Ein cyf/Our Ref: AOS-21167-0032
Eich cyf/Your ref: EN010137
Our Unique Ref: 20048445

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Dyddiad/Date: 07 August 2024

Er sylw / For the attention of: Jake Stephens

Annwyl / Dear Jake,

FFERM WYNT ALLTRAETH MONA / PROPOSED MONA OFFSHORE WINDFARM

CYFEIRNOD YR AROLYGIAETH GYNLLUNIO / PLANNING INSPECTORATE REFERECE: EN010137

EIN CYFEIRNOD / OUR REFERENCE: 20048445

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 23 Gorffennaf 2024, yn gofyn am sylwadau gan Cyfoeth Naturiol Cymru ynglŷn â'r uchod.

Mae'r llythyr hwn yn cynnwys y sylwadau canlynol gan Cyfoeth Naturiol Cymru:

a) Sylwadau Ysgrifenedig – gweler Atodiad A.

b) Cyngor manwl ar Asesiad o'r Effaith ar y Morwedd, y Dirwedd a'r Effaith Weledol – gweler Atodiad B

c) Manylion ategol o ran Ecoleg Pysgod a Physgod Cregyn – gweler Atodiad C

d) Manylion am faterion sy'n ymwneud â drafftio'r Drwydded Forol Dybiedig – gweler Atodiad D

Y sylwadau a gyflwynir yma, gan gynnwys yr Atodiadau cysylltiedig, yw ymateb Cyfoeth Naturiol Cymru fel Parti Statudol o dan Ddeddf Cynllunio 2008 a Rheoliadau Cynllunio Seilwaith (Partïon â Buddiant) 2015 ac fel 'Parti â Buddiant' o dan a102(1) o Ddeddf Cynllunio 2008.

Gwneir ein sylwadau heb effeithio ar unrhyw sylwadau pellach y byddwn am eu gwneud o bosibl mewn perthynas â'r cais hwn a'r archwiliad, boed hynny mewn perthynas â'r Datganiad Amgylcheddol a dogfennau cysylltiedig, darpariaethau'r Gorchymyn Caniatâd Datblygu a'i Ofynion, neu dystiolaeth a dogfennau eraill a ddarperir gan bpENBW ('yr Ymgeisydd'), y Corff Archwilio neu Bartïon eraill â Buddiant.

Yn Atodiad A, rhoddwn ein Sylwadau Ysgrifenedig, gan gynnwys crynodeb byr. Mae'r Sylwadau Ysgrifenedig wedi'u strwythuro mewn fformat sy'n debyg i fformat ein Sylwadau Perthnasol [RR-011], lle y rhoddwn ein sylwadau ar yr agweddau alltraeth, yna'r agweddau sy'n ymwneud â'r tir, ac wedyn yr agweddau rheoleiddiol ar y datblygiad.

Yn Atodiad B, rhoddwn ein cyngor manwl ar yr Asesiad o'r Effaith ar y Morwedd, y Dirwedd a'r Effaith Weledol.

Yn Atodiad C, ceir rhagor o fanylion ategol am Ecoleg Pysgod a Physgod Cregyn.

Mae Atodiad D yn rhoi rhagor o fanylion am faterion sy'n ymwneud â drafftio'r Drwydded Forol Dybiedig.

Roedd y llythyr Rheol 8 yn gofyn i ni gyflwyno Datganiadau Tir Cyffredin Cychwynnol erbyn Dyddiad Cau 1. Cafodd gwasanaeth Cynghori Cyfoeth Naturiol Cymru (CNC (A)) gopïau o'r Datganiadau Tir Cyffredin Cychwynnol drafft ar 28 Mehefin 2024. Rydym wedi cael tri Datganiad Tir Cyffredin Cychwynnol – un yn ymwneud â materion alltraeth, un arall yn ymwneud â materion ar y tir, ac un yn ymwneud â'r asesiadau o'r morwedd a'r dirwedd. Rydym wedi adolygu, hyd eithaf ein galluoedd o fewn y terfynau amser dan sylw, ddrafftiau cychwynnol pob un o'r tri datganiad yn barod ar gyfer Dyddiad Cau 1. Fodd bynnag, mae angen gwneud gwaith ychwanegol ar y rhain wrth i'r archwiliad fynd rhagddo. Er gwybodaeth, mae'r Ymgeisydd a Thîm Trwyddedu Morol Cyfoeth Naturiol Cymru (CNC (MLT)) wedi penderfynu peidio â bwrw ymlaen â Datganiad Tir Cyffredin Cychwynnol ond yn unol â'r cais a wnaed yn ystod Gwrandawiad Mater Penodol 1 [EV2-004a] bydd CNC MLT yn ceisio rhoi rhestr o unrhyw faterion drafftio ynglŷn â'r Drwydded Forol Dybiedig y mae angen cytuno arnynt o hyd erbyn Dyddiad Cau 3.

Fel y nodwyd yn y gwrandawiad rhagarweiniol [EV1-001], mae Cyfoeth Naturiol Cymru wrthi'n ymgysylltu â'r Ymgeisydd i fwrw ymlaen â'r holl faterion cysylltiedig (yn unol â'r cyngor yn ein Sylwadau Perthnasol, y Datganiadau Tir Cyffredin Cychwynnol ac isod yn ein Sylwadau Ysgrifenedig) cyn y gyfres briodol nesaf o ddyddiadau cau. Pan fydd Cyfoeth Naturiol Cymru wedi'i fodloni bod yr Ymgeisydd wedi ymdrin â materion (mewn ymateb i'n Sylwadau Perthnasol), esbonnir hyn, lle y bo'n berthnasol, yn ein Sylwadau Ysgrifenedig isod. Pan fydd materion yn weddill a/neu heb eu datrys, esbonnir hyn isod hefyd.

Lle y gofynnwyd i Cyfoeth Naturiol Cymru gymryd camau gweithredu o ganlyniad i wrandawiadau mater penodol [EV2-004a ac EV3-006a], rydym wedi ymdrin â'r rhain drwy'r adrannau perthnasol a phriodol o'r Sylwadau Ysgrifenedig. Os bydd angen rhagor o eglurder, bydd yn dda gennym roi atebion pellach drwy gwestiynau'r Awdurdod Archwilio a / neu gais/ceisiadau Rheol 17.

Yn ogystal â bod yn barti â buddiant o dan Ddeddf Cynllunio 2008, mae Cyfoeth Naturiol Cymru yn arfer swyddogaethau o dan ddeddfwriaeth, gan gynnwys (ond heb fod 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 cael ceisiadau ar gyfer cais am Drwydded Forol o dan Ddeddf y Môr a Mynediad i'r Arfordir 2009.

Er eglurder, mae'r sylwadau gan CNC MLT o dan deitlau o'r fath ac maent yn ymddangos yn adran 4 ac Atodiad D; mae'r holl sylwadau eraill yn ymwneud â rôl gynghori Cyfoeth Naturiol Cymru.

Mewn perthynas â'r cyngor a geir yn y ddogfen hon ynglŷn â gwarchod natur yn nyfroedd glannau Cymru, efallai y bydd cyfeiriadau at ddyfroedd môr mawr Cymru a dyfroedd glannau / môr mawr Lloegr o ystyried rhywogaethau symudol ac effeithiau trawsffiniol a chronnol / cyfunol posibl ar ardal forol glannau a safleoedd gwarchodedig Cymru. Lle mae effeithiau posibl yn gyfan gwbl o fewn dyfroedd môr mawr Cymru neu ddyfroedd glannau / môr mawr Lloegr, mae CNC (A) yn ildio i'r farn yn y sylwadau a wnaed gan y Cyd-bwyllgor Cadwraeth Natur a Natural England yn y drefn honno.

Dylid nodi bod CNC (A) a'r Cyd-bwyllgor Cadwraeth Natur yn rhoi cyngor ar ddatblygiadau alltraeth yn nyfroedd glannau a môr mawr Cymru a reoleiddir o dan nifer o gyfundrefnau rheoleiddio gwahanol. Ymgynghorir â Cyfoeth Naturiol Cymru a'r Cyd-bwyllgor Cadwraeth Natur ar wahân o dan Reoliadau Gwarchod Cynefinoedd a Rhywogaethau 2017 a Rheoliadau Cynllunio Seilwaith (Asesiad o'r Effaith Amgylcheddol) 2017, ac felly ymatebir yn annibynnol. Fel arfer, y Cyd-bwyllgor Cadwraeth Natur sy'n gyfrifol am gyngor yn y rhanbarth môr mawr (o 12 milltir forol i 200 milltir forol). Fodd bynnag, lle y gallai effeithiau prosiect godi o fewn 12 milltir forol a thu hwnt ac effeithio ar safleoedd gwarchodedig mewn dyfroedd awdurdodaethol, efallai y bydd angen i CNC (A) a'r Cyd-bwyllgor Cadwraeth Natur ill dau roi cyngor. Noder bod y cyngor a roddir yn y sylw perthnasol hwn yn gymwys i effeithiau posibl ar safleoedd gwarchodedig yng Nghymru yn unig. Ar gyfer safleoedd y tu allan i Gymru, dylid ymgynghori â'r Corff Cadwraeth Natur Statudol perthnasol.

Mae croeso i chi gysylltu ag Emma Lowe [redacted] Nia Phillips [redacted] a Siôn Williams [redacted] os bydd angen rhagor o gyngor neu wybodaeth ynglŷn â'r sylwadau hyn arnoch.

Thank you for your Rule 8 letter, dated 23 July 2024, 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 (SLVIA) – see Annex B

(c) Supporting detail with respect to Fish and Shellfish Ecology – see Annex C

(d) Detail on matters relating to the drafting of the deemed Marine Licence – see Annex D

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 bpENBW ('the Applicant'), the Examining Authority 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-011], with our comments on the offshore followed by those on the onshore aspects, and then the regulatory aspects of the development.

In Annex B we provide our detailed advice on the SLVIA.

Annex C provides further supporting detail with respect to Fish and Shellfish Ecology

Annex D provides further detail on matters relating to the drafting of the deemed Marine Licence.

The Rule 8 letter requested Initial Statements of Common Ground (SoCG) to be submitted at Deadline 1. NRW Advisory (NRW (A)) received copies of the initial draft SoCGs from the Applicant on 28 June 2024. 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 have reviewed, to the best of our abilities within the timeframes involved, the initial drafts of all three SoCGs ready for Deadline 1. However, these will require additional work as the examination progresses. For awareness, the Applicant and NRW's Marine Licencing Team (NRW MLT) have decided not to progress a SoCG but as requested during Issue Specific Hearing 1 [EV2-004a] NRW MLT will look to provide a list of any deemed Marine Licensing (dML) drafting matters not yet agreed at Deadline 3.

As noted at the Preliminary hearing [EV1-001], NRW are in active and on-going engagement with the Applicant to progress all related matters (as advised in our Relevant Representations, SoCGs and below in our Written Representations) ahead of the next appropriate series of deadlines. Where NRW is satisfied that issues have been resolved by the Applicant (in response to our Relevant Representations) this progress, is explained, where relevant, in our Written Representations below. Where matters remain outstanding and / or unresolved, this is also explained below.

Where actions were asked of NRW as a result of the issue-specific hearings [EV2-004a and EV3-006a], we have addressed these throughout the relevant and appropriate sections of

the Written Representation. Should further clarity be required, we will be pleased to answer these further through the Examining Authority questions and / or a Rule 17 request(s).

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's MLT are titled as such and are produced in Section 4 and Annex D; all other comments pertain to NRW's advisory role.

With respect to the advice contained within this document relating to nature conservation within Welsh inshore waters, reference to Welsh Offshore waters and English Onshore / Offshore waters may be made in view of mobile species, Zones of Influence and potential cross-border and cumulative / in-combination impacts on the Welsh inshore marine area and protected sites. Where potential impacts are wholly within Welsh offshore waters or English Onshore / Offshore waters, NRW (A) defer to comments provided by the Joint Nature Conservation Committee (JNCC) and Natural England (NE) respectively.

Please do not hesitate to contact Emma Lowe [redacted] Nia Phillips [redacted] and Siôn Williams [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]

Contents

Annex A – Written Representations

1 CRYNODEB / SUMMARY

1.1 CRYNODEB ALLTRAETH

- *Adareg Forol*

1. Mae CNC (A) yn anghytuno â'r dulliau a ddefnyddiwyd gan yr Ymgeisydd mewn sawl agwedd ar yr asesiadau (gan gynnwys dosrannu dosbarthiadau oedran, dulliau o ddosrannu effeithiau y tu allan i'r tymor bridio, cyfnodau sabothol, y ffordd yr ymdrinnir â diffiniadau tymhorol, yn enwedig o ran asesiadau risg o wrthdaro, asesiad dadleoli i safleoedd dynodedig nad ydynt yn cwmpasu'r holl gyfraddau dadleoli a marwolaethau a argymhellir). Nodwn hefyd fod nifer o wallau yn y ffigurau sy'n ymwneud â thoreth dymhorol a gyflwynwyd yn yr asesiad. Mae CNC (A) yn cynghori y dylid cywiro'r gwallau yn y ffigurau, ac y dylid diweddaru asesiadau (ar raddfa Asesiad o'r Effaith Amgylcheddol ac Asesiad Rheoliadau Cynefinoedd) i gyfrif am y ffigurau wedi'u cywiro er mwyn sicrhau mai dim ond y ffigurau mwyaf priodol ar gyfer y risg o ddadleoli a gwrthdaro ar gyfer prosiect Mona fydd ar gael i'w defnyddio yn asesiadau cronnol a chyfunol prosiectau yn y dyfodol. Cynghorwn hefyd y dylai asesiadau sy'n defnyddio'r ffigurau wedi'u diweddaru hefyd gael eu cyflwyno yn unol â'r dulliau gweithredu a argymhellwn fel y gellir llunio barn gwbl hyddysg ar lefelau posibl yr effaith. Os bydd unrhyw effaith bosibl wedi'i diweddaru yn uwch nag 1% o linell sylfaen marwolaethau y boblogaeth berthnasol, yna bydd angen ystyried cynnal Dadansoddiad o Hyfywedd Poblogaeth – byddem yn fwy na pharod i gynghori ymhellach.

2. Mae CNC (A) yn cynghori y dylid cynnal asesiad manwl o effeithiau posibl y prosiect ar nodweddion adar y môr sy'n bridio ar Safle o Ddiddordeb Gwyddonol Arbennig (SoDdGA) Pen y Gogarth (gwylogod, gweilch y penwaig a gwylanod coesddu), gan nad yw hyn wedi cael ei wneud mewn ffordd ddigonol i asesu effeithiau ar y nodweddion hyn. Cynghorwn y dylid asesu ymhellach effeithiau dadleoli ar garfilod a chyfradd marwolaethau gwylanod coesddu oherwydd risg o wrthdaro.

3. Mae asesiadau cronnol (a chyfunol) o effaith yr Ymgeisydd yn cynnwys nifer o fylchau mewn data ac mae CNC (A) yn cynghori na ellir ystyried eu bod yn gynhwysfawr. Hefyd, ceir gwallau yn y ffigurau sydd wedi'u cynnwys ar gyfer prosiectau eraill lle mae data ar gael (e.e. Erebus), ac ers i gais am Orchymyn Cydsyniad Datblygu ar gyfer asedau cynhyrchu Morgan gael ei adolygu, mae nifer o anghysondebau rhwng y niferoedd a gynhwysir ar gyfer prosiectau eraill rhwng ceisiadau'r ddau brosiect. Felly, yn ein barn ni, mae'n amhriodol gwneud sylwadau ar arwyddocâd posibl effeithiau cronnol (neu gyfunol) a gyflwynir ar y cam hwn. Cynghorwn yn gryf y dylai'r Ymgeisydd ystyried y cyngor a roddir a gweithio gyda phrosiect asedau cynhyrchu Morgan a phrosiect asedau cynhyrchu Morcambe (sydd hefyd wedi'u lleoli ym Môr Iwerddon ac sydd wedi cyflwyno ceisiadau ac a fydd yn cael eu harchwilio ar yr un pryd â phrosiect Mona) er mwyn mynd i'r afael â'n pryderon ynglŷn â'r bylchau a'r gwallau a sicrhau bod pob un o'r tri phrosiect yn asesu'r un cyfansymiau cronnol a chyfunol.

4. Mae CNC (A) yn cynghori y bydd yn ofynnol cydymffurfio â Chynllun Rheoli Amgylcheddol alltraeth a fydd yn cynnwys mesurau i leihau unrhyw darfu ar adar sy'n rafftio gan gychod sy'n mynd heibio, cyfyngiad amser ar beidio â gosod ceblau allforio

alltraeth yn ystod y cyfnod rhwng 1 Tachwedd a 31 Mawrth yn AGA Bae Lerpwl ac yn cynnwys Cynllun Llygredd Morol Wrth Gefn er mwyn osgoi neu leihau unrhyw darfu ar drochyddion gyddfgoch a môr-hwyaid du a disodli a geir yn AGA Bae Lerpwl. Bydd angen i'r cynllun a'r mesurau penodol a nodir ynddo gael eu sicrhau yn y drwydded forol.

- *Mamaliaid Morol*

5. Mae CNC (A) eisoes wedi cynghori bod yr asesiad a/neu'r ystyriaeth o effeithiau sŵn tanfor ar famaliaid morol, megis sŵn cychod, defnyddio dyfeisiau atal acwstig i liniaru effeithiau gosod seilbyst, effeithiau rhwystr cronnol posibl, ac effeithiau rhyng-gysylltiedig, yn annigonol a bod angen eu gwella er mwyn gallu cynnal asesiad llawn a digonol o'r risgiau.

6. Mae CNC (A) bellach wedi'i fodloni bod yr Ymgeisydd wedi ymdrin â nifer o'r pryderon a godwyd gennym mewn perthynas â'r asesiad o effeithiau sŵn tanfor ar famaliaid morol drwy ddarparu gwybodaeth ychwanegol. Rydym yn croesawu ymrwymiad yr Ymgeisydd i barhau i ymgysylltu â CNC (A) i ddatblygu'r Strategaeth Rheoli Sŵn Tanfor yn ystod y broses archwilio ac ar ôl rhoi caniatâd, ac rydym yn croesawu'r cyfle i wneud hynny.

7. Mae CNC (A) yn cynghori y gallai'r cynnig effeithio ar famaliaid morol; mae'r teulu morfilaidd (dolffiniaid, llamhidyddion a morfilod) yn warchodedig yn unol â'r rhestr a wnaed o dan adran 7 o Ddeddf yr Amgylchedd (Cymru) 2016, yn ogystal â bod yn Rhywogaeth a Warchodir gan Ewrop a warchodir gan Atodlen 2 i Reoliadau Gwarchod Cynefinoedd a Rhywogaethau 2017 ('y Rheoliadau') fel y'u diwygiwyd. Mae'n drosedd o dan Reoliad 43 o'r Rheoliadau, ymhlith pethau eraill, ddal, anafu, lladd neu darfu ar rywogaethau o'r fath yn fwriadol neu ddifrodi neu ddinistrio eu safle bridio. Mae hyn yn adlewyrchu'r system o warchodaeth gaeth a roddir i rywogaethau o'r fath o dan ddarpariaethau'r Rheoliadau Cynefinoedd.

8. Fodd bynnag, gall CNC (A) roi trwydded Rhywogaeth a Warchodir gan Ewrop, fel y corff trwyddedu perthnasol, at y dibenion a bennwyd yn Rheoliad 55(2) o'r Rheoliadau.

9. Cynghorwn y bydd mesurau lliniaru yn ofynnol er mwyn gwarchod Rhywogaethau a Warchodir gan Ewrop a bydd angen eu rheoleiddio drwy'r Drwydded Forol a /neu drwydded Rhywogaeth a Warchodir gan Ewrop.

- *Ecoleg Pysgod a Physgod Cregyn*

10. Mae CNC (A) yn cynghori y gallai sŵn sy'n gysylltiedig â gosod seilbyst y datblygiad arfaethedig effeithio ar gyfran sylweddol o benfreisiad sy'n silio, a warchodir o dan adran 7 o Ddeddf yr Amgylchedd (Cymru) 2016. Er bod yr Ymgeisydd wedi ymdrin â rhai o'n sylwadau yn y Sylwadau Perthnasol, mae'r effaith ar benfreisiaid sy'n silio yn dal i fod yn brif achos pryder.

11. Er bod yr Ymgeisydd wedi ymdrin â rhai pryderon mewn perthynas ag effeithiau sŵn tanfor, mae angen i CNC (A) gael rhagor o eglurder o hyd er mwyn sicrhau bod y senario gwaethaf oll wedi cael ei asesu'n gywir.

12. Rydym yn croesawu'r penderfyniad i gynnwys y Strategaeth Rheoli Sŵn Tanfor yn y drwydded forol dybiedig a'r drwydded forol annibynnol. At hynny, rydym yn croesawu ymrwymiad yr Ymgeisydd i barhau i ymgysylltu â CNC (A) i ddatblygu'r Strategaeth

Rheoli Sŵn Tanfor yn ystod y broses archwilio ac ar ôl rhoi cydsyniad. Fodd bynnag, ein barn yw bod angen gwaith ar y ddogfen i sicrhau ei bod yn cyflawni ei hamcanion.

- *Prosesau Ffisegol*

13. Nid oes unrhyw asesiad o brosesau ffisegol wedi cael ei gynnal i ganfod sut y byddai gwaith posibl i ddiogelu ceblau yn yr amgylchedd bas wrth ymyl y glannau yn effeithio ar brosesau arfordirol a ffisegol.

14. Mae CNC (A) yn parhau i gynghori y dylid ystyried rhwystro'r llwybrau cludo gwaddodion ar y gwely ar hyd yr arfordir ac ar y tir/y môr, a'r effaith bosibl ar ddiffreithiant tonnau ac ailffocysu tonnau ar yr arfordir, er mwyn sicrhau bod yr asesiad o brosesau ffisegol mor gyflawn a chadarn â phosibl.

15. Nid yw CNC (A) yn gallu cynghori ar yr angen am ddarpariaethau monitro mewn perthynas â'r risg os bydd ceblau glanio yn cael eu hamlygu oherwydd newid ym mhroffil traeth, erydu'r cefndraeth a gostwng lefel traeth yn ystod stormydd nes bod rhagor o waith asesu yn cael ei wneud.

16. Rydym yn cadw ein hargymhelliad y dylid ystyried monitro adferiad tonnau tywod.

- *Ecoleg Islanwol a Rhynglanwol Fenthig*

17. Mae angen rhagor o eglurder mewn perthynas â bwriad yr Ymgeisydd i ddiogelu ceblau yn y dŵr bas wrth ymyl y pyllau allan. Nid oes unrhyw asesiad o'r effeithiau posibl ar ecoleg fenthig na rhynglanwol, o ganlyniad i ddiogelu ceblau yn yr amgylchedd wrth ymyl y glannau, wedi cael ei gynnal.

18. Nid yw CNC (A) yn gallu cynghori ar yr angen am ddarpariaethau monitro mewn perthynas â'r risg os bydd ceblau glanio yn cael eu hamlygu oherwydd newid ym mhroffil traeth, erydu'r cefndraeth a gostwng lefel traeth yn ystod stormydd nes bod rhagor o waith asesu yn cael ei wneud.

19. Rydym yn cadw ein hargymhelliad y dylid ystyried monitro adferiad tonnau tywod.

20. Oherwydd presenoldeb y math goresgynnol iawn o chwistrell môr, Didemnun vexillum, efallai y bydd angen mesurau rheoli penodol pellach yn ychwanegol at brotocolau asesu risg bioddiogelwch safonol os defnyddir Porthladd Caergybi at ddibenion angori cychod.

- *Ansawdd Dŵr Morol a Gwaddodion*

21. Mae CNC (A) wedi'i fodloni bod yr Ymgeisydd wedi ymdrin â'r rhan fwyaf o'i bryderon blaenorol mewn perthynas ag Ansawdd Dŵr Morol a Gwaddodion.

22. Fodd bynnag, cynghorwn o hyd y dylid ystyried y pryderon a nodir uchod o ran asesu'r amgylchedd wrth ymyl y glannau o safbwynt prosesau ffisegol ac ecoleg fenthig.

23. Cynghorwn o hyd fod angen asesiad pellach ar gyfer yr elfennau ansawdd biolegol a'r elfennau ategol oherwydd agosrwydd i gynefinoedd sensitif.

- *Cyrff Arfordirol a Throsiannol y Gyfarwyddeb Fframwaith Dŵr – Gweithiau Alltraeth*

24. Rydym yn cefnogi casgliad yr asesiad na fydd y gweithiau arfaethedig yn achosi i ansawdd dŵr y naill gorff dŵr na'r llall dan sylw (corff dŵr arfordirol Gogledd Cymru a chorff dŵr trosiannol Clwyd) ddirywio, na'r elfennau unigol o'r cyrff dŵr hyn, ac na fydd yn effeithio ar amcanion cyflawni Potensial Ecolegol Da a Statws Ecolegol Da.

25. Rhoddwyd eglurder digonol ynglŷn â'r penderfyniad sgrinio i beidio â chynnwys cyrff dŵr eraill wrth ystyried effeithiau.

26. Mae CNC (A) yn cynghori o hyd, er mwyn cydymffurfio â Rheoliadau'r Gyfarwyddeb Fframwaith Dŵr, tra'n asesu effaith y gweithgareddau arfaethedig, y dylid roi sylw i halogion cemegol sydd wedi'u rhyddhau drwy gamgymeriad neu sy'n rhydd ac yn arnofio mewn dyfroedd hyd at 12 milltir forol o benllanw cymedrig y gorllanw

- *Buddiant Bioamrywiaeth a Datganiad Seilwaith Gwyrdd*

27. Mae CNC (A) yn croesawu ymrwymiad yr Ymgeisydd o hyd i ymgysylltu â ni ynglŷn â mesurau gwella amrywiaeth ar adeg briodol.

- *Dadgomisiynu Alltraeth*

28. Ym marn CNC (A), dylai prosiectau ynni adnewyddadwy alltraeth baratoi cynlluniau datgomisiynu sy'n cadw'r holl opsiynau datgomisiynu (cynnal, cael gwared yn llwyr a chael gwared yn rhannol); yna, gall yr opsiynau gael eu hasesu a'u mireinio'n agosach i'r adeg datgomisiynu ei hun mewn ymgynghoriad â Cyfoeth Naturiol Cymru.

- *Amserlen Lliniaru a Monitro; Egwyddorion Trwyddedu Morol a'r Gorchymyn Caniatâd Datblygu*

29. Erys nifer o anghysondebau o hyd rhwng yr Amserlen Lliniaru a Monitro, Egwyddorion Trwyddedu Morol a'r Gorchymyn Caniatâd Datblygu Drafft y mae angen eu hadolygu. Gall anghysondebau o'r fath achosi amryfusedd ac ansicrwydd ynglŷn â'r graddau y gellir sicrhau mesurau mewn caniatadau perthnasol. Cynghorwn y dylai'r Ymgeisydd gynnal adolygiad llawn o'r dogfennau hyn er mwyn rhoi sicrwydd bod mesurau yn cael eu cofnodi'n briodol. Mae'n bwysig bod yr holl ddogfennau perthnasol yn gyson a'u bod yn cynnwys cyfeiriadau cywir at yr holl fesurau lliniaru, gwaith monitro a chynlluniau arfaethedig fel y'u disgrifiwyd yn nogfennau'r cais ac y cytunwyd arnynt â phartïon â buddiant.

1.2 CRYNODEB AR Y TIR

- *Tirweddau Dynodedig*

30. Mae CNC (A) yn cynghori bod y gwaith alltraeth yn debygol o gael effeithiau niweidiol sylweddol niferus a helaeth ar y morwedd, y dirwedd a derbynyddion gweledol o fewn Tirwedd Genedlaethol Ynys Môn, Parc Cenedlaethol Eryri, ac o fewn eu lleoliadau. Bydd yr effeithiau niweidiol sylweddol hyn yn golygu cryn niwed i'r tirweddau dynodedig hyn a fydd, yn ein barn ni, yn mynd yn groes i ddibenion y Parc Cenedlaethol a'r Dirwedd Genedlaethol.

- *Asesiad o Gydymffurfiaeth â'r Gyfarwyddeb Fframwaith Dŵr: Gwaith ar y tir*

31. Mae CNC (A) yn cynghori bod yr agweddau ar y datblygiad ar y tir yn golygu gwaith sy'n gyfagos i nifer o gyrsiau dwr, neu ynddynt neu oddi tanynt. Mae'r Atodlen Croesi ar y Tir yn nodi'r dulliau croesi arfaethedig ac er bod technegau heb ffosydd (e.e. Drilio Uniongyrchol Llorweddol) wedi'u cadarnhau ar gyfer saith croesfan, mae'r holl opsiynau wedi'u cadw ar gyfer dau o'r cyrsiau dwr. Rydym o'r farn na fydd rhai o'r dulliau, megis ffosydd (fel rhan o'r gwaith o osod ceblau) a'r defnydd o gwlfertau (fel rhan o'r ffyrdd cludo) yn briodol o bosibl mewn rhai lleoliadau. Cynghorwn y dylid cynnal arolwg maes geomorffaidd er mwyn cadarnhau'r amodau lleol ar bob safle a thrwy hynny bennu'r math priodol o groesi ceblau a ffyrdd cludo sydd ei angen a dangos na fydd effeithiau ar geomorffoleg afonol nac ar gyrff dŵr o dan y Gyfarwyddeb Fframwaith Dŵr.

- *Ansawdd Aer*

32. Mae CNC (A) wedi'i fodloni bod yr Ymgeisydd wedi ymdrin â sylwadau blaenorol ynglŷn ag ansawdd aer. Mae gofyniad 9 o'r Gorchymyn Caniatâd Datblygu drafft yn ei gwneud yn ofynnol i Gynlluniau Rheoli a Datganiadau Dull gael eu cyflwyno i'w cymeradwyo gan yr awdurdod cyflawni. Cynghorwn ein bod wedi ein bodloni ar y Cod Ymarfer Adeiladu Amlinellol

- *Ecologeg (Dirol)*

33. Mae CNC (A) wedi'i fodloni bod yr Ymgeisydd wedi ymdrin â sylwadau blaenorol ynglŷn ag ecoleg (dirol). Mae'r Cynllun Rheoli Tirwedd ac Ecoleg Amlinellol yn nodi egwyddorion lliniaru. Caiff y cynllun terfynol ei gymeradwyo gan yr awdurdod cyflawni, mewn ymgynghoriad â CNC (A). Mae CNC (A) yn cytuno â'r dull gweithredu hwn. Fodd bynnag, mae CNC (A) o'r farn y dylid diwygio'r Cynllun Rheoli Tirwedd ac Ecoleg Amlinellol. Argymhellir y diwygiadau hyn er mwyn sicrhau bod effeithiau ar rywogaethau gwarchodedig yn cael eu lliniaru'n briodol. Cynghorwn ein bod wedi ein bodloni ar y Cynllun Rheoli Tirwedd ac Ecoleg Amlinellol o ran adareg ar y tir, pysgod a safleoedd dynodedig. Cynghorwn hefyd ein bod wedi ein bodloni ar y Cod Ymarfer Adeiladu Amlinellol o ran rhywogaethau estron goresgynnol a safleoedd dynodedig.

- *Ansawdd Dŵr (Dŵr Wyneb a Dŵr Daear)*

34. Mae CNC (A) wedi ei fodloni bod yr Ymgeisydd wedi ymdrin â'r sylwadau blaenorol ynglŷn ag ansawdd dŵr (dŵr wyneb a dŵr daear). Mae gofyniad 9 o'r Gorchymyn Caniatâd Datblygu drafft yn ei gwneud yn ofynnol i Gynlluniau Rheoli a Datganiadau Dull terfynol gael eu cymeradwyo gan yr awdurdod cyflawni. Mae'n rhaid i'r fersiynau terfynol fod yn unol â'r fersiynau Amlinellol sydd wedi'u cyflwyno ar hyn o bryd. Cynghorwn y dylid diwygio'r Cod Ymarfer Adeiladu Amlinellol er mwyn sicrhau bod effeithiau ar ansawdd dŵr (dŵr wyneb a dŵr daear) yn cael eu rheoli'n briodol. Cynghorwn hefyd ein bod wedi ein bodloni ar y Cod Ymarfer Adeiladu Amlinellol o ran ansawdd aer, rhywogaethau estron goresgynnol, safleoedd dynodedig, deunyddiau a gwastraff.

