

From: [Griffiths, Bryn](#)
To: [Wylfa Newydd](#)
Cc: [Wylfa Newydd DCO; Energy Island](#)
Subject: Natural Resources Wales: Deadline 2 submission - Wylfa Newydd Nuclear Power Station (Our ref: 20011606)
Date: 04 December 2018 11:45:39
Attachments: [2018.12.04 NRW - Written Representation - 20011606.pdf](#)

Deadline 2 submission, including Written Representations and Response to ExA Questions : Cyfoeth Naturiol Cymru (CNC) / Natural Resources Wales (NRW) – Our ref: 20011606

Dear Kay Sully,

Thank you for sending the Rule 8 letter (dated 6/11/2018) for NRW's attention.

Please see attached NRW's deadline 2 submission which includes the following information:

- NRW's Written Representations;
- NRW's response to the Examining Authority's Questions;
- Statement of Common Ground tables;
- NRW's advice on the 'Blasting and Vessel Movement Change Requests' consultation.

If you need any further information then please get in touch.

Many thanks

Bryn

Bryn Griffiths

Uwch Gyngorydd Cynllunio Datblygu / Senior Development Planning Adviser
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Yn falch o arwain y ffordd at ddyfodol gwell i Gymru trwy reoli'r amgylchedd ac adnoddau naturiol yn gynaliadwy.

Proud to be leading the way to a better future for Wales by managing the environment and natural resources sustainably.

Croesewir gohebiaeth yn y Gymraeg a'r Saesneg / Correspondence welcomed in both Welsh and English.

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4th December 2018

Er sylw / For the attention of: Ms Kay Sully

Annwyl / Dear Madam,

**GORSAF BŴER NIWCLEAR ARFAETHEDIG WYLFA NEWYDD / PROPOSED
WYLFA NEWYDD NUCLEAR POWER STATION**

**CYFEIRNOD YR AROLYGIAETH GYNLLUNIO / PLANNING INSPECTORATE
REFERENCE: EN10007**

EIN CYFEIRNOD / OUR REFERENCE: 20011606

**PARTHED: CYFLWYNIAD YSGRIFENEDIG CYFOETH NATURIOL CYMRU AR
GYFER DYDDIAD CAU 2**

RE: NATURAL RESOURCES WALES' WRITTEN SUBMISSION FOR DEADLINE 2

Diolch am eich llythyr Rheol 8, dyddiedig 6 Tachwedd 2018, sy'n gofyn am sylwadau gan Cyfoeth Naturiol Cymru ynglŷn â'r uchod.

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

- a) Sylwadau Ysgrifenedig – gweler [Atodiad A](#).
- b) Ymateb i Gwestiynau'r Archwiliwr – gweler [Atodiad B](#)
- c) Datganiad Tir Cyffredin drafft gyda'r Ymgeisydd – gweler [Atodiad C](#).
- d) Sylwadau ynglŷn â'r Ceisiadau i Newid y Chwythellu a Symud Llongau – gweler [Atodiad D](#).

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

Mae ein sylwadau'n cael eu cyflwyno heb ragfarnu unrhyw sylwadau eraill efallai y byddwn yn dymuno eu gwneud mewn perthynas â'r cais a'r archwiliad hwn, boed hynny mewn perthynas â'r Datganiad Amgylcheddol, darpariaethau'r Gorchymyn Caniatâd Datblygu a'i ofynion, Datganiadau Tir Cyffredin, neu dystiolaeth a dogfennau

eraill a ddarperir gan Horizon Nuclear Power ('yr Ymgeisydd'), y Corff Archwilio neu unrhyw bartion eraill a chanddynt fuddiant.

Yn Atodiad A, rydym yn darparu ein Sylwadau Ysgrifenedig gan gynnwys crynodeb byr.

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

Yn Atodiad C, rydym yn darparu copi o'r Datganiad Tir Cyffredin drafft rhwng Cyfoeth Naturiol Cymru a'r Ymgeisydd, Horizon Nuclear Power (HNP). Byddwn yn parhau i ddarparu cyngor i'r Ymgeisydd gyda'r nod o sicrhau cymaint o faterion y cytunir arnynt a thir cyffredin â phosibl cyn Dyddiad Cau 5 ar gyfer derbyn Datganiadau Tir Cyffredin wedi'u diweddarau.

Yn Atodiad D, rydym yn darparu copi o sylwadau Cyfoeth Naturiol Cymru ynglŷn â'r Ceisiadau i Newid y Chwythellu a Symud Llongau y gwnaeth yr Ymgeisydd ymgynghori â Cyfoeth Naturiol Cymru yn eu cylch rhwng 5 a 28 Medi 2018, ac a gafodd eu cyflwyno i'r Awdurdod Archwilio ar 17 Hydref 2018.

Er mwyn osgoi unrhyw amheuaeth, mae Cyfoeth Naturiol Cymru yn darparu sylwadau (yn ôl dymuniad Llythyr Rheol 8 yr Awdurdod Archwilio) ar ddogfennau ychwanegol a gyflwynwyd gan yr ymgeisydd mewn ymateb i gyngor Adran 51 o fewn ei Sylwadau Ysgrifenedig.

Yn ogystal â bod yn barti a chanddo fuddiant o dan Ddeddf Cynllunio 2008, mae Cyfoeth Naturiol Cymru'n arfer swyddogaethau dan ddeddfwriaeth benodol, gan gynnwys (ond nid yn gyfyngedig i) Rheoliadau Trwyddedu Amgylcheddol (Cymru a Lloegr) 2016 (fel y'u diwygiwyd), Deddf Adnoddau Dŵr 1991, a Deddf y Môr a Mynediad i'r Arfordir 2009. Mae Cyfoeth Naturiol Cymru wedi derbyn ceisiadau am Drwydded Amgylcheddol Gollwng Dŵr Adeiladu, Trwydded Amgylcheddol Gollwng Dŵr Gweithredol, Trwydded Gosodiadau Hylosgi, ac mewn perthynas â Rheoliadau Sylweddau Ymbelydrol o dan y Rheoliadau Trwyddedu Amgylcheddol 2016 (fel y'u diwygiwyd), a chais am Drwydded Forol o dan Ddeddf y Môr a Mynediad i'r Arfordir 2009. Yn ogystal, mae Cyfoeth Naturiol Cymru yn disgwyl cais am Drwydded Tynnu Dŵr gan yr ymgeisydd o dan Ddeddf Adnoddau Dŵr 1991. Mae Gwasanaeth Trwyddedu Cyfoeth Naturiol Cymru yn disgwyl i Horizon gyflwyno nifer o geisiadau am drwyddedau ar gyfer safleoedd datblygu cysylltiedig yn y dyfodol. At ddibenion eglurder, mae sylwadau gan Dîm Trwyddedu Cyfoeth Naturiol Cymru yn dwyn yr enw hwn ac maent wedi'u nodi fel rhan o sylwadau 2.1 – 2.4 o Atodiad A; mae'r holl sylwadau eraill yn ymwneud â rôl ymgynghorol Cyfoeth Naturiol Cymru.

Mae croeso i chi gysylltu â Bryn Griffiths os oes angen rhagor o gyngor neu wybodaeth arnoch ynglŷn â'r sylwadau hyn.

Thank you for your Rule 8 letter, dated 6 November 2018, requesting Cyfoeth Naturiol Cymru / Natural Resources Wales' comments regarding the above.

This letter comprises the following submission from NRW:

- e) Written Representation – see [Annex A](#).
- f) Response to Examiner's Questions – see [Annex B](#).
- g) Draft Statement of Common Ground with the Applicant – see [Annex C](#).
- h) Comments on the Blasting and Vessel Movement Change Requests – 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), provisions of the draft Development Consent Order ('DCO') and its Requirements, Statements of Common Ground (SoCG) or other evidence and documents provided by Horizon Nuclear Power ('the Applicant'), the Examining Body or other interested parties.

In Annex A we provide our Written Representation including a brief summary.

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

In Annex C we provide a copy of the draft Statement of Common Ground (SoCG) between NRW and the Applicant Horizon Nuclear Power (HNP). We shall continue to provide advice to the Applicant with the aim of reaching as many positions of agreement and common ground as possible prior to Deadline 5 for the receipt of updated SoCGs.

In Annex D we provide a copy of NRW's comments on the Blasting and Vessel Movement Change Requests on which the Applicant consulted NRW between 5th – 28th September 2018, and which was submitted to the Examining Authority on 17/10/2018.

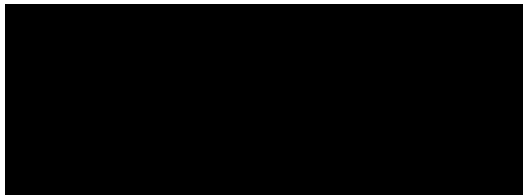
For the avoidance of doubt, NRW provide comments (as requested in the Examining Authority's Rule 8 letter) on additional documents submitted by the Applicant in response to Section 51 advice within its Written Representations.

In addition to being an interested party under the Planning Act 2008, NRW exercises functions under legislation including (but not limited to) the Environmental Permitting (England and Wales) Regulations 2016 (as amended), Water Resources Act 1991 and Marine and Coastal Access Act 2009. NRW has received applications for a Construction Water Discharge Environmental Permit, Operational Water Discharge Environmental Permit, Operational Combustion Installations Permit, and Radioactive Substances Activity Permit under the Environmental Permitting Regulations 2016 (as amended), and a Marine Licence application under the Marine and Coastal Access Act 2009. NRW is also expecting an Abstraction Licence application from the Applicant

under the Water Resources Act 1991. NRW's Permitting Service also expect Horizon to submit a number of permit applications for associated development sites in future. For the purpose of clarity, comments from NRW Permitting Service are titled as such and are produced in comments 2.1 – 2.4 of Annex A; all other comments pertain to NRW's advisory role.

Please do not hesitate to contact Bryn Griffiths should you require further advice or information regarding these representations.

Yn gywir / Yours sincerely



Rhian Jardine
Head of Development Planning and Marine Services
Natural Resources Wales

[CONTINUED]

ANNEX A

NATURAL RESOURCES WALES' WRITTEN REPRESENTATIONS

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1. CRYNODEB / SUMMARY

- 1.1 Mae Cyfoeth Naturiol Cymru yn darparu'r sylwadau isod ar y cais am Orchymyn Caniatâd Datblygu, sy'n cynnwys crynodeb o'n pryderon yn yr adran hon wedi'i ddilyn gan ein sylwadau manwl, fel y'u hamlinellir yn y rhestr gynnwys uchod. Mae sylwadau ar brif safle Wylfa Newydd a'r datblygiad cysylltiedig wedi'u strwythuro yn unol â'r cyfeirnodau a ddefnyddiwyd yn y Datganiad Amgylcheddol ar Effeithiau Ledled y Prosiect (Cyfrol 6C), y Prif Safle (Cyfrol 6D) a'r Datblygiadau Cysylltiedig (Cyfrol E – H). Mae gan Cyfoeth Naturiol Cymru bryderon sylweddol ynghylch yr effeithiau a nodwyd yn 1.2 – 1.28 isod. Noder y bydd angen ystyried ein sylwadau manwl er mwyn deall cyngor Cyfoeth Naturiol Cymru mewn perthynas â'r cais am Orchymyn Caniatâd Datblygu.

- *Gorchymyn Caniatâd Datblygu Drafft*

- 1.2 Rydym yn nodi bod Gwasanaeth Trwyddedu Cyfoeth Naturiol Cymru wedi'i restru fel yr "*awdurdod cyflawni*" ar gyfer "*unrhyw ofynion sy'n gysylltiedig â thir o dan y Cymedr Penllanw Mawr a'r Gwaith Morol*". Ar hyn o bryd, nid oes gan Cyfoeth Naturiol Cymru unrhyw wrthwynebiadau i'r ffaith fod ei Wasanaeth Trwyddedu wedi cael ei nodi fel y gwasanaeth cyflawni sy'n gyfrifol am y gwaith morol, yn amodol ar gynnwys y gofynion ar gyfer adennill costau yn y Gorchymyn Caniatâd Datblygu. Byddwn yn parhau i weithio gyda'r ymgeisydd, Llywodraeth Cymru a Chyngor Sir Ynys Môn, i ystyried y dull arfaethedig ymhellach.
- 1.3 Rydym yn nodi bod nifer o ofynion Gorchymynion Caniatâd Datblygu yn cael eu rhestru yn Atodlen 3 o'r Gorchymyn Caniatâd Datblygu drafft, y bydd angen eu cyflawni gan yr awdurdod cyflawni. Ar gyfer nifer o'r gofynion hyn, rydym yn disgwyl i'r awdurdod cyflawni ymgynghori â Cyfoeth Naturiol Cymru yn ei rôl fel ymgynghorai statudol cyn cyflawni'r gofyniad o dan sylw.
- 1.4 Mae Cyfoeth Naturiol Cymru hefyd yn cynghori bod angen gofyniad ychwanegol i sicrhau bod Is-godau Ymarfer Adeiladu manwl a'r Cod Ymarfer Gweithredol (APP-421) yn cael eu cymeradwyo gan yr awdurdod cyflawni cyn i'r gweithgareddau perthnasol gael eu cynnal.

- *Rhwymedigaethau Cynllunio*

- 1.5 Mae Adran 7.4 o'r Datganiad Cynllunio (APP-406) yn darparu'r Penawdau Telerau arfaethedig ar gyfer y rhwymedigaethau cynllunio. Mae Cyfoeth Naturiol Cymru yn pryderu nad oes unrhyw Benawdau Telerau ar gyfer yr amgylchedd naturiol. Byddai Cyfoeth Naturiol Cymru yn gallu rhoi cyngor i'r ymgeisydd a'r awdurdod lleol mewn perthynas â'r agweddau ar yr amgylchedd naturiol, a ddylai gael eu hadlewyrchu yn y fersiwn derfynol o adran 106.

- *Cod Ymarfer Adeiladu a Cod Ymarfer Gweithredol*

- 1.6 Bwriad Cod Ymarfer Adeiladu Wylfa Newydd (APP-414), ynghyd ag Is-godau Ymarfer Adeiladu sy'n benodol i'r lleoliad, yw nodi sut caiff gweithgareddau adeiladu eu rheoli a'u rheoleiddio er mwyn cyflawni'r ymrwymïadau lliniaru sy'n codi o'r prosiect. Nid oes digon o fanylion yn yr Is-godau Ymarfer Adeiladu a gyflwynwyd i ddangos y bydd gweithgareddau adeiladu'n cael eu rheoli'n briodol. Mae sylwadau ysgrifenedig manwl Cyfoeth Naturiol Cymru yn nodi'r wybodaeth ychwanegol sydd ei hangen, ac a ddylai gael ei hamlinellu yn yr Is-godau Ymarfer Adeiladu manwl i ddangos nad yw'r effeithiau ar y derbynnydd penodol yn arwyddocaol.
- 1.7 Nod Cod Ymarfer Gweithredol Wylfa Newydd yw amlinellu sut y bydd gweithgareddau gweithredol yn cael eu rheoli a'u rheoleiddio er mwyn cyflawni'r ymrwymïadau lliniaru sy'n codi o'r prosiect. Nid oes digon o fanylion yn y Cod Ymarfer Gweithredol a gyflwynwyd. Mae sylwadau ysgrifenedig manwl Cyfoeth Naturiol Cymru yn nodi'r wybodaeth ychwanegol sydd ei hangen, ac a ddylai gael ei hamlinellu yn y Cod Ymarfer Gweithredol manwl i ddangos nad yw'r effeithiau ar y derbynnydd penodol yn arwyddocaol.
- 1.8 Mae Cyfoeth Naturiol Cymru yn nodi, os cyflwynir y Gorchymyn Caniatâd Datblygu, y bydd angen i'r Is-godau Ymarfer Adeiladu a'r Cod Ymarfer Gweithredol manwl gael eu cymeradwyo gan yr awdurdod cyflawni, mewn ymgynghoriad â Cyfoeth Naturiol Cymru, cyn i'r gweithgareddau perthnasol gael eu cynnal. Byddem yn disgwyl i hyn gael ei sicrhau fel gofyniad Gorchymyn Caniatâd Datblygu a fydd yn mynnu ychwanegiad at y gofynion fel y'u hamlinellir yn fersiwn gyfredol y Gorchymyn Caniatâd Datblygu drafft (APP-029).
- 1.9 Yn ogystal â'n sylw uchod, gan y dylid ystyried y fersiynau cyfredol o'r Cod Ymarfer Adeiladu, yr Is-godau Ymarfer Adeiladu a'r Cod Ymarfer Gweithredol yn ddogfennau amlinellol, dylai'r Gorchymyn Caniatâd Datblygu nodi'r wybodaeth ychwanegol a fydd yn cael ei darparu yn y fersiynau manwl (i'w cymeradwyo ar ôl derbyn caniatâd a chyn i'r gweithgareddau adeiladu perthnasol gael eu cynnal).

- *Prif Safle – Perygl Llifogydd*

- 1.10 Mae gan Cyfoeth Naturiol Cymru bryderon sylweddol y gallai'r prosiect, drwy ddiwygio a chynyddu dalgylchoedd ar brif safle Wylfa Newydd, beri perygl llifogydd annerbyniol i eiddo a/neu dir trydydd parti. Mae gan Cyfoeth Naturiol Cymru bryderon nad oes unrhyw fesurau lliniaru'n cael eu cyflwyno fel rhan o'r cais Gorchymyn Caniatâd Datblygu i ddangos y gall mesurau gael eu cyflawni i liniaru'r perygl llifogydd uwch. Mae Cyfoeth Naturiol Cymru yn disgwyl am wybodaeth bellach gan yr Ymgeisydd ynglŷn â'r pryderon hyn.

- *Prif Safle – Y Gyfarwydddeb Fframwaith Dŵr*

- 1.11 Mewn perthynas â Chorff Dŵr Arfordirol Ynysoedd y Moelrhoniaid, mae Cyfoeth Naturiol Cymru'n cytuno ag asesiad cydymffurfiaeth y Gyfarwydddeb Fframwaith Dŵr y gall elfen ansawdd amodau hydromorffolegol ddirywio.

Mae Cyfoeth Naturiol Cymru'n cynghori bod angen mwy o wybodaeth i ddangos na fyddai infertebratau benthig yn dirywio o ganlyniad i'r prosiect.

- 1.12 Mewn perthynas â Chorff Dŵr Arfordirol Gogledd Môn, mae Cyfoeth Naturiol Cymru'n cynghori bod angen mwy o wybodaeth i ddangos na fyddai prosiect Wylfa Newydd yn achosi i'r Corff Dŵr Arfordirol yma ddirywio.
- 1.13 Mewn perthynas â Chorff Dŵr Daear Eilaidd Ynys Môn, mae Cyfoeth Naturiol Cymru'n cytuno gyda chasgliad asesiad cydymffurfiaeth y Gyfarwydddeb Fframwaith Dŵr y gallai'r prosiect achosi dirywiad yng Nghorff Dŵr Daear Eilaidd Ynys Môn oherwydd dŵr heli'n llifo i mewn, ac oherwydd effeithiau elfen ansawdd yr Ecosystem Ddaearol sy'n Ddibynnol ar Ddŵr Daear.
- 1.14 Mewn perthynas ag adroddiad Gwybodaeth Erthygl 4(7), mae Cyfoeth Naturiol Cymru'n cynghori bod angen mwy o dystiolaeth i gefnogi'r wybodaeth a ddarperir ac i gyfiawnhau'r casgliadau a gafwyd yn y ddogfen ynghylch mesurau lliniaru, effeithiau amgylcheddol ac opsiynau gwahanol a gafodd eu hystyried.

- *Prif Safle – Dŵr Ymdrochi Cemaes*

- 1.15 Nid yw Cyfoeth Naturiol Cymru'n cytuno gyda'r casgliad "*na ragwelir unrhyw effeithiau ar y dŵr ymdrochi yng Nghemaes, ac yr ystyrir bod prosiect Wylfa Newydd yn cydymffurfio â'r Gyfarwydddeb Dŵr Ymdrochi*". Mae Cyfoeth Naturiol Cymru yn cynghori bod angen gwaith modelu pellach i ddangos a yw'n bosibl y bydd solidau mewn daliant a gollyngiadau carthffosiaeth i'r amgylchedd morol yn effeithio ar y dŵr ymdrochi yng Nghemaes.

- *Prif Safle – Ardal Gwarchodaeth Arbennig Morwenoliaid Ynys Môn*

- 1.16 Mae Cyfoeth Naturiol Cymru'n ystyried nad yw'r dystiolaeth a'r mesurau lliniaru a gyflwynir yn yr Asesiad Rheoliadau Cynefinoedd Cysgodol yn dangos na fydd aflonyddu (sŵn neu ysgogiadau gweledol) sy'n gysylltiedig â'r cyfnod adeiladu'n cael effeithiau niweidiol ar y poblogaethau o fôr-wenoliaid pigddu, môr-wenoliaid y Gogledd a môr-wenoliaid cyffredin yng nghytref Cemlyn. Mae Cyfoeth Naturiol Cymru o'r farn na ellir diystyru effeithiau negyddol ar yr Ardal Gwarchodaeth Arbennig. Mae Cyfoeth Naturiol Cymru'n ystyried nad oes modd diystyru'r effeithiau negyddol ar yr Ardal Gwarchodaeth Arbennig.
- 1.17 Mae Cyfoeth Naturiol Cymru yn cynghori nad oes modd gwybod a fydd prosiect Wylfa Newydd yn cael effaith negyddol ar gyfanrwydd AGA Morwenoliaid Ynys Môn ac y byddai angen diwygio'r prosiect yn unol â hynny fel bod modd diystyru unrhyw effeithiau negyddol. Os na fydd hyn yn digwydd, bydd yn rhaid bodloni darpariaethau Rheoliad 64 Rheoliadau Cadwraeth Cynefinoedd a Rhywogaethau 2017 er mwyn rhoi caniatâd h.y. sef nad oes unrhyw atebion eraill a bod yn rhaid cynnal y prosiect am resymau gorfodol o fudd cyhoeddus trechol. Os yw'r awdurdod cymwys yn fodlon nad oes unrhyw atebion eraill a bod yn rhaid cynnal y prosiect am

resymau gorfodol o fudd cyhoeddus trechol, yna byddai angen sicrhau mesurau cydadferol.

- *Prif Safle – Ardal Cadwraeth Arbennig (ACA) Bae Cemlyn*

- 1.18 Mae Cyfoeth Naturiol Cymru o'r farn fod angen rhagor o wybodaeth i ddangos nad effeithir ar Forlyn Cemlyn, un o nodweddion yr ACA, gan effeithiau ansawdd dŵr oherwydd dŵr wyneb ffo o Dwmpath E.
- 1.19 Mae Cyfoeth Naturiol Cymru'n cynghori y gallai Esgair Gemlyn, sy'n hanfodol i weithrediad y morlyn ac wrth gefnogi llystyfiant y gefnen raeon (nodwedd arall o'r ACA), gael ei heffeithio gan newidiadau mewn prosesau morol o ganlyniad i'r gwaith morol. Mae angen mwy o wybodaeth o ran modelu prosesau arfordirol i ddeall a allai'r gwaith morol achosi effaith negyddol ar Esgair Gemlyn.

- *Prif Safle – Safle o Ddiddordeb Gwyddonol Arbennig (SoDdGA)*

- 1.20 Yn seiliedig ar y Datganiad Amgylcheddol ac atodiadau ategol y Datganiad Amgylcheddol, mae Cyfoeth Naturiol Cymru yn cynghori y bydd y gwaith arfaethedig yn debygol o effeithio ar weithrediad y SoDdGA yn sylweddol a'i fod yn debygol o ddifrodi nodweddion y SoDdGA. Mae Cyfoeth Naturiol Cymru yn nodi y cynigir creu ffeniau i ddarparu cynefin cydadferol am yr hyn a fydd yn debygol o gael ei golli o'r SoDdGA. Fodd bynnag, cynghorodd Cyfoeth Naturiol Cymru yr Ymgeisydd yn ein hymatebion Adran 42 y dylid ystyried yr holl opsiynau eraill a mesurau lliniaru rhesymol i leihau ac osgoi effeithiau ar y SoDdGA. Mae Cyfoeth Naturiol Cymru'n ystyried nad oes digon o ystyriaeth o fesurau lliniaru yn y Datganiad Amgylcheddol.
- 1.21 Nid yw Cyfoeth Naturiol Cymru yn cytuno â'r modelu hydrolegol cysyniadol yr ymgwymerwyd ag ef ac a ddefnyddiwyd i asesu effeithiau ar SoDdGA Tre'r Gôf. Mae'n seiliedig ar ragdybiaeth heb gefnogaeth fod dŵr daear bas a dwfn yn ymddwyn yn annibynnol ar ei gilydd. Nid yw'r dystiolaeth yn cefnogi hyn. Mae Cyfoeth Naturiol Cymru'n ystyried y dylai mesurau lliniaru ychwanegol gael eu sicrhau.

- *Prif Safle – Cynefin Cydadferol ar gyfer SoDdGA Tre'r Gôf*

- 1.22 Yn seiliedig ar yr wybodaeth a gyflwynir yn y Datganiad Amgylcheddol a gwybodaeth gefnogol, nid yw Cyfoeth Naturiol Cymru'n gallu dod i'r casgliad y bydd y pecyn cydadferol arfaethedig ar gyfer SoDdGA Tre'r Gôf yn cyflawni cynefin newydd sydd o faint neu ansawdd digonol. Ni ddarperir unrhyw wybodaeth waelodlin hydrolegol ar gyfer safleoedd cydadferol Cors Gwawr a Chae Canol-dydd yn y Datganiad Amgylcheddol, er y bydd yr wybodaeth hon yn hanfodol wrth lywio llwyddiant tebygol y cynefin cydadferol.

- *Prif Safle – Effeithiau Ansawdd Aer ar Safleoedd Wedi'u Dynodi*

1.23 Mae Cyfoeth Naturiol Cymru yn cyngori bod angen gwybodaeth ychwanegol i ddangos na fydd yr allyriadau a ragfynegir o ganlyniad i'r gwaith adeiladu yn peri difrod i SoDdGA Cae Gwyn.

1.24 Yn ystod y cyfnod gweithredol, bydd gweithfeydd hylosgi yn cael eu defnyddio fel generaduron wrth gefn, yn ystod profion arferol ac yn ystod y cyfnod comisiynu. Mae gan Cyfoeth Naturiol Cymru bryderon mewn perthynas â'r modelu ansawdd aer sy'n cael ei gynnal ar gyfer y gweithfeydd hylosgi. Bydd Cyfoeth Naturiol Cymru yn gallu rhoi ei gyngor llawn pan fydd y pryderon hyn wedi derbyn sylw a'r allbynnau diwygiedig wedi'u modelu wedi cael eu cyflwyno.

- *Prif Safle – Yr Amgylchedd Morol*

1.25 Nid ydym o'r farn fod gwybodaeth ddigonol wedi cael ei darparu yn y Datganiad Amgylcheddol am y mesurau arfaethedig i wella'r ecoleg forol i ddangos y bydd effeithiau ar gynefinoedd benthig yn cael eu cydbwysu.

- *Cyfleuster Parcio a Theithio (Dalar Hir) – Perygl Llifogydd*

1.26 Mae gan Cyfoeth Naturiol Cymru bryderon sylweddol y bydd y cynnig yn arwain at berygl llifogydd uwch sy'n annerbyniol. Ni ddarperir mesurau lliniaru afonol ac ni ddarperir tystiolaeth yn yr Asesiad Canlyniadau Llifogydd fod mesurau lliniaru ar gael a fyddai'n dangos cydymffurfiaeth â TAN15. Mae Cyfoeth Naturiol Cymru yn aros am wybodaeth ychwanegol gan yr ymgeisydd i ymdrin â'i bryderon.

- *Cyfleuster Parcio a Theithio (Dalar Hir) - Safleoedd o Ddiddordeb Gwyddonol Arbennig*

1.27 Cynhaliwyd asesiadau cyfyngedig o'r opsiynau trin carthion. Oherwydd bod y safle i fyny'r afon o SoDdGA Llyn Traffwill, mae gennym bryderon ynghylch maethynnau ychwanegol yn cael eu gollwng i'r cwrs dŵr.

- *Gwelliannau i Briffordd yr A5025 – Perygl Llifogydd*

1.28 Mae gan Cyfoeth Naturiol Cymru bryderon sylweddol y bydd y cynnig yn arwain at berygl llifogydd uwch sy'n annerbyniol. Mae'r pryderon hyn yn ymwneud â'r cynigion yn adran 1 (y Fali) ac adran 3 (Llanfachraeth). Mae Cyfoeth Naturiol Cymru yn aros am wybodaeth ychwanegol gan yr ymgeisydd i fynd i'r afael â'i bryderon.

1.1 NRW provide a summary in this section followed by our detailed comments on the DCO application, as set out in the contents list above. Comments on the Wylfa Newydd main site and the associated development are structured according to the reference used in the Environmental Statement on Project Wide Effects (Volume 6C), the Main Site (Volume 6D) and Associated

Developments (Volume E – H). NRW have significant concerns regarding the impacts identified in 1.2 – 1.28 below. Please note that our detailed comments should be considered in order to understand NRW's advice regarding the DCO application.

- *Draft Development Consent Order*

- 1.2 We note that NRW Permitting Service are listed as the “*discharging authority*” for “*any Requirements relating to land below the Mean High Water Springs and the Marine Works*”. NRW currently have no objection to NRW Permitting Service being identified as discharging authority for the marine works, subject to the inclusion of cost recovery requirements within the DCO. We will continue to work with the Applicant, Welsh Government and Isle of Anglesey County Council (“**IACC**”) to consider the proposed approach further.
- 1.3 We note that there are a number of DCO Requirements listed in Schedule 3 of the draft DCO which will need to be discharged by the discharging authority. For a number of these Requirements we expect the discharging authority to consult NRW in its statutory consultee role prior to discharging the Requirement in question.
- 1.4 NRW also advise that an additional Requirement is needed to ensure that detailed Sub-Codes of Construction Practices (CoCP), and the Code of Operational Practice (CoOP) (APP-421), are approved by the discharging authority ahead of the relevant activities taking place.

- *Planning Obligations*

- 1.5 Section 7.4 of the Planning Statement (APP-406) provides the proposed Heads of Terms for the planning obligations. NRW is concerned that there is no Heads of Terms for the Natural Environment. NRW would be able to advise the Applicant, and the local authority, in relation to the Natural Environment aspects which should be reflected in the final section 106.

- *Code of Construction Practice (CoCP) and Code of Operational Practice (CoOP)*

- 1.6 The Wylfa Newydd CoCP (APP-414), together with location-specific sub-CoCPs, are intended to set out how construction activities will be managed and controlled to deliver the mitigation commitments arising from the project. There is insufficient detail in the submitted Wylfa Newydd CoCP and the Sub-CoCPs to demonstrate that construction activities will be managed appropriately. NRW's detailed Written Representations identify the additional information required within the detailed Sub-CoCPs to demonstrate that impacts on the specific receptor are not significant.
- 1.7 The Wylfa Newydd CoOP is intended to set out how operational activities will be managed and controlled to deliver the mitigation commitments arising

from the project. There is insufficient detail in the submitted CoOP. NRW's detailed Written Representations identify the additional information required within the detailed CoOP to demonstrate that impacts on the specific receptor are not significant.

- 1.8 NRW advise that if the DCO is made, that detailed Sub-CoCPs and CoOP will need to be approved by the discharging authority, in consultation with NRW, ahead of the relevant activities taking place. We would expect this to be secured as a DCO Requirement which will require an addition to the Requirements as set out in the current version of the draft DCO (APP-029).
- 1.9 In addition to our comment above, as the current versions of the CoCP, Sub-CoCPs and CoOP should be considered as outline documents, the DCO should include reference to the additional information that will be provided in the detailed versions (to be approved post-consent and ahead of the relevant construction activities taking place).

- *Main Site – Flood Risk*

- 1.10 NRW has significant concerns that, through modifying and increasing catchment areas at the Wylfa Newydd main site, the project may cause unacceptable flood risk to third party property and/or land. NRW is concerned that no mitigation is presented as part of the DCO application to demonstrate that measures can be delivered to mitigate the increased flood risk. NRW is awaiting additional information from the Applicant to address its concerns.

