

The Planning Inspectorate  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

24 Hydref / October 2022

Er sylw / For the attention of: Jake Stephens

Annwyl / Dear Jake,

**FFERM WYNT ALLTRAETH AWEL Y MÔR ARFAETHEDIG / PROPOSED AWEL Y MOR  
OFFSHORE WINDFARM**

**CYFEIRNOD YR AROLYGIAETH GYNLLUNIO / PLANNING INSPECTORATE REFERENCE:  
EN010112**

**EIN CYFEIRNOD / OUR REFERENCE: 20031687**

**PARTHED: CYFLWYNIAD YSGRIFENEDIG CYFOETH NATURIOL CYMRU AR GYFER  
DYDDIAD CAU 1**

**RE: NATURAL RESOURCES WALES' WRITTEN SUBMISSION FOR DEADLINE 1**

Diolch am eich llythyr Rheol 8, dyddiedig 27 Medi 2022, sy'n gofyn am sylwadau gan Gyfoeth Naturiol Cymru ynglŷn â'r uchod.

Mae'r llythyr hwn yn cynnwys y cyflwyniad canlynol gan Gyfoeth Naturiol Cymru:

- a) Sylwadau Ysgrifenedig – gweler [Atodiad A](#).
- b) Cyngor manwl ar Forwedd, Tirwedd ac Asesiad o'r Effaith Weledol – gweler [Atodiad B](#)
- c) Ymateb i Gwestiynau'r Awdurdod Archwilio – gweler [Atodiad C](#)

Mae'r sylwadau a ddarperir yn y cyflwyniad hwn, gan gynnwys yr atodiadau, yn cynnwys ymateb Cyfoeth Naturiol Cymru fel parti statudol o dan Ddeddf Cynllunio 2008 a'r Rheoliadau Cynllunio Seilwaith (Partïon a Chanddynt Fuddiant) 2015 ac fel 'parti â buddiant' o dan adran 102(1) o Ddeddf Cynllunio 2008.

Mae ein sylwadau'n cael eu cyflwyno heb ragfarnu unrhyw sylwadau eraill efallai y byddwn yn dymuno eu gwneud mewn perthynas â'r cais a'r archwiliad hwn, boed hynny mewn perthynas â'r Datganiad Amgylcheddol, a'r dogfennau cysylltiedig, darpariaethau'r Gorchymyn Caniatâd Datblygu a'i ofynion, neu dystiolaeth a dogfennau eraill a ddarperir gan RWE ('yr Ymgeisydd'), y Corff Archwilio neu unrhyw bartïon eraill a chanddynt fuddiant.

Yn Atodiad A rydym yn darparu ein Sylwadau Ysgrifenedig gan gynnwys crynodeb byr. Mae'r Sylwadau Ysgrifenedig wedi'u strwythuro mewn fformat tebyg i'n Sylwadau Perthnasol [RR-015], gyda'n sylwadau ar y agwedd alltraeth o'r datblygiad wedi'i ddilyn gyda'n sylwadau ar y agweddau ar y tir.

Yn Atodiad B rydym yn darparu ein cyngor manwl ar yr Asesiad o'r Effaith ar y Forwedd, y Tirwedd a'r Effaith Weledol.

Yn Atodiad C, rydym yn darparu atebion i'r rownd gyntaf o gwestiynau o'r Awdurdod Archwilio.

Roedd llythyr Rheol 8 yn gofyn am i Ddatganiadau Tir Cyffredin (DTC) gael eu cyflwyno erbyn Dyddiad Cau 1. Derbyniodd CNC gopïau o ddrafftiau cychwynnol o'r DTC gan yr Ymgeisydd ar 11<sup>eg</sup>, 12<sup>fed</sup> a 18<sup>fed</sup> o Hydref 2022. Rydym wedi derbyn tri DTC – un yn ymwneud â materion alltraeth, un arall i faterion ar y tir, a DTC penodol i asesiadau morlun a thirwedd. Rydym ar hyn o bryd yn adolygu'r tri drafft ac rydym yn ymgysylltu'n weithredol ac yn barhaus â'r Ymgeisydd i fwrw ymlaen â'r rhain cyn y terfynau amser nesaf. Rydym wedi cynnal nifer o drafodaethau gyda'r Ymgeisydd yn ystod yr wythnosau diwethaf ac wedi symud ymlaen â nifer o faterion a godwyd yn ein Sylwadau Perthnasol – mae'r cynnydd hwn yn cael ei esbonio, lle bo'n berthnasol, yn ein Sylwadau Ysgrifenedig.

Yn ogystal â bod yn barti a chanddo fuddiant o dan Ddeddf Cynllunio 2008, mae Cyfoeth Naturiol Cymru'n arfer swyddogaethau dan ddeddfwriaeth benodol, gan gynnwys (ond nid yn gyfyngedig i) Rheoliadau Trwyddedu Amgylcheddol (Cymru a Lloegr) 2016 (fel y'u diwygiwyd), a Deddf y Môr a Mynediad i'r Arfordir 2009. Mae Cyfoeth Naturiol Cymru wedi derbyn ceisiadau am Drwydded Forol o dan Ddeddf y Môr a Mynediad i'r Arfordir 2009.

Er mwyn eglurder, fe nodir ble bo'r sylwadau gan Wasanaeth Trwyddedu CNC ac fe'u cynhyrchir ym mharagraffau 3.2.1 – 3.2.5 a rhan 4 o Atodiad A; mae pob sylw arall yn ymwneud â rôl gynghori CNC.

Mae croeso i chi gysylltu â Nia Phillips ( ) neu Bryn Griffiths ( ) os ydych angen rhagor o gyngor neu wybodaeth ynglŷn â'r sylwadau hyn.

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Thank you for your Rule 8 letter, dated 27<sup>th</sup> September 2022, requesting Cyfoeth Naturiol Cymru / Natural Resources Wales' comments regarding the above.

This letter comprises the following submission from NRW:

- a) Written Representations – see [Annex A](#).
- b) Detailed advice on Seascape, Landscape and Visual Impact Assessment – see [Annex B](#)
- c) Response to Examining Authority's Questions – see [Annex C](#).

The comments provided in this submission, including the associated Annexes, comprise NRW's response as a Statutory Party under the Planning Act 2008 and Infrastructure Planning (Interested Parties) Regulations 2015 and as an 'interested party' under s102(1) of the Planning Act 2008.

Our comments are made without prejudice to any further comments we may wish to make in relation to this application and examination whether in relation to the Environmental Statement (ES) and associated documents, provisions of the draft Development Consent Order ('DCO') and its Requirements, or other evidence and documents provided by RWE ('the Applicant'), the Examining Body or other interested parties.

In Annex A we provide our Written Representations including a brief summary. The Written Representations are structured in a similar format to that of our Relevant Representations [RR-015], with our comments on the offshore followed by those on the onshore aspects of the development.

In Annex B we provide our detailed advice on the Seascape, Landscape and Visual Impact Assessment.

In Annex C we provide answers to the first round of questions from the Examining Authority.

The Rule 8 letter requested Initial Statements of Common Ground (SoCG) to be submitted at Deadline 1. NRW received copies of the initial draft SoCGs from the Applicant on 11<sup>th</sup>, 12<sup>th</sup> and 18<sup>th</sup> October 2022. We are in receipt of three SoCGs – one pertaining to offshore matters, another to onshore matters, and a SoCG dedicated to seascape and landscape assessments. We are currently reviewing the three drafts and are in active and on-going engagement with the Applicant to progress these ahead of the next deadlines. We have held a number of discussions with the Applicant in recent weeks and have progressed a number of matters raised in our Relevant Representation – this progress, is explained, where relevant, in our Written Representations.

In addition to being an interested party under the Planning Act 2008, NRW exercises functions under legislation including (but not limited to) the Environmental Permitting (England and Wales) Regulations 2016 (as amended), and Marine and Coastal Access Act 2009. NRW has received applications for a Marine Licence application under the Marine and Coastal Access Act 2009.

For the purpose of clarity, comments from NRW Permitting Service are titled as such and are produced in paragraphs 3.2.1 – 3.2.5 and section 4 of Annex A; all other comments pertain to NRW's advisory role.

Please do not hesitate to contact Nia Phillips ( [REDACTED] ) and Bryn Griffiths ( [REDACTED] ) should you require further advice or information regarding these representations.

Yn gywir / Yours sincerely,

[REDACTED]

**Andrea Winterton**  
**Marine Services Manager**  
**Natural Resources Wales**

[CONTINUED]

## **ANNEX A**

### **NATURAL RESOURCES WALES' WRITTEN REPRESENTATIONS**

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## 1. CRYNODEB / SUMMARY

### - *Prosesau Corfforol*

1.1.1. Mae CNC yn cynghori y dylid ystyried monitro sgwrio eilaidd ar ôl y gwaith adeiladu.

1.1.2. Mae angen eglurder lle bydd y carthu sy'n codi o'r gweithgareddau gosod ceblau ar hyd y Coridor Ceblau Allforio yn cael ei waredu a sut mae hyn yn cael ei nodi yn y Gorchymyn Caniatâd Datblygu.

### - *Ansawdd Dŵr Morol a Gwaddodion*

1.1.3. Mae CNC yn fodlon bod pryder blaenorol yn ymwneud â risg o halogion sy'n gaeth i waddodion bellach wedi cael sylw.

1.1.4. Mae CNC yn fodlon bod pryderon blaenorol mewn perthynas â dulliau asesu effaith ar ffytoplancton ac Ocsigen Toddedig bellach wedi'u datrys.

### - *Ecoleg Islanwol Benthig a Rhynglanwol*

1.1.5. Mae CNC yn argymhell bod yr asesiad risg a chynllun bioddiogelwch morol yn ddogfen annibynnol ac wedi'i sicrhau gan y Gorchymyn Caniatad Datblygu a'r Drwydded Forol.

1.1.6. Oherwydd presenoldeb y chwistrell môr ymledol iawn *Didemnum vexillum*, efallai y bydd angen mesurau rheoli penodol pellach, yn ogystal â phrotocolau asesu risg bioddiogelwch safonol, os defnyddir Porthladd Caergybi ar gyfer angori cychod.

### - *Morfa heli*

1.1.7. Bydd y cebl ar y tir yn croesi cynefin adran 7 - dŵl heli Iwerydd - yn Aber Afon Clwyd. Mae CNC yn cynghori bod cadarnhad o dechnegau croesi ceblau yn cael ei ddarparu a'i fanylu yn y Datganiad Dull Adeiladu Amlinellol.

1.1.8. O ystyried natur lanwol aber afon Clwyd, mae CNC yn cynghori y bydd angen i'r Ysgrifennydd Gwladol a/neu Wasanaeth Trwyddedu CNC benderfynu a ddylid cytuno ar y dulliau adeiladu manwl – gydag arwyddbyst perthnasol – yn y Drwydded Morol neu'r Gorchymyn Caniatad Datblygu, neu'r ddau.

### - *Ecoleg Pysgod a Physgod Cregyn*

1.1.9. Mae CNC yn fodlon bod pryderon blaenorol ynghylch gwallau yn yr asesiad effaith ar dderbynyddion ecolegol gwerthfawr pysgod wedi cael sylw.

1.1.10. Mae CNC yn nodi'r asesiad amgylcheddol cronol a gynhaliwyd ar gyfer derbynyddion pysgod ond mae'n anghytuno nad oes potensial i sŵn cydamserol, rhannol orgyffwrdd, neu ddilyniannol o ffermydd gwynt alltraeth arfaethedig effeithio'n andwyol ar dymhorau silio olynol rhywogaethau pysgod. Nid yw CNC o'r farn ei bod yn briodol i'r asesiad o effeithiau cronol ddibynnu ar reoliadau neu fesurau lliniaru posibl yn y dyfodol nad oes ganddynt unrhyw ymrwymiad na mecanwaith cyflawni ynghlwm wrtho.

### - *Adareg Forol*

1.1.11. Mae CNC yn cynghori y dylid cynnal asesiad manwl o effeithiau posibl y prosiect ar nodweddion bridio adar môr Safle o Ddiddordeb Gwyddonol Arbennig (SoDdGA) Pen-y-

Gogarth / Pen y Gogarth (gwylogod, llursod a gwyllanod coesddu). Ar hyn o bryd nid yw wedi ei wneud yn ddigonol i asesu effeithiau ar y nodweddion hyn. Rydym yn cynghori y dylid asesu ymhellach effeithiau dadleoli ar garfilod a marwolaethau'r wylan goesddu sy'n wynebu risg o wrthdrawiad.

- 1.1.12. Mae CNC yn cynghori bod angen monitro dilysu cynhwysfawr cyn, yn ystod, ac ar ôl y gwaith adeiladu i gadarnhau nad yw'r cynefin cynhaliol ar gyfer y trochydd gyddfgoch o fewn Ardal Gwarchodaeth Arbennig Bae Lerpwl (AGA) wedi'i golli.
- 1.1.13. Mae CNC yn cynghori bod angen cynllun Rheoli Traffig Llongau er mwyn osgoi neu leihau aflonyddwch a dadleoliad i nodweddion trochydd gyddfgoch a môr-hwyaid duon yn AGA Bae Lerpwl. Bydd angen sicrhau'r cynllun yn y drwydded forol.

- *Mamaliaid Morol*

- 1.1.14. Mae CNC yn cynghori bod gan y cynnig y potensial i effeithio ar famaliaid morol, a nodir yn y rhestr o dan adran 7 o Ddeddf yr Amgylchedd (Cymru) 2016 yn ogystal â Rhywogaethau a Warchodir gan Ewrop yn Atodlen 2 ac at ddibenion Rheoliad 42 o Rheoliadau Cadwraeth Cynefinoedd a Rhywogaethau 2017 ('y Rheoliadau') fel y'u diwygiwyd. Mae'n drosedd o dan Rheoliad 43 o'r Rheoliadau i ddal, anafu, lladd, neu darfu ar rywogaethau o'r fath yn fwriadol neu niweidio neu ddinistrio eu safle bridio. Mae hyn yn adlewyrchu'r system o warchodaeth llym a roddir i rywogaethau o'r fath dan ddarpariaethau'r Rheoliadau Cynefinoedd.
- 1.1.15. Fodd bynnag, gall CNC, fel y corff trwyddedu perthnasol, roi trwydded Rhywogaethau a Warchodir yn Ewropeaidd at y dibenion a bennir yn Rheoliad 55(2) o'r Rheoliadau.
- 1.1.16. Dywedodd CNC yn flaenorol fod yr asesiad o effeithiau sŵn tanddwr ar famaliaid morol, megis anafiadau clywedol ac aflonyddwch cysylltiedig, yn annigonol ac y dylid ei wella er mwyn gallu asesu'r risgiau'n llawn ac yn ddigonol.
- 1.1.17. Mae CNC yn fodlon bod nifer o'r pryderon sy'n ymwneud ag asesu effeithiau sŵn o dan y dŵr ar famaliaid morol bellach wedi cael sylw drwy waith modelu ychwanegol a wnaed gan yr Ymgeisydd.
- 1.1.18. Mae CNC yn cynghori bod canlyniadau a dehongliad o fodelu Newid Trothwy Parhaol cronol mewn llamhidyddion harbwr yn cael eu cynnwys yn briodol yn y Protocol Lliniaru Mamaliaid Morol. Rydym yn cynghori bod angen lliniaru mewn perthynas â diogelu rhywogaethau o dan y Rheoliadau Cynefinoedd a bod angen ei reoleiddio gan y drwydded forol a / neu'r drwydded Rhywogaethau a Warchodir gan Ewrop (nad yw cais wedi'i gyflwyno ar ei gyfer eto ac yr anogir yr Ymgeisydd i wneud hynny).
- 1.1.19. Rydym yn cynghori bod maint ardal yr Uned Rheoli Mamaliaid Morol yr aflonyddwyd arni gan weithgareddau adeiladu yn cael ei chyflwyno ar gyfer llamhidyddion harbwr, dolffin trwyn potel a morloi llwyd, er mwyn galluogi CNC i asesu'r effaith ar gynefin â chysylltiad swyddogaethol yn erbyn yr amcan cadwraeth Cynefin Ategol.
- 1.1.20. Mae CNC yn fodlon bod pryderon blaenorol yn ymwneud â gwrthdrawiadau cychod wedi cael sylw.

- *Cyfarwydddeb Fframwaith Dŵr – Alltraeth*

- 1.1.21. Mae CNC yn fodlon bod pryderon blaenorol ynghylch casgliadau'r asesiad mewn perthynas â ffytoplancton ag Ocsigen Toddedig nawr wedi cael sylw.

1.1.22. Mae CNC yn fodlon bod pryderon yn ymwneud â throsi gwybodaeth o'r Datganiad Amgylcheddol i'r Asesiad Cydymffurfiaeth bellach wedi cael sylw.

- *Dadgomisiynu*

1.1.23. Safbwynt CNC yw y dylai prosiectau adnewyddadwy ar y môr gynhyrchu cynlluniau datgomisiynu sy'n cadw'r holl opsiynau datgomisiynu (cynnal, tynnu'n llawn a thynnu'n rhannol); gellir asesu'r opsiynau ar eu cyfer a'u mireinio'n agosach at yr amser y caiff ei ddadgomisiynu ei hun mewn ymgynghoriad â CNC.

- *Mesurau lliniaru*

1.1.24. Mae CNC yn cynghori y darperir eglurder o ran anghysondebau rhwng y mesurau lliniaru arfaethedig a chynlluniau fel yr amlinellir yn y dogfennau cais.

## AR Y TIR

- *Tirweddau Dynodedig*

1.1.25. Mae CNC yn cynghori bod y gwaith alltraeth yn debygol o gael effeithiau andwyol sylweddol niferus a helaeth ar forwedd, tirwedd a derbynyddion gweledol yn Ardal o Harddwch Naturiol Eithriadol (AHNE) Ynys Môn a Pharc Cenedlaethol (PC) Eryri ac o fewn eu lleoliadau. Mae'r effeithiau andwyol sylweddol hyn yn cynrychioli graddau sylweddol o niwed i'r tirweddau dynodedig hyn yr ydym yn ystyried eu bod yn gwrthdaro â dibenion y PC a'r AHNE.

- *Perygl Llifogydd*

1.1.26. Mae erthygl 7 o'r Gorchymyn Caniatad Datblygu drafft yn darparu ar gyfer cymhwyso ac addasu darpariaethau deddfwriaethol. O dan Erthygl 7(c) mae'r ymgeisydd yn ceisio datgymhwyso'r gofyniad am drwydded gweithgaredd perygl llifogydd, sef trwydded amgylcheddol sy'n ofynnol o dan Reoliad 12 o Reoliadau Trwyddedu Amgylcheddol (Cymru a Lloegr) 2016. Nid yw CNC yn cytuno i gynnwys Erthygl 7(c).

- *Cyfarwyddeb Fframwaith Dŵr (Ar y Tir)*

1.1.27. Mae agwedd y datblygiad ar y tir yn ymwneud â gwaith gerllaw, o fewn, neu o dan nifer o gyrsiau dŵr. Mae'r Rhestr Groesi [APP-121] yn nodi'r dulliau croesi arfaethedig ac er bod technegau heb ffosydd (e.e., Drilio Uniongyrchol Llorweddol) wedi'u cadarnhau ar gyfer rhai croesfannau, cedwir yr holl opsiynau ar gyfer nifer o gyrsiau dŵr. Rydym yn ystyried efallai na fydd rhai o'r dulliau, megis ffosio (fel rhan o osod ceblau) a defnyddio cwlfertau (fel rhan o'r ffyrdd cludo) yn briodol mewn rhai lleoliadau. Rydym yn cynghori astudiaeth ddesg ac arolwg cerdded trosodd cyflym i ganfod yr amodau lleol ar bob safle i benderfynu ar y math priodol o groesfan cebl neu ffordd cludo a dangos na fydd effeithiau ar geomorffoleg afonol a chyrff dŵr y Gyfarwyddeb Fframwaith Dŵr.

- *Cod Ymarfer Adeiladu*

1.1.28. Mae Gofyniad 10 y Gorchymyn Caniatâd Datblygu Drafft (DCO) yn ei gwneud yn ofynnol i gyflwyno Cynlluniau Rheoli terfynol a Datganiadau Dull i'w cymeradwyo gan yr awdurdod cyflawni. Rhaid i'r fersiynau terfynol fod yn unol â'r fersiynau Amlinellol a gyflwynir ar hyn o bryd. Rydym yn cynghori diwygiadau i'r Datganiad Dull Adeiladu Amlinellol, y Cynllun Atal Llygredd Amlinellol ac Ymateb i Ddigwyddiad a'r Cynllun Amlinellol ar gyfer Rheoli Rhywogaethau Estron Goresgynnol. Mae hyn er mwyn sicrhau bod effeithiau ar ansawdd dŵr a rhywogaethau ymledol yn cael eu rheoli'n briodol. Rydym hefyd yn cynghori bod



Gofyniad 10 yn y Gorchymyn Caniatad Datblygu Drafft yn cael ei ddiweddarau i sicrhau yr ymgynghorir â CNC ar gyflawni'r Gofyniad hwn.

- *Cynllun Rheoli Tirwedd ac Ecoleg Amlinellol*

- 1.1.29. Mae'r Cynllun Rheoli Tirwedd ac Ecoleg Amlinellol (APP-305) yn nodi egwyddorion lliniaru. Bydd y Cynllun Rheoli Tirwedd ac Ecoleg terfynol yn cael ei gymeradwyo gan yr awdurdod cyflawni, mewn ymgynghoriad â CNC. Mae CNC yn cytuno â'r dull hwn. Fodd bynnag, mae CNC o'r farn y dylid gwneud diwygiadau i'r cynllun Amlinellol. Cyngorir y diwygiadau hyn er mwyn sicrhau bod effeithiau ar rywogaethau a warchodir a physgod yn cael eu lliniaru'n briodol.

- *Ansawdd Aer*

- 1.1.30. Mae angen asesiad o effeithiau ansawdd aer posibl ar safleoedd dynodedig ar y tir sensitif sy'n deillio o allyriadau cychod morol. Nid yw'n glir a fydd cychod morol yn gweithredu'n agos at gynefin arfordirol daearol sensitive (a allai gynnwys nodweddion SoDdGA/ACA/Ramsar). Derbyniwyd Nodyn Eglurhad (14/10/2022), fodd bynnag, nid yw CNC wedi gallu adolygu yn yr amser cyfyngedig sydd ar gael cyn y Dyddiad Cau 1. Mae CNC yn cadw ei safbwynt ynghylch a yw'r wybodaeth yn mynd i'r afael â'n pryderon hyd nes y byddwn wedi gallu ei adolygu, ac ar yr adeg honno byddwn yn cynghori'r Ymgeisydd a'r Awdurdod Archwilio ymhellach.

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## OFFSHORE

- *Physical Processes*

- 1.1.31. NRW advises that post-construction monitoring of secondary scour should be considered.
- 1.1.32. Clarity is required about where the dredge arisings from the cable laying activities along the Export Cable Corridor will be disposed of and how this is captured in the DCO.

- *Marine Water and Sediment Quality*

- 1.1.33. NRW is satisfied that its previous concern relating to risk from sediment bound contaminants has now been addressed.
- 1.1.34. NRW is satisfied that its previous concerns with respect to impact assessment approaches to phytoplankton and Dissolved Oxygen have now been resolved.

- *Benthic Subtidal and Intertidal Ecology*

- 1.1.35. NRW recommends that the marine biosecurity risk assessment and plan is a free-standing document and secured by both the DCO and the Marine Licence.
- 1.1.36. Due to the presence of the highly invasive seasquirt *Didemnum vexillum*, further specific management measures may be required in addition to standard biosecurity risk assessment protocols, if the Port of Holyhead is used for vessel berthing.



- *Saltmarsh*

- 1.1.37. The onshore cable will intersect section 7 habitat - Atlantic salt meadow - at the Clwyd Estuary. NRW advises that confirmation of cable crossing techniques is provided and detailed in the Outline Construction Method Statement (CMS).
- 1.1.38. Given the tidal nature of the Clwyd estuary, NRW advises that the Secretary of State and / or NRW Permitting Service (PS) will need to determine whether the detailed construction methods are to be agreed - with relevant signposting - in the ML or the DCO, or both.

- *Fish and Shellfish Ecology*

- 1.1.39. NRW is satisfied that previous concerns with respect to errors in the impact assessment on fish valued ecological receptors have been addressed.
- 1.1.40. NRW notes the cumulative environmental assessment (CEA) undertaken for fish receptors but disagrees that there is no potential for simultaneous, partly overlapping, or sequential noise from planned offshore windfarms to adversely affect consecutive spawning seasons of fish species. NRW does not consider it appropriate for the cumulative effects assessment to rely on potential future regulations or mitigation that has no commitment or delivery mechanism attached to it.

- *Marine Ornithology*

- 1.1.41. NRW advises that a detailed assessment of the potential impacts of the project on the breeding seabird features of Pen-y-Gogarth / Great Orme's Head Site of Special Scientific Interest (SSSI) (guillemots, razorbills and kittiwakes) should be undertaken, as currently this has not been done sufficiently to assess effects on these features. We advise that the effects of displacement on auks and collision risk mortality of kittiwakes should be further assessed.
- 1.1.42. NRW advises that comprehensive validation monitoring before, during, and after construction is needed to confirm that the supporting habitat for Red-Throated Diver (RTD) within the Liverpool Bay Special Protection Area (SPA) has not been lost.
- 1.1.43. NRW advises that a Vessel Traffic Management plan is needed in order to avoid or reduce disturbance and displacement to the RTD and Common Scoter features of Liverpool Bay SPA. The plan will need to be secured in the marine licence.

- *Marine Mammals*

- 1.1.44. NRW advises that the proposal has the potential to impact marine mammals, a long list of cetaceans (dolphins, porpoises and whales) are protected pursuant to the list made under section 7 of the Environment (Wales) Act 2016, as well as being European Protected Species (EPS) protected by Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ('the Regulations') as amended. It is an offence under Regulation 43 of the Regulations to *inter alia* deliberately capture, injure, kill, or disturb such species or to damage or destroy their breeding site. This reflects the system of strict protection afforded to such species under the provisions of the Habitats Regulations.
- 1.1.45. However, an EPS licence may be granted by NRW, as the relevant licensing body, for the purposes specified in Regulation 55(2) of the Regulations.

- 1.1.46. NRW previously advised that the assessment of the impacts of underwater noise on marine mammals, such as auditory injury and associated disturbance, was insufficient and should be improved in order to enable the risks to be fully and adequately assessed.
- 1.1.47. NRW is satisfied that a number of the concerns relating to the assessment of impacts of underwater noise on marine mammals have now been addressed through additional modelling work undertaken by the Applicant.
- 1.1.48. NRW advises that cumulative Permanent Threshold Shift (auditory injury) in harbour porpoise should be included in the Marine Mammal Mitigation Protocol (MMMP). We advise that mitigation is required for EPS protection and needs to be regulated by the marine licence and / or the European Protected Species licence (for which an application has not yet been submitted and which the Applicant is encouraged to do).
- 1.1.49. We advise that the extent of the Marine Mammal Management Unit area disturbed from construction activities is presented (in the form of a clarification note) for harbour porpoise, bottlenose dolphin and grey seal, in order to enable NRW to assess the effect on functionally linked habitat against the Supporting Habitat conservation objective.
- 1.1.50. NRW is satisfied that previous concerns relating to vessel collision have been addressed.
- *Water Framework Directive – Offshore*
- 1.1.51. NRW is satisfied that previous concerns regarding the conclusions of the assessment with respect to phytoplankton and DO have been addressed.
- 1.1.52. NRW is satisfied that concerns relating to the transposition of information from the Environmental Statement into the Compliance Assessment have now been addressed.
- *Decommissioning*
- 1.1.53. It is NRW's position that offshore renewable projects should produce decommissioning plans that retain all decommissioning options (maintain, full removal and partial removal); the options can then be assessed and refined closer to the time of decommissioning itself in consultation with NRW.
- *Mitigation measures*
- 1.1.54. There are a number of inconsistencies between the Schedule of Mitigation and the Marine Licence Principles document that require clarification. Such discrepancies may result in confusion and uncertainty as to the extent of measures that may be secured in respective consents. We advise that clarification regarding such inconsistencies should be provided and advise that both the Schedule of Mitigation and the Marine Licences Principles document are consistent and contain accurate reference to all proposed mitigation and plans as described in the application documents.