- *Perygl Llifogydd*

35. Mae CNC (A) wedi ei fodloni bod yr Ymgeisydd wedi ymdrin â sylwadau blaenorol ynglŷn â pherygl llifogydd ac nid oes gennym unrhyw bryderon eraill ynglŷn â pherygl llifogydd mewn perthynas â'r datblygiad arfaethedig. Mae cyngor CNC (A) ynglŷn â pherygl llifogydd yn gysylltiedig â'r risg honno o'r Môr a'r Afonydd fel y'i dangosir ar y Map Llifogydd ar gyfer Cynllunio. Ers gweithredu Deddf Rheoli Llifogydd a Dŵr 2010 yng

Nghymru, yr awdurdodau lleol yn gweithredu fel yr Awdurdod Llifogydd Lleol Arweiniol, sy'n rheoli llifogydd o gyrsiau dŵr cyffredin, dŵr wyneb (a dŵr daear).

- *Deunyddiau a Gwastraff*

36. Mae gofyniad 9 o'r Gorchymyn Caniatâd Datblygu drafft yn ei gwneud yn ofynnol i Gynlluniau Rheoli a Datganiadau Dull terfynol gael eu cymeradwyo gan yr awdurdod cyflawni. Cynghorwn ein bod wedi ein bodloni ar y Cod Ymarfer Adeiladu Amlinellol o ran deunyddiau a gwastraff.

1.3 CRYNODEB TRWYDDEDU MOROL

37. Mae gan CNC MLT bryderon o hyd ynglŷn â drafftio'r Drwydded Forol Dybiedig. Mae'r pryderon hyn yn ymwneud â darpariaethau ynglŷn â throsglwyddo'r drwydded forol, gweithiau cyn cychwyn, a chymeradwyo cynlluniau (ond nid ydynt yn gyfyngedig i'r rhain). Rhoddwyd nifer o sylwadau ynglŷn â drafftio yn y Sylwadau Ysgrifenedig ac mae CNC MLT yn parhau i gynghori'r Ymgeisydd ar ddrafftio'r Drwydded Forol Dybiedig.

38. Yn ogystal â'r Drwydded Forol Dybiedig mwn perthynas â'r Asedau Cynhyrchu, mae cais ar wahân am Drwydded Forol mewn perthynas â'r Asedau Trawsyrru wedi cael ei gyflwyno i CNC MLT ac mae wrthi'n cael ei benderfynu.

1.4 OFFSHORE SUMMARY

- *Marine Ornithology*

39. NRW (A) disagrees with approaches used by the Applicant in various aspects of the assessments (including age class apportioning, non-breeding season methods for apportionment of impacts, sabbaticals, approach to seasonal definitions particularly for collision risk assessments, displacement assessment to designated sites not covering the full range of advised displacement and mortality rates). We also note that there are a number of errors in the seasonal abundance figures presented in the assessment. NRW (A) advises that the errors in the figures are corrected, and that assessments (Environmental Impact Assessment (EIA) and Habitats Regulation Assessment (HRA) scale) are updated to account for corrected figures in order for the most appropriate figures for displacement and collision risk for the Mona project alone to be made available for use in future projects cumulative and in-combination assessments. We also advise that assessments taking account of updated figures are presented following our advised approaches so that a fully informed judgement on potential levels of impact can be made. If any updated potential impact exceeds 1% of baseline mortality of the relevant population, then consideration will need be given to undertaking a Population Viability Analysis (PVA) – we would be happy to advise further.

40. NRW (A) 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.

41. The Applicant's cumulative (and in-combination) impact assessments contain numerous data gaps and NRW (A) advise that they cannot be considered comprehensive. Additionally, there are errors in the figures included for other projects with data available (e.g. Erebus), and since the Morgan generation assets DCO application has been reviewed, there are multiple discrepancies between the numbers included for other projects between the two project applications. Hence, we consider it inappropriate to comment on the potential significance of cumulative (or in-combination) impacts presented at this stage. We strongly advise that the Applicant considers the advice given and works with the Morgan generation assets and Morecambe generation assets projects (also located in the Irish Sea and submitted applications and will be in examination at the same time as the Mona project) to address our concerns with the gaps and errors and ensure all three projects are assessing the same cumulative and in-combination totals.

42. NRW (A) advises that adherence to an offshore Environmental Management Plan (EMP) that will include measures to minimise disturbance to rafting birds from transiting vessels, a timing restriction of no offshore export cable installation during the period 1st November – 31st March within Liverpool Bay Special Protection Area (SPA), and include a Marine Pollution Contingency Plan (MPCP) is required in order to avoid or reduce disturbance and displacement to the red-throated diver and common scoter features of Liverpool Bay SPA. The plan and the specific measures to be contained within it will need to be secured in the marine licence.

- Marine Mammals

43. NRW (A) previously advised that the assessment and/or consideration of the impacts of underwater noise on marine mammals, such as vessel noise, deployment of acoustic deterrent devices to mitigate from the effects of piling, potential cumulative barrier effects, and inter-related effects, was insufficient and needed to be improved in order to enable the risks to be fully and adequately assessed.

44. NRW (A) is now satisfied that a number of the concerns we raised relating to the assessment of impacts of underwater noise on marine mammals have been addressed through additional information supplied by the Applicant. We welcome the commitment of the Applicant to continue to engage with NRW (A) to develop the Underwater Sound Management Strategy (USWMS) during examination and post-consent, and we welcome the opportunity to do so.

45. NRW (A) advises that the proposal has the potential to impact marine mammals; 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.

46. However, an EPS licence may be granted by NRW (A), as the relevant licensing body, for the purposes specified in Regulation 55(2) of the Regulations.

47. 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.

- Fish & Shellfish Ecology

48. NRW (A) advises that piling noise from the proposed development has the potential to impact a significant proportion of spawning cod, protected under section 7 of the Environment (Wales) Act 2016. Whilst the Applicant has addressed some of our comments within the relevant representations, impact to spawning cod remains a primary concern.

49. Whilst some concerns with respect to underwater noise impacts have been addressed by the Applicant, NRW (A) still requires additional clarity to ensure that the worst-case scenario has been accurately assessed.

50. We welcome the inclusion of the UWSMS in both the deemed and standalone marine licences. Furthermore, we welcome the commitment of the Applicant to continue to engage with NRW (A) to develop the USWMS during examination and post-consent. However, we consider that the document requires work to ensure it achieves its objectives.

- *Physical Processes*

51. No assessment has been carried out to determine how the potential placement of cable protection in the shallow nearshore environment would impact on coastal and physical processes.

52. NRW (A) continue to advise that consideration should be given to the obstruction to the bedload sediment transport pathways both alongshore and onshore/offshore, and the potential impact on wave diffraction and wave refocussing on the coast, to ensure that the assessment of physical process is as complete and robust as possible.

53. NRW (A) are unable to advise on the need for monitoring provisions in respect of risk of exposure of landfall cables due to beach profile change, erosion of the backshore and short-term beach draw-down during storms until further assessment is undertaken.

54. We retain our recommendation that consideration should be given to sandwave recovery monitoring.

- *Benthic Subtidal and Intertidal Ecology*

55. Further clarity is required with respect to the Applicant's intention for cable protection in shallow water at the exit pits. No assessment of the potential impacts to the benthic and intertidal ecology, as a result of cable protection in the nearshore environment, has been made.

56. NRW (A) are unable to advise on the need for monitoring provisions in respect of risk of exposure of landfall cables due to beach profile change, erosion of the backshore and short-term beach draw-down during storms until further assessment is undertaken.

57. We retain our recommendation that consideration should be given to sandwave recovery monitoring.

58. Due to the presence of the highly invasive seasquirt *Didemnun 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.

- *Marine Water and Sediment Quality (MW&SQ)*

59. NRW (A) is satisfied that most of its previous concerns relating to MW&SQ have been addressed.

60. However, we continue to advise that consideration should be given to the concerns noted above regarding the assessment of the nearshore environment from a physical processes and benthic ecology perspective.

61. We continue to advise that further assessment is required for the biological quality elements and supporting elements due to the proximity to sensitive habitats.

- *Water Framework Directive (WFD) Coastal and Transitional Bodies – Offshore Works*

62. We support the assessment conclusion that the proposed works will not cause deterioration to the water quality of either of the water bodies considered (North Wales coastal waterbody and Clwyd transitional waterbody), nor the individual elements of

these water bodies, or impact the objectives of achieving Good Ecological Potential (GEP) and Good Ecological Status (GES).

63. Adequate clarification has been provided for the screening decision to not include other waterbodies in consideration of impacts.

64. NRW (A) continue to advise that to ensure compliance with the WFD Regulations whilst assessing the impact of the proposed activity, the re-suspension or accidental release of chemical contaminants should be considered in waters out to 12 nautical miles from MHWS.

- *Biodiversity Benefit and Green Infrastructure Statement*

65. NRW (A) welcomes the Applicant's ongoing commitment to engage with us on biodiversity enhancement measures at an appropriate time.

- *Decommissioning Offshore*

66. It is NRW (A)'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 and Monitoring Schedule; Marine Licence Principles and the Development Consent Order (DCO)*

67. There remain a number of inconsistencies between the Mitigation and Monitoring Schedule, the Marine Licence Principles and draft DCO that require review. Such discrepancies may result in confusion and uncertainty as to the extent of measures that may be secured in respective consents. We advise that the Applicant undertakes a full review of these documents so as to provide assurance that measures are appropriately captured. It is important that all relevant documents are consistent and contain accurate reference to all proposed mitigation, monitoring and plans as described in the application documents and agreed with interested parties.

1.5 ONSHORE SUMMARY

- *Designated Landscapes*

68. NRW (A) 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 (IoA) National Landscape (NL), Eryri National Park (ENP), 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 NL.

- *Water Framework Directive (WFD) Compliance Assessment (Onshore works)*

69. NRW (A) advises that the onshore aspects of the development involve works adjacent, within, or beneath a number of watercourses. The Onshore Crossing Schedule specifies

the proposed crossing methods and while trenchless techniques (e.g., Horizontal Direct Drilling) are confirmed for seven crossings, all options are retained for two of the 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 geomorphological field survey is 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.

- *Air Quality*

70. NRW (A) is satisfied that previous comments relating to air quality have been addressed. Requirement 9 of the Draft DCO requires the submission of final Management Plans and Method Statements to be approved by the discharging authority. We advise that we are satisfied with the Outline Code of Construction Practice (CoCP) in regards to air quality.

- *Ecology (Terrestrial)*

71. NRW (A) is satisfied that previous comments relating to ecology (terrestrial) have been addressed. The Outline Landscape Ecology and Management Plan (LEMP) identifies the principles of mitigation. The final LEMP will be approved by the discharging authority, in consultation with NRW (A). NRW (A) agrees with this approach. However, NRW (A) considers that amendments to the Outline LEMP should be made. These amendments are advised in order to ensure impacts on protected species are appropriately mitigated. We advise that we are satisfied with the Outline LEMP in regards to onshore ornithology, fish and designated sites. We also advise that we are satisfied with the Outline CoCP in regards to invasive non-native species and designated sites.

- *Water Quality (Surface Water and Groundwater)*

72. NRW (A) is satisfied that previous comments relating to water quality (surface water and groundwater) have been addressed. Requirement 9 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 CoCP to ensure that impacts on water quality (surface and ground water) are appropriately managed. We also advise that we are satisfied with the Outline CoCP in regards to air quality, invasive non-native species, designated sites, materials and waste.

- *Flood Risk*

73. NRW (A) is satisfied that previous comments relating to flood risk have been addressed, and we have no further flood risk concerns with the proposed development. NRW (A)'s advice on flood risk is associated with that risk posed from the Sea and Rivers as shown on the Flood Map for Planning (FMfP). Since the implementation of the Floods and Water Management Act 2010 in Wales, it is the local authorities acting as the Lead Local Flood Authority (LLFA), who manage flooding from ordinary watercourses, surface water (and ground water).

- *Material and Waste*

74. Requirement 9 of the Draft DCO requires the submission of final Management Plans and Method Statements to be approved by the discharging authority. We advise that we are satisfied with the Outline CoCP in regards to material and waste.

1.6 MARINE LICENSING SUMMARY

75. NRW MLT have outstanding concerns surrounding the drafting of the deemed Marine Licence (dML). These concerns relate (but are not limited) provisions relating to the transfer of the marine licence, pre-commencement works, and; approval of plans. A number of drafting comments have been provided within the Written Representation, and NRW MLT continues to advise the Applicant on the drafting of the deemed Marine Licence.

76. In addition to the dML in respect of the Generation Assets, a separate Marine Licence application in respect of the Transmission assets has been submitted to NRW MLT and is currently under determination.

2 OFFSHORE – DETAILED COMMENTS

This section of our Written Representation covers issues associated with the offshore and intertidal elements of the Mona application. It draws on the information contained in the original application documents submitted by the Applicant and the Applicant's response to our Relevant Representations [RR-011] as set out in in the Applicant's response to the Procedural Deadline of 25 June 2024 in PDA-008 (and documents referenced therein) as well as PDA-003 and PDA-005. In our Relevant Representations, NRW (A) set out the main issues in relation to the application. This Written Representation is intended to provide more detail on these issues and to update the Examining Authority (ExA) on progress on those issues following the Applicant's response to our Relevant Representations provided into the examination in document PDA-008 (and relevant documents contained and referred to therein), with the Applicant during the pre-examination period and any updates on issues. Where relevant this Written Representation will refer to the Applicant's response to the specific issues raised in our Relevant Representations as set out by the Applicant in PDA-008. A draft SoCG for Offshore Topics between NRW (A) and the Applicant will also be submitted (by the Applicant) at Deadline 1. This SoCG will highlight progress made and those matters that are still outstanding / ongoing between the two parties.

2.1 Marine Ornithology

77. This section of our Written Representation covers issues relating to marine ornithology associated with the offshore and intertidal elements of the Mona application.

78. Following a review of the environmental material submitted by the Applicant, in our Relevant Representations, NRW (A) identified the key issues as:

- Lack of confidence in assessments due to errors and inconsistencies in information presented;
- Lack of appropriate quantitative assessments for features of Pen y Gogarth / Great Orme's Head Site of Special Scientific Interest (SSSI);
- Methods used in apportionment of impacts to designated sites, including age-class apportioning, non-breeding season impact apportioning, sabbaticals;
- Lack of assessment of apportioned displacement impacts to designated sites covering the range of Statutory Nature Conservation Body (SNCB) advised displacement and mortality rates;
- Data gaps in cumulative (and in-combination) assessments;
- Errors in data included for other projects in cumulative and hence in-combination assessments.

This Written Representation sets out more detail on these issues and any updates to the issues identified above since submission of the Relevant Representations.

2.1.1 EIA Related Issues

2.1.1.1 Lack of confidence in assessments due to inconsistencies and potential errors in information

79. In our Relevant Representations [RR-011], NRW (A) raised concerns as there appeared to be many inconsistencies and possible errors in the information provided throughout the offshore ornithology assessment submission documents, which led to a lack of confidence in the predicted impacts both at EIA and HRA scale. The Applicant has provided responses to the inconsistencies and possible errors in the information identified by NRW (A) in their response to our Relevant Representations [PDA-008]. We welcome these responses and note the comments below on the issues noted by the Applicant.

2.1.1.1.1 Discrepancies between seasonal definitions presented across the documents (Applicant response reference to RR-011.3 in PDA-008)

80. In PDA-008, the Applicant has noted the discrepancies regarding the non-breeding season definition for puffin and the post breeding/autumn migration season definition for Manx shearwater in Table 5.14 in Volume 2, Chapter 5: Offshore ornithology [APP-057]. We welcome the commitment from the Applicant in PDA-008 that these corrections will be included in the Errata Document the Applicant will submit at Deadline 1 and we will review this document once submitted. Whilst the Applicant states in PDA-008 that these discrepancies do not alter the impact assessments as the correct numbers have been used, we note that there are errors in the seasonal abundance figures presented for these species for these seasons, as detailed in Section 2.1.1.1.3 below, which could impact the seasonal abundance figures used in apportionment to designated sites for HRA. Additionally, the correct figures should be made available for use by future projects that include the Mona project in the cumulative/in-combination assessments.

81. Additionally, the Applicant has confirmed in PDA-008 that different seasonal definitions have been used for gannet and kittiwake for displacement and collision assessments. This is because the Applicant has considered that some months are split between two seasons for collision risk. This is as collision mortality estimates are calculated for each month in the collision risk modelling, and as monthly estimates are subsequently added together, it is therefore possible to halve a monthly collision mortality estimate to calculate the seasonal collision mortality estimate. The Applicant has considered the following months to be split across seasons for collision assessment for the following:

- **Gannet:** half of March is defined as the *pre-breeding/spring migration season* with the second half of March falling in the *breeding season* and half of September falling in the *breeding season* and the other half falling in the *post-breeding/autumn migration*.

- **Kittiwake:** half of April is defined as the *pre-breeding/spring migration season* with the second half of April falling in the *breeding season* and half of August falling in the *breeding season* and the other half falling in the *post-breeding/autumn migration*.

We agree with the Applicant (as set out in PDA-008) that as the displacement matrix assessment approach uses mean seasonal peaks it is not possible to split abundance data for a month between seasons.

82. We note that the approach of splitting monthly collision impacts across two different seasons was not discussed during the Expert Working Groups (EWGs). Should this have been discussed, we would not have advised this approach. We advise that the standard approach is to use the full breeding season to define the breeding season, and where there is then overlap of months considered in both the full breeding season and the non-breeding seasons (e.g. with autumn and spring migration seasons) the non-breeding periods should be adjusted accordingly. This can be informed by the information presented in Furness (2015). It is also unclear why the months above have been split across seasons for gannet or kittiwake, as from Table 5.14 of the Offshore Ornithology Chapter [APP-057], the seasonal definitions for these two species do not have any months where part falls in one season and another in another season – Table 5.14 of APP-057 lists the following:

    - **Gannet:** *pre-breeding/spring migration* = December-February, *breeding* = March-September*, post-breeding/autumn migration* = October-November

    - **Kittiwake:** *pre-breeding/spring migration* = January-March, *breeding* = April-August, *post-breeding/autumn migration* = September-December

83. Gannet: Given that Furness (2015) defines the full breeding season for gannet as March-September, we advise this definition is used, and then adjust the non-breeding season definitions in Furness (2015) accordingly as per the standard approach set out above. This then ensures no months are considered in two seasons and hence impacts accounted for twice. This approach fits with the gannet seasonal definitions as presented by the Applicant in Table 5.14 of APP-057 and with those used by the Applicant in the gannet displacement assessment. Therefore, we suggest that the Applicant uses the same seasonal definitions for gannet collision assessment as well. Furthermore, we advise that the seasonal EIA scale collision figures for gannet are updated to account for this, and that the same seasonal definitions and collision predictions are also used in seasonal apportioning to designated sites for gannet.

84. Kittiwake: Furness (2015) defines the full breeding season for kittiwake as March-August. We advise this definition is used and then adjust the non-breeding season definitions in Furness (2015) accordingly to ensure no months are considered in two seasons. Therefore, we advise the Applicant reconsiders its EIA seasonal collision predictions for kittiwake and hence any apportioned collision impacts to designated sites. NRW (A) does not recommend that displacement is assessed for kittiwake as we currently consider the evidence base to be insufficient (as advised to the Applicant at Preliminary Environmental Information Report (PEIR) stage). Hence, we have not provided advice/comment on the displacement aspect of the kittiwake assessment, and we recommend that impacts to kittiwake (at EIA and to Welsh designated sites at least) are presented for collision and displacement separately, rather than just the single combined total of collision and displacement. We again recommend that the impacts of gannet collision and displacement are also presented separately, as well as the combined impact of both, in order for the assessment and impact process to be fully followed.

Additionally, it will be possible to see the level of contribution to the overall predicted impact due to collision and displacement separately if this method is applied.

85. We are unclear how fulmar seasonal totals have been considered. From Table 5.14 of the Offshore Ornithology Chapter [APP-057] it appears that January-March are being considered within both the spring migration and breeding season definitions. We advise that monthly impacts should not be considered twice (i.e. in multiple seasons) and recommend that the standard advice above is taken, i.e. to use the full breeding season definition from Furness (2015) and adjust any non-breeding season definitions accordingly to ensure no overlapping months in the seasonal definitions.

2.1.1.1.2 Errors in seasonal collision totals (Applicant response reference to RR-011.4 in PDA-008)

86. In our Relevant Representations [RR-011], NRW (A) noted there were errors in seasonal collision totals presented in Section 5.7.5 of the Offshore Ornithology Chapter [APP-057] compared to the monthly collision estimates in the Collision Risk Modelling (CRM) Annex [APP-093] making up the seasonal definitions that are summed. In response to RR-011, the Applicant has noted that their approach of adding half of the months impact to each bio-season, when a bio-season starts/finishes mid-month, was not explicitly stated within the application [see PDA-008]. Following this information, NRW (A) understand this to be the reason for the apparent errors for gannet and kittiwake at least. We refer the ExA to comments and advice in Section 2.1.1.1 above regarding the approach for these two species.

2.1.1.1.3 Errors/discrepancies in seasonal peak estimates (Applicant response reference to RR-011.5 in PDA-008)

87. In our Relevant Representations [RR-011], NRW (A) advised that the Applicant check the seasonal abundances of puffin and Manx shearwater within the array plus 2km buffer area presented and used in the assessments for various seasons.

88. We welcome that the Applicant has acknowledged the error in the puffin non-breeding season figure and agree that this should be 22 and not 0 as previously presented. Whilst we agree with the Applicant that this error would not alter the conclusion of negligible significance for displacement from the project alone for this receptor as provided in the Offshore Ornithology Chapter [APP-057], we consider that the correct seasonal abundance figure should be included in the assessment and we welcome the commitment from the Applicant in [PDA-008] that this will be included in the Errata document the Applicant will submit at Deadline 1. We also recommend that this error is corrected in the figures included for the Mona project in the puffin cumulative displacement assessments (in the Offshore Ornithology Chapter [APP-057]) and that the error should be corrected in any apportioned impacts in the HRA Stage 1 Likely Significant Effect (LSE) screening report, and any need for subsequent Appropriate Assessment be updated accordingly. This is in order to ensure that the most appropriate apportioned figures for such sites for the Mona project are readily available for future projects to include the Mona figures in their in-combination assessments going forwards.

89. In their response to our Relevant Representations [PDA-008], the Applicant acknowledges the small discrepancy in the spring migration mean peak abundance of Manx shearwater in the array area plus buffer. However, the Applicant considers that there is no issue with the autumn migration season peak of 182 Manx shearwaters. We suggest that the Applicant reconsiders this, as we note that the Applicant has confirmed in PDA-008 that the definition for Manx shearwater post-breeding/autumn migration season is September-October and hence, August is considered as in the breeding season. However, it appears that the abundance figures for August have been considered by the Applicant in their calculations of mean peak abundance in the autumn migration period. Based on the Applicant's principle of using MRSea[1] (model-based) estimates where available, and design-based if not, and an autumn definition of September-October, the peak autumn migration abundance in the site + 2km buffer should be 25 for year 1 (design-based estimate as MRSea estimate not available for either month) and 1 for year 2 (MRSea estimate), resulting in a mean peak estimate of 13 and not 182 as currently given (see Table 1.46 of Offshore Ornithology Baseline Characterisation Technical Report, APP-091). We therefore suggest that the Applicant should update the assessment with the correct seasonal mean peak numbers in order for future projects to include the most appropriate figures for the Mona project in cumulative/in-combination assessments. We assume that this error has also then fed through to the figures included for the Mona project in the Manx shearwater cumulative displacement assessments in the ES Offshore Ornithology Chapter [APP-057] and will also have implications for apportioned impacts, the HRA Stage 1 LSE screening and any need for subsequent Appropriate Assessment (AA) - which should also be checked and updated if required by the Applicant. This is again in order to ensure the most appropriate figures for the Mona project alone are readily available for future projects to include in their cumulative/in-combination assessments going forwards.

2.1.1.1.4 Other errors/inconsistencies in seasonal peak estimates identified by the Applicant (Applicant response reference to RR-011.6 in PDA-008)

90. We welcome that the Applicant has undertaken detailed checks of the tables of seasonal definitions, seasonal mean peak abundances for displacement, seasonal collision totals etc., presented throughout the various offshore ornithology documents as suggested by NRW (A) in our Relevant Representations. We note that the Applicant has identified some further inconsistencies and intends to include corrections in the Errata document the Applicant plans to submit at Deadline 1. Given the number of errors, whilst it may well be the case that correcting these will not alter the conclusions of the assessments, we would suggest that before the end of the examination the Applicant considers submitting a full updated and revised version of the Offshore Ornithology ES Chapter, Stage 1 HRA Screening for offshore ornithology and HRA Stage 2 ISSA Part 3 (SPAs and Ramsars) in order to ensure the most appropriate figures for the Mona project alone

[1] MRSea: Marine Renewable Strategic environmental assessment. MRSea R package is bespoke software produced to allow density surface models to be fitted to offshore wind farm baseline characterisation survey data. This can be used to produce distribution maps and density estimates (with associated uncertainty estimation) and enables scrutiny of the model selection process and diagnostics. Available at: https://www.creem.st-andrews.ac.uk/software/

are readily and easily accessible for future projects to access for inclusion of the Mona project figures in future cumulative/in-combination assessments.

2.1.1.2 Impacts to Sites of Special Scientific Interest (SSSI) (Applicant response reference to RR-011.7 in PDA-008)

91. In our Relevant Representations [RR-011], NRW (A) highlighted that as the Mona project is located within foraging range of the guillemot, razorbill and kittiwake features of the Pen-y-Gogarth / Great Orme's Head SSSI there was a need for the Applicant to present a full quantitative assessment of impacts from the proposed project on these features of the site. Whilst in paragraph 5.7.2.106 of the Offshore Ornithology Chapter [APP-057] the Applicant makes reference to a PVA (presented in APP-096) and hence assessment of operational displacement for the guillemot feature of the site, as noted in our Relevant Representations, the assessment is unclear. Additionally, no quantitative assessment was made in the submission of impacts to the razorbill (displacement) or kittiwake (collision) features of this site. Therefore, the Applicant has not carried out assessment of potential impacts to this site sufficiently in order to enable the effects on the features of the site to be assessed.

92. The proposed location for the Mona array area is approximately 29.8km from Pen-y-Gogarth / Great Ormes Head Site SSSI (***Figure 1***). 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 790 pairs (5-year mean of peak counts 2018-2022, excluding 2020 when no data were collected due to the COVID-19 pandemic). In addition, the site supports around 1,500 guillemots and 150 razorbills each year (figures also based on 5-year mean peak 2018-2022 excluding 2020).

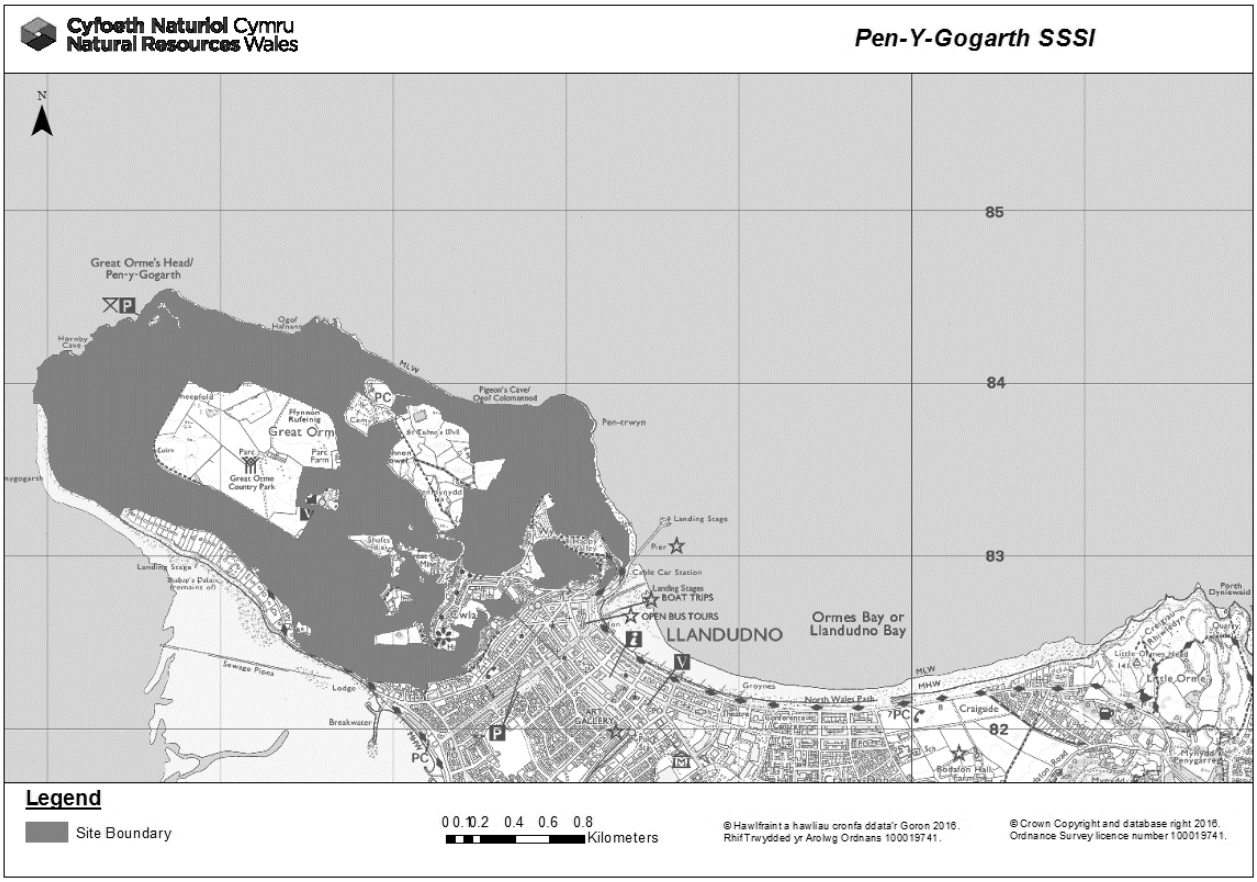

Figure 1 Location of Pen y Gogarth / Great Orme's Head SSSI

93. The assessment of displacement of the guillemot feature of the Pen-y-Gogarth / Great Orme's Head SSSI is currently unclear for the following reasons:

    - The assessment of apportioned impacts presented in APP-096 appears to be based on the breeding season only. As with Special Protection Areas (SPAs), annual impacts should be assessed, and hence there is a need to apportion impacts to this SSSI in the non-breeding season as well and to sum the seasonal impacts to assess an annual impact. We suggest the Applicant considers the approach taken by the Awel-y-Môr Applicant in their Deadline 3a submission: Deadline 3a assessment

    - The displacement matrix approach (as advised by SNCBs: SNCBs 2022) should be presented of the apportioned impacts, and, due to the uncertainty around specific displacement and mortality rates we advise that the assessment considers impacts across the full range of SNCB advised % displacement (30-70% for auks) and % mortality (1-10%) rates.

94. The survival and hence mortality rate used to calculate the baseline mortality and the proportion (%) of baseline mortality that the predicted impact equates to is not made clear in either the assessment in APP-057 or Tables 1.3 or 1.5 of APP-096. As noted in our Relevant Representations [RR-011], for a breeding colony such as this, we recommend that the adult survival rate (such as that in Horswill & Robinson 2015) is used to calculate the adult mortality rate. Therefore, we recommend that the guillemot assessment is updated taking into consideration the points raised above and to make all the information highlighted above clear, for example through a table that sets all this out

per season and annually. Then if the final apportioned annual impact equates to 1% or greater of baseline mortality for the colony, further consideration should be given through an updated PVA.

95. The Applicant should also undertake full quantitative assessments of predicted impacts of displacement of the razorbill and collision of the kittiwake features of the Pen-y-Gogarth / Great Orme's Head SSSI taking into account our comments above on the guillemot assessment. In addition, kittiwake collision assessments should be based on the stochastic collision risk model (sCRM) as used by the Applicant for their other collision assessments and use the kittiwake specific input parameters as provided by NE (and agreed by NRW (A)) during the EWG, including use of the species-group avoidance rate advised for kittiwake (i.e. the all gull rate of 0.9928 ± 0.0003). We again suggest that the Applicant considers the approach taken by the Awel-y-Môr Applicant in their Deadline 3a submission: Deadline 3a assessment. Again, if apportioned impacts equate to 1% or greater of baseline mortality then further consideration should be given through an updated PVA. If this is the case, NRW (A) can discuss and advise appropriate input parameters with the Applicant.