- *Main Site – Water Framework Directive*

- 1.11 In relation to The Skerries coastal water body, NRW agrees with the conclusion of the WFD Compliance Assessment that the hydromorphological conditions quality element may deteriorate. NRW advises that further information is required to demonstrate that benthic invertebrates would not deteriorate as a result of the project.
- 1.12 In relation to Anglesey North coastal water body, NRW advise additional information is required to demonstrate whether the Wylfa Newydd project would result in deterioration of this coastal water body.
- 1.13 In relation to the Ynys Môn Secondary groundwater body, NRW agrees with the conclusion of the WFD Compliance Assessment that the project may cause a deterioration in the Ynys Môn Secondary groundwater body due to saline intrusion and impacts on the Groundwater Dependent Terrestrial Ecosystem (GWDTE) quality element.
- 1.14 In relation to the Article 4(7) Information report (APP-445). NRW advises that further evidence is needed to support the information provided and to justify the conclusions reached in the document regarding mitigation measures, environmental impacts and alternatives considered.

- *Main Site - Cemaes Bathing Water*

- 1.15 NRW does not agree with the conclusion that “*there are no effects predicted on the bathing water at Cemaes, and that the Wylfa Newydd Project is considered to be compliant with the Bathing Water Directive*”. NRW advises that further modelling is required to demonstrate whether elevated suspended solids and sewage discharges into the marine environment have the potential to affect Cemaes Bathing Water.

- *Main Site – Anglesey Terns Special Protection Area (SPA)*

- 1.16 NRW considers that the evidence and mitigation presented in the Shadow HRA does not demonstrate that disturbance (noise and visual stimuli) associated with the construction phase will not have adverse effects on the sandwich, arctic and common tern populations at the Cemlyn colony. NRW considers that adverse effects on the SPA cannot be ruled out.
- 1.17 In view of the above, NRW advise that the project would need to be modified accordingly so that any adverse effects can be ruled out. If not, for consent to be granted, regulation 64 of the Conservation of Habitats and Species Regulations 2017 must be satisfied i.e. it must be shown that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest. If the competent authority is satisfied that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest, then compensatory measures would need to be secured.

- *Main Site – Cemlyn Bay Special Area of Conservation (SAC)*

- 1.18 NRW advise that further information is required to demonstrate that Cemlyn Lagoon, one of the features of the SAC, will not be affected by impacts on water quality due to surface water run-off from Mound E.
- 1.19 NRW advise that Esgair Gemlyn shingle ridge, which is critical to the functioning of the lagoon and in supporting the shingle ridge vegetation (another feature of the SAC), may be affected by changes in coastal process as a result of the marine works. Further information is required with respect to coastal processes modelling to understand whether the marine works may cause an adverse effect on Esgair Gemlyn.

- *Main Site – Tre'r Gôf Site of Special Scientific Interest (SSSI)*

- 1.20 Based on the ES and supporting ES Appendices, NRW advises that the proposed works are likely to significantly affect the functioning of the SSSI and are likely to damage the SSSI features. NRW note that fen creation is proposed as SSSI compensation due to the likely damage to the SSSI. However, NRW advised the Applicant in its Section 42 responses that all reasonable alternatives and mitigation should be considered to reduce and

avoid effects on the SSSI. NRW consider that there is inadequate consideration of mitigation measures in the ES.

- 1.21 NRW does not agree with the conceptual hydrogeological modelling undertaken and used to assess impacts on Tre'r Gôf SSSI. It is based on an unsupported assumption that shallow and deep groundwater behave independently. The evidence does not support this. NRW consider that the dewatering has the potential to cause significant damage to the SSSI. NRW considers that further direct mitigation measures should be secured.

- *Main Site – Tre'r Gôf SSSI Compensation*

- 1.22 Based on the information presented in the ES and supporting information, NRW is not able to conclude that the proposed compensation package for Tre'r Gôf SSSI will deliver adequate quantity or quality of replacement habitat. No hydrological baseline information for the Cors Gwawr and Cae Canol-dydd compensation sites is provided in the ES; however, this information is critical in informing the likely success of the compensation.

- *Main Site – Air Quality Effects on Designated Sites*

- 1.23 NRW advise that additional information is required to demonstrate that the predicted emissions resulting from the construction works will not damage Cae Gwyn SSSI.
- 1.24 During the operational phase, combustion plant will be used as back-up generators during routine testing and the commissioning phase. NRW has concerns with regard to the air quality modelling undertaken for the combustion plant. NRW can give its full advice once these concerns have been addressed and the updated modelled outputs have been presented.

- *Main Site – Marine Environment*

- 1.25 We do not consider that sufficient information on proposed marine ecological enhancement measures has been presented in the ES to demonstrate that impacts on benthic habitats will be offset.

- *Park and Ride Facility (Dalar Hir) – Flood Risk*

- 1.26 NRW has significant concerns that this proposal will result in unacceptable increased flood risk. The fluvial mitigation measures are not provided and no evidence is provided in the Flood Consequence Assessment that measures are available that would demonstrate compliance with TAN15. NRW is awaiting additional information from the Applicant to address its concerns.

- *Park and Ride Facility (Dalar Hir) – Sites of Special Scientific Interest*

1.27 Limited assessment of the sewage treatment options has been carried out. As the site is upstream of Llyn Traffwll SSSI, we have concerns regarding additional nutrients discharging into the watercourse.

- *A5025 Offline Highway Improvements – Flood Risk*

1.28 NRW has significant concerns that the proposal will result in unacceptable increased flood risk. These concerns relate to the proposals at Section 1 (Valley) and section 3 (Llanfachraeth). NRW is awaiting additional information from the Applicant to address its concerns.

2. DRAFT DEVELOPMENT CONSENT ORDER

- *NRW Permitting Service comments*

2.1. We note that NRW Permitting Service are listed within the draft DCO (APP-029) as the “*discharging authority*” for “*any Requirements relating to land below the Mean High Water Springs and the Marine Works*”. The Applicant had not alerted us to this approach prior to the submission of the DCO and Marine Licence applications. However, we currently have no objection to NRW Permitting Service being identified as discharging authority for the marine works, subject to the inclusion of cost recovery requirements within the DCO. To ensure full cost recovery, NRW would expect paragraph 3 of Schedule 18 (Fees) to use the same fee structure that is used in the Marine Licensing regime: £120 per hour with no maximum fee (see <https://naturalresources.wales/permits-and-permissions/marine-licensing/marine-licence-fees/?lang=en>).

2.2. Given that NRW do not hold enforcement powers under the Marine and Coastal Access Act (2009) for the marine licensing regime (as these have been retained by Welsh Ministers) it would not be appropriate for NRW to be identified as the enforcement authority for the marine requirements.

2.3. As we did not have the opportunity to consider the drafting of the DCO from the perspective of acting as the discharging authority, we are not currently in a position to provide detailed commentary on the marine DCO requirements. We are undertaking this work and will provide comments in good time for consideration during the Examination.

2.4. We will continue to work with the Applicant, Welsh Government and Isle of Anglesey County Council (“**IACC**”) to consider the proposed approach further. We reserve the right to amend this position pending further detailed discussions with the Applicant and IACC, and the Welsh Government over the detailed drafting of the order and any necessary agreement over ways of working. Accepting responsibility for the discharging authority role for the Marine Works should not be seen to provide any view on the determination decision for the Marine Licence.

- *NRW Advisory comments*

- 2.5. NRW notes that Article 35(1) allows the Applicant to take temporary possession of “*any of the Order Land in respect of which no notice of entry has been served.*” NRW seeks clarification from the Applicant that they have carried out the environmental assessments to justify this wide-ranging power. If temporary works have not been assessed across the Order Land, the use of this power should be circumscribed, so that it only applies to those locations where temporary works **have** been assessed. NRW notes that the limitation contained in Article 35(1)(a)(i) (i.e. the restriction that land may be used for temporary possession only for the purposes specified in Schedule 14) does not extend to Article 35(1)(a)(ii).
- 2.6. NRW has the same concern in relation to the “*Other Associated Development*” section of Schedule 1 and Article 17. If, for example, construction compounds are able to be constructed in relation to the specified works in any part of the Order Land, the Applicant should confirm they have carried out the associated environmental assessments. If the Applicant’s assessments are based on particular locations for the construction compounds, their location should be specified and the powers similarly circumscribed and limited.
- 2.7. We note that there are a number of DCO Requirements listed in Schedule 3 of the draft DCO which will need to be discharged by the discharging authority. For a number of these Requirements we expect the discharging authority to consult NRW in its statutory consultee role prior to discharging the Requirement in question. However, NRW is not referenced for all the Requirements that we would expect to be consulted. For the avoidance of doubt, NRW would expect to be consulted prior to the discharge of certain Requirements, including the following: PW7, WN9, WN11, WN14, WN19, WN21, OH9, OH 10, ECS2, ECS3, ECS4. This expectation extends to approvals and consents which relate to any changes to the documents, details or policies approved in those requirements.
- 2.8. We note that NRW is listed as the discharging authority for the marine works. NRW in its statutory consultee role would expect to be consulted on those Requirements too.
- 2.9. Paragraph 1(4) of Schedule 3 to the DCO suggests that the Applicant can put forward “*minor*” changes to details or documents approved without demonstrating that these changes do not have materially new or materially different environmental effects from those assessed in the Environmental Statement. NRW requests a change to the wording to ensure that no change, details or documents are outside of the envelope of the environmental assessment carried out and the exception for “*minor*” changes is removed.
- 2.10. For the SPC Requirements relating to the site preparation and clearance activity, in the event that the activity is undertaken pursuant to the DCO (i.e. rather than the Town and Country Planning Act 1990), then NRW would

expect to be consulted on certain Requirements, including SPC1, 3-5, 9, 10 and 13. In relation to SPC5, NRW has advised IACC that the works west of the Afon Cafnan are undertaken between 7 March and 15 August to avoid disturbance to terns.

- 2.11. NRW requests that the Applicant confirm that the mitigation secured in the DCO will be sufficient to mitigate the impacts of the authorised development and that it does not seek to rely on mitigation measures secured in relation to the separate SPC planning application (notwithstanding their “twin track” approach to the SPC permission and the DCO explained in their Explanatory Memorandum (APP-031) at paragraph 4.15).
- 2.12. In any event, the approval by IACC of a condition under the planning permission should not prejudice the need for consultation with NRW under the Requirements. Article 5 should therefore be amended so that the need for consultation with or approval by NRW, or indeed any other body, in relation to any Requirement is unaffected by the approval of a condition in the SPC planning permission other than IACC, particularly in light of the proposed change to the DCO mentioned at paragraph 2.2 above.
- 2.13. NRW also advise that an additional Requirement is needed to ensure that detailed Sub-Codes of Construction Practices (CoCP), and the Code of Operational Practice (CoOP) (APP-421), are approved by the discharging authority ahead of the relevant activities taking place. We provide further advice and reasoning in relation to this below.
- 2.14. As a general point, NRW is unclear on the justification as to why some Requirements use the phrase “*in general accordance with*” (e.g. Requirement PW3) but others use the phrase “*in accordance with*” (e.g. Requirement PW7). NRW would request that, in order to capture the construction activities which have been environmentally assessed, the Applicant be adequately tied to all documents produced by using the phrase “*in full accordance with*” in the DCO.

3. PLANNING OBLIGATIONS

- 3.1. Paragraph 7.4.1 of the Planning Statement (APP-406) state that a number of mitigation measures require a contribution through a planning obligation under section 106 of the Town and Country Planning Act. Section 7.4 also provides the proposed Heads of Terms for the planning obligations. NRW notes that the Mitigation Route Map (APP-422) references “*Draft Heads of Terms for Planning Obligations (Application Reference Number: 3.4)*” but this does not appear to be available in the examination library. NRW is particularly concerned that there is no Heads of Terms for the Natural Environment. NRW would be able to advise the Applicant, and the local authority, in relation to the Natural Environment aspects which should be reflected in the final section 106.

4. CODE OF CONSTRUCTION PRACTICE (COCP)

- 4.1. The Wylfa Newydd CoCP (APP-414), together with location-specific sub-CoCPs, are intended to set out how construction activities will be managed and controlled in order to deliver the mitigation commitments arising from the project. There is insufficient detail in the submitted Wylfa Newydd CoCP and the Sub-CoCPs to demonstrate that construction activities will be managed appropriately. NRW advise that if the DCO is made, that detailed Sub-CoCPs will need to be approved by the discharging authority, in consultation with NRW, ahead of the relevant activities taking place. We would expect this to be secured as a DCO Requirement which will require an addition to the Requirements as set out in the current version of the draft DCO (APP-029).
- 4.2. In addition to our comment above, as the current versions of the CoCP and Sub-CoCPs should be considered as outline documents, the DCO should include reference to the additional information that will be provided in the detailed versions (to be approved post-consent and ahead of the relevant construction activities taking place). In effect, this mirrors other Requirements which include documents, not yet sufficiently detailed, which must be approved (see, for example, Requirements PW10(2), WN11(1)-(2), WN18(2) and OH8(2)). Moreover, a requirement that the final CoCPs reflect the current “outline” documents should be inserted (see, for example, Schedule 2 to the recently made Testo’s Junction Alteration Order 2018). In our comments below, for each affected receptor, we reference where the current version of the CoCP / Sub-CoCPs, for approval by the Examining Authority, should be updated accordingly.

5. CODE OF OPERATIONAL PRACTICE (COOP)

- 5.1. The Wylfa Newydd CoOP is intended to set out how operational activities will be managed and controlled in order to deliver the mitigation commitments arising from the project. There is insufficient detail in the submitted CoOP. As advised above for the Sub-CoCPs, NRW advise that if the DCO is made, that a detailed CoOP will need to be approved by the discharging authority, in consultation with NRW ahead of the relevant operational activities taking place. We would expect this to be secured as a DCO Requirement which will require an addition to the Requirements as set out in the current version of the draft DCO (APP-029)
- 5.2. We note that the CoOP is a control document for approval by the Examining Authority / Secretary of State. We therefore advise, in addition to our comment above, that the current version of the CoOP should include reference to the additional detail that will be provided in the detailed version (to be approved post-consent and ahead of the relevant operational activities taking place). The same considerations and mechanisms on how the Requirements should operate for the CoCP and sub-CoCPs described above also apply to the CoOP. In our comments below, for each affected

receptor, we reference where the current version of the CoOP for approval by the Secretary of State should be updated accordingly.

6. PROJECT WIDE EFFECTS (VOLUME 6C)

6.1. Waste

- 6.1.1. At this stage, details on how construction generated waste will be managed is not available and it is not possible to set out mitigation measures in ES chapter C6 (APP-093) (e.g. until contractors are appointed). The assessment of available waste management capacity will need to be updated prior to and throughout the construction phase, to ensure that appropriate decisions on waste management routes are taken for the duration of the scheme. The principles of the Waste Hierarchy will need to be applied at all times.
- 6.1.2. We have the following detailed comments which the Applicant should consider:
- a) Appendix C6-1 (APP-117) assesses the availability of local and regional waste management facilities. Table 1.1 shows data from waste management facilities within the Anglesey and Gwynedd. NRW recommends this data is updated using the most up to date available figures. In addition, for some facilities identified, the data is incorrect in relation to both capacity limit and the spare capacity potentially available. This data needs to be reverified.
 - b) It is noted that ES Appendix C6-01 does not provide any tonnage capacity for transfer stations on Anglesey or Gwynedd and an assumption has been made on the capacity available. Whilst permitted annual tonnages may seem acceptable, working practices, site management systems and site infrastructure may not correlate with this and the figure may be lower than that predicted.
 - c) The Applicant should be aware that any movement of waste material above mean high water will be subject to the Waste Framework Directive therefore suitable permits and exemptions maybe needed for the storage, treatment, use or disposal of the material. This requirement should be acknowledged within the relevant Sub-CoCPs. Compliance with Duty of Care requirements¹, hazardous waste regulations and other legislative requirements may also be applicable depending on proposals. Waste arisings from the marine environment which are to be reused on land should also be factored into relevant proposal documentation for 'site' based works.

¹ https://gov.wales/topics/environmentcountryside/epq/waste_recycling/publication/waste-duty-of-care-code-of-practice/?lang=en

- 6.1.3. Detailed information to demonstrate how construction generated waste will be managed is not yet available. NRW consider that it would be appropriate for further detail on waste management methodologies to be set out in a Site Waste Management Plan, which will be governed by the CoCP and relevant Sub-CoCPs, which must be approved by the discharging authority as a DCO requirement. We advise that a commitment to undertake a Site Waste Management Plan is set out in the CoCP / Sub-CoCPs to be approved by the Secretary of State.

6.2. **Air Quality Effects of Traffic – Designated Sites**

- 6.2.1. NRW agrees with the conclusion of ES chapter C4 (APP-091) and Shadow Habitats Regulations Assessment (HRA) (APP-050) that designated ecological sites (including Sites of Special Scientific Interest (SSSI), Special Protection Areas, Special Areas of Conservation or Ramsar sites) will not be adversely affected by emissions from road traffic as a result of the Wylfa Newydd project.
- 6.2.2. ES chapter C4 indicates that there are predicted increases in annual mean NO_x concentrations at Beddmanarch-Cymyran SSSI, Malltraeth Marsh/Cors Ddyga SSSI and Coedydd Afon Menai SSSI. However, the designated features of the SSSIs within the areas of predicted increases are not likely to be damaged by the proposed project.

7. **MAIN SITE (VOLUME 6D)**

7.1. **Flood Risk**

- 7.1.1. As highlighted in its Relevant Representations, NRW has significant concerns that, through modifying and increasing catchment areas at the Wylfa Newydd main site, the project may cause unacceptable flood risk to third party property and/or land. Technical Advice Note (TAN) 15, which provides technical guidance that supplements the policy set out in Planning Policy Wales in relation to development and flooding, states that there should be no increased flood risk elsewhere. We provide further details of our concerns below.
- 7.1.2. NRW has reviewed the hydraulic flood modelling undertaken and outlined in the appendices of the Flood Consequence Assessment ES Appendix D8-4 (APP-150 – APP-157). NRW is satisfied that the modelling has been undertaken appropriately in order to inform the Flood Consequence Assessment.
- 7.1.3. There are works to Main rivers associated with the project. Works affecting Main rivers require a Flood Risk Activity Permit (Environmental Permitting (England and Wales) (Amendment) (No.2) Regulations 2016) from NRW for certain activities, in, over, under or within the Main rivers and their floodplains.

- 7.1.4. Please note that NRW provide advice on fluvial and tidal flood risk and that you should seek the advice of the Lead Local Flood Authority, the Isle of Anglesey County Council in this instance, on local flood risk matters (including pluvial flood risk).
- 7.1.5. NRW is satisfied that the Site Campus is not at risk of fluvial/tidal flooding. However, as highlighted above, we refer you to the Lead Local Flood Authority in relation to pluvial flood risks.
- 7.1.6. Please note, the Office for Nuclear Regulation will be able to advise on the safety case and any potential flood risks for the nuclear reactors and associated buildings.

- *Afon Cafnan*

- 7.1.7. The proposals (including the mounding) will increase the catchment area for the Afon Cafnan watercourse. The Flood Consequence Assessment and ES chapter D8 (APP-127) predicts the proposals will result in an increase in flood depth for the 1 in 100 event (1% Annual Exceedance Probability) for the Afon Cafnan of between 60mm and 140mm. This is beyond NRW's modelling tolerances (of 5mm) and shows detriment and unacceptable increased risks. We refer the Applicant to NRW's guidance *Good Practice Guide 101- Producing flood risk hydraulic models and flood consequence assessments for development planning purposes*².
- 7.1.8. The ES also refers to an increase in flood levels in the stream during the construction phase, due to temporary pumping, of 0.07m for the 1:30 year event. Clarification is required as to why the 1:30 (1:3.3% Annual Exceedance Probability) event has been used rather than the 1:100 (1% Annual Exceedance Probability).
- 7.1.9. Paragraph 8.5.40 of ES chapter D8 (APP-127) refers to the proposed realignment of Nant Caerdegog Isaf, a tributary of the Afon Cafnan. As highlighted above, a Flood Risk Activity Permit will be required from NRW for both the permanent and temporary works associated with the diversion of this Main river. The application would need to be supported by a detailed method statement.

- *Nant Cemlyn*

- 7.1.10. The proposals will increase the catchment area for the Nant Cemlyn stream with the FCA predicting an increase of 20mm in flood depth for the 1 in 100

² <http://www.naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/development-and-flood-risk/?lang=en>

event (1% AEP) for the Nant Cemlyn stream. This is beyond NRW's modelling tolerances (of 5mm) and shows detriment and unacceptable increased flood risks.

- *Nant Cemaes*

- 7.1.11. The Flood Consequence Assessment identifies that through modifying the catchment area of Nant Cemaes, there is predicted to be an increased flood risk to residential and commercial properties (including Brookside Garages and on Ffordd Y Traeth) upstream of Cemaes village. The increased flood depth for the 1 in 100 event (1% Annual Exceedance Probability) is predicted to be 40mm. This is beyond our modelling tolerance. Even if an area is already at risk of flooding, allowing detriment is not acceptable and must be mitigated.

- *Marine Works*

- 7.1.12. NRW considers that there is no increased flood risk to third parties due to the marine works. However, whereas the application has provided supporting documents which considers measures to be taken to minimise the risks to the environment, the risks to the construction personnel, plant and materials has not been considered. We note that contractors have not been appointed, however a commitment should be undertaken to ensure that a suitable flood action plan is produced and adhered to at all stages of the works associated with the marine works. We would expect a detailed plan which would be instigated based on various factors such as astronomical tides, storm surges, wave action and wind direction against each operation. Failure scenarios should also be factored into the plan (e.g. failure of the cofferdam while workers are undertaking construction works). We advise that these details should be set out in the detailed Marine Works Sub-CoCP and approved by the discharging authority, in consultation with NRW. We advise that a commitment to provide detailed measures is set out in the CoCP / Sub-CoCPs to be approved by the Secretary of State.

- *Mitigation*

- 7.1.13. In view of the increased flood risks highlighted above, the Flood Consequence Assessment states that *"the outline landform and drainage scheme would be revised at detailed design stage so as not to exacerbate any existing flood risk"*. NRW is concerned that no mitigation is presented as part of the DCO application to demonstrate that measures can be delivered to mitigate the increased flood risk. NRW advises that details of mitigation measures should be presented to the Examining Authority to demonstrate that increased flood risk can be managed and that the proposals are compliant with TAN15. NRW has raised these concerns with the Applicant and we understand that additional information will be submitted by the Applicant to demonstrate how increased flood risk can be mitigated. In the absence of suitable mitigation, NRW would have significant concerns on increased flood risk to these catchments.

7.2. Pollution Prevention

- 7.2.1. The Wylfa Newydd project has the potential to result in pollution incidents via a number of pathways, during both the construction and operational phase. NRW believe that the CoCP, Sub-CoCP and CoOP documents are imperative in managing pollution prevention risk.
- 7.2.2. As highlighted above in comments 4.1 – 5.2, NRW advise that pollution prevention measures should be set out in the CoCP and relevant Sub-CoCPs, and the Code of Operational Practice. NRW advise that these should be in line with current regulatory guidance, environmental legislation and good practice guidelines. NRW also advise that the documents produced should provide a clear, unambiguous demonstration of pollution prevention and will need to be approved by the discharging authority, in consultation with NRW. We advise that a commitment to provide further detailed pollution prevention measures is set out in the CoCP, Sub-CoCPs and CoOP approved by the Secretary of State.
- 7.2.3. NRW provide further advice on pollution concerns under the respective receptor of concern below.

- Land Contamination

- 7.2.4. There are 'Areas of Potential Concern' (identified in ES chapter D7 (APP-126) within the Wylfa Newydd Development Area that primarily relate to areas contaminated during the construction of the Magnox station.
- 7.2.5. Prior to the commencement of works in the vicinity of the Areas of Potential Concern, the following information will need to be provided:
- a) A preliminary risk assessment which has identified:
 - all previous uses;
 - potential contaminants associated with those uses;
 - a conceptual model of the site indicating sources, pathways and receptors;
 - potentially unacceptable risks arising from contamination at the site.The relevant information above for a) is provided in ES Appendix D7-2 (APP-144).
 - b) A site investigation scheme, based on a), to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
 - c) The site investigation results and the detailed risk assessment [(b) above] and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
 - d) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in c) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

- 7.2.6. Prior to commencement, a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation should be submitted to and approved, in writing, by the discharging authority. The report should include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It should also include any plan (a “long-term monitoring and maintenance plan”) for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the discharging authority.
- 7.2.7. If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed with the discharging authority) should be carried out until the Applicant has submitted, and obtained approval for, an amendment to the remediation strategy detailing how this unsuspected contamination will be dealt with.
- 7.2.8. Detailed mitigation measures, including the points raised above, will need to be set out in the relevant Main Power Station Site (MPSS) Sub-CoCP (APP-415) and approved by the discharging authority, in consultation with NRW, as a DCO Requirement. We advise that a commitment to provide detailed measures is set out in the CoCP / MPSS Sub-CoCP approved by the Secretary of State.

7.3. Water Resources

- 7.3.1. The Wylfa Newydd project, particularly the construction phase, will require substantial amounts of potable water. NRW raised concerns in its Section 42 pre-application consultation responses as to the capacity of Dŵr Cymru Welsh Water to meet the demand of Wylfa Newydd.
- 7.3.2. NRW have reviewed Dŵr Cymru Welsh Water’s newly published Revised Draft Water Resources Management Plan 2019 (see section 5.7.6 of the Plan³) which confirms that Dŵr Cymru Welsh Water can provide adequate water supply within its existing licensed abstraction and that new abstraction licences for water supply will not be required. NRW are therefore satisfied that the Wylfa Newydd project will not have adverse effects on water resources of the North Eryri Ynys Môn zone.

7.4. Water Framework Directive (WFD)

³ <https://www.dwrcymru.com/en/My-Water/Water-Resources/Revised-Draft-Water-Resources-Management-Plan-2019.aspx>

- 7.4.1. The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 set out the legal requirements to protect and improve the water environment and set out environmental objectives that must be met for all water bodies. The Directive requires measures to be taken to protect and improve surface waters (including rivers, lakes, transitional and coastal waters), and groundwater bodies, with the aim of achieving good status.
- 7.4.2. NRW has reviewed the Applicant's WFD Compliance Assessment (APP-444). This information is provided by the Applicant to inform the Secretary of State's WFD Compliance Assessment. We provide the detailed comments below on the Applicant's assessment.
- 7.4.3. Where the Appropriate Authority (the Secretary of State for the DCO) identifies there may be deterioration to the status of a WFD water body, the tests of Article 4(7) must be met. The Applicant is expected to provide information to inform those tests. We refer you to our comments 7.4.30 – 7.4.48 below in relation to the Article 4(7) Information (APP-445) report.
- 7.4.4. The WFD introduced a 6-yearly cycle of river basin planning. It requires the river basin management plan (RBMP) for each river basin district produced in 2009 to be reviewed and updated in 2015, the start of cycle 2, and 2021 at the start of cycle 3. The Applicant used the 2015 classification data at the start of cycle 2 for the compliance assessment. NRW are currently updating this dataset. In autumn 2018, NRW released an updated interim WFD classification⁴ for freshwaters (rivers and lakes) on Water Watch Wales⁵. The marine classification (transitional and coastal water bodies) is expected during late 2018 or early 2019. A Frequently Asked Questions document about the interim classification is also available. The groundwater classification only requires updating every 6 years so there is no cycle 2 interim classification for groundwater. It is expected that the most up to date evidence is used in assessment.

- *The Skerries Coastal Water Body*

- 7.4.5. The Skerries water body comprises the coastal environment from the Existing Power Station out to around 2km north-west of the Skerries islands and up to the Anglesey North Coastal water body on the eastern side (see Figure 1 below).

⁴ <https://naturalresources.wales/evidence-and-data/research-and-reports/water-reports/river-basin-management-plans-published/?lang=en>

⁵ Water Watch Wales provides local information on classification, projects and measures. This is an interactive spatial web-based tool that provides supporting information and data to assist partners.

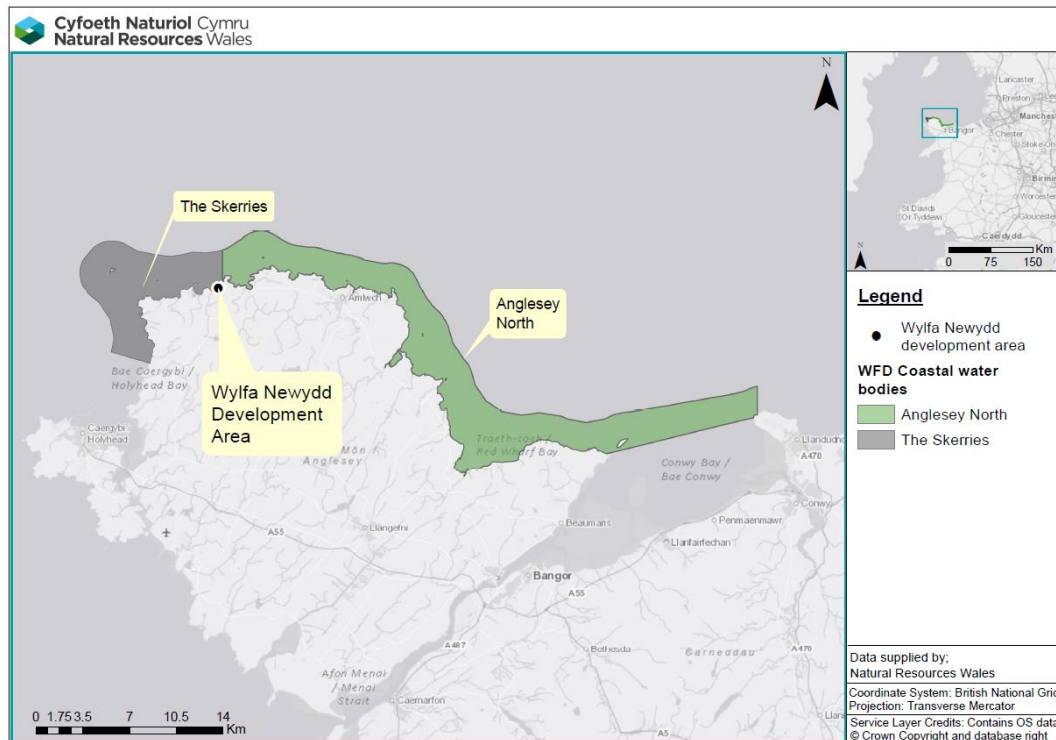


Figure 1: Map showing The Skerries and the Anglesey North coastal water bodies.

- 7.4.6. The biological quality elements (based on benthic invertebrates), physicochemical quality elements (based on dissolved oxygen) and the hydromorphological supporting elements are all at high status. The Skerries water body is the only coastal water body in Wales with overall high status. It is one of only three water bodies in Wales classified as having “high status” in cycle 2 of the WFD classifications carried out in 2015. High status represents no or only very minor alterations to physico-chemical and hydromorphological quality elements from those normally associated with undisturbed conditions.
- 7.4.7. The Wylfa Newydd project will affect the coastal bed and intertidal zone in the Skerries through the direct impact of the physical footprint of the marine structures and excavation/dredging as well as the secondary effects associated with changes in hydrodynamics, of scour and sediment deposition. These impacts may result in deterioration to the hydromorphological quality element of the water body. NRW agree with the conclusion of the WFD Compliance Assessment that the hydromorphological conditions quality element may deteriorate from high to good status. NRW agree that for this water body, a derogation under Article 4(7) of the WFD will be required. Please see advice provided below in relation to the Article 4(7) information.
- 7.4.8. Section 7.3.73 – 7.3.80 of the WFD Compliance Assessment considers effects on the biological quality elements of the Skerries Coastal water body. NRW advise that further information is required to demonstrate that benthic

invertebrates may not deteriorate as a result of the Wylfa Newydd project. We provide further advice below in a) – e) on the information required:

- a) The scale of impact on benthic invertebrates should be considered, however further consideration of all requirements of the Directive, including the relationship between hydromorphology and biological quality and comparison to normative definitions⁶ should be used to complete the assessment;
- a) With regard to cumulative effects on benthic invertebrates, further clarity is required on the total extent (both percentage of the water body and area in km²) of all combined non-temporary effects on benthic invertebrates in the Skerries.
- b) Direct loss due to the marine structures may result in deterioration. The increased scale of temperature and Total Residual Oxygen impact at the seabed should also be considered.
- c) In relation to b) above, NRW note that for the 23°C absolute temperature target mixing zone, the hydrodynamic model uses a background temperature of 16.44°C. The Applicant has produced further statistical modelling (WYL-PD-PAC-REP-00012, version 2.0) using more up-to-date data (1993 to 2013 or 2003-2012) where the 98%ile is 16.6°C or 16.7°C, respectively. We note that using the more up to date data will impact on the areal extent calculated for absolute temperature / mixing zone.
- d) The application does not provide an assessment of the impact of the operational cooling water discharge upon coastal processes. It is unclear whether the water discharge velocities and volumes over the water column could affect the local dynamics, stratification, scour and sediment movement sufficiently to risk causing deterioration in quality elements. The operational cooling water discharge will require an environmental permit from NRW Permitting Service.
- e) Further information is required regarding the temporary waste water outfall and whether or not the footprint of the temporary (non-temporary in WFD terms) waste water outfall (pipe, rock foundation and armouring) has been factored in to calculations of total marine works footprint relative to The Skerries water body. The total extent of the Marine Works including waste water outfall may exceed the 30.5ha previously stated.