## ONSHORE

- *Designated Landscapes*
- 1.1.55. NRW advises that the offshore works are likely to have numerous and extensive significant adverse effects on seascape, landscape and visual receptors within the Isle of Anglesey Area of Outstanding Natural Beauty (AONB) and Snowdonia National Park (NP) and within

their settings. These significant adverse effects represent a substantial degree of harm to these designated landscapes which we consider to be in conflict with the purposes of NP and AONB.

- *Flood Risk*

- 1.1.56. Article 7 of the draft DCO provides for the application and modification of legislative provisions. Under Article 7(c) the Applicant is seeking to disapply the requirement for a flood risk activity permit, being an environmental permit required under Regulation 12 of the Environmental Permitting (England and Wales) Regulations 2016. NRW does not consent to the inclusion of Article 7(c).

- *Water Framework Directive (WFD) (Onshore)*

- 1.1.57. The onshore aspects of the development involve works adjacent, within, or beneath a number of watercourses. The Crossing Schedule specifies the proposed crossing methods and while trenchless techniques (e.g., Horizontal Direct Drilling) are confirmed for some crossings, all options are retained for a number of watercourses. We consider some of the methods, such as trenching (as part of the cable installation) and use of culverts (as part of the haul roads) may not be appropriate at some locations. We advise a desktop study and rapid walkover survey are carried out to ascertain the local conditions at each site and thereby determine the appropriate type of cable or haul road crossing required and demonstrate that there will not be impacts on fluvial geomorphology and WFD waterbodies.

- *Code of Construction Practice*

- 1.1.58. Requirement 10 of the Draft DCO requires the submission of final Management Plans and Method Statements to be approved by the discharging authority. The final versions must be in accordance with the Outline versions currently submitted. We advise that amendments are made to the Outline CMS, Outline Pollution Prevention and Incident Response Plan and Outline Invasive Non-Native Species Management Plan. This is to ensure that impacts on water quality and invasive species are appropriately managed. We also advise that Requirement 10 in the Draft DCO is updated to ensure that NRW is consulted on the discharge of this Requirement.

- *Outline Landscape and Ecology Management Plan (LEMP)*

- 1.1.59. The Outline LEMP identifies the principles of mitigation. The final LEMP will be approved by the discharging authority, in consultation with NRW. NRW agrees with this approach. However, NRW considers that amendments to the Outline LEMP should be made. These amendments are advised in order to ensure impacts on protected species and fish are appropriately mitigated.

- *Air Quality*

- 1.1.60. An assessment of potential air quality impacts on sensitive onshore designated sites arising from marine vessel emissions is required. It is unclear whether marine vessels will operate in proximity to sensitive coastal onshore habitat (that may support features of SSSIs/Special Areas of Conservation (SACs) and/or Ramsar sites). A Clarification Note has been received (14/10/2022), however, NRW has not been able to review this in the limited time available ahead of Deadline 1. NRW reserves its position as to whether the information addresses our concerns until we have been able to review it, at which point we will advise the Applicant and the Examining Authority further.

## 2. OFFSHORE

### 2.1. Physical Processes

- 2.1.1. NRW agrees that the baseline description of physical processes obtained through the desktop review of existing literature, project-specific surveys and existing data sources is sufficient to appropriately characterise the study area (Array and Export Cable Corridor (ECC) and landfall) for the Awel-y-Môr project.
- 2.1.2. NRW agrees with the numerical modelling approach and scenarios conducted in relation to hydrodynamics, waves and sediment transport to inform the potential changes to Constable Bank/Rhyl Flats, designated sites and the adjacent coast arising from the construction, operation and decommissioning of Awel-y-Môr.
- 2.1.3. We agree with the assessment methodology and the conclusions of the assessment of the potential impacts on physical processes as outlined in the Environmental Statement (ES).
- 2.1.4. We agree with the conclusions of the Report to Inform Appropriate Assessment (RIAA) with respect to physical processes.

- *Secondary scour protection*

- 2.1.5. NRW notes (Volume 4: Annex 2.3 page 30: *Physical Processes Modelling Results* [APP-077], that the local dimensions of secondary scour are highly dependent upon the specific shape, design and placement of the scour protection. These parameters are highly variable and so there is no clear quantitative method or evidence base for accurately predicting the dimensions of secondary scour. Given the uncertainty regarding the spatial extent and volume of secondary scour, we advise that post-construction monitoring should be considered. Post-construction monitoring and any potential mitigation measures should be agreed in writing with NRW and take the form of an environmental monitoring plan. Clarity is required on the most appropriate regulatory mechanism needed to secure it. We advise that a condition of the Marine Licence (ML) would be appropriate.
- 2.1.6. We acknowledge that the assessment of primary scour has been undertaken using recognised empirical equations, supported by knowledge of the foundation design dimensions, and we agree with the assessment as presented for primary scour.

- *Dredge and Disposal of Dredge Material*

- 2.1.7. ES Volume 2: Chapter 2: Marine Geology, Oceanography and Physical Processes [APP-048] states in Table 8 that “*The project array area and offshore ECC will be licenced as disposal sites for the deposition of dredgings and drill arisings*”. From the information provided, it is not clear if the ECC is to be licenced as a disposal site in the Marine Licence application associated with the array area. We note that only the array area is considered and has been characterised as a potential disposal site (please see document 8.9: Awel-y-Môr Disposal Site Characterisation Report [APP-309]). The disposal site report details at paragraph 122 that “...as a worst case, the total volume of natural material that may require disposal would be up to 12,920,356m<sup>3</sup>”. We understand that this volume relates only to the volume of dredge material associated with the construction activities of the array site. It is currently unclear, therefore, where the dredge arisings from the cable laying activities along the ECC - amounting to a volume of 6,281,000m<sup>3</sup> (Volume 2: Chapter 1: Offshore Project Description, Table 22: Design Envelope for export cables [APP-047]) - will be disposed of. Further clarity should be provided in this regard and the relationship with the offshore design parameters, as presented in the draft DCO, explained (specifically Requirement 2 - *Offshore*

*Design Parameters* – Table 3 [AS-014]). We note that only the maximum volume of material for disposal for the array area is assigned at Requirement 2.

- 2.1.8. We acknowledge the intention that all dredged material from the seabed will be disposed of within these designated disposal sites in order to ensure that the material is retained within the local sediment transport system, and we recommend that retention of material in the local sediment transport system becomes a condition of the marine licence if granted.

## 2.2. **Marine Water & Sediment Quality (MW&SQ)**

- 2.2.1. NRW agrees that there is no impact on Bathing Waters from elevated suspended sediment, during the construction phase.
- 2.2.2. Since the submission of NRW's Relevant Representations [RR-015], NRW has met with the Applicant to further discuss the concerns pertaining to sediment bound contaminants. This has resulted in additional information being provided to NRW in the form of a clarification note titled *Marine Water and Sediment Quality Clarification Note* dated September 2022, which contains further detail regarding contaminated sediment. We advised in our Relevant Representations that the Applicant should report all data in the context of Centre for the Environment, Fisheries and Aquaculture Sciences (CEFAS) Action Levels (ALs). Specifically, polycyclic aromatic hydrocarbons should be presented against CEFAS ALs and where other data are not shown against CEFAS ALs (i.e., PCBs, Organotins, DDT and dieldrin), then reasoning should be given as to why. This information has now been provided in the Clarification Note, which we have reviewed again alongside the ES as submitted. NRW now agrees that there is no risk from contaminated sediment. We advise that the Applicant submits the Clarification Note into the DCO Examination at the next available deadline.
- 2.2.3. NRW's Relevant Representations noted concerns about the approach to assessing impacts on phytoplankton and Dissolved Oxygen (DO). The assessments focussed on the impacts of nutrients on phytoplankton and DO, where we were not expecting any nutrients to be released. NRW advised that the assessment needed to consider impacts on phytoplankton and DO in light of suspended sediments not nutrients and that we could not therefore agree with the conclusions of the assessment presented. This issue has been discussed further with the Applicant and additional information has been provided to NRW within the *Marine Water and Sediment Quality Clarification Note*. A discussion around the interactions between DO and suspended sediment, and phytoplankton and suspended sediment has been provided, indicating there is no risk to these receptors. We agree there is no risk to DO and phytoplankton from the proposed development.
- 2.2.4. In our Relevant Representations, NRW did not agree that the impact of accidental spills could be considered *negligible adverse*. The Applicant stated effects would be temporary, whereas contaminants, particularly sediments, can persist in the environment, for long periods of time. We advised that the impact should be considered *medium adverse* as the ability to meet Environmental Quality Standards (EQS) could be compromised (Chapter 3: Table 6, page 59 [APP-049]). Additionally, NRW advised that impacts will not be short-term as stated and considerable time would be needed to recover to baseline conditions. However, having reviewed the justifications provided within the Clarification Note, alongside further consideration of the assessment and mitigation measures outlined within the ES, we now agree that this impact can be considered *negligible adverse* provided that the mitigation commitments outlined in the ES (Chapter 3: Section 3.9, Table 16 [APP-049]) and the Marine Water and Sediment Quality Clarification Note, are incorporated into a Project Environmental Management Plan (PEMP) and Marine Pollution Contingency Plan (MPCP), and appropriately secured and delivered post-consent. We would suggest a condition of the ML may be the appropriate regulatory mechanism to secure this.



- 2.2.5. In our Relevant Representations we advised that a number of marine water quality inter-relationships had been overlooked from Volume 2: Chapter 3: Section 3.14: Inter-relationships [APP-049]. In our view, these include the following: the potential for elevated counts of bacteria at Bathing Waters which has the potential to impact human (“public”) health; linkages between major disasters, Marine Water & Sediment Quality (MW&SQ) and other ecological receptors, and; the link with MW&SQ and onshore water quality. Further MW&SQ inter-relationships are missed from Volume 2: Chapter 14 [APP-060]. While the relationship between accidental spills and physical processes is included, the link between accidental spills and ecological receptors is not. Links between marine water quality and onshore works are made appropriately in Volume 3: Chapter 7 [APP-068] and we agree with the conclusions and mitigation proposed. Whilst some inter-relationship links have been missed, this does not alter the conclusions of the ES. We do not consider that there is a risk from these inter-relationships not being listed and we have informed the Applicant of this accordingly. The comments above are provided as points of clarification, and we are satisfied that they do not affect the overall conclusion with respect to MW&SQ.

### 2.3. Benthic Subtidal and Intertidal Ecology

- 2.3.1. NRW agrees that the data collected through the site-specific surveys, through the desktop review of existing literature, and data sources are sufficient to appropriately characterise the benthic ecology throughout the array and ECC. We also agree with the assessment methodology and the conclusions of the assessment with respect to the potential impacts of the project on benthic receptors, as outlined in the ES.
- 2.3.2. We agree with the conclusion of the RIAA that, provided the mitigation measures outlined are adhered to, the project will not have an adverse effect on site integrity (AEOSI) and therefore will not undermine the conservation objectives of the benthic designated features of the Dee Estuary Special Area of Conservation (SAC) and the Menai Strait and Conwy Bay SAC, but please note paragraph 2.3.6 below.
- 2.3.3. From the evidence presented (Volume 2: Chapter 5: Section 5.7.4, paragraph 95 [APP-051]), the areas of low resemblance stony reef do not meet the strong justification criteria in terms of biological communities that NRW would expect within an Annex I stony reef feature. Stony reef can be categorised according to Irving (2009) with additional clarification provided by Golding *et al.* (2020). The criteria state that low resemblance stony reef can be included as an Annex 1 feature where there is “strong justification”. NRW currently advise that any justification for inclusion of low resemblance stony reef should be based on the following:
1. the associated biological community is composed of a diverse mix of epibiota, including erect and / or branching forms, and / or
  2. the substrate is relatively stable and allows longer lived or slow growing epibiota to persist.

NRW therefore agrees with the conclusion presented in the project application that the discrete patches of stony habitats found in the ECC area would not qualify as Annex I stony reef.

- 2.3.4. NRW considers that the magnitude of impact from the potential introduction of marine invasive non-native species (mINNS) should be presented as *low* and not *negligible* (Volume 2: Chapter 5: Section 5.11.4, paragraph 191[APP-051]) as there is a continuous risk of mINNS being introduced (please also see paragraph 2.3.6). Notwithstanding this, we consider that the significance of the impact would still be minor and therefore not significant in EIA terms.

- 2.3.5. We acknowledge the commitment of the Applicant to produce a biosecurity risk assessment to be conditioned within the marine licence, as outlined in the Schedule of Mitigation [APP-310] and the Marine Licence Principles document [AS-023]. NRW recommends that the marine biosecurity plan is a free-standing document kept separate to the terrestrial plan provided in the Outline INNS Management Plan [APP-323]. NRW should be consulted on the suitability of a marine biosecurity risk assessment and plan ahead of commencement of activities. Clarity is required on the most appropriate regulatory mechanism needed to secure it, but we advise it would need to be secured by both the marine licence and the DCO given jurisdictional overlap.
- 2.3.6. We note under Section 10.1.1, paragraph 130 [APP-051] that the Applicant discusses the introduction, in 2006, and subsequent eradication of slipper limpet to the mussel lays in the Menai Strait. Please be aware that slipper limpet has recently been found in the Menai Strait and Conwy Bay SAC (please refer to the [NBN Atlas](#) to view records). Notwithstanding, we agree with the conclusion of the RIAA that provided the mitigation measures are adhered to (production of a biosecurity risk assessment and management plan), there will be no adverse effect on site integrity (AEOSI) in the context of the conservation objectives of the Menai Strait and Conwy Bay SAC.
- 2.3.7. Should the Port of Holyhead be used for the berthing of vessels during construction, operation and/or decommissioning, then we advise that specific management measures may be required in addition to standard biosecurity risk assessment protocols. This is due to the presence of the highly invasive carpet seasquirt *Didemnum vexillum*. Any specific measures that might be required should be managed via the marine biosecurity risk assessment and management plan, to be agreed in writing with NRW post-consent, once further details are known.
- 2.3.8. We note that the following Section 7 habitats protected under the Environment (Wales) Act 2016 have been reported as being present within the development: *Sabellaria alveolata* and peat and clay exposures. Both the small patches of *Sabellaria alveolata* and the piddocks in clay are found in existing pipelines or in small patches on the boundary of the cable route and as noted by the Applicant, will remain in place and undisturbed. Therefore, there will be no potential impact on these Section 7 habitats from the development.

## 2.4. Saltmarsh

### - Clwyd Estuary

- 2.4.1. We note that the onshore cable will intersect Atlantic salt meadow at the Clwyd Estuary. Whilst the Clwyd Estuary is not designated as a SAC or Site of Special Scientific Interest (SSSI), saltmarsh is a Section 7 habitat (being a habitat type which in the opinion of the Welsh Ministers are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales) under the Environment (Wales) Act 2016. We note that there is a commitment in the Crossing Schedule [APP-121] for the use of trenchless techniques (for example, Horizontal Directional Drilling (HDD)) underneath the Clwyd Estuary. Confirmation with respect to how the cable will cross the river if it is undergrounded, the techniques to be employed (being deep enough to avoid the saltmarsh and minimise cable exposure), and identification of appropriate entry and exit sites (pits) is recommended. Such detail should be specified in the Outline CMS [APP-313].
- 2.4.2. In addition, given that the Clwyd estuary is tidal, we advise that the Secretary of State and / or NRW Permitting Service (PS) will need to determine whether the detailed construction methods are to be agreed - with relevant signposting - in the ML or the DCO, or both. We are aware that the NRW PS has requested further information from the Applicant with



regards to the cable laying works under the Clwyd estuary, as the activity will be licensable under section 67 of the Marine and Coastal Access Act 2009.

## 2.5. Fish and Shellfish Ecology

- 2.5.1. NRW considers that a robust assessment has been carried out to support the overall conclusions of no significant impacts on fish and shellfish receptors.
- 2.5.2. NRW agrees that the data collected through the site-specific surveys, through the desktop review of existing literature, and data sources are sufficient to appropriately characterise the fish and shellfish ecology throughout the array and export cable corridor.
- 2.5.3. NRW agrees with the conclusion of the RIAA that the project will not undermine the conservation objectives of the designated migratory fish features of the River Dee and Bala Lake SAC and Dee Estuary SAC.
- 2.5.4. The assessment asserts that Atlantic salmon do not pass through the array area and are therefore unlikely to be exposed to potential impacts from noise. However, we note that evidence supporting this assertion is not available. However, NRW agrees that Atlantic salmon are not considered to be particularly sensitive to underwater noise impacts and furthermore, will only be transient in the array area. Therefore, NRW agrees with the overall conclusion of no AEOSI on the River Dee and Bala Lake SAC
- 2.5.5. NRW raised two potential areas of concern in our Relevant Representations regarding the impact assessment of fish valued ecological receptor species (VERs)<sup>1</sup>. The concerns related to: (1) errors and inaccuracies in the assessments of impact to sandeel from construction piling noise and that fish are modelled as fleeing rather than static receptors, and: (2) some of the assumptions made in the cumulative environmental assessment.
- 2.5.6. Following the submission of NRW's Relevant Representations, NRW has met with the Applicant (6/9/2022) to further discuss the concerns pertaining to the assessment of impacts to fish from piling noise. This has resulted in additional information being provided to NRW in the form of a clarification note titled *Fish and Shellfish Clarification Note* dated September 2022, which corrects the error for sandeel and presents impact scenarios based on modelling fish as static receptors. NRW are now satisfied that the revised impact figures presented in the note for sole, sandeel, plaice, mackerel, cod and whiting are realistic and that, in conjunction with the assessment, provide evidence for the conclusion of '*minor adverse*' effects in the Fish and Shellfish Ecology Chapter (Volume 2: Chapter 6 [APP-052]). We advise that the Applicant submits the Clarification Note into the DCO Examination at the next available deadline.
- 2.5.7. NRW notes the CEA undertaken for fish receptors, in Section 6.13.2 (Volume 2: Chapter 6 [APP-052]) - the Applicant has undertaken an assessment of the potential cumulative effects from construction noise and vibration on fish receptors. NRW agrees with the projects identified as being in scope.
- 2.5.8. However, some of the reasoning provided to support the conclusions of *minor adverse* effect are speculative. The Applicant states at paragraph 359 [APP-052]: "*It is noted that there is a broadscale push from regulators and Statutory Nature Conservation Bodies*

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<sup>1</sup> Valued Ecological Receptors (VER's) are the agreed list of fish species which are considered to be at risk from the development and therefore relevant to the assessments carried out in the ES.

(SNCBs) within the UK towards the use of technologies to reduce the noise emitted during offshore wind construction works. The method used or the mechanism by which this may be enforced is yet to be determined however it may comprise using non-piled structures (e.g., GBS or suction bucket structures) or at source noise mitigation (e.g., bubble curtains or the BLUE piling system)". NRW does not consider it appropriate for the cumulative assessment to rely on potential future regulations or mitigation that has no commitment or delivery mechanism attached to it.

- 2.5.9. 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.

## 2.6. Marine Ornithology

- 2.6.1. In our Relevant Representations, NRW advised that a detailed assessment of the potential impacts of the Awel-y-Môr project on the breeding seabird features of Pen-y-Gogarth / Great Orme's Head Site of Special Scientific Interest (SSSI) should be undertaken, as this has not been carried out sufficiently to enable the effects on the features of the site to be assessed. The site is designated for breeding Black-legged Kittiwake *Rissa tridactyla* (hereafter referred to as Kittiwake), Common Guillemot *Uria aalge* (hereafter referred to as Guillemot) and Razorbill *Alca torda* (hereafter referred to as Razorbill).
- 2.6.2. In discussion with the Applicant, NRW has advised that the effects of displacement on auks (Guillemots and Razorbills) and collision risk mortality of Kittiwakes should be further assessed for the Pen-y-Gogarth / Great Orme's Head site. We advised that displacement and collision risk would then need to be apportioned using the Scottish Natural Heritage (now NatureScot) apportioning tool (SNH 2018) in order to understand the effects on the features of Pen-y-Gogarth / Great Orme's Head SSSI. If apportionment is greater than or equal to 1% then a Population Viability Analysis would also be required.
- 2.6.3. The proposed location for Awel-y-Môr is approximately 10km from Pen-y-Gogarth / Great Ormes Head Site SSSI (Figure 1; hereafter referred to as Pen-y-Gogarth SSSI). The cliffs host a large colony of breeding seabirds, and the site is designated for breeding Kittiwake, Guillemot and Razorbill. This is the second largest Kittiwake breeding colony in Wales and the largest in North Wales, supporting approximately 821 pairs each year (5-year mean of peak counts 2017-2022 = 821 pairs, excluding 2020 when no data were collected due to the COVID-19 pandemic). In addition, the site supports around 2149 breeding pairs of Guillemot and 236 breeding pairs of Razorbill each year (figures also based on 5-year mean peak 2017-2022 excluding 2020).

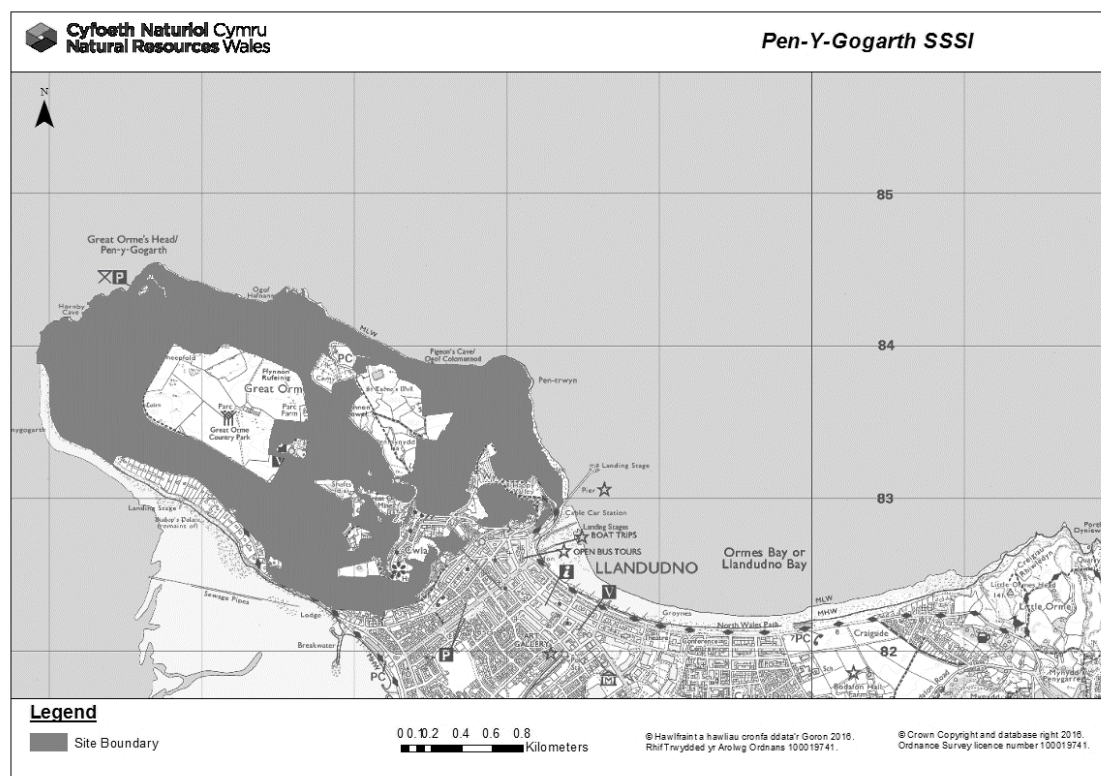


Figure 1: location of Great Ormes Head / Pen-y-Gogarth SSSI.

- 2.6.4. Displacement of seabirds, both during construction and operation, of offshore windfarms is widely recognised as one of the main impacts on biodiversity from offshore windfarms and can impact population dynamics (Dierschke *et al.*, 2016; Welcker and Nehls, 2016). The construction, operation and decommissioning of windfarms have the potential to impact seabirds by displacing individuals from foraging habitats. The impact of displacement is particularly significant for breeding seabirds as they are constrained to obtaining food within a certain distance from the breeding colony. Displacement is likely to result in changes to daily energy and time budgets. Such changes may impact on the body condition of adult breeders which, in turn, can affect breeding success, adult survival and, ultimately, population size. Additionally, breeding success of seabirds may be affected directly if provisioning rates of food from adults to chicks reduce significantly. Research suggests that displacement in Guillemots and Razorbills can be variable. For example, Welcker and Nehls (2016) conducted a literature review of displacement studies, concluding that there was strong evidence that Guillemots and Razorbills are displaced by offshore windfarms. However Dierschke *et al.* (2016) concluded that these species 'weakly avoided' windfarms. It is possible that displacement of auks may be state-specific (breeding or non-breeding), or it may be due to habitat quality and/or availability (e.g. birds will be more easily displaced from poorer quality habitat or where habitat is not limiting). Sensitivity Indexes for Guillemot and Razorbill indicate that both species have a medium level of sensitivity to windfarm displacement, relative to other species (Garthe and Hüppop, 2004).
- 2.6.5. The collision of seabirds with the rotor blades of turbines is a known impact of offshore wind farms (Drewitt and Langston, 2006; Fox *et al.*, 2006; Furness *et al.*, 2013). This can cause direct mortality in adult birds, and indirect mortality for chicks and eggs if adults do not return to the breeding site. The resulting additional mortality may have a substantial impact at a population level because seabirds are long-lived species with a delayed maturity and small clutch size (Cairns, 1992). Estimates of the number of potential bird collisions with turbines reflect both the abundance of a species in the area concerned and flight behaviour, making some species more likely to collide than others (Furness *et al.*, 2013). Models have been

developed which estimate species-specific collision risk, accounting for characteristics including body length, wingspan, flight speed and level of nocturnal activity (Band and Hermansen, 2012). A key aspect of flight behaviour which contributes to estimates of collisions is the height at which birds fly (Chamberlain et al., 2006; Furness et al., 2013). Studies based on aerial survey data suggest that Kittiwake flight heights range from approximately 1-20m above sea level, with the majority recorded at approximately 8-12m (Johnston and Cook, 2016). Therefore, Kittiwakes are sensitive to collision with offshore turbines (Bradbury et al., 2014), and given the wide-ranging nature of this species, individuals may be at risk of collision with several windfarms both during a season and across their life cycle. We note that for Awel-y-Môr the minimum distance from Mean High Water Springs (MHWS) to the lowest point of the rotating blades for each turbine is 22m, however collision risk modelling is still needed to quantify the likely risk to this species from this development.