96. We welcome the commitment by the Applicant in their response to our Relevant Representations [PDA-008] to present a specific document on the impact on the Pen-y-Gogarth/Great Orme's Head Site SSSI year-round and note that the Applicant intends to submit this at Deadline 1. Once this note is submitted into the examination, will provide further advice. We suggest that the Applicant considers our advice provided in our Relevant Representations [RR-011] and also that set out below regarding apportioning (age classes and non-breeding season methods of apportionment of impacts) and % displacement and % mortality rates in this document. Should this work not be submitted and the Applicant does not follow the advice we have provided, then 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 / Great Orme's Head SSSI.

2.1.1.3 Cumulative (and in-combination) Assessments

2.1.1.3.1 Data gaps (Applicant response reference to RR-011.8 in PDA-008)

97. As noted by NRW (A) RR-011, the Applicant's cumulative (and in-combination) impact assessments contain numerous data gaps and cannot be considered comprehensive. This issue was raised as a concern by the SNCBs in PEIR responses and discussed during the EWGs. The SNCBs supplied bespoke advice to the Applicant (and other Round 4 Irish Sea projects) detailing a hierarchical method to 'gap-fill' the Irish Sea cumulative and in-combination assessments (see Section D.6.13 of Appendix D of Technical Engagement Plan APP-042). This approach was relatively basic, with acknowledged limitations but was designed to generate **indicative** estimates for currently unknown (zeroed) impacts. This would then enable more informed expert judgement to be made on the likelihood of adverse effects, and thus if further investigation by a more rigorous assessment was warranted.

98. We note that in paragraph 5.7.15.9 of the Consultation Report [APP-037], the Applicant states that 'it does not consider it appropriate to estimate impacts for other projects and notes that there is no precedent for this type of exercise in the offshore wind industry to 'gap-fill' information from existing projects.' NRW (A) note that this is not quite the case,

although previous 'gap-filling' exercises have focused on in-combination assessment of at-risk sites/species. E.g., Burbo Bank Extension, Walney Extension and Gwynt-y-Mor projects all quantified impacts using contemporary Collision Risk Modelling (CRM) techniques for lesser-black backed gull at historic offshore wind farms where appropriate impact estimates were not available to inform a robust in-combination assessment. Additionally, we highlight that NRW (A) advised the Round 4 plan-level HRA (undertaken by The Crown Estate) to undertake quantitative 'gap-filling' for historic projects: in our comments on the Round 4 draft RIAA, we said:

"NRW (A) are happy that this cumulative assessment will include built and operational windfarms. Using the MERP or SeaMaST modelled data, assessments could be made for those old windfarms that didn't do sufficient assessments in the past. Therefore, cumulative assessments of CRM and displacement could be assessed using this technique as it has been used for the Round 4 areas."

99. It is unfortunate that this advice was not adopted as we consider that this would be best tackled at the strategic level.

100. Despite this, the Applicant's cumulative and in-combination assessments still do not quantitatively consider impacts from a number of relevant projects due to the acknowledged lack of data. Impacts specified as 'unknown' have been assessed qualitatively but are ultimately still treated as zero. This approach will inevitably underestimate impacts and sets a risky precedent for future development in the region. NRW (A) continue to judge this qualitative approach to be problematic, and hence consider it inappropriate to comment on the potential significance of cumulative (or in-combination) impacts presented at this stage.

101. To increase confidence in the cumulative (and in-combination) assessments, the method previously provided to the Applicant remains our preferred approach. However, we do accept that for most assessments the legitimate risk of impact on integrity judgements is relatively low. Therefore, we suggest the Applicant could consider an alternative approach that essentially back calculates the total species-specific impact that would need to be estimated for all projects with no data for the 1% baseline mortality threshold to be reached. Information from sites with data can then be used to inform a judgement on the likelihood of the unknown project impacts being of the scale required for this threshold to be reached. We understand this is the approach that the Morecambe Generation Assets projects has taken in their application, which has recently been accepted by PINS (PINS doc ref: EN010121-000242-5.1.12 Chapter 12 Offshore Ornithology.pdf (planninginspectorate.gov.uk). NRW (A) have not yet conducted a complete technical review, but currently consider this approach to be a useful initial screening method. If by following this approach it does appear that the likelihood of the impacts are of the scale required for this threshold to be reached, then a more rigorous consideration of impacts may be required. Indeed, the Applicant has recently contacted the relevant agencies to secure a date to discuss gap-filling approaches. We will update the ExA accordingly as this matter evolves and develops.

2.1.1.3.2 Data included for other projects in cumulative assessments (Applicant response reference to RR-011.9 – RR-011.11 in PDA-008)

102. In our Relevant Representations [RR-011], NRW (A) highlighted a number of issues with the data/figures presented by the Applicant for other projects included in the cumulative impact assessments. In their response to our Relevant Representations [PDA-008], the Applicant has acknowledged the errors made with the figures included for the Erebus project and has committed to correcting these in an Errata document to be submitted at Deadline 1. We welcome this.

103. We have reassessed the cumulative displacement assessments presented in APP-057 following the Applicant's confirmation in PDA-008 that the underwater collision mortalities from wave/tidal projects have not been included in the displacement abundance calculations and have been added additionally to the predicted displacement mortalities. Following this, we can confirm that we agree with the Applicant's approach regarding this aspect.

104. We welcome the Applicant's clarification in PDA-008 that collision predictions have been corrected to the current advised avoidance rates and that the Applicant has provided information on how they have recalculated the collision figures for the new avoidance rates. As a result, we are content with the Applicant's approach regarding this issue.

105. We welcome that in PDA-008 the Applicant has confirmed that the collision figures included in the cumulative assessments for the Awel-y-Môr project are those for Band Option 3 – we assume these are just figures for large gulls and that the figures included for the other species are from Band Option 2. However, we note that the avoidance rates recommended for use by the Mona Applicant by NE/NRW (A)/JNCC are those for the 'basic' Band model (i.e. Options 1 and 2) and are not considered appropriate for use with the 'extended' model (i.e. Option 3). We note that at the time of the Awel y Môr examination SNCB advice would have been that the extended model (i.e. Option 3) could be used for large gulls using the avoidance rates advised for the extended model. However, we note that the advice provided to the Applicant in the EWG by NE regarding CRM parameters in July 2022 stated that they no longer accept use of the extended Band model (options 3 & 4) (see Section D.3.13 of Appendix D of Technical Engagement Plan APP-042). NRW (A) agree with NE's position. Therefore, we advise that if the Option 3 large gull collision predictions for Awel-y-Môr are included in the cumulative assessments, they should not be corrected to the currently advised avoidance rates. However, if the Option 2 figures for this project are included instead (which in light of current advice would be our preferred approach), then these could be corrected to the currently recommended avoidance rates.

106. In the cumulative assessments in the Offshore Ornithology Chapter [APP-057], the Applicant had included figures from the PEIRs for the Morgan and Morecambe Generation Asset projects. As was noted in our Relevant Representations [RR-011], the PEIR figures for both of these projects were based on only 12 months of data and therefore, subject to change and have a degree of uncertainty associated with them. However, we note that the Morgan Generation Assets project and the Morecambe Generation Assets project applications have been submitted and accepted by PINS and hence the implications of these to the Mona project cumulative (and in-combination) assessments should be considered by the Applicant. Given that both the Mona project, the Morgan Generation Assets project and the Morecambe Generation Assets project will likely all be in examination (albeit at different stages) at the same time, and all three projects are located within the Irish Sea, there will be a need for all three projects to be

assessing the same cumulative (and hence in-combination) total impacts. Therefore, we very much urge the three projects to work together collaboratively to ensure the assessments are consistent.

107. Additionally, since the Morgan Generation Assets application has been submitted to the Planning Inspectorate and reviewed by NRW (A), there appear to be several differences between the figures included by the Mona Applicant and those included by the Morgan Generation Assets project in their submission for the same operational projects in the cumulative assessments. NRW (A) are in the process of reviewing the Morecambe Generation Assets project application and as yet cannot confirm whether there are further differences in the numbers included for other projects in this project's cumulative assessment. However, given that all three projects will likely be in examination (albeit at different stages) at the same time, and all of the projects are located within the Irish Sea, we again note the need for all three projects to be assessing the same cumulative (and hence in-combination) total impacts and continue to suggest that the projects work together collaboratively to ensure the assessments are consistent.

2.1.2 HRA Related Issues

108. We reiterate our advice provided in our Relevant Representations [RR-011], and during the EWG discussions, on the approach to the HRA Screening of LSE taken by the Applicant, i.e. that the approach taken may be considered appropriate regarding the Mona project alone, but that this approach will not necessarily be appropriate for all offshore wind cases. Therefore, we advise future offshore wind projects discuss any proposed LSE screening approaches with NRW (A) well in advance of any proposed submission of an application.

2.1.2.1 Lack of clarity in approach and presentation of apportioned impacts and assessment (Applicant response reference to RR-011.13 in PDA-008)

109. As noted in our Relevant Representations [RR-011], the Applicant's approach and presentation of apportionment of predicted impacts to designated sites, assessment and process of reaching the predicted impacts in the HRA Stage 1 Screening Report [APP-034] and HRA Stage 2 ISAA SPAs and Ramsars [APP-033] is difficult to follow and unclear in places. Whilst we welcome the worked example provided by the Applicant in PDA-008 for great black-backed gull at the Isles of Scilly SPA, we advise the Applicant considers our comments below regarding aspects of the assessment (including age class apportionment, calculation of non-breeding season apportionment proportions etc) and we strongly recommend that tables are provided for each designated site and feature that contain information on the following for the Mona project alone:

- Seasonal abundance (for displacement assessments) and/or collision predictions at EIA scale for birds of all ages and then apportioned to adults (noting comments below).
- Apportioned % or weighting per season for the colony in question (noting comments below) and resulting seasonal apportioned number of adults.
- Apportioned seasonal and summed annual predicted impacts for each species feature for the site/colony in question.

- Adult mortality rate for the species feature considered.
- Colony size (breeding adults) and date of count.
- Baseline mortality rate for colony (based on adult mortality rate and colony size).
- Proportion of baseline mortality that the annual predicted apportioned impact equates to, should be provided for the SNCB advised range of % displacement and % mortality rates and range of predicted collisions from the sCRM tool for the SNCB advised input parameters.

110. This could be submitted as a clarification note into the examination, and through an updated HRA Stage 1 Screening report and HRA Stage 2 ISAA Part 3 (SPAs and Ramsars) report. This is to ensure that the most appropriate figures for the Mona project alone are readily and easily accessible for future projects to access for inclusion of the Mona project figures in future in-combination assessments. Ideally a final table of EIA and HRA scale figures for each species and site that any consent for the project gets based on should be made publicly available. Consented figures can then be accessed by future projects to ensure the appropriate figures can be added for the Mona project into future cumulative/in-combination assessments. Potentially this could be to a central place, such as Marine Data Exchange (MDE) hosted by The Crown Estate.

2.1.2.2 Qualifying features of designated sites (Applicant response to RR-011.14 in PDA-008)

111. We welcome the acknowledgement from the Applicant in PDA-008 that the errors in the qualifying features of the Skomer, Skokholm and seas off Pembrokeshire SPA will be listed correctly in the Errata document the Applicant plans to submit at Deadline 1. We advise that the errors will also need to be corrected in the HRA Stage 1 Screening report [APP-034], HRA Stage 2 ISSA Part 3 (SPAs and Ramsars) report [APP-033] and HRA Integrity Matrices [APP-035].

2.1.2.3 Apportionment of impacts (age classes, methods for apportionment of impacts to designated sites, sabbaticals)

2.1.2.3.1 Age class apportionment: immatures (Applicant response reference REP-011.19 in PDA-008)

112. Since the submission of our Relevant Representations [RR-011], we welcome that the Applicant has confirmed in PDA-008 that the impacts apportioned to each SPA in the HRA Stage 1 Screening Report [APP-034] and HRA Stage 2 ISAA Part 3 (SPAs and Ramsars) [APP-033] are for adult birds only in both the breeding and non-breeding period. Based on the worked example for great black-backed gull at the Isles of Scilly SPA provided by the Applicant in their response to our Relevant Representations (see response reference RR-011.13 in PDA-008), it clearly shows that the proportion of immatures as presented in the Apportioning Technical Report [APP-095) have not been used in the calculations of impacts apportioned to designated sites. Therefore, we are uncertain as to the reason or value in the Applicant having presented this information as it has caused confusion over the methods taken. We suggest that this is clarified.

2.1.2.3.2 Age class apportionment: kittiwake in the breeding season (Applicant response reference to REP-011.15 in PDA-008)

113. In our Relevant Representations [RR-011], NRW (A) raised concerns regarding the appropriateness of the Applicant's use of the kittiwake adult proportion that was calculated for Hornsea 2. We note that this approach was not raised by the Applicant during EWG meetings or subsequently, and therefore NRW (A) has not agreed to this approach. The Hornsea 2 approach to apportioning to age class referred to in Paragraph 1.3.3.5 of the Applicant's Apportioning Technical Annex [APP-095] relies on reliable counts of first year birds, i.e. in the case of kittiwake first summer birds which by August of that year have largely transitioned to adult plumage and are indistinguishable from mature adults. Therefore, the identification rate of first summer kittiwake is questionable and calculations derived from this e.g. applying survival rates to define an age class structure, is also questionable. Additionally, the very low number of aged juvenile kittiwakes in the Mona site-specific surveys and that the juvenile survival rates (0-1 year) given in Horswill & Robinson (2015) are very old and from a single colony in the North Sea (taken from Coulson & White 1959) and hence have a poor data quality score (score of 1). These issues mean there is uncertainty around the appropriateness of the approach for use at the Mona site which is located in the Irish Sea. Therefore, we reiterate our advice from our Relevant Representations [RR-011] that a more appropriate approach for the breeding season would be to use the 95.23% of adults recorded in the Mona site-specific Digital Area Survey (DAS) data, or to take the same approach as for auks and Manx shearwater and assume all birds are adults.

114. We recommend that the Applicant also provides into the examination, impact assessments for all sites with kittiwake features following NRW (A)'s advised approach alongside the assessments using their approach, so that a fully informed judgement can be made.

2.1.2.3.3 Non-breeding season apportionment of impacts, including age classes (Applicant response reference to RR-011.16 and RR-011.18)

115. The Applicant has used a theoretical generalised stable age structure (Furness 2015) to apportion impacts to adults in the non-breeding season from SPA colonies. As noted in our Relevant Representations [RR-011], we do not agree with this approach. This is because these are considered unlikely to be representative of the actual proportions of adults present within specific areas at different times of year and could lead to over, or more importantly, underestimation of impacts.

116. In their response to this in PDA-008 in reference to RR-011.16, the Applicant states that their approach *'has followed the approach used previously in the application for Development Consent for multiple offshore wind farms'* and lists Outer Dowsing (2024) as an example. Whilst the Outer Dowsing Applicant may have taken this approach in

their application, we note that NE in their Relevant Representations for this project[2] have disagreed with the Applicant's approach and have advised that where good quality site-specific ageing data is not available, that the precautionary approach is used - that is to assume that all 'adult type' birds recorded on surveys (i.e. birds that cannot be distinguished from adults, and hence might be adults) are apportioned as adults (Natural England 2024).

117. We also note that at Awel-y-Môr, whilst the Applicant there used the Furness (2015) stable age structure approach to age class apportioning, NRW (A) did not agree with the approach and in our Relevant Representations for this project (NRW (A) 2022) stated: *'NRW (A) notes that the Furness (2015) stable age structure assessment method has been applied. Whilst NRW (A) would have preferred that stable age structure is calculated from the local surveys, or, by adopting a precautionary approach by counting all birds as adults, we do not consider that this impacts the final assessments.'*

118. In their response to our Relevant Representations in PDA-008 (see response to reference RR-011.13), the Applicant has provided a worked example of their approach to apportioned impacts for collisions of great black-backed gull at Isles of Scilly SPA (age-class apportionment and apportionment to SPA). This shows that the Applicant has taken the EIA scale all age class collision figure for the non-breeding season and applied an apportionment rate for proportion of adults (based on stable age structure from Furness 2015) and an apportionment rate for proportion of adult birds within the relevant seasonal Biologically Defined Minimum Population Scale (BDMPS). We note that this approach essentially double apportions to adults as the BDMPS proportions in the tables in Appendix A of Furness (2015) already takes account of the number of adults likely to be present in the BDMPS, so it is not appropriate to correct (a second time) for the proportions of adults (or adult type in the case of kittiwake) in the BDMPS. Therefore, we recommend that no age class apportionment is undertaken for the non-breeding season(s) and that the apportionment to designated sites for the non-breeding season(s) is undertaken based on the proportion of the SPA adult birds across the BDMPS total of birds of all ages for each relevant non-breeding BDMPS season. So, for example for gannet at Grassholm SPA in the Western Waters BDMPS in the post-breeding/autumn migration season:

- From Table 15 of Appendix A of Furness (2015) the number of Grassholm SPA adult birds in the BDMPS is 78,584 birds, whilst the total number of gannets of all ages across the BDMPS is 545,954 birds. Therefore, the proportion of Grassholm SPA adult birds across the BDMPS during autumn can be calculated as 0.1439 (14.39%).

- Therefore, the autumn migration apportioned collisions to the Grassholm SPA, should be: Mona EIA autumn collision total x 0.1439.

[2] Natural England (2024) Proposed Outer Dowsing Offshore Wind Farm: Relevant Representations of Natural England. Planning Inspectorate Reference EN010130. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010130/EN010130-000700-Binder1.pdf

119. We therefore recommend that the Applicant also provides into the examination, impact assessments for all designated sites following NRW (A)'s advised approach alongside the assessments using their approach.

2.1.2.3.4 Sabbaticals (Applicant response reference to RR-011.17 in PDA-008)

120. We welcome that the Applicant has confirmed in PDA-008 that sabbaticals have not been removed from the adult numbers. This is in line with the advice provided to the Applicant by NRW (A) (and NE/JNCC) during the EWG. This is because we do not consider the current evidence base sufficient to recommend sabbatical rates of >0 for any species (see details below). We acknowledge some birds do not breed every year, but the mean proportions of populations doing so are not well understood, nor are their behaviours or distributions in the breeding season.

121. Whilst the Applicant has confirmed that sabbaticals have not been removed from adult numbers, we do note that in paragraph 1.3.4.5 of APP-095 the Applicant states: *'Every breeding season a proportion of adults skip breeding and take a 'sabbatical'. To include any impacts occurring on any sabbatical birds within that apportioned to those individuals of the species breeding at a colony, would likely overestimate the effects to these species/populations (Marine Scotland 2017a, b).'*

122. NRW (A) does not agree with this statement and consider that review of the seabird demographic rates presented by Horswill & Robinson (2015) and the literature used to inform them introduces significant caution in any consideration of sabbaticals during impact assessment. This is because there are insufficient studies to inform a full understanding and no clear basis to extrapolate findings to other colonies. Additionally, it is uncertain that historic findings remain relevant now, or for the extended period (30 or more years) that offshore wind projects may impact populations.

123. In paragraph 1.3.4.5 of APP-095 the Applicant claims: '….breeding colony population size estimates, which are used within the Environmental Impact Assessment and HRA Stage 2 ISAA (Document Reference APP-031) to inform the derivation of the significance of impacts, do not include these sabbatical birds……it is likely therefore that impacts assigned to breeding colonies will be an overestimate,….'.

124. NRW (A) does not consider this statement to be evidence based and we remain unconvinced that seabirds are not attending colonies while taking sabbaticals from breeding, and therefore potentially being counted as part of the breeding population. Reed et al. (2015), reported that on the Isle of May (where the adopted sabbatical rate for guillemot was calculated) that: *"Non-breeding guillemots spend much time in the colony near their last breeding site".* Therefore, we consider that sabbatical guillemots may be represented in colony population estimates, especially given the methods employed to count auk colonies (individuals present in breeding habitat are counted, rather than apparently occupied nests/sites). Similarly, we consider it possible that gulls may attend colonies, and even attend or defend nest sites while taking a sabbatical. For example, Calladine and Harris (1997) found large numbers of Herring Gulls and Lesser Black-Backed Gulls residing in a breeding colony on the Isle of May, despite those individuals not breeding during the breeding season in question.

125. Additionally, in Table 1.7 of APP-095 the Applicant presents sabbatical rates proposed by Marine Scotland in guidance supplied to Scottish offshore wind farms seven years ago. We note that these rates were specifically for consideration within a PVA model, not apportioning, and the use of these rates is not justified or evidenced in the cited document. Hence NRW (A) do not consider these sabbatical rates appropriate for consideration during apportioning.

2.1.2.4 Apportioned impacts from the Mona project alone (Applicant response reference to RR-011.19 and RR-011.21 in PDA-008)

126. In our Relevant Representations [RR-011], NRW (A) noted that the apportioned impacts to designated sites from displacement and resulting % increases to baseline mortality considered in the Stage 1 HRA Screening Report [APP-034] and hence taken through the assessments in the HRA Stage 2 ISAA for SPAs and Ramsars [APP-033], are based on the Applicant's considered appropriate % displacement and % mortality rates only. The apportioned impacts for the full ranges of SNCB (NRW/NE/JNCC) advised % displacement and % mortality rates are not presented in the HRA Stage 1 Screening [APP-034] or HRA Stage 2 ISAA Part 3 (SPAs and Ramsars) [APP-033] reports.

127. We acknowledge that the EIA scale full displacement matrices and predicted impacts for the full range of SNCB advised % displacement and % mortality rates are presented and assessed in Section 5.7.2 of the Offshore Ornithology Chapter [APP-057] and Section 1.4 of the Displacement Technical Report [APP-092], and that the EIA scale displacement matrices based on the upper and lower 95% confidence limits of the abundance data are presented in Appendix C of APP-092. However, the displacement impact figures apportioned to the designated sites for the SNCB advised ranges (e.g. 30-70% displacement and 1-10% mortality for auks), or the full matrices of apportioned impacts to each designated site, have not been provided by the Applicant anywhere in the submission documents or in the response to our Relevant Representations [PDA-008]. The only apportioned figures available are for the Applicant's preferred % displacement and % mortality for each species feature of: 50% displacement and 1% mortality for auks, Manx shearwater and kittiwake and, 70% displacement and 1% mortality for gannet. This should be rectified. Please see further detail below.

2.1.2.4.1 Auk displacement rates

128. In paragraphs 5.7.2.14-5.7.2.16 of the Offshore Ornithology Chapter [APP-057], the Applicant presents evidence to justify its preferred rates of 50% displacement and 1% mortality across the site and 2km buffer, as being the most realistic rates to base the auk HRA assessments on. NRW (A) considers that the evidence for auk displacement is variable, with some studies finding a strong displacement effect of guillemots and razorbills from offshore wind farms, whereas other studies have found none. For example, displacement of guillemots and razorbills have been reported in the non-breeding season in the southern North Sea of distances from 2 to 4km (Petersen et al. 2004) and Petersen & Fox (2007) demonstrated the exclusion of guillemots out to at least 2km at Horns Rev development site. Mendel et al. (2014), studying the Alpha

Ventus windfarm in Germany found that guillemot were in significantly lower numbers in all distance bands from the windfarm (out to 6-10km), with the highest displacement within 2km of the windfarm (razorbill were not in sufficient numbers to assess). Welcker & Nehls (2016), also studying Alpha Ventus, found that auks (predominantly guillemot) were 75% lower inside compared to outside the windfarm and that the lower numbers were evident out to 2.5km of the windfarm. Welcker & Nehls (2016) also conducted a literature review of studies looking at displacement and concluded that there was strong evidence across studies that auks are displaced by offshore windfarms. However, this has not been the case for other studies, e.g. guillemots at Robin Rigg wind farm in Scotland (Vallejo et al. 2017) and a study by Webb et al. (2017) found no displacement or attraction occurred at the Lincs and LID wind farms for all auks. Dierschke et al. (2016) conducted a review (for full details see table 3 in the paper) and they concluded that common guillemot and razorbill 'weakly avoided' windfarms.

129. We note 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). The Applicant's evidence in paragraph 5.7.2.14 of APP-057 notes that evidence for auk displacement is variable. We also note a recent study has highlighted the potential for displacement to occur over much greater distances (up to ~20km) than are typically assessed or considered by baseline characterisation surveys (Peschko et al. 2024). Therefore, our advice remains that consideration should be given to a range of displacement rates from 30%-70% across a 2km buffer and we strongly advise the Applicant provides apportioned impacts for relevant designated sites across this range.

2.1.2.4.2 Manx shearwater displacement rates

130. The Applicant has not presented any evidence to justify a 50% displacement and 1% mortality rate as being appropriate evidence-based rates to use for Manx shearwater HRA displacement impact assessments. As was noted by NRW (A) in our response to actions from EWG3 (see Section D.4.3 of Appendix D of APP-042), there is currently no evidence for any particular range of displacement rates (1-10%, 30-70% or any other) for this species from offshore wind farms. Therefore, we advise that the full displacement matrices for apportioned impacts to Manx shearwater designated sites are provided, or as a minimum the range of impacts across the same range of rates as per auks are provided (i.e. 30-70% displacement and 1-10% mortality). We strongly advise the Applicant provides apportioned impacts for relevant designated sites across this range and/or the full displacement matrices for apportioned impacts for each relevant designated site.

2.1.2.4.3 Gannet displacement rates

131. With regard to the Applicant's chosen rates of 70% displacement and 1% mortality for use for gannet displacement assessment, we note that in paragraph 5.7.2.21 of the Offshore Ornithology Chapter [APP-057], the Applicant presents the evidence from Pavat et al. (2023) and Apem (2022) as justification for its chosen rates. Whilst the Apem (2022) report is not listed in the reference list of APP-057, we assume the Applicant is referring to the '*Gannet Displacement & Mortality Evidence Review*' submitted during the

Hornsea Project 4 examination[3]. If this is the case, the Apem (2022) review results in a conclusion that 40-60% displacement should be considered for gannet during the breeding season, and a 60-75% would be more appropriate during the non-breeding season. We note that of the seven studies reported in Apem (2022) suggesting displacement rates of less than 60%, the authors placed low confidence in the survey methods and/or data collected for five of these. We also note there is currently no empirical evidence for displacement consequent mortality of gannet and the studies quoted in Apem (2022) have significant limitations and numerous underlying assumptions limiting confidence in their conclusions. Therefore, based on the evidence, we do not consider that the Apem (2022) report provides sufficient justification for the use of different displacement and mortality rates to those advised by NRW (A).

132. We note that the work by Pavat et al. (2023) was commissioned by NE and the aim of the work was to deliver an evidence-based method to ensure macro-avoidance behaviour is appropriately accounted for in collision risk models of gannet at offshore wind farms. This work was not aimed at reviewing displacement rates for use in the displacement matrix. Displacement effects are an inherent part of macro-avoidance behaviour because macro-avoidance is a combination of both displacement and barrier effects. However, currently displacement and collision risk are performed as separate analyses and there are spatio-temporal mismatches in how displacement and collision mortalities are measured (Pavat et al. 2023). We note that in assessments macro avoidance applies only to birds in the array footprint in flight, whereas displacement applies to the buffer as well and to all birds (on the water plus in flight). NRW (A) agree with the advice provided by NE to the Applicant on 7th July 2022 regarding CRM parameters that to account for gannet macro avoidance by a reduction of density of birds in flight based on the level of macro avoidance displayed by this species, which was advised to be 70% (see Section D.3.13 of Appendix D of APP-042). However, we note that the displacement matrix approach uses mean seasonal peaks of all birds, whereas CRM uses monthly means of birds in flight. Hence the two things do not fit together, and we have no way of reconciling this at present.

133. Therefore, NRW (A) recommend that a range of 60-80% displacement for gannet should be considered in the assessment (as was set out by the Applicant in their displacement technical note supplied to the EWG, see Section D.3.9 of Appendix D of APP-042). So, we strongly advise the Applicant provides apportioned impacts for relevant designated sites across this range of displacement and mortality rates.

2.1.2.4.4 Mortality rates

134. We acknowledge that empirical evidence regarding the energetic consequences of displacement for seabirds and wintering waterbirds using the marine environment are very limited, and the role of overwinter survival on seabird population dynamics is poorly understood. Therefore, as there is very little information available about the consequences of displacement for individuals, there is actually no evidence to suggest that 10% is precautionary. Furthermore, we note that the mortality rates are a crude

[3] APEM (2022). Gannet Displacement and Mortality Evidence Review. APEM Scientific Report P00007416. Ørsted, March 2022, Draft 1.2, 55 pp. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010098/EN010098-001144-Hornsea%20Project%20Four%20-%20Other-%20G2.9%20Gannet%20Displacement%20and%20Mortality%20Evidence%20Review.pdf

method of capturing a range of potentially deleterious effects that could arise from displacement, including reduced fitness for migration and reduced productivity during the breeding season. These are particularly relevant when considering displacement effects within sites designated for the species affected.

135. We note that the evidence for mortality rates cited by the Applicant in paragraph 5.7.2.12 of APP-057 (e.g. Van Kooten et al. 2019 and Searle et al. 2014; 2018) used individual based models (IBMs) to infer mortality rates and we highlight that in each case that was not the primary aim of the studies. The cited studies each suffer from data deficiencies that introduce significant uncertainty to any estimate of mortality rate arising from offshore windfarm displacement.

136. Therefore, as there is very little information available about the consequences of displacement for individuals, we continue to advise that a range of mortality rates from 1-10% are assessed for all species for displacement assessments.

2.1.2.4.5 Precaution in assessments and range based approach

137. Based on the above we consider that the use of single values, as used by the Applicant, runs a significant risk of 'false precision', which is inappropriate given the range of responses apparently recorded and the limitations of the studies so far carried out. As a result, NRW (A)'s recommended range-based approach seeks to encompass a range of potential displacement effects as observed in post-construction monitoring studies and mortality rates that reflect the considerable uncertainty relating to site-specific drivers for, and impacts of, displacement. We also highlight that the mortality rates are a simple way of attempting to capture a range of sub-lethal as well as lethal effects from displacement, e.g. adults entering the breeding season in poor condition. We would highlight that this approach is evidence-based and consider that it better reflects the relatively data poor landscape of offshore impact assessment.

138. We note that in their response to this issue (see response to reference RR-011.19 in PDA-008) the Applicant states that 'it considers it overly precautionary to undertake the HRA using the largest displacement impacts, which are not scientifically justified.' We note that NRW (A) are not advising that the HRA be based solely on the upper end of the % displacement and % mortality rates advised (e.g. 70% displacement and 10% mortality for auks), but we are advising that in order to account for the large degree of uncertainty regarding displacement rates and effects that the assessments consider a range of potential rates and effects rather than focussing on a single figure as the Applicant has done in their HRA documents. Additionally, seabirds in general also continue to experience multiple human induced pressures that offshore developments are at risk of accentuating. Therefore, NRW (A) does not consider our advised approach to the impact assessment to be unduly precautionary and question the characterisation of it as such in light of the evidence base and high levels of uncertainty regarding the consequences of displacement.

139. We would highlight that NRW (A) will base our advice and conclusions on assessments that consider the full range of advised displacement and mortality rates that follow SNCB guidance. As the apportioned impacts across the full range of advised displacement and mortality rates are currently not available for each designated site, we therefore suggest that the Applicant provides this information into the examination as

soon as possible. With regard to presenting assessments following SNCB advised approaches in applications, we recommend that the Applicant considers the recent letter from PINS to the Outer Dowsing Applicant that requests that the Applicant presents assessments following NE (and others) advocated approaches as well as their own into the examination - see: EN010130-000725-20240703 Rule 17 Request for further Information.pdf (planninginspectorate.gov.uk)

2.1.2.5 In-combination Assessments (Applicant response reference to RR-011.20 and RR-011.22 in PDA-008)

140. We again reiterate our advice provided in our Relevant Representations [RR-011] that the approach taken by the Applicant to in-combination assessment may be appropriate for this project where predicted impacts from the project alone are likely very small. However, we advise that the Applicant considers our advice in the Sections above, particularly regarding the advice for the Applicant to consider the apportioned impacts across the full range of SNCB advised % displacement and % mortality rates.

141. We also note that this advice is provided with regard to Welsh designated sites only. As we noted in our Relevant Representations [RR-011], the approach taken by the Applicant may not be appropriate in other situations, including for designated sites where in-combination impacts are already close to/at levels that are already considered to be of an adverse effect; or designated sites considered to be in unfavourable condition/have restore conservation objectives. We note that this may be the case for designated sites located outside of Wales. We again note that it also does not mean that impacts from the Mona project should be excluded from in-combination totals for future project assessments.

142. Therefore, it should be noted that we do not endorse this approach for use by future projects and recommend that future Applicants discuss proposed approaches to in-combination assessments with NRW (A) (and/or other relevant SNCBs) well in advance of submission.