In view of the comments in 7.4.8 above and the additional information required, we are currently unable to agree with the conclusion that potential cumulative effects on biological quality elements of the Skerries *"would not cause deterioration in the status of biological quality elements in The Skerries"*.

⁶ Surface water bodies are classified according to their chemical and ecological status. The WFD Annex V normative definitions provide the basis upon which ecological status is defined. The WFD classification schemes were based upon the normative definitions in Annex V of the Directive [Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy]

- 7.4.9. For completeness, in relation to Table 6-2 in the WFD Compliance Assessment, no justification has been provided for the omission of physico-chemical (transparency) and specific pollutant quality elements for activity 1.17 (mobilisation of sediment from disturbance of the seabed). We consider that these should be included as quality elements at risk, added to the relevant section of Appendix D, table 1b and carried through to detailed assessment. However, we consider that these specific quality elements are not at risk of deterioration from this activity alone.
- 7.4.10. Part 5 of the WFD Compliance Assessment considers “*Potential risk to biological quality elements in The Skerries and Anglesey North water bodies from the introduction of non-native species during construction*”, We refer you to advice below (comments 7.18.10 – 7.18.11) in relation to Marine Invasive Non-Native Species.

- *Anglesey North Coastal Water Body*

- 7.4.11. The Anglesey North Coastal water body comprises the coastal environment from the Existing Power Station to the west, to the Great Orme Headland in the east (see Figure 1 above).
- 7.4.12. The Anglesey North water body is classified as having moderate status overall. The biological quality elements are at good status (based on benthic invertebrates). The classification of physico-chemical quality elements is high (based on dissolved inorganic nitrogen, dissolved oxygen, copper and zinc). The hydromorphological supporting elements are at high status (based on morphology being classified as high). However, Anglesey North fails the chemical assessment due to mercury and its compounds.
- 7.4.13. Further information is required to assess the impact on load and distribution of additional/concentrated mercury due to the cooling water discharge. Where an element comprising surface water chemical status is already in the lowest status class, then any further deterioration (within class) is considered a deterioration of the water body. Any negative change must be measurable and meaningful at a water body scale in order for it to be considered deterioration. Further analysis provided by the Applicant should be presented in this context.
- 7.4.14. The application does not provide an assessment of the impact of the cooling water discharge upon coastal processes. It is unclear whether the water discharge velocities and volumes over the water column could have a detectable change on the local dynamics, stratification, scour and sediment movement. An assessment of the effects of the cooling water on hydrodynamic processes is required.
- 7.4.15. Part 5 of the WFD Compliance Assessment considers “*Potential risk to biological quality elements in The Skerries and Anglesey North water bodies from the introduction of non-native species during construction*”, We refer

you to advise below (comments 7.18.10 – 7.18.11) in relation to Marine Invasive Non-Native Species.

- 7.4.16. Please note the advice provided in relation to H1 below (section 7.5) which may be relevant to WFD.

- *Ynys Môn Secondary Groundwater Body*

- 7.4.17. The Ynys Môn Secondary WFD groundwater body covers an area of approximately 600km² comprising most of Anglesey. Ynys Môn Secondary groundwater body is currently at poor status overall due to failure of the chemical dependent surface water body status test.
- 7.4.18. NRW consider that the groundwater body may deteriorate from saline intrusion and effects on Groundwater Dependent Terrestrial Ecosystems. Both are discussed in more detail below.
- 7.4.19. NRW agrees with the conclusion of the WFD Compliance Assessment that there is potential for saline intrusion of the aquifer from dewatering below sea level during construction. This effect is relevant to both quantitative and chemical tests. The risk of saline intrusion results from the reversal of groundwater flow along the coast at the Wylfa Newydd Development Area due to dewatering below sea level.
- 7.4.20. The WFD Compliance Assessment concludes that *“the predicted extent of saline intrusion is limited in both space and time. However, the dewatering during construction does not have a defined end date and the duration of the effect is uncertain. Although the extent of the effect would be small, it may take longer than one River Basin Management Plan (RBMP) cycle (six years) to fully recover”*.
- 7.4.21. In view of the above, NRW agree with the conclusion of the WFD Compliance Assessment that the Ynys Môn Secondary groundwater body may deteriorate due to saline intrusion as a result of the Wylfa Newydd project. On this basis, there may be a need for an Article 4(7) derogation.
- 7.4.22. In relation to the Groundwater Dependent Terrestrial Ecosystem quality element, we agree that damage to Tre'r Gôf SSSI could be caused by anthropogenic change in supporting groundwater level and chemistry from large scale earthworks around the site, which would constitute deterioration in the status of the Ynys Môn Secondary groundwater body.
- 7.4.23. However, it is not clear that all impact pathways have been fully assessed. NRW do not agree that the evidence supports the Applicant's baseline Conceptual Site Model on which the assessment of impacts on Tre'r Gôf is based. We refer you to our detailed comments below in section 7.13 in relation to Tre'r Gôf SSSI. In addition, dewatering during cooling water discharge tunnel construction is only considered in the appendix of the WFD Compliance Assessment (activity 1.20), in which underlying assumptions are

considered unsound (see comments 7.13.6). NRW advise that there is a risk that dewatering of groundwater could alter critical groundwater contribution to the SSSI and cause significant damage which would constitute a risk of deterioration in the status of the Ynys Môn Secondary groundwater body.

- 7.4.24. NRW considers that the project is unlikely to damage Cae Gwyn SSSI, which is also identified as a Groundwater Dependent Terrestrial Ecosystem, however, we refer you to comments below (section 7.15) for our detailed comments on Cae Gwyn SSSI.
- 7.4.25. We also advise that detailed mitigation measures, including embedded mitigation, should be set out in the detailed Sub-CoCPs and approved by the discharging authority, in consultation with NRW.
- 7.4.26. Where a project may cause deterioration, it must be demonstrated through the Article 4(7) derogation that all practicable steps have been taken to mitigate the adverse impact. As the significance of all dewatering activities on Tre'r Gôf SSSI, both during construction and operation, is not fully explored in the WFD Compliance Assessment and ES, we cannot confirm that all feasible mitigation has been considered. NRW therefore advise that appropriate mitigation measures to address these impacts should be set out in the Article 4(7) information.
- 7.4.27. It should be noted that deterioration will be attributable to dewatering which will be subject to an Abstraction Licence under the Water Resources Act 1991, as amended by the Water Act 2003.

- *Cemlyn Lagoon Coastal Water Body*

- 7.4.28. NRW advises that further information is required to demonstrate that Cemlyn Lagoon will not be affected by impacts on water quality due to surface water run-off from Mound E. Further information is also required to demonstrate that changes in coastal processes due to the presence of the marine structures will not affect the shingle ridge, which supports the functioning of Cemlyn Lagoon. NRW is therefore unable to agree with the conclusion that *"the Wylfa Newydd Project would neither cause deterioration in the status of the Cemlyn Lagoon water body, nor compromise the ongoing achievement of its objectives"*. We refer you to section 7.10 below for NRW's detailed advice in relation to Cemlyn Bay SAC and this specific concern.

- *Other WFD Water Bodies*

- 7.4.29. NRW agree with the conclusion of the WFD Compliance Assessment that the project is unlikely to cause deterioration in other water bodies. These include: (i) Caernarfon Bay North coastal water body which is the closest water body to the dredge disposal site in Holyhead North; and (ii) the migratory fish quality elements of riverine/transitional water bodies which may interact with the zone of influence identified for the Wylfa Newydd project.

- *Article 4(7) Information*

- 7.4.30. The Article 4(7) Information (APP-445) report identifies water bodies and elements that the Applicant considers will require derogation (i.e. based on the Applicant's WFD Compliance Assessment). The scope of the report will need to be reviewed following the completion of the Examining Authority / Secretary of State's WFD Compliance Assessment. Please note that there may be further water bodies and/or elements to be included in the scope of Article 4(7), including as a result of the advice provided above. However, based on the Applicant's WFD Compliance Assessment and Article 4(7) report as submitted as part of the DCO application, we provide the following comments below.
- 7.4.31. NRW advises that further evidence is needed to support the information provided and to justify the conclusions reached in the document regarding mitigation measures, environmental impacts and alternatives considered.
- 7.4.32. As the appropriate agency for the purposes of WFD we advise that the Overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Nuclear Power Generation (EN-6) can be used as evidence to inform the assessment of compliance with Article 4.7 tests C and D of the Water Framework Directive. Section 4.1.1 of EN-6 specifically lists Wylfa as a site determined by the UK Government as potentially suitable for the deployment of new nuclear power stations in England and Wales before the end of 2025.
- 7.4.33. Only one limb of Test C is legally required. NRW intend to advise on overriding public interest and not the benefits weighing test.
- 7.4.34. There is no quantitative information presented in the assessment of technical feasibility and disproportionate cost relating to Tests A and D. This should be included in the main body of the report as it is important information. Evidence to support the decisions and justifications will also need to be provided. The model(s) used for the cost-benefit analysis also needs to be made clear and the underpinning calculations provided. We have advised the Applicant that this information will be required in the application of the tests. Without this information conclusions cannot be agreed.
- 7.4.35. Various references are made within the document to adaptive monitoring and management principles and utilisation of monitoring thresholds to identify the need for further mitigation if required. If an adaptive management approach is implemented in relation to any aspect of the project of relevance to Article 4(7), then this must be set out in detail within a document (e.g. the relevant Sub-CoCP) dealing specifically with adaptive management, approved by the discharging authority, subject to regular review and secured as a DCO Requirement. If this information is to be used to apply the Article 4 (7) tests there must be confidence in its deliverability.

- 7.4.36. Paragraph 3.4.2 of the Article 4(7) report does not include potential impacts to the hydromorphology of The Skerries water body arising during the operational phase of the project. Hydromorphological changes brought about by the physical presence of structures within this water body are likely and therefore will need to be included in this list.
- 7.4.37. Paragraph 3.4.4 which refers to "*Shoreline structures assessment*" requires explaining by the Applicant.
- 7.4.38. In relation to paragraph 3.4.8, we advise the use of the normative definition 'very minor'.
- 7.4.39. With regard to paragraph 3.4.8, we advise that the changes brought about by the project to The Skerries water body are inconsistent with the normative definition for High hydromorphological status. We note that this does not alter the requirement for Article 4(7) derogation which the Applicant is in agreement with, however, this should be made clear. Additionally, certainty is required at the project approval stage; in the absence of certainty, Article 4(7) derogation is required.
- 7.4.40. In relation to paragraph 4.2.5 of the Article 4(7) report, please note that Common Implementation Strategy 36 has now been published.
- 7.4.41. In relation to paragraph 4.2.21, we recommend that this section explains why only the first limb is being considered.
- 7.4.42. In relation to paragraph 4.2.26, further consideration of Welsh policy context for nuclear is required. We recommend that the Applicant considers Welsh Government energy policy statements.
- 7.4.43. In relation to paragraph 5.4, we advise clarity is required on the division of evidence for the first limb of test (c) and second limb (or not as it is not being considered) and greater emphasis on Welsh energy policies.
- 7.4.44. No detailed evidence has been provided on the assessment of disproportionate cost. Quantitative information on the assessment of disproportionate cost will be needed in order to apply the tests. Additionally, it should be set out what models have been used to determine if a mitigation measure or other environmental option is cost beneficial (e.g. whether Treasury Green Book rules have been used).
- 7.4.45. With regard to Table 6-1 in the Article 4(7) report, we do not consider that sufficient information has been presented on proposed marine ecological enhancement measures to demonstrate that all practical steps are being taken to mitigate adverse impacts on benthic habitat. We have previously advised the Applicant that a feasibility study on proposed enhancement measures should be undertaken.

- 7.4.46. In relation to Table 6-2, evidence to support the decisions and justifications in the table will need to be provided. The impact pathways to the various receptors mentioned in the impacts column have also not been included. These will need to be provided.
- 7.4.47. Also in relation to Table 6-2, in all instances where the Applicant has highlighted the potential environmental impacts of the 'preferred option' for the various design/construction elements, no specific mention of impacts related to marine invasive non-native species has been given. The table states that "*Delivery by sea could impact marine water quality, flora, fauna, birds and habitat integrity*", which may include non-native species impacts, but lacks specific detail. Marine invasive non-native species should be mentioned in this section as well as a reference to the 'Biosecurity Risk Assessment Strategy' which would form an integral part of any mitigation strategy to prevent the ingress and spread on marine non-natives.
- 7.4.48. Also in relation to Table 6-2, consideration of locating the Cooling Water intake in the same location as the intake for Wylfa A (that would only involve widening/ deepening of the existing intake channel) has not been included in the decision and justification column. This information should be included.

7.5. Horizontal Guidance (H1)

- 7.5.1. The H1 risk assessment tool can be used to assess the impact of hazardous pollutants released within discharges to surface waters.
- 7.5.2. The Applicant's H1 assessment in ES Appendix D13-11 (APP-229) indicates that sodium nitrite has been modelled conservatively and that decay has not been included. It might be expected that, as sodium nitrite is being modelled as a conservative tracer, the contaminant will travel with the thermal plume associated with the cooling water discharge. Consequently, the sodium nitrite mixing zone will depend on the size of the thermal plume. The Applicant has used the summer base case to model the extent of sodium nitrite which results in a smaller thermal plume extent than the autumn base case. As a result, it is unclear whether the worst-case scenario has been modelled and assessed. The following additional information is required from the Applicant:
- a) Provide worst case scenario to model the extent of the sodium nitrite.
 - b) Provide the area of effect in km².
- 7.5.3. NRW note that Ammonia concentrations have been calculated (paragraph 13.6.38 of ES chapter D13 (APP-132)) using incorrect water temperatures. We advise that Ammonia concentrations should be recalculated using an appropriate maximum temperature.
- 7.5.4. The water quality monitoring undertaken and specified in ES Appendix D13-1 (APP-219), only includes summary data (e.g. annual averages). The Applicant should show the conceptual model, statistical basis of analysis, the expected confidence in the results obtained and provide clarity of the

assumptions made. For each determinand, we advise that the following information is necessary:

- a) Provide all the raw data that makes up the annual average data. This includes sample results at each sample location for each sampling period, not just the average figures of all sample sites. Maximum and minimum concentrations of each substance should be clearly shown.
- b) The state of the tide (including whether spring/neap).

7.5.5. Please note NRW's Permitting Service will be assessing H1 as part of its determination of the Operational Water Discharge and Construction Water Discharge applications under the Environmental Permitting Regulations 2016.

7.6. Cemaes Bathing Water

7.6.1. Bathing waters are designated under the Bathing Water Directive (2006/7/EC). There is one Bathing Water, at Cemaes Bay, which is within the zone of influence of the Wylfa Newydd project. Potential effects on Cemaes Bathing Water are assessed in the WFD Compliance Assessment (Section 9 Protected Areas) and ES chapter D13 (APP-132).

7.6.2. Bathing Water quality is monitored using two microbial parameters – *Escherichia coli* (*E.coli*) and *Intestinal enterococci*. There are four classifications for Bathing Water quality: 'Excellent', 'Good', 'Sufficient' and 'Poor'. In 2017 and 2018 (based on the data collected from the preceding year) the Bathing Water status of Cemaes Bay was classified as 'Poor' meaning the advice is not to bathe in this water due to pollution levels. There is an ongoing programme of work to reduce the bacterial and sediment loading from the freshwater inputs. It has recently been assessed as 'Sufficient' following monitoring undertaken in 2018⁷ and therefore will be 'Sufficient' for the 2019 bathing season.

7.6.3. Cemaes Bathing Water has the potential to be affected by the Wylfa Newydd project as a result of the sewage discharges from the construction sewage package plant and from Dŵr Cymru Welsh Water sewage works (which will receive the sewage from the Site Campus). When considering Bathing Water quality, the turbidity of the Bathing Water is also important. The more turbid the water (e.g. due to significant wind and rain, or elevated suspended solids as a result of drainage associated with the Wylfa Newydd project) the less ultra violet sunlight will reach the bacteria in the water. Exposure to ultra violet sunlight kills some bacteria and acts as natural disinfection. As a result of increased turbidity (as a result of elevated suspended solids in the marine

⁷ http://environment.data.gov.uk/wales/bathing-waters/profiles/profile.html?_search=cemaes&site=ukl1100-40050

environment), bacterial survival may be higher and could affect the designated European bathing beach.

- 7.6.4. NRW does not agree with the conclusion that *“there are no effects predicted on the Bathing Water at Cemaes, and that the Wylfa Newydd Project is considered to be compliant with the Bathing Water Directive”*.
- 7.6.5. NRW has previously advised the Applicant that discharges of elevated suspended solids and sewage discharges into the marine environment has the potential to affect Cemaes Bathing Water. NRW does not consider that the sewage modelling has been conducted appropriately and advise that further modelling of both *E.coli* and *Intestinal enterococci*, should be undertaken to look at the impact of different bacterial sources on the Bathing Water. The model should include both the Applicant’s discharge from the temporary waste water outfall as well as the discharge from the Dŵr Cymru Welsh Water’s waste water treatment works (which will receive the Site Campus sewage loading). The modelling should include meteorological forcing (winds and rainfall via river flow) and storm discharges. If an impact is shown at the Bathing Water following modelling of a suitable bathing season, the Applicant would be advised to undertake a compliance assessment to examine the impact of their asset on Bathing Water compliance. NRW understands that the Applicant intends to undertake further modelling to address this matter.
- 7.6.6. Sewage modelling parameters should be fully defined. Specifically, more information is needed regarding:
- a) the 11.5 l/s and 18.5 l/s values, used for the construction sewage discharge location (adjacent to the seaward end of the western breakwater) seen throughout the application. The 11.5 l/s is better understood although this is not used in the modelling.
 - b) how the 12-hour or 15-hour operation of the temporary construction waste water discharge has been included in the modelling (values vary in the application documents).
 - c) the 18.5 l/s value used for the Dŵr Cymru Welsh Water Waste Water Treatment Works. Clarity is required on how realistic this value is (e.g. whether it includes the current population and whether it only cover 12 hours of operation)
 - d) In relation to T90 values used, we advise using different T90 values for each type of bacterium and giving consideration to suspended sediment concentrations.
- 7.6.7. Results of the relevant bacterial modelling should be compared to each compliance metric i.e. *E. coli* model results should be compared to *E. coli* standards.
- 7.6.8. Background total suspended solids have not been included in the modelling outputs of total suspended solids concentrations. Instead, the change in total suspended solids concentrations have been presented. We advise that the Applicant recalculates areal extents (e.g. based on 10% of background total

suspended solids (0.61mg/l) provided no other receptors are sensitive to total suspended solids loading).

- 7.6.9. At present, no assessment of the total suspended solids has been presented. The Applicant will need to provide plots and areal extents for total suspended solids which includes land drainage, sewage discharges and dredging.
- 7.6.10. The Examining Authority should note that NRW's Permitting Service has received an Environmental Permit application for construction water discharges. The application includes discharges from the proposed construction sewage package plant.

7.7. Habitats Regulations Assessment – General

- 7.7.1. We note that the Applicant has submitted a Shadow Habitats Regulations Assessment (HRA), (APP-050), herein referred to as the Shadow HRA. This comprises the Applicant's Stage 1 Test of Likely Significant Effect and also the Stage 2 Appropriate Assessment.
- 7.7.2. The Stage1 Test of Likely Significant Effects assessment in the Shadow HRA concludes that, as a result of the Wylfa Newydd project, significant effects on Special Areas of Conservation (SACs), Special Protection Areas (SPAs), the Ramsar site, and/or Sites of Community Interest (SCI) cannot be ruled out. The Secretary of State will need to carry out its own HRA including the Stage 1 Test of Likely Significant Effects under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 and, where necessary, the Stage 2 Appropriate Assessment.
- 7.7.3. We note that the Examining Authority propose to consult Interested Parties on the Report of Implications on European Sites. NRW will provide its advice as an Appropriate Nature Conservation Body on the report in its submission for Deadline 9. Please note that, as the Appropriate Nature Conservation Body for Wales, NRW provides advice below only on those sites wholly or partly within Wales or Welsh waters.

7.8. Habitats Regulations Assessment – Morwenoliaid Ynys Môn / Anglesey Terns SPA (including Cemlyn Bay SSSI)

- 7.8.1. Anglesey Terns SPA is a European designated site, consisting of three colonies: Cemlyn, The Skerries and Ynys Feurig, that contain four tern breeding species, namely Arctic *Sterna paradisaea*, Common *Sterna hirundo*, Sandwich *Thalasseus sandvicensis* and Roseate *Sterna dougallii* Terns. The different colonies are of different sizes (numbers of pairs) and naturally contain different proportions of the different species. The site also consists of an area of sea which was designated for foraging terns from the different colonies (Figure 2).

7.8.2. The Conservation Objectives for the SPA⁸ are as follows:

- The number of breeding terns within the SPA is stable or increasing.
- The number of chicks successfully fledged in the SPA and beyond is sufficient to help sustain the population.
- The range and distribution of terns within the SPA and beyond is not constrained or hindered.
- The extent of supporting habitats used by terns is stable or increasing.
- Supporting habitats are of sufficient quality to support the requirements of terns.
- There are appropriate and sufficient food sources for terns within access of the SPA.
- Actions or events likely to impinge on the sustainability of the population are under control.

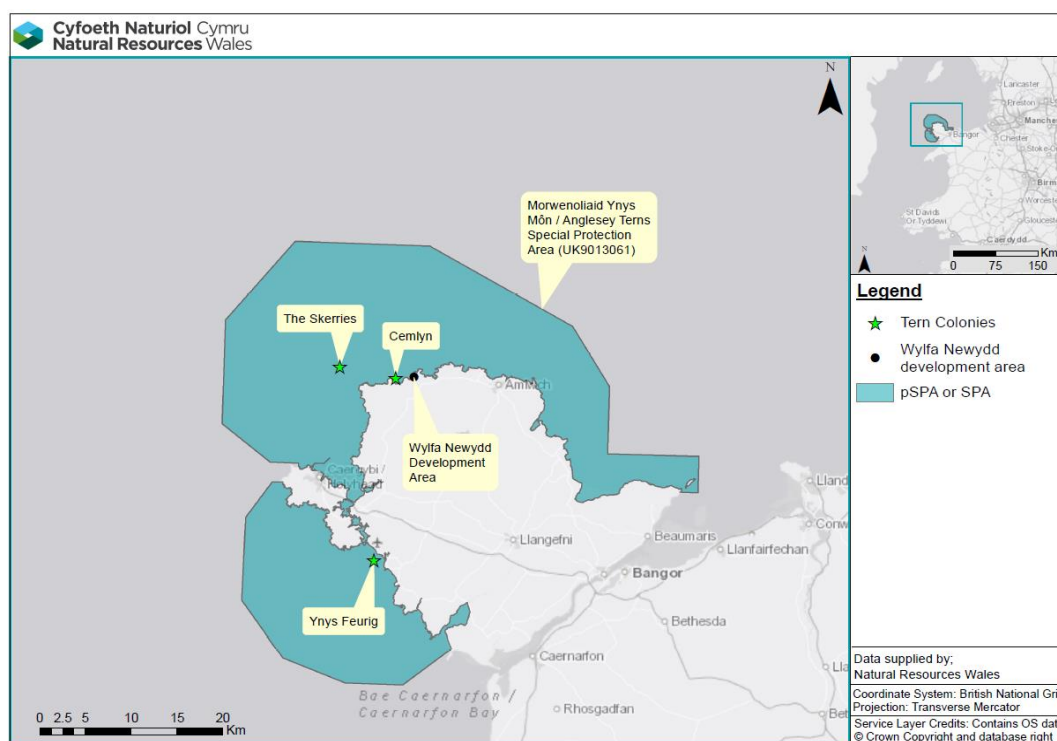


Figure 2: Map of Anglesey Terns SPA with the three breeding sites of Cemlyn, The Skerries and Ynys Feurig.

7.8.3. These breeding sites form part of a network of tern sites within the Irish Sea (Figure 3).

⁸ <https://naturalresources.wales/media/671214/Cemlyn%20WES32%20plan%20English.pdf>

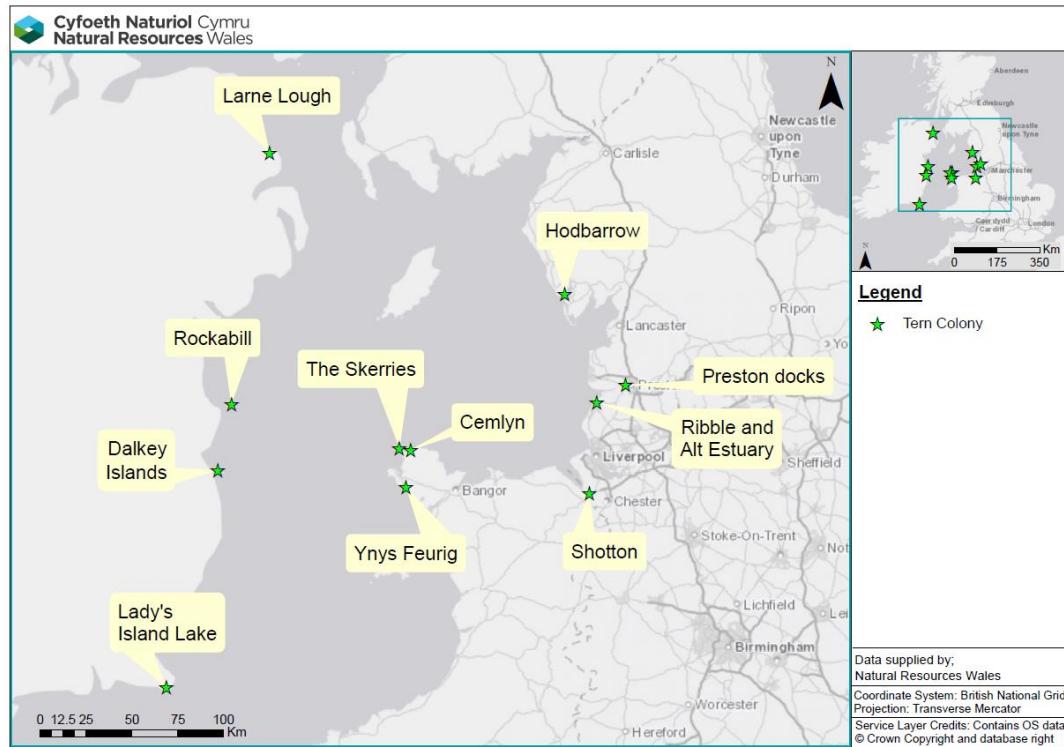


Figure 3: Map of Irish Sea tern colonies.

- 7.8.4. **The Skerries** is an offshore island, located to the north of Anglesey (Figure 4) surrounded by strong currents offering feeding opportunities for breeding terns. The colony is dominated by Arctic terns with a five-year mean⁹ of 3,532 breeding pairs up to 2018. It also has a much smaller population of breeding common terns with a five-year mean of 297 pairs. One pair of Roseate terns bred here in 2018.

⁹ The five-year mean is an average of the annual counts of the number of breeding pairs, of a specific tern species over the most recent five-year period.



Figure 4: Photo of The Skerries. [Acknowledgements: CHERISH Project 2016: Climate Change and Coastal Heritage EU Funded Project]

- 7.8.5. **Ynys Feurig**, is located on the west coast of Anglesey and is a tombolo (a temporary island formed at high water, but connected to the mainland of Anglesey by a spit at low tide). This is the smallest colony of the three within the Anglesey Terns SPA in terms of breeding terns, with a five year mean up to 2018 of 175 pairs of Common terns and 412 pairs of Arctic terns. One pair of Roseate terns bred here in 2012.
- 7.8.6. **Cemlyn lagoon** differs from the other two sites in that it is on the mainland, but with the breeding terns located on small islands within a marine lagoon separated from the sea by a shingle ridge (Figure 5). Sandwich tern is the main breeding tern species of this site with a mean of 2,062 pairs for the last five years including 2018. Common and Arctic terns also breed here in small numbers, with equivalent five-year mean values of 47 pairs of Common terns and 36 pairs of Arctic terns.



Figure 5: Photo of Cemlyn Lagoon taken from the shingle ridge on the seaward side, showing one of the two islands used by breeding terns.

- 7.8.7. Sandwich tern nest exclusively at Cemlyn amongst the Anglesey Terns SPA colonies, apparently because only this site offers suitable nesting habitat, which in this case is a dry sand-silt substrate with low growing herbs. This type of substrate is perhaps more prevalent in the Irish Sea relative to other colonies in the UK where embryonic sand dune with patchy dune grasses is preferred.
- 7.8.8. Moreover, a key factor in the selection of Cemlyn may be the presence of a colony of Black-headed gulls *Chroicocephalus ridibundus* as Sandwich terns “often nest in association with black-headed gulls” according to Cabot & Nisbet (2013). The gulls are thought to offer protection against predators as Sandwich terns are generally passive in the defence of their eggs and chicks and do not actively mob potential predators as the *Sterna* terns often do. Instead, they rely on nesting in very close proximity (touching distance with their neighbour) and offering a wall of upturned beaks to ward off potential aerial predators. There are costs to the association with Black-headed gulls as they are known to steal a relatively high proportion of the prey (up to 30% in the studies of Stienen *et al.* 2001) that adults attempt to deliver to their chicks, as well as undertaking some predation of eggs and small chicks.
- 7.8.9. A further major behavioural difference between Sandwich tern and the other *Sterna* terns is that “unlike most terns, they sometimes desert a site even after laying eggs” according to Cabot & Nisbet (2013). Indeed, Brown & Grice (2005) state that “Sandwich terns appear to be highly susceptible to individual events and the entry into a colony of lone dog-walker or a nocturnal visit by a fox or badger, for example, may cause large numbers of birds to desert” and “Restriction of human access and the control of predator such

as foxes, stoats and rats, by electric fencing have undoubtedly done much to foster the twentieth century increase in breeding numbers.” Equally, “colonies can grow extremely rapidly” where conditions are suitable, as occurred at Cemlyn as evidenced by Figure 6. However, an increase in numbers at one colony will invariably mean a decline in one or more connected colonies within the ‘metapopulation’ (see Figure 3).

- 7.8.10. The Cemlyn colony of Sandwich terns is currently very vulnerable. There has been a sudden decline in the population from approximately 2,600 pairs of Sandwich terns between 2014 to 2016, to 1,980 pairs in 2017 and then down to 519 pairs in 2018 (Figure 6). The conservation objectives for the number of Sandwich terns in the SPA designation is 460 pairs based on a five-year mean using data from 1992-1996.