- 2.6.6. We consider that it is possible that Awel-y-Môr could have a significant effect on the breeding seabird features of Pen-y-Gogarth SSSI, through displacement of birds or through bird collisions with the windfarm. Guillemots and Razorbills could be subject to displacement, whilst Kittiwakes could be subject to collision mortality.
- 2.6.7. The Applicant has not presented an assessment of the likely effects on the breeding seabird features of Pen-y-Gogarth SSSI, as such NRW are unable to conclude that there is no significant effect on the features of the site. We advise that the effects of displacement on Guillemots and Razorbills should be assessed, as well as collision risk mortality of Kittiwakes.
- 2.6.8. NRW advise undertaking a displacement assessment for Guillemot and Razorbill using the Joint SNCB guidance and matrix SNCB (2022)<sup>2</sup>. Due to the uncertainty around specific displacement and mortality rates we advise the applicant to consider a range of rates for Guillemot and Razorbill as follows:

Buffer (km)	Displacement rate range	Mortality rate range
2km	30-70%	1-10%

- 2.6.9. Collision Risk Modelling (CRM) should be used to calculate the collision risk for Kittiwake. This uses mean monthly densities of birds recorded in flight only. We advise using either the Band model (Band and Hermansen, 2012) Excel spreadsheet or the stochastic model R shiny (sCRM) (which is based on the Band model). The sCRM Shiny app and associated user guide available from: <https://www.gov.scot/publications/stochastic-collision-risk-model-for-seabirds-in-flight/>. Avoidance rates for use in CRM are advised in the Joint SNCB response to the Marine Scotland Science Avoidance Rate Review (SNCB, 2014).
- 2.6.10. To determine connectivity with breeding seabird sites, displacement and collision risk will then need to be apportioned using the Scottish Natural Heritage (now NatureScot) [apportioning tool](#) (SNH, 2018). If apportionment is greater than or equal to 1% of baseline mortality, then a Population Viability Analysis (PVA) will also be required. This will estimate the effects on these features over the 25-year life of the windfarm to see how the project is likely to affect Pen-y-Gogarth SSSI.

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<sup>2</sup> The use of the Joint SNCB guidance and matrix SNCB (2022) is the approach recommended by the Statutory Nature Conservation Bodies (SNCBs) to ensure a standard and consistent approach between different developments, according to the best available evidence.



- 2.6.11. NRW has discussed these issues with the Applicant, and it is our understanding that the above work is being undertaken. As such, NRW reserves its position on this matter until the results of the collision risk modelling and displacement assessments (and PVA if appropriate) for this site and features are submitted - at which point, we will provide further advice. Should this work not be submitted, we will be unable to conclude / determine or rule out, as the case may be, the likely damage to the special features of Pen-y-Gogarth SSSI. We advise the Applicant to submit these results as soon as possible.
- 2.6.12. The proposed project location is adjacent to Liverpool Bay / Bae Lerpwl Special Protection Area (hereafter referred to as Liverpool Bay SPA). Liverpool Bay SPA encompasses marine areas supporting large aggregations of wintering Red-throated Diver *Gavia stellata* and Common Scoter *Melanitta nigra*.
- 2.6.13. Red-Throated Diver (RTD) and Common Scoter are features of Liverpool Bay SPA, and Common Scoter are included as a priority species in the section 7 list made pursuant to the Environment (Wales) Act 2016. Both species are sensitive to anthropogenic disturbance and displacement (Fliessbach *et al.*, 2019; Kaiser *et al.*, 2002). The Applicant has stated that they will produce a vessel traffic management plan (paragraph 47 of APP-050), and NRW welcomes this. We agree that this vessel traffic management plan is needed, and that it uses measures such as (but not limited to) restricting vessel movements to existing navigation routes. This is necessary to avoid or reduce disturbance, and therefore displacement. As requested by the Applicant, we will advise them in producing the plan. NRW would be provided with an outline plan for comment at the Applicant's earliest opportunity. Subject to an appropriate vessel traffic management plan being agreed, in writing by NRW, and secured as a condition of the ML, we consider it to be unlikely that there will be an adverse effect on Liverpool Bay SPA.
- 2.6.14. From the evidence provided by the Applicant, it does appear that the extent of the supporting habitat for RTD within Liverpool Bay SPA will be maintained if the project is constructed, and therefore there will be no adverse effect on the RTD feature of Liverpool Bay SPA from habitat loss. However, we note that the lack of displacement of RTD in this part of Liverpool Bay SPA is not consistent with what has been observed in other areas of Liverpool Bay SPA as well as in other areas of the UK and Europe where strong displacement of RTD by offshore windfarms have been observed. For example, research by Heinänen *et al* (2020) found that that RTD were strongly displaced within and up to 5km from offshore windfarms, with effects decreasing with distance away from the windfarm site. Heinänen *et al* (2020) found that displacement effects were very strong up to 5 km away, but a significant effect was still detected up to 10–15 km away. Given this anomaly between published research findings and the evidence submitted by the Applicant, we advise that comprehensive validation monitoring before, during, and after construction is needed to confirm that it is the case that supporting habitat (as identified in the sites conservation objectives) has not been lost. Such monitoring should comprise aerial surveys to look at RTD distribution pre, during and post construction. We recommend the Applicant produces a monitoring plan for this validation work. The monitoring plan should be agreed in writing with NRW and secured as a condition of the ML.
- 2.6.15. Guidance which aims to assist developers in designing and undertaking robust ornithological surveys to inform data collection, assessments and post-consent monitoring requirements has been developed by NRW and may be useful to consider in respect of the above. The guidance, titled "*At sea ornithological survey guidance*" is available [here](#).

## 2.7. Marine mammals

- 2.7.1. NRW have previously advised that the project proposal has the potential to impact marine mammals.
- 2.7.2. Cetacean species are identified in the list under section 7 of the Environment Wales Act 2016. In addition, they are also identified as European Protected Species (EPS) in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ('the Regulations') as amended. It is an offence under Regulation 43 of the Regulations to *inter alia* deliberately capture, injure, kill, or disturb such species or to damage or destroy their breeding site. This reflects the system of strict protection afforded to such species under the provisions of the Habitats Directive.
- 2.7.3. However, an EPS licence may be granted by NRW, as the relevant licensing body, for the purposes specified in Regulation 55(2) of the Regulations.
- 2.7.4. Exposure of marine mammals to loud sounds, such as those generated by pile driving, can lead to reductions in hearing sensitivity known as "threshold shifts" (TS). These can either be temporary (TTS), or permanent (PTS). In the UK, PTS is considered an injury (JNCC 2010). Threshold shifts are assessed using the most recent set of auditory injury criteria (currently Southall *et al*/2019). For impulsive noise (i.e., noise that has almost instantaneous spikes in the sound level), two metrics are used: the sound pressure level (SPL, i.e., the maximum sound level at any point) and the sound exposure level (SEL, i.e., the sound an animal is exposed to over a period of time). These two metrics account for the different aspects of impulsive noise from piling, that is: (1) exposure to sound level, and (2) duration. SEL can be used as a measure of the sound energy released over a single pile strike, a metric known as single strike SEL ( $SEL_{ss}$ ) or summed over multiple pile strikes using a metric known as cumulative SEL ( $SEL_{cum}$ )<sup>3</sup>.

When carrying out impact assessments, we often refer to instantaneous PTS (from SPL) and cumulative PTS (from  $SEL_{cum}$ ), and the spatial extent or range (m to km) that can elicit PTS in marine mammal species from instantaneous and cumulative noise respectively.

- 2.7.5. In our Relevant Representations and subsequent correspondence with the Applicant, NRW advised that the assessment (in the ES and RIAA) of the impacts of underwater noise on marine mammals, such as auditory injury and associated disturbance, was insufficient and should be improved in order to enable the risks to be fully and adequately assessed. The reasons for this are as follows:
- a. **NRW advised that additional modelling should be carried out and additional model details provided to inform assessments of underwater noise and PTS onset, to include carrying out Interim Population Consequences of Disturbance (iPCoD) modelling for harbour porpoise disturbance and PTS injury, including detail of the modelling parameters used which, unlike for other species, is not included in the ES.**
  - i. Since the production of our Relevant Representation, NRW have conducted in-house iPCoD modelling for harbour porpoise (using the beta (unpublished) Cumulative

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<sup>3</sup> If a graph of sound level (dB) vs time for sound from a pile is plotted, the highest point on the graph would be SPL,  $SEL_{ss}$  is "the area under the graph", and  $SEL_{cum}$  is roughly  $SEL_{ss}$  x the number of pile strikes.

Effects Framework project web-based portal [CEF ([ceh.ac.uk](http://ceh.ac.uk))] – this is a web based interface that allows iPCOD v5.2 to be used in a more ‘user-friendly’ way). The population input parameters used were those from Sinclair *et al* (2020) and Evans & Cordes (in prep) (the latter being Welsh / regionally relevant population demographics) and the development parameters were as presented in the Awel-y-Môr ES. A piling schedule was created by randomising 201 piling days through a single year. The worst-case PTS SEL (83) and disturbance prediction (2112: Sea Watch density scenario) (see Volume 2: Chapter 7: Tables 20 and 28 (p131 and 137) [AS-026]) were modelled. The results indicate negligible effect from the combination of PTS and disturbance to the population which indicates AEOSI can be ruled out for all harbour porpoise SACs in the Celtic and Irish Seas (CIS) Marine Mammal Management Unit (MMMU). We advised the Applicant that they should provide their own full modelling to support the conclusion of minor / negligible effect (in EIA terms) and no AEOSI on North Anglesey Marine SAC - this being in view of Conservation Objective 1: Population viability conservation objective. We advised the Applicant that until this modelling is undertaken the evidence submitted could not be relied upon to rule out AEOSI.

- ii. Additionally for harbour porpoise, we advised that the maximum area ensonified out to a behavioural threshold (e.g., 143 dB re 1 $\mu$ Pa<sup>2</sup>s or similar (see d below)) should be modelled (at the furthest corners/nodes of the array footprint) and to express this maximal area as a proportion of the CIS MMMU area. In other words, the area covered by the 143dB contour should be calculated and expressed as a percentage of the CIS MMMU area. This would provide an indication of the area of habitat within the MMMU that could be potentially disturbed (i.e., causing displacement to marine mammals). The area is functionally linked to the harbour porpoise features of the SACs in the MMMU and the impact pathway (disturbance from underwater noise) manifests as displacement (albeit temporary – 1 year) from functionally linked habitat. NRW accordingly advised the Applicant that AEOSI could not be ruled out in the absence of such information, and we advised that such information should be presented by the Applicant to demonstrate no AEOSI.
- iii. Following on from a meeting with the Applicant on 6/9/2022, a clarification note – *Marine Mammal Clarification Note* - dated September 2022 was issued to NRW with respect to the above issues. The Applicant conducted modelling in iPCOD as requested. NRW is satisfied that the results demonstrate there is no significant effect at the population level and can be relied upon to rule out AEOSI to North Anglesey Marine SAC and all other SACs with harbour porpoise feature in the MMMU in relation to auditory injury (PTS) (see NRW’s [Position Statement](#) on use of MMMUs in HRA for map of relevant SACs).
- iv. For the underwater noise disturbance impact pathway for harbour porpoise, various behavioural thresholds and a 26km Effective Deterrent Radius were explored by the Applicant in the clarification note and the predicted areas ensonified that overlapped with North Anglesey Marine SAC were quantified. All approaches indicated that less than 4% of the area of the SAC were disturbed. On this basis, NRW is satisfied that AEOSI can be ruled out (see d below for further details). However, as described above at 2.7.5a.ii, the total area ensonified and the proportion of the CIS MMMU habitat disturbed has not been described. NRW request that this further information be included in Table 2 (page 11) of the clarification note to establish the extent of noise disturbance in relation to supporting/functionally linked habitat.
- b. **NRW advised that there was insufficient justification for the absence of assessment of cumulative PTS in the Habitats Regulations Assessment (HRA); and as a result that the HRA was incomplete.**



- i. Cumulative PTS ( $SEL_{cum}$ ) has been modelled in the ES but results were not included in the HRA. This information is required for the purposes of Appropriate Assessment and in order to rule out AEOSI. Using the values in the ES (Volume 2: Chapter 7: Table 20 (p127), 21 (p128), and 23 (p131) [AS-026]) for harbour porpoise, bottlenose dolphin and grey seal respectively, NRW has subsequently modelled the effect of cumulative PTS on the relevant MMMU population for each species of relevance (bottlenose dolphin, grey seal, harbour porpoise) using iPCOD (via the CEF web-based portal: [CEF \(ceh.ac.uk\)](http://cef.ceh.ac.uk) - see section a for further modelling details). The modelling results indicated that cumulative PTS ( $SEL_{cum}$ ) on its own is highly unlikely to result in a significant adverse effect on the population of the MMMU and therefore no AEOSI in the context of the population viability conservation objectives of any of the relevant SACs (see NRW's [Position Statement](#) on use of MMMUs in HRA for map of relevant SACs). Nevertheless, we advised the Applicant that they would need to conduct and present such information to be able to consider cumulative PTS in the HRA and rule out AEOSI.
- ii. Following on from a meeting with the applicant on 6<sup>th</sup> September 2022, a clarification note – *Marine Mammal Clarification Note* - dated September 2022 was issued by the Applicant to NRW with respect to the above issues. The Applicant conducted modelling of cumulative PTS in iPCOD as requested by NRW (as described in 2.7.5b.i above). Results indicate, as concluded above, that there is no AEOSI to any of the relevant SACs (see NRW's [Position Statement](#) on use of MMMUs in HRA for map of relevant SACs) in Wales with marine mammal features. We are now satisfied that the information provided addresses our concerns and supports the conclusion of no AEOSI from this pathway and no further information is required in this regard.
- c. **NRW advised that there were insufficient grounds to conclude that PTS-onset risk has a negligible impact on harbour porpoise because cumulative PTS-onset had been excluded from the Marine Mammal Mitigation Protocol (MMMP)**
  - i. It is NRW's understanding that cumulative PTS was not included in the MMMP [APP-107] because the Applicant argued that the assumptions that underpin the PTS  $SEL_{cum}$  metric (i.e. the equal energy hypothesis) lead to precautionary ranges, and that  $SEL_{cum}$  is therefore not valid. While there has been research to try to find an alternative to the equal energy hypothesis, the general scientific consensus is that there are not enough data yet to support a departure from this model. The Southall *et al* (2019) thresholds recommend the use of dual metric criteria (i.e., SPL and SEL) so even though in its current form,  $SEL_{cum}$  gives precautionary results it is the best way there is of assessing multiple consecutive instances of impulsive noise. We therefore advised that the Applicant continues to use the Southall *et al* 2019 thresholds and includes instantaneous PTS (SPL) and cumulative PTS (SEL) in the assessments (EIA, HRA) and the MMMP.
  - ii. The MMMP (Volume 4: Annex 7.2 [APP-107] states: “*The primary aim of this draft Outline MMMP is to set out the measures proposed to reduce the risk of Permanent Threshold Shift (PTS) auditory injury to any marine mammal species in close proximity to the pile driving for the installation of AyM foundation structures to negligible (as defined in Section 1.5 [sic – should be section 7.5] in Volume 2, Chapter 5 [sic – should be chapter 7]: Marine Mammals).*”
  - iii. The Applicant proposes the use of the industry standard protocol for minimising the risk of injury (PTS) to marine mammals (JNCC (2010): [Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise | JNCC Resource Hub](#)) i.e. ‘standard mitigation’ (with a slightly enhanced observation

zone of 640m (cf the usual 500m)). However, this would not 'mitigate' against cumulative PTS for harbour porpoise when considering the proposed Worst Case Scenario (WCS) (Multileg 2 at 1 location: NW [see Volume 2: Chapter 7 (Table 20 p127 of ES)] [AS-026]), which suggests cumulative PTS will extend to 6.3km (and for the next Worst Case [monopiles at NW location] suggests cumulative PTS extends to 4.3km). Cumulative PTS for other Annex II (bottlenose dolphin and grey seal) species is predicted to extend to less than 100m and, as such, standard mitigation is sufficient.

- iv. However, our in-house modelling using iPCOD (on Annex II species only – see a above) suggests there would not be an AEOSI, or a likely significant effect on the environment in EIA terms as a result of cumulative PTS (with or without the additional pathway of disturbance). Thus, the protocols for minimising injury (i.e., 'mitigation') would not be formally required for the purposes of removing AEOSI in HRA or reducing significant effects in EIA. Nevertheless, the 'mitigation' should be incorporated in accordance with industry best practice to reduce effects in relation to EPS protection (deliberate injury i.e. PTS). The industry standard mitigation would adequately mitigate against instantaneous PTS but not cumulative PTS in harbour porpoise. Therefore, although mitigation for cumulative PTS may not be a requirement for AA / EIA in this case the use of the mitigation protocols is generally required to minimise risk of injury in relation to EPS and the Applicant is advised to apply for an EPS licence for injury (to individuals).
- v. One of the tests for EPS licensing is that of "*no satisfactory alternatives*" (alternative solutions). Mitigation such as Acoustic Deterrent Devices (ADDs) and Noise Abatement Systems (such as bubble curtains) will be a consideration when considering this test. It should be noted that one of the other tests for EPS licensing is to assess whether "*...the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range*".
- vi. NRW advise the Applicant that results and interpretation from modelling cumulative PTS in harbour porpoise using iPCOD (as described in a above) should be included in the MMMP to allow NRW PS to confirm no effect (or otherwise) in relation to HRA or EIA and evaluate mitigation options in relation to EPS licensing.
- vii. We note that the Applicant's intention is that "*...The MMMP will be secured as a condition within the Marine Licence*". EPS mitigation and industry best practice mitigation may be a consideration and an actionable condition in the Marine Licence and/or the EPS licence but the licensing for EPS would be the responsibility of the Species Licensing team within NRW.
- viii. Following on from a meeting with the applicant on 6/9/2022 a clarification note – *Marine Mammal Clarification Note* - dated September 2022 was issued to NRW with respect to the above issues. The Applicant has confirmed (on page 7) that "*...cumulative PTS will be mitigated in the final MMMP if guidance and evidence at the time suggest that it is appropriate to do so. This will ensure that the potential risk of PTS is reduced to negligible levels for all species*".
- ix. NRW suggests editing this sentence to: "*... the Applicant can confirm that cumulative PTS will be mitigated as outlined in the final MMMP unless guidance and evidence at the time suggest that it is not appropriate to do so...*". In other words, NRW request that mitigation is considered for cumulative PTS in the likely event that at the time there will be no new evidence that improves our collective understanding of cumulative PTS.

- x. NRW advise that mitigation is required in respect of EPS protection and needs to be regulated by the ML and/or the EPS licence (for which an application has not yet been submitted and which the applicant is encouraged to do).

**d. NRW does not recommend the use of dose/response (D/R) curves to conduct an area-based assessment to estimate the area of harbour porpoise habitat disturbed; D/R curves are used to estimate the number of animals affected, not the habitat/area affected. Given that disturbance for harbour porpoise SACs is defined through spatial and temporal thresholds of 20% daily and 10% seasonal disturbance, as set out in the supporting advice for the disturbance conservation objective (CO2) for porpoise sites, we advise that an area-based assessment should be carried out where the extent of habitat that is ensonified to a level that might produce significant disturbance is determined. Although there is a strong link between area lost and numbers disturbed, directly equating the probability of population response to loss of habitat / loss of habitat quality (i.e. using a D/R curve to calculate habitat loss) is currently not possible.**

Dose-response (D/R) curves are a method used to estimate the numbers of animals disturbed by underwater noise. D/R curves are based on the fact that not all animals in an impact zone will respond and are determined from field data. D/R curves consist of a graph which shows probability of a behavioural response (Y-axis) against sound level (X-axis).

Therefore, the probability of a response, and thus the proportion of animals experiencing behavioural disturbance, will depend on the “dose” (in this case, the sound level).

- i. For harbour porpoise, NRW recommends that an unweighted noise threshold of 143 dB re 1µPa<sup>2</sup>s (un-weighted) single strike sound exposure level (Brandt *et al* 2018; Heinis *et al* 2019) is used as the extent of disturbance for impulsive noise sources. This threshold is the modelled average of six different studies of full-scale pile driving operations and thereby represents the largest amount of empirical data (Tougaard 2021). Other threshold values might be suitable (e.g. 140 dB re 1µPa<sup>2</sup>s single strike SEL - ASCOBANS, 2014; or 145 dB re 1µPa<sup>2</sup>s single strike SEL - Lucke *et al* 2009). The 143 dB re 1µPa<sup>2</sup>s noise contour / isopleth is overlayed onto a map of the area to determine the extent of overlap with North Anglesey Marine SAC, and the extent of the area of the SAC that is ensonified to a level that could be considered significant disturbance can then be determined. The extent of the overlap is then compared against the 20%/10% thresholds set out in the conservation objectives for the site (CO2: significant disturbance).
- ii. The Applicant used a harbour porpoise D/R curve as a proxy for other species of cetacean. The literature suggests that bottlenose dolphin and minke whale are more tolerant to noise than harbour porpoise. Anecdotal / qualitative observations also suggest that these species behave very differently from harbour porpoise. Therefore, applying a D/R curve from a more sensitive species (e.g., harbour porpoise) to a less sensitive species (e.g. bottlenose dolphin) is likely to result in overestimates of disturbance, which might be considered an overly precautionous approach. It is agreed that consideration should be given to the fact that sound energy of pile driving is highest in the low frequency range and overlaps more with the hearing range of a minke whale than with that of a harbour porpoise - pile strikes of the same

unweighted single-strike SEL ( $SEL_{ss}$ ) are louder for a minke whale than a harbour porpoise. For minke whale, however, evidence from studies with sonar suggests that they are less sensitive by ca 40-50 dB re 1  $\mu$ Pa (Tougaard 2021). NRW acknowledges that the Applicant used a method known to be precautionary for other species and explained its basis for doing so in some detail. Although NRW would not recommend this approach, given that other threshold options are available for other species (minke whale and bottlenose dolphin) (e.g., Level B harassment: NMFS 1995, 2005)<sup>4</sup>, we do not explicitly rule this method out.

- iii. NRW advises that the Applicant include an analysis using a fixed threshold, such as 160 dB re 1  $\mu$ Pa  $SPL_{rms}$ , for impulsive noise for bottlenose dolphin (Level B harassment: NMFS 1995, 2005) to calculate the number of dolphins disturbed. This would also be useful to compare against the results of the proxy D/R analysis. This is because D/R curves are developed from fine scale behaviour – therefore even if these species started to respond at similar sound levels, there is no guarantee that the probability curve will have the same shape for different species.
- iv. There currently are not enough data to establish a D/R curve or a definite threshold for grey seal. NRW agrees that using harbour seal D/R curves as a proxy for grey seal is appropriate in this case, since there is evidence that grey seal show similar reactions to harbour seals and are within the same hearing group (Aarts *et al* 2017, Gotz and Janik 2010).
- v. Following on from a meeting with the applicant on 6/9/2022, a clarification note – *Marine Mammal Clarification Note* - dated September 2022 was issued to NRW with respect to the above issues. The Applicant conducted further area-based assessments for harbour porpoise using a range of thresholds, an EDR and the D/R, by way of comparison. All methods indicated considerably less than 20% of the area of NAM SAC would be disturbed and thus AEOSI from disturbance can be ruled out. NRW are satisfied that no further information is required in this regard.
- vi. NRW advise adding an analysis of the area ensonified from 160dB  $SPL_{rms}$  for bottlenose dolphin so as to compare against the D/R proxy.

2.7.6. NRW previously advised that insufficient justification to support a conclusion of no Likely Significant Effect (LSE) from vessel collision for bottlenose dolphin, grey seal or harbour porpoise features of relevant SACs was presented by the Applicant, and that LSE for vessel collision should not be ruled out. The submitted Report 5.2 RIAA (see Table 4 p105 [APP-027]) lists only underwater noise as the pathway with LSE for all mammal species/SAC combinations.

2.7.7. Page 65; Table 1 of the RIAA [APP-027] states: “*The Applicant acknowledges this feedback. The Project is making a commitment to minimise the risk of collisions. The adoption of best practice vessel handling protocols (e.g. following the Codes of Conduct provided by the WiSe Scheme, Scottish Marine Wildlife Watching Code or Guide to Best Practice for Watching Marine Wildlife) will minimise the potential for any impact. The final codes of conduct will be discussed and agreed with NRW and JNCC through the marine licence conditions.*”

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<sup>4</sup> Level B Harassment is a threshold that was first introduced in the US by NOAA/NMFS. It is a widely used general noise threshold (i.e. not species specific) for all marine mammals for assessment purposes. Thresholds are: 120 dB  $SPL_{rms}$  for continuous noise, and 160 dB  $SPL_{rms}$  for impulsive noise.

- 2.7.8. While NRW encouraged the Applicant's intention to minimise the risk of collisions with vessels and to adopt best practice (as per our advice on the Preliminary Environmental Information Report (PEIR) and RIAA comments log (Table 1: RIAA [APP-027]), we considered that the potential for an LSE could not be ruled out and thus needed to be taken forward to Appropriate Assessment. We advised that the information provided by the Applicant in light of the application would likely be sufficient to inform an Appropriate Assessment and that had vessel collision been included in the RIAA, NRW would not anticipate an AEOSI from this pathway with the listed mitigation (including best practice and codes of conduct) in place.
- 2.7.9. We noted the commitment by the Applicant to produce and implement a Vessel Traffic Management Plan in consultation with NRW. We discussed with the Applicant that whilst it appears that this plan relates solely to ornithological interests, we recommend that the Plan also appropriately considers marine mammal interests. We advised that such a plan is secured as a condition in the ML.
- 2.7.10. Following on from a meeting with the applicant on 6/9/2022, a clarification note – *Marine Mammal Clarification Note* - dated September 2022 was issued to NRW with respect to the above issues. NRW had highlighted that a commitment to embedded mitigation cannot be used to scope out an impact from LSE. The Applicant provided additional text in the clarification note on the assessment of vessel collisions for the RIAA. NRW agrees that the proposed management of vessel traffic is sufficient to rule out any AEOSI.
- 2.7.11. We advise that the Applicant submits the above-mentioned Clarification Note into the DCO Examination at the next available deadline.
- 2.7.12. A number of figures in the revised marine mammal Chapter 7 [AS-026] appear to be incorrect. For example, Figure 21 is supplied in place of Figure 19, and Figure 21 does not contain all the necessary data layers either time it is presented. Corrected figures should be supplied alongside confirmation of the nature of any revisions from the original version – this is required to provide NRW with confidence that the revisions and assessments have been applied correctly.
- *Cumulative / in-combination effects*
- 2.7.13. 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.

## 2.8. Water Framework Directive (Offshore)

- *North Wales Coastal Water Body*

### *Hydromorphology*

- 2.8.1. NRW agrees with the assessment of potential effects on the hydromorphology resulting from the presence of physical structures as provided in Volume 2, Chapter 2: Marine Geology, Oceanography and Physical Processes [APP-048]. We therefore agree with the conclusions of the WFD CA for the hydromorphology element – that the proposed activities will not result in deterioration of the water body or jeopardise the attainment of its objectives.



### *Biology*

- 2.8.2. NRW agrees with the characterisation of the biology, assessment methodology and assessment conclusions of the potential impacts on benthic receptors as outlined in Volume 2, Chapter 5: Benthic and Subtidal Ecology [APP-051]. NRW therefore agrees with the conclusions of the WFD CA for biology: habitats within the water body – that the biological elements associated with this would not be at risk of deterioration as a result of the project.