143. We again reiterate that, if following the advice we have provided in the various sections above, the Applicant's apportioned impacts predict further Welsh site and feature combination impacts from the project alone may exceed 0.05% of baseline mortality, then the gaps in the cumulative and hence in-combination assessments will need to be addressed.

2.1.2.6 Liverpool Bay SPA (Applicant response reference to RR-011.23 and RR-011.24 in PDA-008)

144. The proposed Mona array is located 10km from the Liverpool Bay SPA, but the offshore export cable route goes through the SPA. 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, including from vessel movements (Fliessbach et al. 2019; Kaiser et al. 2002). As the port location is currently unknown, there is the possibility that vessels transiting from port to

the array area could travel through the SPA to reach the array during all phases of the project.

145. As noted in our Relevant Representations [RR-011], we welcome the measures listed within the Stage 2 ISAA Part 3 – SPAs and Ramsars [APP-033] of adherence to an offshore Environmental Management Plan (EMP) that will include:

- Measures to minimise disturbance to rafting birds from transiting vessels (as set out in APP-203).
- A timing restriction of no offshore export cable installation during the period 1st November – 31st March within Liverpool Bay SPA.
- A Marine Pollution Contingency Plan (MPCP).

146. We agree that this EMP, and the specific aspects within it that the Applicant commits to listed above, is needed and is necessary to avoid or reduce disturbance, and therefore displacement and pollution impacts to the RTD and common scoter features of the SPA from both cable laying activities in the construction phase, and from vessels potentially transiting from port to the array during all phases.

147. As was noted during the EWG, the SNCBs consider that there is not much that can be done to minimise disturbance to RTD and common scoter due to cable installation works, and the measures to minimise disturbance (such as those committed to by the Applicant in APP-203) were more related to activities such as Crew Transfer Vessel movements, rather than cable installation works. The only effective measure to minimise disturbance from cable installation works is to not be present in the area. Therefore, we note that the Applicant's commitment to measures to minimise disturbance to rafting birds from transiting vessels is only applicable to minimising disturbance to these features of the SPA from vessel transit movements to the array through the SPA during all phases.

148. Given that vessels laying the offshore export cable within the SPA will need to follow the specific route for the offshore export cable, it will not be possible for them to adhere to the measures set out by the Applicant in APP-203, such as using existing shipping lanes/transit routes, avoiding aggregations of rafting birds etc. Therefore, the Applicant's commitment to the timing restriction on offshore export cable installation activities to avoid the key winter period when the features of concern will be present in greatest numbers, is welcomed in order to minimise disturbance to the relevant SPA features from this activity within the SPA.

149. Whilst the adherence to an offshore EMP is secured within the deemed marine licence in Point 18 of Part 2 of Schedule 14 of the draft DCO (in 'C1 Draft Development Consent Order F03' [PDA-003]), we note that the cable laying timing restriction aspect of the EMP is not included within the list of information to be included in the EMP listed within Part e) of point 18 of conditions listed in Part 2 of Schedule 14 of the draft DCO [PDA-003]. We consider that this aspect of the measures/conditions within the EMP needs to also be included within the DCO and committed to and secured in the deemed marine licence in order to minimise disturbance to the key features from this activity. We also note that it is the Applicant's intention to secure an offshore EMP in the standalone Marine Licence (ML) (as set out in the row relating to Project Environmental Monitoring Plan, PEMP, in the 'Marine Licence Principles Document 02' [PDA-005]).We welcome the intention to also secure this commitment in the standalone ML.

150. We note that, in PDA-005 in the row on the Project Environmental Management Plan (PEMP) (page 20), whilst the timing restriction is mentioned as a measure that the offshore EMP should include, it is currently added to the point on measures to minimise the potential spread of invasive non-native species. This timing restriction is not related to minimising spread of INNS, rather it is related to reducing/minimising disturbance effects to the wintering features of the Liverpool Bay SPA. As such, we consider that this should be separated out to be a standalone point required to be included in the EMP.

151. Subject to an appropriate EMP that includes all the measures listed above being agreed, in writing by NRW (A) and JNCC, and secured as a condition of the deemed ML and standalone ML, we consider it to be unlikely that there will be an adverse effect on Liverpool Bay SPA.

152. With regard to the timing restriction on offshore export cable installation activities within the SPA not applying to the trenchless works on the intertidal zone (as raised in our Relevant Representations), we acknowledge the Applicant's position set out in their response to RR-011.24 of PDA-008 that prohibiting works at the trenchless techniques exit pits during the overwintering period would add further pressure to the installation window for offshore export cables. For this aspect of the work, we note:

- Any disturbance impact to features of the SPA will be temporary for the time of the vessel presence.
- Birds will be able to return once the vessel has gone.
- There will be other habitat available within the SPA to the birds for the time they are disturbed from the landfall area.
- Up to 8 movements across the key winter period of November-March represents a small proportion over this timescale.
- A commitment to trenchless works at the landfall has been made – the Applicant's commitment to installing export cables from landward of mean low water springs (MLWS) to onshore by trenchless techniques is secured through the Outline landfall construction method statement [APP-226] and the Outline landfall construction method statement forms part of the Code of Construction Practice (CoCP) and is therefore secured under Schedule 2, Requirement 9 of the Draft DCO (see 'C1 Draft Development Consent Order F03' [PDA-003]).

153. Based on the above, NRW (A) does not expect this temporary activity as part of the construction phase will result in an Adverse Effect on Site Integrity (AEoSI) on the wintering waterbird features of the Liverpool Bay SPA.

2.1.2.7 Design parameters in draft DCO (Applicant response reference to RR-011.25 in PDA-008)

154. We welcome that in document 'C1 Draft Development Consent Order F03' [PDA-003), the Applicant has updated Table 4 of design parameters in Schedule 14 Part 2 to include a parameter for the rotor swept area.

2.2 Marine Mammals

2.2.1 Baseline

155. NRW (A) agrees with the data collected through surveys and literature including the data sources used to characterise the baseline, as well as the management unit approach adopted [APP-056] (although please see section 2.2.9 below), as discussed through the various EWGs [APP-042]. We agree with the majority of the conclusions in the ES and HRA, unless listed in the representations below.

2.2.2 Injury and disturbance to marine mammals from elevated underwater sound due to vessel use and other (non-piling) sound producing activities

156. In its Relevant Representation [RR-011], NRW(A) acknowledged and welcomed the information provided with regard to vessel traffic data [APP-056], as well as the information provided in APP-098 with respect to Navigational Risk Assessment (NRA). We advised however, that there was inadequate justification for an overall conclusion of *low magnitude*, further noting that the estimated numbers of animals disturbed by vessels and any subsequent conclusions appear to have been based on static impact radii – i.e. equivalent to vessels that are not moving. Given that vessels would be expected to move location, we consider that estimating numbers based on static impact radii may lead to both underestimates of daily numbers disturbed, and an underestimate of the overall daily area ensonified; which is required to compare against the time area thresholds for an adverse effect for harbour porpoise Special Areas of Conservation (SACs).

157. Paragraph 4.9.5.22 of [APP-056] concludes that "Multiplying the area of ensonification by each species-specific density would lead to unrealistic estimates, as serious disturbance would not occur over ranges such as 23 km. As such, this value has not been quantified." In our PEIR response, NRW(A) acknowledged that it is unrealistic to assess injury and disturbance from vessel use by presenting a sum of the impact ranges of all vessels. This is because the level of detail necessary to assess the trips of over 2000 vessels of different size and function for the project alone would be impractical and disproportionate in terms of the time required. While we still hold to this opinion, this does not preclude the need to propose an alternative method to gauge the number of animals affected by this impact pathway, which we suggest can be done by making certain assumptions to make the calculation more tractable.

158. Given the known sensitivity of harbour porpoise (Dyndo et al. 2015; Wisniewska et al. 2018; Rojano-Doñate et al. 2023) and other marine mammal species (e.g. Marley et al. 2017a, 2017b; Erbe et al. 2019) to vessel noise and the increase of the number of vessel trips in the area as a result of the construction / operation of the proposed development (an additional 2055 trips per year within the array area) compared to baseline vessel traffic (approximately 3166 trips per year within the array area), we do not agree with an overall magnitude of *low*, and recommend that the assessment is revised and quantified both for the project alone and in-combination in a manner that takes into particular account the impact of repeated and chronic interruptions to harbour porpoise foraging.

159. As a point of clarification in the actions following EWG05 the Applicant requested further advice from NRW (A) on how to assess disturbance from vessels. Our email response of 27 July 2023 was as follows: *"In our PEIR comments, NRW(A) provided an*

example of how this could be done, referring to the Wylfa assessment which considered disturbance based on the travel paths of vessels used by the project. This by no means prescriptive and other approaches can be taken. We recommend that the crucial thing to consider is to avoid basing assessment conclusions on assumptions that marine mammals are anticipated to demonstrate some degree of habituation to sound from vessels as this runs the risk of verging into speculation and overlooking the extent of a potential impact pathway. While it is reasonably likely that boat noise as a stressor is tolerated by marine mammals, absence of displacement is not evidence of absence of all detrimental consequences to animals. Responses may be physiological which are harder to detect, and animals may react by reducing foraging which leads to energy intake costs (e.g. harbour porpoise, see Rojano-Donate et al. 2023 - presented at Oceanoise 2023), or making deeper dives increasing swimming effort, and ceasing echolocation and foraging for several minutes (Wisniewska et al. 2018). Thus the presence of vessels almost certainly has an energetic cost to harbour porpoise. Similar / related findings were made by, e.g. Pirotta et al. (2013, 2015), Dyndo et al. (2015), Oakley et al. (2017), Marley et al. (2017a, 2017b). Other arguments such as the increase in number of vessels will be small when compared to the baseline shipping traffic should ideally also be quantified. In future, ideally, direct measures of the associated energetic costs of exposure would be available for Population Consequence of Disturbance (PCoD) models, to link disturbance parameters to fitness and population dynamics, however work on this is still ongoing".

160. We suggest adapting the approach taken for the Wylfa Newydd project (5.2 Shadow Habitats Regulations Assessment Report) referred to in paragraph 134, noting that conclusions on magnitude and significance for the operational and decommissioning phases may need to be reviewed and updated based on the assessment for the construction phase. This method would involve assuming that all vessels involved in the construction, operation, and decommissioning phases travel along the same track from port to their required location. For simplicity, this could be taken to be e.g. the centre of the array. A value from the literature, could then be used as an impact radius on either side of the track to allow calculation of an estimated area (and estimated numbers) ensonified on a daily basis. Further refinements could also be included, for example information on expected recovery time which could be touched upon qualitatively in an evidence-based discussion in the text.

161. NRW (A) has reviewed the Applicant's response [PDA-008 and relevant documents references therein] to our Relevant Representation [RR-011] on the matters relating to injury and disturbance to marine mammals from elevated underwater sound due to vessel use and other non-piling sound producing activities. Paragraph 1.2.1.15 of PDA-009 notes the commitment of the Applicant to the development of, and adherence to, an Offshore Environmental Management Plan (EMP) which includes measures to minimise disturbance to marine mammals (and rafting birds) from transiting vessels. We welcome this commitment, which we consider should mitigate most of the impacts, making the overall conclusion acceptable.

2.2.3 Injury from elevated underwater sound due to piling:

162. 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, like for example pile driving), 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).

163. 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}) 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.

164. Acoustic Deterrent Devices (ADDs) are often used to deter marine mammals from pile driving operations that may otherwise cause hearing injury. These devices work by emitting a noise to which the target animal is sensitive, and at a level loud enough, or for a long enough time period, to elicit a behavioural reaction sufficient for the animal to swim away to a safe distance – i.e. a deterrence range. This deterrence range can be altered based on the expected PTS impact range.

165. RR-011 (section 2.2.3) noted that a conclusion of *negligible* magnitude for auditory injury impact pathway (i.e. Permanent threshold shift / PTS) had been assigned based on the inclusion of the potential indicative use of designed-in measures (i.e. 30 minutes of ADDs). NRW (A) advised that consideration of the large-scale use of ADDs was required, as evidenced by, for example, Elmegaard et al. (2023), which demonstrates that harbour porpoise show very strong flight and physiological responses to ADD use far beyond the intended range of mitigation. We believe that there is a risk that in an effort to reduce the number of animals injured, a reliance on ADD deployment over other forms of mitigation will increase the number of animals disturbed, particularly harbour porpoise. A deterrence sound must be efficient in clearing an area of animals, yet it should not cause disruptions at scales larger than necessary.

166. In principle, we agree with the overall conclusion of *minor adverse* significance, based on numbers presented in the "*no ADD*" scenario [APP-056]. However, while we acknowledge that the proposed mitigation strategy outlined in the ES [APP-056], Marine Mammal Mitigation Protocol (MMMP) [APP-207] and Underwater Sound Management Strategy (UWSMS) [APP-202] is to be agreed post-consent, we note that the length of ADD exposure should be scaled to the need - i.e. the impact range from PTS. Where exposure length is indicative, this should be made clear. Based on results presented in the ES [APP-056], the range at which instantaneous PTS could be elicited at maximum hammer energy (for a hammer energy of 4400 kJ) ranged between 41 – 662 m. The threshold for eliciting cumulative PTS was not exceeded for any species except Minke whale. Estimated swim distances for 30 minutes of ADD activation ranged between 2,700m (for harbour porpoise) to 4,140m (for minke whale). Given the (1) short impact range for instantaneous PTS, (2) a maximum of 4 minke whales (but no other species) predicted to be injured from cumulative PTS in a no ADD scenario (reduced to <1 in a 30 min ADD scenario), and (3) swim distances that exceeded the PTS impact range for

all species other than minke whale, we believe that the indicative length of ADD exposure may be excessive when considering the additional noise and disturbance introduced to the environment. We consider that there are other ways that the range could be reduced, for example by altering the pattern of pile strikes - especially by increasing the time between each strike. We would be happy to discuss this further with the Applicant.

167. Evidence from Elmegaard et al. (2023), Graham et al. (2023), Voß et al. (2023), and Brandt et al. (2013) demonstrates that harbour porpoise show very strong flight and physiological responses to ADD use even at low received levels and often far beyond the intended mitigation zone. This evidence is corroborated by data collected on porpoise response (displacement) to chronic and long-term exposure to ADDs at aquaculture sites (Findlay et al. 2024). Such energetic responses to noise may have a cumulative effect on health if they occur frequently enough, particularly for porpoise who are thought to need to forage constantly to meet their energy demands.

168. We note the Applicant's response to the matters raised concerning ADD use in PDA-008 (RR-011.28). On balance, we consider that the Applicant's response is sufficient, noting in particular the final paragraph which states that "*Therefore, the Applicant understands the need for proportionate and judiciary application of ADDs, and this will be considered carefully when finalising the ADD deployment duration post consent*". We confirm that we agree with the Applicant that overall conclusions of the assessment are valid. We can also confirm that we do not believe it is necessary for the Applicant to assess separately the effects of Acoustic Deterrent Devices given that proportionate application of ADD use will be considered post consent.

169. However, we also note the Applicant's assertion at RR-011.28 [PDA-008] that the approach adopted is typical for Offshore wind assessments and that neither during the EWG consultation process nor in the S42 response, was this concern raised by NRW (A) or other stakeholders. NRW (A) contend that this approach being "typical" does not preclude that publication of new evidence, akin to Elmegaard et al. (2023), Graham et al. (2023), and Voβ et al. (2023) , may lead to questions being raised with respect to existing approaches. Furthermore, as per the agreement logs [APP-042] this issue was raised by both NRW (A) and NE.

170. We welcome the Applicant's commitment as referenced in in PDA-008 (RR-011.28) that the time period and final ADD duration will be agreed post-consent in the final MMMP and secured by condition within the DCO. We advise that such a condition will also need to be secured within the Marine Licence associated with the Transmission Assets.

2.2.4 Barrier effects

171. We noted in our Relevant Representation [RR-011] that limited justification had been provided for the absence of cumulative assessment of barrier effects. This is particularly relevant given the planned construction and operation of four new offshore windfarm arrays (Awel-y-Môr, Mona, Morgan, Morecambe) in the area. We advised that clarity and potentially further assessment was required.

172. We note the Applicant's response to this matter, as stated at RR-011.29 [PDA-008]. It is our view that a conclusion of non-significance for the project alone does not

necessarily imply that the effects of all projects together may potentially result in a scaling up of effects. Similarly, we advise that a conclusion of non-significance from an EIA perspective is not equivalent to lack of an effect. In addition, we would caution that while NRW (A)'s agreement that the UWSMS could reduce the magnitude of impacts to an acceptable level, this should not be taken to imply unconditional agreement prior to any measures being discussed and finalised post-consent, nor should it be concluded "*that NRW (A) agrees this is a solid platform for managing underwater sound*" and as a result incorporated into the assessment of barrier effects.

173. On balance, we consider that the Applicant's response is sufficient, noting in particular that it would be unlikely that all four of these projects will undergo construction activities at the same time.

2.2.5 Interrelated effects

174. We noted in our relevant representation that there was inadequate, evidence-based, justification for the conclusion that "the effects on marine mammal receptors are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase or when considered in conjunction with other topics addressed in the ES" [APP-056].

175. While the effect of two or more pressures acting together may not necessarily be additive (e.g. Crain 2008; Thomsen & Popper 2024), this does not rule out such a possibility occurring. The presence of several different pressures at the same time could also lead to different responses compared to when the animal is exposed to one. Animals within a population may potentially be making adaptive trade-offs to avoid or remain within a prime habitat due to the presence of favourable prey resources and site quality, even when exposed to noise, yet they may not have sufficient resilience to adapt to additional pressures.

176. We have reviewed the Applicant's response in PDA-010 on interrelated effects. On balance, given the mitigation measures planned, including development of the MMMP, and being conscious of the challenges inherent in quantifying such effects, we anticipate being able to agree with the overall conclusion in the ES [APP-056] following discussion and provided agreement is reached on mitigation measures post-consent.

177. In the Applicant's response [PDA-010] we note that the conclusions are underpinned by statements that "the effect of behavioural disturbance is reversible, and receptors are expected to recover within hours/days following the cessation of the activity, therefore unlikely to lead to any long-term, additive effects on the individual." We understand that the assessment has based its conclusion of no long-term additive effects by considering each disturbance event to take place independently, assuming reversibility based on the temporary nature of the noise, and full recovery between each event. However, the potential effects of aggregate exposures to one or multiple pressures has not been discussed. The interrelated effects assessment would be made more robust by considering the potential effects of aggregate exposure, particularly within the context of this assessment being used to inform cumulative assessments with other future projects.

2.2.6 Outline Underwater Sound Management Strategy (UWSMS)

178. As noted in our Relevant Representation [RR-011], we agree, in principle, with the commitment to develop an Underwater Sound Management Strategy (UWSMS), and that it should identify all potential noise sources associated with the project with further detail provided in associated mitigation plans. Whilst we acknowledge that further significant detail cannot be populated at this time, we consider it likely that the UWSMS could potentially reduce the magnitude of impacts to an acceptable level. We welcome the commitment of the Applicant to continue to engage with NRW (A) to develop the USWMS during examination and post-consent. We agree that the UWSMS be conditioned through both the dML and standalone ML. NRW (A) welcomes the opportunity to engage with the Applicant on developing the UWSMS during the examination and post-consent and consider that this is required.

179. We have the following observations on the draft outline UWSMS as provided with the application [APP-202]:

a) The document focuses only on two species: bottlenose dolphin and harbour porpoise. The current decision appears to have been based on the conclusions of significance in the ES and appears to suggest that only two species are at risk. We do not consider that this is assumption is correct. Without mitigation, all marine mammals are sensitive to injury and disturbance from piling and Unexploded Ordnance (UXO) clearance and as EPS, all cetacean species are protected from both. Thus, a conclusion of not significant / no adverse effects is not sufficient; mitigation should be included as industry best practice to reduce the risk of a residual effect to negligible in relation to EPS.

b) Noise abatement systems (NAS) for piling, which are technologies that reduce the noise propagating through the water during pile driving (e.g. bubble curtains), have been presented as other (or 'secondary') mitigation by the Applicant. It is our view that NAS should be given more serious consideration.

c) In line with the Governments Joint Position Statement on UXO clearance [DEFRA, 2022], low order methods of clearance (i.e. methods which cause the UXO to burn out but not detonate and are thus less disruptive / damaging) should be prioritised, with high order clearance (i.e. detonation of UXO using a small explosive charge) only to be used in exceptional circumstances. We recommend that this commitment be made more explicit in the UWSMS.

d) We do not recommend the proposed use of soft start charges for UXO clearance due to the substantial additional impulsive noise they introduce into the environment (Robinson et al. 2022), and their scaring effect not being proven (Lewis 1996; Keevin and Hempen 1997, Cheong et al. 2020).

e) For Table 1.7 *Summary of the reduction in key engineering parameters relevant to elevated underwater sound for the Mona Offshore Wind Project* clarity should be provided as to what metric was used to measure the % reduction: i.e. whether this

was measured based on SPL_{peak}, SEL or both since these are different metrics needed to account for the different aspects of sound exposure and duration. SPL_{peak} is a measure of absolute maximum exposure at any one time, whereas SEL is a measure of the sound energy of exposure accumulated over time.

f) No evidence has been provided to support the statement that "*it is anticipated any reduction in sound impacts from potential implementation of the NAS will act to mitigate impacts on fish species in the same area*." We request that supporting evidence is provided.

g) We recommend that the Applicant considers one of the key findings in ORJIPs Range Dependent nature of Impulsive Noise (RaDIN) project (ORJIP 2024). The purpose of this project was to improve our understanding of how the impulsiveness of sounds produced during pile driving and unexploded ordnance clearances changes with increasing distance from the source, and to help refine the estimation of auditory injury impact ranges for marine mammals to reduce conservatism during noise impact assessments. One of the major findings from this project was that the time between subsequent pile strikes was found to have the largest effect on hearing injury onset ranges, where increasing the time between pile strikes significantly reduced the range of injury onset.

   A freely available software tool was developed by the project, which allows the user to estimate permanent hearing damage impact ranges from impact pile driving by considering a variety of factors including source level, timing between pile strikes, fleeing speed of the animal, and the assumed distance at which sound becomes non-impulsive. Work is currently ongoing to further develop the tool to be able to include ramp-up procedures, and the potential for the auditory system to recover between pile strikes.

   NRW(A) understands that at the application stage, consent must be considered on the basis of the maximum design envelope which considers both a realistic worst case in accordance with the precautionary principle and also to maximise flexibility in construction if consent is awarded. In addition, detailed information and further refinements of the piling schedule are normally only available further along the consenting process. Thus, post-consent, once more information on the piling schedule is available, there may the potential to consider using the PTS software tool developed from RaDIN to test the effect of altering the temporal pattern of pile strikes on PTS impact range and potentially use the temporal pattern of pile strikes as a primary mitigation method. We believe this could be particularly useful for mitigating impacts on Minke whale (LF hearing group) the species with the largest PTS impact range.

180. NRW (A) confirm that for marine mammals, in view of the overall conclusions in this assessment and the commitment to an UWSMS, provided the UWSMS is produced in consultation with SNCBs during the post-consent stage, marine mammal monitoring to test the predictions made within the impact assessment would not be required from a

consenting perspective although any additional data collection carried out by the applicant would be welcome.

181. We do note that noise monitoring requirements are usually specified within the Marine Licence granted and typically for offshore wind farm projects across the UK there is a requirement to measure the underwater noise from the installation of the first four piles for each foundation type, or a representative number of pile locations, or the four largest piles. NRW (A) would also adopt a standard approach to this monitoring requirement (ISO 18407:2017). We acknowledge that the applicant has already indicated their intention to carry out such monitoring in the outline MMMP [APP-207].

182. We noted, at 2.2.6.2 of our Relevant Representation [RR-011], a number of inconsistencies within the application documents (including in the UWSMS) relating to the Maximum Design Scenario (MDS) and advised that these inconsistencies be clarified. The Applicant has provided a clear reasoning at RR-011.32 in PDA-008 which NRW (A) welcomes. This clarification now allays our concerns. Nonetheless, we advise that section 3.5.7 of the project description [APP-050] is updated accordingly as the rationale presented in PDA-008 is not clear in APP-050.

2.2.7 Underwater Sound Technical Report [APP-079] / Mona ES Marine Mammals [APP- 056]

183. We noted in our Relevant Representation that whilst we did not disagree with the overall conclusion of *minor adverse* significance (for both disturbance and injury) for site investigation surveys, the impact ranges for sparkers (a type of pulsed sub-bottom profiler, or SBP) appeared relatively small in contrast with the non-pulsed sub-bottom profiler methods presented. We requested further clarity in this regard. Following consideration of the Applicant's response and explanation [RR-011.33 of PDA-008] to NRW (A)'s Relevant Representations we consider this issue closed.

2.2.8 Mona ES Marine Mammals [APP-056] / Mona ISAA Special Areas of Conservation [APP-032]:

184. For impulsive sources, both APP-056 and APP-032 reference (e.g. Paragraph 4.9.3.51 of APP-056) that changes in the impulsive characteristics of impulsive noise at range implies that disturbance thresholds for piling noise should be considered precautionary at long range (i.e. a few kilometres).

185. We have reviewed the Applicant's response at RR-011.34 [PDA-008.As outlined in our position statement [NRW 2023], we fully agree that at ranges over several kilometres impulsive noise gradually becomes more continuous due to refraction, absorption and scattering attenuating high frequencies more than low frequencies. Sound also reflects off the surface and bottom of the sea taking different paths, thus it takes a different amount of time to arrive at a given point, lengthening the pulse. In this way noise that is impulsive at the source becomes less likely to cause hearing injury with range [Hastie et al. 2019; Martin et al. 2020; ORJIP Offshore Wind, 2024].

186. We disagree that this will affect disturbance thresholds except in very specific cases where thresholds were based on observations close to the source noting that at present, changes in impulsive characteristics have only been discussed in the published literature in terms of their effects on hearing injury but not disturbance. Similarly, to our knowledge

there are currently no published data which quantify the impact of these changes with regard to disturbance, or the relative importance / extent of this in comparison with other explanatory variables such as piling duration, piling schedule, exposure to previous piling events, and other contextual factors which include differences between species and individuals, situational contexts (e.g. foraging, breeding, presence of calves), and temporal scale. Thus, although we agree that it is plausible that changes in impulsive characteristics with range will influence animal behaviour, particularly when applying thresholds at ranges further away than the observations on which they were based, we also caution against phrasing this in conclusive terms in the absence of published data.

187. We can confirm that this does not materially affect the conclusions, since assessment results were based on the full modelled range of disturbance, However, we do recommend that for this project and future projects the Applicant acknowledges the uncertainty with regard to potential effects of impulsive noise at range on disturbance and clarifies that the points and conclusions made with regard to this are their own. When sufficient evidence is found to support this, it may then be appropriate to incorporate into an assessment.

2.2.9 Mona ISAA Special Areas of Conservation [APP-032]

188. We noted in our Relevant Representations [RR-011] that in line with NRW's position statement on use of Management Units [NRW, 2022], photo-ID evidence shows that most individual dolphins move between the two SACs, strongly supporting the idea that the populations of the two Special Areas of Conservation (SACs) are highly connected, and that there is likely a single genetic population across the management unit (although a few individuals appear to be faithful to one particular site).

189. Cardigan Bay (CB) SAC is the principal SAC for bottlenose dolphin and was designated primarily (Grade A) for this species, whereas bottlenose dolphins are a secondary (Grade C) feature of Pen Llyn a'r Sarnau (PLAS) SAC. However, there is no legislative reason why one site would be more important than the other, and given the strong evidence outlined above, we consider the entire Irish sea MU to be a single inter-connected unit. We therefore consider the population associated with PLAS SAC and CB SAC to be the same and that this is broadly equivalent to the population of the wider management unit for purpose of assessment of site integrity.

190. However, we have reviewed the Applicant's response to this matter [PDA-008 section RR-011.35] and agree that this does not materially impact the conclusions of the application. We consider that this matter can now be closed.

2.2.10 Mona ISAA Stage 1 Screening [APP-034]

191. We note the Applicant's response [PDA-008] in relation to the matters raised at Relevant Representations [RR-011 para 2.2.10]. This matter can now be considered closed.

2.2.11 Mona ISAA Stage 2 Special Areas of Conservation [APP-032], Table 1.85 Summary of SPLpk PTS injury ranges and areas of effect for marine mammals for single pin pile installation (N/E = threshold not exceeded)

192. We note the Applicant's response [PDA-008] in relation to the matters raised at Relevant Representations [RR-011 para 2.2.10]. This matter can now be considered closed.

2.3 Fish and Shellfish

193. NRW (A) agrees that the data collected through the site-specific surveys and through the desktop review of existing literature and data sources are sufficient to appropriately characterise the fish ecology for the project.

194. With the exception of comments made at 2.3.1 – 2.3.4 below, and supported in Annex C, we agree with the assessment methodology and conclusions for impacts to fish.

195. We agree with the screening undertaken in the HRA Screening report (document reference E1.4 [APP-034]) and the subsequent Stage 2 assessment (document reference E1.2 [APP-032]) and agree with the overall conclusion of no risk of an adverse effect on the integrity of diadromous fish features from the Welsh protected sites; Dee Estuary/Aber Dyfrdwy SAC, River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC, and Afon Gwyrfai a Llyn Cwellyn SAC.

2.3.1 Impacts to Cod High Intensity Spawning habitat from Underwater Noise - Piling

196. In RR-011 we advised that we disagreed that the impact to cod high intensity spawning habitat - as a result of disturbance from underwater noise - could be assessed 'alone' as *minor*. Instead, we advised that by adopting the same approaches applied for herring, that the impact should be assessed as *moderately adverse* during the breeding season.

197. We have considered the Applicant's response to the matter as detailed in PDA-008 (section RR-011.41). However, our position on the Applicant's assessment of the impacts of underwater noise on cod remains unchanged. The Applicant argues that the degree of overlap with mapped spawning grounds is not used to underpin the assessment but is considered to support expert judgement alongside other parameters. This, it notes, is due to mapped spawning grounds not reflecting hard boundaries. The Applicant asserts that a number of factors are considered when defining the magnitude of impact, including the consideration of the maximum area of overlap with mapped high intensity spawning grounds. In Annex C, we have provided supporting information to the positions put forward by the Applicant at RR-011.41 for the ExA's and Applicant's consideration.

198. Taking into consideration both the spawning behaviour exhibited by cod, and their known hearing sensitivity and vulnerability to anthropogenic noise (including piling

impacts), we consider the current approach presented by the Applicant is not sufficiently precautionary to fully assess the impacts of underwater noise to cod.

199. We continue to advise that the Applicant should reassess the impacts to cod in line with the methods applied for herring.

200. NRW (A) does not agree with the Applicant that a duration of 114 days for predicted piling over a 2-year period can be considered an intermittent impact. Although the noise produced is temporary in nature, the impact is not, with the potential to directly affect two years/ two spawning cohorts of the species, with indirect impacts for subsequent cohorts. We advise that restricting piling activity to outside of the peak spawning activity period (February and March) is necessary in order to mitigate the impacts of the proposed development on cod species. This can be secured through the UWSMS, which is to be conditioned as part of the dML and advised to be conditioned as part of the standalone Marine Licence.

2.3.2 Approaches used for Herring and Cod – noise thresholds

201. The overlap with noise impacts on Herring spawning ground has been calculated using 135db threshold [APP-055], as a precautionary approach, which is welcomed. This advice was based on a study by Hawkins et al. (2014), showing behavioural responses by sprat and mackerel to piling sounds including break up of school formations.

202. The proposed approach for Cod uses a noise impact threshold of 160db [APP-055]. Using this threshold, which NRW (A) does not consider to be precautionary, the proportion of high intensity spawning ground overlapped with modelled noise impact zones is greater than 20% for the project alone.

203. Cod displayed a variety of behavioural reactions to piling noise at sound levels measured from 140db re 1 µPa Peak in one study (Mueller-Blenkle et al. 2010), including freezing and changing direction, and altering swimming speed. Whilst this study was not intended to show a threshold for noise related impacts on the species, it does show an indication that piling noise from 140db may have an impact on Cod. During the sensitive spawning period for the species in which sound and hearing play a pivotal role in their behaviour and activities, this could have an adverse impact on the species.

204. NRW (A) advises that the Applicant runs the 140db threshold through the noise model so that the impact on spawning Cod can be fully assessed. We consider this threshold is more appropriate for Cod during their sensitive spawning period and would display a more accurate extent of the area impacted by piling noise.