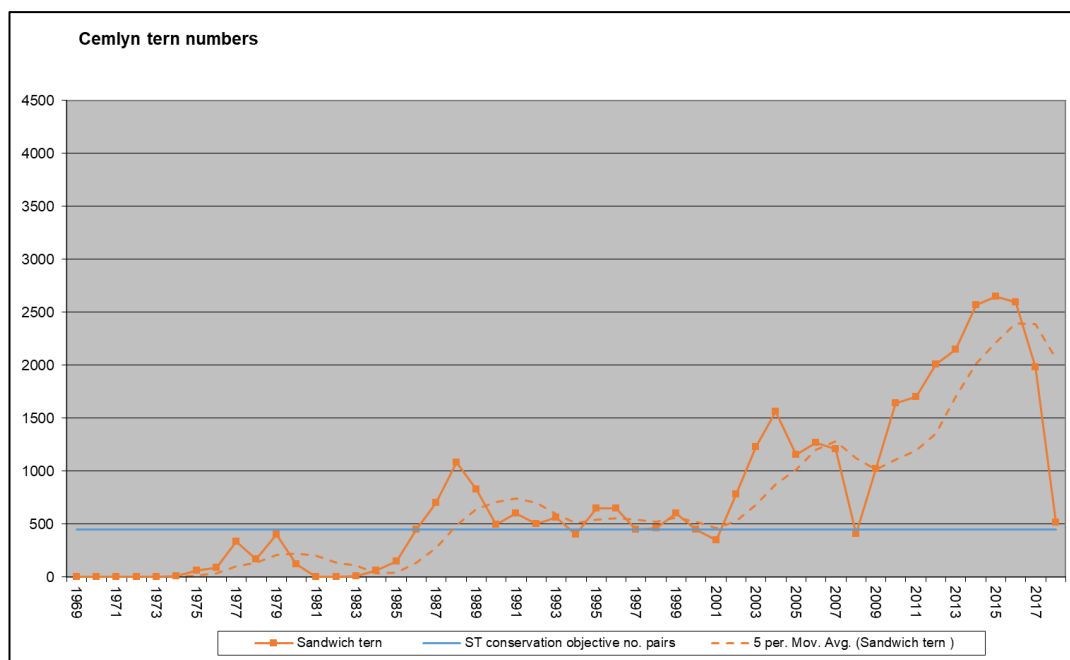


Figure 6: Numbers of breeding Sandwich tern pairs from 1969 to 2018 (North Wales Wildlife Trust data).

- 7.8.11. The vulnerability of the colony can also be seen in the decline of productivity (estimated number of chicks fledged per pair per year) in the Sandwich tern population (Figure 7). Productivity dropped dramatically due to predation in the colony in 2007 and 2008, but it has also been declining in general over the recent years with a five-year mean of 0.452 from 2013 to 2017, compared to a performance indicator for the conservation objective of 0.85 five year mean. The stress on the colony can be seen further in the behaviour of the Sandwich terns, where they have taken to provisioning the chicks in the colony with multiple small prey items in one trip rather than the usual provisioning of one single large prey item. This has been rarely seen in Sandwich terns and could indicate that the colony is struggling to get their preferred prey items (Figure 8).

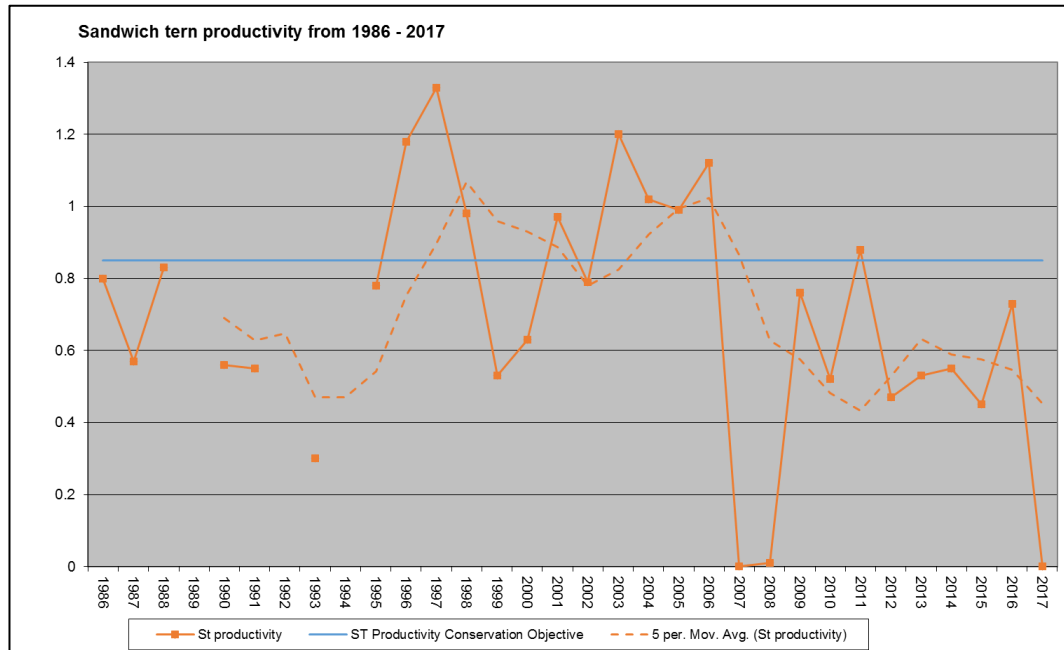


Figure 7: Productivity (estimated number of fledged chicks per pair per year) of breeding Sandwich terns from 1986 to 2017 in comparison to the five-year rolling peak mean and the performance indicator for productivity within the SPA conservation objectives (North Wales Wildlife Trust data).



Figure 8. Images of Sandwich terns returning to the colony with prey to provision chicks in 2016. The right image shows the delivery of favoured large prey (a sandeel) compared to the left image showing the capture and carry of multiple smaller items (also sandeels), which has only very rarely been recorded before at colonies in the UK.

- Overview

- 7.8.12. NRW has provided substantial pre-application advice to the Applicant in the preparation of its Shadow HRA, including provision of advice to the Applicant on its draft Shadow HRA in NRW's letter dated 27 October 2017. NRW advised that it did not agree with the conclusions of the Shadow HRA that adverse effects on the Sandwich, Arctic and Common tern populations at the Cemlyn colony, caused by disturbance effects generated by the construction of Wylfa Newydd, could be ruled out. The Applicant also consulted NRW on a revised Shadow HRA in March 2018. NRW advised in its letter dated 11

May 2018 that it did not agree with the conclusions in the revised Shadow HRA.

- 7.8.13. As explained further in the detailed comments below, NRW considers that there is significant scientific doubt regarding whether there will be adverse effects on the Sandwich, Common and Arctic terns of the Anglesey Terns SPA. We provide detailed advice below (comments 7.8.27 – 7.8.29) explaining the significant uncertainty regarding the evidence that exists on the sensitivity of terns to disturbance. NRW has raised many of the comments concerning the literature and evidence presented during the pre-application phase. In its letter to the Applicant on 11 May 2018, NRW also advised that it is not aware of further information that may be available or could be collected that would address the uncertainty.
- 7.8.14. We also provide detailed advice below (comment 7.8.31) on the mitigation specified by the Applicant. During the pre-application stage, NRW raised concerns regarding the likely success and deliverability of an earlier iteration of these mitigation measures. The detailed comments in 7.8.31 are provided to explain the significant concerns that NRW has on the effectiveness and deliverability of the mitigation.
- 7.8.15. In its letter of 11 May 2018, NRW advised the Applicant that it was not aware of feasible mitigation, that did not result in significant constraints on the project (e.g. construction works to be undertaken outside the tern breeding period), and that could be implemented to appropriately mitigate the disturbance effects generated during the construction works and enable a conclusion of no adverse effects to be agreed.
- 7.8.16. In view of the detailed comments specified below, NRW advises that there is significant scientific doubt regarding whether there will be adverse effects on the Sandwich, Common and Arctic terns of the Anglesey Terns SPA. It should be noted that, in line with the precautionary principle, the Court of Justice of the European Union has consistently held that a competent authority may only authorise a project having made sure that it will not adversely affect the integrity of a site, taking account of the conclusions of the HRA. The Court of Justice of the European Union has held that this is the case “*where no reasonable scientific doubt remains about the absence of such effects*”¹⁰. For the reasons given in comments 7.8.20 – 7.8.31 below, NRW considers that there remains significant scientific doubt in this case and that a conclusion of no adverse effects on site integrity of the Anglesey Terns SPA cannot be reached.
- 7.8.17. In light of this assessment, the project would need to be modified accordingly so that any adverse effects can be ruled out. If not, for consent to be granted,

¹⁰ Case C-127/02, Waddenvereniging and Vogelbeschermingsvereniging

regulation 64 of the Conservation of Habitats and Species Regulations 2017 must be satisfied i.e. it must be shown that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest. If the competent authority is satisfied that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest, then compensatory measures would need to be secured.

- 7.8.18. Without prejudice to the decision of the competent authority, including the Secretary of State for the DCO, NRW has been advising the Applicant on the development of possible compensation measures. There have been productive discussions with the Applicant and good progress has been made. During the Examination stage, NRW can provide further advice to the Applicant, and the Examining Authority, on the suitability of the compensation measures proposed.
- 7.8.19. We provide the detailed advice below to explain the summary provided above.

- *Tern Disturbance*

- 7.8.20. NRW does not consider that the evidence and mitigation presented in the Shadow HRA demonstrates that adverse effects on the SPA relating to the sensitivity of Sandwich, Arctic and Common terns to disturbance can be ruled out.
- 7.8.21. According to Figure 2-1 of the Phasing Strategy (APP-447), the Wylfa Newydd construction phase will last approximately 9 years. Works at the main site during years 1-3 include bulk earthworks, deep excavations (including blasting), rock excavation as well as construction of the marine structures in Porth y Pistyll. This is then followed by the construction and commissioning of reactor units 1 and 2 up to year 9. At its peak there will also be 9,000 workers on site, which also brings risk of recreational disturbance. The Time Slice Phasing Plans in Annex A of the Construction Method Statement (APP-136) provide a spatial sequenced plan which shows the scale of the works. The works will require extensive plant and machinery and will involve a major construction project located near a tern colony which forms part of the Anglesey Terns SPA.
- 7.8.22. NRW consider that the project will generate construction noise stimuli that will cause increased stress to terns at the Cemlyn colony. NRW consider that noise stimuli are likely to disturb breeding birds when they are present at the colony and reduce breeding success. A reduction in breeding success could be caused by birds flying-up ('fly-ups') and temporarily leaving their nests, eggs or chicks unattended and making them more vulnerable to predation and chilling. Disturbance can also result in stress, manifested as changes in hormone levels and not necessarily in a visual response, particularly if that visual response (such as taking flight) is unlikely to be appropriate for the type of disturbance. For example, taking flight might be appropriate to avoid

a predator, but is of little adaptive value as a response to noise especially if this exposes eggs or chicks to predators. In such circumstances, birds may appear to tolerate noise or disturbance. However, it should not be assumed that there is no ultimate effect on body condition or breeding performance. Furthermore, colony abandonment could occur because of breeding failure or high levels of disturbance. In addition to increased construction noise stimuli at the colony, terns flying in and out of the colony during the course of their foraging trips will also be subject to a significant change to their visual environment due to the scale of construction works and associated machinery. The stress caused by these visual stimuli has the potential to act cumulatively with the effects of noise stimuli.

- 7.8.23. In relation to Sandwich terns, NRW consider that disturbing stimuli (such as noise and visual effects of the proposed works) will cause stress to the birds which breed and rear young at Cemlyn. This is likely to reduce the breeding success and lead to potential abandonment of the colony by Sandwich terns. This would constitute an adverse effect on the Sandwich tern conservation objectives for productivity, range and population size.
- 7.8.24. In relation to Common and Arctic terns, NRW considers that the increase in noise and visual stimuli on land and sea is likely to reduce the breeding success and lead to potential abandonment of the colony by Common or Arctic terns. This would constitute an adverse effect on maintaining range and distribution for both the Common tern and Arctic tern features of the SPA.
- 7.8.25. We also consider that the works may affect black-headed gulls which, as mentioned above, the Sandwich terns often breed in association with. Although not a feature of the SPA, the loss through abandonment by Black-headed gulls may also impact on other components. For example, a reduction or loss of black headed gulls could reduce the resilience of the entire colony to predation by both mammalian and avian predators (such as large *Larus* gulls, Grey Heron *Ardea cinerea* and Peregrine falcon *Falco peregrinus*) due to the role that Black-headed gulls play in defending the colony.
- 7.8.26. In the Shadow HRA, the Applicant uses various evidence (including literature and observational monitoring, as well as mitigation) in presenting its conclusions on the Shadow HRA. NRW provide advice on each below.
- 7.8.27. NRW considers that there is significant uncertainty and/or insufficiency regarding the evidence used in the Shadow HRA to consider the sensitivity of terns to disturbance. The comments in a) – g) below explain this in further detail:
 - a) The noise modelling predicts 58.6 dBLAeq from the main construction works and 44.6 dBLAeq at night. No ambient noise data for night time at the colony is provided for comparative purposes. The predicted noise levels from blasting are that the “large majority” are under 60 dBLaf max.

However, there is particular concern regarding the perceived minority of cases as unconstrained blasts would remain above 80 dBLAF max.

- b) The evidence available from the literature cited by the Applicant is not directly comparable with the situation at Cemlyn. The quoted papers consider the effect of disturbance on wintering wildfowl and waders or other tern species, often in the tropics, whose behaviour are substantially different to Sandwich tern colonies such as that present at Cemlyn. Also, the sources of disturbance cited generally relate to watercraft and people and are not directly relevant to the placement of a large construction site within 500 metres of a vulnerable Sandwich tern colony.
- c) We do not agree with the Applicant's argument in paragraph 10.3.9 of the Shadow HRA that anthropogenic disturbance causing abandonment by the terns "*does not withstand scientific scrutiny*". The Shadow HRA, in contrast to this conclusion, also cites scientific papers which state that 45% of the failures of Least tern colonies in New England were actually accounted for by human disturbance (Burger, 1984). Burger & Gochfield (1991) also states that human disturbance was responsible for 35% of the colony failures amongst Common terns. There is only one paper cited, that of Nisbet (2000), which considers that the argument for anthropogenic disturbance effects on colonial waterbirds is over emphasised. However, this paper was mainly focusing upon how stressed birds are due to people undertaking scientific research in colonies and is not representative of the response of terns to the construction activities taking place at Wylfa Newydd.
- d) The papers referenced for Garthe & Huppopp (2004) and Furness *et al.* (2013), which are essentially based on the same information, assess the sensitivity of Sandwich tern to noise at sea based on their reaction to at-sea surveys by both planes and boats generally in an offshore environment and compare this to the sensitivity of birds such as divers (*Gavia spp.*) and seaducks. However, terns at a colony will behave quite differently and would be more sensitive than birds at sea. Also, the evidence that the Applicant has presented on avoidance of a wind farm at Teeside relates to passage birds and not to birds at a colony.
- e) The Shadow HRA also cites Dierschke *et al.*, (2016) which discusses the behaviour of terns in relation to offshore wind farms as supporting the argument that they lack sensitivity to anthropogenic disturbance. However, the more detailed study of Harwood *et al.* (2017) is not cited, which showed that breeding Sandwich terns showed "*unforeseen responses*", by reacting to the construction of an offshore wind farm in ways not predicted during detailed environmental impact assessment. This involved some 30% fewer birds entering the wind farm area and birds avoiding areas of construction and standing structures (turbines without blades and offering no risk of collision). The mechanisms for these unpredictable responses in the open sea remained unclear. Therefore, activities near the colony may generate greater behavioural responses than those in an offshore environment.
- f) The argument about terns choosing to breed in industrial areas is invalid in the context of this colony. The only example referred to in the Shadow HRA of a Sandwich tern breeding colony in an industrial environment is

at Zeebrugge docks in Belgium. However, we note that the colony eventually abandoned this site and we understand that Sandwich terns have not bred at this site for more than a decade. In fact *all* the Sandwich tern colonies in the UK are located in rural, non-industrial locations.

- g) The Applicant states that in Fijn et al (2017), fieldwork takes place without obvious detrimental effect to a Sandwich tern colony. However, in this paper, they make no analysis of the colony without disturbance from the fieldwork and also state that the whole process could be improved by using remote cameras to reduce disturbance. We also consider that disturbance caused by field work cannot be compared with the scale of the construction works proposed for this development.

7.8.28. The blasting trial which took place in March 2017 (and describe in ES Appendix D13-7 (APP-225), observed the responses of loafing/roosting black-headed gulls however no terns or gulls were breeding at the time of the trial. Therefore, the response of the birds present at the time cannot be used as evidence to state that blasting and certain noise levels would not have a significant effect on the populations of any species of breeding terns or black-headed gulls. It should also be noted that the colony failed in the breeding season of 2017 and so the case cannot be made that the responses observed are typical of an undisturbed colony.

7.8.29. In relation to the observational (disturbance) monitoring (ES Appendix D13-7 (APP-225)) undertaken at the colony, we have the following comments:

- a) The monitoring of the colony did show a number of responses to noise by the colony, however 66% of the tern responses were attributed to unidentified sources. The Applicant states that *“it is not plausible that a significant proportion of these responses to unidentified causes were attributable to disturbance events associated with undetected anthropogenic activities”*. However, we do not consider that it can be concluded with reasonable certainty that a ‘significant’ proportion of the unidentified causes were not due to disturbance events. The observational monitoring assumes that only the disturbance responses recognised by the observers are important. In fact, stress, manifested as changes in hormone levels may be experienced but not be observable, particularly if an observable response (such as taking flight) would be unlikely to be appropriate for the type of disturbance. Taking flight might be appropriate to avoid a predator, but is of little adaptive value as a response to noise especially if this exposes eggs or chicks to predators. In such circumstances, birds may appear to tolerate noise or disturbance, but this should not be interpreted as generating no response or, more importantly, that there is no ultimate effect on body condition or breeding performance.
- b) The observers allocated 11% to 12% of the responses to ‘obvious’ anthropogenic sources. However, as noted above, many responses to sources of disturbance that did not have obvious causes were also recorded. Of the obvious anthropogenic sources of disturbance, such as fly over by jets and the presence of people, these will have been occurring regularly, over many years, and so the colony will have

developed a degree of habituation to these events. In comparison, the construction noise will be both novel to the area and frequent and thus, very different in pattern to the more sporadic and infrequent events currently observed. It therefore cannot be assumed that birds will habituate in the same manner or even show any degree of habituation at all, especially if the level of disturbance exceeds a tolerable threshold.

- c) Finally, the results of the 2017 observational monitoring work need to be considered in the context of a season when there was complete collapse of the colony. The colony of Sandwich terns is currently particularly vulnerable due to declining productivity and other factors such as disturbance/predation, which resulted in abandonment of the colony in 2017. This brings increased risks of abandonment in relation to novel disturbing factors.

7.8.30. In view of the comments in 7.8.27 – 7.8.29 and the significant uncertainty and limited evidence cited, as well as the known sensitivity of Sandwich tern colonies, to disturbance, NRW does not consider that the evidence demonstrates that terns will not be significantly disturbed as a result of the construction of Wylfa Newydd.

7.8.31. As result of the potential disturbance to terns, the Applicant has proposed mitigation in Table 11-1 of the Shadow HRA. However, NRW has significant concerns about the effectiveness and deliverability of the mitigation proposed. To explain further:

- a) It is unclear how the Applicant will effectively implement its proposals to manage construction activity if monitored noise levels at the colony exceed the proposed limits. For instance, there is no explanation as to how the Applicant will attribute an exceedance of noise limits to its construction activity or an item of equipment. We consider that this will be particularly challenging given the scale of the construction site and the range of construction activities likely to be occurring simultaneously.
- b) If the Applicant can effectively determine that a noise limit exceedance has been caused by a specific construction activity or item of equipment, it is unclear how the Applicant will then respond. For instance, we would welcome clarity on the Applicant's proposals for a "*temporary suspension of work*", and on the process by which it will "*substitute equipment*" and consider "*other feasible and reasonable measures*".
- c) During the main earthworks phase of construction, the Applicant commits to ensuring that blasting on site when "*taking into account wind factors, noise shielding and other mitigation*" will not exceed 60db. In addition, limits are set for day-time construction noise (59db) and night time construction noise (43db) at the colony. Based on the information provided, we are unclear as to how wind and weather conditions will be taken account of to ensure that these limits are not exceeded.
- d) NRW does not agree that there is sufficient evidence to demonstrate that the colony would not be disturbed by noises below the proposed limits of 60 dB and 59db. In addition, there is no consideration of the uniqueness of the noises produced by blasting and construction noise.

- e) The Applicant has proposed additional noise controls during the 'establishment period' and during the first two years of construction. The controls propose a limit of 55dB, at the colony, on the noise caused by blasting and day-time construction works. The Applicant states that in order to achieve 55db, *"works would avoid the most adverse (light downwind) wind conditions for noise transfer to the colony"*. NRW require further detail on how noise-generating construction activity will be managed in accordance with the highly variable wind and weather conditions at Wylfa Newydd.
- f) NRW advise that the establishment period should apply from no later than 15th March, when the black-headed gulls are likely to begin settling on site. There is ambiguity with respect to the statement *"unless significant nest establishment is observed"*. It is unclear what would denote significant nest establishment.
- g) The Applicant also proposes a programme of 'reactive monitoring' at the colony during the construction phase. The Applicant also states that *"if the colony exhibits fly-up disturbance reactions...as a direct result of attributable noise events or shows a measurable increase in the incidence of disturbance events above those recorded during baseline observation works... then alternative methods of working or additional constraints would be applied (including the option of temporary suspension of works)"*. NRW note that the baseline observations took place during the breeding season when the colony failed and it would therefore be incorrect to consider the number of fly-up disturbance reactions of terns during the 2017 surveys as a reliable or acceptable baseline. It is also unclear if alternative methods may be available or that temporary suspension of works would be feasible: see (b) above. In addition, it remains unclear what a 'fly-up' means in terms of energetic losses and whether the number of 'fly-ups' has a cumulative effect on individuals and thus the colony as a whole.
- h) Based on baseline incidence of circa 1.6 fly-ups per hour during the 2017 observation works, the Applicant has proposed that if a threshold of 3 fly-ups per hour for which there is *"no obvious non-Horizon cause"* is exceeded, it *"would cease the most obvious disturbing activity"*. It is also proposed that *"if the independent observers record more than two fly-ups in the next hour Horizon would stop the next most disturbing activity"*. It is proposed that any ceased activities would start again 7 days later, under observation. NRW is unclear about: why a limit of three fly-ups per hour is considered acceptable; the method by which the Applicant would identify and manage the 'most obvious' and 'next most' disturbing construction activities; and the rationale for restarting disturbing activities seven days later.
- i) Based on the concerns set out in (a)-(h), NRW does not consider that the proposed mitigation can be effectively implemented to manage the risk of noise disturbance at the colony. If the Applicant is able to provide further information to demonstrate that the mitigation proposals are workable, NRW consider that whilst the noise levels at the colony would be managed, the measures would not fully mitigate the risk of noise disturbance. Furthermore, NRW do not consider the reactive monitoring

proposals to be a fail-safe on the basis that they do not manage the risk of sudden colony abandonment or a decrease in productivity caused by noise-induced stress. As advised above, stress may be manifested as changes in hormone levels without this being manifested as a visual response (e.g. fly-ups). Birds may appear to tolerate noise or disturbance but it cannot be concluded that there would be no effect on body condition or breeding performance.

- j) The Applicant acknowledges that a further reduction of productivity, is possible when it states that, *“losses of eggs or chicks to opportunistic predators e.g. gulls could potentially occur”*. The Applicant also acknowledges that *“any responses by the Sandwich terns breeding at the Cemlyn Bay colony to construction noise are likely to result in, at most, small effects on breeding success”*, acknowledging a possible effect on the productivity conservation objective, which is already approximately 50% of the target.

- Supporting habitat

7.8.32. The Wylfa Newydd project has the potential to affect supporting habitat of terns during the construction phase (e.g. dredging and land drainage discharges, disposal of dredge material, and construction of marine structures) and during the operational phase (e.g. discharges associated with the cooling water system as well as the habitat loss to the marine structures). Please see comments 7.8.20 – 7.8.29 below regarding fish (as prey items) that may also be affected as a result of the abstraction of sea water and the associated risk of impingement and/or entrainment.

7.8.33. In terms of supporting habitat, the Shadow HRA considers possible effects of the project, including the effects of permanent/temporary land-take and effects on marine water quality. Although there will be an impact on supporting habitats (as detailed in ES chapter D13 and the Shadow HRA), it is unlikely that losses or modifications to the benthic environment at the predicted scale will have a significant impact on the conservation objectives associated with benthic supporting habitat for the Anglesey Terns SPA. NRW therefore advise that the construction and operation of the Wylfa Newydd project is not likely to have adverse effects on site integrity as a result of impacts on supporting habitat of terns.

- Tern foraging & fish (as prey items)

7.8.34. Studies have shown that sandeels (*Ammodytes* spp. and *Hyperoplus lanceolatus*) and clupeids (mainly restricted to Atlantic herring *Clupea harengus* and European sprat *Sprattus sprattus* in the Irish Sea) are the key prey groups for Sandwich, Common and Arctic terns (Cabot & Nisbet 2013; this has also been shown in local studies undertaken by RSPB and North Wales Wildlife Trust). Figures 6-30 to 6-34 of the Shadow HRA provides the result of tracking surveys of terns from Cemlyn, which shows that Sandwich terns forage along the north-east/eastern side of Anglesey, making particular use of sandy habitats that support sandeels.

- 7.8.35. Fish have the potential to be affected by the Wylfa Newydd project through impingement and/or entrainment as a result of the cooling water system. NRW is satisfied that the baseline fish surveys have been undertaken in an appropriate manner.
- 7.8.36. Further to NRW's comments in its Relevant Representations (comment 4.3.3), NRW has considered the monitoring and mitigation proposed in the CoOP and undertaken further assessment of data (inclusive of Cefas data) not considered by the Applicant in its Shadow HRA. NRW provide the following advice on the possible effects of increased entrapment as a result of the project.
- 7.8.37. Annually the power station is predicted to entrain 331.2kg of Sprat and 35.88kg of sandeels. In Lees & Mackinson (2007), it states that "*an average sandeel biomass estimate of 2.14 tonne per km² was calculated from Cefas Irish Sea ground fish survey*". The Sandwich tern foraging area calculated by the JNCC model is 309.5 km², which equates to 662.3 tonnes of available sandeel based on the CEFAS data. The 35.88kg predicted to be entrapped equates to 0.03588 tonnes and thus 0.005% of what is potentially available in the foraging range. NRW also note that the majority of Sandwich tern foraging is to the east of Anglesey away from the area of impingement or entrainment and the colony initially started and grew during the period that the Wylfa Magnox station entrained and impinged fish prey.
- 7.8.38. There are 22,489 tonnes of Atlantic herring in the ICES Irish Sea area 7a, which is 50369.5 km² in size. Therefore, there may be approximately 0.45 tonnes per km² within this area. The Sandwich tern foraging area calculated by JNCC is 309.5 km², therefore has the potential to support 138 tonnes of herring compared to the 0.33 tonnes of sprat/clupeid predicted to be entrapped by the power station. This equates to 0.245% of the stock available to foraging terns.
- 7.8.39. In view of the above comment in 7.8.37 and 7.8.38, NRW consider that there will be no adverse effect on the Sandwich tern feature of the Anglesey Terns SPA from impingement and entrapment of prey.
- 7.8.40. The foraging area calculated by JNCC for Common tern from Cemlyn Lagoon, equates to 97.8 km² which, based on the CEFAS data (2.14 tonnes of sandeel per km²) supports 209.3 tonnes of sandeel. The entrapment of 35.8 kg of sandeel equates to 0.0358 tonnes, therefore comprises 0.017% of that potentially available in the foraging range.
- 7.8.41. The foraging area calculated by the JNCC for Arctic terns model equates to 424.5 km² which, based on the CEFAS data (2.14 tonnes of sandeel per km²), equates to 910.4 tonnes of sandeel. The entrapment of 35.8 kg of sandeel equates to 0.0358 tonnes, therefore comprising 0.004% of that potentially available in the foraging range.

- 7.8.42. In view of the above comments in 7.8.40 - 7.8.41, NRW also agrees that there will be no adverse effect on the Common and Arctic tern feature of the Anglesey Terns SPA from impingement and entrapment of prey.
- 7.8.43. We note that the Code of Operational Practice (CoOP) proposes to monitor the entrapment of fish. We advise that detailed monitoring proposals, which will be used to optimise the mitigation, should be set out in a detailed CoOP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement.

- *Coastal processes*

- 7.8.44. Further information is required to demonstrate that changes in coastal processes due to the presence of the marine structures will not affect the shingle ridge, which supports the functioning of Cemlyn Lagoon and the tern breeding islands contained therein. We refer to our comments in section 7.10 below.

- *Conclusion*

- 7.8.45. In view of the above comments in section 7.8.20 – 7.8.31, and as outlined in 7.8.12 – 7.8.18, NRW advises that there is significant scientific doubt regarding whether there will be adverse effects on the Sandwich, Common and Arctic terns of the Anglesey Terns SPA. In line with the precautionary principle, we consider that a conclusion of no adverse effects on site integrity of the Anglesey Terns SPA cannot be reached.
- 7.8.46. NRW advise that it cannot be ascertained that the Wylfa Newydd project will not adversely affect the integrity of the Anglesey Terns SPA and that the project would need to be modified accordingly so that any adverse effects can be ruled out. If not, for consent to be granted, regulation 64 of the Conservation of Habitats and Species Regulations 2017 must be satisfied i.e. it must be shown that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest. If the competent authority is satisfied that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest, then compensatory measures would need to be secured.
- 7.8.47. As highlighted in 7.8.18, NRW in its advisory role has been advising the Applicant on its development of a compensation package which we expect the Applicant to provide to the Examining Authority / Secretary of State if this information is requested. NRW will continue to work with the Applicant to further develop the package. We advise that further clarity is required as to how the compensation package would be secured and delivered (including within a section 106 agreement and/or DCO Requirement(s)).
- 7.8.48. Please note that the above advice in section 7.8 constitutes NRW Advisory's advice to the Examining Authority as the Appropriate Nature Conservation

- *Glannau Ynys Gybi / Holy Island Coast SPA*

- 7.9.2. Glannau Ynys Gybi / Holy Island Coast SPA is located on the west coast of Holy Island and is classified for breeding and wintering chough. There is evidence (ES Appendix D9-14 (APP-181)) that shows chough nest and forage in the vicinity and/or within the Wylfa Newydd Development Area. The Shadow HRA assesses the potential that chough from the SPA may use the Wylfa Newydd Development Area, its functional linkage¹¹ or connectiveness, and its significance.
- 7.9.3. In relation to the potential for breeding chough from the chough SPA populations to forage in the Wylfa Newydd Development Area, we agree with the evidence presented in the Shadow HRA and ES Appendix D9-14 that there is no functional link between the Wylfa Newydd Development Area and the existing Welsh chough SPA network.
- 7.9.4. In relation to the potential for chough from Welsh SPA populations to forage in the Wylfa Newydd Development Area outside the breeding season, NRW agree that there is functional linkage between Wylfa Newydd Development Area and the existing Welsh chough SPA network but given the evidence base the level of functionality is not considered to be significant.
- 7.9.5. In relation to the potential for recruitment of chough from Wylfa Head into Welsh SPA breeding populations, NRW agree with the evidence presented that demonstrates there is functional linkage between Wylfa Newydd Development Area and the existing Welsh chough SPA network but given the evidence base the level of functionality is not considered to be significant. Furthermore, NRW projected that over a 10-year period, taking into account mean productivity, male and female dispersal distance, male to female fledging ratios and juvenile survival it would be expected to show a low contribution of juvenile chough dispersing from natal sites within the Wylfa Newydd Development Area to potential adult nesting sites within the existing Welsh chough SPA network. Therefore, NRW agree that the existing Welsh chough SPA network is not dependent on recruitment of juvenile male or female chough from the Wylfa Newydd Development Area.
- 7.9.6. In view of the above, NRW advise that the Wylfa Newydd project is unlikely to have significant effects on the Glannau Ynys Gybi / Holy Island Coast SPA (and the wider Welsh chough SPA network), either alone or in-combination.

¹¹ Chapman & Tyldesley (2016) define the term 'functional linkage' as "*the role or 'function' that land or sea beyond the boundary of a European site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore 'linked' to the European site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status*".

- *Other SPAs in Wales*

7.9.7. We note that a number of SPAs, for which the Wylfa Newydd project may cause likely significant effects, are considered in the Shadow HRA. Some of the SPAs are considered further in the Stage 2 Appropriate Assessment in the Shadow HRA. For the SPAs not discussed above, NRW agree with the conclusions of the Shadow HRA that the Wylfa Newydd project will not result in adverse effects on site integrity. Please note this advice is based on sites in Wales, or partly in Wales, and we advise that you liaise with other Appropriate Nature Conservation Bodies as appropriate in relation to sites elsewhere.

7.10. **Habitats Regulations Assessment – Bae Cemlyn / Cemlyn Bay SAC (including Cemlyn Bay SSSI)**

7.10.1. Cemlyn Bay SAC consists of two features: the coastal lagoon and the perennial vegetation of stony banks (i.e. the Esgair Gemlyn shingle ridge)¹². The lagoon is a priority feature under the Habitats Directive.