#### *- Clwyd Transitional Water Body*

### *Hydromorphology*

- 2.8.3. Based on the statement made at paragraph 128 and within Table 9 of Volume 4: Annex 3.1 [APP-094] that “...there are no current intentions to install structures which may alter the hydromorphology of the Clwyd transitional water body”, NRW agrees with the conclusions of the WFD CA for the hydromorphology element within the Clwyd water body.
- 2.8.4. Notwithstanding this, we advise that if this intention changes, and infrastructure associated with the scheme is to interact with the Clwyd transitional water body, then this will need to be appropriately assessed and the WFD CA revisited to consider this, and any potential footprint and secondary effects properly assessed.

### *Biology*

- 2.8.5. NRW agrees with the WFD CA conclusions for biology – habitats within the water body, that provided no direct interaction with the biological habitats in the Clwyd transitional water body will occur due to the proposed trenchless techniques, the project will not cause deterioration of the biological elements within the water body, or jeopardise the attainment of Good Ecological Potential, the WFD objective for the water body.
- 2.8.6. We note the commitment by the Applicant to utilise trenchless techniques to bring the cable underneath the Clwyd estuary. This commitment is set out in the Crossing Schedule [APP-121]. We require confirmation that the techniques employed for crossing the river will be of sufficient depth to avoid any potential for interaction with the saltmarsh habitat (please also see comments at 2.4.1 – 2.4.2 above). We advise this information is provided in the Outline CMS [APP-313]. We also advise that if the proposal to utilise trenchless techniques changes, then the WFD CA will need to be revisited and any impacts properly assessed.
- 2.8.7. The Applicant will be required to assess the potential effects of all activities associated with watercourse crossings, including the potential for secondary effects in all hydrologically connected WFD water bodies, where there is a pathway for effect, for example: sediment transport or effects to migratory species. Where doubt remains regarding the nature of the watercourse crossings, a reasonable worst-case scenario must be assumed as the basis for assessment. The assessment will also need to take into account the potential for cumulative effects where they may occur. Please also see sections 3.3.6 below.

#### *- Marine Water & Sediment Quality*

- 2.8.8. NRW noted in its Relevant Representation that whilst we agreed with the conclusions in the ES with respect to suspended sediment (water clarity) and contaminated sediment in WFD water bodies (Chapter 3: paragraphs 129&132 [APP-049], the information presented in the MW&SQ Chapter had not been transposed in the WFD Compliance Assessment (CA) and that as such, we could not agree with the conclusions of the CA with respect to those aspects of the assessment. Our concerns regarding CA signposting were discussed in a meeting with the Applicant on 13.09.2022. It was agreed more robust signposting would be made throughout and that would be sufficient to address our concerns.

2.8.9. NRW agrees with the conclusions provided within the Marine Water and Sediment Quality Clarification Note with respect to impacts on Dissolved Oxygen and Phytoplankton by suspended sediment. We agree there will not be an impact on WFD water body status.

- *Marine Fish*

2.8.10. NRW agrees with the conclusions that the project will not impact Water Framework Directive (WFD) fish status in the affected Transitional waterbodies.

- *General*

2.8.11. We welcome the Applicant's proposal to produce a biosecurity risk assessment, as outlined in the Schedule of Mitigation [APP-310] and the Marine Licence Principles document [AS-023]. We advise this is secured by a requirement of the DCO and a condition of the Marine Licence as it is of relevance to both aspects of the consenting process. NRW should be consulted on the suitability of a marine biosecurity risk assessment and plan prior to commencement of any works.

## 2.9. Decommissioning (Offshore)

2.9.1. NRW acknowledges the commitment to produce a Decommissioning Plan under section 105 of the Energy Act 2004 and as identified in under Requirement 20 of the draft DCO [AS-014] and in the Marine Licence Principles document [AS-023].

2.9.2. We note, from the ES, the intention to completely remove all infrastructure at the end of the operational lifetime of the project, unless, closer to the time of decommissioning it is decided that removal would lead to a greater environmental impact than leaving some components *in situ*.

2.9.3. NRW considers that offshore renewable projects should produce decommissioning plans that retain all decommissioning options (maintain, full removal and partial removal); the options can then be assessed and refined closer to the time of decommissioning itself in consultation with NRW. NRW reserves its position until a draft plan is submitted at which point, we will provide further advice.

2.9.4. We advise that the Applicant follows the extant industry decommissioning guidance produced by [BEIS](#).

2.9.5. We note that the requirement for the production of a Decommissioning Plan for the offshore works is referenced in the draft DCO [AS-014] for the project. We recognise that there are issues that substantively overlap between the determination of the DCO and ML. However, given that the respective consents are determined under separate and distinct legal frameworks, we consider it would be prudent to understand how decommissioning plans (for both the offshore and onshore aspects of this project) will be dealt with.

## 2.10. Mitigation: Schedule of Mitigation and the Marine Licence Principles

2.10.1. There are a number of inconsistencies between the Schedule of Mitigation [APP-310] and the Marine Licence Principles document [AS-023] that require clarification. For example, the Schedule of Mitigation refers to a *Cable Specification and Installation Plan* to be secured as part of the marine licence, but which is not recognised in the Marine Licence Principles document as a specific document (albeit cable management plans are noted). Additionally, a *Vessel Traffic Management Plan* is proposed in Volume 2: Chapter 4: Offshore Ornithology [APP-050] but this plan does not appear within either the Schedule of Mitigation



or the Marine Licence Principles document. Further, a *Scour Protection Management Plan* is proposed within the ES and to be secured by the ML (see also APP-310). However, AS-023 notes that the plan “...is not anticipated to be needed given minimal scour predictions.”

- 2.10.2. Such discrepancies may result in confusion and uncertainty as to the extent of measures that may be secured in respective consents. We request that clarification regarding such discrepancies and inconsistencies is provided and advise that both APP-310 and AS-023 are consistent and contain accurate reference to all proposed mitigation and plans as described in the application documents.

### **3. ONSHORE**

#### **3.1. Designated Landscapes - Seascape, Landscape and Visual Effects**

- 3.1.1. NRW advises that the offshore works are likely to have numerous and extensive significant adverse effects on seascape, landscape and visual receptors within the Isle of Anglesey Area of Outstanding Natural Beauty (AONB) and Snowdonia National Park (NP) and within their settings. These significant adverse effects represent a substantial degree of harm to these designated landscapes which we consider to be in conflict with the purposes of the NP and AONB.
- 3.1.2. In our comments below, we explain the significant effects that we consider are likely to arise for the operational phase of the offshore development. We also advise on further mitigation that should be considered in order to minimise the effects of the project. Finally, we advise on enhancement measures that should be considered.
- *Summary of the effects arising from the project*
- 3.1.3. Our detailed comments on the seascape, landscape and visual effects of the project are provided in Annex B. The Seascape Landscape and Visual Impact Assessment (SLVIA) has identified significant adverse effects on a number of seascapes, landscape and visual receptors. NRW is in agreement with the SLVIA on the significant effects identified and these points of agreement are explained in Annex B.
- 3.1.4. We are also in agreement with the SLVIA conclusions for some effects that are non-significant. Again, these points of agreement are clearly identified in Annex B.
- 3.1.5. Whilst there is broad agreement on most of the findings in the SLVIA, NRW considers that there has been an under-estimation of some seascape, landscape, and visual effects on designated landscape receptors within the SLVIA. These are also explained in detail in Annex B. However, we do not consider that the areas of disagreement affect our overall conclusion and that, solely based on the conclusions in the ES where there is agreement, we consider the proposal would conflict with the purpose of the Isle of Anglesey AONB and Snowdonia NP.
- 3.1.6. NRW's key conclusions with respect to the likely effects of the offshore development are summarised below (as mentioned above, we refer you to Annex B for our detailed advice):
- 3.1.7. With respect to the Isle of Anglesey AONB and Snowdonia NP, NRW considers that the proposal will result in substantial harm and adverse effects that conflict with their purpose of conservation and enhancement of natural beauty, which is enshrined in the purposes of these designated landscapes.

- 3.1.8. NRW considers that Special Qualities set out in the respective management plans for the areas which support the designations, would be adversely affected.
- 3.1.9. The ES considers that the acknowledged harmful effects would not affect the overall integrity of the Isle of Anglesey AONB or Snowdonia NP or their inherent natural beauty. NRW disagrees and considers that the degree of harm to nationally designated landscapes is substantial and is contrary to the purpose of conservation and enhancement of natural beauty.
- 3.1.10. NRW considers that there would also be non-significant, but adverse effects on the Clwydian Range and Dee Valley AONB as well as other non-significant but adverse effects on the Isle of Anglesey AONB and Snowdonia NP. The adverse, but non-significant effects are numerous and detrimental. They do not conserve and enhance natural beauty and add to the overall adverse effect on designated landscapes.
- 3.1.11. In addition, the ES notes significant adverse effects on the community of Moelfre and Benllech and on several special qualities of the Isle of Anglesey AONB. We agree with this assessment.
- 3.1.12. The ES also acknowledges significant adverse effects on 7 Seascape Character Areas which form part of the setting of the two designated landscapes. We agree with this assessment.
- 3.1.13. The ES also notes that proposals are likely to have adverse, though non-significant night-time visual effects on the Isle of Anglesey AONB and Snowdonia NP. We note, and agree, that dark skies are a noted feature of the Peace & Tranquillity Special Quality within the Anglesey AONB. The proposal would have a detrimental effect on this special quality.

- *Cumulative effects*

- 3.1.14. NRW are concerned that adverse incremental<sup>5</sup>, combined cumulative<sup>6</sup> seascape, landscape and visual effects may arise on the Isle of Anglesey AONB and Snowdonia NP because of plans and projects both offshore and onshore.
- 3.1.15. The proposal would substantially increase the baseline of offshore wind farms affecting designated landscapes along the North Wales coast, such that significant adverse effects would be widespread across this area.
- 3.1.16. Further offshore Crown Estate leasing areas are planned (Round 4) to the northwest of the proposal which could add to adverse effects.
- 3.1.17. The Morlais tidal energy scheme is approved, and it has been acknowledged that this would have a significant adverse effect on another part of the Isle of Anglesey AONB (the northwest coast of Holy Island).
- 3.1.18. As well as two pre-assessed areas for wind energy developments (onshore) that are identified in Future Wales: 2040 (*Policy 17: Renewable and Low carbon Energy and*

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<sup>5</sup> GLVIA3 7.17 describes incremental change as a result of successive individual developments such that the combined landscape and/or visual effect is significant even though the individual effects may not be.

<sup>6</sup> GLVIA3 7.3 describes cumulative effects as 'the additional changes caused by a proposed development in conjunction with other similar developments, or as the combined effect of a set of developments, taken together'

*Associated Infrastructure: Pre-assessed Areas for Wind Energy*) to the east of Snowdonia NP, there is a further area (3) to the southeast of the NP. Developments in area 3 have the potential for significant adverse effects on another part of the NP.

- 3.1.19. For context, the increasing scale of both offshore and onshore wind energy developments, as illustrated by this proposal, means that adverse visual effects are increasingly likely as the renewable sector rapidly progresses in and around this coastline. This increasing scale means that significant adverse effects are likely at increasingly greater distances from the receptor. Onshore windfarms are currently being progressed to scoping stage that are 250m height to blade tip and offshore windfarms such as this proposal are proposed at 282m or 332m to blade tip. This means that the potential for significant adverse cumulative effects from windfarms located in leased and pre-assessed areas is likely.

- *Mitigation*

- 3.1.20. Whilst we acknowledge the embedded mitigation of the reduced western extent of the array, and that a reduction in the number of WTGs has been applied, we do not consider it sufficient to reduce the likely significant effects at the numerous viewpoints within Isle of Anglesey AONB and Snowdonia NP. The visual impacts will lead to significant adverse effects on landscape character within these Nationally Designated Landscapes and within their seascape settings. The ES acknowledges that the likely significant effects on these landscapes have not diminished because of the reduction in the extent and number of turbines.
- 3.1.21. The Overarching National Policy Statement for Energy (EN-1) 2011 at 5.9.8 states that *"virtually all nationally significant infrastructure projects (NSIPs) will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate"*. EN-1 at 5.9.12 notes that *"the duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them"*. National Policy Statement for Renewable Energy Infrastructure (EN-3) states at 2.6.208 that *"where an Offshore Wind Farm is in sight of the coast there may be adverse effects. The IPC should not refuse to grant consent unless an alternative layout in the same site could minimise harm or the harmful effects outweigh the benefits"*. We consider that the siting and scale of this proposal would give rise to substantial harm to nationally designated landscapes. The proposal is not simply visible from within a designated landscape, but has numerous significant adverse visual effects on two of these areas. We do not consider that harm has been minimised and advise that the Applicant considers measures to further minimise harm, including reductions in the array area and/or in the scale/number of turbines.
- 3.1.22. The Welsh National Marine Plan SOC\_6: Designated Landscapes states that *"Proposals should demonstrate how potential impacts on the purposes and special qualities for which National Parks or AONBs have been designated have been taken into consideration and should, in order of preference: a) Avoid adverse impacts on the designated landscapes; and/or b) Minimise impacts where they cannot be avoided; and/or c) Mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Opportunities to enhance designated landscapes are encouraged"*. We advise the proposal has not avoided adverse impacts on designated landscapes and has not adequately minimised impacts. The proposal would result in significant adverse impacts.

- 3.1.23. We advise a further substantial reduction in the array area and number of turbines, along with a reduction in scale and height of the turbines would be needed to minimise adverse effects on the Isle of Anglesey AONB and Snowdonia NP.
- 3.1.24. In our Relevant Representations we advised that further consideration be given to NRW's evidence base "*Seascape & visual sensitivity to offshore wind farms in Wales: Strategic assessment and Guidance*" (White Consultants for NRW, March 2019<sup>7</sup>) to assist in informing an appropriate reduction in the extent/scale of the proposed development. NRW had previously advised the Applicant of this in our section 42 consultation response on 8<sup>th</sup> October 2021. However, the Applicant has not followed the guidance in this document. The document comprises commissioned research reports relating to designated landscapes taking the form of an evidence base (Stage 1 report), strategic siting guidance (Stage 2 report), and the application of 1 and 2 in a sensitivity assessment (third report). The three reports should be read together. These reports indicate relative sensitivity in terms of buffer size and are typically used as one layer among others in a spatial constraints analysis.
- 3.1.25. Accordingly, NRW advises that the Applicant undertakes the 3-stage approach identified below to inform a further reduction:

*Stage 1 Report: Ready Reckoner*

The proposed MDS A is for turbines of 332m height to blade tip. This places them in the 301-350m range, where the report advises that a buffer of 32.8km is required to avoid medium magnitude effects on high sensitivity receptors, which are frequently of major-moderate significance. A buffer of 44km is required to avoid low magnitude effects on high sensitivity receptors, which are frequently of moderate significance. MDS B is for turbines of 282m to blade tip. This places them in the 226-300m range, where the report advises that a buffer of 28km is required to avoid medium magnitude effects on high sensitivity receptors and 41.6km required to avoid low magnitude effects.

*Stage 2 Report: Guidance on siting offshore windfarms*

Table 4.1 of this report identifies measures to avoid or minimise seascape and visual effects including:

- **3.** *Locate developments beyond the limit of negligible visual effects, particularly for the highest sensitivity area National Parks/AONBs overlaid with Heritage Coasts, and*
- **4.** *If the above is not possible, locate development beyond Stage 1 Report low magnitude buffer distances of the highest potential turbine proposed from National Parks and AONBs (44km for 301-350m turbines);*
- **6.** *Locate developments in areas identified as lower sensitivity in the Stage 3 Report;*
- **14.** *Particularly avoid developments within buffer distances of several separate designations;*
- **16.** *Example 1 avoid locations offshore from Islands;*
- **18.** *Example 3 avoid locations filling or almost filling framed views;*
- **19.** *Avoid potential cumulative impacts by extending the width of arrays visible through extensions or additional wind farms.*

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<sup>7</sup> [Natural Resources Wales / Offshore wind developments](https://naturalresourceswales.gov.uk/natural-resources-wales/offshore-wind-developments)

*Stage 3 Report, Seascape, and visual sensitivity assessment for offshore wind farms*

Part 1 of Stage 3 identifies zones within the offshore area with differing levels of sensitivity. Part 2 provides a detailed sensitivity and capacity assessment for each zone. The proposal is located in Zones 1 and 2. **Zone 1**, adjacent to Gwynt y Môr is of medium sensitivity, and up to 22.6km from shore considered to have potential for a small extension, but scope is limited. Extending windfarm development westwards of Gwynt y Môr would cause cumulative effects on sensitive receptors. A small number of additional turbines may be possible, but cumulative effects and avoiding extending across the horizon from key viewpoints would need to be carefully considered. **Zone 2** is of medium/low sensitivity, and between 22.6 and 44km from shore and the evidence base indicates that potential development is dependent on the height of turbine and likely extent of the overall windfarm. Development beyond Gwynt y Môr would tend to limit harm. There is potential for combined cumulative effects on the Great Orme and Snowdonia if further windfarms or extensions extend west, especially closer to the shore. The area has the ability for further development to be accommodated north of Gwynt y Môr (but away from Douglas oil field). The size of the turbine should be similar to the existing development closer to the shore but can increase in height further offshore taking into account the visual impact analysis.

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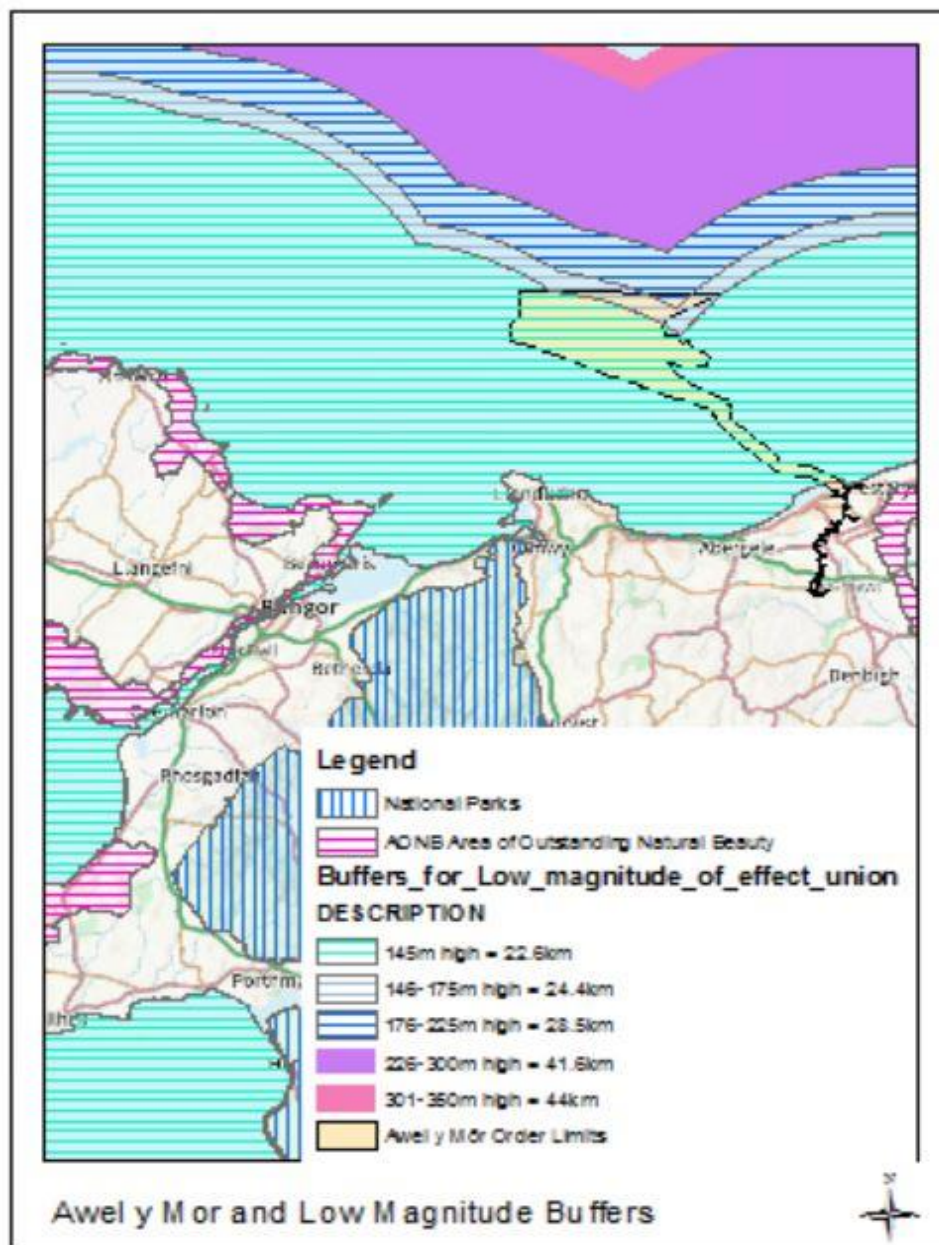


Figure 2: showing the Avel y Môr Order Limits overlaid with the buffers from the White Consultants' report for a Low magnitude of effect

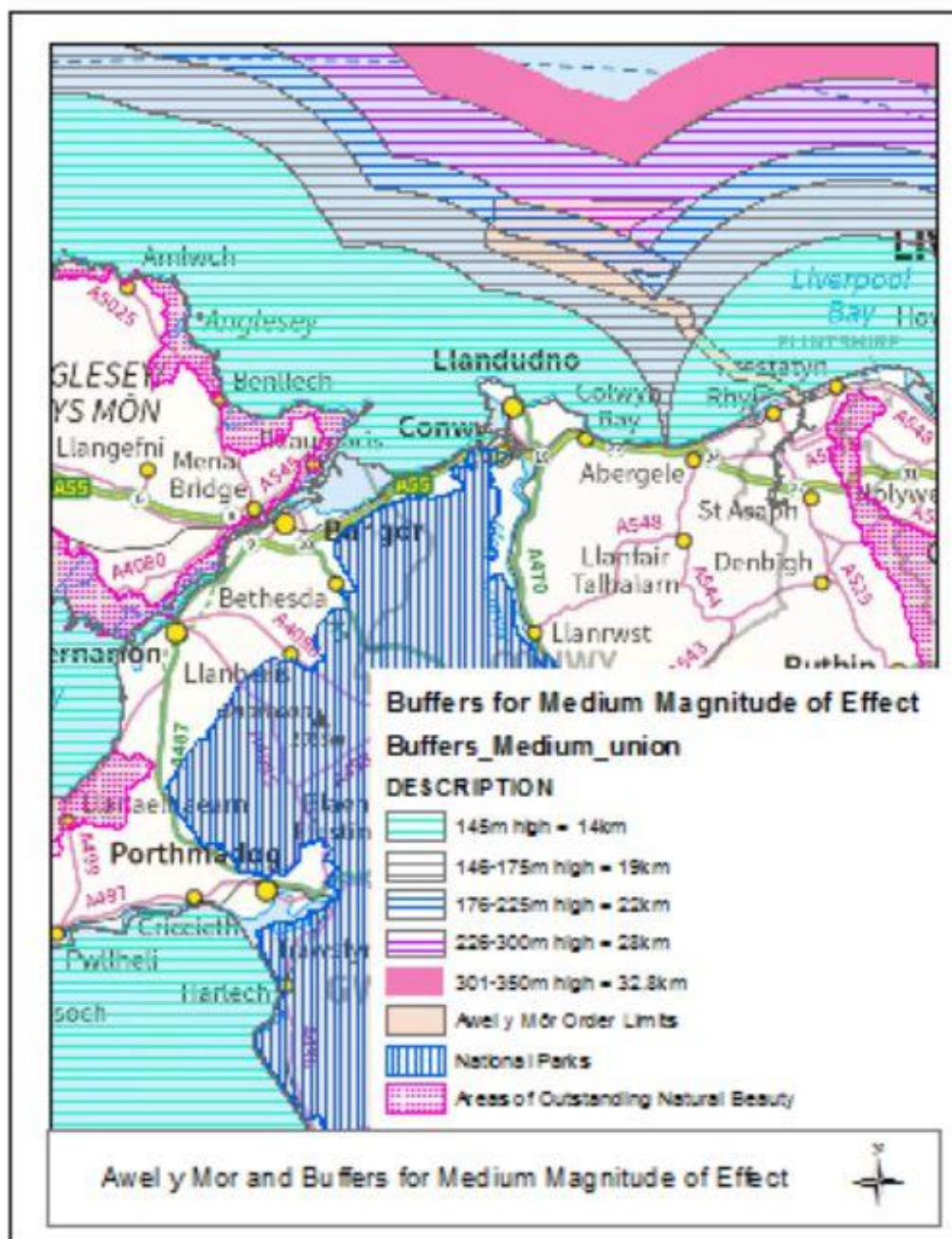


Figure 3: showing the Avel y Mor Order Limits overlaid with the buffers from the White Consultants' report for a Medium magnitude of effect

- 3.1.26. Notwithstanding the above advice, NRW met with the Applicant on 05/09/2022, where the Applicant indicated that it had considered further reductions in array area and height/number of turbines, but that it considered any reduction from that currently submitted as part of the DCO application to be economically unviable.
- 3.1.27. In view of the nature and significance of the impacts and the Applicant's position with respect to any further reduction in scale, NRW consider that (as detailed above in the Summary of Effects) the proposal would conflict with the purpose of the Isle of Anglesey AONB and Snowdonia National Park and result in substantial landscape effects.



- *Enhancements*

- 3.1.28. NRW has provided advice to the Applicant, in conjunction with the Local Planning Authorities, on the development of a potential and appropriate enhancement scheme. NRW advises that opportunities for enhancement of the designated landscapes should be considered in accordance with Welsh National Marine Plan Policy SOC\_06: Designated Landscapes. Enhancements of designated landscapes should support the purpose of conservation and enhancement of natural beauty and contribute to the conservation and enhancement of the Special Qualities, as set out in the relevant management plan. NRW considers that enhancements, by nature, would not directly mitigate the visual effects of the offshore wind farm.

- *Onshore works*

- 3.1.29. Whilst NRW considers that the landscape and visual effects of the onshore substation on the Clwydian Range and Dee Valley AONB are unlikely to be significant, adverse effects should be minimised and the materials and colours of the proposed buildings and infrastructure should be designed to minimise visual impacts. We note and accept the intention to secure such detail under DCO Requirement 6. We also note that Requirement 8 will secure a detailed written landscape scheme with respect to the onshore substation works which will need to be approved by the discharging authority. However, we advise that both Requirements 6 and 8 are updated to ensure that the scheme is approved by the discharging authority, *in consultation with NRW*.

### 3.2. Flood Risk

- *Flood Risk Activity Permit*

- 3.2.1. Article 7 of the draft DCO provides for the application and modification of legislative provisions. Under Article 7(c) the applicant is seeking to disapply the requirement for a flood risk activity permit, being an environmental permit required under regulation 12 of the Environmental Permitting (England and Wales) Regulations 2016 ('the Regulations'). The works that would comprise flood risk activities for the purposes of the Regulations are detailed by the Applicant in paragraphs 68-77 of part 3.3 of the Outline CMS under the heading '*Onshore Export Cable Watercourse and Flood Defence crossings*' ('the works'). Whereas the Applicant has identified general principles and commitments in respect of how the works will be carried out, the detailed design has not been made available and as NRW understands, will not be provided during the examination. Rather, it is the Applicant's intention for the final design details in respect of the works to be incorporated into the CMS, to be subsequently approved by the Local Planning Authority under Requirement 10 of the draft DCO.
- 3.2.2. The legislative basis for Article 7(c) of the draft DCO is section 150 of the Planning Act 2008 ('Section 150') ('*Removal of Consent Requirements*') which provides as follows (emphasis added):
- (1) An order granting development consent may include provision the effect of which is to remove a requirement for a prescribed consent or authorisation to be granted, **only if the relevant body has consented to the inclusion of the provision.**
  - (2) "The relevant body" is the person or body which would otherwise be required to grant the prescribed consent or authorisation.
- 3.2.3. The Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015 (specifically regulation 5 and Schedule 2) prescribe certain consents and

authorisations for the purposes of section 150 above, and this includes an environmental permit or an exemption under the Regulations and therefore encompasses the works. NRW is a '*relevant body*' under section 150 (2) and therefore it must consent to the disapplication provisions. Put another way, NRW's consent is required for Article 7(c) to remain in the DCO.