2.3.3 Sound exposure levels for assessing impacts

205. NRW (A) noted in its Relevant Representation [RR-0.11] that the Applicant had been advised to use the Popper et al. (2014) Sound Exposure Guidelines to assess impacts from underwater noise, and specifically that sound levels from impact piling were described using Cumulative Sound Exposure Levels (SEL_{cum}) in order to reflect the cumulative exposure from the total piling event. We noted in RR-011 that we consider the SEL_{cum} threshold is likely to be lower than the Peak Sound Pressure Levels (SPL_{pk}) used to assess the percentage of cod spawning habitat affected and therefore the 21.64% presents a potential underestimate of the area ensonified. We note the

Applicant's response to this matter in PDA-008, section RR-011.42. Whilst the Applicant has provided some narrative around their approach, we remain unclear on some of the points raised. It is our understanding that owing to the nature of what is being measured, SPL_{pk} (peak levels) and SEL_{cum} (a sum of the level over multiple piles) cannot be directly compared given they are different metrics and can't be converted between the two. As such we are not clear on the validity of the argument on the use of SPL_{pk} data as compared to SEL_{cum} data, as a precautionary measure. We advise that further clarity is provided by the Applicant on this matter.

206. The Applicant also states that SEL_{cum} is derived from SEL_{ss}, again it is not clear how this was done as each measure different aspects of the noise level. We advise that a clearer explanation is provided by the Applicant. This would allow NRW (A) to fully understand and therefore advise further and provide a more accurate opinion of the noise modelling approaches adopted.

2.3.4 Underwater Sound Management Strategy (**UWSMS**)

207. We welcome the commitment that that the UWSMS will be secured within the dML and standalone ML [PDA-008; RR-011.43] but we reiterate that the strategy will need to continue to be developed to continue to ensure it is fit for purpose - particularly with reference to cod. We note that the outline UWSMS (section 1.8.2.6 [APP-202]) includes potential spatial and temporal phasing measures relating to herring but it currently does not include specific measures relating to Cod. We advise that Cod should be explicitly considered and included as a receptor within the strategy, also requiring mitigation measures to ensure that the Irish Sea population is not adversely impacted from piling and other noisy activities during the sensitive spawning period. See our expanded comments above and in Annex C regarding noise impacts to Cod.

208. NRW (A) strongly encourages the Applicant to continue to engage with us in developing the strategy during the examination (as far as is reasonable and appropriate) and post-consent. Providing the UWSMS is properly developed with NRW (A) and achieves the aims of reducing the impact of noise on both herring and cod spawning, then additional validation monitoring of the impacts of the Mona project should not be required.

209. In addition, embedded mitigation approaches proposed such as the use of soft start and ramp up procedures have limited evidence that support their effectiveness in reducing noise disturbance impacts to fish, which is NRW (A)'s primary concern for spawning cod. We would welcome further discussion with the Applicant on this matter.

210. NRW (A) welcomes the commitment to secure the UWSMS in the dML and advise that it is also secured in the standalone ML. NRW (A) will need to be consulted, in writing, on the suitability of the UWSMS.

2.3.5 Inconsistencies with the application

211. NRW (A) raised inconsistency issues with the application as noted in PDA-008 section RR-011.44. These inconsistencies related to the presentation of the worst-case scenario for Offshore Substation Platforms (OSPs) in the application. The Applicant's response to this concern at RR-011.44 is lacking, however we note that it is explained more clearly in response to a similar matter raised under the marine mammal section

(see RR-011.32 of PDA-008 and 182 above). Given the explanation provided for marine mammals, we are now content that the worst-case scenario for OSPs has been presented in relation to impacts on fish receptors. We do, however, advise that the project description and, where appropriate the relevant chapters, are updated to reflect this.

2.3.6 Future Monitoring

212. Paragraph 2.3.8 of our Relevant Representation [RR-011] encouraged the Applicant to further consider future monitoring to inform the baseline of future projects and their alone and in-combination assessments. This was raised by NRW (A) as a direct result of information provided in the application at sections 1.5.4.10 of APP-186 and 3.11.9.1 of APP-055. We also noted in our Relevant Representations that such future monitoring is not essential to the project - as mitigation measures are proposed by the Applicant to manage potential impacts to an acceptable level (which will be delivered via the UWSMS). It is therefore not surprising to note the response of the Applicant at RR-011.45 in PDA-008 which notes that given the commitment to an UWSMS that future monitoring is not required for the project or considered necessary to test the predictions of the impact assessment. Whilst it is unfortunate that the Applicant will not further consider future monitoring, we understand and acknowledge this response. NRW (A) has no further comments to make on future monitoring to inform baseline. Should the Applicant change their position on monitoring to inform baseline of future projects, then NRW (A) would be happy to discuss approaches further with the Applicant.

2.4 Physical Processes

213. NRW (A) agrees that the baseline description of physical processes through the desktop review of existing literature and existing data sources, project specific surveys and numerical modelling baseline scenarios are sufficient to appropriately characterise the study area (Array Area, Export Cable Corridor).

214. NRW (A) agrees with the Numerical modelling approach and scenarios conducted in relation to hydrodynamics, waves and sediment transport to inform the potential changes on Constable Bank, Menai Strait and Conwy SAC and the adjacent coast arising from the construction, operation and decommissioning of Mona Offshore Wind Farm.

215. Our Relevant Representation [RR-011] acknowledged the commitment of the Applicant to the development of, and adherence to, an Offshore Construction Method Statement (CMS) including a cable specification and installation plan (CSIP) detailing the commitments to minimise the potential impacts to Constable Bank (an Annex 1 habitat outside of an SAC), the habitats and species within the Menai Strait and Conwy Bay SAC and the intertidal area between Mean High Water Springs (MHWS) and Mean Low Water Springs (MLWS). NRW (A) requested that it should be consulted on the suitability of the offshore CMS ahead of commencement of activities. We therefore welcome the commitment made in PDA-008 (section RR-011.49) that confirms the Applicant's intention that NRW will be consulted in writing on the offshore CMS. However, we note that Condition 18(1)(d), Part 2, Schedule 14 of the dDCO (C1 Draft Development Consent Order F03) [PDA-003] requires the undertaker to submit an offshore CMS to the licensing authority for approval in writing prior to commencement of

the authorised scheme. We note that NRW (A) are not specifically listed (please also see comments 2.10.1 below) as a consultation body and request that we are consulted, in writing, on the suitability of the offshore CMS prior to commencement of activities. We advise that this condition is also captured in the standalone ML.

216. NRW (A) welcome the confirmation that no cable protection will be installed within Constable Bank (section RR-011.50: PDA-008] and that the wording in paragraph 1.5.2.28 of APP-186 was an error, we welcome the confirmation that this is secured through the offshore CMS. As above, we note that NRW (A) are not listed as a consultation body and request that we are consulted, in writing, on the suitability of the offshore CMS prior to commencement of activities. We advise that this condition is also captured in the standalone ML.

217. NRW (A)'s relevant representation [RR-011], requested clarification from the Applicant as to whether cable protection would be required on the Horizontal Directional Drill (HDD) exit pits and if it was the case that cable protection was required, then we advised that the potential impacts to physical processes would require assessment. The Applicant has responded [RR-011.51 PDA-008] by stating that up to 4 exit pits would be located seawards of MLWS and that, as with other remedial cable protection, cable protection at the exit pits would be avoided wherever possible. The Applicant further notes that that in the event that the export cable exit pits (seaward of MLWS) required cable protection in the form of mattressing or rock bags, the width and height of the cable protection at the exit pits would be subject to the same commitments as for the whole Mona Offshore Cable Corridor.

218. We have further reviewed ES Volume 2, Chapter 1: Physical processes [APP-053] and Volume 6, Annex 1.1: Physical processes technical report [APP-086], and note that the numerical modelling conducted to determine the impact to physical processes caused by cable protection, included the Offshore windfarm array scour protection, and a short section of cable protection along the offshore cable corridor offshore of Constable Bank (see sections 1.3.66 and 1.3.6.8) - all of which were in *deep* water. The modelled outputs showed very small changes to the currents and waves and therefore concluded (based on the findings) that there would be no interaction with the shoreline or nearshore banks and morphology.

219. However, NRW (A) reiterates that no physical processes assessment has specifically been carried out to determine how placement of cable protection in the *shallow* nearshore environment, so close to the coast, would impact on the coastal processes (including any potential changes to bathymetry and wave transformation processes). In the event that cable protection is to be placed over the four exit pits in the nearshore, NRW (A) continue to advise that consideration should be given to the obstruction to the bedload sediment transport pathways both alongshore and onshore/offshore, and the potential impact on wave diffraction and wave refocussing on the coast, to ensure that the assessment of physical process is as complete and robust as possible. Until an assessment has been made, NRW (A) are not able to provide further advice with respect to either the extent of any potential concerns in the nearshore environment, or any proposed or possible mitigation and monitoring measures, including cable protection.

220. NRW (A) welcomes the use of HDD at landfall to minimise the environmental impact of trenching on conservation features in the intertidal area between MHWS and MLWS. We also welcome that no maintenance works will be undertaken in the intertidal zone

during the operations and maintenance phase. We advise that the design and installation of the cable to landfall should take account of the natural envelope of beach profile change and the future erosion of the backshore. It is fundamental that the depth of installation across the intertidal is sufficient to minimise any future risk of exposure over the life of the windfarm due to short-term beach draw-down during storms or long-term beach erosion. NRW (A) acknowledge as documented at RR-011.52 in PDA-008 that geotechnical site investigations were undertaken in 2022 and 2023 to confirm the technical feasibility of, and commitment made to, the use of trenchless techniques under the intertidal area as set out in section 1.4 of the Outline Landfall Construction Method Statement (LCMS) [APP-226]. NRW (A) note that further detailed onshore and offshore geotechnical investigations will be conducted at the landfall, including establishing the depth of burial requirements to avoid the risk of exposure. Details of the final design will be included within the final LCMS submitted to the relevant planning authority following consultation with NRW as secured in Schedule 2, Requirement 9 of the draft DCO (C1 Draft Development Consent Order F03). NRW (A) request that they are consulted, in writing, with respect to the final LCMS ahead of commencement of activities. Whilst we note the commitment to securing trenchless techniques in the intertidal is made in the Marine Licence Principles document [PDA-005], we do not consider that the commitment is explicit enough in the detail provided and advise that this is rectified. This will also be important for the detail of the standalone ML.

221. NRW (A) acknowledges the commitment of the Applicant to conduct a detailed Cable Burial Risk Assessment and Burial Assessment Study, which will be included within the CSIP prior to cable laying and which will confirm the locations requiring cable protection along the cable corridor. NRW (A) acknowledges the commitment that no more than 5% reduction in water depth (referenced to Chart Datum) will occur at any point along the Mona offshore cable corridor without prior written approval from the Licensing Authority in consultation with the Maritime Coastguard Agency (MCA). NRW (A) previously queried whether this commitment means that the height of the cable protection above the seabed will be altered in relation to the given water depth at that point along the export cable corridor. The Applicant has confirmed at section RR-011.53 of PDA-008 , that the height of the cable protection above the seabed may be altered in relation to the given water depth at any point along the export cable corridor in order to adhere to the commitment, ensuring that any cable protection is sufficiently low profile to cause minimal changes to wave, tide and sediment transport. We welcome that the Applicant is committed to ensure that no more than a 5% reduction in water depth (referenced to Chart Datum) will occur at any point along the Mona offshore cable corridor without prior written approval from the Licensing Authority in consultation with the MCA. This commitment is secured within the dML in Schedule 14 of the draft DCO (C1 Draft Development Consent Order F03) and also suggested for inclusion in the standalone ML Marine Licence (see the draft Marine Licence Principles Document (APP-195)). We agree with the inclusion of this commitment in the standalone ML. NRW (A) reiterate that we will need to be consulted in writing on these matters.

222. Our Relevant Representation [RR-011] requested that consideration should be given to sandwave recovery monitoring to be included in post-installation surveys, particularly on Constable Bank. This suggestion was promoted in order to validate the assumptions made in the ES that sandwave reformation would occur within months given the active sediment transport in the study area and the availability of recharge material. The MDS for sand wave clearance in Mona Array and cable corridor amounts to 14,541,497m^3 and

of that 1,504,000m^3 of sediment displacement occurring in the offshore cable corridor. We acknowledged that in all cases, the material cleared from the sandwave will be sidecast allowing the sediment to be readily available for supply for sandwave recovery. We further acknowledged that sandwave reformation will depend on a range of factors including the size, location and alignment of any breach with respect to the sediment transport pathways and available recharge material. We noted that whilst we recognised that monitoring is not essential, given the active sediment transport in the study area and the availability of recharge material, consideration should be given to sandwave recovery monitoring in the post installation surveys, particularly on Constable Bank. This, we argued, would support statements that sandbanks will recover in the short-term as well as help inform future work. The Applicant has responded by stating that as no significant effects were predicted in the EIA, no further monitoring is considered to be required to test the predictions of the EIA [PDA-008, RR-011.54]. NRW (A) acknowledges the Applicant's response, however, we retain our recommendation that consideration should be given to sandwave recovery monitoring for the reasons outlined above particularly with respect to informing future work.

223. With respect to sediment removal for the purpose of ballast for gravity-based foundations, NRW (A) are satisfied that the sediment removal is not likely to indirectly have an impact on designated features within Welsh Water jurisdiction. NRW (A) acknowledges in RR-011.55 [PDA-008] that the Applicant notes and welcomes NRW (A)'s response. We defer to JNCC for further detailed advice on this on matter.

2.5 Benthic Subtidal and Intertidal Ecology

224. NRW (A) agrees the data collected through the site-specific surveys and through the desktop review of existing literature and data sources are sufficient to appropriately characterise the benthic ecology in the export cable corridor.

225. NRW (A) agrees with the conclusion of the Information to Support an Appropriate Assessment (ISAA [APP-032]) that provided the mitigation measures outlined are adhered to, the project will not have an AEoSI and therefore will not undermine the conservation objectives of the benthic designated features of the Menai Strait and Conwy Bay SAC.

226. NRW (A) advises *Table 1.220 Summary of conclusions* [APP- 032], is revised as there are a number of impacts summarised in this table such as Electro Magnetic Fields (EMF) that have not been assessed but are included here. Please note we agree that impacts from EMF should not be scoped into the assessment as the Mona Offshore Cable corridor and Access Areas does not overlap with any Annex I features of the Menai Strait and Conwy Bay SAC.

227. NRW (A) noted in its Relevant Representation [RR-011] that it was unclear whether cable protection would be required on the Horizontal Directional Drilling (HDD) exit pits, and further noted that, should cable protection at the exit pits be required, then an assessment of the potential impacts to benthic and intertidal ecology would need to be made. Following consideration of the Applicant's response to NRW (A)'s Relevant Representations [PDA-008 – sections RR-011.51 / RR-011.58], we continue to request clarification with respect to the location of cable protection in the nearshore zone close

to Mean Low Water Springs (MLWS), and whether it is the Applicant's intention to place cable protection at the exit pits in shallow water. The impact to benthic ecology caused by the presence of cable protection in the shallow water nearshore zone has not been assessed, particularly in relation to effects resulting from subsequent potential changes to physical processes (wave transformation processes, sediment transport and deposition). Until an assessment has been made, NRW (A) are not able to provide further advice with respect to either the extent of any potential concerns in the nearshore zone, or any proposed or possible mitigation or monitoring measures, including cable protection.

228. NRW (A) request that we are consulted on the relevant plans (Offshore Construction Method Statement [OCMS] and Landfall Construction Method Statement (LCMS) in the post-consent, pre-construction stage, under both the deemed Marine Licence within the DCO, and the standalone Marine Licence.

229. NRW (A) acknowledges the Applicant's response to our Relevant Representations where we advised that the outputs of the physical processes study should be used to ensure that the depth of cable installation across the intertidal is sufficient to minimise future cable exposure. We note at RR-0.11.52 [PDA-008] that the Applicant reconfirms its commitment to the use of trenchless techniques under the intertidal area as set out in the Outline LCMS [APP-226]. We note that the Applicant has also stated that further onshore and offshore geotechnical investigations will be conducted at the landfall, post-consent, including establishing the depth of burial requirements to avoid the risk of exposure. We also note that details of the final design will be included within the final LCMS, and we request that NRW (A) are consulted on the final LCMS prior to submission to the relevant planning authority. Whilst we note the commitment to securing trenchless techniques in the intertidal is made in the Marine Licence Principles document [PDA-005], we do not consider that the commitment is clear enough in the detail provided and advise that this, along with its position in the principles document, is reviewed to provide confidence that this commitment is appropriately secured. This will also be important for the detail of the standalone ML. Furthermore, NRW (A) expect to be consulted, in writing, on this matter.

230. We note the action upon NRW (A) from the ExA as listed in EV3-006a - to advise on the need for monitoring provisions in respect of risk of exposure of landfall cables due to beach profile change, erosion of the backshore and short-term beach draw-down during storms. Until further assessment is provided as per 227 above, we are unable to provide further advice in this regard.

231. Whilst we agree with the conclusions of the ES that the potential impact from sandwave clearance in Constable Bank is not significant in EIA terms, we noted in our Relevant Representations [para 2.5.5 of RR-011], that consideration should be given to sandwave recovery monitoring during the post-installation surveys in Constable Bank in order to validate the assumptions in the ES. This, we argued, would support statements that sandbanks will recover in the short-term as well as help inform future work. The Applicant has responded by stating that as no significant effects were predicted in the EIA, no further monitoring is considered to be required to test the predictions of the EIA [PDA-008, RR-011.60]. NRW (A) acknowledges the Applicant's response, however, we retain our recommendation that consideration should be given to sandwave recovery monitoring for the reasons outlined above particularly with respect to informing future work.

232. NRW (A) welcomes the clarity provided by the Applicant in PDA-008 [RR-011.61] with respect to the Biosecurity Risk Assessment and Invasive Non-native Species (INNS) Management Plan – that the measures to minimise the potential spread of INNS is secured in a free-standing annex to the offshore EMP and a separate plan to the outline Biosecurity Protocol as part of the Code of Construction Practice (CoCP). We also welcome the commitment that the plans will be secured as part of the dML and standalone ML. We continue to recommend that NRW (A) are consulted, in writing, on the suitability of the plans ahead of commencement of activities. Please also see 2.10.1 below

233. We advise that should the intention be to utilise Holyhead Port for berthing of vessels during construction, operation and/or decommissioning, 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* within the Port. Notwithstanding this, any specific measures that might be required could be managed via the marine biosecurity risk assessment and management plan.

234. NRW (A) welcomes the clarity provided by the Applicant [RR-011.62 of PDA-008] with regards to the Marine Pollution Contingency Plan (MPCP) and Offshore EMP confirming the commitment to pre-commencement consultation with NRW (A) under the DCO conditions, and to securing the Offshore EMP and MPCP within the standalone ML.

2.6 Marine Water and Sediment Quality (MW&SQ)

235. Following the review of the Applicant's Response to Relevant Representation [PDA-008], RR-011.63, NRW (A) are content that the Offshore EMP and MPCP will be submitted for consultation with JNCC and NRW (A). However, we note that NRW (A) are not specifically listed as a consultation body in the DCO Schedule 14, Part 2, condition 18 (c) and request that we are consulted, in writing, on the suitability of the above plans prior to commencement of activities. We are pleased to note the commitment to securing the Offshore EMP and the MPCP in both the dML and the standalone ML.

236. On the basis that trenchless techniques to landfall will be used to minimise sediment disturbance, we agree (as noted in RR-011 at para 2.6.3) that, as it stands, we have no concerns from a water quality perspective. However, consideration should be given to the advice at 219 and 227 above with respect to the assessment of the nearshore environment. Should issues transpire, Water Quality should be considered alongside other receptors.

2.7 Water Framework Directive (WFD) Coastal and Transitional Water Bodies: Offshore works

237. We support the assessment conclusion in APP-088 that the proposed works will not cause deterioration to the water quality of either of the water bodies considered (North Wales coastal waterbody and Clwyd transitional waterbody), nor the individual elements of these water bodies, or impact the objectives of achieving Good Ecological Potential (GEP) and Good Ecological Status (GES).

238. Paragraph 2.7.2.1 of our Relevant Representation requested clarification on the justification for the screening decision not to include other waterbodies (e.g. Dee (North Wales), Conwy Bay and Anglesey North) in consideration of impacts. The Applicant provided clarification of justification for this within PDA-008 at RR-011.67, which we are satisfied with and therefore have no further comments on the matter.

239. In response to the Applicant's comments within PDA-008 at RR-011.68, NRW (A) continue to advise that for the purposes of chemical contaminants, the assessment should extend to 12 nm from MHWS for compliance with the WFD Regulations. These regulations state that for all characteristics other than chemical contaminants, assessments can be made to 1nm, however for chemical contaminants assessments shall extend to 12nm[4],[5] .

240. We do not consider that a satisfactory explanation has been provided to explain the rationale for the limited spatial extent of the Zone of Influence (ZoI) between 1 nm of MHWS and the offshore waters. We remain unsatisfied with the response of the Applicant (RR-011.69, PDA-008) in their establishment of impacts within the ZoI over the route of the transmission cable. We consider that the Applicant has been inconsistent in its approach between legislative regimes in assessing environmental impact and preventing and/or mitigating adverse effects on the environment. The ZoI assessed for consideration under the Conservation of Habitats and Species Regulations (Habitats Regulations) is substantially larger than that assessed for consideration under the WFD Regulations. Although this will not alter the conclusions of the assessment, had the Applicant included this it would have made the assessment more robust and would give the ExA confidence that the Applicant is acting diligently in its endeavours to identify and mitigate all potential adverse impacts on the environment. We continue to advise that the justification for the inconsistency is made clear, or that the Applicant is consistent in their approach of consideration of the spatial extent of the impacts of their proposed activities regardless of the legislation they are attempting to comply with.

241. NRW (A) note the typographical error outlined in PDA-008 at RR-011.69 with regard to the ZoIs considered in the WFD compliance assessment. We agree that the conclusions are unaffected by the discrepancy, and we continue to advise that the corrections are carried through to future revisions or re-submissions of the WFD Compliance Assessment.

242. From review of PDA-008 RR-011.72, NRW (A) note the Applicant's re-assertion that the sediment sample results used to inform the WFD impact assessment are appropriately spatially bound. However, we reiterate our previous advice within RR-011 that additional clarity should be given to highlight that the data used in the WFD compliance assessment were relatively limited in their spatial applicability compared with the entire benthic subtidal and intertidal ecology study area. This request has been made in order to aid clarity and for the benefit of the ExA.

243. Contrary to the assertion made at RR-011.75 that no further assessment is required for biological quality elements and supporting elements due to the proximity to the

[4] Natural Resources Wales / How to carry out a Water Framework Directive (WFD) assessment for a marine licence application

[5] Consultation on amending the Environmental Damage (Prevention and Remediation) Regulations 2009 in England and Wales to transpose Article 38 of the Offshore Safety Directive 2013: A summary of responses to the consultation and government response (publishing.service.gov.uk) (page 8, para 3.10)

supporting habitats, we direct the Applicant to Volume 6, Annex 2.2: Water Framework Directive Coastal Waters Assessment [APP-088], Table 1.8 (page 18) which states "*impact assessment required*" for *biology -habitats risks for the North Wales water body*. This statement was made by the Applicant both in relation to activity within 500 m of higher sensitivity habitat, and where 1% or more of any lower sensitivity habitat is of consideration for risk of impact. We continue to advise, as noted in our Relevant Representation at 2.7.5.1, that further assessment is required.

2.8 Biodiversity Benefit

244. NRW (A) welcomes the Applicant's ongoing commitment to engage with us on biodiversity enhancement measures at an appropriate time, as noted in PDA-008. We also welcome the Applicant's positive engagement with the formalisation of the delivery of terrestrial net benefit for biodiversity in Wales as the Welsh Government develops its approach. We will continue to work with the Applicant on developing these proposals as more detail emerges throughout examination and post-consent, and we welcome the work that the Applicant has done on this topic thus far.

245. We welcome the justification provided by the Applicant within PDA-008 at point RR-011.78 with regard to achieving overall net benefit for biodiversity. We also welcome the review of PPW12 as highlighted in PDA-006.

246. Paragraph 3.2.1.1 in APP-193 states that NRW (A) agreed to the qualitative approach taken by the Applicant during a meeting held in April 2023. Whilst we do not necessarily disagree with this approach, we note that engagement on this topic, from both a terrestrial and marine perspective was limited. We do however acknowledge that no formal advice was requested by the Applicant or provided by NRW (A) during the pre-application phase. Nonetheless, we welcome the Applicant's commitment to this matter, and we will continue to work with the Applicant on this as more detail emerges throughout examination. We welcome the Applicant's response to this matter under RR-011.80 of PDA-008, however we note that this topic is not currently included within the SoCG.

247. We continue to advise that in developing proposals, mitigation measures should not be considered as methods for biodiversity improvement or enhancement, as they are in place as preventative measures of deterioration of features rather than providing biodiversity benefits from the baseline.

248. We welcome the Applicant's commitment to further considering the inclusion of the Marine Area Statements in developing the Biodiversity and Green Infrastructure Statement.

2.9 Decommissioning - Offshore

249. We acknowledge the commitment to produce a Decommissioning Programme under section 105 of the Energy Act 2004 to be approved by the Secretary of State for the Department of Energy Security and Net Zero (DESNZ). This has been noted by the Applicant within PDA-008.

250. We note from PDA-008 section RR-011.85, and welcome that the Decommissioning Plan will be shared with NRW (A) at the appropriate time. For clarity, NRW (A) were not advising in our Relevant Representation (RR-011) that the plan should be submitted at this point in time, but pointing out that when it is produced for consultation, it should retain all decommissioning options (maintain, full removal, and partial removal) so that all options can be fully assessed and refined closer to the time of decommissioning itself. As expressed in RR-011, NRW (A) reserves its position until a draft plan is submitted at which point we will provide further advice.

251. We welcome the clarity provided by the Applicant with respect to the Applicant's intention for decommissioning activities to be secured through separate standalone Marine Licence at the relevant time (PDA-008, RR-011.86).

2.10 Mitigation and Monitoring Schedule; Marine Licence Principles and the Development Consent Order

252. Following review of PDA-008 RR-011.87, we wish to reiterate our point made in RR-011 that there remain inconsistencies between the Mitigation and Monitoring Schedule [APP-196], Marine Licence Principles document [PDA-005] and draft Deemed Marine Licence [AS-010] that require review. We advise that the Applicant should conduct a thorough check and ensure that all requirements / conditions are accurately captured across all relevant documentation.

253. For example, APP-196 states that condition 18 (1)(d) within the draft dML to produce an Offshore CMS should include a commitment to cable burial where possible. We note that this commitment has not been transposed to the dML within the draft DCO, or the Marine Licence Principles document.

254. Such discrepancies may result in confusion and uncertainty as to the extent of measures that may be secured in respective consents. We advise that the Applicant undertakes a full review of these documents so as to provide assurance that measures are appropriately captured. It is important that all relevant documents are consistent and contain accurate reference to all proposed mitigation, monitoring and plans as described in the application documents and agreed with interested parties. Please also see comments provided by NRW MLT at paragraph 340 below.

2.10.1 Conditions and requirements within the DCO

255. We note from review of the draft DCO that the requirements/conditions under Schedule 14 dML: Part 2 18-21, 24-28 refer to the need for authorisation to be approved in writing by the Licensing Authority in consultation with the relevant identified bodies. We note that at present the only ANCB that the dML references is JNCC and NRW (A) are not included in any of the requirements/conditions. The documents outlined in these sections of the dML will all require consultation with NRW (A), in writing, prior to approval by the regulator. This includes (but may not be limited to) all pre-construction plans and documentation, the UWSMS, UXO clearance, pre-construction monitoring and surveys, construction monitoring, post-construction monitoring, reporting of scour and cable protection. We advise that the Applicant undertakes a thorough review of all conditions

and amended where necessary. Please also see comments made by NRW MLT with respect to pre-commencement plans at Section 4.5.

256. We also note the use of ‘MLW’ and ‘MHW’ within some of the conditions as opposed to MLWS and MHWS. However, application documents and SoCGs use MLWS and MHWS. We request clarification from the Applicant on the interchangeability of this terminology and the implications for the assessments and relevant licences (dML / ML). Please also see comments made by NRW MLT in row 2 in Annex D.

3 ONSHORE – DETAILED COMMENTS

3.1 Designated Landscapes

257. NRW's (A) Written Representations on seascape, landscape, and visual matters are set out below. These relate to the development's potential impacts on the character and visual amenity of the Isle of Anglesey (IoA) National Landscape (NL), Eryri National Park (ENP), and the Clwydian Range and Dee Valley (CRDV) NL, and the statutory purpose of these designations to conserve and enhance their natural beauty.

258. For the purposes of this representation, the aforementioned designations are referred to collectively as Statutory Designated Landscapes (SDLs) and *ES Volume 2 Chapter 8: Seascape and Visual Resources* [APP-060] and *ES Volume 3, Chapter 6: Landscape and Visual Resources* [APP-069], and the appendices which support these chapters, are referred to collectively as the Seascape, Landscape, and Visual Impact Assessment (SLVIA).

3.1.1 Effects of Proposed Development

259. Since NRW (A) commented on the PEIR[6], the Maximum Design Scenario (MDS) for the proposed wind turbines has changed. For MDS Scenario 1 the maximum number of turbines has reduced from 107 to 96 but the maximum blade tip height is unchanged at 293m above Lowest Astronomical Tide (LAT). For MDS Scenario 2 the maximum blade tip height has increased from 324m to 364m above LAT, but the maximum number of turbines is unchanged at 68 turbines. (Table 3.5 ES Document Reference: F1.3) [APP-050].

260. The changes above do not address concerns raised in pre-application advice provided by NRW (A) to the Applicant regarding the impacts of the proposed turbines on the IoA NL and potential cumulative impacts on both the IoA NL and ENP. Instead of reducing the maximum blade tip height of the turbines, the Applicant has increased it. We advise that without a reduction in the height of the turbines and/or a reduction in the array area (i.e. away from the coast) it is likely the proposed turbines will cause:

- Significant adverse effects on the views and visual amenity of people within the IoA NL and ENP.
- Significant adverse effects on sensory and perceptual characteristics and special qualities of the IoA NL;
- Significant adverse cumulative effects on sensory and perceptual characteristics and special qualities of the IoA NL and ENP; and
- Effects on the IoA NL, ENP, and CRDV NL that are not significant, but nevertheless adverse. All are designated for their natural beauty, and the importance nationally of this being conserved and enhanced.

261. The proposed wind turbines individually and cumulatively with e.g., the consented Awel-y-Môr development, will result in visual changes to the settings of the IoA NL and

[6] Dated 1 June 2023, Our Ref: AOS-21167-0026

the ENP. These changes will harm characteristics and qualities of these landscapes - particularly those relating to perceptual and scenic aspects. We advise the SDLs exist for the purpose of conserving and enhancing their natural beauty. In the case of both the IoA NL and the ENP, the proposals will harm aspects of these landscapes which contribute to their natural beauty.

262. Effects on the views and visual amenity of visual receptors (people) at locations within both the IoA NL and ENP would be significant and adverse, both as a result of the proposed development individually and cumulatively with the consented Awel-y-Môr development. This will include harm to views at locations which attract visitors seeking to experience the natural beauty and special qualities of these landscapes. Particularly within the IoA NL which is predominantly a coastal designation.

263. People using the Isle of Anglesey Coast Path, Wales Coast Path, and Cambrian Way would experience both combined and sequential cumulative impacts as a result of the proposal and wind turbines within the consented Awel-y-Môr development. At locations such as Penmon Point, the cumulative effect would be greater than the effect of the Mona Array Area in isolation, and it is likely to be significant. We advise that as a result of both schemes in combination, people will have to travel ever further west along the north coast of Wales – and in effect to the western side of Anglesey - to be afforded coastal views unaffected by wind turbine development.

264. People walking the Offa's Dyke Path National Trail where it crosses the CRDV NL are expected to experience combined and sequential visibility of the Tier 1 onshore and offshore projects (including Awel-y-Môr substation) and experience potentially significant adverse visual effects. However, mitigation measures are expected to reduce the impact on receptors within the CRDV NL. These measures – which we welcome – include proposals for new woodland planting around the proposed substation, as illustrated on the Illustrative Landscape and Ecology Strategy Plan within the Outline Landscape and Ecology Plan (LEMP) [APP-208] together with the intention for substation buildings to be finished in recessive colours as set out in the Design Principles [APP-189].

265. We disagree with conclusions in the Seascape Landscape and Visual Impact Assessment (SLVIA) regarding the effects of the proposed turbines on the IoA NL, ENP, and visual receptors within the SLDs. We advise the SLVIA has underreported and underestimated effects on SLDs. We advise conclusions regarding the effects on SLDs reported in the SLVIA are undermined by a number of issues. These include the omission of relevant receptors from the assessment, flaws within the SLVIA methodology, and flawed judgements. We advise that because the SLVIA has underestimated the effects of the proposed wind turbines, no specific mitigation measures have been considered.