7.10.2. Cemlyn lagoon is considered to be the best example of a saline coastal lagoon in Wales. Cemlyn lagoon supports an unusual set of species, several of which are specific to lagoons and are tolerant of very variable salinity. Water is supplied to the lagoon from various sources; direct rainfall, freshwater streamflow, groundwater, seawater percolation through the shingle ridge and seawater overtopping of the sluice and shingle ridge during highwater storms. The very variability of salinity produced by these sources is important in stressing plant and animal life, enabling only those tolerant of these unique conditions to thrive.

7.10.3. Shingle beaches are widely distributed around the coasts of Wales and England but vegetated shingle, as found at Cemlyn, is a habitat with very restricted distribution. The shingle ridge at Cemlyn supports distinctive vegetation adapted to this very dynamic and challenging environment and characterised by sea kale and yellow horned-poppy. The ridge itself is a product of wind, waves, tides and sediment supplies; alteration to any of these factors has the potential to impact on the feature.

7.10.4. The lagoon and shingle ridge vegetation could both be affected by the proposed marine works which may impact on coastal processes in the locality. Both may also be affected by air emissions as a result of the project. The lagoon feature may also be affected by the bulk earthworks and landscape mounding (Mound E) proposed within the Cemlyn catchment as well as effects on the surface water and groundwater inputs into the lagoon.

¹² <https://naturalresources.wales/media/671214/Cemlyn%20WES32%20plan%20English.pdf>

- *Terrestrial water quality*

- 7.10.5. As highlighted in NRW's Relevant Representation (paragraph 4.3.10), further information is required to demonstrate that Cemlyn Lagoon will not be affected by impacts on water quality due to surface water run-off from Mound E. We note that the project design has been amended and that no construction water discharge is now proposed to be discharged into Nant Cemlyn via discharge location E1 until vegetation has been re-established on the western slope of Mound E. Further clarity is required in relation to the mitigation measures detailed in 7.4.5 of the Shadow HRA and in relation to the drainage proposed on and around Mound E. It appears to NRW that pumping capacity is limited and that in extreme events some runoff will enter Nant Cemlyn; clarification from the Applicant is required on the level and frequency of such occurrence.

- *Air quality effects*

- 7.10.6. We refer to our comments in section 7.16 below.

- *Hydrology / Hydrogeology*

- 7.10.7. Part B of Chapter 7 of the Shadow HRA assesses the effects of changes to surface water and groundwater flows into the lagoon. The Wylfa Newydd project may affect groundwater through dewatering effects during construction (and possible passive dewatering during operation). The project may affect surface water flows during construction (including temporary pumping of Mound E discharges into the Cafnan catchment) and during operation as a result of landscape mounding.
- 7.10.8. As well as freshwater inputs, sea water also percolates through the shingle ridge or occasionally overtops the ridge or the sluice into the lagoon. This results in salinity levels that fluctuate throughout the year, depending on freshwater flows. The species present within the lagoon are therefore adapted to fluctuating salinity levels and this fluctuation is in fact required to maintain the special interest.
- 7.10.9. In view of the natural fluctuations in salinity, NRW considers that the changes in surface water and groundwater flows predicted in the Shadow HRA, are not significant and are unlikely to affect the functioning of the lagoon or the interest that it supports.

- *Coastal processes effects*

- 7.10.10. NRW advise that Esgair Gemlyn shingle ridge, which is critical to the functioning of the lagoon and in supporting the shingle ridge vegetation, may be affected by changes in coastal process as a result of the marine works. The marine structures, including the breakwater and marine off-loading facility, are permanent structures (that are not proposed for removal during

the decommissioning phase) and may cause long-term changes in coastal processes in the vicinity of Esgair Gemlyn.

- 7.10.11. NRW has provided substantial pre-application advice to the Applicant on the modelling work undertaken which informs the impact assessment. A number of our previous pre-application comments have been addressed, however there are still outstanding issues as explained below which we advise are addressed in order to understand the potential effects of the marine works on Esgair Gemlyn shingle ridge.
- 7.10.12. The wave modelling shows that when waves approach the western breakwater from the north west, during extreme storm events, they reflect off the structure and are redirected so that the energy is focussed on a small area of Esgair Gemlyn towards the western end of the ridge. Insufficient evidence has been presented to demonstrate whether the reflected wave will change the sediment movement in that area over the lifetime of the project. There are gaps in the modelling assessment undertaken by the Applicant which relates the waves to the sediment dynamics during storm conditions from the north west. Changes in wave energy leading to changes in sediment movement could change the shape and height of the ridge at the western end and potentially result in more wave overtopping, or even a breach in the ridge which would affect the integrity and functioning of Cemlyn Lagoon.
- 7.10.13. Waves from the north west are generally smaller than waves from the north east, however it may not be a linear association and the biggest impact on the ridge may be from more frequent and/or smaller but more focused waves which are reflected off the western breakwater (see Figure 10 below). NRW advise that this smaller but more frequent focussing of energy by the western breakwater needs to be further understood to ensure that there is no detriment to the shingle ridge through erosion or breaching events over the lifetime of the project.

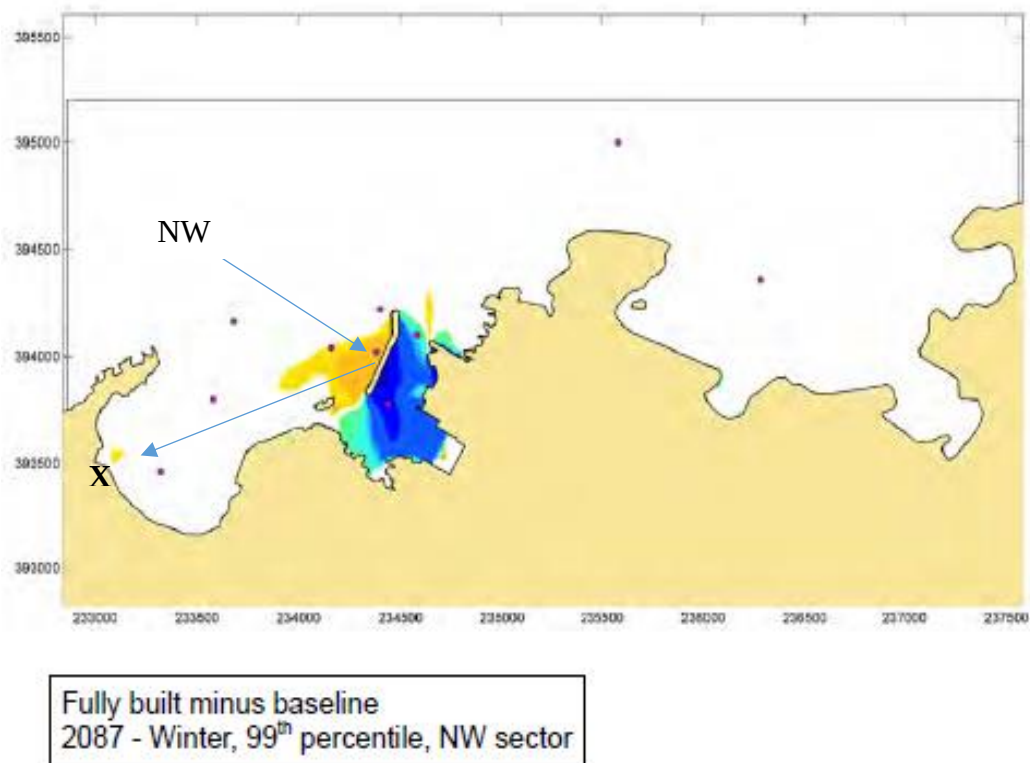


Figure 10: This figure, reproduced from figure D12-13 in ES chapter D12 (APP-131) is presented to explain concerns raised in comment 7.10.12. The arrows represent the reflected waves due to the western breakwater and the focussing of energy on to the western end of the Esgair Gemlyn shingle ridge (marked by 'X').

- 7.10.14. It is largely unknown how the ridge has responded to past wave events. There is therefore, a gap in the baseline understanding of the response of Esgair Gemlyn to storm events from different directions.
- 7.10.15. There is conflicting interpretation in the ES of what is causing the increased wave height off Esgair Gemlyn. Wave modelling (ES Appendix D12-3 (APP-218) section 4.5.5) cites wave reflection off the western breakwater. However, ES chapter D12 (APP-131) in paragraphs 12.5.37, 12.5.108 and 12.5.109 reports increased wave heights as '*shoaling effects due to the ebb delta*' of the lagoon drainage system.
- 7.10.16. The application does not provide an assessment of the impact of the cooling water discharge upon coastal processes. It is unclear whether the water discharge velocities and volumes into the water column could affect the local dynamics, stratification, scour and sediment movement sufficiently to risk affecting the integrity of the shingle ridge.

- 7.10.17. There is a construction waste water outfall structure, which will be in place for the whole construction phase, which has not been considered in the modelling and/or assessments which inform the Shadow HRA. The outfall pipe will be routed around the west of the west breakwater, and will end at a discharge point slightly beyond the northern end of the west breakwater (see drawing WN0907-HZCON-LAP-DRG-00023 Rev 2.0). There are protective structures (rock foundation overlain by concrete mats) surrounding the waste water outfall pipe which appear to be approximately 4m in height. This structure has the potential to alter coastal processes in the locality.
- 7.10.18. For completeness, we recommend that the Applicant provides a map of the total potential Zone of Influence with respect to the impact of the development on hydrodynamics. This advice relates to Technical Advice Note (TAN) 14: Coastal Planning and the importance of showing the total area of the environment that may be affected to some degree by the development in regards to hydrodynamics.
- 7.10.19. The Applicant has been previously advised that dredged fine material not suitable for re-use during construction should be returned to the marine system. Clarification is needed as to where the gravel and other sediments used for the construction phase will originate from. We recommend, where possible, that sediments are returned to the marine system.
- 7.10.20. In view of the comments above (7.10.12 – 7.10.17), we consider that further information is required to demonstrate whether there will be adverse effects on Cemlyn Bay SAC as a result of changes to coastal processes.

7.11. **Habitats Regulations Assessment - Welsh Special Areas of Conservation (SACs) with Marine Mammal Features**

- 7.11.1. There are a number of SACs in Wales which have been designated due to their international importance in supporting populations of marine mammals listed in Annex II of the Habitats Directive.
- 7.11.2. The following six SACs are designated in Wales:
- a) Pen Llŷn a'r Sarnau / Llyn Peninsula and the Sarnau SAC and Bae Ceredigion / Cardigan Bay SAC for bottlenose dolphin and grey seal;
 - b) Sir Benfro Forol / Pembrokeshire Marine SAC for grey seal;
 - c) Gogledd Môn Forol / North Anglesey Marine, Gorllewin Cymru Forol / West Wales Marine, and Dynesfeydd Môr Hafren / Bristol Channel Approaches Sites of Community Importance¹³ for harbour porpoise.

¹³ A site becomes a site of community importance when it has been submitted and adopted by the European Commission as a special area of conservation (SAC), but not yet designated by the government of the member state.

- 7.11.3. These marine mammal populations are highly mobile; there is demonstrated connectivity among sites. The populations are considered part of management units for the species (IAMMWG 2015): Irish Sea Management Units for bottlenose dolphin, Celtic and Irish Seas Management Units for harbour porpoise, and South and West England and Wales Management Units for grey seal. Given the mobility of site features and connectivity of sites, activities outside the boundaries of SACs must be considered because the site features can be impacted by distant activities. The harbour porpoise sites have seasonal components and are designated for their importance to the species in either summer or winter or both. All marine mammal site features are known to breed and raise young within and outside of the sites. All cetaceans are also European Protected Species and are strictly protected from deliberate disturbance, injury or killing wherever they are in European waters. Please see comments in section 7.17 below in relation to European Protected Species.
- 7.11.4. There are aspects of the marine works which are located within the Gogledd Môn Forol / North Anglesey Marine Site of Community Importance. The Shadow HRA (APP-050) refers to the Gogledd Môn Forol / North Anglesey Marine cSAC however please note that this site is now known as a Site of Community Importance. The site is designated for harbour porpoise *Phocoena phocoena*. Figure 11 below shows the location of the site.

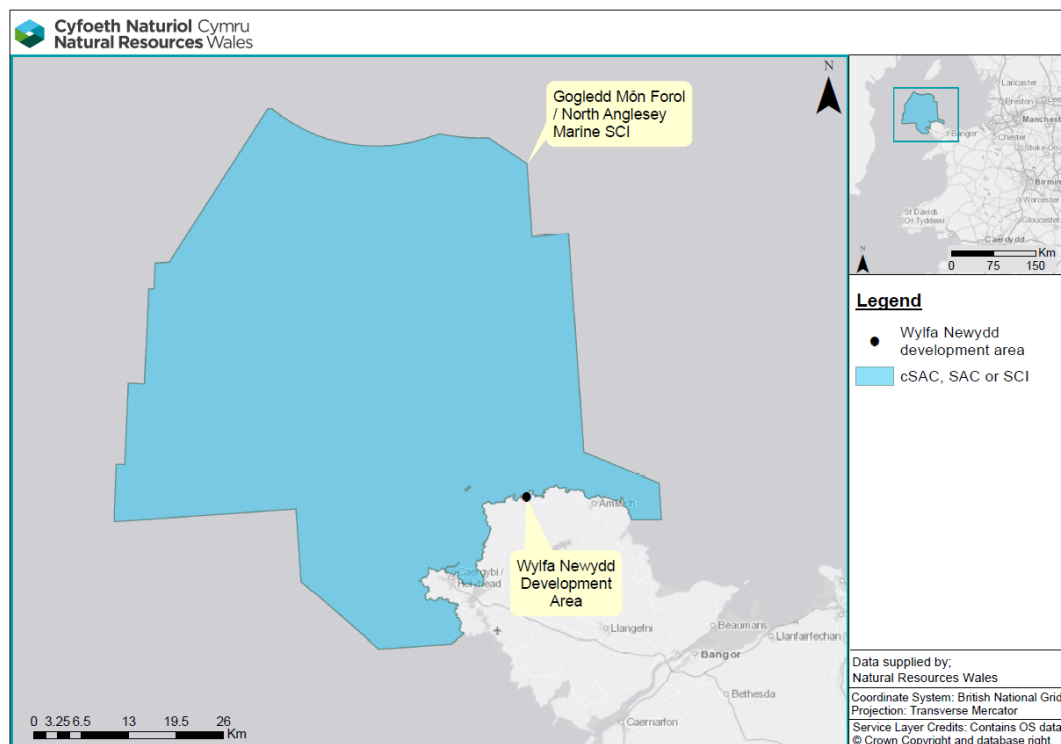


Figure 11: North Anglesey Marine Site of Community Importance

- 7.11.5. As highlighted in section 7.9. above, NRW is the Appropriate Nature Conservation Body for Welsh sites and, for the avoidance of doubt, NRW's advice is focused on the sites listed below. We also recommend that you

liaise with the other relevant Appropriate Nature Conservation Bodies as appropriate.

- 7.11.6. We note that a number of SACs (with marine mammal features), for which the Wylfa Newydd project may cause likely significant effects, are considered in the Stage 1 Test of Likely Significant Effects part of the Shadow HRA. SACs are considered further in the Stage 2 Appropriate Assessment in the Shadow HRA. NRW agree with the approach taken in Stage 1 in relation to use of marine mammal management units as the spatial basis for consideration of likely significant effects.
- 7.11.7. NRW have the following comments to make in relation to any potential adverse effects on site integrity of the marine mammal sites in, or partly within, Wales.

- *Disturbance / Injury / Mortality*

- 7.11.8. Marine mammals may potentially be disturbed (e.g. from underwater noise) or injured/killed (e.g. from underwater noise or collision with marine vessels) as a result of marine works.
- 7.11.9. NRW agree with the conclusions of the Shadow HRA that construction works associated with the Wylfa Newydd project (including collision with marine vessels) are not likely to result in adverse effects on site integrity of SACs/Sites of Community Importance in Wales. Please note, the occurrence of collision with vessels will need to be carefully monitored. Vessel management (e.g. keeping travel speed low; staying on course; following codes of conduct for reducing wildlife disturbance) will be important in mitigating possible risk of collision. We advise that a Vessel Management Plan will need to be set out in the Marine Works Sub-CoCP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement. We advise that a commitment to provide detailed measures is specified in the current 'outline' Marine Works' Sub-CoCP.
- 7.11.10. Marine works including dredging, rock breaking, rock cutting and drilling undertaken in the marine environment as part of the construction works have the potential to generate significant underwater noise. The Shadow HRA includes mitigation measures in Table 11-1, also reflected in the Mitigation Route Map (APP-422), which will need to be implemented. We advise that detailed mitigation measures will need to be approved by the discharging authority, in consultation with NRW, as a DCO Requirement. We advise that a commitment to provide detailed mitigation measures is set out in the Marine Works Sub-CoCPs approved by the Secretary of State.
- 7.11.11. Since the HRA and ES were written, the accepted underwater noise criteria for marine mammal injury and disturbance have changed. The Southall et al 2007 noise criteria were the accepted industry standard until April 2018, when updated criteria were published: National Marine Fisheries Service [NMFS] (2018). These latest criteria represent the best available science and

have now been adopted by the appropriate nature conservation bodies as the preferred criteria to use in noise assessments. Although we consider that the conclusions of impacts from noise will not change when using these new criteria, it may be beneficial to demonstrate this, since, especially for harbour porpoise, the distance from the sound source where hearing injury (Permanent Threshold Shift) can occur can be much greater using the new National Marine Fisheries Service criteria compared to the Southall et al 2007 criteria.

- 7.11.12. NRW also agree with the conclusions of the Shadow HRA that the operational effects of the Wylfa Newydd project are unlikely to cause adverse effect on site integrity through disturbance or injury/mortality (e.g. through marine vessel movements or discharges associated with the cooling water system). We also note that the design of the proposed cooling water system (i.e. coarse bar screens) will ensure that marine mammals will not be entrapped within the system.

- *Supporting habitat and fish (as prey items)*

- 7.11.13. The Wylfa Newydd project has the potential to affect supporting habitat of marine mammals during the construction phase (e.g. dredging and land drainage discharges, disposal of dredge material, and construction of marine structures) and during the operational phase (e.g. discharges associated with the cooling water system as well as the habitat loss to the marine structures). During the operational phase, fish (as prey items) may also be affected as a result of the abstraction of sea water and the associated risk of impingement and/or entrainment.
- 7.11.14. In terms of supporting habitat, the Shadow HRA considers possible effects of the project, including as a result of permanent/temporary land-take, effects on coastal processes and effects on marine water quality. Although there will be an impact on supporting habitats (as detailed in ES D13 (APP-132) and the Shadow HRA), it is unlikely that losses or modifications of the benthic environment on the predicted scale will have a significant impact on the conservation objectives associated with benthic supporting habitat for these sites. NRW therefore advise that the construction and operation of the Wylfa Newydd project is not likely to have adverse effects on site integrity as a result of impacts on supporting habitat of marine mammal sites.
- 7.11.15. Paragraph 8.7.47 of the Shadow HRA refers to the change and/or loss of habitat in combination with Wylfa Newydd for the bottlenose dolphin features of Pen Llŷn a'r Sarnau and Cardigan Bay SACs. Please note that the Swansea Bay and Cardiff Tidal Lagoons considered are located in a different bottlenose dolphin management unit and do not need consideration in combination; anything outside of the Irish Sea management unit does not need to be assessed in combination. This does not, however, alter the conclusions in the Shadow HRA.

7.11.16. In terms of fish as prey items, NRW agree with the conclusions of the Shadow HRA that effects on fish as prey items of marine mammals are unlikely to result in adverse effects on site integrity of marine mammal sites. The Dietary Equivalence Assessment suggests few individual marine mammals (expressed as adult equivalents) would be affected. Marine mammals forage over wide areas on a wide range of benthic and pelagic fish and other species. The predicted amount and composition of fish species (from larval to adult stages, the majority being larval stages) entrained/impinged is not considered to diminish the composition or availability of prey for marine mammals to an adverse extent.

7.11.17. We note that the Code of Operational Practice (CoOP) proposes to monitor the entrapment of fish. We advise that detailed monitoring proposals, which will be used to optimise the mitigation, should be set out in a detailed CoOP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement.

7.11.18. Please note that the above advice in section 7.11 constitutes NRW Advisory's advice to the Examining Authority as the Appropriate Nature Conservation Body. This advice is without prejudice to NRW Permitting Service's role as a competent authority for activities regulated by the Permits or Licences referred to in the cover letter of this response (page 3). The advice above is also without prejudice to NRW Advisory's advice in response to consultations from NRW's Permitting Services on those Permits and Licences.

7.12. **Habitats Regulations Assessment - Other SACs and Ramsar sites in Wales**

7.12.1. We note that a number of SACs and Ramsar sites are considered in the Shadow HRA, some of which are considered further in the Stage 2 Appropriate Assessment. NRW consider that for other sites not discussed above, there will not be adverse effects on the integrity of those sites.

7.13. **Tre'r Gôf Site of Special Scientific Interest (SSSI)**

7.13.1. Tre'r Gôf SSSI has 2 special features:

- a) Lime-rich wetland with associated plant communities characterised by blunt flowered rush, black bog rush and great fen sedge.
- b) The nationally scarce marsh fern.

7.13.2. ES chapter D8 (APP-127) indicates that the Tre'r Gôf Catchment has an estimated area of 1km², supplying the 10ha wetland. Tre'r Gôf SSSI is fed by a number of springs and small watercourses and ditches. It is supported by mineralised groundwater, which gives the SSSI its alkaline fen interest. This is the crucial distinction between a bog and a fen; a bog is rainwater-fed, often resulting in a base-poor and nutrient-poor acid environment; a fen also receives terrestrial water inputs in addition to direct rainfall.

- 7.13.3. As stated in the Site Management Statement¹⁴ for the SSSI, it is sensitive to impacts as a result of changes in water quality and water quantity. These effects are discussed further below. The project also has the potential to result in air quality effects on the SSSI – these are discussed further in section 7.16 below.
- 7.13.4. Based on the ES and supporting ES Appendices, NRW advises that the proposed works are likely to significantly affect the functioning of the SSSI and likely to damage the SSSI features. Mounding and drainage proposals as well as dewatering activities pose significant risks to the SSSI. The Site Campus, being located immediately adjacent to the SSSI, may also alter the natural drainage and bring risks of pollution and disturbance incidents during its construction, operation and decommissioning. NRW note that fen creation is proposed as pre-emptive SSSI compensation due to the likely loss, or damage to, the SSSI (see our advice below on SSSI compensation). However, NRW advised the Applicant in its Section 42 pre-application responses that all reasonable alternatives and mitigation should be considered (before compensation) to reduce and avoid negative effects on the SSSI. NRW consider that there is inadequate consideration of direct mitigation measures in the ES.
- 7.13.5. During the construction phase, the preliminary drainage design (shown in ES App D8-8 (APP-167)) shows that run-off from the SSSI catchment will be directed via a system of leats to sediment ponds and then to point discharges at WA1 and WB1. These point discharges will not allow the water to flow, as at present, through the superficial deposits and receive some of the alkalinity required to support the interest feature of the SSSI. Discharge WA1 is shown discharging into the outfall stream which at this point is buried in an 18th century stone built culvert, possibly several metres below the ground surface. NRW advise the need for confirmation on the condition and capacity of this culvert in order to inform an assessment of whether the culvert can accommodate the proposed discharge and is adequately secure to function as the outfall of the SSSI and land drains while subject to above-ground pressures.
- 7.13.6. During the construction phase, substantial dewatering is required from the deep excavations and in constructing the cooling water system tunnels, which have the potential to affect groundwater flows to the SSSI. During operation, the groundwater level around the main site will be lowered through passive drainage. The ES assesses effects on groundwater and the SSSI through MODFLOW and 4R modelling (ES Appendix D8-7 (APP-160 – APP-166)). Although we are in broad agreement that groundwater modelling outputs are likely to be of the right order of magnitude at a regional scale, we

¹⁴ https://naturalresources.wales/media/633310/SSSI_0015_SMS_EN001211d.pdf

do not have confidence in the outputs in identifying sensitive changes to Tre'r Gôf SSSI, for the following reasons:

- a) The conceptual model for Tre'r Gôf on which the groundwater model is based has not been accepted. We refer you to our detailed comments provided on ES Appendix D8-5 (APP-158) below and in Annex A1. Of particular concern is flawed comprehension of the geology and hydrogeology, reliance on water balances¹⁵, water balances' arbitrary separation of aquifers by geological description and no accounting for significant anisotropy¹⁶ in the aquifer.
- b) The effects of dewatering of the cooling water tunnels, both short and long term, are not included in the model. Given the proximity of the tunnel outfall to Tre'r Gôf SSSI, there is real risk that levels could be lowered further in combination with other dewatering activities on site. No assessment has been provided to substantiate the conclusion that cut-and-cover sections of the tunnel will not reduce groundwater levels at Tre'r Gôf SSSI (ES paragraph 8.5.11 in D8 (APP-127)).
- c) It is not agreed that the model is conservative. It is misleading to state that modelled dewatering is for an 'indefinite period'. It models steady state, which could be reached quickly. No estimate of the likely time to reach steady state is provided and given the geology, it is possible that it will be reached quickly relative to the duration of dewatering. Shotcreting¹⁷ may mean that groundwater ingress is reduced, but no timescales, evidence of efficacy or longevity of the material are provided, so it cannot be assumed that this is 'conservative'.

7.13.7. ES Appendix D8-5 (APP-158) presents the Conceptual Site Model for Tre'r Gôf SSSI. The Conceptual Site Model has been produced following monitoring of the inflow and outflows from the SSSI. However, NRW does not agree with the conceptual hydrogeological modelling undertaken and used to assess impacts on Tre'r Gôf SSSI. We refer you to our detailed comments and concerns in relation to ES Appendix D8-5 in [Annex A1](#).

7.13.8. In terms of surface water flows, paragraph 8.5.13 of ES chapter D8 states that the *“modelling results show that the mean change in outflow from the baseline to the construction scenario across the Tre'r Gôf SSSI at VN5 (the outfall from the SSSI) is an increase of 129m³/day”*. Whilst the modelling shows that the average impact on flows at VN5 is an increase, the results also show that the impact on low flows (approximately Q90 and below (lowest

¹⁵ Rainfall landing on the ground discharges via evaporation, river flows and groundwater discharge. Ignoring short term fluctuations, the inflows to this system must balance the outflows.

¹⁶ The variation of hydraulic properties with direction in an aquifer. Around Wylfa Newydd the hydraulic conductivity is not uniform because rock is fractured and glacial deposits are highly variable in composition. This means that groundwater can flow through some parts of the aquifer much more easily than others.

¹⁷ To reduce groundwater inflow to the excavation, particularly through fractures, the walls of the deep excavations would be sprayed with concrete ('shotcrete') as the excavation deepens.

10% of flows)) is negative during the construction phase (Figure 5.9 of ES Appendix D8-7 (APP160-166)). This negative impact during low flow periods is potentially a high proportion of the baseline and should be presented clearly to show the scale of change and impact on the SSSI. We would however refer to our comments above (paragraph 7.13.6) which highlight the difficulty of the model in identifying sensitive changes at Tre'r Gôf SSSI.

- 7.13.9. Paragraph 8.5.13 of the ES also states that *“Negative change in flow has been modelled at one of the four inflow points within the SSSI at VN1 in the west compartment where a decrease of 59m³/day is predicted”*. This is the averaged impact on flows at VN1, and the impact is negative throughout the flow range here. The plots in ES Appendix D8-7 indicate that the impact is most significant at medium and low flows. Model outputs also show a negative change in flow at VN3 for low flows (lowest 10% of flows) and possibly at VN2 at low flows (though the plots are difficult to decipher). Therefore, negative impacts have actually been modelled at more than one of the four inflow points. These negative impacts, experienced during low flow periods, should be presented for discussion of cause and effect. Using only the average impact does not give the whole picture.
- 7.13.10. Paragraphs 8.5.120 of ES chapter D8 states that during the operational phase *“the presence of landscape mounding and drainage would reduce the catchment area of the Tre'r Gôf outflow by 9%”*. However, modelling of the operational phase (ES Appendix D8-7) shows that flows will be reduced by more than 10% at: VN1 over the whole flow range, VN2 for the lowest 50% of flows, VN4 for the highest 50% of flows, and at VN5 for the lowest 50% flows. The greatest impacts (more than 30% reduction in flow) are at: TG1 for the lowest 45% of flows, and TG2 for the lowest 10% of flows. These impacts are plotted at the end of the D8-7 modelling report but are not well presented or discussed elsewhere, including the ES.
- 7.13.11. In view of the effects highlighted above, NRW advise that the changes in groundwater recharge and flow could lead to alteration in water chemistry, which could significantly damage the site. As stated in 8.5.13, *“potential reduction in water availability from diffuse seeps within the Tre'r Gôf SSSI could have subsequent effects on the water quality of the SSSI. The inflow of shallow groundwater in the soils, superficial deposits and potentially the top of the bedrock into the SSSI brings mineral enriched water into the SSSI via a series of small springs, seeps and flushes. The subsequent build-up of calcium concentrations in the peat fen is an important supporting condition for rare plant communities within the SSSI...A reduction in diffuse inflows could therefore reduce calcium concentrations within the SSSI, particularly in the west compartment where negative water availability has been modelled”*.
- 7.13.12. There are also two discharges which have the potential to impact on the Tre'r Gôf SSSI, these being A1 and B1 as shown on Figures 2-3 and 2-5 of ES Appendix D8-8 (APP-167) respectively. The connection between the drainage channel from Mound A and the drain from Tre'r Gôf to the shore is

unclear. A1 appears, from plans, to discharge into this culvert about halfway along, where it may be as much as 3m below current ground surface. It is unclear how this would work in practice.

- 7.13.13. In relation to B1, elevated total suspended solids discharging into Tre'r Gôf will need to be minimised. No information is presented to demonstrate that 70mg/l will not damage the SSSI. It is unclear why 70mg/l total suspended solids limit is proposed at B1 while 40mg/l is proposed at some of the other discharge points. Clarification is required as to why 40mg/l has not been considered at this discharge point and why a limit of 70mg/l would not damage the SSSI features. Please note, the impacts of the water discharge from A1 and B1 upon Tre'r Gôf SSSI will be assessed by NRW Permitting Service as part of the Construction Water Discharge Permit application under the Environmental Permitting Regulations 2016 (as amended).
- 7.13.14. The pH of the discharge will need to be managed to avoid damaging the alkaline fen SSSI. No information is provided on how the pH will be managed at B1.
- 7.13.15. Mounding run-off from outside the current Tre'r Gôf catchment will be directed into the WB1 discharge. This may result in changes in flow into Tre'r Gôf SSSI during the construction phase. Further information is required to demonstrate what are the likely impact of the changes on flows directed into Tre'r Gôf and the likely impacts of those flows on the water balance within Tre'r Gôf.
- 7.13.16. As highlighted above in 7.13.7, the investigation and conceptualisation of baseline conditions at Tre'r Gôf SSSI is not considered sufficient for the purposes of the ES. Although there is proposal for 'compensation', all feasible mitigation measures and alternatives should be considered. There could be appreciable drawdown and/or change to the hydrological and chemical regime around the SSSI, contributing to significant damage and it is therefore imperative that the baseline hydrogeological model is robust to inform assessment of risk and any subsequent monitoring and mitigation.
- 7.13.17. The mitigation refers in item 0209 of the Mitigation Route Map (APP-422) to the use of an underlying "blanket" (a gravel layer under the mounds), the success of which is uncertain. No examples have been quoted where this technique has been successfully used in this context. The design is "*deemed to be flexible*", but the drainage blanket, once installed, will not be and its functionality will be fixed.
- 7.13.18. There is also risk of failure in the effectiveness of the proposals associated with the complex system of ditches, swales and overflow points from the mound drainage which is designed to replicate the natural hydrological regime. Item 0209 refers to the use of overflow pipes at intervals in the drainage ditch to the north and west of Mound A. There are substantial uncertainties about the effectiveness of the proposal and its ability to mimic the natural hydrology of Tre'r Gôf. For instance, Figures 2-2 and 2-3 of D8-8

(APP-167) shows the drainage leat from Mound A making a circuitous route around the mound and descending a gradient (hidden under the key on Figure 2-3) with no hydro-brake or attenuation of kinetic energy, raising the possibility of erosion or overtopping and transmission of water and sediment directly to the SSSI. This leat will intercept the current overland flow which is to be substituted by the water from the drainage blanket. The leat itself will be located within the buffer zone around the site, further reducing this protection zone, while overtopping of the leat could deliver sediment-rich waters in an uncontrolled manner to the SSSI. It is possible that this may be as good a design as can be achieved within the constraints set by the project, but we cannot be confident that it will appropriately mitigate the impact. NRW has limited confidence in the ability of this complex system to meet design objectives. It is considered unlikely that the proposed drainage design around Tre'r Gôf will reproduce the groundwater conditions required to support the SSSI sustainably in the long term.