3.2.4. NRW does not consent to the inclusion of Article 7(c) for the following reasons:

1. In order for NRW to determine whether or not to provide consent for the disapplication of the relevant provisions under section 150, it must be provided with the specific details of the works for which the consent or authorization would be required. To date, NRW has not been provided with the required information. Section 150 does not provide a general or blanket exemption from the need for consents or authorisations, the details of which have not yet been identified but may however materialise during the lifetime of the development.
2. Notwithstanding and/or further to the above, NRW is not satisfied that the regulatory mechanisms under the draft DCO in respect of the works are adequate. Should the requirement for an environmental permit in respect of the works be disappplied, the local planning authority will be the discharging authority with responsibility for approving the detailed design. NRW considers it necessary to retain its regulatory functions under the Regulations in respect of the works given its established expertise when appraising works of this nature.
3. An application for the works under the Regulations would be subject to an application charge in accordance with NRW's Environmental Permitting Charging Scheme [Environmental Permitting Charging Scheme 2022/23 \(cyfoethnaturiolcymru\)](https://www.naturalresourceswales.gov.uk/cyfoethnaturiolcymru/). NRW considers it necessary for this scheme to be applied in respect of the works, having regard to the appropriate allocation of public resources.

3.2.5. Accordingly, NRW does not agree to the inclusion of Article 7(c) in the DCO.

- *Flood Consequence Assessments (FCA) – Export Cable Corridor (ECC)*

3.2.6. The works proposed within the ECC are located mainly within zone C1 of the Development Advice Map (DAM) contained in Technical Advice Note (TAN)15, along with minor works in C2. The proposed development is considered to be a less vulnerable development as defined by TAN 15. The Applicant has prepared an FCA [APP-137] to demonstrate whether flood risk will be appropriately managed.

3.2.7. The FCA refers to the Flood Risk Assessment Wales maps. As detailed in our Relevant Representations (paragraph 3.2.5), the Flood Risk Assessment Wales maps should not be relied upon; NRW advises that the Flood Map for Planning (FMfP) represents more up-to-date information for assessing flood risk. The ECC is located partly within Flood Zones 2 and 3 of the FMfP. Our advice below is provided based on the DAM and FMfP maps.

3.2.8. Section 1.3 of the FCA explains that the ECC works involve the installation of the export cables along with associated temporary construction infrastructure during the construction phase (including temporary construction compound, haul roads, etc). It also states that "*once constructed, all infrastructure relating to the onshore ECC will be below ground, other than elements of the landfall TJB and link boxes along the onshore ECC which will be set at ground level*". Section 2.2 of the FCA states, in relation to the temporary construction compounds, that "*buildings on the temporary works sites, if any, will be limited to small, temporary offices and welfare facilities. In addition, the sites will house construction plant and materials*".

3.2.9. The site is subject to both tidal and fluvial flood risk. With regard to tidal flooding, the ECC area along with the associated infrastructure, will be protected from tidal flooding up to the

current day 1 in 200 (0.5%) flood event along the River Clwyd estuary (providing a 0.5% Standard of Protection). If allowance for climate change is applied to sea level rise then a 1 in 200 flood event would overtop the defence (and possibly result in a breach). However, in view of the short duration of the construction works compared to measurable sea level rises, we are satisfied that the FCA has not assessed the impacts of climate change. With regard to fluvial flooding, there are a number of main river watercourse crossings where detailed information (e.g. relating to the method, timing etc) will need to be provided in the final CMS to be approved by the discharging Authority.

- 3.2.10. NRW also notes that there are proposed works in C2 (as identified in the Development Advice Maps in TAN15) which are not assessed in the FCA. The works include an operational access track and a temporary mitigation area. It should be ensured that any tracks or temporary mitigation areas within zones C1/C2 or within 8m of a designated main river do not interfere with access to maintain the watercourse or impact on flood risk. The access track must be designed so as not to increase flood risk elsewhere, and details must be clearly set out in the final CMS. Such proposals require a bespoke FRAP application to be made to NRW.
- 3.2.11. In view of the works proposed, its temporary nature, and the mitigation proposed in the FCA, we are satisfied that flood risk can be appropriately managed. NRW is satisfied with the mitigation identified in the FCA, including the preparation of a flood response plan, as included in section 2.16 of the Outline CMS. The final CMS, which will include the detailed design information, will be approved by the discharging authority (Requirement 10).
- 3.2.12. Whilst consultation with NRW is specifically stated for the discharge of some Requirements (e.g. Requirement 7, 13 and 14 of the draft DCO [AS-014]), we note that this is not included for Requirement 10. For the avoidance of doubt, and as highlighted in our Relevant Representations, we recommend that the Draft DCO is updated to ensure that NRW should be consulted by the discharging authority prior to the discharge of Requirement 10.
- *FCA – Onshore Sub-Station*
- 3.2.13. The proposed Onshore Sub-Station is within Zone A of the Development Advice Maps. Although the supporting Flood Consequence Assessment has not referred to the FMfP, we can confirm that it is in zone 1 of the FMfP. NRW is therefore satisfied that the FMfP/DAM shows that the site is not at risk of flooding from the sea or fluvially.
- 3.2.14. Some parts of the site are at risk of flooding from surface water and small watercourses according to the FMfP. The Lead Local Flood Authority (Denbighshire County Council) is the appropriate body to advise with regard to surface water flood risk.

### **3.3. Water Framework Directive (Onshore works)**

#### *- Coastal, Transitional and River Waterbodies*

- 3.3.1. The onshore aspect of the development involve works adjacent, within, or beneath a number of watercourses. These works include the ECC watercourse crossings as well as the temporary haul roads crossings. The ECC watercourse crossings involve either trenchless (e.g. Horizontal Direct Drilling (HDD)) or trenching methods. Trenching involves three methods to deal with the waterflow and enable the cable to be installed: temporary flume, over-pumping or diversion of the watercourse. The temporary haul roads involve two main methods to allow for the installation of a temporary track for the duration of the construction works: installation of a culvert or temporary bridge (e.g. bailey bridge). Paragraph 20 of the Outline CMS [APP-313] also states (for haul road crossings over

smaller watercourses) that “as an alternative, and only where appropriate, diversion of the land drain or watercourse may be used”.

- 3.3.2. As detailed in paragraph 3.2.2 and 3.8.2 of our Relevant Representations, the proposed crossing method for a number of the watercourses has not been confirmed. The Crossing Schedule [APP-121] specifies the proposed crossing methods and while trenchless techniques (e.g. HDD) are confirmed for some crossings, all options are retained for a number of watercourses. We consider that the use of trenchless techniques (e.g. HDD) for the ECC works would have the least environmental impacts, particularly in terms of fluvial geomorphology. Good river health, upon which all species and habitats rely, is built upon three fundamental pillars; water quality, water quantity and geomorphology (the physical form and processes of a river). Degradation of any one of these pillars reduces the health of the river, and the species and habitats it supports declines. Physical modification of the geomorphology of rivers remains the primary risk and cause of waterbody failure across Wales. We consider that trenching techniques, at unsuitable locations, pose a potential risk of long-term impacts on fluvial geomorphology. Watercourse diversion in particular, at inappropriate locations, also poses risks of permanent changes in watercourse geomorphology following completion of the works (e.g., where restored channel banks may be more susceptible to erosion). In relation to haul roads, bridges should be used wherever possible, rather than culverts, in order to maintain the natural flow, allow natural channel migration and to maintain natural sediment and gravel movement downstream.
- 3.3.3. We acknowledge that the final CMS will be approved by the discharging authority, which will detail the specific methods proposed. However, the Outline CMS [APP-313] retains all options for a number of the watercourse crossings and we consider the proposal therefore has the potential, should a number of the more damaging methods be chosen, for the works to result in impacts to the environment downstream. Depending on local conditions, techniques such as trenched crossings and watercourse diversions can make the watercourse, its bed and banks weak and susceptible to increased future erosion, dynamic instability and even avulsion (the rapid, often overnight, abandonment of a river channel and the formation of a new river channel during high flow conditions). Such waterbody responses may impact on the habitats and species present and therefore the condition of multiple elements (e.g. fish, ecology, water quality) of the waterbody itself and those downstream. We consider that this risk could be mitigated via a desktop study and rapid walkover survey to ascertain the local conditions at each site to determine the appropriate type of cable or haul road crossing. NRW advised this information be provided in a meeting with the Applicant on 3/8/2022.
- 3.3.4. We note that the ECC watercourse crossings will involve trenchless methods (e.g. HDD) underneath parts of the WFD river water bodies (e.g. Glanffyddion Cut and Pont Robin Cut). However, trenching and culverting (haul roads) are still retained as options in the upstream sections of these water body catchments. Trenching (ECC) and culverting (haul roads) are also still retained as options in the non-reportable Rhyl Cut water body. The WFD Regulations still apply and the assessment will need to consider impacts on the downstream water bodies, the North Wales Coastal waterbody and the Clwyd Transitional waterbody.
- 3.3.5. As highlighted above, although the final CMS will secure the specific crossing methods for approval by the LPA, we advise that the Applicant, through retention of all options (including some more damaging activities) has not demonstrated that the works will not result in deterioration of any WFD quality elements. As we advised the Applicant in our meeting on 3/8/2022, further work should be undertaken to confirm the site conditions and therefore the specific crossing methods proposed at each location. Where the more environmentally preferred option (i.e. trenchless ECC crossing, or temporary bridge for the haul road) is not possible then appropriate mitigation and justification should be provided at this stage (e.g. due to the prevailing ground conditions). Clear plans and grid references should be provided

alongside this information. The outputs from this work should be used to update the Outline CMS. NRW can provide further advice to the Applicant once in receipt of this additional work.

3.3.6. We consider that indirect effects of changes in hydromorphology (the physical characteristics and processes of the river) on the WFD quality elements have not been appropriately assessed in the WFD Compliance Assessment [APP-094]. For example, Table 10 (*Scoping assessment of freshwater (riverine) WFD waterbodies and non-reportable*) states that “*no alteration to the morphology or the hydromorphology of any of the rivers is anticipated*”. In the detailed Impact Assessment in section 7.2.1 (Physical habitat), effects as a result of changes in hydrology (flow rate and water level) are discussed, however there is no assessment of the effects from changes in hydromorphology (including the physical habitat of the river). We also refer you to our WFD comments on the offshore (section 2.8 above). We advise that a more detailed assessment of potential effects of all activities associated with watercourse crossings is required including the potential for secondary effects in all hydrologically connected WFD water bodies, where there is a pathway for effect, e.g. sediment transport, effects to migratory species. Where doubt remains regarding the nature of the watercourse crossings, a reasonable worst-case scenario must be assumed as the basis for assessment. The assessment will also need to take into account the potential for cumulative effects where they may occur. NRW can provide further advice once this information has been presented.

3.3.7. Notwithstanding the above, we acknowledge that the Applicant will still need to prepare the information advised above to inform the final CMS that will need to be approved as part of Requirement 10. We are therefore satisfied that the mechanism is in place to ensure that WFD impacts can be avoided. However, in deferring this information to the post-consent stage, the Applicant should be aware that some of the crossing methods proposed may not be appropriate, or acceptable, at certain locations if the information demonstrates there may be potential impacts on WFD waterbodies.

- *General comments*

3.3.8. The comments below (paragraphs 3.3.9 to 3.3.12) are provided as points of clarification, and we are satisfied that they do not affect the overall conclusion with respect to WFD.

3.3.9. Table 10 (Scoping) of the WFD Compliance Assessment considers potential indirect impacts for Invasive Non-Native Species (INNS) but these have not been scoped in. As detailed in para 3.8.3 of our Relevant Representation we consider that INNS should have been scoped into the impact assessment stage as there is a risk of introduction of INNS. However, we are satisfied that, subject to amendments as explained in paragraph 3.5.1, INNS will be appropriately managed as the final (terrestrial) INNS Management Plan will be approved by the LPA.

3.3.10. As detailed in paragraph 3.8.4 of our Relevant Representations, the updated Western Wales River Basin Management Plan 2021-2027 was published on 18th July 2022 and is available here: [Western Wales RBMP 2021 2027 Summary \(cyfoethnaturiol.cymru\)](https://www.naturalresourceswales.gov.uk/wp-content/uploads/2022/07/Western-Wales-RBMP-2021-2027-Summary.pdf)

3.3.11. Section 2.5.4 (para 24) of the WFD Compliance Assessment refers to the Nitrate Pollution Prevention (Wales) Regulations 2013. Please note that these have been revoked and replaced by the Water Resources (Control of Agricultural Pollution)(Wales) Regulations 2021. See section 2.3 p27 of the Western Wales RBMP 2021-2027 (link in paragraph 3.3.10 above).

3.3.12. Section 6.2 para 121 of the WFD Compliance Assessment states "It is also noted that the offshore ECC overlaps the Rhyl Bathing Water Sensitive Area as designated under the



Urban Waste Water Treatment Directive (see Figure 8)." Rhyl bathing water sensitive area is not a protected area under the Urban Waste Water Treatment directive. For clarification, Rhyl bathing beaches are Bathing Water protected areas under the WFD Regulations 2017.

### 3.4. Protected Species (Onshore)

- 3.4.1. The proposed onshore works has the potential to impact on protected species, designated under European and national legislation and policy. The surveys and assessments in the ES consider the following species, all of which are European Protected Species protected under the Conservation of Habitats and Species Regulations 2017: great crested newts (GCNs), bats, otters, dormice. The surveys and assessments in the ES also considers water voles and barn owls, both of which are protected under the Wildlife and Countryside Act 1981. NRW considers the surveys and assessments to be satisfactory for all these species and we consider that, subject to implementation of appropriate mitigation, the works are unlikely to be detrimental to the favourable conservation status of the species referred to above.
- 3.4.2. The Outline LEMP [APP-305] identifies the principles of mitigation. We note that under requirement 13, the final LEMP will be approved by the discharging authority, in consultation with NRW. NRW agrees with this approach. However, NRW requires the following amendments to the Outline LEMP in order to demonstrate that the proposal would not be detrimental to the favourable conservation status of protected species: These (as communicated to the Applicant on 5/10/2022) are as follows:

#### *Ecological Compliance Audit:*

- As the Ecological Clerk of Works will be involved in advising contractors on the implementation of the mitigation, we advise that an appropriate external body be appointed specifically for undertaking compliance audits (i.e. to confirm that the mitigation has been completed appropriately) and advise that this commitment is clearly stated in the Outline LEMP.
- The Outline LEMP should clearly state that the compliance audit shall include identified key performance indicators (KPI's) for each identified ecological feature. We are satisfied for the detailed KPI's to be agreed as part of the agreed Final LEMP.
- The Outline LEMP should clearly state that the frequency and dissemination of compliance audit reports will need to be agreed as part of the Final LEMP

#### *Long-term monitoring for GCNs:*

- We advise that revised details regarding long-term monitoring are submitted. The Outline LEMP should be updated to include a commitment that monitoring of the mitigation areas shall be carried out annually throughout operational phases of the scheme unless otherwise approved by the discharging authority. In the event of the freehold transfer of the ecology area to another party/body, the duration of post development surveillance should be set at 25 years as the basis for informing financial assessments.

#### *Long-term management plan for GCNs:*

- Paragraph 132 of the Outline LEMP confirms that areas that form part of the compensation and mitigation requirements for GCNs will be the subject of a long term management plan (i.e. for the lifetime of the development), with further information to be secured in the final LEMP. We advise that the Outline LEMP is updated to confirm that the following information will be specified in the final LEMP:
  - habitat management prescriptions for aquatic and terrestrial habitats;
  - site liaison, wardening, incident reporting and response arrangements;

- provision for periodic review mechanism for the long-term management plan;
- contingency measures that are capable of being implemented in the event of failure to undertake or appropriately implement management or surveillance prescriptions including any required actions arising from unforeseen situations;
- current and proposed changes to tenure of the ecology area to be approved by the discharging authority in consultation with NRW to ensure appropriate control over the land is established and the effective targeted delivery of long-term actions;
- details of persons or bodies responsible for undertaking management and surveillance together with required skills and competencies; and
- reporting requirements associated with species surveillance and habitat management.

### **3.5. Invasive Non-Native Species (INNS) (Terrestrial)**

- 3.5.1. The proposed works have the potential to introduce and/or cause the spread of INNS which, where established, may impact on native habitats and species, including protected species. We note that the Outline INNS Management Plan [APP-323] details the principles of how these risks will be managed, and that the final (terrestrial) INNS Management Plan will be approved by the discharging authority (Requirement 10). NRW agrees with this approach and consider that INNS will be appropriately managed. However, NRW considers that amendments to the Outline INNS Management Plan should be made in order to ensure that the final version of the plan is based on a more robust Outline version. The Outline INNS Management Plan should be updated to include the following commitments:
- That the associated biosecurity risks from landscape planting will be assessed and mitigated in the final INNS Management Plan.
  - That diseases that may affect biodiversity (e.g. Chytrid, Ash die-back etc) will be assessed and mitigated as far as possible in the final INNS Management Plan. Currently, the Outline version only covers agricultural diseases.
  - That due consideration of biosecurity infrastructure, such as jet/wheel washes for vehicles and boot cleaning facilities by offices/cabins, will be considered at the outset.
- 3.5.2. The final INNS Management Plan will be approved by the discharging authority as required under Requirement 10 of the draft DCO [AS-014]. As highlighted above (paragraph 3.2.12), we recommend that the Draft DCO is updated to ensure that NRW should be consulted by the discharging authority prior to the discharge of Requirement 10.

### **3.6. Water Quality (Freshwater)**

- 3.6.1. The proposed works have the potential to impact water quality through a number of pathways. Pollution prevention measures are identified in the Outline Code of Construction Practice and the underpinning Outline Method Statement and Outline Management Plans. NRW notes that the final Code of Construction Practice and the underpinning Method Statements and Management Plans must be submitted to and approved by the discharging authority (Requirement 10). As highlighted above (paragraph 3.2.12) we recommend that Requirement 10 is updated so that NRW is specifically referenced as a consultee.
- 3.6.2. The Outline Pollution Prevention and Emergency Incident Response Plan (PPEIRP) [APP-318] identifies a number of mitigation measures that will be implemented to avoid impacts

on water quality. However, we advise that amendments are required to the Outline version to demonstrate that potential impacts on water quality can be appropriately managed. These suggested amendments involve the inclusion of statements in the Outline PPEIRP confirming the following:

- That no discharge of contaminated water occurs (including contamination with sediments) without the relevant exemption or Environmental Permit<sup>8</sup> from NRW
- That no refuelling will be undertaken within 10m of a watercourse (rather than the 5m as currently stated).
- Where possible, biodegradable hydraulic oil will be used on machines operating in or near water.

3.6.3. In relation to the Outline CMS, figure 4 gives an indicative layout for the over-pumping methodology. We advise this is updated to clearly show that water will be pumped into a settlement tank, or an alternative settlement arrangement, prior to discharge back to the watercourse.

3.6.4. Subject to the inclusion of these amendments, NRW consider that impacts on water quality (both surface and groundwater) can be appropriately managed. We refer you to our comments with respect to WFD (paragraphs 3.3.1 – 3.3.7) which raises concerns, based on the information currently provided, with respect to the watercourse crossing options retained at some locations. As explained, further information is required to determine which crossing option would be appropriate at each location.

### 3.7. Fish (Freshwater)

3.7.1. NRW notes that mitigation for fish (eels) is included in the Outline LEMP and that the final version will be approved by the discharging authority, in consultation with NRW.

3.7.2. We also note that the ES chapter Onshore Biodiversity and Nature Conservation [APP-066] discusses the declining trend of salmonids within the river Clwyd. Whilst the statement is correct, the conclusions of the ES of “*Not Significant*” should not be based on the fact that populations are declining, and numbers are low. However, we can agree with the conclusion based on the Applicant undertaking trenchless techniques (e.g. HDD) to install the cables under the river Clwyd which mitigates disturbance to fish.

3.7.3. The onshore works also include watercourse crossings which may involve in-river works. We agree with the conclusions of the ES that the watercourses that may be subject to in-river works are not important spawning areas for salmonids. However, as a precaution, we advise that the Outline LEMP is updated to include the following statement:

- Works will have regard to the Salmon and Freshwater Fisheries Act 1975.

3.7.4. Notwithstanding the above comments, we refer you to our comments above (paragraphs 3.3.1 – 3.3.7) with respect to WFD, which advises further information on the proposed watercourse crossing in order to demonstrate that fish (as a supporting element) will not be impacted.

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<sup>8</sup> [Natural Resources Wales / Do I need to apply for a permit for discharges to surface water and groundwater?](https://www.naturalresourceswales.gov.uk/natural-resources-wales/do-i-need-to-apply-for-a-permit-for-discharges-to-surface-water-and-groundwater/)

### 3.8. Air Quality

- 3.8.1. As detailed in our Relevant Representations, NRW agrees with the conclusions in the ES (Chapter 11) [AS-030] that construction and operational onshore traffic is unlikely to have significant effects on any designated nature conservation site (SSSI, SAC, SPA and Ramsar site). This is because any increases in onshore traffic, above the threshold that requires assessment as defined by the Design Manual for Roads and Bridges, would be more than 200m from any designated sites.
- 3.8.2. NRW notes that the works will be within the proximity of ancient woodland. Planning Policy Wales recognises the significant value of ancient woodlands and makes provision for their protection against damage or loss. Our standing advice to all planning proposals that may affect (directly or indirectly) ancient woodland can be found at [Natural Resources Wales / Advice to planning authorities considering proposals affecting ancient woodland](#). Denbighshire County Council, as the Local Planning Authority, may be able to advise with respect to the acceptability of the proposals in terms of ancient woodland.
- 3.8.3. In our Relevant Representations, we advised that there was no assessment of any air quality impacts arising from marine vessel emissions. It was unclear whether marine vessels will operate within proximity to sensitive coastal onshore habitat (that may support features of SSSIs/SACs/Ramsar). As such, we could not rule out likely significant effects on designated sites. We advised that the Applicant provide additional information to demonstrate that there will not be significant impacts from marine vessel emissions. A Clarification Note has been received (14/10/2022), however, NRW has not been able to review it in the limited time available ahead of Deadline 1. NRW reserves its position as to whether the information addresses our concerns until we have been able to review it, at which point we may advise the Applicant and the Examining Authority further.

### 3.9. Materials and Waste

- 3.9.1. The proposed onshore works will generate waste that will need to be appropriately managed. The Applicant has prepared an Outline Site Waste Management Plan (SWMP) [APP-317] which explains the principles of how waste will be appropriately managed. The final SWMP, which will need to be in accordance with the Outline SWMP, will need to be approved by the discharging authority as part of DCO Requirement 10. NRW agrees with this approach and are satisfied with the principles included within the Outline SWMP. We are therefore satisfied that onshore waste will be appropriately managed. As stated above (paragraph 3.2.12), NRW should be consulted on the final Site Waste Management Plan prior to discharge of Requirement 10, and we advise that Requirement 10 is amended to ensure that this is explicitly stated.

## 4. NRW Regulation and Permitting Services

### - Marine Licensing: Regulatory Response

- 4.1.1. A marine licence application ('the ML application') was submitted to NRW on 30 May 2022 in respect of the marine works under the project, in respect of which a DCO under the Planning Act 2008 ('the DCO regime') is also required. The marine works comprise marine licensable activities under section 66 of the Marine and Coastal Access Act 2009 ('the MACAA'). NRW is the appropriate licensing authority in respect of the marine licence, acting on delegated authority of the Welsh Ministers. In practice, this licensing function is carried out by NRW's marine licensing team ('NRW MLT') which operates independently and separate from NRW's advisory function.

- 4.1.2. NRW MLT has carried out a public and technical consultation on the ML application. NRW MLT has received responses from the following consultation bodies: NRW's advisory function, JNCC, the Crown Estate, Ministry of Defence, RSPB, Welsh Archaeological Trust, Cadw, Royal Commission on Ancient and Historic Monument of Wales, NATS Safeguarding, Chamber of Shipping, National Federation of Fishermen's Organisations (NFFO), Cefas, Maritime and Coastguard Agency, Isle of Anglesey County Council, Department of Business, Energy & Industrial Strategy, and the Isle of Man Department of Infrastructure. The comments received from the consultation bodies were sent to the Applicant on 4 September 2022 along with two representations received during the public consultation. On the 8 September 2022, NRW MLT requested that further information be provided by the Applicant in support of the ML application to address comments raised by the consultation bodies. A copy of this request is enclosed and a response from the Applicant is yet to be received. Following this, there may be further iterative responses from the Applicant, consultation bodies and public representees. NRW MLT is not in a position to provide detailed comments on the potential impacts of the project pending the proper determination of the ML application. Copies of consultation responses can be provided upon request, should this be of assistance to the Examining Authority.
- 4.1.3. There is a significant amount of overlap between the proposed DCO and the ML application. Accordingly, there is also a significant overlap in respect of the supporting evidence between the respective regimes. By way of example, the environmental statement and the management plans relied upon for the purposes of the DCO regime are also, in general, applicable to the ML application. Accordingly, NRW MLT has relied upon Regulation 10 of the Marine Works (Environmental Impact Assessment') Regulations 2007 which exempts the need for an Environmental Impact Assessment ('EIA') in respect of the ML application on the basis that the EIA will be properly carried out by another consenting authority, which in this case is the Secretary of State. Under this arrangement, NRW MLT must take into account *inter alia* the conclusions of the Secretary of State's assessment, any conditions attached to the DCO, and mitigation and monitoring measures. A practical consequence of this therefore is that NRW MLT would not be in a position to issue a marine licence until the DCO has been issued.
- 4.1.4. The ML application requests the issuing of three separate licences, respectively for the electricity generating infrastructure, the transmission assets, and infrastructure to facilitate the interlinking of the Awel-y-Môr project with the existing Gwynt-y-Môr offshore wind farm. NRW MLT understands that the reason behind this approach is to facilitate subsequent transfer and/or disposal of assets pursuant to the Offshore Transmission Operator (OFTO) regime requirements. NRW MLT also understands that following recent discussions with the Applicant, a fourth licence may be required in respect of drilling activities under the Clwyd estuary. NRW MLT is satisfied with this approach in principle. It is anticipated that the ML application will be determined concurrently with the DCO examination, although it is currently not possible to provide an indicative timescale in respect of the ML determination.
- 4.1.5. It should be noted that the ML application is determined under separate and distinct legislation and the integrity of the decision making under MACAA must be ensured and maintained.
- 4.1.6. NRW MLT agrees with the current approach proposed by the Applicant whereby the DCO does not contain powers or controls which also sit within the marine licence. If one regime of regulation must deal with something according to law (the regime under MACAA) and it can deal with it adequately (for which NRW MLT, as a competent regulatory will do so), it would lead to unnecessary complexity if another regime (the DCO regime), which does not need to make the same provision, did so in any case. Ultimately, there should be avoidance of potential regulatory overlap which can give rise to problems in respect of implementation



and enforcement of any duplicated consents. In respect of any works which comprise both development under the DCO regime and marine licensable activities under MACAA 2009, and where such regulatory overlap is unavoidable, then consistency between any respective duplicated provisions must be ensured. If the Examining Authority does not agree with this approach, NRW MLT requires clarity as to whether any measures, controls and provisions relevant to licensable activities will be included in the DCO, and if so, that consistency can be ensured with any corresponding conditions in the marine licence and that enforcement provisions are appropriately secured. It should be noted that NRW MLT is not in a position to formulate or present the DCO examination with a draft marine licence. This would not be possible at this stage of the determination process. Further, and in any event, NRW MLT does not routinely issue a draft licence for external consideration, regardless of the outcome of the consultation and whether or not it may be in a position to do so. This advice has been given to the Applicant in pre-application discussions with NRW MLT and accordingly, the Applicant has submitted a 'Schedule of Mitigation' and a 'Marine Licence Principles' document (application reference 5.4.1) into the DCO examination which seeks to identify conditions which have been included in previous marine licences issued by NRW MLT, and which the Applicant would expect to be incorporated in the Awel-y-Môr marine licence. Without prejudice to the general determination of the marine licence application NRW MLT is in general agreement with this document on the basis that the mitigation measures identified and proposed by the Applicant have been captured within previous Marine Licences (save as to the reference to safety zones). Further information has been requested by NRW MLT in respect of this document, as detailed within the further information letter dated 8 September 2022 referred to above. NRW MLT is not in a position to comment substantively on this document for the purposes of the DCO, or on the issue of weight that should be given to this document.