266. We are concerned that the SLVIA local landscape and seascape character areas have been excluded from the SLVIA. Whilst studies such as the Anglesey Landscape Strategy, 2011 and Anglesey Seascape Character Assessment, 2013, are referenced in the SLVIA, they are not receptors and it is not clear how – if at all - the review of these documents has informed an understanding of the character of the SDLs, their special qualities, and the impacts on these.

267. We advise there are methodological and presentational issues with the visualisations and figures intended to support the SLVIA. Issues include wirelines not presented in accordance with best practice (e.g. turbines blades pointing up); photography taken in

unsuitable conditions; heavily pixilated baseline photography; and information being illegible due to the presentation of figures/maps – often at a high scale - as small insets within the ES report. It is also noted that when using the visualisations on site, the landscape appears smaller in the photomontages than in reality. This means that when viewing the photomontages on site or at 100% on screen, the turbines will also appear smaller than they would in reality. This issue is compounded by the separate issue of the prominence of the turbines being downplayed at VPs such as VP 4 and VP 7 where the turbines have been depicted more faintly than they would appear in reality. Including also at e.g., VP 55 where turbines have been rendered faintly presumably in response to poor visibility conditions - when baseline photography should not have been taken. We also note errors such as the onshore photomontages for VP 11 (APP-158), which appear to show the substation would be more noticeable in summer at Year 15 with mitigation planting established and in leaf (Figure 22), and less noticeable in winter at Year 1 (Figure 21).

268. We advise that despite Awel-y-Môr having been approved, this scheme is only shown in the wireframes from 5 viewpoints within SDLs. We advise all of the wireframes should include this scheme / a separate cumulative wireframe should be provided for all viewpoints as is best and common practice. This omission means at other viewpoints, where the nature of the view and the cumulative impact would be different, no visualisation is provided. We also advise cumulative visualisations showing the proposed substation and other Tier 1 developments (including the Awel-y-Môr substation) would be beneficial.

269. Overarching National Policy Statement for Energy (NPS EN-1) sets out a requirement for projects to be designed carefully, taking account of the potential impact on the seascape and landscape. The aim is to minimise harm to the seascape and landscape, providing reasonable mitigation where possible and appropriate. We do not consider that sufficient evidence has been provided to demonstrate that seascape, landscape, and visual impacts have been minimised in this case.

270. We advise the proposal would not accord with Policy SOC06 – *Designated Landscapes* - of the Welsh National Marine Plan 2019 (WNMP) because it does not avoid adverse impacts on designated landscapes; has not satisfactorily minimised impacts which cannot be avoided; and has not satisfactorily mitigated impacts which have neither been avoided nor minimised. Therefore, we advise that mitigation measures should be explored in the first instance. Enhancement measures should not be proposed unless and until mitigation measures have been fully exhausted.

271. Opportunities to enhance designated landscapes are encouraged by the WNMP but no proposals for enhancement have been included by the Applicant in the draft DCO. We consider enhancements represent compensation and/or offsetting and not mitigation for adverse effects, as any enhancements would not be directly related to the impacts. Notwithstanding this, if DCO consent is to be granted, we consider that a proportionate enhancement scheme for the IoA NL and ENP should be provided to compensate for the adverse effects of the Mona Array on these nationally important landscapes.

Our detailed comments on the seascape, landscape and visual effects of the project are provided in Annex B.

3.2 Water Framework Directive (WFD) Compliance Assessment: Onshore works

3.2.1 Marine

272. We note that the Applicant notes and welcomes our comments put forward in RR-011 3.2.1.1, 3.2.1.2 and 3.2.1.3 regarding WFD compliance assessment conclusions within PDA-088 RR-011.105 to RR-011.107, and therefore have no further comments to make.

273. Following review of the Applicant's response in PDA-008 at RR-011.108, NRW (A) reiterate the advice to include Rhyl East and Abergele (Pensarn) bathing waters sites for assessment of impact. Further comments at section 3.2.4 below.

3.2.2 Water Quality

274. NRW (A) agrees with the WFD compliance assessment conclusion [APP-120] that there is no pathogen source from the onshore works and so no potential to impact the Clwyd transitional waterbody and associated bathing waters sites.

275. We agree with the WFD compliance assessment conclusion that the proposed onshore works are unlikely to create or present significant sources of nutrients that would negatively impact the moderate phytoplankton status of the North Wales coastal waterbody or the good status of the Clwyd Transitional waterbody.

3.2.3 Fish

276. We agree with the WFD compliance assessment conclusion [APP-120] that the proposed onshore works are unlikely to pose a potential risk to the fish quality element status of the Clwyd transitional waterbody and therefore advise that detailed assessment is not necessary.

3.2.4 Protected Areas

277. We support the Applicant's approach to consideration of bathing waters protected areas (Environment Statement – Water Framework Directive surface water and groundwater assessment, Vol 7 Annex 2.4 para 1.9.4.6 pg. 70 [APP-120]). We advise that the Applicant takes note of the susceptibility of the Pensarn, the Kinmel Bay, the Rhyl and Rhyl East bathing waters sites to failure during heavy rainfall events when sewage, agricultural and sanitary pollutants may be washed into the sea. We note that the Applicant's response to our Relevant Representation [PDA-008] still refers mostly to Abergele (Pensarn) and Marine Lake in WFD CA "*The assessment includes the bathing water quality profiles at Abergele (Pensarn) and the Marine Lake at Rhyl."* We reiterate that Kinmel Bay, the Rhyl and Rhyl East bathing waters should be included. The proposed activity presents a high risk of causing deterioration to the status of these protected areas. The more turbid the water (e.g. due to wind, rain or a sediment/solids source) the less ultra violet light will reach the bacteria in the water. As a result, bacterial survival is higher, and this can result in bacteria surviving longer in the water body and then on to the designated European bathing beach. Therefore, we advise an extension of the spatial area to be considered for impact beyond the usually acceptable 2 km.

278. We welcome the commitment in the Outline Code of Construction Practice (CoCP) [APP-212] to pre-construction site investigation surveys and protective measures to reduce the risk of exacerbating this.

3.2.5 Biology, INNS

279. We support the conclusions of the WFD compliance assessment [APP-120] that there will be no potential risk to the biological habitats, biological species or INNS receptors from the onshore portion of the proposed works to the WFD transitional and coastal waterbodies considered.

3.2.6 Mitigation measures assessment

280. In section 3.2.5 of our Relevant Representation, we advised that the mitigation measures assessment element for North Wales coastal water body (table 1.15 [APP-120]) should be moderate status, rather than the good status reported in 2021 classification. This is because the mitigation measures should be "*not in place - not yet identified*" instead of "*Not applicable - not required in this water body*" (Water Watch Wales 2021 Cycle 3 Classification Data - Erratum tab). We note and welcome the update as noted in mitigation measures assessment element for the North Wales coastal water body is reported as 'moderate status' in the Mona Errata Document [PDA-006].

3.2.7 In combination effects and cumulative effects

281. We note the submission of Annex 3.5 of the Applicant's Responses to our Relevant Representations [PDA-013]. We welcome the clarification provided for WFD.

3.2.8 Fluvial geomorphology elements of the WFD

3.2.8.1 General Comments

282. We note the Applicant's Responses to our Relevant Representations [PDA-008] and largely reiterate our points below as our position remains valid. Elements of the proposed infrastructure may yet need to be significantly repositioned to alternative (more acceptable) locations within the catchment following receipt of adequate geomorphological field survey. Further information (as previously stated) should be provided in order to agree these locations in principle.

283. With the exception of being mentioned in the WFD assessment [APP-120] and partial related reference to impacts on habitats in the Onshore Ecology chapter [APP-066] section, the ES fails to specifically address fluvial geomorphology (the physical form and natural processes of rivers). Unlike other similar subjects (e.g. hydrology, flood risk, ecology, fisheries etc) there is no baseline fluvial geomorphology data (e.g. River Habitat Survey, MoRPh, Fluvial Audit), no impacts identified, no consideration of sensitivity of receptors, no significance of effect or cumulative impact of any of the proposed works with regard to fluvial geomorphology (e.g. open cut or trenchless crossings of watercourses, haul road bridges etc.). As stated in our previous response to the PEIR dated (1 June 2023 AOS-21167-0026) "*More details of the geomorphological impacts associated with the proposals should be provided and suitable expertise sought*." This position remains valid.

3.2.8.1.1 Environmental Statement Volume 5, Annex 5.3: Onshore Crossing Schedule [APP-083]

284. From the onshore crossing schedule there appears to be 9 watercourse crossings proposed. Seven of these crossings are proposed as trenchless (NRW (A)'s preferred method of crossing, dependant on launch and receiving pit locations and depth below the watercourse) and two marked as to be crossed via trenching or trenchless (S3N/S-WX-1 and S9-WX-1). Additional detail should be provided for each crossing location (and haul road bridges) but greater depth of assessment will likely be required for the crossings proposed using trenched techniques.

3.2.8.1.2 *Environmental* Statement Volume 7, Annex 2.4: Water Framework Directive surface water and groundwater assessment [APP-120]

285. *"A note of the condition of each channel has been made"* – however, no details of how this was assessed, or the record of the condition has been provided.

286. Open cut trenching techniques can cause long term or irreparable impacts, not just short to medium term impacts stated in Table 1.13.

287. No consideration is given to the long-term impacts on the rivers physical form and natural sediment processes given that the proposals fail to detail decommissioning of the scheme at the end of its life (Table 1.13), leaving equipment *in-situ* in perpetuity potentially within zones of influence of rivers. Rivers are naturally mobile features of the landscape and as such the risk of erosion, scouring or re-exposure of cables etc is likely over the coming generations. Failure to decommission all elements of the proposals within the rivers zone of influence will result in exposure of any abandoned buried infrastructure over time as the rivers meander across their floodplain and valley floor. This would likely result in deterioration of the environment in terms of the Water Framework Directive at that time, require others to pay for its removal and restoration, and as such presently would likely fail to comply with the Future Generations Act.

288. Notwithstanding the above, we acknowledge that the Applicant will still need to prepare the information advised above to inform the final CoCP which is secured by Requirement 9 of the draft DCO. We note from the Applicant's Responses to our Relevant Representations [PDA-008] *"A commitment to undertake these surveys will be included in an update of the Outline Onshore Construction Method Statement (APP-227) which will be submitted to the Examination. The Outline Onshore Construction Method Statement forms part of the Code of Construction Practice (CoCP). The CoCP is secured by Requirement 9 of the draft DCO."* We are therefore satisfied that the mechanism is in place to ensure that WFD impacts on fluvial geomorphology elements 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.

3.3 Air Quality

3.3.1 F3.10 Environmental Statement - Air Quality [APP-073]

289. As noted in our Relevant Representations (3.3.1), we raised a query with regards to the traffic assessment that there is no proposal/justification included to scope traffic out for construction and decommissioning as is for operational and maintenance phases on ecological receptors. We welcome the points of clarification provided by the Applicant in their Response to our Relevant Representation "*there are no road links where the change in AADT exceeds 1000 vehicles. There are seven road links (the A55 between junction 23 and 27a) where the number of HDVs could increase by up to 205 HDVs however there are no European sites within 200 m of these road links. All other road links have an increase of less than 200 HDVs. The Air Quality assessment concludes that the NO_2 emissions from construction traffic are negligible at all receptors (paragraph 10.8.3 Volume 3, Chapter 10: Air Quality (APP-073)). There will be no change in the annual mean NO_2 concentrations at any of the receptors as a result of the Mona Offshore Wind Project, when compared to the annual mean NO2 concentrations without the Project; and given that all of the ecological receptors are further from the A55 than the modelled receptors, it can be concluded that there would be no effects on the sections of ancient woodland nearest to the A55."* We have no further concerns with this aspect.

290. We are satisfied with the assessment of dust impacts (section 10.8.2) and proposed mitigation measures with regards to protected sites within the Outline Dust Management Plan [APP-214] to form part of the CoCP [APP-212]. We also note that the final CoCP (Requirement 9 of the DCO) will be approved by the Local Planning Authority (LPA) following consultation with NRW (A). We agree with this approach.

291. In regard to air quality, we note that the works will be within the proximity of Ancient Woodland. Edition 12 of 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 on the NRW website under "*Advice to planning authorities considering proposals affecting ancient woodland*". The LPA will be able to advise with respect to the acceptability of the proposals in terms of Ancient Woodland.

3.4 Ecology (Terrestrial)

3.4.1 Ornithology

292. In our Relevant Representation (3.4.1.1) we raised concerns with regards to Barn Owl. We note the Applicant's Response to our Relevant Representation in that respect and the detailing of the survey undertaken. It is also noted *"On the basis that no barn owls were recorded during the surveys, an assessment for impacts on barn owl was not undertaken in Volume 3, Chapter 4: Onshore and intertidal ornithology (APP-067) as it was not considered that there would be any impact on barn owls arising from construction and operation of the onshore elements on the Mona Offshore Wind Project*." We also note the commitment to undertake pre-construction surveys where vegetation removal is proposed during the breeding bird season and if barn owl is recorded during the pre-

construction surveys, mitigation measures from the Breeding Bird Plan will be implemented.

293. Therefore, we agree with the conclusions in the ES Onshore and intertidal ornithology [APP-067] and the recommendations and proposed principles for mitigation as set out in the Bird Protection Plan of the Outline Landscape and Ecology Management Plan (LEMP) [APP-208]. We also note that the final LEMP (Requirement 12 of the DCO) will be approved by the LPA following consultation with NRW (A). We agree with this approach.

3.4.2 Protected Species

294. We consider the survey and assessment to be satisfactory in respect of great crested newts (GCNs), bats, otters, dormice, water voles. Water voles are protected under the Wildlife and Countryside Act 1981 (as amended). GCNs, bats, otters and dormice are also European Protected Species (EPS) which are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). 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.

295. We agree with the conclusions in the ES Onshore Ecology (ref F3.3) [APP-066] and the recommendations and proposed principles for mitigation in the Outline Landscape and Ecology Management Plan (LEMP) [APP-208]. We also note that the final LEMP (Requirement 12 of the DCO) will be approved by the LPA following consultation with NRW. We agree with this approach. However, we advise 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 are as follows:

<u>Ecological Compliance Audit:</u>

- 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.

<u>Long-term monitoring for GCNs:</u>

- 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:

- We advise that the Outline LEMP is updated to confirm that the following information will be specified in the final LEMP:

i. habitat management prescriptions for aquatic and terrestrial habitats;
ii. site liaison, wardening, incident reporting and response arrangements;
iii. provision for periodic review mechanism for the long-term management plan;
iv. 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;
v. 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;
vi. details of persons or bodies responsible for undertaking management and surveillance together with required skills and competencies; and
vii. reporting requirements associated with species surveillance and habitat management.

3.4.3 Fish (Freshwater)

296. We agree with the conclusions in the ES Onshore Ecology (ref F3.3) [APP-066] and the recommendations and proposed principles for mitigation for fish (eels) in the Outline LEMP (LEMP) [APP-208]. We also note that the final LEMP (Requirement 12 of the DCO) will be approved by the LPA following consultation with NRW. We agree with this approach.

3.4.4 Designated Sites

297. We note the design of the cable corridor is for an avoidance of impact to sensitive ecological receptors and when this is not possible there is a commitment to trenchless techniques under Traeth Pensarn Site of Special Scientific Interest (SSSI) and Llanddulas Limestone and Gwrych Castle Wood SSSI as stated in Table 3.22 of the Onshore Ecology report [APP-066]. Micro-siting of the route will be detailed in the Outline Landfall Construction Method Statement [APP-226] and Outline Construction Method Statement [APP-227] as they are progressed as part of the overarching Outline Code of Construction Practice (Requirement 9 of the DCO). We also note the commitments in Outline LEMP [APP-208] as part of the final LEMP (Requirement 12 of the DCO). Both Requirements 9 and 12 will be approved by the LPA following consultation with NRW. We agree with this approach.

3.4.5 Invasive Non-Native Species (INNS) (Terrestrial)

298. Further to our comments (3.4.5 of our Relevant Representation) on Outline Biosecurity Protocol (APP-223) we note the Applicant's Responses to our Relevant Representations [PDA-008] and welcome these clarifications. We note that the (terrestrial) Biosecurity Protocol will be approved by the LPA (Requirement 9 under CoCP). We agree with this approach and consider that this will appropriately manage INNS. However, we advise that NRW (A) is consulted prior to the discharge of Requirement 9.

3.5 Water Quality (Surface and Groundwater)

3.5.1 F3.1 Geology, Hydrogeology and Ground Conditions [APP-064]

299. NRW (A) note the Applicant's Responses to our Relevant Representations [PDA-008] and our comments remain on the whole the same.

300. We note the completion of a water feature survey and on the whole are satisfied with the baseline condition assessments. However, it is noted that private water supplies (PWS) located within this area. (PWS 02, 06, 07 and 08) require further site investigation and for mitigation measures to be agreed with the PWS owners – we should be informed of the mitigation measure employed so that the risk is assessed on site. We note from RR-011.125 of PDA-008 – *"measures to mitigate potential impacts on private water supplies will be set out in the final CoCP in line with section 1.4 of Volume 7, Annex 1.2: Groundwater Sources of Supply – Hydrogeological Risk Assessment (APP-116) and will be agreed with the relevant planning authority (rather than the landowner) following consultation with NRW (as secured in Requirement 9 of the draft DCO (C1 Draft Development Consent Order F03))".* We agree with this approach.

301. We note that the method used on site for the trenchless cable routing will be confirmed at the detailed design stage. Once the trenchless method(s) has been confirmed all the risk assessments to controlled waters (groundwaters) should be updated to consider this method. We note RR-011.126 of PDA-008 and welcome the approach.

302. Cable routing around the historical landfill will be by trenchless cable routing methods (likely Horizontal Direction Drilling), we previously asked for confirmation and a commitment that risks will be assessed to ensure the waste material and landfill engineering is not affected or impacted by the trenchless methods – this will prevent (minimise) the risk to controlled waters. We note RR-011.127 of PDA-008 and welcome the approach.

303. Reference is made to working near an old mine in Outline Onshore Construction Method Statement [APP-227]. We previously asked that confirmation should be provided whether or not grouting will be required to be protective of groundwater and limit the risk to controlled waters. We note RR-011.128 of PDA-008 and welcome the approach.

304. We, therefore, consider all of the above are minor amendments that should be made to the Outline Code of Construction Practice [APP-212] and the underpinning Outline

Method Statements and Management Plans in order to ensure that the final version of the plan is based on a more robust Outline versions.

305. We note that the final Code of Construction Practice [APP-212] and the underpinning Method Statements and Management Plans must be submitted to and approved by the LPA (Requirement 9). We agree with this approach and consider that impacts on water quality (both surface and groundwater) will be appropriately managed and suitable mitigation measures will be adopted. We advise that NRW (A) is consulted prior to the discharge of Requirement 9.

3.6 Flood Risk

3.6.1 F3.2 Environmental Statement Hydrology and Flood Risk [APP-065]

306. Further to our previous comments for the Relevant Representation, with regards to flood risk, we have reviewed the relevant sections of the Applicant's Response to Relevant Representations (Document Reference: MOCNS-J3303-JVW-10218. June 2024). These would be Reference numbers RR-011.131 to RR-011-140. It is appreciated that the Applicant has noted comments provided by NRW (A) and actioned accordingly.

307. It is important to remind all interested parties that NRWs remit on flood risk is associated with that risk posed from the Sea and Rivers as shown on the Flood Map for Planning (FMfP). Since the implementation of the Floods and Water Management Act 2010 in Wales, it is the local authorities acting as the Lead Local Flood Authority (LLFA), who manage flooding from ordinary watercourses, surface water (and ground water). Thus, it is the LLFA who are ultimately responsible for managing and advising on flood risk management related to Ordinary watercourses/Surface water and small watercourses. They would also advise/approve surface water management and normally as they are also the Sustainable Drainage Systems Approval Bodies (SABs). Thus, the views and comments from both Conwy County Borough Council and Denbighshire County Council should be sought on the documents relating to flood risk as they are the LLFA and the SAB in this instance.

308. With regard to paragraph 2.3.8.18, we are still awaiting confirmation from Welsh Government as to when the new Technical Advice Note (TAN) 15 will be published. The 2004 TAN15 remains the Policy in force.

309. With regard to table 2.7. Assessment of significant effects - Construction phase – we note and accept that the landfall will be installed using trenchless techniques. It should be noted that this is the only section of the Mona Onshore Development Area that is shown to be within the Flood Zones 2 and 3 for flood risk from the Sea or Rivers as per the FMfP.

310. With regard to section 2.7.2.2 - any temporary change in runoff over the areas affected during construction, such as temporary construction compounds, haul road, construction accesses will be subject to sustainable drainage systems approval from the respective SAB to ensure that changes and minimal/managed.

311. With regard to section 2.7.2.4 - whilst all watercourse crossings for the haul road are on ordinary watercourses (and subject to consent from Conwy CBC/Denbighshire CC as Lead Local Flood Authorities), we suggest that bridged (or clear span) crossings would be preferrable to culvert crossings. It should be noted that culverting of watercourses (regardless of length) may pose a high risk to the delivery of WFD objectives. On average the UK has one barrier to natural processes and ecosystem communities per kilometre of watercourse. The majority of those barriers are culverts. Physical modification (e.g. culverting) remains a high risk in the majority of Welsh catchments and the primary cause of waterbody failure is physical modification.

3.6.2 Flood Consequence Assessments [APP-117]

312. No further comments to those provided previously for the PEIR, our comments have been addressed and thus the relevant risk management authority (LLFA/SAB) should provide any additional advice.

3.6.3 Surface watercourses and NRW Flood Zones [APP-118]

313. We note that Annex 3.10 Applicant's Response to our Relevant Representation [RR-011.138; PDA-018] has also been compiled to provide an update to the flood risk maps in relation to the Flood Map for Planning and specifically the Surface Water and Small Watercourse mapped outlines. Figures 1.3 to 1.5 of Volume 7, Annex 2.2 have been updated. A minor point would be that the same colour banding used in the on-line mapping would be clearer i.e. Sea- green; rivers- blue and Surface water and Small watercourses- purple (Flood Map for Planning (naturalresources.wales) 'detailed view')

3.6.4 Outline Flood Management Plan (OFMP) [APP-219]

314. This document is adequate to manage flood risk as an appendix to the Outline Code of Construction Practice document (Ref J26) [APP-212] for flood risk from the sea at landfall location.

315. However, there will be flood risk associated with the small watercourses/ordinary watercourses as a result of the onshore development route. It may be appropriate to also consider flood risk from these sources as shown on the Flood Map for Planning Flood zones 2 and 3 for Surface water and Small Watercourses. The respective LLFA would be able to advise if the management plan for this source of flood risk can be managed in any updated OFMP.

3.7 Materials and Waste

316. NRW (A) notes that the final Site Waste Management Plan [APP-221] will be approved by the LPA. We agree with this approach and consider that waste will be appropriately managed. NRW (A) should be consulted on the final Site Waste Management Plan [APP-221] as part of the Code of Construction Practice [APP-212] prior to discharge of Requirement 9.

4 MARINE LICENSING

317. The Welsh Ministers have delegated functions for the administration and determination of Marine Licence applications under Part 4 of the Marine and Coastal Access Act 2009 to Natural Resources Wales (NRW). The representation below is provided by NRW's, Marine Licensing Team function (NRW MLT).

4.1 The Marine Licence proposals:

318. As set out within the Marine Licence Principles Document (PDA-005), two Marine Licences are sought for the Mona Offshore Wind Project;

- A Licence in respect of the Generation Assets, to be deemed as part of the Development Consent Order (DCO)
- A separate Licence in respect of the Transmission Assets to be determined by NRW MLT.

319. NRW MLT agrees with the Applicant that the DCO sought may, in principle, include provisions deeming a Marine Licence to have been issued for those marine licensable activities that are wholly within Welsh Offshore Waters in accordance with s149A of the Planning Act 2008. The Transmission Assets are located within both the Welsh inshore and offshore region and therefore cannot be deemed as part of the DCO and a separate Marine Licence is required for which NRW MLT is the determining authority.

320. The Applicant submitted a Marine Licence application in respect of the Transmission Assets to NRW MLT on the 29 April 2024. The application was validated on the 31 May 2024. NRW MLT have consulted with relevant consultation bodies and the public on the application who have until 19 August 2024 to provide any comment. It is anticipated that this application will be determined concurrently with the DCO examination, although it is currently not possible to provide an indicative timescale in respect of the determination. Although there are issues that substantively overlap between the determination of the DCO and the Transmission Assets Marine Licence application, it should be noted that the respective consents must be determined separately.

321. NRW MLT, has determined that an Environmental Impact Assessment is not required in relation to the Marine Licence for the Transmission Assets in reliance on Regulation 10 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended). This is on the basis that we are satisfied that an EIA assessment in respect of the project is to be carried out by the Secretary of State and that such assessment will be sufficient to meet the requirements of the EIA Directive. 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. It should be noted that a practical consequence of this is that we would not be in a position to conclude the determination of the Marine Licence application for the Transmission Assets until the DCO has been issued.

322. NRW MLT, in its delegated role as Licensing Authority, will be responsible for determining requests to discharge conditions of a Marine Licence and therefore have a keen interest in ensuing that the provisions drafted in a deemed Marine Licence are appropriate to allow it to exercise this function.

323. Although a number of Marine Licences have been deemed within DCOs in English Waters, this is the first deemed Marine Licence that has been sought in Welsh Waters and where NRW MLT is making representations and providing advice to the ExA as to how the deemed Marine Licence should be considered.

324. As detailed within our Relevant Representations [RR-011], NRW MLT provided the Applicant with NRW's template Marine Licence and condition bank to aid with drafting. However, the Applicant has chosen to use previously deemed Marine Licences issued in English waters as their template for the proposed deemed Marine Licence. Although we are not fundamentally opposed to this approach, due to the minimal pre-application engagement in regard to the drafting of the Licence there remains a number of outstanding comments and concerns in respect of drafting. The Applicant has provided a Response to Relevant Representation [PDA-008] and an updated Draft Development Consent Order [PDA-003] which has been considered. The Written Representation below contains the key concerns surrounding the drafting of the Licence, whilst a number of further comments on the drafting are provided in Annex D.

4.2 Decommissioning

325. Within our Relevant Representation (RR-011) we requested clarity surrounding the Applicant's proposed approach to licensable decommissioning activities.

326. Within the '*Applicant's Response to Relevant Representations*' [PDA-008], the Applicant has clarified that the deemed Marine Licence does not include provision for decommissioning and has acknowledged that it will need to apply and secure a separate Marine Licence for licensable decommissioning activities prior to decommissioning taking place. NRW MLT are content with this proposed approach to licensable decommissioning activities.

327. NRW MLT acknowledges that the Applicant has amended the Marine Licence Principles Document [PDA-005] to clarify this. However, the Applicant has not, to date, removed reference to the inclusion of an expected condition relating to a decommissioning plan as part of the Transmission Asset Marine Licence within the Principle Document. This should be corrected, as neither has decommissioning activities been requested as part of the Transmission Marine Licence Application.

4.3 Transfer of the Licence

328. Para 7 of Schedule 14 (deemed Marine Licence) of the draft DCO proposes to amend the provisions under section 72 of the Marine and Coastal Access Act (MACAA) 2009 for the transfer of the Marine Licence. Specifically, the Applicant proposes that the powers to transfer should be given to the Secretary of State instead of the Licensing Authority.

329. Within our Relevant Representation we requested the Applicant provide further explanation and justification as to the need and lawfulness of this provision. This has been provided within '*Applicant's Response to Relevant Representations*' [PDA-008].

330. NRW MLT has concerns as to whether the inclusion of such provision would be appropriate.

331. Firstly, NRW MLT have concerns in respect of whether a deemed Marine Licence can lawfully include such a provision. This is upon the basis that the power under s120(5)(a) relied upon by the Applicant can only relate to '*any matter for which provision may be made in the order*'; (our emphasis). The provisions for transfer of a marine licence are not explicitly dealt with under the Planning Act 2008. Rather it is controlled by provisions under a separate Act of Parliament (s72 MACAA 2009). On this basis, NRW MLT's concerns are that absent of any explicit provisions in the Planning Act 2008, such provisions for transfer of licences may not be lawfully made.

332. Secondly, should the ExA disagree with the above, inclusion of such transfer provisions in the deemed Marine Licence would deviate from the established practice under the MACAA 2009. It is a matter of good regulation that regulatory overlap and/or duplication should be avoided. The implications of including the requested transfer provisions in the deemed Marine Licence could effectively provide two extant regulatory regimes (the deemed Marine Licence itself, and the section 72 (MACAA 2009) for the transfer of licence) which could lead to uncertainty. In our view, the established and correct approach in such circumstances would be to defer to the most appropriate regulatory regime which in our view would be under section 72 of the MACAA 2009.

333. We also highlight that the inclusion of such provision would result in differentiating the arrangements for transfer for the generation/transmission Licences for the project.

4.4 Overlap between the generation and transmission Licences

334. The Marine Licence Principles Document [PDA-005] states that there is intentional overlap between the generation and transmission Licences in relation to the authorisation of offshore substation platforms and the inter-connector cables, which are duplicated within both Licences. The reason given being, that the location of the offshore substation platforms at this stage are unknown, likewise it is unknown at this stage whether the offshore substation platforms and inter-connector cables will be transferred to the Offshore Transmission Operator alongside the Transmission Assets in future.

335. As detailed within our Relevant Representation we sought clarity on how the deemed Marine Licence was seeking to address this overlap, specifically in ensuring that the deemed generation and transmission Licences, when taken together, do not authorise the construction of more than four offshore substation platforms.

336. A response has been provided within '*Applicant's Response to Relevant Representations*' [PDA-008] confirming that the deemed Marine Licence contains provision for a design plan to be submitted for approval by the Licensing Authority prior to commencement of works. Amongst other things, the design plan would contain detail of the number of offshore substation platforms. NRW MLT are satisfied with this approach and request that the Explanatory Memorandum for the DCO is updated to reflect this approach in relation to condition 18(a) of the deemed Marine Licence.

4.5 Pre-commencement works

337. As drafted, works relating to pre-construction including ground investigation and UXO clearance would not fall under the definition of commencement, despite their potentially intrusive nature and associated risk. As currently drafted, pre-commencement work could be carried out without the need to adhere to other relevant conditions of the

deemed Marine Licence including pollution prevention practices, notices to mariners and approval of appropriate plans such as biosecurity and/or method statements.

338. Consequently, NRW MLT requests that the definition is amended so as to ensure that appropriate requirements and controls are engaged. Including but not limited to, conditions 18 and 21 of the deemed Marine Licence which relate specifically to activities currently defined as pre-commencement activities.

339. NRW MLT previous practice has included the following definition in relation to commencement within existing marine licences - "*the first undertaking of any Licensed Activities*".

4.6 Consistency between NRW Transmission Licence and Generation Licence

340. In respect of the Marine Licence Principles Document [PDA-005], the Applicant has detailed conditions it would anticipate being incorporated within the Marine Licence for the Transmission Asset (based on review of previous Marine Licences issued in Wales), and has compared these with those presented within the deemed Marine Licence for the Generation Assets. NRW MLT in our relevant representation noted that some conditions which are detailed as anticipated within the Transmission Licence, are omitted from the deemed Marine Licence. NRW MLT continue to advise the Applicant on the drafting of the deemed Marine Licence so as to ensure consistency where possible. Full comments relating the draft deemed Marine Licence are presented within Annex D.

341. In respect of the '*Applicant's Response to Relevant Representations*' [PDA-008], the Applicant notes that they do not consider a Compliance Report necessary for the deemed Marine Licence, detailing that it would be unnecessary and burdensome. NRW MLT disagree and consider that a Compliance Report is reasonable and necessary and is in line with established practice for licences of a similar scale in Wales including Awel-y-Môr. The report does not require the Applicant to carry out any additional assessment only to identify and signpost approved reports and approved plans to confirm relevant conditions have been met prior to each phase of construction. NRW MLT consider that this document would be particularly beneficial where the Applicant seeks to carry out works in stages, allowing the Applicant to highlight which plans are relevant to any particular activity or stage of development. NRW MLT consider this should be information that the Applicant should have readily available.

4.7 Approval of Plans

342. Condition 19(2) of the deemed Marine Licence provides that NRW must determine an application for approval made under condition 18 (pre-construction plans and documents) within a period of four months commencing on the date the application is received by NRW. Similar provision has been included in condition 20(3) and 21(3).