- 7.13.19. NRW considers that further direct mitigation measures should be considered. Possible measures that the Applicant may consider include installing a weir at the outflow to manage water levels on the SSSI via the outflow (at least during dewatering periods) in order to avoid or reduce drying and oxidation of the peat. Other measures include direct recharge of the dewatering to the SSSI (should the water be of sufficient quality) via infiltration trench(es).
- 7.13.20. We note in Table D9-11 of ES chapter D9 (APP-128) that long-term botanical monitoring and operational monitoring of water quality and quantity will be undertaken. The monitoring should also inform an updated Conceptual Site Model which should be agreed with NRW and used to inform detailed mitigation measures. This should apply to both the construction and operation phases.
- 7.13.21. We advise that outline mitigation measures should be presented to the Examining Authority. We also advise that detailed monitoring and mitigation should be set out in the detailed Main Power Station Site Sub-CoCP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement. We also advise that this commitment is referenced in the current 'outline' version of the Sub-CoCP for approval by the Secretary of State.
- 7.13.22. We note that drainage mitigation measures have been included in the Main Power Station Site Sub-CoCP, however, we consider that additional detail of the drainage proposals is required. We advise that detailed drainage mitigation measures should be set out in the detailed Main Power Station Site Sub-CoCP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement.
- 7.13.23. To conclude, in view of the risks and likely effects identified above for Tre'r Gôf SSSI, NRW advises that the Wylfa Newydd project is likely to result in significant damage to Tre'r Gôf SSSI.

7.14. Tre'r Gôf SSSI Compensation

- 7.14.1. NRW notes the pre-emptive SSSI compensation proposals outlined in ES Appendices D9-24 (APP-191). NRW welcome the proposals to compensate the predicted likely significant damage to the SSSI as a result of the activities highlighted in section 7.13 above.
- 7.14.2. The SSSI compensation package proposes measures to compensate for the long-term damage to the SSSI, through fen habitat creation (Cors Gwawr and Cae Canol-dydd) as well as fen habitat improvement and restoration at Tŷ Du to compensate for short term disturbance or temporary damage to the SSSI. Comments on these sites are provided below.
- 7.14.3. Fen habitat creation works may in themselves result in adverse effects on receptors (e.g. as a result of top soil stripping), and these are considered in D1-2 (APP-137). NRW provide advice on those receptors below.

- *Fen habitat creation and restoration*

- 7.14.4. ES Appendix D9-24 proposes outline management measures for restoring fen habitat at Tŷ Du, a site where the habitat is currently in unfavourable condition. NRW agrees that this site is suitable for fen restoration and compensates for the temporal loss in fen habitat between the damage to the SSSI and time taken for the fen creation to mature. NRW advise that detailed management measures for Tŷ Du should be set out in the Management Scheme which will need to be approved by the discharging authority (in consultation with NRW) as a DCO Requirement (ECS3 in the draft DCO). We also consider that the long-term management should be secured under a section 106 agreement.
- 7.14.5. In relation to fen creation, a number of factors will need to be considered when assessing the sufficiency of proposed compensation to offset damage to the SSSI interest. These factors include the quantity of proposed compensation (extent), the quality of proposed compensation (wetland type), distance from the location of the loss (affected SSSI), the potential connectivity with existing wetland areas, the likelihood / feasibility of successful habitat creation and the arrangement for long-term monitoring, management and security of the compensation.
- 7.14.6. Based on the information presented in the ES and supporting information, NRW is not able to conclude that the proposed compensation package for Tre'r Gôf SSSI will deliver adequate quantity or quality of replacement habitat. No hydrological baseline information for the Cors Gwawr and Cae Canol-dydd compensation sites is provided in the ES; however, this information is critical in informing the likely success of the compensation. Given the requirement for at least one hydrological year of data to characterise the hydrological regime of the site and determine its suitability to support target rich-fen habitat based on feasible site restoration measures (including soil stripping and re-routing of suitable water supplies), it seems

unlikely that this data can now be provided to fulfil this requirement during the DCO Examination phase.

- 7.14.7. NRW consider that an adaptive management approach based on defined required outcomes, may be a way forward. However, the data is currently insufficient to assess whether the proposed creation of 14ha of fen is likely to be feasible.
- 7.14.8. It is unclear whether topsoil stripping or turf removal will be proposed by the Applicant. NRW's experience in this field is that removal of topsoil is highly beneficial in the creation of low-nutrient high base-status fen. NRW cannot endorse the suggestion that soil stripping will not be required without the appropriate hydrological information to assess against soil data.
- 7.14.9. DCO Requirement ECS2 states that plans and written details of habitat design will need to be approved by IACC. Sub-paragraph (2) also highlights the details that should be included. DCO Requirement ECS3 states that management schemes relating to management and maintenance of each Ecological Compensation Site will be approved by IACC. ECS4 states that hydrological and hydrogeological monitoring and details of the drainage design will need to be approved by IACC. For these three Requirements, NRW would expect to be consulted in its statutory consultee role. We also consider that the long-term management of the sites (as set out in the agreed 'management schemes') should be secured under the section 106 agreement.

- *Assessment of Environmental Effects*

- 7.14.10. Fen creation and restoration works will most likely require construction machinery and plant and may need to alter the existing topography of the sites. NRW have the following advice.
- 7.14.11. In terms of flood risk, the works to alter the hydrology and increase the water table at the sites has the potential to increase flood risk to third parties. TAN15 requires that there is 'no flood risk elsewhere'. NRW advise that, prior to commencement of the works, a backwater analysis (an analysis of the effect of the works on upstream water levels, in terms of increased levels and extent) will need to be carried out to determine the extent of water level increases for a range of events (including the more frequent events). Hydrological and hydrogeological data will be required for this work – we note that this data is not yet available and is currently being collected by the Applicant. NRW advise that a Flood Consequence Assessment, including the backwater analysis should be undertaken prior to commencement of the works, and should be set out in the detailed Main Power Station Site Sub-CoCP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement. The Flood Consequence Assessment will need to demonstrate that the proposals do not result in unacceptable increased flood risk elsewhere. The Applicant will also need a Flood Risk Activity Permit for works within 8m of a Main river.

- 7.14.12. Top soil stripping has the potential to generate increased suspended sediments in adjacent watercourses. Parts of the proposed fen creation are upstream of Caeau Talwrn SSSI, Cors Bodeilio SSSI and Corsydd Môn / Anglesey Fens SAC. In view of the nature of the watercourses passing through these sites, NRW advise that, as long as detailed pollution prevention measures are adhered to the SSSIs/SAC will not be adversely affected. NRW advise that detailed pollution prevention measures will need to be set out in a detailed Main Site Power Station Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.
- 7.14.13. European Protected Species (e.g. otters, bats, great crested newts) and nationally protected species (e.g. water voles, Schedule 1 birds) may be affected by the fen creation and restoration works. We note that protected species surveys have not been undertaken on site. However, NRW agree that baseline surveys, along with any necessary mitigation and/or compensation measures, should be undertaken prior to works commencing on site. An Ecological Compliance Audit is also advised. As part of the Protected Species Licence submission (to NRW's Permitting Service), we advise that overarching conservation plans be prepared for the species to provide strategy and context. These should define, but should not be limited to, overarching aims and objectives, mechanisms for delivery, surveillance and monitoring targets (including Key Performance Indicators). NRW advise that the above measures, including survey methodology and required mitigation/compensation, should be set out in a detailed Main Site Power Station Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.
- 7.14.14. In advance of works commencing on site, a biosecurity risk assessment will need to be set out in a detailed Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. As above, we advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.
- 7.14.15. In relation to waste, topsoil stripping and storage is referred to. However, the document indicates that no intended use has been found for the topsoil. The Applicant needs to consider potential uses and, if the material is considered waste, consider Environmental Permitting Regulations 2016 requirements. The Applicant needs to consider permitting requirements for all references made to the storage, treatment, use and disposal of waste material. NRW requires that all permissible activities are accounted for and suitable authorisations are sought in advance of the specific activity commencing.

7.14.16. NRW is satisfied that the proposed works, in view of their location, will not affect the special qualities of the Anglesey Area of Outstanding Natural Beauty.

7.15. Sites of Special Scientific Interest - Cae Gwyn SSSI

7.15.1. Cae Gwyn SSSI borders the south-western end of the Wylfa Newydd Development Area. The site comprises a series of wetland basins which lie at the base of a central rocky outcrop which supports heathland and scrub communities. A special feature¹⁸ of this site is its poor fen habitat, dominated by Sphagnum bog-mosses, in the southern basin which support the locally scarce species cranberry (*Vaccinium oxycoccos*), mud sedge (*Carex limosa*) and royal fern (*Osmunda regalis*). Other basins support typical poor-fen vegetation where groundwater chemistry is more dominant.

7.15.2. Cae Gwyn SSSI may be affected by changes to water quantity (changes to surface water and/or groundwater flows) and effects on water quality. Cae Gwyn is in part (the western basin) a perched wetland and discharges downstream, via the 'Primary Outflow Basin' into Nant Caerdegog Isaf and then to the Afon Cafnan. Mound C is located adjacent to Cae Gwyn, however the majority of the Wylfa Newydd works will be downstream of the SSSI.

7.15.3. With regard to the Cae Gwyn Hydroecological Assessment (ES Appendix D8-6 (APP-159)), NRW agree with the overall conclusion that two compartments of the site (the southern basin and POB) are groundwater dependent and that the remainder of the site is less dependent on groundwater. However, NRW consider that the site investigation (which are used to produce the Conceptual Site Model presented in D8-6) is of insufficient detail to draw any substantial conclusions about hydraulic supporting mechanisms for communities on a site scale. NRW consider there are the following inadequacies with the site investigations:

- a) the conclusions in section 5 of D8-6 acknowledge that data collection is limited to a period of less than two years and is skewed towards the winter months;
- b) no boreholes extending into the bedrock are present within the SSSI, and information on bedrock composition and groundwater levels is inferred from boreholes outside of the site and which penetrate different (albeit hydrogeologically similar) geological strata;
- c) peat surveys are limited in extent and depth with instrumentation within the peat limited to one piezometer per basin.
- d) no flow data is collected from within Cae Gwyn SSSI; the assessment relies heavily on data from a point 800m downstream of the SSSI and lacks quantitative information on inflows from road drain and southern drain.

¹⁸ https://naturalresources.wales/media/653332/SSSI_0841_SMS_EN0010941.pdf

- 7.15.4. Assessment of the effects of dewatering, drainage and landscaping on hydrology is undertaken using the MODFLOW and 4R modelling presented in D8-7 (APP-160). We accept the modelling outputs are likely to be of the right order of magnitude at a regional scale, but advise the model is not capable of assessing effects on a site-specific scale.
- 7.15.5. Although baseline information for the site is lacking, the risk to the integrity of Cae Gwyn SSSI from predicted hydrological changes is low, based on the evidence that has been provided. Groundwater modelling indicates that drawdown from dewatering will be negligible. Given the intervening geology and likely hydrological supporting conditions, this is plausible. However, in view of the uncertainties identified, NRW advise that hydrological and hydrogeological monitoring is undertaken during the construction phase along with a strategy for implementing a mitigation response in the event of significant impact.
- 7.15.6. Mound C is located in close proximity to the SSSI, however, we note that drainage run-off will discharge into Nant Caerdegog-Isaf, downstream of the SSSI. However, we note that there is a proposal for car parking in close proximity to the north-east corner of the site. Water quality impacts from parking and mounding in the vicinity of Cae Gwyn SSSI will need to be carefully managed to ensure the SSSI is not damaged.
- 7.15.7. The proposed monitoring (and mitigation where required) and pollution prevention measures should be set out in a detailed Main Site Power Station Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We note that a high level commitment is specified in paragraph 10.4.6 of the current version of the Main Power Station Site Sub-CoCP for approval by the Secretary of State.

7.16. **Air Quality Effects on Designated Sites**

- *Emissions from construction plant, machinery and marine vessels*

- 7.16.1. The Wylfa Newydd project will require extensive construction plant and machinery which may affect sensitive ecological sites through air pollution (e.g. from NO_x and SO₂) and nitrogen and acid deposition.
- 7.16.2. NRW is satisfied that the modelling approach has been undertaken appropriately in order to provide the predicted emissions to inform the impact assessment.
- 7.16.3. In relation to nitrogen deposition, NRW has provided pre-application advice to the Applicant and following receipt of additional information, NRW consider that the shingle ridge vegetation is not sensitive to nitrogen inputs and that 20 kgN/ha/year would be a suitable Critical Load on which to base the assessment.

- 7.16.4. In relation to Cemlyn Bay SAC/SSSI, in view of the relatively nitrophilous nature of the brackish lagoon water and the shingle ridge vegetation, NRW is satisfied that the predicted Process Contribution for annual mean NO_x, short-term NO_x, annual mean SO₂, nitrogen deposition and acid deposition is unlikely to have adverse effects on site integrity of the lagoon or vegetated shingle ridge features.
- 7.16.5. In relation to Tre'r Gôf SSSI, NRW agree that there will be possible effects on the SSSI features as a result of nitrogen inputs from the emissions of construction plant and machinery. NRW agree that appropriate mitigation, including vegetation cutting and removal (respecting the SSSI features) may help to offset the nitrogen inputs. NRW advise that detailed monitoring and mitigation measures should be set out in a detailed Main Site Power Station Site Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We note that a high-level commitment is specified in section 11.15 of the current version of the Main Power Station Site Sub-CoCP for approval by the Secretary of State.
- 7.16.6. In relation to Cae Gwyn SSSI, ES chapter D9 (APP-128) identifies that there will be exceedances for nitrogen deposition during the construction phase. NRW disagree with paragraph 9.5.73 of D9 that the predicted reduction in species diversity will be minor adverse. It is likely that the first species to be lost in the event of raised nitrogen levels would be those with very specific requirements such as Sphagnum bog mosses, cranberry or mud sedge. If such species are lost they are unlikely to recolonise, due to the geographical isolation of this site and the impacts would therefore be major adverse. NRW advise that additional information is required to demonstrate that the predicted emissions will not damage the SSSI.

- *Combustion emissions during the operational phase*

- 7.16.7. During the operational phase, combustion plant will be used as back-up generators, during routine testing and during the commissioning phase. The operational air quality impacts will be assessed by NRW's Permitting Service as part of the Operational Combustion Installations permit application.
- 7.16.8. It is important that air quality modelling is undertaken appropriately in order to have confidence in the modelled outputs. As detailed below, we have concerns with regard to the air quality modelling undertaken for the operational combustion plant.
- a) With respect to ES Appendix D5-3 (APP-141) Air Dispersion Modelling Report, NRW consider that building downwash¹⁹ has not been adequately considered in the modelling. Building downwash has the

¹⁹ The presence of buildings can affect plume rise and the initial dispersion of pollutants within the atmosphere and can result in excessive concentrations of air pollutants in the immediate downwind vicinity of the source.

potential to significantly influence predicted concentrations. For instance, the modelling does not include information of detailed building roof features (i.e. dome, slope), their location/dimension and physical stack locations. With respect to the building downwash modelling, it is also unclear whether the configuration for the impact assessment represents the worst-case scenario. For example, it is unclear whether the impact of the dome/slope has been assessed, why a nearby taller building was not chosen as the main building and whether the modelled moving stack location could underestimate building downwash effect on the predicted concentration. We advise that further information on the building downwash modelling is required.

- b) Within ES Appendix D5-3, NRW note that it may be true that O₃ concentrations increase in the presence of VOCs/CO and sunlight. However, that does not necessarily result in a NO₂/NO_x ratio decrease due to the fact that O₃ will be replaced with created peroxides (HO₂ and RO₂) which will oxidize NO to NO₂.
- c) Within D5-3, we note that fewer stable conditions may not necessarily reduce ground level concentrations and an increase of high temperature, sunny summer days may not necessarily bring about an increase in the ground level concentration. The impact deepens on the effective stack height and receptor distance. We advise that further information is required to explain how the two effects interact.
- d) NRW also require clarity on testing scenarios set out within D5-3. Confirmation is required that there will be no overlap between different testing scenarios. If there is overlap, then some generators will be tested for more than 24 hours, which is at odds with the statement “*Each standby generator will be tested for 24 hours during this period*”.
- e) Clarification is required as to how the emission source term of the single effective generator was derived, and whether there are hourly exceedances from this exercise.
- f) It is unclear whether there are any exceedances from individual runs of Emergency Diesel Generators, Back-up Building Generators, and Auxiliary Standby Generators. If so, we advise that the relevant data is provided.

7.16.9. It is important that air quality modelling is undertaken appropriately in order to have confidence in the modelled outputs. We have the concerns set out above with regard to the modelling undertaken. On this basis, we are unable to provide our advice on the exceedances predicted (and highlighted in D5-3) for Tre'r Gôf and Cae Gwyn SSSIs and Bae Cemlyn / Cemlyn Bay SSSI/SAC. We can give our full advice once these concerns have been addressed and the updated modelled outputs have been presented.

- Dust

7.16.10. Dust has the potential to affect designated ecological sites through deposition on vegetation which reduces the ability of plants to photosynthesise and transpire effectively. It may also lead to increased algal growth on plant surfaces which can exacerbate this problem and to

proliferation of species which respond positively to increased nutrients, often undesirable weed species. These vigorous species can outcompete the more desirable plants, which are often the reason for site designation.

- 7.16.11. In order to ensure no significant effects on protected sites due to dust during the construction works, NRW advise that detailed dust monitoring and mitigation measures should be set out in a detailed Main Site Power Station Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement.

7.17. **European and Nationally Protected Species**

- *Terrestrial protected species*

- 7.17.1. Bats, great crested newts and otters are present within/adjacent the Wylfa Newydd Development Area. These species are European Protected Species (EPS) protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981.
- 7.17.2. Water voles, red squirrels, and Schedule 1 listed birds (chough and barn owl) are present within/adjacent the Wylfa Newydd site. These species are protected under the Wildlife and Countryside Act 1981 (as amended).
- 7.17.3. NRW has advised IACC on the planning application for site preparation and clearance (38C310F/EIA/ECON) including advice on required conditions to mitigate impacts on protected species.
- 7.17.4. NRW is satisfied that sufficient baseline information has been collected to inform the impact assessment for the protected species referred to above.
- 7.17.5. NRW note the outline mitigation measures specified in the ES chapter D9 and in the Mitigation Route Map (APP-421). We also note the draft mitigation licence submitted in relation to bats and great crested newts, and the draft conservation licence submitted in relation to water voles. NRW advises that, as long as detailed mitigation measures are set out in a detailed Main Power Station Site Sub-CoCP, and approved by the discharging authority in consultation with NRW, the proposed works at the main site are (i) not likely to be detrimental to the maintenance of the favourable conservation status of any local populations of European protected species; and/or (ii) not likely to adversely impact any local populations of British 'fully' protected species (protected under the Wildlife and Countryside Act 1981).
- 7.17.6. NRW has considered the draft mitigation licences submitted as part of the DCO application. NRW advises that the proposed period of post-construction monitoring is not long enough to test whether the mitigation is successful in terms of maintaining or restoring the current conservation status of the species to favourable levels. NRW is awaiting additional information from the Applicant to address this point.

7.17.7. Please note that the European Protected Species derogation licence and the Conservation Licence (water voles) will be considered by NRW Permitting Service.

7.17.8. We note that DCO Requirement WN11 will ensure that the Landscape and Habitat Management Schemes will be approved by the discharging authority. We advise that NRW in its statutory consultee role is consulted on the discharge of the Requirement. Subsection 2 sets out the landscape and habitat features that the detail will address. The management schemes will need to ensure appropriate management of habitats on site in the long-term, as well as providing detailed phasing plans in the short term. We advise that these measures are secured through an overarching Section 106 agreement together with complementary site-specific management agreements under section 39 of the Wildlife and Countryside Act 1981. NRW can provide further advice on the provisions of the suggested Section 106 agreement if required.

- *Migratory Fish*

7.17.9. Migratory (diadromous) fish may use watercourses within the Wylfa Newydd Development Area. These fish may be affected by works within the Wylfa Development Area or within the marine environment.

7.17.10. In order to mitigate effects on migratory fish during the construction works, NRW advise that detailed mitigation measures should be set out in a detailed Main Site Power Station Site Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.

7.17.11. In order to mitigate effects (e.g. impingement) on migratory fish during the operation of the power station works, NRW advise that detailed monitoring and mitigation measures should be set out in the Code of Operational Practice and approved by the discharging authority (in consultation with NRW) as a DCO Requirement.

7.17.12. ES Chapter D8 (APP-127) lists the steps involved in the diversion of the watercourse (north of Caerdegog Isaf). We advise that specific design details of the watercourse realignment (with consideration of fish requirements) and detailed mitigation measures are specified in the detailed in the Main Power Station Site Sub-CoCP.

- *Marine Protected Species*

7.17.13. Cetaceans (whales, dolphins, and porpoises), marine turtles and sturgeon are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and are European Protected Species which are protected from deliberate capture, injury, killing and disturbance. European Protected Species have the potential to be present in the vicinity of the marine works

and could be injured (hearing damage, vessel collision), killed (vessel collision) or disturbed. A European Protected Species licence²⁰ could be applied for where the risk of deliberate injury, killing or disturbance was thought to be significant. However, we advise that implementation of mitigation measures will ensure that the proposed works are unlikely to be detrimental to the maintenance of the Favourable Conservation Status of cetacean species. NRW advise that detailed mitigation measures should be set out in a detailed Marine Works Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.

7.18. Marine Environment

- *Annex I and Section 7 Benthic habitats - Wylfa Newydd Development Area*

- 7.18.1. The Wylfa Newydd project will cause adverse impacts on benthic habitat through a number of pathways, including direct loss under the footprint of the marine works as well as potential indirect effects as a result of changes in coastal processes (see comments in section 7.10 above) and the effects of the cooling water plume. NRW advise that the full range of effects on benthic habitats have not been adequately indicated in the ES.
- 7.18.2. The ES indicates that benthic habitats that will be affected include approximately 20ha of habitats listed under Annex I of the Habitats Directive (located outside protected sites) as well as approximately 3ha of Section 7 habitat, protected under the Environment (Wales) Act 2016.
- 7.18.3. NRW advise that there is insufficient evidence presented to demonstrate that the cumulative effects of the project on benthic habitats are insignificant. Further consideration of mitigation and/or enhancement measures will be required.
- 7.18.4. We do not consider that sufficient information has been presented in the ES on proposed marine ecological enhancement measures to demonstrate that impacts on Annex I and Section 7 'Rock reef habitat' habitats will be offset. Embedded mitigation measures proposed to reduce direct loss of habitats and species are outlined in paragraphs 13.5.82, 13.5.83 and 13.5.113 of ES chapter D13 (APP-132). However, no detail has been provided on the engineering and material options that could be used to offset the direct and indirect effects of reef habitat loss as a result of construction and operational activities within the development area. We do not consider, based on the limited mitigation proposed, that impacts can be downgraded from moderate

²⁰ <https://naturalresources.wales/permits-and-permissions/protected-species-licensing/european-protected-species-licensing/marine-european-protected-species-licensing/?lang=en>.

to minor. We advise that a detailed feasibility study on proposed enhancement measures should be undertaken, including a full appraisal of the options that have been considered.

- 7.18.5. Where possible, rock dredged from the marine environment should be re-used as part of the proposed ecological enhancement of the external breakwater and shoreline protection structures (i.e. as external surfacing) to increase the likelihood of colonisation by local flora and fauna, and to minimise the amount of rock disposed of at Holyhead North Disposal Site.

- *Annex I and Section 7 Benthic habitats – Holyhead North Disposal Site*

- 7.18.6. There are areas of Annex I habitat within the Holyhead North disposal site. The disposal site is a dispersive site for fine sediment but is not designated for rock disposal. We note that benthic grab sampling has been undertaken in the Holyhead North site, however, we advise that pre-disposal surveys should be undertaken in order to microsite specific disposal locations within the site. This is to ensure that reef communities present within the area are avoided where possible. NRW advise that detailed mitigation measures will need to be set out in the Marine Works Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State. The detailed mitigation will need to include pre-commencement benthic surveys (pre-disposal) to be undertaken within 1 year of disposal taking place. This is to identify the extent of any benthic habitats of conservation importance and enable micro-siting of rock disposal to minimise impacts on these.

- 7.18.7. The dredge disposal activity will also be assessed by NRW's Permitting Service as part of the determination of the Marine Licence application.

- *Section 7 Species*

- 7.18.8. With regards to Section 7 fish, we consider that there may be potential effects on lesser sandeel, whiting and herring. There is no consideration of the effect of creating a sheltered bay as a result of the breakwater and thus the possible increased use of the area by some fish species – this could potentially result in increased impingement rates for some species. There is also the risk of large amounts of shoaling fish, such as herring, being herded into the area behind the breakwater by predators. In certain weather conditions and at certain times of the year, this could increase the impingement of these species.
- 7.18.9. We note that the Code of Operational Practice proposes to monitor the entrapment of fish. We advise that detailed monitoring proposals, which will be used to optimise the mitigation, should be set out in a detailed CoOP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement.

- *Marine Invasive Non-Native Species*

- 7.18.10. We note that the Shadow HRA Addendum (AS-010) submitted by the Applicant in response to the Section 51 advice includes a draft Biosecurity Risk Assessment. We consider the report provides a number of appropriate measures in order to minimise the introduction and/or spread of marine invasive non-native species. However, there are outstanding gaps that will need to be addressed in the final Biosecurity Risk Assessment which should be set out in the detailed Marine Works Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement.
- 7.18.11. The following comments will need to be addressed in the final Biosecurity Risk Assessment:
- a) The presence of the carpet sea squirt *Didemnum vexillum* (Figure 9 below) in Holyhead is a particular concern. The Applicant will need to ensure there is a joined-up approach with the Port of Holyhead with respect to ensuring risks posed by this species (and others) are minimised as far as possible. We note the approach to minimising the time spent in Holyhead Port by vessels/construction plant before arrival on the site. Another consideration is time of year in relation to when *D. vexillum* larvae will be in the water column. This species poses significant threat to local economic businesses (e.g. mussel fishery Menai Strait) and features of conservation importance (e.g. intertidal and subtidal reef)
 - b) After the March 2018 storm event in Holyhead Marina, a new baseline survey for *Didemnum vexillum* has been undertaken by NRW. We recommend the Applicant contacts NRW in relation to this work undertaken.
 - c) The current Risk Assessment Strategy makes no reference to who (person(s) or group) is responsible for ensuring that all activities outlined in the document are undertaken. This is a crucial step in order to ensure good biosecurity measures and practices are undertaken.
 - d) We advise that the additional species on the 'Marine Invasive Non-native Species Priority Monitoring and Surveillance List for Wales'²¹ are included in the assessment.
 - e) The draft Biosecurity Risk Assessment Strategy has not addressed the issue of dredging vessel hopper water which is an unregulated pathway (for vessels operating within UK waters) under the current proposal. Early consultation with NRW related to this issue is recommended in order to devise appropriate management measures in relation to dredging vessels and hopper water exchange.
 - f) We note the implementation of a monitoring programme for invasive non-native species and request early consultation so as to input into the design and frequency of the different elements.

²¹ <https://beta.gov.wales/sites/default/files/publications/2018-02/invasive-aquatic-species-priority-marine-species.pdf>

- g) We note the approach to strict adherence to the Ballast Water Management Convention with the use of a Ballast Water Record Book which will help to identify specific instances that may result in the discharge of water containing high risk planktonic stage species. We advise creating a traffic light system for vessels based on port of origin and/or origin of ballast water uptake so as to identify those vessels where unregulated discharge must be avoided as far as practicably possible i.e. avoiding docking in borderline weather conditions that may result in the need to discharge ballast for whatever reason. Information on whether the vessels will undertake any form of ballast water treatment should also be presented in the biosecurity risk assessment strategy.

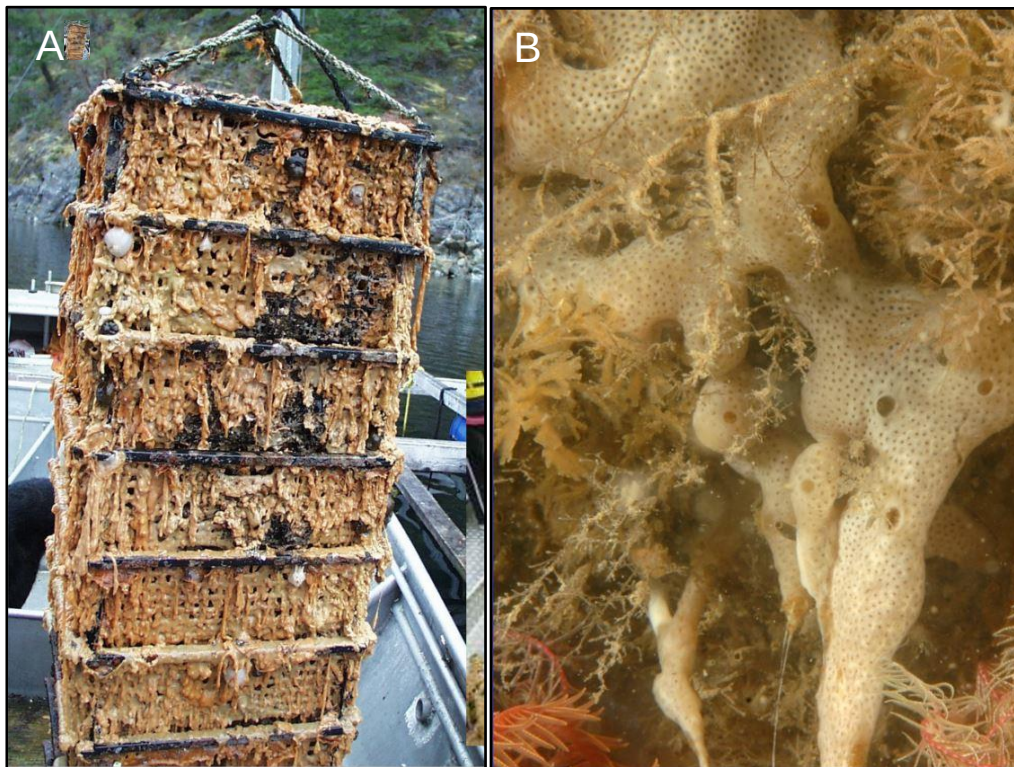


Figure 12. A) *D. vexillum* smothering shellfish cages, New Zealand; B) *D. vexillum*, Holyhead marina pontoons 2011.

7.19. Protected Landscapes

- 7.19.1. The Wylfa Newydd project has the potential to affect sensitive landscape receptors, including the Ynys Môn / Anglesey Area of Outstanding Natural Beauty (AONB). The western end of the Wylfa Newydd Development Area, and the marine works in Porth y Pistyll, are located within the AONB.
- 7.19.2. We consider the baseline information for the study area to be appropriate, and application of assessment methodology and stages in the assessments to be appropriate.

7.19.3. The ES assesses significant effects (Moderate and Major adverse) upon the character and special qualities of the AONB in the following cases:

- a) Site clearance and preparation work will result in localised short term direct effect upon AONB landscape within the Wylfa Newydd Development Area.
- b) The short-term construction phase, particularly the use of high cranes within the site which would have wide visual influence upon receptors within the study area, and the construction of new drumlin earthworks within the AONB/ Wylfa Newydd Development Area which by year 15 would be assimilated.
- c) The construction and operation of the breakwaters and marine offloading facility within Porth y Pistyll with permanent change to the character of the bay and natural coastline.
- d) The visual influence of the new power station and supporting buildings which would increase development influences upon the coastal and landscape character of the AONB to some 3km from the Wylfa Newydd Development Area site boundary. The most notable locations of public interest within the AONB to be affected would include Mynydd Y Garn, Cemlyn Bay, Porth Y Pistyll and Porth Padrig. The coastal sites are linked by the Wales Coastal Path. Walkers through the AONB would experience changing sequential views of the development.
- e) The temporary Campus site development present during the power station construction phase, would be at odds with its coastal setting.
- f) The dark skies of the AONB (particularly Cemlyn Bay) would be impacted by lighting effects during the construction and operational phases. There would be short-term 24-hour effects during the construction period, progressing to longer-term effects during the operational phase of the development, which would involve more extensive night-time lighting than the existing power station.