## 5. NRW'S GENERAL PURPOSE

- 5.1 NRW is satisfied that this advice is consistent with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources. In particular, NRW acknowledges that the principles of sustainable management include taking account of all relevant evidence and gathering evidence in respect of uncertainties, and taking account of the short, medium and long term consequences of actions. NRW further acknowledges that it is an objective of sustainable management to maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing meet the needs of present generations of people without compromising the ability of future generations to meet their needs, and contribute to the achievement of the well-being goals in section 4 of the Well-being of Future Generations (Wales) Act 2015.

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## ANNEX B – NRW'S DETAILED ADVICE ON SEASCAPE, LANDSCAPE, AND VISUAL IMPACT ASSESSMENT

### - *Seascape Impact*

- 6.1.1. **Seascape Character Area (SCA) F North Wales Open Waters** is described in the ES as having an industrialised character due to existing offshore wind farms, oil and gas platforms, dredging and shipping routes and lack of landscape designation. Sensitivity is described as medium-low, with the proposal reinforcing the industrialised character and effects as non-significant. The ES does not consider SCAF to be part of the immediate setting of the Isle of Anglesey AONB or the Great Orme Heritage Coast as it is separated from them by open seascape. The ES considers the western part to be influenced by offshore windfarms and vessels.
- 6.1.2. We consider that SCA F *does* form part of the setting of the Isle of Anglesey AONB and Great Orme Heritage Coast and that there are views from SCA F towards parts of Anglesey and the Great Orme. Part of the area is likely to be of medium sensitivity. The proposal would extend and increase the industrial character across more of the SCA. However, NRW agrees that the effects on this SCA are likely to be non-significant.
- 6.1.3. **SCA 28 North-east of Anglesey** is described in the ES as having medium sensitivity. Given it forms part of the setting of Anglesey AONB and Snowdonia NP, NRW disagrees with this description and rather we consider parts of SCA 28 to be of high sensitivity as the area has views to Anglesey including Puffin Island and Point Lynas as well as to the Great Orme and large areas of relatively open waters. The adverse visual effects are likely to be far reaching as illustrated by the prominence of the turbines from Viewpoints 66 and 67. We agree that there are likely to be significant adverse effects.
- 6.1.4. **SCA 3 Traeth Lafan, SCA 4 Menai Strait, SCA 5 Penmon, SCA 6 Red Wharf Bay to Moelfre, SCA7 Dulas Bay.** We agree with the conclusion in the ES that there are likely to be significant adverse effects on these LCAs. It should be noted that there is some overlap between coastline SCAs and coastline Landscape Character Areas (LCAs) and effects over the same parts of SCA/LCAs should not be double counted. For example, SCA 5 is similar in extent to LCA 10. The SLVIA considers the significant effects on **SCA 5 Penmon** would be likely along the coastal, northerly part of the SCA and non-significant west of Bwrdd Arthur, in settled inland areas and in the former quarry to the east. The ES states that significant effects are limited in extent. We do not consider the effects to be limited, since significant effects are likely to occur across a substantial part of this SCA as the majority of the SCA occurs across the northern coastline and immediate hinterland.
- 6.1.5. **SCA 2 Conwy Bay.** We agree with the conclusion in the ES that there are likely to be significant adverse effects. The SLVIA considers the significant effects to be limited to the upper and northerly slopes of the Great Orme, with non-significant effects on the upland area between Foel Lus and Conwy Mountain and the coastal areas due to existing development influence and to the seascape to the northwest.
- 6.1.6. However, we consider that significant adverse effects are likely to extend over a larger area than the Great Orme as described by the ES, with likely significant effects along Conwy Mountain and Foel Lus, extending west towards Cefn Coch stone circle (Viewpoint 37), just outside the National Park. The SCA extends almost to Ynys Seiriol/ Puffin Island to the northwest, where visual effects are significant. The visual character and scenic quality of the SCA just offshore of Anglesey and within parts of the National Park are likely to be significantly affected.



- 6.1.7. **SCA C & D.** We agree that effects on these areas are likely to be non-significant, although the effect would nevertheless be adverse. The proposal would intensify the effect of wind farms through the increased scale and extent of the proposal with the existing windfarms by filling a gap between existing arrays in some views from the coast.

- *Landscape & Visual Impact – Isle of Anglesey AONB*

Landscape Character Impacts

- 6.1.8. **LCA 6 Amlwch & Environs.** We agree that effects on this area are likely to be non-significant.
- 6.1.9. **LCA 8 Dulas Bay Hinterland, LCA 9 Red Wharf Bay, LCA 10 Penmon & Puffin Island, LCA 11 Eastern Menai Strait.** We agree with the conclusions of the ES that there are likely to be significant adverse effects within these areas. Within **LCAs 8, 9 & 10** the SLVIA describes significant effects as limited in extent to the coastline and immediate coastal hinterland to 1km and non-significant elsewhere. Further inland from this, effects are described as non-significant.
- 6.1.10. We consider that significant adverse effects are likely to extend further across these LCAs, as indicated by the Zone of Theoretical Visibility (ZTV), notwithstanding that some parts would be screened by topography, vegetation, and buildings. The coastline and immediate hinterland are assessed as of medium-high. However, these areas are the most sensitive parts of the LCAs, within the Isle of Anglesey AONB, as their scenic quality and character are unaffected by large scale infrastructure and are highly sensitive to changes in the coastal character. Existing housing and other built development in the coastal landscape is of a quite different scale and nature to the proposed wind farm, which would contrast strongly with it. We therefore believe this should be assessed as being of high sensitivity.

Visual Impacts

- 6.1.11. **Viewpoints 1-3.** The SLVIA describes the effects as non-significant. In the case of Viewpoint 1 Porth Llechog/Bull Bay, it states that the association with the coastline where there is some development, and not with the open sea, reduces the effect. For Viewpoint 2 Trwyn y Balog/ Point Lynas, the location in open sea, separated from the coast and views of Snowdonia NP is given as a reason that the effects are reduced. At Viewpoint 3 Mynydd Eilian the presence of masts and onshore wind farms to the west are given to be one reason the effects are reduced.
- 6.1.12. We consider that the effects at these viewpoints have been underestimated and are likely to be significant adverse. From these viewpoints viewers are focused on the coastal landscape and sea views. Although there are large-scale sea views, the scale and nature of the development would make the proposed development very noticeable and focus attention on it. Sea views and the coastline are the key focus of views in the predominantly coastal AONB and are currently untrammelled by development apart from the occasional ship. The existing windfarms to the east, including Gwynt y Môr, are extremely hard to discern even in fine weather and built development along the coastline is not similar in nature or scale to the proposed wind farm. The proposal would interfere with the appreciation of the open sea and coastline

including coastal landforms and the mountains of Snowdonia. Inland, windfarms to the west are not associated with the sea views and coastline.

- 6.1.13. **Viewpoint 41.** This viewpoint has not been assessed in detail but assessed as part of the Wales Coast Path Section C and significant effects have been acknowledged by the Applicant. We agree that effects at this viewpoint are likely to be significant adverse.
- 6.1.14. **Viewpoints 4-8 & 14, 16 (just outside the AONB), & 28.** NRW agrees that the effects at these viewpoints are likely to be significant adverse.
- 6.1.15. **Viewpoints 42-43.** We agree that the effects at these viewpoints are likely to be non-significant, however, the effects are still likely to be adverse.
- 6.1.16. **Viewpoint 53 Puffin Island.** This viewpoint has not been assessed in detail; however we consider the effect from this viewpoint to be significant adverse.
- 6.1.17. The village of Moelfre lies within the AONB and we agree that there would be significant adverse effects on this community where there are views towards the proposed development.
- 6.1.18. The village of Benllech lies just outside but surrounded by the AONB and we agree that there would be significant adverse effects on this community where there are views towards the proposed development.
- 6.1.19. We agree that there would be adverse effects on the villages of Amlwch and Llanddona, (just outside) and Beaumaris (within the AONB) where there are views towards the proposed development, but that these are likely to be non-significant.
- 6.1.20. **Wales Coast Path (WCP) Sections A, B & G & NCR 5.** We agree that effects along these sections are likely to be adverse but non-significant.
- 6.1.21. **WCP Sections C, D, E & F.** We agree that effects along these sections are likely to be significant adverse. Reduced susceptibility is described due to the transient nature of the viewers; however, these are slow-moving receptors and likely to stop and rest to appreciate scenic views. The scenic views of the sea and coast are likely to be the focus of walkers on a national coastal trail. We consider these receptors within an AONB to be of high susceptibility and sensitivity.

- *Landscape & Visual Impacts – Snowdonia National Park*

Landscape Character Impacts

- 6.1.22. **LCA 01 Northern Uplands.** The SLVIA describes the effects as moderate and non-significant. It describes the magnitude of change on landscape character arising from visibility in a single direction as part of a wider context in the LCA likely to be lower than is identified for a viewpoint.
- 6.1.23. We consider that the effects on this LCA have been underestimated. Viewpoints 12, 36, 38 and 40 are within this LCA and effects at all these viewpoints would be significant in our opinion. The viewpoints which experience significant adverse effects are spread across the LCA and illustrate that there would be visibility across a large part of the LCA, affecting the overall scenic quality and visual experience. The scale of the turbines in views and the likely extent of effects over the upland area, as

indicated by the ZTV, indicates likely significant adverse effects over a large part of this LCA. Scenic views of the coast and sea are an important part of the character of this LCA and are particularly experienced and appreciated from the high ground of peaks and ridges in the area. The scenic quality is part of the visual experience of the National Park in this area, along with tranquillity and remoteness in parts. The proposal is not similar in nature or scale to existing developments in the area and would distract from the appreciation of the combination of upland and coastal landscape.

6.1.24. **LCA 02.** We agree that effects on this area are likely to be non-significant.

- Visual Impacts

6.1.25. **Viewpoints 10, 12, 38 & 40.** We agree that effects at these viewpoints are likely to be significant adverse.

6.1.26. **Viewpoint 34 Snowdon Summit.** We agree that effects at this viewpoint are likely to be non-significant. We note that whilst the extent of visibility at Yr Wyddfa/Snowdon Summit is limited, there is a larger area with visibility indicated in the ZTV along Crib y Ddysgl, a popular summit approach.

6.1.27. **Viewpoint 36 Tal y Fan.** We consider that the effects at this viewpoint have been underestimated and are likely to be significant adverse. The SLVIA describes sensitivity as medium-high and the effects non-significant (moderate). It states that the experience is modified by existing wind farms and pylons and therefore the existing baseline is considered already significantly modified. We disagree and consider, at this viewpoint, that existing onshore wind farms and pylons are hard to discern from Gwynt y Môr and other offshore wind farms which are visible at a distance and appear small scale and not prominent in views. For this viewpoint, the existing baseline is not significantly modified by wind farms in our opinion.

6.1.28. We consider the sensitivity at this viewpoint likely to be high, magnitude medium-low, with significant effects (moderate). From this viewpoint, viewers are focussed on the landscape and sea views. The sea draws the eye, and the wind farm would be prominent. The turbines would interfere with the appreciation of the views of the Great Orme landform and the relationship between the seas, Conwy Bay, and the headland. Existing turbines including Gwynt y Môr are much smaller and harder to discern and the proposal noticeably much larger in scale. Existing housing and other built development in the view is of a very different scale and nature to the proposed wind farm, which would contrast strongly with it.

6.1.29. **WCP Section 1.** We agree that effects along parts of this section are likely to be Significant.

- *Landscape & Visual Impacts – Clwydian Range & Dee Valley AONB*

#### Landscape Character Impacts

6.1.30. **LCT 2 & 5.** We agree that effects at these viewpoints are likely to be non-significant.

#### Visual Impacts

6.1.31. **Viewpoint 24 Graig Fawr & Viewpoints 26 & 54.** We agree that effects at these viewpoints are likely to be non-significant. However, we consider that there would be adverse effects on views, through an intensification of wind farm development.

6.1.32. **Offa's Dyke National Trail Long Distance Path.** We agree that effects along the path within the AONB are likely to be non-significant.

- *Night-time Visual Impacts*

6.1.33. We agree with the ES that the proposals are likely to have adverse, though non-significant night-time visual effects on the Isle of Anglesey AONB, including from viewpoints at Moelfre (4), Point Lynas (2), Red Wharf Bay (5), Benllech Bay (16), Penmon Point (7), Trwyn y Penrhyn (28) and Beaumaris (8), and from beaches at Traeth Lligwy, Traeth Bychan, Penrhyn. Dark skies are a noted feature of the Peace & Tranquillity Special Quality within the AONB and the proposal would have a detrimental effect on this special quality.

6.1.34. The proposals are likely to have adverse, non-significant night-time visual effects on some views within the Snowdonia NP, through intensification of light pollution e.g. from viewpoint 60 Foel Lus, where red lights would be visible in an otherwise dark sea beyond the Great Orme. There would be no adverse effect on the core areas of the Dark Sky Reserve.

- *Effects on Designated Landscapes*

6.1.35. NRW considers that the proposal will result in numerous likely significant adverse effects on the Isle of Anglesey AONB and Snowdonia NP which conflict with their purpose of conservation and enhancement of natural beauty, which is enshrined in the purposes of these designated landscapes. NRW consider that the proposal is contrary to Planning Policy Wales (PPW) (Edition 11). Paragraph 6.3.5 of PPW states that *"the duty to have regard to national park and AONB purposes applies in relation to all activities affecting these areas, whether those activities (including development proposals) lie within or in the setting of the designated areas"*. Paragraph 6.3.6 states that *"In National Parks, planning authorities should give great weight to the statutory purposes of National Parks, which are to conserve and enhance their natural beauty, wildlife and cultural heritage, and to promote opportunities for public understanding and enjoyment of their special qualities"*. Paragraph 6.3.7 states that *"planning authorities should give great weight to conserving and enhancing the natural beauty of AONBs"*. Paragraph 6.3.8 states that *"National Parks and AONBs are of equal status in terms of landscape and scenic beauty and must both be afforded the highest status of protection from inappropriate development."* Paragraph 6.3.9 states that *"the special qualities of designated areas should be given weight in the development planning and development management process. Proposals in National Parks and AONBs must be carefully assessed to ensure that their effects on those features which the designation is intended to protect are acceptable"*.

6.1.36. NRW considers that the numerous likely significant adverse effects and the widespread nature of these effects (see Figure 4 below), extending along the coast from Bull Bay in northeast Anglesey to Conway Mountain in Snowdonia NP, inland to the northern uplands of the Carneddau and within the seascape setting of two designated landscapes, would result in a substantial level of harm to these nationally designated landscapes. In addition, NRW considers that there would be non-significant, but adverse effects on the Clwydian Range and Dee Valley AONB as well



as other non-significant but adverse effects on the Isle of Anglesey AONB and Snowdonia NP.

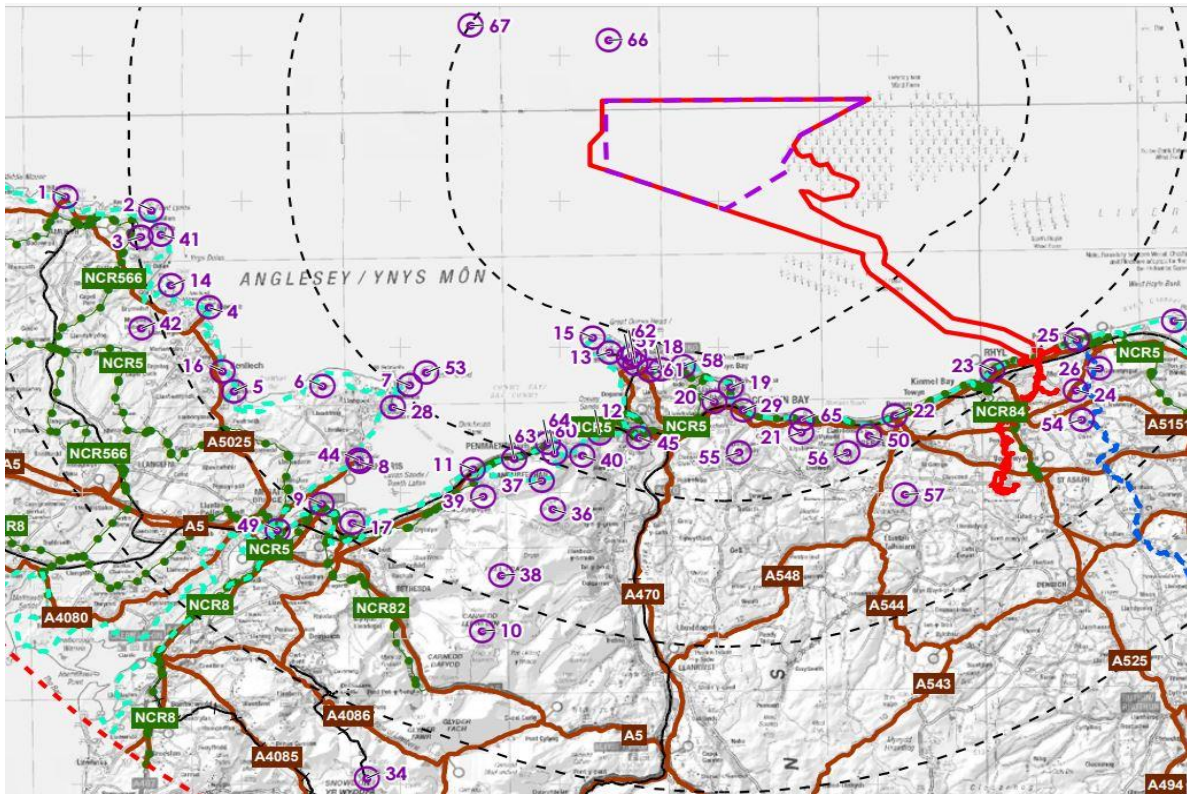


Figure 4: Extract from ES Vol 6 Annex 10.4 Fig 11 (Visual Receptors & Viewpoint Locations) illustrating the extent of adverse effects along the North Wales coast from Viewpoint 1 Bull Bay in the west to Viewpoint 24 Graig Fawr in the east and inland to Viewpoint 10 Carnedd Llewelyn.

- 6.1.37. Adverse effects would be experienced along a substantive part of the North Wales coastline from Anglesey in the west to the Clwydian Range and Dee Valley AONB in the east.
- 6.1.38. Much of the eastern coastline of Anglesey and northern uplands of Snowdonia include areas assessed by LANDMAP to be of 'Outstanding' and 'High' value for their visual and sensory aspects. The entire area is popular with visitors for coastal recreation, both water and land based. The area includes the Isle of Anglesey Coastal Path (Wales Coast Path), the North Wales Path, other public rights of way, open-access land, beaches, headlands, islands, and coastal upland. The juxtaposition of the coastal and mountain scenery with open sea views combine to make the area of exceptional scenic quality. The seascape setting forms a crucial part of how the public experience the character and special qualities of the area.
- 6.1.39. We agree that the Special Qualities of the Isle of Anglesey AONB that required detailed assessment were: Expansive views, Peace & Tranquillity, Islands around Anglesey. We agree with the SLVIA that there would be significant adverse effects on these Special Qualities.
- 6.1.40. The Special Qualities of Snowdonia National Park that required detailed assessment were: Diverse Landscapes and Tranquillity & Solitude – Peaceful Areas. We agree with the SLVIA that the effects on these Special Qualities are non-significant. Nevertheless, the effects are adverse and would detract from these qualities and on



scenic views in the northern part of the park. Scenic views are a characteristic of Snowdonia's landscapes, as noted in the SNP Partnership Plan 2020.

- 6.1.41. The Special Qualities of the Clwydian Range & Dee Valley AONB that required detailed assessment are: Landscape Character and Quality – Tranquillity and Landscape Character and Quality – Remoteness & Wildness. We agree that the likely effects on these special qualities would be non-significant. However, we consider that there would be adverse effects, through an intensification of wind farm development within views from the AONB and erosion of the special qualities.
- 6.1.42. The ES considers that the acknowledged harmful effects arising from the project would not affect the overall integrity of the Isle of Anglesey AONB or Snowdonia NP or their inherent natural beauty. NRW considers that the degree of harm to nationally designated landscapes is substantial and contrary to the purpose of conservation and enhancement of natural beauty.

## ANNEX C – RESPONSES TO EXAMINING AUTHORITY'S QUESTIONS

Please find below NRW's responses (right hand column) to the Examining Authority's questions:

Reference	Respondent:	Question:	NRW Response
<b>0 General and Cross Topic Questions</b>			
0.3	Applicant, Any Interested Party	<b>National Policy</b> Are you aware of any updates or changes to UK or Welsh Government Policy or Guidance relevant to the determination of this application that have occurred since it was submitted? If yes, what are these changes and what are the implications, if any, for the application?	Natural Resources Wales defer to Welsh Government as the appropriate body to comment on policy matters in Wales.
0.16	NRW, CCBC, DCC, FCC, GC, IoACC, SNP	<b>Code of Construction Practice (CoCP)</b> The CoCP would be an important part of the mitigation strategy for dealing with and controlling potentially adverse effects from the various construction activities. Do you consider that as drafted it is sufficiently robust and precise and consequently enforceable?	Our detailed advice is given in our Written Representations. We advise amendments to specific Outline Management Plans and Outline Method Statements that form part of the Code of Construction Practice (please see sections 3.3.5, 3.5.1, 3.6.2 and 3.6.3. We advise that Requirement 10 is amended to ensure that NRW will be consulted by the discharging authority prior to the approval of the CoCP/ discharge of Requirement 10.  Notwithstanding the above advice, we refer you to our comments on the Water Framework Directive (Freshwater) (paragraphs 3.3.1 – 3.3.7) which explain that further information is required to evidence the appropriate watercourse crossing methods (as described in the Outline CMS) at each location.

0.19	All Interested Parties	<b>Other Projects and Proposals</b> Are there any other projects that are not documented in the ES that are relevant and need to be considered by the ExA? If so, please identify these projects and the public information source(s) from which you have made your assessment that they are relevant.	Broadly, we consider the cumulative effects assessment to be comprehensive. Please note our comments in response to question 2.23 and para 2.7.13 of our Written Representation with respect to the marine cumulative effects assessment for disturbance from underwater noise.
<b>2. Biodiversity, Ecology and Natural Environment</b>			
2.5	The Applicant, NRW, DCC	<b>General</b> Paragraph 5.3.4 of NPS EN-1 states that the Applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests. Please can you outline if and how does the application take advantage of opportunities to enhance biodiversity?	The Applicant should clarify how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation in accordance with the provisions of EN-1. However, NRW notes the following: The Outline LEMP (and the associated DCO Requirement) may secure biodiversity enhancements with respect to Great Crested Newts (GCN). There are important GCN populations within and in the vicinity of the Export Cable Corridor and there is habitat creation as a material component of the scheme that functions to restore FCS and constitutes both enhancement and restoration. Whilst actions are targeted at GCNs there will be ecosystem benefits for a range of species and habitat, we refer you to this <a href="#">report</a> for further information on the wider biodiversity and ecosystem benefits of GCN mitigation  Although mitigation has been presented for the offshore marine environment, we are not aware of any particular opportunities presented for enhancement for biodiversity and geological conservation interests.
2.8	NRW, JNCC, RSPB, NWWT	<b>Offshore – General</b> Are you satisfied that there is no disturbance assessment available to assess other construction activities	NRW request clarification from the Examining Authority as to what is being asked under this question – it is currently unclear specifically which receptor and impact pathway this relates to.

		<p>such as drilling, dredging, vessel activity? If no, please explain your reasons and provide evidence justification.</p>	<p>In order to try to assist the ExA, we offer the following response from an ornithological and marine mammals perspective.</p> <p><b>Marine Ornithology:</b> NRW are satisfied with the assessments for disturbance on marine ornithology, apart from Pen-y-Gogarth SSSI, a site designated for breeding Kittiwake, Guillemot and Razorbill. Kittiwakes can be affected by windfarms through collision mortality, whereas Guillemots and Razorbills can be displaced by wind farms. We advise that assessment is needed to understand the likely effects of Awel-y-Môr on Pen-y-Gogarth SSSI. In addition, Red-Throated Diver and Common Scoter are features of Liverpool Bay SPA, and Common Scoter are included as a priority species in Section 7 of the Environment (Wales) Act 2016. Both species are sensitive to anthropogenic disturbance and displacement. The Applicant has started that they will produce a vessel traffic management plan, and NRW welcomes this. We agree that this vessel traffic management plan is needed, and that it adopts measures such as (but not limited to) restricting vessel movements to existing navigation routes. This is necessary to avoid or reduce disturbance, and therefore displacement. As requested by the Applicant, we will work with them to produce and implement the plan. Please see further details in section 2.6 of our Written Representations.</p> <p><b>Marine mammals:</b> NRW are satisfied that there is no quantitative assessment of underwater noise disturbance from other construction activities (drilling, dredging, vessel activity). The Applicant has addressed these qualitatively in the ES. This is because impacts from the activities are thought to be relatively benign. The following is an excerpt from the SNCBs EPS guidance (JNCC/CCW/NE 2010) and is broadly compatible with the reasons for a qualitative assessment in the EIA as described by the applicant:</p> <p><i>'Drilling: In the UK, no guidelines exist for mitigating the sound from drilling activities since these are thought to be of relatively low concern for cetaceans. However, for large scale drilling operations, particularly in areas where animals could become chronically exposed, e.g. areas where small</i></p>
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			<p>populations of coastal bottlenose dolphins or Risso's dolphins occur, an assessment of the risk of deliberate disturbance should be carried out and consideration given to whether appropriate mitigation is feasible.</p> <p><u>Dredging:</u> There are no specific good practice guidelines on how to mitigate for the potential impacts to marine EPS during this activity since the risk of injury is considered negligible. However, an assessment of the likelihood of disturbance occurring as a result of the activity should be undertaken by those responsible for dredging in areas where there is a risk that animals could be chronically exposed to the dredging noise, e.g. areas where small populations of coastal bottlenose dolphins or Risso's dolphins occur.</p> <p><u>Vessel movements:</u> It is most unlikely that a passing vessel would cause more than trivial disturbance. It is the repeated or chronic exposure to vessel noise that could cause disturbance in the terms of the Regulations.'</p> <p>JNCC/CCW/NE (2010). <i>The protection of marine European Protected Species from injury and disturbance</i>. Guidance for the marine area in England and Wales and the UK offshore marine area. Joint Nature Conservation Committee, Natural England and Countryside Council for Wales. June 2010 Available <a href="#">here</a>.</p>
2.11	NRW, JNCC, NWWT	<p><b>Offshore - Baseline data and modelling</b></p> <p>Are you satisfied with:</p> <p>a) the information contained in table 22, ES Volume 4 [APP-106] with the listed species, mu size and density estimates recommended for use in the quantitative impact assessment;</p> <p>b) the two modelling locations northwest &amp; southeast of the array area represent the locations closest to important marine mammal areas;</p>	NRW are satisfied with the parameters used.