343. Within '*Applicant's Response to Relevant Representations'* [PDA-008] the Applicant set out that they consider the condition necessary to assist in maintaining the project delivery programme.

344. However, NRW MLT maintain our position, and do not consider the condition reasonable and necessary. There are no provisions under MACAA2009 for such time

limits and it would not be consistent with NRW MLT's established practice to constrain its determination to a defined period. As such, the inclusion of such provision would provide for regulatory divergence with other Marine Licences in Wales. Specifically, and important to note that NRW MLT will not be including such provision in respect of the Transmission Marine Licence required for this project.

345. In addition, NRW MLT is unclear surrounding the enforceability of the condition.

346. The time it takes NRW MLT to make a determination depends on the quality of the application made, complexity of issues and the consultation required with other organisation and technical experts. In some instance this requires further information or updated documents to be supplied from the Licence Holder as they seek resolutions with key stakeholders. NRW MLT seek to make its determination in a timely manner and would not seek to delay determination unnecessarily.

347. Therefore, for the reasons stated above, we maintain our position and do not consider the condition necessary and should be removed from the deemed Marine Licence.

4.8 Reference to NRW as the Licensing Authority

348. Within our Relevant Representation we requested that the 'Licensing Authority' is used throughout the deemed Marine Licence in place of NRW. We are satisfied that that the Applicant has taken account of our comment and has revised the deemed Marine Licence accordingly.

4.9 Designation of Disposal Sites

349. The Applicant is proposing to designate a disposal site for disposal of material associated with the construction of the project. A site Characterisation Report has been provided for the Generation Asset [APP-205] and separate site Characterisation Report [APP-206] for the offshore cable corridor which is part of the Transmission Assets.

350. It is established practice for NRW MLT to consider the designation of a disposal site and the suitability of material for disposal at sea during the determination of the Marine Licence application. As part of this determination NRW MLT would consult with independent external scientific advisors for specific advice on whether sufficient information has been provided for the designation of the disposal site; whether sufficient sampling has taken place by the Applicant; whether the sampling has indicated that material is suitable for disposal at sea, and whether further monitoring will be required during the course of the Licence, in line with OSPAR guidelines. If this advice has not be sought by the ExA we would need to consider this further.

351. Where a disposal site is designated, a unique disposal site code would be allocated to the site by Cefas (Centre for Environment, Fisheries and Aquaculture Science) who has been appointed to maintain an active list of all open and closed or disused sites in UK waters and allocate a unique reference to each site. NRW MLT would then include reference to this disposal site within the Marine Licence. As this is the first deemed Marine Licence issued in Wales, NRW MLT would seek clarity from the ExA as to whether it is their intention to seek to designate the disposal site and obtain the appropriate disposal site code from Cefas during the determination of DCO and deemed Marine Licence.

352. We welcome that the Applicant, following our relevant representation, has provided their sediment sampling results within the proforma provided on our website [PDA-014 to PDA-017] which aids with OSPAR reporting should the application be positively determined.

353. Following discussion with the Applicant, it is our current understanding that the sediment sampling [PDA-014 to PDA-017] that has been carried out in relation to disposal of material for the generation assets have also been provided to NRW MLT as it is also relevant to the determination of dredge disposal associated with the Transmission Marine Licence. As such, NRW MLT, will be seeking independent external scientific advice particularly in understanding whether sufficient sediment sampling has taken place, and whether the sampling has indicated that the material is suitable for disposal at sea in line with OSPAR guidelines. NRW MLT would be able to share this response with the ExA.

4.10 Enforcement Authority

354. As detailed within our Relevant Representation the enforcement provisions in respect to conditions of a Marine Licence have not been delegated to NRW and remain with Welsh Government. This has been correctly identified within the deemed Marine Licence itself (Schedule 14 of the DCO); however, the Environmental Statement Chapter 2 Policy and Legislative Context [APP-049 - section 2.3.3.2], incorrectly refers to NRW as the Enforcement body in respect to conditions of the Marine Licence. This has been acknowledged by the Applicant within '*Applicant's Response to Relevant Representations*' [PDA-008] and we are satisfied with this response.

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Annex B – SLVIA Detailed Comments

355. Our advice is structured to address the following matters:

- Our comments on the Applicant's Response to NRW (A)'s Relevant Representations
- The effects of the Mona Array on the views and visual amenity of visual receptors within the Isle of Anglesey National Landscape; Landscape/Seascape Character within the IoA NL; and Special Qualities of the IoA NL.
- The effects of the Mona Array on the views and visual amenity of visual receptors within the Eryri National Part; Landscape/Seascape Character within the ENP; and Special Qualities of the ENP.
- Potential effects of the Mona Array on receptors within the Clwydian Range and Dee Valley National Landscape
- Potential effects of the Onshore Substation on receptors within the CRDV NL.
- Cumulative Effects

1.1. Applicant's Response to NRW's Relevant Representations

356. The Applicant has provided a written response [**PDA-008**, **PDA-011]** to our Relevant Representations [**RR-011**].

357. Based on the Applicant's Response, it is apparent that one of the key differences in opinion between NRW (A) and the Applicant concerns the extent to which the distance between the Mona Array and the IoA NL and ENP mitigates harm to receptors within these SDLs.

358. Regarding potential effects on the IoA NL, the Applicant cites the distance of 29km or more between the Mona Array and the IoA NL as a reason why they consider effects on receptors within this landscape would not be significant. We advise that distance in itself is only one factor in predicting the level of impact.

359. The height and size of wind turbines determines whether a distance is significant relative to a given receptor. In the case of this development, the proposed turbines would have a blade tip height of 364m above LAT. When viewed from locations within the IoA NL such as Trwyn Eilian (Point Lynas) (at 29km distance) turbines with a tip height of 364m will be obvious features within the view – with the number of turbines, the extent of view which they would occupy, and the rotation of turbine blades, combining to establish a new and obvious focal point that would attract attention. The characteristics of the development would contrast with the inherent natural (undeveloped) qualities and beauty of the coast and views of the sea.

360. NRW evidence[7] provides further information on the implications of the ratio between the heights of turbines and the distance on the likelihood of significant effects on high sensitivity receptors such as SDLs. That evidence provides a '*very approximate ratio between turbine height and distance*' for different magnitudes of change (low and medium) which when combined with a high sensitivity receptor are likely to result in an effect of 'moderate' significance or 'major-moderate' significance. With the former

[7] Stage 1- Ready reckoner of visual effects related to turbine size Simon White, Simon Michaels and Helen King, White Consultants NRW Report No 315

potentially being significant and the latter being significant in the '*vast majority of SLVIAs'*. Those ratios are:

- 1:133 for an average low magnitude.
- 1:100 for an average medium magnitude.

361. Applying these ratios to turbines with a 364m blade tip height results in:

- A likelihood of there being a Low magnitude of change and overall moderate effect on high sensitivity receptors at distances up to 48.4km.
- A likelihood of there being a Medium magnitude of change and overall moderate/major effect on high sensitivity receptors at distances up to 36.4km.

362. These ratios are only a guide. But these illustrate the distances where significant effects are – as shown by evidence - expected to occur and to support our advice that 29km should not be assumed to be a significant distance when considering the impacts of turbines with a 364m blade tip height.

363. Other matters raised in the Applicant's written response [**PDA-008**, **PDA-011**] are listed below and are addressed in the subsequent paragraphs.

- Refinement of the Mona Offshore Wind Project
- Effects on the character and special qualities of the Isle of Anglesey National Landscape
- Effects on the settings of nationally designated landscapes
- Effects of the Mona Offshore Wind Project on visual receptors using the Wales Coast Path
- Combined and sequential cumulative effects experienced by users of the Wales Coast Path
- Relevant representation – paragraphs 3.1.1.7 to 3.1.1.9

1.2. Refinement of the Mona Offshore Wind Project

364. The Applicant states they have 'sought to avoid and mitigate significant landscape, seascape and visual impacts through the refinement of the Mona Offshore Project taking into account comments received during statutory consultation. The refinements included a reduction in the proposed Mona Array Area (from 500 km 2 to approximately 300 km2) and the maximum number of turbines was reduced from 107 to 96'[8].

365. Notwithstanding the fact the maximum height of the turbines has been increased, we advise the reductions referred to in the Applicant's comments relate primarily to the northern and eastern parts of the order limits, i.e. areas which are furthest away from the IoA NL[9]. Referring to Figure 4.18 it appears the southern limit of the Array area has been moved northwards, but only by approximatively 2km, the benefit of which for receptors in the IoA NL would be undermined by the increase in turbine height (40m)[10].

[8] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.1 (**PDA-011**)
[9] Refer Figure 4.18 in ES Volume 1, Chapter 4: Site Selection and Consideration of Alternatives (**AS-016**)
[10] At PEIR the maximum tip height was 324m versus the current proposed maximum of 364m.

366. In our comments on the PEIR, we advised further consideration should be given to NRW's evidence base: *Seascape and Visual Sensitivity to Offshore Wind Farms in Wales: Strategic Assessment and Guidance* (White Consultants for NRW, March 2019). The evidence base is divided into 3 reports, which should be read together. We advised that further work was required to demonstrate how this guidance had been taken into consideration and informed the proposals. We do not consider this guidance has adequately informed the proposals. For example, the Stage 2 Report[11] provides guidance on siting offshore windfarms, and Table 4.1 of this report identifies measures (Principles) to avoid or minimise seascape and visual effects. The proposals for the Mona Array are contrary to a number of these Principles because:

367. The Array is not located 'beyond the limit of negligible visual effects, particularly for the highest sensitivity area National Parks/AONBs overlaid with Heritage Coasts'. (**Principle 3**).

368. The Array is not located 'beyond the Stage I report low magnitude buffer distances for the highest potential turbine proposed from National Parks and AONBs' which is requested when Principle 3 is not achievable (48.4km for 364m turbines[12]). At the closest point the Mona Array is 28.8km from the IoA NL, 35.9km from the ENP, and 41.1km from the CRDV NL[13]. (**Principle 4**).

369. The Array is not located 'so as not to cause undue combined cumulative impact on existing landscape and visual receptors'. (**Principle 9**).

370. The Array is not located to avoid development '*within buffer distances of several separate designations*' (see Principle 4 above) and this is highlighted as being a particularly important principle. (**Principle 14**).

371. The Array is not located to 'avoid potential cumulative impacts by extending the width of arrays visible through extensions or additional wind farms'. (**Principle 19**).

1.3. Effects on the character and special qualities of the Isle of Anglesey National Landscape

372. The Applicant's comments miss the relevance of special qualities to certain locations and as a result dismiss the importance of impacts on these qualities. For example, in relation to impacts on 'expansive views' the Applicant states '*only those views from the northern coastline including the Irish Sea and the Mona Array Area would be affected*'[14]. Comments such as this are dismissive of the fact that a significant area of the coastline would be affected, as evidenced in the Applicant's ZTV and confirmed through observations on site.

[11] Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance Stage 2- Guidance on siting offshore windfarms Simon White, Simon Michaels and Helen King, White Consultants Report No 330

[12] Based on the ratio of 1:133 provided in the ready reckoner (Page 14). There is no low magnitude buffer identified for turbines with a height above 350m because this was the maximum height considered in the study (see Figure 3 and Table 1). However, even if using the buffer for turbines with a lower height than those proposed (44km for turbines 300-350m tall) then all three SDLs would still be within this buffer.

[13] Volume 6, Annex 8.5: International and nationally designated landscape study Table 1 [**APP-105**]

[14] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.8 [**PDA-011**]

373. Similarly dismissive comments are made in relation to the impacts at Point Lynas, where the Applicant states 'visibility of the Mona Array Area is limited to the tip and eastern side of this promontory. Other expansive views along this promontory would be unaffected'[15]. We do not consider this visibility to be limited or of little importance. n the contrary, the fact the development would be visible from the end of this promontory is important and relevant. This is an obvious destination and viewing point, marked by the landmark Grade II listed lighthouse and accessible via the Coast Path. The fact the Array would be visible along the entire eastern side of the promontory which is Open Access Land and in itself is an attraction, is also significant. Point Lynas is part of the Heritage Coast and is therefore recognised as a 'stretch of outstanding, unspoilt coastline'. Qualities derived from its outstanding coastal scenery and unspoilt coastline, including a sense of wildness and tranquillity, are easily appreciated from Point Lynas, and would be adversely impacted by the proposed Array.

374. When discussing the impacts of the Array on peace and tranquillity within the IoA NL, the Applicant states impacts would not be significant due to the distance of the Array (which we have addressed elsewhere in our comments) and '*the influence of sea-based infrastructure and activities (offshore wind farms, shipping) and the presence and influence of infrastructure on land (such as the Wylfa Nuclear Power Station)*'[16]. These comments are considered unhelpful as they are irrelevant to the majority of the IoA NL coastline affected by the Mona Array, for example:

- Wylfa is not visible from the majority of SLVIA viewpoints.
- Existing offshore wind farms are either not visible from or have a negligible impact on the majority of SLVIA viewpoints.
- Shipping is an inherently maritime and transient activity. It does not justify the type and degree of harm which would be caused by the Mona Array.

1.4. Effects on the settings of nationally designated landscapes

375. We disagree with assertions made by the Applicant and consider a number of these relate to why the Applicant has underestimated adverse effects on SDLs. For example, the Applicant asserts that '*the Mona Array, at distances of approximately 29 km and greater, and in 'open sea' would have almost no relationship to the coastal landscape and coastal landscape features*'[17]. We disagree and advise the development would be a new and obvious focal point within views from coastal locations and would have a demonstrable relationship with the coastal landscape. For example:

376. At elevated viewpoints inland such as VP 1: Mynydd y Garn trig point (Figures 1.1 - 1.2) [**APP-106**] and VP 26: Yr Arwydd trig point, near Mynydd Bodafon (Figures 22.1 - 22.2) [**APP-108**] the distance within the horizontal field of view between the development and the coastline would appear small, and there would be a clear relationship between views of the coastline and the development. At both locations, the turbines would be seen in the context of an extensive tract of coastline which demonstrates coastal features such as the Traeth Dulas Estuary, and qualities for which the designation exists to conserve.

[15] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.8 (**PDA-011**)
[16] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.9 (**PDA-011**)
[17] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.25 first bullet (**PDA-011**)

377. Closer to the coastline at viewpoints such as VP 2: Llanlleiana Head (Figures 2.1 - 2.2) [**APP-106**], VP 4: Bwrdd Arthur trig point (Figures 4.1 - 4.2) [**APP-106**], VP 24: Bull Bay, Amlwch (Figures 20.1 - 20.2) [**APP-108**], and VP 55: Trwyn Eilian (Point Lynas) (Figures 44.1 - 44.2) [**APP-111**], the turbines would be seen from and in the context of the coastal edge. At these locations the relationship between the coastal landscape and the sea is immediate and strong. The turbines would harm the scenic and perceptual qualities of the coastal landscape in these areas being an obvious detractor and focal point in views offshore.

378. In relation to the settings of nationally designated landscapes the Applicant states 'When viewed from the coast the overriding influences on the intervening seascape character are the existing numerous offshore wind turbines and the large commercial shipping vessels that use these waters'[18]. We disagree and advise these comments do not accurately reflect the character of the seascape setting to the affected parts of the IoA NL, where the overriding influence on the intervening seascape is the sea and an absence of any fixed development, as illustrated in the Applicant's baseline viewpoint photographs from VPs 1-4, VPs 24-28, and VP 55 [**APP 102** & **APP 103**].

379. Regarding the influence of 'commercial shipping vessels' on the visual amenity of views and seascape character, we advise such vessels are typically seen low on the horizon and are either temporarily static (awaiting the pilot) or are moving slowly. Whereas the large scale and height of the turbines, their fixed position, and rotation of their blades means they are a more obvious detractor, and one which is not an inherently maritime feature.

380. The Applicant concludes 'the Applicant's position is that the Mona Offshore Wind Project would have little if any effect on the setting of the Isle of Anglesey NL, the Eryri NP and the Clwydian Range and Dee Valley NL'[19]. We disagree and advise that the development would result in significant harm to the setting of the IoA NL, because of:

- The importance of the seascape setting to the character and qualities of the IoA NL;
- The prominence of the Mona Array within that setting;
- Its contrast with the inherent qualities of that setting; and,
- The importance of those qualities to the experience of the IoA NL.

1.5. Effects of the Mona Offshore Wind Project on visual receptors using the Wales Coast Path

381. SLVIA viewpoints on the Wales Coast Path within the IoA NL are:

- Viewpoint 2: Llanlleiana Head (APP-106)
- Viewpoint 24: Bull Bay, Amlwch (APP-108)
- Viewpoint 25: Moelfre Headland (APP-108)
- Viewpoint 28: Penmon Point (APP-108)
- Viewpoint 55: Trwyn Eilian (Point Lynas) (APP-111)

[18] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.25 (**PDA-011**)
[19] Applicant's Response to NRW's Relevant Representations Paragraph 1.2.2.27 (**PDA-011**)

382. The Applicant concludes 'Although it is acknowledged that adverse visual effects would be experienced by people at these viewpoints and by these receptor groups the Applicant found that no significant effects on people's views and visual amenity would be experienced, **primarily due to distance of the Mona Array from the land**'[20] (our emphasis). For the reasons outlined elsewhere in our advice, we disagree. The Applicant considers that the distance is significant and sufficient to ensure there would be no significant adverse impacts. We advise that when considering the size of the proposed turbines (364m blade tip height), the distance offshore is not significant, nor is it sufficient to avoid:

- The turbines being an obvious feature within views.
- Impacting on identified qualities sought to be protected by the NL designation (e.g. scenic qualities and perceptual qualities such as a sense of wildness and tranquillity).
- Undermining the experience of those qualities for visitors to the NL.

1.6. Combined and sequential cumulative effects experienced by users of the Wales Coast Path

383. Although the heading of this section refers to sequential cumulative effects, these effects are not addressed. In relation to the combined effect at different viewpoints, the Applicant states *'The combined effect attributable to the addition of the Mona Array at these distances, given the context and prevailing atmospheric conditions, from the nationally designated landscapes would not noticeably increase any effects already caused by Awel y Môr, which retains its prominent position in relation to the national landscapes…'.*[21] We disagree and advise that at viewpoints such as VP 28: Penmon Point, turbines in the Mona Array and those in Awel-y-Môr would be seen in the same views, and appear close together, with each extending the horizontal field of view affected by the other. We note the SLVIA which supported the Awel-y-Môr application concluded that turbines within Awel-y-Môr would have a Major-Moderate adverse (significant) visual effect at this location[22].

384. Elsewhere on Anglesey, for example at VP 3: Mynydd Eilian (Figure 47), the turbines within the separate developments would appear similar in size, being significantly larger than any other development in view, and the gap between the two developments would appear small. The Mona Array would occupy a larger field of view compared with Awel-y-Môr and in combination large scale offshore wind turbine development would be seen across a substantial horizontal field of view in a location where offshore views are currently unaffected by development; with Walney too far to significantly affect views. We advise that at locations such as VPs 28 and 3, the combined cumulative effect would be greater than the effect of either the Mona Array or Awel-y-Môr in isolation and would be significant.

1.7. Relevant Representation – paragraphs 3.1.1.7 to 3.1.1.9

[20] Applicant's Response to NRW's Relevant Representations Paragraph 1.3.2.9 (**PDA-011**)
[21] Applicant's Response to NRW's Relevant Representations Paragraph 1.3.2.12 (**PDA-011**)
[22] Awel y Môr Offshore Wind Farm Category 6: Environmental Statement Volume 2, Chapter 10: Seascape, Landscape and Visual Impact Assessment Deadline 8 Date: 15 March 2023 Revision: D Document Reference: 8.67 Application Reference: 6.2.10, Table 20: Summary of effects

385. It is clear from the Applicant's Response[23] they do not consider it necessary to make any changes to the proposed development because their SLVIA has not identified any significant effects, other than a '*potentially significant cumulative effects … for the special quality entitled tranquillity and solitude – peaceful areas in Eryri National Park*'. We also assume it is the Applicant's position that, for the same reasons, they do not consider it necessary to provide any offsetting/enhancement measures.

386. A fundamental difference therefore between our position and the Applicant's position, is we consider the Mona Array would cause significant adverse effects on the IoA NL and the ENP whereas the Applicant does not. If the Applicant cannot mitigate these effects, they should provide offsetting/enhancement measures. Opportunities to enhance designated landscapes are encouraged by the WNMP but no proposals for enhancement are included. Enhancements represent compensation and/or offsetting and not mitigation for adverse effects, as any enhancements would not be directly related to the impacts. Notwithstanding this, if DCO consent is to be granted, we consider that a proportionate enhancement scheme for the IoA NL and ENP should be provided to compensate for the adverse effects of the Mona Array on these nationally important landscapes.

1.8. Isle of Anglesey National Landscape

- ***IoA NL – Effects on Views and Visual Amenity***

387. At its closest point the Mona Array is located approximately 29km northeast of the IoA NL (Trwyn Eilian (Point Lynas)). Comments below relate to the Mona Array as the proposed substation would not be visible from the IoA NL.

388. The Crown Estate lease for the Mona Array is 60 years. Whilst the '*design life of the Mona Offshore Wind Project is likely to be 35 years*'[24] repowering/replacing the turbines within the 60-year lease period is reasonably likely. The impacts discussed in our comments are therefore long term.

389. The SLVIA includes the following representative viewpoints (VP) within the IoA NL:

- VP 1: Mynydd y Garn trig point (Figures 1.1 - 1.2) [**APP-106**]
- VP 2: Llanlleiana Head (Figures 2.1 - 2.2) [**APP-106**]
- VP 3: Mynydd Eilian (Figures 3.1 - 3.2 and Figure 47) [**APP-106 and APP-112**]
- VP 4: Bwrdd Arthur trig point (Figures 4.1 - 4.2) [**APP-106**]
- VP 24: Bull Bay, Amlwch (Figures 20.1 - 20.2) [**APP-108**]
- VP 25: Moelfre Headland (Figures 21.1 - 21.2) [**APP-108**]
- VP 26: Yr Arwydd trig point, near Mynydd Bodafon (Figures 22.1 - 22.2) [**APP-108**]
- VP 28: Penmon Point (Figures 24.1 - 24.2 and Figure 56) [**APP-108 and APP-112**]
- VP 55: Trwyn Eilian (Point Lynas) (Figures 44.1 - 44.2) [**APP-111**]
- VP 57: Trwyn Cemlyn (Figures 46.1 - 46.2) [**APP-111**]

390. Visual receptors (people who will be affected by changes to their views and visual amenity) at all of the above viewpoints are assessed within the SLVIA as having high

[23] Applicant's Response to NRW's Relevant Representations Paragraphs 1.4.2.1 – 1.4.2.9 (**PDA-011**)
[24] Volume 1, Chapter 1: Introduction and overarching glossary Paragraph 1.4.1.2 (**APP-048**).

sensitivity to the proposed development. We advise people at these locations have the highest level of sensitivity, which is 'very high' within the SLVIA. Receptors at these locations will be particularly interested in their surroundings, being on the Isle of Anglesey Coastal Path and/or at a particular viewpoint such as Trwyn Eilian (Point Lynas). All are within an area designated for its natural beauty.

391. For example, VP 2 Llanlleiana Head is located:

- On a locally and nationally promoted route (The Isle of Anglesey Coast Path & Wales Coast Path);
- Within an area of Open Access Land;
- Within the Dinas Gynfor Hillfort Scheduled Monument;
- Within an area of Heritage Coast (stretches of outstanding, unspoilt coastline set up to protect coastlines from insensitive developments and to encourage and help the public to enjoy, understand and appreciate these areas.);
- Within an Area of Outstanding Natural Beauty / National Landscape (designated for the purpose of conserving and enhancing the natural beauty of the area); and,
- The current view, as described in the SLVIA is an '*attractive seascape view* [which] *is wild and natural in character*'[25].

392. People at this location – and on the preceding sections of the coast path – will be very interested in views of their surroundings, and in particular views of the coast and sea, which are an important contribution to their experience of this particular National Landscape. Despite these factors, the SLVIA downgrades the sensitivity of people at this location, assessing it as high rather than very high. Following concerns raised in our comments at PEIR, it remains unclear why the SLVIA has downgraded sensitivity on receptors such as those at VP 2.

393. The underestimation of sensitivity within the SLVIA has implications for the conclusions of effect. The SLVIA considers that effects with '*a significance level of substantial or major*' are deemed significant in EIA terms[26]. According to the SLVIA methodology[27], an effect will considered to be substantial or major, and therefore be deemed significant, if there is:

- A large (the largest category) magnitude of impact on a receptor with a high or very high sensitivity, or
- A medium magnitude of impact on a receptor with a very high sensitivity.

394. Therefore, if it is accepted that receptors at e.g. VP 2 Llanlleiana Head have high rather than very high sensitivity, then according to the SLVIA methodology the only way in which those receptors would experience a significant effect is if the magnitude of change were 'large', which is defined in the SLVIA as a: '*Total loss, or/very substantial loss or addition of key elements/features/patterns of the baseline (i.e. pre-development seascape/landscape) and/or introduction of dominant, uncharacteristic elements*

[25] Volume 6: Annex 8.3: Visual Baseline Technical Report – Offshore Development, Page 11 (**APP-101**)
[26] Volume 6, Annex 8.4: Seascape, landscape and Visual Resources Impact Assessment Methodology, Page 29 (**APP-104**).
[27] Volume 6, Annex 8.4: Seascape, landscape and Visual Resources Impact Assessment Methodology, Table 1.14 (**APP-104**).

compared to the attributes of the receiving seascape/landscape'. We advise this threshold is too high and it has distorted the conclusions of the SLVIA.

395. Furthermore, we question the threshold of significance (set in the SLVIA as either major or substantial) when the SLVIA defines a moderate effect as:

- '*Where proposed changes would be demonstrably out of scale or at variance with the character of an area'.*
- *'Where proposed changes to views would be demonstrably out of scale or at variance with the existing view'.*

396. These changes should be considered potentially significant, at least, when they occur in relation to a National Park or National Landscape. That is why, in most SLVIAs, moderate is considered to be potentially significant, and is often considered to be significant when the receptor relates to a designated landscape.

397. At all of the viewpoints above, the SLVIA concludes that during the operational phase the magnitude of change would either be negligible or small. This results in a '**negligible to minor adverse**' effect on receptors at VP 1: Mynydd y Garn trig point and VP 57: Trwyn Cemlyn, and a '**minor to moderate**' adverse effect on receptors at all other viewpoints listed above.

398. We disagree with these conclusions and consider that the magnitude of change at all viewpoints is expected to be at least small and, in some places, medium. We advise that for offshore turbines with a blade tip height of 364m, an average low magnitude of change is typically expected to occur up to approximately 48.4km distance[28]. All SLVIA viewpoints above are within this distance. Combined with a high sensitivity receptor, a small magnitude of change is expected to result in an effect of 'moderate' significance, which we advise is potentially significant. Furthermore, a medium magnitude of change is typically expected to occur up to approximately 36.4km distance[29]. The following SLVIA viewpoints are within this distance[30]:

- VP 2: Llanlleiana Head (**33.8km**)
- VP 3: Mynydd Eilian (**31km**)
- VP 24: Bull Bay, Amlwch (**31.9km**)
- VP 25: Moelfre Headland (**33.2km**)
- VP 26: Yr Arwydd trig point, near Mynydd Bodafon (**36.4km**)
- VP 28: Penmon Point (**35.2km**)
- VP 55: Trwyn Eilian (Point Lynas) (**29.1km**)
- Other viewpoints such as VP 4 Bwrdd Arthur trig point (**36.6km**) are also close to this distance.

[28] Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance Stage 1- Ready reckoner of visual effects related to turbine size Simon White, Simon Michaels and Helen King, White Consultants Report No 315

[29] Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance Stage 1- Ready reckoner of visual effects related to turbine size Simon White, Simon Michaels and Helen King, White Consultants Report No 315

[30] Distances as stated on the Applicant's visualisations.

399. We advise a medium magnitude of change is likely to result in an effect of 'major-moderate' significance on high sensitivity receptors within a National Landscape. Research and guidance indicate that major-moderate is classified as significant in the vast majority of SLVIAs.

400. Whilst the above is intended to be used as a guide, we advise that in the case of this application, the guidance is considered to be accurate. At the locations above (VPs 2-4, 24-26, 28, 55) the magnitude of change is expected to be medium and the effect of the Mona Array would be **moderate/major adverse** and, in our opinion, significant.

401. At the more distant viewpoints within the IoA NL (VP 1: Mynydd y Garn trig point (**42.4km**) and VP 57: Trwyn Cemlyn (**39km**)) we consider the magnitude of change would be at least small and the overall effect would be **moderate adverse** and, in our opinion, potentially significant.

1.9. IoA NL – Effects on Landscape/Seascape Character

402. In comments on the PEIR, we raised concerns about the omission from the SLVIA of local landscape/seascape receptors. The final SLVIA continues to use National Landscape and Seascape Character Areas as receptors and therefore provides only a high-level assessment of landscape/seascape effects. Whilst studies such as the Anglesey Landscape Strategy, 2011 and Anglesey Seascape Character Assessment, 2013[31], are referenced in the SLVIA, they are not receptors and it is not clear how – if at all - the review of these documents has informed an understanding of the various character areas along the Anglesey Coast, their characteristics and special qualities, and the impacts on these. Problems arising from omitting an assessment against local baseline studies include:

- Key characteristics and qualities within those areas and the impact on these are unreported.
- Judgements on the geographical extent of impacts distort conclusions because they are based on the geographical extent of a national character area, which covers a substantial area drawn at a national scale.

403. The SLVIA assesses the sensitivity of National Landscape Character Area (NLCA) 1 Anglesey Coast as medium to high. The magnitude of change during operation is assessed as 'negligible to small' and the overall effect is reported as '**minor adverse at most**'. The SLVIA justifies the negligible/small magnitude of change by stating that except for parts of the north coastline of NCLA 01, '*The remainder of this coastal landscape of this NLCA will be scarcely affected*'[32]. We advise that whilst geographical extent is relevant, it is only one of several considerations with others including the 'size or scale' of the change to the character and qualities within those parts of the landscape that would be affected. Placing great weight on the proportion / geographical extent of impacts on a receptor, when that receptor is a National Landscape Character Area (or designated landscape), will inevitably lead to the effects being described as minor. Few if any scheme would have a significant effect for the majority of a National Landscape

[31] Anglesey Seascape Character Assessment, 2013 Prepared by Fiona Fyfe Associates, with Countryscape and Bangor University on behalf of the Isle of Anglesey Council.
[32] Volume 2, Chapter 8: Seascape and visual resources Paragraph 8.8.2.63 (**APP-060**)

Character Area given these typically relate to substantial geographical areas, identified at a national scale.

404. Notwithstanding the above, we advise the geographical extent of impacts along the Anglesey coastline is large. This is evident in the zone of theoretical visibility (ZTV) analysis, which shows visibility across a large geographical area (Figure A.4 (**APP-060**)) and is evident from the number and wide distribution of viewpoints along the coast.

405. The relationship between land and sea is integral to the character of NCLA 01, and as described in the NCLA profile '*The area's strongest identity comes from the varying expression of the relationship of the sea to the land*..'[33]. This relationship, and the importance of coastal views, are described in greater detail within the Anglesey Seascape Character Assessment, 2013, which divides the north coast of Anglesey into 5 unique Seascape Character Areas (SCAs). These areas consist of both terrestrial and marine parts, and are described as '*geographically-distinct areas with a unique sense of place*'[34]. The 5 SCAs are:

- SCA 5: Penmon
- SCA 6: Red Wharf Bay to Moelfre
- SCA 7: Dulas Bay
- SCA 8: Amlwch and Cemaes
- SCA 9: Cemlyn Bay

406. The SCA descriptions provide additional information to the NCLA description, and highlight specific characteristics, qualities, and sensitivities which are relevant to the assessment of the Mona Array. For example:

407. **SCA 5: Penmon** – the description highlights valued aspects such as the Grade II* listed Trwyn Du Lighthouse, and the area's remote and wild qualities. It specifically highlights '*panoramic, open views over the sea*' and where these contrast with '*the enclosed feel of the land*'. Long views seaward to the north and the lack of existing development are highlighted as inherent sensitivities. These aspects – as they relate to the coast at Penmon - are not specifically highlighted in the NCLA description. Yet the proposed Array would adversely impact on these aspects. The photomontage from VP 28: Penmon Point (Figures 24.1 - 24.2 and Figure 56 (**APP-106**) illustrates how the Mona Array would erode the area's wild qualities by introducing a large development into an area of the sea which is currently undeveloped. This change would be seen directly behind the Lighthouse at a location where views of the Lighthouse and panoramic views over the sea are particularly valued by visitors.