7.19.4. NRW agrees with the conclusions in the ES and its assessment of landscape and visual effects relating to the Ynys Môn / Isle of Anglesey AONB. However, we consider detailed proposals are required to confirm that the power station's landscape and visual integration with the AONB has been developed sufficiently. We consider opportunities to mitigate landscape and visual effects have been appropriately designed and integrated into the proposals within the Wylfa Newydd Development Area and have been derived from a clear understanding of the development effects and the landscape and visual context. However, we advise that detailed design for the power station colour scheme should ensure mitigation of impacts upon the AONB are fully developed. Detailed information should include the following:

- a) A detailed colour scheme is required for the power station, ancillary buildings, security fencing within the Wylfa Newydd Development Area and Site Campus, to be developed in accordance with the design principles set out in the DCO documents, with specific attention to views from the AONB. Elevation drawings and photomontage images to explain the colour scheme will be required.

- b) Detailed proposals and materials for the marine offloading facility and breakwater
- 7.19.5. DCO Requirements WN9 (Final Landscape and Habitat Scheme) and WN11 (Landscape and Habitat Management Schemes) will implement the principles of the Landscape and Habitat Management Strategy and will be approved by the discharging authority. We advise that NRW is consulted on the information submitted to discharge the Requirement.
- 7.19.6. We also consider that opportunities are required off-site within the AONB to mitigate/compensate for the development's significant visual effects. This is needed to support the area's conservation and enhancement policy requirements. We have indicated above in comment 7.19.3 above where the main areas of visual impact are predicted to occur. Measures that enhance the physical components of landscape, contain views, provide greater foreground visual interest and enjoyment of natural beauty need to be identified, funding made available, and its delivery and maintenance co-ordinated and enabled. Measures could include, for example: new sections of stone walls to replace post and wire fencing; hedgerows; enhancement of natural habitats; the provision of benches orientated towards points of natural beauty; an environmental fund to support AONB management plan initiatives and community projects. We advise such measures should be secured through a Section 106 agreement.

7.20. Geological Interest

- 7.20.1. The geology along the coast of the Wylfa Newydd Development Area currently supports two Regionally Important Geological Sites (RIGS). NRW has highlighted in its Section 42 pre-application responses that NRW is undertaking a review of the Precambrian geology within the wider Wylfa Newydd Study Area, with a view to possible future designation as a Geological Conservation Review site and SSSI. The review will also include areas within the Wylfa Newydd Development Area. This work is ongoing. We recommend that you seek the advice of IACC and GeoMôn UNESCO Global Geopark in relation to the two RIGS already established in the Wylfa Newydd Development Area.

8. OFFSITE POWER STATION FACILITIES (VOLUME 6E)

8.1. Flood Risk

- 8.1.1. The proposed Offsite Power Station Facility is not located within flood zone C1 or C2 (as defined under TAN 15) and is unlikely to cause increased flood risk elsewhere. NRW advise that the proposal is compliant with TAN15. However, we advise that you consider the advice of IACC as the Lead Local Flood Authority on the local flood risks associated with this site and the proposed surface water drainage arrangements.

8.2. Pollution Prevention

- 8.2.1. The construction and operation of the proposed facility has the potential to result in pollution incidents. NRW advise that detailed mitigation measures should be set out in a detailed Offsite Power Station Facility Sub-CoCP and CoOP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.

- Foul drainage

- 8.2.2. The Applicant states in ES chapter E8 (APP-246) (paragraph 8.4.11) that the foul drainage will connect to foul sewer, however may discharge to a treatment plant where it is unable to connect to sewer. The Applicant must liaise with Dŵr Cymru Welsh Water regarding connection to the foul sewer.
- 8.2.3. We refer you to Welsh Government Circular 008/2018 on private drainage, specifically paragraphs 2.3-2.5 which stress the first presumption must be to provide a system of foul drainage discharging into a public sewer. The Applicant should thoroughly investigate the possibility of connecting to the foul sewer by taking the following steps:
- a) Formally approach the sewerage undertaker regarding a connection under Section 106 or a requisition under Section 98 of the Water Industry Act 1991.
 - b) Serve notice for connection under Section 106 of the Water Industry Act 1991 if the sewerage undertaker has refused connection.
 - c) Provide details of the reasons given by the sewerage undertaker if it has refused connection under section 98 or section 106 of the Water Industry Act 1991 and confirmation that they have appealed against this decision.
 - d) Demonstrate that it is not reasonable to connect to the public foul sewer.
 - e) Where it is not reasonable to connect to the public foul sewer, demonstrate that they have considered requesting that the sewerage undertaker adopt their proposed system.
- 8.2.4. If connection to main sewer is not undertaken, there should be a justifiable reason why this is not possible before an application to discharge to ground/watercourse would be considered. If connection to mains is not possible the Applicant will need to decide whether the discharge will go to ground or to a watercourse. If the proposal is to discharge to ground a porosity test will need to be done to ensure suitability of the ground. More information on this can be found on the Netregs website on Guidance for Pollution Prevention 4²². For any discharges to ground or watercourse Environmental Permitting Regulations 2016 must be adhered to and a permit will be required.

²² <http://www.netregs.org.uk/media/1471/gpp4-20171114-online-v2.pdf>

- **Waste**

- 8.2.5. The proposed development may give rise to a large volume of waste material. It needs to be confirmed whether the demolition material is to be treated as a waste. If so, the material must be referred to under the waste management plan and must comply with Duty of Care requirements, Environmental Permitting Regulations 2016 and other applicable legislation. Alternatively, if the demolition material is to be re-used the Applicant should consider a materials management plan such as the CL:AIRE Code of Practice. These details will need to be set out in the Sub-CoCP.

8.3. **Water Framework Directive**

- 8.3.1. NRW advise that the Offsite Power Station Facility is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.

8.4. **Habitats Regulations Assessment**

- 8.4.1. NRW advise that the proposed Offsite Power Station Facility is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.

8.5. **Sites of Special Scientific Interest**

- 8.5.1. NRW advise that the proposed Offsite Power Station Facility is unlikely to damage any SSSIs.

8.6. **European and Nationally Protected Species**

- 8.6.1. Table E9-3 of ES chapter E9 (APP-247) indicates that the proposed works have the potential to impact on bats, otters and water voles. NRW advise that as long as detailed and routine mitigation measures are set out in a detailed Sub-CoCP, and approved by the discharging authority (in consultation with NRW), that the proposals are (i) not likely to be detrimental to the maintenance of the favourable conservation status of any local populations of European protected species; and/or (ii) not likely to adversely impact any local populations of British 'fully' protected species (protected under the Wildlife and Countryside Act 1981).

8.7. **Protected Landscapes**

- 8.7.1. NRW is satisfied that the proposed development is unlikely to affect the special qualities of the Ynys Môn / Anglesey Area of Outstanding Natural Beauty.

9. PARK AND RIDE FACILITY (VOLUME 6F)

9.1. **Flood Risk**

- 9.1.1. As explained below, NRW has significant concerns that this proposal will result in unacceptable increased flood risk. It should be noted that NRW is awaiting additional information, including revised modelling undertaken by the Applicant, to address the matters raised below.
- 9.1.2. The site is within zone A as per the Development Advice Maps accompanying TAN15: Development and Flood risk which would suggest that the site is considered to be at little to no risk of fluvial or tidal flooding. Since the catchment is less than 3km² in area, it has not been included in NRW's nationalised mapping (and therefore used to develop the Development Advice Maps). Due to the topography and influence of structures including the elevated A5/A55 carriageways, site-specific modelling has been carried out by the Applicant. The modelling demonstrates that the fluvial flood risk to the proposed Park and Ride at Dalar Hir is high. Factors influencing the risk are the culverts and carriageways that impede flood flows allowing flood water to accumulate on the site. The culvert under the A5 has been identified in the modelling as being at risk of blockage and sensitivity testing has been carried out. As expected the blockage of a culvert leads to increased flooding upstream (at the site of the Park and Ride).
- 9.1.3. Whereas the Flood Consequence Assessment (APP-281) and ES chapter F8 (APP-273) considers blockage to be a residual risk and has been included as a sensitivity test, TAN15 suggests otherwise (TAN15, Para A1.6 & A1.17(7)). The TAN states that the Flood Consequence Assessment should consider and include all potential sources of flooding to include potential blockages and breaching of defences. The criterion is that no flooding should occur on the application site for the 1% Annual Exceedance Probability event with a site-specific blockage proportion of either 30%, 67% or 95% for culverts. Clarification is required as to why a low blockage scenario (30%) was used rather than medium/high (67%/95%).
- 9.1.4. The baseline fluvial modelling for this site (with no blockage) shows that it is affected by flooding in parts where depths are in excess of 1m for the 1% Annual Exceedance Probability. This site will suffer from significant flood depths and will fail the criterion of TAN15 of being flood free during the 1% event (1 in 100 year) (para A1.14 of TAN15). The site will also flood on more frequent events (1:20) and it is unclear if any mitigation is proposed or feasible. The Flood Consequence Assessment/ hydraulic modelling has also identified flood depths greater than 2m at the 0.1% Annual Exceedance Probability (1 in 1,000 year) event in the south-central area of the Park and Ride.
- 9.1.5. Section 8.6 of ES chapter F8 (APP-273) refers to additional mitigation and the measures proposed relate to controlling peak run-off to reduce the impact on the receiving watercourse. Since the receiving watercourse flows through (and floods the site) it is considered to be of little benefit in reducing flood levels/depths on the site. The fluvial mitigation measures are not provided and no evidence is provided in table F8-4 that measures are available that would demonstrate compliance with TAN15.

9.1.6. We advise that the Flood Consequence Assessment is unacceptable to NRW in terms of addressing the flood risks of the proposal. The Lead Local Flood Authority should also comment on the pluvial flood risks which shows the application site flooding to considerable depth and poses a risk to users and their property.

9.2. Pollution Prevention

9.2.1. The construction and operation of the proposed facility has the potential to result in pollution incidents. We advise that a risk assessment will need to be provided prior to commencement of the work, and should set out information on the likely levels of solids that will be discharged during construction. With regard to the operational phase, the Applicant should note that for car parks that are larger than 50 spaces in size, a fuel interceptor should be installed as per Guidance for Pollution Prevention²³.

9.2.2. NRW advise that detailed pollution prevention measures should be specified in a detailed Park and Ride Sub-CoCP and CoOP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement. We also advise that this commitment is referenced in the current version of the Sub-CoCP for approval by the Secretary of State.

- Foul Drainage

9.2.3. Toilet facilities and sewage treatment are briefly discussed, but no details are provided as to the proposed sewage treatment and volumes generated. Limited assessment of the sewage treatment options has been carried out. This is a concern given that the porosity may mean that an infiltration system may not be appropriate (although no porosity test details have been supplied). With regard to discharge to a watercourse, we would also have concerns regarding additional nutrients discharging into the watercourse as the receiving watercourse would be upstream of Llyn Traffwll SSSI. The Applicant may therefore need to consider an appropriately designed and managed reedbed system, or chemical treatment. Sufficient land to accommodate a reedbed may need to be factored in to the site plan.

9.2.4. Discharges to a watercourse or ground may require an Environmental Permit from NRW's Permitting Service.

9.2.5. All decommissioning throughout the proposals should seek to return watercourses back to pre-development physical condition or better. This

²³ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/#collapse2345>

should include the removal of all redundant structures (e.g. ES chapter F8, section 8.5.39).

- **Waste**

- 9.2.6. The proposed development may give rise to a large volume of waste material. It needs to be decided whether the demolition material is to be treated as a waste and in that case, referred to under the waste management plan and must comply with Duty of Care requirements, Environmental Permitting Regulations 2016 and other applicable legislation. Alternatively, if the demolition material is to be re-used, the Applicant should consider a materials management plan such as the CL:AIRE Code of Practice. These details will need to be set out in the Sub-CoCP referred to above.

9.3. **Water Framework Directive**

- 9.3.1. NRW advise that the Dalar Hir Park and Ride Facility is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.

9.4. **Habitats Regulations Assessment**

- 9.4.1. NRW advise that the proposed Dalar Hir Park and Ride Facility is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.

9.5. **Sites of Special Scientific Interest**

- 9.5.1. NRW advise the proposal has the potential to damage the special interest of Llyn Traffwll SSSI. This site is notified as an example of a lowland lake of moderate nutrient levels with high alkalinity. The interest in the lake includes its aquatic plant community which supports the Red data book species *Elatine hydropiper*. Increases in nutrients in the lake have potential to lead to trophic shift (in which over-enrichment and consequent algal growth causes a change from clear-water to algal dominated conditions) and the loss of species of conservation interest. We refer you to our comments above in relation to foul drainage.

9.6. **European and Nationally Protected Species**

- 9.6.1. Bats, great crested newts and otters are present within/adjacent to the Dalar Hir site. These species are European Protected Species (EPS) protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981.
- 9.6.2. Water voles and Schedule 1 listed birds (barn owl) are present within/adjacent the site. These species are protected under the Wildlife and Countryside Act 1981.

- 9.6.3. NRW is satisfied that sufficient baseline information has been collected to inform the impact assessment for the protected species referred to above.
- 9.6.4. NRW note the outline mitigation measures specified in the ES chapter F9 (APP-274) and F9-9 (APP-290) Dalar Hir Protected and Legally Controlled Species Compliance Report and in the Mitigation Route Map (APP-422). NRW advises that, as long as detailed mitigation measures are set out in the Power Station Sub-CoCP, and approved by the discharging authority in consultation with NRW, the proposed works are unlikely to be detrimental to the favourable conservation status of protected species.
- 9.6.5. NRW advises that the duration of the post-construction monitoring is not satisfactory for evidencing the successful mitigation in terms of maintaining or restoring the current conservation status of the species to favourable levels. NRW is awaiting additional information from the Applicant to address this point.
- 9.6.6. NRW advises that the detailed phasing plans, and the final layout of the management schemes that will implement the principles of the Landscape and Habitat Management Strategy, will need to be approved by the discharging authority, in consultation with NRW, as a DCO Requirement. The management schemes will need to ensure appropriate management of habitats for protected species (including great crested newts and water voles) on site in the long-term. We advise that these measures are secured through the provisions of an overarching section 106 agreement under the Town and Country Planning Act 1990 together with complementary site-specific management agreements under Section 39 of Wildlife and Countryside Act 1981. We can provide further advice on the provisions of the suggested section 106 Agreement if required.

9.7. Protected Landscapes

- 9.7.1. NRW is satisfied that the proposed development is unlikely to affect the special qualities of the Ynys Môn / Anglesey Area of Outstanding Natural Beauty.

10.A5025 OFF-LINE HIGHWAY IMPROVEMENTS (VOLUME 6G)

10.1. Flood Risk

- 10.1.1. NRW has reviewed the hydraulic flood modelling undertaken and which is outlined in the appendices of the Flood Consequence Assessment ES Appendix G8-1 (APP-323). NRW is satisfied that the modelling has been undertaken appropriately to inform the Flood Consequence Assessment.

- Valley (Section 1)

- 10.1.2. As explained further below, NRW has significant concerns that the proposal will result in unacceptable increased flood risk.

- 10.1.3. Paragraph 8.3.8 of ES chapter G8 (APP-311) states that land within Section 1 is within Flood Zone C2, as defined in Technical Advice Note (TAN) 15. We would expect a statement justifying the location of the development within zone C. TAN 15 advises that new developments should be directed away from zone C and towards suitable land in zone A, otherwise to zone B, where river or coastal flooding will be less of an issue.
- 10.1.4. The Afon Cleifiog river at Valley flows to the Holyhead Strait via three tidal gate structures located within a tidal flood defence embankment. The river discharges on low water when the gates are able to open due to water level differential. Section 1 is within an area of reclaimed land from the sea to allow for the construction of the A5 carriageway. Prior to the construction of the defences, the area subject to the DCO for Section 1 works would be inundated by the tide. This is reflected in figure G7-4 which shows tidal flat deposits.
- 10.1.5. With regard to paragraph 8.3.9, although flooding may be primarily from fluvial sources a breach/failure of the gates/defences affording protection to the area may give more frequent and deeper flooding to the figures quoted in this paragraph for fluvial flood risk.
- 10.1.6. We would have expected that failure (breach) of the defence embankment should have been considered in line with NRW's Breach and Blockage Guidance. A copy of the guidance has been provided to the Applicant previously (OGN100 Modelling blockage and breach scenarios). The OGN indicates that when breaches are to be considered, then a breach length in an estuary/tidal river could be anything between 20 and 50m should the embankment fail. Embankment failures are usually associated with the defence being under severe loading if not in good condition (Tyddyn y Cob embankment is deemed to be in current good condition). Overtopping is more likely to lead to breaching from levels exceeding crest heights.
- 10.1.7. The tidal defence only provides protection up to and including the 1/1000-year tidal flood level (0.1% Annual Exceedance Probability). However, the tidal defence embankment would be overtopped when climate change is also considered, for the lifetime of the development. Overtopping is more likely to lead to breaching from levels exceeding crest heights. The impact the works would have on flood risk elsewhere should a failure (breach) of the tidal defence occur has not been assessed.
- 10.1.8. Paragraph 4.2.1 of the Flood Consequence Assessment refers to the appropriate design of the compensation flood storage area that would be undertaken and agreements with landowners implemented. This is for the

fluvial and fluvial tide locked²⁴ events and NRW would consider the compensation appropriate for those events. Mitigation has been provided for other modelled scenarios, however, the tidal breach scenario has not been assessed as NRW has previously advised. NRW advise that should a failure (breach) occur to the defences affording tidal protection to the area, then existing properties (and land) may be inundated to deeper flooding following the development in Section 1. NRW is awaiting additional information from the Applicant to address the above matters.

- *Llanfachraeth (Section 3)*

10.1.9. Following the development, the water level immediately upstream of the bypass increases in the Afon Alaw and Afon Llywenan in all flood events. The increase for the 'design event' (table A1.14 in TAN15) for the 1% Annual Exceedance Probability plus climate change is 0.09m and 0.02m respectively. Table G8-8 refers to mitigation which would involve "...*minor ground re-profiling without increasing flood risk elsewhere.....*". It has not been demonstrated that this can be achieved. It is also unclear if this can be carried out within the current DCO application limits, and NRW therefore advise it is unclear whether the proposal is compliant with TAN15.

- *Llanfaethlu (Section 5)*

10.1.10. The proposed Logistics Centre is not located within flood zone C1 or C2 (as defined under TAN 15) and is unlikely to cause increased flood risk elsewhere. NRW advise that the proposal is compliant with TAN15. However, the advice of IACC as the Lead Local Flood Authority should also be sought on the local flood risks associated with this site and the proposed surface water drainage arrangements.

- *Cefn Coch (Section 7)*

10.1.11. The proposed Logistics Centre is not located within flood zone C1 or C2 (as defined under TAN 15) and is unlikely to cause increased flood risk elsewhere. NRW advise that the proposal is compliant with TAN15. However, the advice of IACC as the Lead Local Flood Authority should also be sought on the local flood risks associated with this site and the proposed surface water drainage arrangements.

10.2. **Pollution Prevention**

10.2.1. The construction and operation of the proposed highway improvements has the potential to result in pollution incidents. NRW advise that detailed

²⁴ Due to the presence of the tidal doors, river/fluvial flows can only be discharged when tide/sea levels are at or lower than those in the river. The doors work on head of water either side of the door.

pollution prevention measures should be specified in a detailed Sub-CoCP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement. However, NRW have the following detailed advice which should be incorporated in to the detailed Sub-CoCP:

- a) No mention is made to pollution prevention guidance – particularly Guidance for Pollution Prevention (GPP) . The document should refer the contractor doing the work to the Net Regs website²⁵ for the latest pollution prevention guides.
- b) On the balancing ponds that are being installed, it would be advisable to include a pollution shut-off valve.
- c) The implication from the document is that a materials balance is being sought in terms of soil, stone etc. If there is any excess the following applies: the development will generate what is termed as controlled waste. This waste should only be disposed at sites which can prove that they are registered as exempt or licensed under the Environmental Permitting Regulations. It needs to be confirmed whether the material is to be treated as a waste and thereby included in the waste management plan and there must also be compliance with the Duty of Care requirements, Environmental Permitting Regulations 2016 and other applicable legislation. Alternatively, if the demolition material is to be re-used the Applicant should consider a materials management plan such as the CL:AIRE Code of Practice. These details will need to be set out in the Sub-CoCP referred to above.
- d) Particular care should be taken with concrete so as not to pollute any watercourses. An impermeable coffer dam must be in place between any concreting works and the river. Any water that comes into contact with wet concrete must be treated as contaminated and must not be allowed to discharge into any watercourse.
- e) The G8-2 (APP-324) HAWRAT and spillage risk assessment document concludes that the SUDS solutions used would be sufficient and that the risk of significant pollution is low even on the roundabouts. However, we advise a fuel interceptor is installed at the roundabouts at Valley and at the entrance to the power station.

10.3. **Water Framework Directive**

- 10.3.1. NRW advise that the A5025 Highway Improvements are not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.

10.4. **Habitats Regulations Assessment**

²⁵ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppps-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/#collapse2345>

- 10.4.1. NRW advise that the proposed A5025 Highway Improvements are unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.

10.5. Sites of Special Scientific Interest

- 10.5.1. A section of the proposed works is upstream of Beddmanarch-Cymyran SSSI. As long as detailed mitigation measures are set out in the Sub-CoCP (see comments 10.2.1 above), NRW advise that the proposed A5025 Highway Improvements are unlikely to damage any SSSIs.

10.6. European and Nationally Protected Species

- 10.6.1. Bats, great crested newts and otters are present within/adjacent to the A5025 highway improvement works. These species are European Protected Species (EPS) protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).
- 10.6.2. Water voles and Schedule 1 listed birds (barn owl) are present within/adjacent the site. These species are protected under the Wildlife and Countryside Act 1981.
- 10.6.3. NRW is satisfied that sufficient baseline information has been collected to inform the impact assessment for the protected species referred to above.
- 10.6.4. NRW note the outline mitigation measures specified in the ES chapter G9 (APP-312) and G9-10 (APP-334) Protected and Legally Controlled Species Compliance Report and in the Mitigation Route Map. NRW advises that, as long as detailed mitigation measures are set out in the Power Station Sub-CoCP, and approved by the discharging authority in consultation with NRW, the proposed works are (i) not likely to be detrimental to the maintenance of the favourable conservation status of any local populations of European protected species; and/or (ii) not likely to adversely impact any local populations of British 'fully' protected species (protected under the Wildlife and Countryside Act 1981).
- 10.6.5. NRW has considered the draft mitigation licences submitted as part of the DCO application. NRW advises that the duration of the post-construction monitoring is not satisfactory for evidencing the successful mitigation in terms of maintaining or restoring the current conservation status of the species to favourable levels. NRW is awaiting additional information from the Applicant to address this point
- 10.6.6. NRW advises that the detailed phasing plans, and the final layout of the management schemes that will implement the principles of the Landscape and Habitat Management Strategy, will need be approved by the discharging authority, in consultation with NRW, as a DCO Requirement. The management schemes will need to ensure appropriate management of habitats for protected species (including great crested newts and water voles) on site in the long-term. We advise that these measures are secured

through the provisions of an overarching section 106 agreement under the Town and Country Planning Act 1990 together with complementary site-specific management agreements under Section 39 of Wildlife and Countryside Act 1981. We can provide further advice on the provisions of the suggested section 106 agreement if required.

10.7. Protected Landscapes

- 10.7.1. The A5025 touches the AONB boundary only at two locations, does not alter land within the AONB, seeks to reconnect field boundaries along the road corridor, would introduce new planting along the offline scheme and would not be lit at night. NRW is satisfied that the proposed development is unlikely to affect the special qualities of the Ynys Môn / Anglesey Area of Outstanding Natural Beauty. However, the advice of IACC should be sought in relation to local landscape impacts.

11. LOGISTICS CENTRE (VOLUME 6 H)

11.1. Flood Risk

- 11.1.1. The proposed Logistics Centre is not located within flood zone C1 or C2 (as defined under TAN 15) and is unlikely to cause increased flood risk elsewhere. NRW advise that the proposal is compliant with TAN15. However, the advice of IACC as the Lead Local Flood Authority should also be sought on the local flood risks associated with this site and the proposed surface water drainage arrangements.

11.2. Pollution Prevention

- 11.2.1. The construction and operation of the proposed centre has the potential to result in pollution incidents. With regard to the operational phase, the Applicant should note that for car parks that are larger than 50 spaces in size, a fuel interceptor should be installed as per Guidance for Pollution Prevention²⁶.
- 11.2.2. NRW advise that detailed pollution prevention measures should be specified in a detailed Logistics Centre Sub-CoCP and approved by the discharging authority, in consultation with NRW, as a DCO Requirement.

- Foul drainage

- 11.2.3. The Applicant states in ES chapter H8 (APP-362) (paragraph 8.4.16) that the foul drainage will connect to foul sewer or discharge to a treatment plant

²⁶ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/#collapse2345>

where it is unable to connect to sewer. The Applicants must liaise with Dŵr Cymru Welsh Water regarding connection to the foul sewer. We refer you to comments 8.2.2 -8.2.4 which are also relevant to this aspect.

- **Waste**

- 11.2.4. The proposed development may give rise to a large volume of waste material. It needs to be confirmed whether the material is to be treated as a waste and thereby included in the waste management plan and there must be compliance with the Duty of Care requirements, Environmental Permitting Regulations 2016 and other applicable legislation. Alternatively, if the material is to be re-used the Applicant should consider a materials management plan such as the CL:AIRE Code of Practice. These details will need to be set out in the Sub-CoCP referred to above.

11.3. Water Framework Directive

- 11.3.1. NRW advise that the Logistics Centre is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.

11.4. Habitats Regulations Assessment

- 11.4.1. NRW advise that the proposed Logistics Centre is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.

11.5. Sites of Special Scientific Interest

- 11.5.1. NRW advise that the proposed Logistics Centre is unlikely to damage any SSSIs.

11.6. European and Nationally Protected Species

- 11.6.1. NRW advise that as long as detailed and routine mitigation measures are set out in a detailed Sub-CoCP, and approved by the discharging authority (in consultation with NRW), the proposals will not be detrimental to the Favourable Conservation Status of protected species.

11.7. Protected Landscapes

- 11.7.1. The proposed Logistics Centre is located within Parc Cybi, a Local Development Plan allocation site, within the AONB. Attention to design, and to the existing character and appearance of the area, are important to placemaking. Whilst the development and use of the site for Wylfa Newydd is temporary, the infrastructure it puts in place is likely to remain and be reused. The physical components of the development will have a legacy and will inevitably influence the planning and design of development that will come forward in the future.

- 11.7.2. We consider more could therefore be done to extend the planting strategy of native hedgerow with trees along the frontage of the site with Parc Cybi road, to provide a lasting high-quality landscape infrastructure to the site (subject to CCTV and highway sightlines). The use of painted Paladine fencing rather than bare galvanised finish is also recommended. These items would better support the development's character and appearance design principles. We advise that information about this be made a requirement of the DCO and are approved by the discharging authority, in consultation with NRW.
- 11.7.3. To conclude, NRW is satisfied that effects on the special qualities of the Ynys Môn / Anglesey Area of Outstanding Natural Beauty can be mitigated.

12. NRW'S GENERAL PURPOSE

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

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14. ANNEX A1 – NRW SPECIALIST COMMENTS ON ES APPENDIX D8-05

ES APPENDIX D8-05 (APP-158) Tre'r Gôf Hydroecological Assessment

1. It is imperative that a geological model is agreed to the extent that it informs the hydrogeological model. Based on the information provided, we do not agree with the hydrogeological model or underlying geological model presented. We have previously recommended that geological cross sections are produced to a scale appropriate to understanding wetland water supply mechanisms, showing details of ground investigations and a representation of the uncertainty

in these data. These should clearly illustrate the hydrogeological mechanisms. This has not been provided and we advise that sections presented to date (Figures 2-1 and 2.2) are misleading.

- a) We agree that there is a thick (25m) drift sequence associated with the 'plug' beneath the northern ridge. However, it is not appropriate to assume there is a straight line between this and the thickness of drift deposits to the south of the SSSI in BH311 (Section 2.3.2 and Figure 2-1). There must be an unusual geological feature between the two, hence the formation of Tre'r Gôf, which can't be ignored; this is an example of why it is important to understand the geological formation of the site.
- b) No evidence is provided that the laminated deposits extend in a straight line below the site; again this could be refined based on understanding of geological origin and using Botterill (1988), which suggests that the extent of the original lake was considerably smaller than the current site. No laminated clay is recorded in the log for BH526, but it is drawn on the cross section.
- c) Several boreholes are inexplicably omitted from the cross sections.
- d) Peat thicknesses should be included on a cross section on a scale appropriate to the site. Only one piezometer reached the 'base' of the peat in the current study (at the edge) and no reasoning behind their locations is given; the centre of the site where peat is anticipated to be deeper has been avoided and no transects are installed, as would normally be expected. Botterill (1988) records gyttja (a type of organic deposit) to at least 8m depth beneath the site. This is not correctly portrayed on the cross sections ; the peat depth map (Figure 2-3) is also misleading.
- e) Only one hole into the peat encountered the underlying material; it is not appropriate to extend this finding to the rest of the basin (Section 2.3.4).
- f) Explanation would need to be provided on how peat distribution can be determined from the topography in a fen (Section 2.3.4) before the evidence can be accepted.

In the absence of new information from beneath the site we default to the Botterill study (1988). This suggests that there is at least 8 m of organic material beneath the centre of the site, underlain by lacustrine clay. The west and south of the SSSI are underlain by shallow bedrock shelves, which support marl and thin superficial deposits. Nothing from the present study contradicts this more thorough investigation of the site itself. This means that flow through fractured bedrock can potentially directly and indirectly discharge through the side of the peat, without intervening clay.

2. We agree that there is a perched water body beneath the topographic high to the north of the site and that this will (at least in part) drain towards the SSSI. However, apart from perched water in topographic highs in the vicinity, all evidence points to the distinction between 'bedrock' groundwater and 'superficial' groundwater bedrock as arbitrary:
 - a) We agree that regional groundwater levels reflect topography and are towards the coast. Being deeper, it is not surprising the contours plotted for the bedrock are a subdued version of this. This is not evidence that there is a separate water body in the bedrock.

- b) We disagree that there are significantly steepening contours to the south of Tre'r Gôf when compared with the rest of the region.
- c) Hydrographs in dual installations show that water in superfcials and bedrock is in continuity around the site (except beneath the northern ridge).
- d) No distinction can be made between groundwater chemistry in the superfcials or bedrock. Reference is made to the site receiving water from the surrounding till (Section 2.3.3); whilst this is no doubt correct, it could be misleading because it implies that supporting chemistry can only be from the till, which is not borne out by the chemical testing.
- e) A slight upwards hydraulic gradient does not prove that the superfcials confine the bedrock, only that this is an area with an upwards hydraulic gradient
- f) Persistent reference is made to 'deep' groundwater contribution being minor relative to surface water inputs, and implicitly of lower importance. This is to misunderstand the way that Groundwater Dependent Terrestrial Ecosystems (GWDTEs) operate; 'deeper' groundwater inputs are almost certainly low by volume, but they are absolutely critical in maintaining high water levels throughout the year and contributing to the appropriate water chemistry for these rare assemblages.

On this basis, we do not recognise clear separation of water by geology and would advise reference to 'groundwater', which includes all water from superfcials, weathered bedrock and deeper bedrock that supports the SSSI year-round. There will also be a quicker component of 'throughflow' and seasonally saturated flow through shallow material above this, which recharges transient surface water and springs.

3. Based on the information provided we predict that groundwater provides water to the site through the sides of the basin and is critical in maintaining the high water level in the site during dry periods. We therefore disagree with the often cited conclusion by the Applicant that groundwater is of minor importance.
 - a) Piezometric contours suggest that the SSSI acts as a point of discharge for groundwater. This is not to say that all deep groundwater in the area discharges to the site; clearly a component continues towards the coast. Data from the hydrogeological baseline report suggests that there is measurable flow to at least 50m depth in the region, the deepest of which could well pass below Tre'r Gôf.
 - b) Hydrographs from dual installations around the site show a negligible difference in head at depth and an upwards head gradient in the area (except the north). The first observation implies a common and easy discharge pathway, and similar recharge responses suggest a system well-connected to the surface throughout. An upwards head gradient means that groundwater is trying to move upwards locally.
 - c) Hydrographs show that groundwater levels around the site are coincident with and generally higher than levels in the SSSI year round. Unless there is a clear geological barrier between the two (and evidence for this is not provided) then it must be assumed that groundwater will flow into the site all year. This does not have to be at the surface; this can be at any point through the water column where the head gradient drives the water in the right direction through ground of sufficient permeability.