		<p>c) the swimming speeds per mammal assumed in the impact assessment.</p> <p>If no to any of the above points, please explain reasons and provide evidence justification.</p>	
2.13	NRW, JNCC, NWWT	<p><b>Offshore – Marine Mammal</b></p> <p>Are you satisfied that as there is no threshold for temporary threshold shift (TTS) onset (that would indicate a biological significant amount of TTS), it is not possible to carry out a quantitative assessment of magnitude or significance of the impact of TTS on marine mammals? [AS-026]. If no, please explain you reason and provide evidence justification.</p>	<p>NRW are satisfied with the reasoning for exclusion as described by the Applicant. There is no threshold (in terms of numbers of animals) for temporary threshold shift (TTS) onset that would be of biological significance. A large enough dose (in terms of level or time) of underwater noise would eventually cause the shift in hearing sensitivity to become permanent (PTS) but PTS is assessed separately. Given that TTS is inherently temporary in nature, lasting between minutes to a few days, it could not have long term biologically significant population effects.</p>
2.14	NRW, JNCC, NWWT	<p><b>Offshore – Marine Mammal</b></p> <p>To assess potential for behaviour disturbance in marine mammals from unexploded ordnance (UXO) detonations the Applicant has presented impact assessment for 26km effective deterrence range (EDR) for high-order detonations; 5km EDR for low-order detonations; and TTS-onset thresholds for high-order detonations in [AS-026]. Are you satisfied with these assessments? If</p>	<p>NRW is satisfied with these assessments. For single high order detonations of unexploded ordnance (UXO), NRW advises the use of a fixed TTS-onset threshold. This is because: (1) the standard methodology for modelling noise propagation for underwater explosions, Soloway &amp; Dahl (2014), is known to overestimate the impact range due to various simplifying assumptions, (2) a one-off explosion would probably only elicit a startle response and would not cause widespread and prolonged displacement (JNCC 2010), (3) There are currently no fixed thresholds to assess behavioural disturbance from UXO. Thus, using a TTS-onset threshold (which is normally considered the least precautionary option for assessing disturbance) achieves a good balance to avoid overly conservative impact range estimates. For low order detonations, as with high order detonations, there are no fixed thresholds to assess behavioural disturbance from UXO. Low order detonations would also not be expected</p>

		no, please explain the reasons and provide evidence justification.	to elicit TTS in marine mammals except at very close range. Thus, the next best available sufficiently precautionary option, in our opinion, is to apply a 5 km EDR.
2.18	NRW	<p><b>Offshore – Marine Mammals</b></p> <p>With reference to your Relevant Representation [RR-015] please can you explain with evidence justification:</p> <p>a) What is meant by “area-based assessment should be carried out where the extent of habitat that is insonified to a level that might produce significant disturbance is determined”;</p> <p>b) the alternative to the “use of dose/response curves to conduct an area-based assessment to estimate area of harbour porpoise habitat disturbed”; and</p> <p>c) your reasons for “insufficient justification to support a conclusion of no Likely Significant Effect from vessel collision for bottlenose dolphin, grey seal or harbour porpoise features of relevant SACs”.</p>	Please refer to our Written Representation and specifically section 2.7, paragraphs 2.7.5d i-v and 2.7.6 - 2.7.11
2.19	NRW, JNCC, NWWT	<p><b>Offshore – Marine Mammals</b></p> <p>Draft Outline Marine Mammal Mitigation Protocol - Paragraph 20 [APP-107] states “Given these levels of uncertainty and over-precaution, and given that this is an evolving field of research, the Project does not consider</p>	Please refer to our Written Representations.

		it necessary to commit to mitigating cumulative PTS-onset at this stage". Please can you respond to this statement and provide evidence justification.	
2.23	NRW, JNCC, NWWT	<p><b>Offshore – Marine Mammals</b></p> <p>Are you satisfied with the list of projects in [AS-026] screened into the marine cumulative effects assessment (CEA) for disturbance from underwater noise? If not, please explain your reasons and provide evidence justification.</p>	<p>NRW has potential concerns with the CEA. We note that the projects screened into the CEA differ between fish/shellfish and marine mammals for the same impact pathway (underwater noise) and some projects are screened in for assessment in the screening matrices but excluded in the CEA assessment.</p> <p>Several projects are missing from the Marine Mammal CEA although they are included and qualitatively assessed for fish &amp; shellfish. For example, compare Table 45 Volume 2 Chapter 6 [APP-052] - which includes North Wales Tidal Energy Project, Mostyn Lagoon, Morgan &amp; Mona offshore windfarms (also known as EnBw and BP) and Morecome Offshore windfarm (also known as Cobra &amp; Flotation Energy) - with Table 48, 50 &amp; Figure 28 of Volume 2 Chapter 7 [AS-026], which for harbour porpoise, grey seal and bottlenose MMMUs of relevance to Wales (i.e. southwestern Britain) includes only Dublin Array, Erebus and North Hoyle offshore windfarm. Mona and Morgan are screened in for inclusion in the CEA matrices (Volume 1. Annex 3.1 Cumulative Effects Assessment Methodology [APP-042]) for both fish and marine mammals but not included in the CEA assessment in the marine mammal chapter (Volume 2 Chapter 7 [AS-026]). Moreover, Morecombe is screened in for fish but not for marine mammals in the assessment matrices and excluded in the CEA assessment in the marine mammal chapter. It is also unclear to NRW why Morlais tidal project and Valorous Floating offshore windfarm have been screened out of the marine mammal CEA. Other projects may also be missing e.g., Greenlink interconnector. It is unclear whether these inconsistencies make a material difference to the conclusions of the CEA without further information. We have alerted the Applicant to these discrepancies and are seeking</p>

			clarification with them; please see paragraph 2.7.13 of our Written Representation.
2.26	NRW, JNCC, NWWT	<b>Offshore – Marine Mammals</b> Are you satisfied with: a) The impact magnitude definitions given in Table 9, [AS-026]; and b) The description/reason in Table 10 Sensitivity/importance of the environment? [AS-026]. If not, please explain your reasons and provide evidence justification.	NRW are satisfied with the definitions of magnitude and sensitivity/importance categories.
2.31	The Applicant, NRW	<b>Offshore – Mitigation</b> [AS-026] (Table 3) states that “NRW agreed with the proposed approach to incorporation of ADDs [acoustic deterrent devices] into the MMMP”. The draft outline Marine Management Mitigation Protocol (MMMP) suggests some uncertainty as to whether an ADD is to be delivered – for example, paragraph 32 states “If an ADD is chosen as part of the suite of mitigation measures set out in the final MMMP...”. a) Can the Applicant explain what factors would affect the decision on whether to select an ADD as part of the	Please refer to NRW's written representation with regard to mitigation – see section 2.7  Please also see the response to question 2.107 and paragraph 4.1.6 of the written representation.

		<p>suite of mitigation measures set out in the final MMMP?</p> <p>b) Can the Applicant and NRW comment on whether it is necessary to secure provision of an ADD through the DCO?</p>	
2.37	NRW	<p><b>Offshore – Monitoring</b></p> <p>Could NRW comment on the scope of the proposed monitoring during piling procedures, as described in Volume 4: Annex 7.2: Draft Outline Marine Mammal Mitigation Protocol [APP-107]?</p>	<p>Please refer to NRW's written representation with regard to mitigation of cumulative Permanent Threshold Shift (PTS) (sections 2.7.5). The MMMP describes standard procedures for monitoring a 'mitigation' zone as per the industry standard guidelines to reduce injury (PTS) (JNCC 2010). Additionally, Noise Abatement is described in the MMMP, although their use is dependent on their need to mitigate cumulative PTS rather than instantaneous PTS. Necessary mitigation measures and piling monitoring will be regulated under a Marine Licence.</p>
2.39	NRW, JNCC, RSPB, NWWT	<p><b>Offshore – Ornithology</b></p> <p>Are you satisfied with the existing baseline data and for a future baseline to be informed by extrapolation of the currently available data by reference to policy and plans, other proposal applications and expert judgement? (Paragraph 40, [APP-050]). If not, please explain your reasons and provide evidence justification.</p>	<p>NRW are satisfied with the existing site-characterisation. However, a baseline survey may be needed for post-consent monitoring. Please see written representations for specific comments on Red-Throated Diver post consent-validation monitoring (paragraphs 2.6.14 - 2.6.15)</p>
2.41	NRW, JNCC, RSPB, NWWT	<p><b>Offshore – Ornithology</b></p> <p>Are you satisfied:</p> <p>a) That the site-specific baseline surveys and sample sizes could not be used to accurately calculate site-specific flight heights for the four species selected for CRM, and</p>	<p>NRW are satisfied with these approaches.</p>



		<p>consequently band 2 and 3 were applied and presented in the report? Paragraph 2.1 [APP-097];</p> <p>b) With the list of migratory birds screened in for modelling migropath and broad front modelling in table 1 in ES Volume 4 [APP-098];</p> <p>c) With the worked example for apportioning gannet collision mortalities to colonies during migration free breeding season (April to August) table 1 [APP-032]; and</p> <p>d) With the potential likely significant effects listed within the Matrixes? ES Report 5.2 [APP-033].</p> <p>If not, please explain your reasons and provide evidence justification.</p>	
2.65	NRW, DCC, NWWT, Envirowatch.E U, Sustainable Cymru	<p><b>Onshore – Mitigation</b></p> <p>Are you satisfied the following provide sufficient mitigation measure details and are adequate for preparing future detailed versions:</p> <p>a) outline Code of Construction practice [APP-312];</p> <p>b) outline Construction Method Statement [APP-313];</p> <p>c) outline Landscape and Ecology Management Plan [APP-305].</p> <p>If not for any of the above points please explain reasons and provide evidence justification.</p>	<p>NRW advise as follows:</p> <p>a) With respect to the Outline Code of Construction Practice, NRW is satisfied that sufficient information has been included to inform the detailed version, to be approved as part of DCO Requirement 10.</p> <p>b) With respect to the Outline CMS, as detailed in paragraph 3.3.5 and 3.6.3 of our Written Representations, we advise that amendments are made to the Outline CMS. We would also refer you to our comments on the Water Framework Directive (Onshore works) in paragraphs 3.3.1 – 3.3.7 which explain that further information is required to evidence the appropriate watercourse crossing methods (as described in the Outline CMS) at each location.</p> <p>c) As detailed in paragraphs 3.4.2 and 3.7.3 of our Written Representations, we advise that amendments are made to the Outline LEMP</p>

2.79	The Applicant, NRW, NWWT, Envirowatch.EU	<b>Onshore – Hedgerow</b> Please can you advise on the recovery time of a hedgerow to ecological function for use per species?	<p>Hedgerow planting/management has an important role to play in maintaining or restoring the Favourable Conservation Status of protected species (e.g. bats) during the construction and operational phase of the development. These are features of the landscape which, by virtue of their linear and continuous structures that are functionally required for the migration, dispersal and genetic exchange of wild species. The Outline LEMP includes a number of mitigation and compensation measures to ensure that bat commuting/foraging flight lines are maintained throughout construction and site restoration. NRW is satisfied that the Outline LEMP includes appropriate mitigation (with respect to hedgerow planting) to inform the detailed version that will be approved by the discharging authority.</p> <p>With respect to hedgerow restoration as an important ecological resource in its own right, then we would defer to Denbighshire County Council, as the local planning authority, who may be able to advise further on this matter.</p>
2.91	NRW, DCC, RSPB	<b>Onshore – Habitats and Species</b> Are you satisfied with: <ul style="list-style-type: none"> <li>a) The designated sites listed in Table 5: Designated Sites Scoped out of the Assessment ES Volume 3, Chapter 5 [APP-066];</li> <li>b) The targeted scope of the wintering bird survey and that significant effects on other wintering bird species are unlikely and surveys for other species were not considered necessary (ES Volume 5 – Annex 5.3 [APP-126]); and</li> <li>c) That assessment of noise impact upon ecological receptors is not required for the cable route or OnSS (paragraph 105 of ES Volume 3, Chapter 10 [APP-071]).</li> </ul>	<p>NRW advise as follows:</p> <ul style="list-style-type: none"> <li>a) With respect to the onshore works, we would agree with the sites scoped out in Table 5. We consider the onshore works are unlikely to have any direct or indirect significant effects on designated nature conservation sites. We also consider that the area subject to the onshore works is unlikely to provide supporting habitat that would be important for mobile features of any designated sites (e.g. Dee Estuary SPA/Ramsar or Liverpool Bay SPA). However, we refer you to our Air Quality comments (paragraph 3.8.3 of our Written Representations) where we advise that we could not rule out likely significant effects on designated sites from marine vessel emissions. A Clarification Note has been received (14/10/2022) which NRW will review and advise the Applicant and the Examining Authority accordingly.</li> <li>b) We are satisfied with the scope of the wintering birds survey. As advised above, we consider the onshore works are unlikely to affect supporting habitat of any bird features of designated sites. In relation to Wildlife and Countryside Act 1981 (as amended) Schedule 1 birds (e.g. barn owls), and Birds Directive Annex I species, we are satisfied with the surveys undertaken. We defer to DCC with respect to locally important bird species.</li> </ul>

		If not, please explain reasons and provide evidence justification.	c) We are satisfied with the assessments undertaken with respect to noise impacts on protected species (including bats and barn owls) and the mitigation provided in the Outline LEMP.
2.97	NRW, JNCC, RSPB, NWWT	<p><b>RIAA</b> Are you satisfied with:</p> <p>a) Table 57 and no adverse effect on integrity alone and in- combination? (ES Report to Inform Appropriate Assessment [APP-027]);</p> <p>b) Table 6 – summary of the screening conclusions for all receptors (excluding ornithology) (ES RIAA Annex 1 [APP-028]); and</p> <p>c) The minimum air gap of 21.9m referenced in table 1 turbine and array parameters used to inform Collision Risk Models [APP-097].</p> <p>If no to any of the above points, please identify and explain your reasons and provide evidence justification.</p>	<p>For ease of interpretation, we have broken the response to this question down per receptor.</p> <p><b>Benthic:</b> a) we are satisfied; b) we are satisfied; c) not relevant to benthic receptors therefore we are not in a position to comment</p> <p><b>Marine mammals:</b> a) NRW are satisfied that there is no AEOSI to the relevant SACs in Wales with marine mammal features; b) we are satisfied with the conclusions of HRA screening for marine mammal features of SACs in Wales, except for vessel collision. See Written Representation for further information (sections 2.7.6-2.7.10); c) Not relevant to marine mammal receptors (unable to comment)</p> <p><b>Marine Ornithology:</b> a) NRW are satisfied with the HRA assessments carried out for Welsh SPAs; b) Not asked of ornithology; c) NRW are satisfied with the minimum air gap used to inform Collision Risk models.</p> <p><b>Fish:</b> a) we are satisfied; b) we are satisfied; c) not relevant to fish receptors therefore we are not in a position to comment</p>
2.98	NRW, JNCC, RSPB, NWWT	<p><b>RIAA</b> Are you satisfied with the potential impacts considered at designations within Table 1.1.</p> <p>If no, please identify the designation(s), explain your reasons, and provide evidence justification (ES Integrity Matrices [APP-034]).</p>	<p>For ease of interpretation, we have broken the response to this question down per receptor.</p> <p><b>Benthic:</b> NRW is satisfied</p> <p><b>Marine mammals:</b> NRW are satisfied with the impacts considered within the integrity matrices for marine mammal features of SACs in Wales, except for the exclusion of vessel collision. Although the potential for LSE from vessel collision exists and should be taken to Appropriate Assessment, the pathway</p>

			<p>is adequately mitigated for using a vessel management plan and codes of conduct and on that basis NRW can be satisfied that there will be no resulting AEOSI. See Written Representation for further information.</p> <p><b>Marine Ornithology:</b> NRW are satisfied with the approach taken for Welsh SPAs.</p> <p><b>Fish:</b> we are satisfied.</p>
2.101	NRW	<p><b>RIAA</b></p> <p>The Applicant's assessment of LSE on European sites (Table 5 of [APP-027]) includes pintail, teal and ringed plover as features of the Severn Estuary Ramsar site. However, the ExA notes that these features are listed on the relevant Ramsar Information Site as identified for possible future consideration under criterion 6. Natural Resources Wales is requested to confirm if these features should be treated as listed Ramsar features. If so, what is the legal or policy basis for doing so?</p>	<p>NRW advise that these species form part of the assemblage feature of Severn Estuary Ramsar site. They should therefore only be assessed as part of the Ramsar bird assemblage feature and not as individual features.</p>
2.102	NRW, NS, DAERANI, Isle of Man Government, JNCC	<p><b>RIAA</b></p> <p>Please confirm if there are any additional European/Ramsar sites or qualifying features which have not been included in [APP-027].</p>	<p>NRW is not aware of any Welsh European/Ramsar sites or features which have not been included in [APP-027], for which we consider there is a pathway for effects on that site or feature.</p>

2.103	NRW, JNCC, DAERANI	<p><b>RIAA</b></p> <p>Please confirm if the assessment in [APP-027] refers to the correct conservation objectives for the European/Ramsar sites under consideration.</p>	<p>NRW is not aware of any errors to the Conservation Objectives of Welsh European/Ramsar sites in [APP-027]. Nonetheless, we note the following:</p> <p><b>Benthic:</b> NRW confirms that the assessment refers to the correct conservation objectives for the European/Ramsar sites under consideration.</p> <p><b>Marine Ornithology:</b> NRW agrees that the assessment refers to the correct conservation objectives for the SPAs and Ramsar sites under consideration.</p> <p><b>Marine Mammals:</b> The correct conservation objective has been used for harbour porpoise sites around Wales. For grey seal and bottlenose dolphin features of SACs around Wales - where the conservation objectives for these species are the same for Pembrokeshire Marine, Cardigan Bay and Pen Llyn a'r Sarnau SACs - the Applicant has assessed disturbance from underwater noise against the Range conservation objective i.e. <i>"The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future"</i>: see Table 14 and 15 in APP-027. The Supporting habitat conservation objective could be additionally listed as a relevant CO, since this specifically raises disturbance: <i>"Disturbance by human activity is below levels that suppress reproductive success, physiological health, or long-term behaviour"</i>. Nevertheless, NRW are satisfied that the assessment would result in the same conclusions whichever CO is used in the assessment. In our Written Representation, we have requested that the Applicant clarify the extent of the MMMU area disturbed from construction activities is presented, in order to enable NRW to assess the effect on functionally linked habitat against the Supporting Habitat conservation objective.</p> <p><b>Fish:</b> NRW confirms that the assessment refers to the correct conservation objectives for the European/Ramsar sites under consideration.</p>
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2.104	NRW	<p><b>RIAA</b></p> <p>In the assessment of potential adverse effects on the integrity of Liverpool Bay SPA, [APP-027] refers to the conservation objectives contained in the Regulation 35(3) Advice agreed by Natural Resources Wales (NRW) and Natural England (NE), despite the lack of reference in these objectives to several of the qualifying features (common tern, little tern and common scoter). Could NRW confirm if this approach is appropriate and how the Secretary of State can consider the implications for the conservation objectives of the SPA if the conservation objectives do not cover the full range of qualifying features?</p>	<p>NRW advised the applicant on which Conservation Objectives to use for Liverpool Bay SPA and are satisfied with the approach. For Red Throated Diver and Common Scoter, we advised the Applicant to use the old Conservation objectives. Due to the project location and the species recorded in surveys, we were satisfied that no other features of Liverpool Bay SPA would be affected. NRW and Natural England are currently in the process of updating conservation advice for Liverpool Bay</p>
2.107	The Applicant, NRW	<p><b>RIAA</b></p> <p>The Examining Authority notes that the Applicant has relied on mitigation measures to avoid harm to the integrity of European/Ramsar sites in the marine environment. However, these mitigation measures, including the Marine Mammal Mitigation Protocol and the Project Environmental Management Plan are not secured through the draft DCO but instead rely on suitable conditions being attached</p>	<p>The ExA is referred to Section 4 of the written representations which explain that the ML regime is distinct and separate to the DCO regime. Accordingly, NRW MLT is not in a position to provide substantive comment on this issue. It should also be noted, with reference to paragraph 4.1.6 of the written representation, that it should be assumed by the Examining Authority that NRW's MLT regulatory functions will be competently and properly undertaken in accordance with any and all relevant legislation, policy and guidance.</p>

		<p>to the Marine Licences for the Proposed Development.</p> <p>The <b>Applicant</b> is requested to explain, with references to case law if appropriate, why the SoS should have confidence that such an approach would comply with the requirements of the Habitats Regulations.</p> <p>Do <b>NRW</b> agree with this approach to securing mitigation? If so, a justification should be provided, with reference to any relevant case law, as to why this approach is appropriate.</p>	
<b>3. Compulsory Acquisition (CA) and Temporary Possession (TP)</b>			
3.5	Affected Persons, Interested Parties	Are any Affected Persons or Interested Parties aware of any inaccuracies in [AS-020a], [APP-021] or [AS-005]? If so, please set out what these are and provide the correct details.	NRW has no comments to make with respect to this question.
<b>4. Construction</b>			
4.22	NRW	<p><b>Hazardous Waste and Emergency Incident Processes</b></p> <p>Are you satisfied with the content of the outline Site Waste Management Plan (oSWMP) [APP-317] and outline Pollution Prevention and Emergency Incident Response Plan (oPPEIRP)</p>	NRW is satisfied with the content of the Outline SWMP and Outline PPEIRP with respect to hazardous waste and emergency incident processes.

		[APP-317] with specific regard to the proposed hazardous waste and emergency incident processes? If not, please explain your reasons.	
<b>7. Flood Risk and Water Quality</b>			
7.2	NRW	<b>Western Wales River Basin Management Plan</b> Please provide a copy of the updated Western Wales River Basin Management Plan 2021-2027 as detailed in your relevant representation [RR-015].	The updated Western Wales River Basin Management Plan 2021-2027 was published on 18th July 2022 and is available here: <a href="https://www.naturalresourceswales.gov.uk/cyfoethnaturiol/cymru/2021-2027-Summary">Western Wales RBMP 2021 2027 Summary (cyfoethnaturiol.cymru)</a>
7.3	NRW	<b>Inter-relationships</b> Further to your relevant representation [RR-015], please provide an explanation of which inter-relationships between marine water and sediment quality and other receptors you consider have been overlooked, in addition to elevated bacterial counts and human health.	Please refer to our Written Representations – paragraph 2.2.5
7.9	NRW	<b>Marine Water and Sediment Quality</b> Please clarify the comments made in your relevant representation [RR-015] regarding the need for further information and reporting against Cefas Action Levels. What additional information is required beyond the	The contaminants presented in the ES are only a subset of those included in the CEFAS action level list of contaminants. Please also see our Written Representation paragraph 2.2.2 which outlines the clarifications presented by the Applicant.

		information presented [APP-049], Tables 10 and 12?	
7.31	NRW, DCC	<p><b>Outline Code of Construction Practice</b></p> <p>Are you satisfied that the measures contained within [APP-312] and associated outline environmental plans would be sufficient to effectively control the below during construction:</p> <p>a) Turbid run-off into rivers; b) Accidental spillages; and c) Run-off from HDD</p> <p>If not, please expand on your reasoning and detail additional required mitigation.</p>	<p>NRW advises as follows:</p> <p>a) We refer you to paragraphs 3.3.5, 3.6.2 and 3.6.3 of our Written Representations which advise amendments to the Outline CMS and Outline PPEIRP. However, we would also refer to our comments on the Water Framework Directive (Freshwater) (paragraphs 3.3.1 – 3.3.7) which explain that further information is required to evidence the appropriate watercourse crossing methods (as described in the Outline CMS) at each location. As explained, depending on the ground conditions and the nature of the watercourse at a particular crossing point, the use of an inappropriate crossing technique may cause turbid run-off into rivers.</p> <p>b) We refer you to paragraph 3.6.2 of our Written Representations which advises amendments to the Outline PPEIRP. Subject to the inclusion of these amendments, and on the basis that a final PPEIRP will be approved by the discharging authority, we would be satisfied that the risk of accidental spillages will be appropriately controlled.</p> <p>c) We are satisfied that the risks can be managed based on the Outline PPEIRP, and that the final version will be approved by the discharging authority.</p>
<b>9. Land Use</b>			
9.9	CBBC, DCC, NRW	<p><b>Outline Code of Construction Practice (oCoCP) and Soil Resources</b></p> <p>Are you satisfied with the approach and content of the oCoCP [APP-312] and associated appendices (e.g. the outline</p>	<p>With respect to soil resources, NRW is satisfied with the approach and content of the Outline CoCP and the associated Outline Soil Management Plan.</p>

		Soil Management Plan (oSMP) [APP-316]) in respect of the management of potential effects on soil resources? If not, please detail additional methods and/or mitigation measures considered necessary within the oSMP. In addition, please confirm whether you are satisfied that soils would be suitable for the required end use and the appropriateness of the proposed soil restoration methods.	
9.10	CBBC, DCC, NRW	<p><b>Outline Code of Construction Practice (oCoCP) and Ground Conditions</b></p> <p>Are you satisfied with the approach and content of the oCoCP [APP-312] and associated appendices (e.g. the Outline Pollution Prevention and Emergency Incident Response Plan (oPPEIRP) [APP-318]) in respect of the management of potential effects on ground conditions?</p> <p>If not, please detail additional methods and/or mitigation measures considered necessary within the oPPEIRP.</p>	We refer you to paragraph 3.6.2 of our Written Representations which advises amendments to the Outline PPEIRP.
<b>10. Landscape and Visual</b>			
10.1	DCC, NRW	<p><b>Assessment</b></p> <p>Please confirm whether you are satisfied with:</p> <p>a) the ECC and OnSS study areas; and</p>	NRW is satisfied with a) the study areas and b) the viewpoint locations where they relate to the Clwydian Range and Dee Valley AONB.



		b) the OnSS viewpoint locations selected, as identified within ES Chapter 2: Landscape and Visual Impact Assessment (LVIA) [AS-029]. If not, please explain the reasons for this.	
10.2	DCC, NRW	<b>Assessment</b> Please confirm whether you are in agreement with: a) the Applicant's LVIA methodology; and b) its assessment of effects in respect of landscape features, landscape character and visual amenity. If not, please explain the reasons for this.	NRW is in agreement with the Applicant's a) LVIA methodology and b) assessment of effects.
10.3	DCC, NRW, The Applicant	<b>Assessment</b> The LVIA methodology provides for moderate adverse effects to be classified as either 'significant' or 'not significant' based on professional judgement. DCC / NRW - Please confirm you are satisfied with this approach? The Applicant - Please further justify the instances where moderate adverse effects are considered 'not significant' in Tables 8, 10, 13 and 14, as the precise reasons for this are not clear to the ExA.	NRW agrees with the LVIA method which provides for moderate adverse effects to be classified as either 'significant' or 'not significant' based on professional judgement. There are a number of cases where our professional judgement classifies moderate effects as significant.