408. **SCA 7: Dulas Bay** – the description highlights the importance of the Traeth Dulas Estuary, which is not highlighted in the NLCA description. The Applicant's photomontage from Viewpoint 26: Yr Arwydd trig point (Figures 22.1 - 22.2) (**APP-108**) illustrates how the Mona Array would adversely impact upon the character of views towards the Estuary by introducing a large-scale detractor within the visual setting of the Estuary, with similar impacts also expected to be experienced from locations at/closer to the Estuary itself.

[33] NLCA01 Anglesey Coast - Page 3
[34] Anglesey Seascape Character Assessment, 2013 Prepared by Fiona Fyfe Associates Paragraph 1.2

409. **SCA 8: Amlwch and Cemaes** – the description highlights valued aspects including the open views seawards to the north, the wild qualities of the rocky coast and seascape, and the sense of remoteness and wildness particularly in areas of coastal heath. The Applicant's photomontage from VP 2: Llanlleiana Head (Figures 2.1 - 2.2) (**APP-106**) is taken from an area of coastal heath, and in this area and the adjoining sections of the coast path, the coast has strong perceptual qualities of wildness, remoteness and tranquillity. These qualities are in part due to the emptiness of the seascape setting. The Array would introduce an obvious large-scale development within that setting, eroding the aforementioned qualities.

410. The description of SCA 8 also draws attention to the Grade II listed Lighthouse, which sits at the end of Trwyn Eilian (Point Lynas). This is a popular location with visitors seeking coastal views and the sense of wildness and exposure on the promontory. At this location the offshore horizon is empty and panoramic views across the open sea strengthen the sense of exposure and wildness and underpin the relationship of this location to the sea. The Applicant's photomontage from VP 55: Trwyn Eilian (Point Lynas) (Figures 44.1 - 44.2) (**APP-111**) shows the field of view impacted would be wide, and the development would detract from the scenic and perceptual qualities at this location.

411. Seascape character along the north coast of Anglesey varies, and is most sensitive within those areas which correspond with the IoA NL designation, and where views of the sea and/or coastal features contribute to the area's unique sense of place. The magnitude of change to scenic and perceptual characteristics within each SCA will vary, but will be greatest where the Array would adversely impact upon valued aspects such as those highlighted above. At such locations, we consider the magnitude of change to characteristics of the SCAs would be medium and the effect up to **moderate/major adverse** and significant. For the avoidance of doubt, we consider impacts on scenic and perceptual characteristics of the IoA NL coastline would extend to a greater number of locations than the examples given above.

1.10. IoA NL – Special Qualities

412. The SLVIA assesses the impact of the Array on two of the IoA NL's special qualities: 'expansive views' and 'peace and tranquillity'. The first special quality should read 'expansive views/seascapes'[35]. The SLVIA considers that both special qualities are of 'high value'. We advise that special qualities of a nationally designated landscape should be afforded the highest value within an SLVIA, which in this case is very high. The overall sensitivity of these qualities is assessed within the SLVIA as high.

413. The SLVIA considers the Array would result in a 'negligible to small' magnitude of change to these qualities, resulting in a **minor to moderate adverse** effect. The magnitude of change judgement is reasoned '*Due to the distance to the Mona Array Area, and the geographic extent of the effects, being largely confined primarily to the northeast coastline of the NL overlooking the Irish Sea*'.[36]

[35] Ynys Môn Isle of Anglesey Area of Outstanding Natural Beauty Management Plan 2023-2028 Page 7
[36] Volume 6, Annex 8.5: International and nationally designated landscape study Paragraph 1.7.6.11 and Paragraph 1.7.6.14 (**APP-105**)

414. We do not agree that the distance is significant when considering the size of the proposed turbines (364m) nor that the geographic extent is insignificant, as the Array would impact on key viewpoints along the entire northern coastline of the IoA NL. Sea views are the key focus in the predominantly coastal AONB, many of which are currently empty and unimpeded by development. The scale and nature of the Array would make it noticeable and would focus attention on it, detracting from the area's expansive seascape views and sense of peace and tranquillity. The effects on views, and scenic and perceptual aspects of the seascape are reported above, and these relate directly to the identified special qualities of the IoA NL. For the reasons set out above, we consider these qualities would be harmed by the proposed Array.

415. Although the special qualities of 'Islands around Anglesey' and the 'Public rights of way network' were referenced in our PEIR comments, these are scoped out of the SLVIA. It is understood the Applicant scoped out 'Islands' because they considered that '*The Mona Offshore Wind Project would not directly affect the fabric of the islands (30 no.) and their physical link between the landscape and seascape of Anglesey*' and therefore '*There would be no change to this special quality*'. We advise the special quality of islands is not confined to the fabric of the islands or any physical link, but it also relates to the contribution the islands make to the scenic and perceptual qualities of the designation. In some locations, for example at VP 24, the Mona Array would be seen in the context of island(s) (Ynys Amlwch), where it would detract from the scenic quality of views towards the island.

416. Dark skies within the IoA NL contribute to the special quality of peace and tranquillity. The SLVIA considers aviation warning lights on the turbines would '*be barely visible or not visible at all and therefore there is no potential for significant nighttime effects on the special qualities*'[37]. Based on our experience of reviewing similar schemes, we consider aviation warning lighting is expected to be visible from the northern coast of Anglesey and the impact on dark skies would not be negligible.

1.11. Eryri National Park

- ***Eryri National Park – Effects on Views and Visual Amenity***

417. The SLVIA includes the following representative VPs within ENP[38]:

- VP 6: Carnedd Llewelyn (50.7km) (Figures 6.1 - 6.2 and Figure 48) [**APP-106**]
- VP 29: Base of Moel Wnion (45.5km) (Figures 25.1 - 25.2) [**APP-108**]
- VP 30: Garreg Fawr (42.1km) (Figures 26.1 - 26.2) [**APP-108**]
- VP 31: Tal y Fan, summit (42km) (Figures 27.1 - 27.2) [**APP-108**]
- VP 32: Foel Lus, summit (38.5km) (Figures 28.1 - 28.2) [**APP-109**]
- VP 33: Conwy Mountain, summit (36.7km) (Figures 29.1 - 29.2) [**APP-109**]

418. Visual receptors at all but VP 6 are assessed within the SLVIA as having high sensitivity to the proposed development. Visual receptors at VP 6 are assessed as very high sensitivity. See comments above. We advise that people on promoted routes such as the Wales Coast Path or Cambrian Way within a designated landscape have the

[37] Volume 6, Annex 8.5: International and nationally designated landscape study Paragraph 1.7.6.11 and Paragraph 1.7.8.2 (**APP-105**)
[38] Distances in brackets are from the Mona Array, as provided on Applicant's photomontages.

highest levels of sensitivity to changes to their views and visual amenity. Where lower levels of sensitivity are identified, the reasoning for this should be clear. But this is not clear from the SLVIA. In our comments on the PEIR, we advised this information should be added to the summary tables in Volume 6: Annex 8.3: Visual Baseline Technical Report – Offshore Development [**APP-101**] but this information has not been added.

419. Except for VP 33: Conwy Mountain, the SLVIA concludes that at all viewpoints within ENP the magnitude of change to the views and visual amenity of people would be 'negligible'. Resulting in a **minor adverse** effect on receptors at VP 6: Carnedd Llewelyn and a **negligible to minor adverse** effect at VPs 29-32. At VP 33: Conwy Mountain, the SLVIA considers the magnitude of change would be small, resulting in a **minor to moderate adverse** effect on people's views and visual amenity.

420. We advise the magnitude of change at the above viewpoints would be small, except for VP 6 where it would be slightly reduced compared with those VPs closer to the Array, and slightly greater (medium) at VP 33 on account of the closer proximity to the Array and the nature of views at this location. We consider the effect at VP 6 would be **minor/moderate adverse**, at VPs 29-32 the effect would be **moderate adverse** and potentially significant, and at VP 33 it would be **moderate/major adverse** and significant.

- ***Eryri National Park – Effects on Landscape/Seascape Character***

421. As outlined in our comments above, the SLVIA has opted to carry out an assessment only against high level landscape/seascape receptors, e.g., the NCLAs. Furthermore, it has determined there is '*no potential to experience significant effects*' on any NCLAs beyond 30km of the Array and therefore scopes out all NCLAs on the mainland except for NLCA 08 Arfordir Gogledd Cymru / North Wales Coast. This is despite eight of the SLVIA viewpoints being located within NCLA 06 Eryri (Snowdonia). The approach taken means the effects of the Mona Array on landscape character within the ENP is not reported in the SLVIA.

422. Within Supplementary Planning Guidance 07 *Landscapes and Seascape of Eryri* prepared by the ENP Authority, all of the SLVIA VPs above - except VP 6 - are located within LCA 1: Ucheldir y Gogledd. The ZTV[39] indicates visibility of the turbines across this mountain landscape, including on the summits of Tal Y Fan, Moel Wnion, Drosgl, and Conwy Mountain. The description of LCA 1 highlights a number of key characteristics which are susceptible to change as a result of the Mona Array. Key characteristics are '*those combinations of elements which help to give an area its distinctive sense of place. If these characteristics change, or are lost, there would be significant consequences for the current character of the landscape*'[40]. These include[41]:

- *'Long views north across the coastline, out to sea and to the Isle of Anglesey'.*
- *'A highly tranquil, remote landscape with few modern intrusions and a pervading 'wilderness' quality associated with the mountains'.*

[39] Figure A.4 (**APP-060**)
[40] An Approach to Landscape Character Assessment October 2014, Natural England Page 51
[41] SPG 07 Landscapes and Seascape of Eryri prepared by the ENP Authority Page 21

423. A specific 'force for change affecting landscape character' is 'Offshore wind turbines visible from the LCA impacting on the tranquillity and remoteness of the landscape'[42]. This detailed information has not been considered in the SLVIA for the Mona Array but we advise the proposed development would:

- Adversely impact on the long views north across the coastline and out to sea by introducing an obvious detractor into these views.
- Adversely impact on the sense of tranquillity and 'wilderness' qualities associated with the mountains by introducing an additional 'modern intrusion' into views.
- Exacerbate the existing impact of offshore wind turbines on these valued aspects.

424. At locations within LCA 1: Ucheldir y Gogledd, such as the summit of Tal y Fan, we consider the magnitude of change to characteristics of the LCA would be small and the effect **moderate** adverse.

- ***Eryri National Park – Special Qualities***

425. The SLVIA only assesses the impact of the Array on one of the ENP's special qualities: '*tranquillity and solitude – peaceful areas'*. The SLVIA considers this special quality is of 'high value' and high sensitivity. We advise that special qualities of a nationally designated landscape should be afforded the highest value and sensitivity within an SLVIA, which in this case is very high. The SLVIA considers the Array would result in a 'negligible' magnitude of change to this quality, resulting in a **negligible to minor adverse** effect.

426. The magnitude of change judgement is reasoned 'This reflects the short term and reversible nature of the effects and the scale of the change in views which will diminish with increasing distance from the Mona Array Area.[43] Considering the lease is for 60 years, we do not agree the effects would be short term. The scale of change in views would diminish with distance, as it would for any development anywhere. More importantly, however, the scale of change would be significant at locations which have high sensitivity to the type of change being proposed.

427. Although the special quality of 'Diverse Landscapes' was referenced in the PEIR and our comments on it, this quality has been scoped out of the SLVIA. It is understood the Applicant scoped out this quality because they consider that '*The Mona Offshore Wind Project would not affect the fabric of the diverse landscapes'* and therefore '*There would be no change to this special quality*'[44]. We advise this special quality is not confined to the fabric of the landscape but also relates to the character of the ENP and how it is perceived and experienced by people. The full title of the quality is the '*Diverse, high-quality landscapes and seascapes within a small geographic area, ranging from coast to rolling uplands to rugged mountains for which Eryri is famed*' and the description refers to evidence such as the ENP being '*named the most beautiful National Park in Europe'*.[45]

[42] SPG 07 Landscapes and Seascape of Eryri prepared by the ENP Authority Page 22
[43] Volume 6, Annex 8.5: International and nationally designated landscape study Paragraph 1.7.6.11 and Paragraph 1.7.18.3 (**APP-105**)
[44] Volume 6, Annex 8.5: International and nationally designated landscape study Table 1.12 (**APP-105**)
[45] Cynllun Eryri The ENP Partnership Plan 2020 Page 29

428. The effects on views, and scenic and perceptual aspects of the landscape are reported above, and these relate directly to the identified special qualities of the ENP. For the reasons set out above, we consider these qualities would be harmed by the proposed Array.

1.12. Clwydian Range and Dee Valley National Landscape – Mona Array

429. SLVIA viewpoints within the CRDV NL used for the assessment of the Mona Array are:

- Viewpoint 10: Graig Fawr (42.3km) (Figures 10.1 - 10.2 and Figure 50) [**APP-107 and APP-112**]
- Viewpoint 11 – Moel y Parc (54.1km) (Figures 11.1 – 11.2) [**APP-107**]
- Viewpoint 39: Prestatyn Hillside, Offa's Dyke Path / public footpath 405/12 (Figures 35.1 - 35.2) [**APP-110**]
- Viewpoint 54: Bridleway north of Golden Grove (43.6km) (Figures 43.1 - 43.2) [**APP-111**]

430. Receptors at all viewpoints except VP 39 are assessed as high sensitivity (see comments above). Receptors at VP 39 are assessed as having very high sensitivity. The magnitude of change is assessed in the SLIVA as negligible at all viewpoints. The overall effects reported in the SLVIA are **negligible to minor adverse** at VPs 10 and 11, **minor adverse** at VP 39, and **negligible** at VP 54.

431. We advise that at all four viewpoints the proposed turbines would be seen behind – and in the gaps between - existing turbines within the 'North Wales offshore wind farm cluster'. Due to its location 'behind' the cluster of existing offshore wind farms, the Mona Array is unlikely to result in any significant landscape or visual effects within the CRDV NL, but non-significant adverse effects would occur. In particular, the relationship between the proposed turbines and existing turbines is expected to result in:

- An increase in issues such as 'stacking' (blade overlap) and overall visual clutter within views of the sea.
- Intensify the developed character of the seascape off the north coast of Wales in contrast to the inherent natural beauty of the CRDV NL.
- Differences in turbine size may distort perspective and a sense of distance, with the more distant turbines (Mona) appearing bigger than those which are closer.
- Differences in blade size and rotation speed may appear jarring.

1.13. Clwydian Range and Dee Valley National Landscape – Onshore Substation

432. The proposed Onshore Substation is a substantial project with the MDS providing a maximum footprint for the substation of 6.5 hectares and a maximum impermeable footprint of 4.2 hectares. The maximum building dimensions will be 80m wide, 140m long and 15m high, with an 8m wide permanent access road up to 800m in length. The MDS for the substation construction compound is 15 hectares and it is expected to take up to 33 months to construct. Approximately 5.8 hectares of woodland planting is proposed in proximity to the Onshore Substation and 715 m of hedgerow enhancements.

The expected lifetime of the Onshore Substation is up to 50 years, although it is noted the lifespan of some components can be extended beyond this period.

433. SLVIA viewpoints within the CRDV NL used for the assessment of the Onshore Substation are:

- VP 11 – Offa's Dyke Path, south of Moel Maenefa (Figures 21–22) [**APP-158**]
- VP 12 – Offa's Dyke Path, south of Pen-y-Mynydd (Figures 23–24) [**APP-158**]
- VP 18 – Graig Fawr summit (Figures 35–36) [**APP-159**]
- VP 19 – Offa's Dyke Path / public footpath 405/12, Prestatyn hillside (Figures 37–38) [**APP-159**]

434. Views from these locations currently provide an outlook across a predominantly rural and attractive landscape, which provides a sympathetic and coherent setting to the NL and Offa's Dyke Path (National Trail). The substation would be visible within this rural context. Receptors at this location will take an interest in the view towards the substation as the mountains of Eryri are visible in the distant background.

435. Offa's Dyke Path is referenced as a component of the CRDV NL's special qualities (under access, recreation and tourism)[46]. SPG Policies relevant to this quality include ensuring the attractiveness of the NL's landscape and views as a primary basis for the areas tourism are retained. Safeguarding panoramic views and tranquillity are also referenced under the landscape character special quality.

436. Receptors at all viewpoints except VP 18 are assessed in the SLVIA as having very high sensitivity. Receptors at VP 18 are assessed as having high sensitivity. The magnitude of change is assessed in the SLIVA as negligible at all viewpoints. The overall effects are reported in the SLVIA as **minor adverse** at VPs 11, 12, and 19, and **negligible to minor adverse** at VP 18. In relation to VPs 11 and 12 the Applicant states '*As the new planting becomes established, it would not alter the predicted visual effect in the longer term, as this is an elevated view, but would enhance the character of the view and soften views of the substation*'[47]. Similar comments are made in relation to the visual impact at VP 18.

437. We agree it would be difficult to screen the substation entirely in views from Offa's Dyke Path at VPs 11, 12 and 19, and at summits such as Graig Fawr, due to these locations being considerably more elevated than the substation site. Detailed design measures, including colour selection for built elements will therefore be an important consideration and we note the intention for substation buildings to be finished in recessive colours (as set out in the Design Principles document [**APP-189**]). Although planting is unlikely to screen the substation in its entirety, new woodland planting around the proposed substation, as illustrated on the Illustrative Landscape and Ecology Strategy Plan within the LEMP [**APP-208**], will help to integrate the development into its landscape setting – particularly when recessive darker hues / materials are used for the substation buildings and components. In combination, these measures should ensure that any effects on the visual amenity of people within the CRDV NL, and on the character and special qualities of the CRDV NL are not significant.

[46] Section 4, Supplementary Planning Guidance Note Clwydian Range and Dee Valley AONB, 2018
[47] Volume 3, Chapter 6: Landscape and visual resources Paragraph 6.11.2.124 (**APP-069**)

1.14. Cumulative Effects

438. At viewpoints with the IoA NL, the Mona Array is not expected to result in any significant cumulative effects in combination with the existing North Wales offshore wind farm cluster. This is due to (inter alia) the distance of separation between visual receptors within the IoA NL and the existing cluster, and the height of turbines within that cluster.

439. There would be a significant increase in the influence of offshore wind turbine development on the north coasts of Anglesey from the combination of the Mona Array and the consented Awel-y-Môr development. For example, at VP: 28 Penmon Point (Figure 56) [**APP-112**] the gap between the Mona Array and Awel-y-Môr would be small, with each development extending the horizontal field of view affected by the other. Elsewhere, for example at VP 3: summit of Mynydd Eilian (Figure 47) [**APP-112**], the gap between the two developments would appear small and offshore wind turbine development would be seen across a large horizontal field of view in a location where offshore views are unaffected by development. We advise that at locations such as VPs 28 and 3, the cumulative visual effect, and the cumulative effect on scenic and perceptual characteristics and qualities of the IoA NL, would be greater than the effect of the Mona Array in isolation, and would be significant. Such effects would affect the same special qualities of the NL affected by Awel-y-Môr, i.e. Mona would exacerbate harm to the special qualities harmed by Awel-y-Môr.

440. We consider that incremental change would be noticeable from viewpoints in ENP such as at Vp 33 (Conwy Mountain summit), where the gap between Mona and the North Wales offshore wind farm cluster would appear small due to viewing angles. The Mona Array would extent the field of view affected by offshore wind turbines. The addition of Awel-y-Môr in closer proximity and the extension of the portion of view affected by Mona means significant cumulative visual effects would be experienced by receptors within ENP. Cumulative effects on scenic and perceptual characteristics and qualities of the ENP, resulting from Mona and Awel-y-Môr in combination, would be greater than the effect of the Mona Array in isolation, and would be significant. Mona would exacerbate harm to the same special qualities harmed by Awel-y-Môr.

441. At locations within the Clwydian Range and Dee Valley AONB, such as VP 39 from Offa's Dyke, the Mona Array would be seen behind the North Wales offshore wind farm cluster, appearing as a wider extension to it, with Awel-y-Môr also visible behind and infilling gaps. There would be an increase in effect, but it is unlikely to be significant.

442. We advise that the proposal would 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. As a result of both the Mona and Awel-y-Môr schemes in combination, people will have to travel ever further west along the north coast of Wales – and in effect to the western coast of Anglesey - to be afforded coastal views unaffected by large scale offshore wind turbine development. It is relevant to note that approval has also been given to the Morlais tidal energy scheme, and it was acknowledged as part of that consenting that it would have a significant adverse effect on another part of the IoA NL; the northwest coast of Holy Island.

Annex C – Fish and Shellfish Ecology Further Detail

"The extent of suitable habitat for cod spawning", "The short term and intermittent nature of the impact" and "Reversibility" [RR-011.41, PDA-008]

443. Populations of cod, a section 7 species under the Environment (Wales) Act 2016, are known to reside in the Irish Sea. Most of the Irish Sea population remain within area, demonstrate limited mixing with neighbouring populations, and the population is understood to be severely depleted. It is also known that cod spawning takes place in and around the proposed Mona project area - this is indicated by the density maps provided within the application documentation. Whilst we agree with the Applicant that suitable cod habitat exists across the Irish Sea, the spawning and nursery maps presented (e.g. figure 1.4 in APP-089) show areas of 'hotspots' i.e., the spawning and nursery locations for the species are not evenly distributed and spawning intensity differs across the region. There is a hotspot for adult cod in the vicinity of the proposed works shown by modelled density maps (Campanella and Van der Kooij, 2021) and a juvenile presence in the area during both cod spawning Quarter 1 (February to April) and Quarter 4 (September to December).

444. NRW (A) agrees that uncertainty exists within the spawning and nursery grounds data, however the lack of a hard boundary around the data does not necessarily mean that spawning grounds are being over-represented. Equally an under-representation could exist, should areas that are important be misinterpreted or not surveyed.

445. It is understood that most Irish Sea cod remain within the Irish Sea management area (International Council for the Exploration of the Sea [ICES] area 7a), with a high site fidelity reported (Fox et al. 2000). A study by Neat et al. (2014) which tagged and released cod within their management sections and followed their movements, showed limited mixing between stocks, with Irish sea stocks having a restricted feeding and spawning range compared to other stocks around the UK. This therefore highlights the importance of this site for cod spawning and should therefore be considered on a more precautionary basis.

446. Recruitment in 2023 of Cod in ICES section 7a (Irish sea) was 896,000 individuals (95% confidence interval of 0-2,337,000), the lowest ever recorded (ICES, 2024). Disturbance from the Mona project during the sensitive spawning period covering over 20% of the spawning ground for cod, could significantly impact the recruitment of the species in each of the two piling years, which will slow or prevent the recovery of the cod population which is already much depleted in the Irish Sea.

447. ICES have advised a zero Total Allowable Catch (TAC) for 2024, based on precautionary considerations (ICES, 2024). A stock recovery plan for the species has been in place since 2002, with a recovery plan implemented in 2003. Zero catches have been advised for 18 of the 23 years since then. This demonstrates the sensitivity of the species and the long recovery rates for the population as a whole.

448. Cod are hearing specialists, possess anatomical adaptations for hearing, are known to be sensitive to both sound pressure and particle motion (Popper et al. 2019). They display complex courtship and mating behaviour during the spawning season, in which sound and hearing play a pivotal role in finding and attracting mates (Kasumyan, 2009). During the breeding season males protect and defend individual territories (leks) and

produce ‘grunts’ and other noises produced by the swim bladder which attract females. Spawning is dependent on female choice in response to the males vocal and behavioural courtship displays.

449. Anthropogenic noise impacts have been shown to affect larval and juvenile growth and survival. It has been demonstrated that chronic noise exposure in cod during spawning can result in a significant reduction in total egg production and fertilisation rates, reducing the total production of viable embryos by over 50% (Sierra-Flores et al. 2015). Studies have shown that exposure to regular anthropogenic noise results in cod larvae using their yolk sac faster, with lower body width-length ratios, and were easier to catch in predator avoidance experiments than the control fish (Nedelec et al. 2015).

450. In addition, fish are likely to be more impacted by external stressors during spawning as they tend to be at their poorest body condition during this time. Catch rates of spawning cod are known to be higher than at other times of the year (De Jong et al. 2020). Stressed mates initiate fewer courtships (Morgan et al. 1999), which could result in a further impact to the population. As demonstrated by these studies, the additional stress placed on the population in their spawning habitat from underwater noise as part of the proposed development could severely impact the growth of the cod population.

451. Irish sea cod are known to stay within a limited area displaying minimal mixing with other nearby stocks (Fox et al. 2000). The impact of piling noise predicting to cover more than 20% of the high intensity spawning grounds over two spawning seasons could impact the success of the cohorts (affecting number and health of offspring produced), with impacts on the overall fitness of the population.

452. The Cod population in the Irish Sea is in poor condition and vulnerable to disturbance impacts, therefore further impacts to spawning such as introduction of anthropogenic noise are likely to prevent or slow recovery to sustainable population levels.

453. NRW (A) does not agree with the Applicant that a duration of 114 days for predicted piling over a 2-year period can be considered an intermittent impact. Although the noise produced is temporary in nature, the impact is not, with the potential to directly affect two years/ two spawning cohorts of the species, with indirect impacts for subsequent cohorts.

454. Taking into consideration both the spawning behaviour exhibited by cod, and their known hearing sensitivity and vulnerability to anthropogenic noise, we consider the current approach presented by the Applicant is not sufficiently precautionary to fully assess the impacts of underwater noise to cod.

Annex D – Marine Licensing Deemed Marine Licence Comments

	Development Consent Order Part 1	
1	**Interpretation** Natural Resources Wales - means the body acting on behalf of the Welsh Ministers pursuant to powers under the 2009 Act or any successor of that function and "NRW" must be construed accordingly	The definition currently refers to NRW's role as Licensing Authority in relation to the Marine Licence. However, within the draft DCO, NRW is used to refer to its wider function including as a statutory advisor on the environment E.g. Part 3 16(5) (8), schedule 1 Part 2, 5, 7, 9, 12, 13(2), 18 (1). We question whether an organisation like NRW needs a definition. But if a definition is to be used, we would suggest 'NRW' means Natural Resources Wales.
2	Within the updated draft DCO (PDA-004) Reference to Mean High Water Springs has been amended to Mean High Water Schedule 14 definition – MHW.	The correct reference is MHWS, consistent with terminology in the MACAA 2009 (see section 66(4) and s42 for the definition of Marine Licensable area) In addition, the definition within Schedule 14 deemed Marine Licence should refer to MHWS rather than MHW when referring to the licensable area and activities.
3	Commence; in relation to works seaward of MLW, the first carrying out of any licensed marine activities authorised by the deemed marine licence, save for pre-construction surveys and monitoring, and unexploded ordnance surveys and clearance of unexploded ordnance authorised under the deemed marine licence;	See section 4.5 of Written Representation.
	Schedule 14 deemed Marine Licence - Reference	**Comment**
4	Definition "commence" means the first carrying out of any licensed marine activities, save for pre-	See section 4.5 of written representation.

	construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of unexploded ordnance, and "commenced" and "commencement" must be construed accordingly	
5	Definition – Co-ordinates - all coordinates are latitude and longitude degrees and minutes to two decimal places.	These have now been correctly provided in decimal degrees in Table 3, however the definition incorrectly refers to co-ordinates as provided in degrees and minutes to two decimal places.
6	Para. 7 The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence apply only to a transfer not falling within article 7 (benefit of order) of the Order.	See section 4.3 of written representation.
7	Table 4	We welcome a number of additional parameters have been included following our Relevant Representation (RR-011). We would however request that the maximum volume of scour protection is broken down to detail both the maximum volume of scour protection for the platforms, and the total volume of scour protection for the generators, rather than a single combined total.
8	Para. 11 (3) An operations and maintenance plan in accordance with the outline operations and maintenance plan must be submitted to and approved by the licensing authority in writing at least four months prior to commencement of the operation of licensed activities and be provided for review and	As currently written requires both the submission and approval 4 months prior to commencement. Please amend; An operations and maintenance plan in accordance with the outline operations and maintenance plan must be submitted to the Licensing Authority for approval in writing at least four months prior to commencement of the operation of licensed activities and be provided for

	resubmission every three years during the operational phase. Maintenance must be carried out in accordance with the approved plans.	review and resubmission every three years during the operational phase. Maintenance must be carried out in accordance with the approved plans.
9	Para. 12 Any time period given in this Marine Licence to either the undertaker or NRW may be extended with the agreement of the other party, such agreement not to be unreasonably withheld or delayed.	See section 4.7 of Written Representation in relation to requirement 19(2). We consider that this should be amended to; Any time period given in the Marine Licence may be extended with the agreement of the Licensing Authority.
10	Para. 16 (2) The undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.	Within the Applicant's response to our Relevant Representation (PDA-008) the Applicant confirmed that the EA pollution prevention control guidelines have been withdrawn and will liaise with NRW MLT on an alternative text. We would suggest the following; *The undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with best environmental practice*.
11	Para. 17 (2) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost within the Order limits, the undertaker must report the loss in writing to the licencing authority and the MEO within 48 hours and if the licencing authority, in consultation with the MEO, reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must, in that event, demonstrate to the licencing authority that reasonable attempts have been made to locate, remove or move any such material.	We request that 17 (2) is amended, that the undertaker must report the loss to the Licensing Authority, MEO, Trinity House and the MCA. The condition does not need to specify that consultation will take place with the MEO. The condition should also be amended that the undertaker must locate the material and recover it at its own expense unless otherwise approved by the Licensing Authority. A similar requirement was used within the Hornsea 4 deemed Marine Licence Schedule 12 Part 2 condition 12 (2) In addition, "if reasonable to do so" should be removed. NRW MLT in

		performing its function would be expected to act reasonably.
12	Para. 17 (3) All dropped objects must be notified to NRW in accordance with the dropped objects plan. On receipt of a notice NRW may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and if reasonable to do so NRW may require obstructions to be removed from the seabed at the undertaker's expense.	We maintain the comments provided within our Relevant Representation (RR-011). This condition should be amended to provide that the undertaken must locate the material and recover it at its own expense unless otherwise approved by Licensing Authority. In addition, "if reasonable to do so" should be removed. NRW MLT in performing its function would be expected to act reasonably.
13	Para. 17 (1) If, due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to NRW, the MEO, Trinity House and the Maritime and Coastguard Agency.	This condition should also be amended to include; (2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the Licensing Authority.
14	Para. 18 (1) No part of the authorised scheme may commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by NRW, in consultation with the relevant statutory nature conservation body Trinity House and the MCA as appropriate	The Response to Relevant Representation (PDA-008) highlights which plan and documents are usually approved in consultation with different consultees. However, within condition 18 reference to consultees remains unclear. We would also note that the list remains incomplete, JNCC have been included, however other Statutory Nature Conservation Bodies including NRW Advisory and Natural England have not.

		We maintain that we do not consider it necessary to list the consultation bodies within this condition, reference to specific consultation bodies can be removed. It will be a matter for NRW MLT as to who it consults under the specific circumstances.
15	Para 18 (4) Para. 19 (2) , para 20 (3), para 21 (3) NRW must determine an application for approval made under condition x within period of four months commencing on the date the application is received by NRW, unless otherwise agreed in writing with the undertaker.	We consider this should be removed. See section 4.7 of the Written Representation.
16	Para. 21(5) Subject to sub-paragraph (6), an unexploded ordnance close-out report must be submitted to the licensing authority and the JNCC within three months following the end of the unexploded ordnance clearance activity and must include the following for each detonation undertaken	We note that reference to Statutory Nature Conservation Bodies within this condition has been amended in the most recent drafting to JNCC. We consider that the close out report may be relevant to other statutory nature conservation bodies including NRW A and NE. However, we maintain that we do not consider it necessary to list the consultation bodies within this condition as detailed in row 14. However, if consultation bodies are included it would appear that some relevant bodies have been omitted.
17	Para. 26.—(5) The undertaker must carry out the monitoring agreed under sub-paragraph (1) and provide the agreed reports to the licensing authority in the agreed format in accordance within four months of completion of the reports, unless otherwise agreed in writing with the licensing	Following review, we would suggest that this is reverted back, so that the reports are submitted in line with the agreed timetable which will be agreed as part of approval of the offshore monitoring plan. As above we note that reference to Statutory Nature Conservation Bodies within this condition has been amended in the most recent drafting to JNCC. We

	authority in consultation with JNCC.	consider that the monitoring report may be relevant to other consultees including NRW A and NE.
18		We maintain our previous comments and as discussed in section 4.6 of Written Representation. We require a Compliance Report to be submitted for approval prior to commencement of any licensable activity. The compliance report should identify all relevant Plans and monitoring which is applicable to associated works.