10.16	DCC, NRW	<p><b>Clwydian Range and Dee Valley Area of Outstanding Natural Beauty</b></p> <p>VP 9 [APP-189] is located within the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB). Are you satisfied that:</p> <p>a) the OnSS would give rise to no significant effects from this viewpoint (and the AONB as a whole); and</p> <p>b) that this would also be the case should the AONB change to National Park status (albeit boundaries might differ)?</p>	<p>NRW advises as follows:</p> <p>a) We agree that the OnSS would not give rise to significant effects from this viewpoint (and the AONB as a whole). However, there will be we adverse effects which should nevertheless be minimised, and the materials and colours of the proposed buildings and infrastructure should be designed to minimise visual impacts. We refer you to paragraph 3.1.29 of our Written Representations.</p> <p>b) We agree that this would also be the case should the AONB change to National Park - including the advice regarding minimising adverse effects.</p>
10.36	DCC, NRW	<p><b>Cumulative Assessment</b></p> <p>Are you satisfied with the list of developments for cumulative assessment purposes as shown in Table 15 of ES Chapter 2 [AS-029] and with the conclusions that no significant cumulative landscape and visual effects would arise?</p>	<p>NRW is satisfied with the list of developments considered and is satisfied that there would not be significant cumulative landscape and visual effects on the Clwydian Range and Dee Valley AONB.</p>
10.37	DCC, NRW, The Applicant	<p><b>Cumulative Assessment</b></p> <p><b>DCC / NRW</b> - [AS-029] sets out that the cumulative assessment excludes the consideration of the necessary extension to the National Grid substation on the basis of insufficient</p>	<p>NRW agrees that it is unlikely to lead to significant cumulative effects on the Clwydian Range and Dee Valley AONB.</p>

		<p>detail known of it at the time of the assessment. However, it goes on to suggest that the effects of the extension would be localised and would therefore be unlikely to lead to a significant cumulative effect. Are you in agreement with this?</p> <p><b>The Applicant</b> - Has there been any progression in respect of the National Grid substation extension which might assist with a more detailed consideration of cumulative effects?</p>	
<b>11. Marine and Coastal Physical Processes</b>			
11.5	The Applicant, NRW	<p><b>Assessment of Change to Pathways</b> Paragraph 43 of ES Volume 2, Chapter 2 [APP-048] confirms that the assessment of potential change to pathways will not, at this stage, be accompanied by a conclusion regarding the significance of effects.</p> <p><b>Applicant</b> – Please confirm why it isn't necessary to include significance of effect conclusions in respect of this matter? Are they to be provided at a later date?</p> <p><b>NRW</b> – Do you consider such conclusions necessary?</p>	<p>NRW considers that this question relates to Physical Processes, and as such advises the following. It is not necessary to reach a conclusion regarding significance if the impact being assessed is a physical process pathway (for example: suspended sediment concentration plumes and seabed levels associated with redeposition) and will not have any impact to the baseline physical processes. Assessing significance for a physical processes pathway has been signposted to the relevant receptor which the impact pathway is affecting, and appropriately addressed in the relevant receptor chapters. This approach was made clear in paragraph 19, Table 3 and paragraph 72 [APP-048].</p>
<b>13. Marine – Natural</b>			

13.12	NRW, JNCC, RSPB, NWWT	<b>Offshore – General</b> Are you satisfied that there is no disturbance assessment available to assess other construction activities such as drilling, dredging, vessel activity? If no, please explain your reasons and provide evidence justification.	This is a repetition of question 2.8 above – please refer to the response above.
<b>14. Public Health and Nuisance</b>			
14.12	DCC, NRW	<b>Assessment</b> Are you satisfied: a) That a project specific air quality monitoring survey has not been carried out? b) With the approach adopted for the consideration of cumulative construction dust impacts in Section 11.13 of ES Volume 3 Chapter 11: Air Quality [AS -030]? c) That all relevant receptors have been identified? d) With the Applicant's assessment of road traffic effects and that there is no proposal to use dispersion modelling to quantify the resultant impact on critical loads and/ or critical levels? e) With the assessment of construction dust impacts on ecological sites?	With regards to air quality, NRW's advice relates to potential impacts on designated sites (SSSI, SAC, SPA, Ramsar). NRW can advise to each part of the question as follows: a) In view of the screening undertaken, NRW is satisfied that air quality monitoring survey is not required to inform an assessment of impacts on designated sites. b) We consider that 400m would be an appropriate screening distance for assessment of dust impacts. We are satisfied that there are no designated sites that support features that would be sensitive to dust impacts, within 400m of the Order Limits. c) As highlighted in paragraph 3.8.3 of our Written Representations, an assessment of any air quality impacts arising from marine vessel emissions is required. This pathway, and any potential impacts on any designated ecological sites, will need to be assessed. A Clarification Note has been received (14/10/2022), however, NRW has not been able to review it in the limited time available ahead of Deadline 1. NRW reserves its position on the satisfaction of the note to address our concerns until we have been able to review the Note, at which point we will advise the Applicant and the Examining Authority further. d) As detailed in paragraph 3.8.1 of our Written Representations, we are satisfied that construction/operational onshore traffic is unlikely to have significant effects on any designated nature conservation site (SSSI, SAC, SPA and Ramsar site). This is because any increases in onshore traffic,

		<p>f) That the screening of traffic trips is in accordance with current guidelines and legal judgements? And</p> <p>g) With the assessment of the potential health impacts from PM10 of NRMM in Section 11.10.1 of ES Volume 3 Chapter 11: Air Quality [AS-030]?</p>	<p>above the threshold that requires assessment as defined by the Design Manual for Roads and Bridges, would be more than 200m from any designated sites. NRW would therefore not expect dispersion modelling to inform an assessment on designated sites.</p> <p>e) Please see our response to b).</p> <p>f) We are satisfied that the screening undertaken for construction/operational traffic is appropriate.</p> <p>g) NRW has no comments to make with respect to assessment of health impacts and defer to DCC on this matter.</p>
<b>17. Seascape, Landscape and Visual</b>			
17.1	DCC, IoACC, CCBC, GC, FCC, SNP, NRW	<p><b>Assessment</b></p> <p>Please confirm whether you are satisfied with:</p> <p>a) the study area;</p> <p>b) the Zone of Theoretical Visibility;</p> <p>c) the viewpoint locations selected; and</p> <p>d) the extent of assessment of these viewpoints, as identified within ES Chapter 10: Seascape, Landscape and Visual Impact Assessment (SLVIA) [AS-027].</p> <p>If not, please explain the reasons for this.</p>	<p>NRW is satisfied with a) study area, b) ZTV, c) viewpoint locations, d) extent of assessment of viewpoints (assuming this part of the question relates to the level of assessment undertaken for each viewpoint.)</p>
17.2	DCC, IoACC, CCBC, GC, FCC, SNP, NRW	<p><b>Assessment</b></p> <p>Please confirm whether you are satisfied with:</p> <p>a) the Applicant's SLVIA methodology; and</p>	<p>NRW can advise as follows:</p> <p>a) We are satisfied with the SLVIA methodology.</p> <p>b) We are not satisfied with the assessment of effects and refer you to our Written Representations (section 3.1)</p>



		<p>b) its assessment of effects on seascape character, landscape character and visual amenity.</p> <p>If not, please explain the reasons for this.</p>	
17.3	DCC, IoACC, CCBC, GC FCC, SNP, NRW	<p><b>Assessment</b></p> <p>The SLVIA methodology provides for moderate adverse effects to be classified as either 'significant' or 'not significant' based on professional judgement.</p> <p><b>DCC/IoACC/CCBC/GC/FCC/SNP/NRW</b> - Please confirm you are satisfied with this approach?</p> <p><b>The Applicant</b> - Please further justify the instances where moderate adverse effects are considered 'not significant' as the precise reasons for this are not clear to the ExA.</p>	<p>NRW is satisfied with the approach in SLVIA that provides for moderate adverse effects to be classified as either 'significant' or 'not significant' based on professional judgement</p>
17.5	SNP, NRW	<p><b>Assessment</b></p> <p>SNP [RR-006] and NRW [RR-015] raise concerns around under-reporting of significant effects. Please identify specifically where your concerns lie, with supporting reasons for this.</p>	<p>Our detailed comments regarding an under-estimation of some effects are set out in Annex B.</p> <p>However, the ES identifies numerous significant adverse effects which we are in agreement with. We do not consider that the areas of disagreement affect our overall conclusion and that, based solely on the conclusions in the ES, we consider the proposal would have substantial landscape effects on the Isle of Anglesey AONB and Snowdonia NP.</p>

17.7	SNP, NRW, GC (if relevant), CCBC (if relevant)	<p><b>Assessment</b></p> <p>Please confirm:</p> <p>a) whether you agree that the relevant special qualities of the National Park are limited to 'Diverse landscapes' and 'Tranquillity and solitude – Peaceful areas' as defined in the Cynllun Eryri The Snowdonia National Park Partnership Plan 2020 (SNPPP);</p> <p>b) the status of the SNPPP, noting [AS-027] indicates it is currently draft and under consultation; and</p> <p>c) whether you agree with the Applicant's assessment of effects in respect of these special qualities (Table 10) and its overall conclusion that any harm would not be to such a degree as to affect the integrity and inherent natural beauty of the National Park (paragraph 806).</p>	<p>NRW advise as follows:</p> <p>a) We agree that the relevant Special Qualities (requiring detailed assessment) are 'Diverse Landscapes' and 'Tranquillity &amp; Solitude-Peaceful areas' as defined in the Snowdonia National Park Partnership Plan. However we also consider that scenic views are a characteristic of Snowdonia's landscapes, as set out in the Plan and consider the effects adverse with respect to scenic views and with respect to relative tranquillity.</p> <p>b) We agree that the Plan is currently in draft and under consultation;</p> <p>c) We agree that the effects on Special Qualities would be non-significant but consider the effects adverse and adverse on scenic views. We do not agree with the Applicant's conclusion and consider that there would be harm to the natural beauty of the National Park through significant adverse effects on landscape character and visual amenity, as set out in our Written Representations.</p>
17.8	NRW	<p><b>Assessment</b></p> <p>[AS-027] reports no significant effects on landscape character areas within the National Park, including for SNP LCA 01: Northern Uplands and SNP LCA 02: Carneddau Range. It also reports no significant effects on the identified special qualities of the National Park. NRW [RR-015] (paragraphs 3.1.2 and 3.1.5) appears</p>	<p>NRW considers that there would be significant adverse effects on LCA1 as explained in our detailed comments in Annex B. We agree that there would be non-significant effects on LCA2 and on the two Special Qualities, but adverse effects on scenic views.</p>

		to suggest otherwise. Please explain your reasons for this.	
17.9	NRW, National Trust, The Applicant	<p><b>Assessment</b>  <b>NRW and National Trust</b> - NRW [RR-015] and National Trust [RR-029] suggest that enhancement of designated landscapes should be considered. Please explain what is meant by this and how you envisage this might be achieved?</p> <p><b>The Applicant</b> - Is this something that you have considered or are willing to consider?</p>	NRW advise that opportunities for enhancement of the designated landscapes should be considered in accordance with WNMP SOC_06 in line with principles set out in paragraph 3.1.28 of our Written Rep. NRW is advising the Applicant, in conjunction with the Local Planning Authorities, on the development of an appropriate enhancement scheme and the type of measures that could be considered. We consider an enhancement package may need to be secured under a Section 106 agreement.
17.11	NRW, IoACC	<p><b>Assessment</b>  Do you agree that the relevant special qualities of the Ynys Môn (Anglesey) Area of Outstanding Natural Beauty (AONB) include 'Expansive views'; 'Peace and tranquillity'; and 'Islands around Anglesey' as reported in [AS-027]? Following on from this, do you agree with the conclusions in Table 7 relating to these and the overall conclusion in paragraph 562 that harm would not occur to such a degree that it would affect the overall integrity of the Ynys Môn (Anglesey) AONB or its inherent natural beauty? Please</p>	NRW agrees with the three relevant Special Qualities of the AONB set out in the ES and the findings of the ES that there would be significant adverse effects on these three qualities. We do not agree with the overall conclusion in paragraph 562 and consider that there would be harm to the natural beauty of the AONB through significant adverse effects on landscape character, visual amenity and special qualities, as set out in our Written Representations.

		provide reasons if there is any disagreement.	
17.12	DCC, FCC, NRW	<b>Assessment</b> Do you agree that the relevant special qualities of the Clwydian Range and Dee Valley AONB include 'Tranquillity'; and 'Remoteness and Wildness' as reported in [AS-027]? Following on from this, do you agree with the conclusions in Table 13 relating to these? Please provide reasons if there is any disagreement.	We agree with the relevant Special Qualities and that the likely effects on these Special Qualities would be non-significant. However, we consider that there would be adverse effects, through an intensification of wind farm development within views from the AONB and an erosion of the special qualities as set out in our Written Representations.
17.18	DCC, IoACC, CCBC, GC FCC, SNP, NRW	<b>Assessment</b> Do you agree that MDS A and MDS B would have similar effects in seascape, landscape and visual terms, as indicated in paragraph 138 of [AS-027]?	NRW agrees that MDS A and MDS B would have similar effects in SLVIA terms.
17.30	DCC, IoACC, CCBC, GC FCC, SNP, NRW	<b>Cumulative and Inter-Relationship Assessments</b> Are you satisfied with the assessment of cumulative and inter-relationship effects in sections 10.13 and 10.14 of [AS-027]?	Please see our Written Representations (paragraphs 3.1.14 – 3.1.19) and our response to question 0.19 above.

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Sent by e mail

8 September 2022

Dear Mr Carter,

## **MARINE AND COASTAL ACCESS ACT 2009: PART 4 – MARINE LICENSING**

### **Marine Licence Application ORML2233 – Awel y Môr offshore wind farm**

Awel y Môr Offshore Wind Farm Limited applied to Natural Resources Wales (NRW) for a Marine Licence under the Marine and Coastal Access Act 2009 to build and operate the Awel y Môr offshore wind farm located off the north Wales coast in the Irish Sea adjacent to the operational Gwynt y Môr Wind Farm.

In accordance with Part 4, Chapter 1, Regulation 67 (4) of the Marine and Coastal Access Act 2009, NRW require further information to continue with the determination of this application.

The consultation responses received during determination have been shared with you and you will note a number of concerns which should be addressed and/or clarified. It is strongly recommended that you review and look to respond accordingly to the points raised by the various consultees.

Specific attention is given to a number of clarification points, of which many will need to be addressed before the marine licence process progresses further. However, please note that this list is not exhaustive and reference should be made to all the consultee comments. A clear signposting document or matrix should be provided showing how requested information has been provided and each consultee comment has been considered and/or addressed.

It is strongly recommended that further engagement is sought with relevant consultees as you look to address comments made. We are aware further documents such as Statements of Common Ground may be produced through the Development Order Consent process which is running parallel to the Marine Licence application. Where these are produced on matters within the Marine Licensable Area we would strongly recommend that these are also submitted to us in support of your marine licence application.

### Further Information Required

#### Dredge and Disposal

As raised by NRW (A) and Cefas, clarification is required surrounding the proposed disposal location for dredge arising from the export cable corridor as this may require designation of an additional disposal site. The disposal site characterisation report appears to concentrate on disposal of dredge arising from within the array area itself (including 1,532,615m<sup>3</sup> of dredge arising from the export cable that falls within the array area). Clarity is required surrounding the disposal of any dredge arising from the Export Cable Corridor, ES chapter 1 Offshore Project Description details this to be 6,281,000m<sup>3</sup>.

Following consideration of representation made by Cefas we consider further clarification is required in relation to the Sediment Sample Analysis presented within the Disposal Site Characterisation Report:

- Data on Particle size distribution of samples.
- Confirmation that the inshore area will only be subject to trenching. Further sampling may be required if dredging will be needed in the inshore area.
- Name of the laboratory undertaking the trace metal analysis. If the laboratory does not appear on [NRW approved list](#) for those determinants, the analysis method will need to be provided.
- The analysis results need to be presented in NRW Sediment Sampling Template Form, and should include the results of cadmium and mercury to two decimal places.
- If Naphthalene data is available, this should be provided for completeness.

### Navigation

Chamber of Shipping expressed concerns to statements raised within the ES surrounding impact of allision and vessel drift. We would ask that you review Chamber of Shipping comment and provide a response.

Chamber of Shipping have expressed concerns surrounding the placement of an isolated structure within the "Other Infrastructure Zone". We note that the ES details that the met mast may be placed within the array area or the 'Other Infrastructure Zone'. Please provide reasoning why the MetMast may be placed outside the array area.

The Marine and Coastguard Agency (MCA) have suggested a number of mitigations that should be included in any Marine Licence determined. Should you have any comment on the mitigation proposed within the MCA consultation response please provide this.

Provision for Safety Zones are detailed within the Schedule of Mitigation as being secured through a Marine Licence. Designation of Safety Zones are outside the remit of the Marine Licence and discussion should be held with the relevant authorities. We would recommend that you discuss any proposed safety zones with the MCA.

### Seascape and Landscape

Significant Concerns have been raised by NRW(A) in relation to impacts of the works on Seascape and Landscape. Although the Environmental Statement acknowledges that the proposed work will have a significant adverse effect on the Isle of Anglesey AONB and



Snowdonia National Park in a number of instances NRW(A) disagree with the extent of the effect predicted and consider that the significance has been underestimated. NRW (A) consider that the degree of harm to nationally designated landscapes is substantial. Please review detailed comments provided by NRW (A) on this matter and provide a response. We would encourage you to liaise with NRW (A) to seek points of agreement and mitigation where possible, and provide justification for the approach taken where there is a disagreement that cannot be resolved.

Following comments raised by the Anglesey County Council clarification is required surrounding the proposed Lighting Management Plan within the DCO and any lighting requirement that will be required for navigational safety. Please confirm the relationship of the Lighting Management Plan detailed proposed to be captured within the DCO and the Navigation Risk Assessment proposed for the Marine Licence.

Please confirm whether discussion surrounding compensation in relation to seascape has taken place with Anglesey County Council. Please also confirm how it is proposed that compensation for seascape and landscape impacts are to be secured, based on the Mitigation Schedule it would be our understanding that the intention is that compensation in relation to Seascape and Landscape would be secured within the DCO.

#### Marine Ornithology

JNCC and NRW (A) note that evidence of displacement on Red-throated divers is not consistent with what has been observed in other areas of Liverpool Bay SPA, as well as other areas of the UK and Europe. Validation monitoring has been requested as detailed within the response of JNCC and NRW(A). Please provide any comment you have to make in relation to this request.

Both JNCC and NRW (A) agree with the need for a Vessel Management Plan which would require further consultation with the JNCC and NRW (A) prior to being agreed.

A number of points of clarification or further information to support calculations used within the assessment has been requested by the JNCC and should be provided, these include:

- Annual displacement matrices for Manx Shearwater for both the array and the array areas plus 2km buffer.
- Clarification how the relative harvest values which were used within the PVA tool have been calculated. In addition as part of the Population Viability Analysis graphs of population size over the years of impact, counterfactual of growth rate and counterfactual of population size including confidence interval should be presented.
- Clarification to how vessel numbers and movement has been calculated.
- Full apportioning calculation for all SPAs and designated features.

The RSPB have raised a number of concerns surrounding the assessment, we ask that you review the consultation response and provide a response or further information to address concerns raised. These concerns include but are not limited to:

- the assessment of impact of displacement on Red Throated Divers;
- the need for improved baseline survey methodology;

- the need to scope in the collision risk for Manx shearwater;
- the inaccurate avoidance rates used in gannet collision risk modelling particularly in breeding season, and
- the need for consideration of the Highly Pathogenic Avian Influenza.

Further assessment is required on the potential impact of the project on breeding seabird features of the Pen-y-Gogarth / Great Orme's Head SSSI. NRW (A) do not consider the current assessment to be sufficient for features of this site including the Common Guillemot, Razorbill and Black-legged Kittiwake. Further consideration surrounding the displacement on auks and collision risk mortality on kittiwakes is required, see further comment within NRW (A) response.

### Physical Processes

Post construction monitoring of secondary scour has been proposed by NRW (A) please provide any comment you have to make in relation to this request.

### Marine Water and Sediment Quality

Following advice received from NRW (A) we request that conclusion made in relation to sediment bound contaminants within Volume 2 chapter 3 of the ES should be looking at referring to CEFAS action levels.

NRW (A) disagree with the approach to assessing phytoplankton and dissolved oxygen which focusses on nutrient content rather than light limitation and suspended sediments. Consideration of impact on phytoplankton due to increased turbidity and dissolved oxygen as a result of suspended sediment should be provided. This should also be considered in the context of the WFD assessment.

### Fisheries and Shellfish Ecology

NRW (A) have a number of comments relating the cumulative assessment in relation to fish population. Further information is required to demonstrate how cumulative impact to fish populations over multiple spawning seasons from underwater noise associated with construction of offshore wind farm projects has been considered.

### Marine Mammals

NRW (A) consider the assessment of impact of underwater noise on marine mammal such as auditory injury and associated disturbance to be insufficient. NRW (A) have provided detailed advice with their consultation response on how they consider the assessment could be improved and remodelled. Issues raised and which need to be considered include but are not limited too;

- Analysis of PTS and disturbance
- Proposal for modelling cumulative PTS to be included within the MMMP
- Incorporation of mitigation to avoid impact on marine mammals through collision risk in the proposed Vessel Traffic Management Plan

We would encourage you to discuss this issue with NRW (A) and where possible provide an agreed updated assessment or response to the comments raised.

### Air Quality

An assessment of air quality has been undertaken. However as detailed by NRW (A) it is unclear whether vessels will operate in the proximity to sensitive coastal onshore habitats, we request that you provide additional information to demonstrate that there will not be significant impacts from marine vessel emission on sensitive habitats.

### Decommissioning

We note within the schedule of mitigation that a Decommissioning Plan is proposed within the DCO and Marine Licence. Please could you explain whether there is a difference between the Offshore Decommissioning Plan proposed within Schedule 2 Article 3 (20) of the DCO and that proposed to be included within the Marine Licence.

Additionally please confirm whether it is proposed that work in the intertidal area will be covered within the Offshore decommission plan or onshore.

### Isle of Man

The Isle of Man Government provided a consultation response where concerns have been raised surrounding the consideration of Ornithology, Marine Mammals and Commercial Fisheries within their jurisdiction. There are concerns surrounding the potential impact on mobile features which are of importance to designated sites within the Isle of Man territorial limits. As these sites are not European Designated sites, their assessment will not be included in the HRA. Furthermore, confirmation has also been requested of whether the Fisheries Liaison Plan will consider and engage with fishing vessels from the Isle of Man.

Please provide a response to the comments raised, signposting within the response where relevant consideration has taken place within the Environmental Statement.

### Other Concerns

Representation was received from Janet Finch Saunders MS on a range of issues including archaeology and commercial Fisheries. I would ask that the letter is reviewed and response provided to comments made. In reference to point 5 of the letter, chapter 7 Marine Mammals of the ES has now been shared so no action is required on this point.

### Clwyd Estuary

Further information is required surrounding cable laying under the Clwyd Estuary. The Clwyd Estuary is tidal and therefore as detailed under section 67 of the Marine and Coastal Act a marine licence is required for construction and deposits both in and under the seabed. We are aware that detail surrounding the works at the Clwyd has been considered and provided as part of the project Environmental Statement. Please provide

additional detail surrounding the cable laying works at the Clwyd Estuary which are seaward of Mean High Water Springs (MHWS), this should include:

- description of works seaward of MHWS;
- signposting to relevant section of the ES and supporting documents;
- map showing location of the works seaward of MHWS;
- co-ordinates of the works seaward of MHWS;
- confirmation of depth of the construction and installation underground;
- confirmation whether the entry and exit sites (pits) will be landward of MHWS, and
- confirmation whether the detailed construction method statement associated with the cable works at the Clwyd will be captured within the DCO and if so the need to signpost to relevant condition.

To ensure all relevant information is provided we would suggest that you provide information within an application form which can form an addendum to the form already submitted.

### Marine Mitigation

There are inconsistencies and uncertainty surrounding mitigation proposed within the Marine Principle Document and the Schedule of Mitigation. For example, a Scour Protection Management Plan is proposed within the ES and detailed to be captured within the Marine Licence within the Schedule of Mitigation, however within the Marine Principle Document it details that a Scour Protection Management Plan is “*not anticipated to be needed given minimal scour predictions.*”

Additionally a Vessel Traffic Management Plan is proposed within *ES Volume 2 Chapter 4 Offshore Ornithology* however this Plan does not appear within either the Principles Document or Schedule of Mitigation.

There are also discrepancies within the naming of the plans between the Principle Document and the Schedule of Mitigation.

We request clarification to the discrepancies highlighted above . We request that you review the schedule of mitigation and Marine Licence Principles document, these need to be consistent and contain all planned mitigation and plans proposed to be captured within the Marine Licence which are detailed in the ES. We also request that naming of plans is consistent across both documents.

For documents which cover both the marine and terrestrial area, such as the Written Scheme of Investigation, it would be useful to understand whether it is proposed that a single document is developed, or whether separate documents will be produced for the marine and terrestrial aspects of the proposal. Where separate documents are being proposed, please confirm whether the intertidal is proposed to be captured within the offshore or onshore document presenting reasoning for the approach taken.

### Project Parameters

The Marine Licence Principles documents sets out the licences activities that are being requested under each of the proposed licences (generating, transmission and GyM interlink); however, the design parameters provided cover the project as whole (page 11-13). As 3 licences are being sought, we request that 3 separate licence parameters are provided for each licence. For example, Parameters for Marine Licence 1 (generating asset) should include the relevant parameters for Wind turbines and the array cables, while these will not be required within Marine Licence 2 (transmission asset). Relevant volumes for each proposed licence should also be provided rather than a combined total (such as length of cable and volume of cable protection).

The following comments were provided and are shared for your information

#### Decommissioning

We bring to your attention comment provided by BEIS who remind you of obligations under Section 105 of the Energy Act (2004) to have a BEIS-approved decommissioning programme and for BEIS to hold a Financial Security Sum to avoid taxpayer-funded decommissioning. Please contact [OREIDecommissioning@beis.gov.uk](mailto:OREIDecommissioning@beis.gov.uk) to engage further.

#### Archaeology

A number of comments related to the draft Written Scheme of Investigation have been provided by the Royal Commission on The Ancient and Historical Monuments of Wales (RCAHMW) which will need to be addressed in any final WSI.

#### Fisheries Liaison

The NFFO have provided a number of comments that should be considered as part of the liaising with relevant local industry representatives as you develop a Fisheries Liaison Plan.

Once you have had the opportunity to review the above we will look to discuss and agree with you a realistic deadline for the provision of information.

In the meantime, should you have any queries please do not hesitate to contact me.

Yours sincerely



**Peter Morrison**  
**Marine Licensing Team**  
**Natural Resources Wales**