- d) Hydrographs in the peat (Figure 2.15) do not demonstrate the typical 'saw tooth' response associated with rainfall and evaporation to the peat at times of 'no' groundwater flow. On the contrary, most have very limited fluctuations (of the order of centimetres), implying constant groundwater input. We therefore disagree with the conclusion that the site does not receive groundwater in the summer based on the hydrograph evidence.
 - e) We expected to see further consideration of the pumping tests in Appendix D8-05, because preferential drawdown was identified in the direction of Tre'r Gôf, implying fault influenced flow in this direction. We disagree that the results of the pumping tests have 'no relevance for Tre'r Gôf' as the Applicant stated during the pre-application stage; it cannot be assumed that 'they're not connected to the SSSI', pumping tests were of too short a duration to be confident that the drawdown will be of limited lateral extent in the long term and only limited conclusions should be drawn from two boreholes given the anisotropy of the aquifer. It is stated in Section 2.3.1.2 that 'the bedrock is crossed by several steeply dipping faults; many of these run between the area proposed for the Power Station and the Tre'r Gôf SSSI'.
4. We recommend that hydrological monitoring and the water balance are not reliable evidence for explaining hydrogeological mechanisms at the site:
- a) Several of the flumes are elevated above streams for part of the year and are therefore missing the all important bottom (groundwater baseflow) part of the hydrograph. In addition, they are typically above the groundwater level, so will not capture most groundwater inputs to the site. Groundwater/4R modelling (in D8-7 (APP-160)) confirms that measured flows are less than would have been expected using the catchment areas. On this basis, we cannot agree with the implicit conflation of 'no data in the flumes' meaning that there is no groundwater inflow during the summer.
 - b) We note walkover surveys have concluded that springs and seepages dry up between May and November/December. However, slow, diffuse seeps, particularly where masked by vegetation or within the peat itself are difficult to identify, and a visual check of the site is not diagnostic of no groundwater input. As an example, a seep that is wet year round, but no flow can be estimated is identified in Section 3.1.3 (the East Compartment)
 - c) The description of the wetland as 'seasonal' appears to be based on the flashy nature of the flumes and perceived drying up of seepages at the surface. On this basis (and the response of dipwells in the peat), we disagree with the description of the site as 'seasonal'.
5. We do not have confidence in the radii calculated for recharge and subsequently used as buffer zones; these should be underpinned by a hydrogeological conceptual model on a scale appropriate to the site. This is because:
- a) The water balance is of limited use in informing the conceptual model for the site at an appropriate scale. It simply suggests that the wetland is wetter in the winter and drier in the summer, that most of the flow through VN5 is likely to be surface water and that groundwater is a small part of the water budget. This says nothing about the criticality of the contribution of groundwater.

- b) There is no evidence presented to justify seepage flow estimates (e.g. measurements of infill rates to trial pits), and no explanation of how the length of seepage zones is incorporated.
 - c) The use of the radial flow equation is flawed for seepages where a point source discharge does not occur. In addition, it is possible that spring and seepage recharge zones would overlap each other; they would need to be larger to account for this.
 - d) Caution should be applied when using 'typical' rates from the rest of the UK and for a material as variable as glacial till. We recommend that site specific data are used where possible, or confidence in these values reflected in the calculations.
 - e) The use of VN2 to validate spring and seepage catchment estimates; VN2 probably is the only inflow flume that intercepts (at least the upper part of the) aquifer year round. However, it's not clear if this is a typical example of groundwater inflow to the site given the small catchment area and discrete nature of flow. Definition of springs and seepages may help clarify future discussions. Chemical data suggest that 'springs' are similar to the water intercepted by flumes and residence times are probably low. These are therefore more likely to be expressions of rapid throughflow that tends to flow during wet periods. We agree that much of this water is likely to be transmitted through the sites via drains. This is therefore not the critical groundwater supporting the site, which must be dominated by diffuse 'springs', seepages and deeper inflows.
 - f) The reference (RD18) used to describe flow through lowland peat is not appropriate. It is a non-peer reviewed short summary paper about drain blocking in upland blanket peat, which this site is not. There is more suitable, peer-reviewed research available on flows in fen peat bogs to refer to, or better still site specific data would be collected.
6. We have concerns about handling of chemical data:
- a) We note that chemical results are generally representative of winter conditions, and therefore more likely to reflect higher rainfall contribution to the site during this season. We therefore cannot draw conclusions about the chemistry of groundwater contribution during the period from May to December.
 - b) No satisfactory explanation is given as to why there are systematically larger errors in ionic balances for boreholes 309, 524 and 526; if data have not been used then this significantly reduces the monitoring available at the site and confidence in the conclusions drawn.
 - c) There appear to be data management handling errors in Table 2.5, further reducing confidence in conclusions.

ANNEX B – RESPONSES TO EXAMINING AUTHORITY’S QUESTIONS

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

Reference	Respondent:	Location:	Question:	NRW Response
1. Air Quality including Dust				
Q1.0.5	The Applicant and NRW	WB	ES D13 paras 13.5.14-15 state that construction derived sewage and site campus sewage would both have a maximum daily rate of discharge as 1,598m³. It seems unlikely that the discharges would be exactly the same. [I3] Is this correct, are they both the same and is there a need for any limits to be set and controlled through a suitable mechanism? Is NRW content this could be controlled through the EP?	As of June 2018, NRW’s Permitting Service is determining an Environmental Permit application (reference PAN-002428) that includes - amongst a number of other discharges - a discharge of up to 990m ³ /d of sewage effluent. NRW has not received an application from the Applicant or Dŵr Cymru Welsh Water for sewage discharges derived from the site campus.
Q1.0.6	IACC and NRW	Q	With reference to Table D5-46 of Chapter D5 Air Quality [APP-124], and section 7.5 of the MPSSSCoCP [APP-415], the ExA notes that many of these measures are yet to be fully defined/specified, including the monitoring locations and plant emission standards (see paragraph 7.5.2 of [APP-415]). IACC and NRW would also	NRW do not consider there is sufficient certainty for the delivery through the dDCO of the measures outlined in Table D5-46 of D5 [APP-124] or section 7.5 of the MPSSSCoCP [APP-415]. Paragraph 7.5.2 of the MPSSSCoCP states that <i>"a comprehensive air quality monitoring and reporting scheme will be developed in consultation with IACC and NRW"</i> . However there is no DCO Requirement to secure the approval of the detailed measures. NRW consider an

			be involved in the specification of these works post-consent, and in determining any “additional modelling and assessment [that] would be undertaken to support the development of the scheme as it matures”. IACC and NRW are invited to comment on: whether they consider that it would be appropriate these matters to be deferred until later; and, whether or not sufficient certainty is provided for their delivery through the provisions of the dDCO.	additional DCO Requirement, for approval of a detailed MPSSSCoCP by the discharging authority is needed. NRW is satisfied that it would be appropriate to provide the required detail prior to the commencement of the relevant activity (i.e. after the DCO is made). NRW has set out its overarching views on the dDCO, and the need that detailed CoCPs be subject to approval by the discharging authority in its Written Representations (section 4).
2. Biodiversity				
Q2.0.1	IACC and NRW	WF	Are IACC and NRW content that the baseline assessments for Soils and Geology in Chapter B7 [APP-072] and Terrestrial and Freshwater Ecology in Chapter B9 [APP-074] are sufficient?	NRW consider that there are sufficient baseline assessments in Chapter B7 [APP-072]. NRW consider there are sufficient baseline assessments in Chapter B9 [APP-074] for the relevant receptors with the exception of Tre'r Gôf and Cae Gwyn Sites of Special Scientific Interest. We refer you to sections 7.13 and 7.15 respectively in NRW's Written Representations.
Q2.0.6	NRW and IACC	WA	Are NRW/IACC content with the 15 year lease arrangements described in Chapter B9 para 9.3.8 for the ecological mitigation areas?	Paragraph 9.3.8 refers to the 'ecological mitigation areas'. NRW understands this to be the mitigation areas for notable wildlife species and reptiles. NRW defer to IACC on locally important species and species partially protected under the Wildlife and Countryside Act 1981. The Applicant should explain whether it has secured the rights required once the lease mentioned at Paragraph 9.3.8 of Chapter B9 is terminated. NRW notes that reliance on

				third party agreements outside of the powers of the DCO is not usually considered sufficient for securing essential mitigation. Please note, for the avoidance of doubt, that NRW would expect long-term management on the <u>ecological compensation proposals</u> (fen creation and restoration).
Q2.0.14	NRW	WA	Is NRW content with the mitigation measures described in the Mitigation Route Map [APP-422] Item 0209 for protecting surface water quality at Tre'r Gof SSSI?	NRW is not content with the mitigation measures described in Item 0209 of the Mitigation Route Map. The mitigation refers in item 0209 of the Mitigation Route Map (APP-422) to the use of an underlying "blanket" (a gravel layer under the mounds), the success of which is uncertain. No examples have been quoted where this technique has been successfully used in this context. The design is "<i>deemed to be flexible</i>", but the drainage blanket, once installed, will not be and its functionality will be fixed. There is also risk of failure in the effectiveness of the proposals associated with the complex system of ditches, swales and overflow points from the mound drainage which is designed to replicate the natural hydrological regime. Item 0209 refers to the use of overflow pipes at intervals in the drainage ditch to the north and west of Mound A. There are substantial uncertainties about the effectiveness of the proposal and its ability to mimic the natural hydrology of Tre'r Gôf. For instance, Figures 2-2 and 2-3 of D8-8 (APP-167) shows the drainage leat from Mound A making a circuitous route around the mound and descending a gradient (hidden under the key on Figure 2-3) with no hydro-brake or

				attenuation of kinetic energy, raising the possibility of erosion or overtopping and transmission of water and sediment directly to the SSSI. This leat will intercept the current overland flow which is to be substituted by the water from the drainage blanket. The leat itself will be located within the buffer zone around the site, further reducing this protection zone, whilst overtopping of the leat could deliver sediment-rich waters in an uncontrolled manner to the SSSI. It is possible that this may be as good a design as can be achieved within the constraints set by the project, but we cannot be confident that it will appropriately mitigate the impact. NRW has limited confidence in the ability of this complex system to meet design objectives. It is considered unlikely that the proposed drainage design around Tre'r Gôf will reproduce the groundwater conditions required to support the SSSI sustainably in the long term. NRW considers that further direct mitigation measures should be considered. We refer you to NRW's Written Representations (section 7.13) which explains the need for additional mitigation.
Q2.0.16	The Applicant and NRW	WA	What would be the effects on Tre'r Gof SSSI if the drainage system cannot be improved compared to the baseline, and can further refinements be included within the authorised development?	The land drainage system installed as part of the Wylfa Newydd project may result in changes in water quantity and water quality at the SSSI. Changes in water quantity may result in fen vegetation becoming inundated which, though normal at times in winter, could be damaging if occurring for long periods in the summer growing season. Alternatively periods of drought leading to peat shrinkage and oxidation may occur with consequential changes to the properties of the peat and to the flora and fauna that it supports. Changes

				in water quality (e.g. as a result of increased nutrients or suspended solids during construction) may result in fen vegetation becoming over-enriched (and the vegetation dominated by aggressive nitrophilous species), while changes in the pH or in the mineral content of the irrigating waters may result in subtle long-term shifts in the nature of the fen vegetation. As noted above, consideration may need to be given to strengthening the system of leats around Mound A in particular with regard to attenuation of energy.
Q2.0.19	NRW	WA	In its RR para 4.4.1 [RR-088] NRW considers that there is inadequate consideration of direct mitigation at Tre'r Gof SSSI. Are there any further direct measures that NRW suggest to protect the SSSI?	NRW considers that further direct mitigation measures should be considered by the Applicant in relation to Tre'r Gôf SSSI. Possible measures that the Applicant may consider include controlling water loss from the site via the underground culvert at VN5 during critical periods, in order to avoid the drying and oxidation of the peat body. Consideration should also be given to recharging groundwater, particularly in areas potentially affected by de-watering during the construction period. These mitigation measures should be clearly secured and identified in the draft DCO. We refer you to section 7.13 of NRW's Written Representations.
Q2.0.20	IACC and NRW	WA	Are IACC and NRW content that air quality monitoring as described in Sections 7.5 and 7.6 of the MPSSSCoCP would be sufficient to protect Tre'r Gof SSSI?	In terms of emissions from plant and machinery, NRW advise that, in addition to monitoring, mitigation as outlined in 11.15 of the MPSSSCoCP will need to be implemented to protect Tre'r Gôf SSSI. NRW consider that more detailed monitoring and mitigation measures are needed - we advise that such measures should be approved by the discharging authority, in consultation with NRW, prior to commencement

				of the relevant activities. In terms of dust, NRW advise that detailed dust monitoring and mitigation measures should be specified and then approved by the discharging authority, in consultation with NRW, prior to commencement of the relevant activities.
Q2.0.21	NRW, NWWT and RSPB	WA	Do NRW, NWWT and RSPB agree that the creation and management of species - rich grassland with a close sward and coastal heath/grassland mosaic as described in Chapter 8.16 [APP-424] paras 6.5.7 and 6.5.12 and the management of Mound A as described in 5.4.12 would be sufficient for providing optimal foraging for Chough?	NRW consider that the proposed management of habitat for chough is feasible long-term, during the operational phase of the development. NRW do not consider that creating optimal foraging habitat for chough would be feasible during the construction phase.
Q2.0.22	NRW, NWWT, RSPB	WA	Do NRW, NWWT and RSPB agree that the mitigation described in the MPSSSCoCP 8.3.3 would be sufficient to protect Chough nesting sites from construction noise?	Chough is a Schedule 1 bird. In order to avoid disturbing a Schedule 1 bird while nesting, we advise that detailed mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW.
Q2.0.24	NRW	WA	Is NRW content that reptile translocation (Chapter D9 paras 9.5.189 – 190 and para 9.5.337) could be secured through species mitigation licence, or should more detail be included in the MPSSSCoCP?	NRW do not consider that reptile translocation, based on current interpretation, is a species licensing matter. We defer to IACC in terms of advising on reptiles which are partially protected under the Wildlife and Countryside Act 1981.

Q2.0.43	NRW	WF	In its RR NRW [RR-088] para 4.5.1 NRW advises that the duration of postconstruction monitoring is not satisfactory. What duration would NRW consider to be satisfactory?	Following a Statement of Common Ground meeting on 14th September to address this matter, NRW is awaiting confirmation from the Applicant on the agreed duration of post-construction monitoring. NRW expect confirmation that the duration will adhere to the following: (a) Great crested newt. • Main site – monitoring to be undertaken during years 1, 3, and 6 (monitoring would involve collection of Habitat Suitability Index information and two torch head count surveys). • A5025 – Habitat Suitability Index surveys to be undertaken annually for a minimum of 21 years. Two torch population surveys to be undertaken annually for the first 10 years then every other year for a minimum of 11 years (minimum 21 years total) (b) Bats • Main site only – 10 visits covering 15 year period (c) Water voles • Main site only – surveys to be undertaken in years 1, 3, and 6.
Q2.0.49	NRW and IACC	ADD	Do NRW and IACC agree with the assumptions made in Chapter G9 [APP312] paras 9.3.4- 9.3.8 regarding ecological receptors, as the survey data is more than two years old?	NRW consider the information to be sufficient for the purposes of demonstrating that the proposal is not likely to be detrimental to the maintenance of the favourable conservation status of local populations of European protected species provided long term issues (site security, management and surveillance) are appropriately considered.

				The same can be applied to British 'fully' protected species under the Wildlife and Countryside Act 1981.
Q2.0.56	NRW	ADD	Is NRW content that the habitat provisions and post construction monitoring for Great Crested Newts in new ponds, in Table G9-17, would be secured through the GCN Licence?	Habitat provisions and post construction monitoring would be secured through the GCN licence. However, NRW consider these should also be secured through the S106 Agreement to enable long-term proposals to be secured (as the licence provisions may be of shorter duration).
Q2.0.62	NRW	ADD	Can NRW clarify why it suggests that long-term monitoring and management of land identified for mitigation and/or compensation measures is required to ensure that the project would not be detrimental to the maintenance of the Favourable Conservation Status of affected species?	The Habitats Directive defines Favourable Conservation Status (FCS) in Article 1 (i). This states that the conservation status of a species means the “<i>sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2</i>”. The conservation status will be taken as "favourable" when: • population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and • the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and • there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis (our emphasis added). This highlights the need to consider the long term when assessing mitigation (including avoidance and compensation measures). Failure to consider the long term will mean that it is likely that the proposal cannot demonstrate that there will

				be no detriment to the maintenance of the favourable conservation status [of each local] population of European protected species. The 'Favourable Conservation Status' test is one of three tests that are to be applied in respect of European Protected Species derogation under Article 16 of the Habitats Directive. Regulation 9 (1) of the Conservation of Habitats and Species Regulations 2017 requires that this specific consent complies with the provisions of the Birds and Habitats Directives (it is not only a duty to have regard to these provisions).
Q2.0.63	NRW	WF	Paragraph 4.4.3 of the MPSSSCoCP [APP-415] states that no lighting would be used for the MUGAs after 21:00 hours during the winter months to prevent light trespass onto Tin-y-Maes bat barn and the adjacent ecological mitigation area. Given that it would get dark earlier than this during winter months do you consider the proposed 21:00 curfew appropriate or should it be earlier and if so what time?	External lighting is not an issue over the winter period. For information, new external lighting guidance has been jointly published by the Institute of Lighting Professional and Bat Conservation Trust https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/
Q2.0.64	NRW and IACC	WF	Are the trigger levels for dust at ecological receptors set out in paragraph 7.6.6 of the MPSSSCoCP [APP-415] appropriate? If you consider that different trigger levels should apply then provide further details/explanation.	NRW advise that the trigger levels specified in 7.6.6 are appropriate for protecting ecological receptors.

Q2.0.65	NRW and IACC	WF	Paragraph 7.6.9 of the MPSSSCoCP [APP-415] sets out the actions that would occur should the trigger levels be exceeded. This list currently does not include a requirement to cease work – should it and if so why?	We note that “ <i>temporary</i> ” is not defined and would consider it appropriate for the relevant activity to be suspended until monitoring indicates that there are no exceedances of the trigger levels (i.e. as a result of mitigation measures being implemented). This follows how Requirements in a DCO are typically secured where there is some activity that causes an exceedance.
Q2.0.66	NRW	ADB	Can you confirm that you are satisfied with the proposed measures to deal with badgers, bats and water voles as set out in section 11 of the Park and Ride Sub CoCP [APP-418]?	Badgers are considered by the Local Planning Authority. We are satisfied with the proposed measures in respect of bats and water vole, provided long-term issues are effectively considered and that detailed mitigation measures are approved by the discharging authority in consultation with NRW.
4. Development Consent Order				
Q4.0.11	IACC and Interested Parties	Q	Do you consider the permanent stopping up or extinguishing of private means of access listed in Schedule 7 is necessary? If not please list the relevant streets that should not be included and explain why?	NRW has no comment to make in response to this question.
Q4.0.14	The Applicant and Interested Parties	Q	<u>Article 17 - Use of Private Roads for Construction</u> 17 – What private roads are intended to be used within the order limits during construction and have discussions been had, and agreement been reached with	NRW has no comment to make in response to this question, save that it would ask the Applicant to explain how such a wide-ranging power has been environmentally assessed. As NRW has stated in its comments on the Article 35 temporary possession power (see Written Representation at comment 2.5), the powers granted to the Applicant should be circumscribed to the specific locations for which it has carried out environmental assessments.

			the owners of these roads regarding their use? Can the applicant confirm that there would be severance/access issues?	
Q4.0.43	NRW	WCWD	<u>Article 53 Power to dredge</u> The applicant explains that <i>Article 53 gives Horizon the right to dredge within the harbour limits for the purpose of constructing, maintaining and operating the Marine Works. These powers are subject to the requirements set out under the Marine and Coastal Access Act 2009 to obtain marine licences. <u>In addition</u>, the approval of NRW is required to deposit any dredging below mean high water springs, and this approval can be given subject to conditions and restrictions.</i> What is the additional approval to deposit referred to by the applicant and what does NRW need to consider before providing this approval? Having regard to the matters relevant to determining a marine licence (section 69 of the Marine and Coastal Access Act) is NRW content that sufficient conditions and restrictions on the power to dredge can be provided in	In order to deposit dredge arisings at sea, samples from the sediment of the proposed dredge areas must be taken and analysed to ensure the sediment is suitable for deposit. Previously, samples have been taken and analysed from these areas, however, the guidelines that govern the process (OSPAR) require that data should be no more than 3 years old at the time the marine works are undertaken, to provide assurance that the nature and composition of the sediment has not changed. The original samples were taken and analysed in 2016 and so further sampling should be conducted prior to the marine works commencing. The additional approval from NRW is therefore a marine licence to take samples from the dredge sites for subsequent testing and analysis. NRW will consider the sampling methodology and analysis plan when determining a licence application of this nature. Approval to deposit will be based on considering the sample analysis results in consultation with relevant parties. NRW is content that sufficient conditions and restrictions on the power to dredge can be provided in a marine licence (and any other consent to deposit) but the DCO should be amended to make clear that the provision does not obviate the need for a marine licence for these activities (and that the additional approval should be defined as a marine licence)

			the marine licence (and any other consent to deposit) and that no further controls are required in the DCO in relation to dredging?	
Q4.0.77	IACC and NRW	Q	WN25 - this only appears to require submission and approval of details for the marine works to NRW. Are IACC and NRW content?	NRW is working with IACC, Welsh Government and HNP to consider whether the Applicant's proposal that NRW Permitting Service acts as the discharging authority for any requirements relating to land below the mean high water springs and the marine works is acceptable and if so, how the proposal could be practically implemented. This would include agreement on the need to consult relevant parties (e.g. IACC) on discharging DCO Requirements associated with development in the marine environment. See comments 2.1 - 2.4 in NRW's Written Representations. NRW aims to reach agreement between parties prior to the end of Examination.
Q4.0.78	The Applicant, IACC and NRW	Q	WN26 (a), (b), (c) and (d) - is AOD the correct point of reference or would Above Chart Datum (ACD), Mean High Water (MHW) or Mean Low Water (MLW) be more appropriate? Should definitions be provided for crest and roundhead in Table WN26a?	AOD is an acceptable and correct point of reference. ACD would also be acceptable. Yes, definitions for crest and roundhead should be provided for the avoidance of doubt regarding the consented envelope for these aspects of the development.
Q4.0.79	The Applicant and NRW	WC/WD	WN 28 - What is the relationship between this requirement and the consents required (by NRW) for depositing as set out in Article 53? Is the flexibility under the requirement	As of June 2018, NRW's Permitting Service has been determining a Marine Licence application that includes - amongst a number of other activities - the disposal of dredge material at Holyhead North. Amendments to the proposed

			“unless otherwise agreed with NRW” consistent with the need to secure a variation of any such consents? WN28 Disposal of Dredged Material <i>Any surplus dredged material arising from the authorised development that cannot be re-used must be disposed of at Holyhead North, unless otherwise agreed with NRW.</i>	dredged material disposal activities (including location) would require approval from NRW in the form of a marine licence or a variation to an existing licence.
Q4.0.96	The Applicant, IACC and NRW	Q	OH9 (1) and OH10 (1) should this read ‘prior to completion’? Is this the right trigger for the submission of these details or should the information be submitted at the same time as the details for work No 8? Given that the works relate to a water vole enhancement area would they require clearance from NRW as well as IACC?	NRW do not consider 'prior to completion' to be the appropriate trigger for submission of these details. NRW consider that 'prior to commencement of the relevant activity' would be a more appropriate trigger. This follows the precedented approach in relation to protected species (e.g. Requirement 7 in the recent A19/A184 Testo's Junction Alteration Development Consent Order 2018). NRW advise that the works should be approved by IACC in consultation with NRW. The works may also be subject to a Conservation Licence from NRW under the Wildlife and Countryside Act 1981. The need for such a licence should be made clear in the DCO.
Q4.0.97	The IACC and NRW	Q	ECS2 (1) given the works relate to ecological compensation sites would they require clearance from NRW as well as IACC? Are the IACC and NRW satisfied with the list contained within (2)?	NRW advise that ECS2 should be approved by IACC in consultation with NRW. Parts of the fen restoration works will be undertaken on Caeau Talwrn SSSI. Insofar as the works would be carried out under a DCO which confers statutory powers upon the developer (and the detailed approval is delegated to IACC) it is deemed to override section 28E of the Wildlife & Countryside Act 1981 with regard to operations

				on or affecting, Caeau Talwrn SSSI. No SSSI consent is then required. However, as a statutory body, the determining authority would be required to consult NRW under section 28I of the Wildlife and Countryside Act 1981 (as amended) and obtain NRW's advice on the detail of design and implementation. We advise that NRW's advice and expertise is utilised in this regard, with details approved by the discharging authority in consultation with NRW. NRW is satisfied with the list included in ECS2
Q4.0.99	IACC and NRW	Q	ECS4 are the IACC and NRW satisfied with the list contained within (1) and do the works require clearance from NRW as well as the IACC?	Subsection (1) of ECS 4 states that "<i>no construction of the Ecological Compensation Sites at Cae Canol-dydd or Cors Gwawr may commence until hydrological and hydrogeological monitoring has been undertaken comprising—</i> <i>(a) ground investigations to identify soils and geology of the sites; and; (b) hydrological monitoring comprising installation of boreholes, piezometers, surface water monitoring and any other relevant installations</i>". NRW advise that the list in subsection (1) should also include hydrochemical monitoring (particularly nutrient and base status). We also advise that sufficient hydrological and hydrogeological baseline data should be collated and used to produce a hydrogeological/ecological conceptual model (which should be approved in consultation with NRW). The design for the fen creation should be based on the agreed conceptual site model. The works to undertake hydrological and hydrogeological investigations have already received consent from NRW where they are located within SSSI. Any harvesting of seed or green-hay material from the SSSI for

				innoculation of Ecological Compensation Sites could require consent. NRW advise that ECS4 should be approved by IACC in consultation with NRW. As stated in its Written Representation, NRW would request a consultative role in relation to this Requirement and the DCO should be amended to provide this.
Q4.0.102	IACC and other discharging authorities	Q	Schedule 18 (Article 79): Comment on the procedures; timescales; categorisation of scale of development and fees proposed in relation to the appeals procedure proposed in Schedule 18 (Article 79). Are the proposals reasonable and proportionate and would they be adequately resourced?	NRW is working with IACC, Welsh Government and HNP to consider whether the Applicant's proposal that NRW Permitting Service acts as the discharging authority for any requirements relating to land below the mean high water springs and the marine works is acceptable and if so, how the proposal could be practically implemented. This will include consideration of the procedures; timescales; categorisation of scale of development and fees in relation to the appeals procedure proposed in Schedule 18 (Article 79). NRW aims to reach agreement between parties and provide comments in good time for consideration during the Examination. See comments 2.1 - 2.4 in NRW's Written Representations.
Q4.0.111	Applicant, IACC, NRW, Welsh Government and other parties	Q	Section 7.4 of the Planning Statement [APP-406] deals with Planning obligations and outlines the proposed heads of terms. Please set out how the proposals would meet with the tests for planning obligations.	NRW would defer to Welsh Government as the appropriate body to comment on how the proposals meet the tests for planning obligations in Wales. We refer to NRW's advice on planning obligations in section 3 of its Written Representations.

	involved with the S106			
Q4.0.114	Applicant, IACC, Welsh Government, NRW and Emergency Services	Q	A Programme Board would be responsible for setting and reviewing the monitoring programme and having an oversight of the funding from the Section 106. Can further details be provided as to how this would work in particular what process/mechanism would be put in place in the event of a dispute?	NRW has had no discussions with respect to the proposals for managing the S106. We advise that more information is required from the Applicant and IACC with regard to the mechanism proposed. On this question, we would defer to IACC's advice as the Local Planning Authority responsible for managing the S106 agreement. NRW would seek to be consulted where its functions were engaged, see further NRW's Written Representation at section 3.
5. Habitats Regulation Assessment				
Q5.0.2	NRW and RSPB	WFD	In paras 4.3.1 and 4.3.2 of its RR [RR-088] NRW, and RSPB in its RR [RR084] consider that adverse effects on the Anglesey SPA cannot be ruled out due to noise, vibration and visual disturbance. Can NRW and RSPB explain why?	NRW does not consider that the evidence and mitigation presented in the Shadow HRA demonstrates that disturbance associated with the construction activities will not have adverse effects on the sandwich, arctic and common tern populations at the Cemlyn colony. We refer you to section 7.8 of NRW's Written Representations.
Q5.0.3	NRW and RSPB	WD	What is NRW and RSPB's views on the effectiveness of the monitoring proposals described in paragraphs 10.3.43 – 10.3.53 of the Shadow HRA [APP-050]?	NRW has significant concerns on the effectiveness and deliverability of the mitigation proposed in paragraphs 10.3.43 - 10.3.53 of the Shadow HRA. We refer you to comments in 7.8.31 in NRW's Written Representations

Q5.0.11	NRW and RSPB	WCWD	Can NRW and RSPB confirm that they agree that the seabird survey described in the Seabird Baseline Review [APP-225] and the Shadow HRA [APP-050] is adequate for the purposes of assessing effects on European sites?	NRW consider that the baseline seabird information collected through boat-based transect and tracking surveys are adequate to inform the assessment. However, NRW do not agree that the disturbance monitoring described in section 5 is adequate to inform the assessment. Also, NRW do not agree that the evidence presented in the Shadow HRA on the response of breeding Sandwich, Arctic and common terns to disturbance to be adequate to inform the assessments. We refer you to our comments in section 7.8 in NRW's Written Representations.
Q5.0.14	NRW and RSPB	WF	Can NRW and RSPB confirm that they agree with the method of apportioning bird species to different European sites described in paragraphs 6.5.63 – 6.5.67 of the Shadow HRA? If not, why not?	Please note that NRW, as the Appropriate Nature Conservation Body, advises on Special Protection Areas wholly or partly in Wales. NRW consider that the apportioning method is adequate to enable an assessment on Welsh SPAs to be made.
Q5.0.15	The Applicant and NRW	WF	Can the Applicant and NRW comment on the decision to exclude incombination air quality effects where the process contribution from the Proposed Development is less than 1% of the critical load in light of the judgement in <i>Wealden v SSCLG</i> [2017] EWHC 351 (Admin)?	With regard to paragraph 7.4.118 of the Shadow HRA, NRW do not agree that " <i>where the process contribution (PC) (meaning the contribution made by the activity) is less than 1% of the relevant critical level or critical load, the emission is not likely to be significant alone or in-combination</i> ". In light of the <i>Wealden</i> judgement, NRW consider that (even when the Process Contribution is less than 1%), consideration of other relevant projects may be required to ascertain whether there are possible in-combination effects. However, with respect to Cemlyn Bay SAC, NRW is not aware of other relevant projects which may act in-combination to cause a significant effect or adverse effect on site integrity.

Q5.0.16	NRW, RSPB, and NWWT	WF	Are NRW, RSPB and NWWT content with the Applicant's conclusion regarding likely significant effects on European sites as expressed in the Shadow HRA and the Shadow HRA Addendum [AS-0101]? If not, why not?	With regard to the Welsh sites, NRW in its Appropriate Nature Conservation Body role is content with the Applicant's conclusions in the Shadow HRA / Shadow HRA Addendum with respect to likely significant effects.
Q5.0.19	NRW	WA	Do NRW agree that there will be no adverse effects on integrity on the Cemlyn Bay SAC from the levels of dissolved copper, lead and zinc from discharges during construction, as described in section A2 of the Shadow HRA?	With reference to section A2 of the Shadow HRA, NRW is satisfied that the discharges of copper, lead and zinc into the marine environment will not result in adverse effects on the site integrity of Cemlyn Bay SAC. However, NRW do have outstanding concerns with regard to the discharges from Mound E into the Cemlyn catchment (including impacts on water quality when the drainage pumped over to Afon Cafnan is re-connected to Nant Cemlyn). We refer you to comment 7.10.5 of NRW's Written Representations.
Q5.0.32	NRW and RSPB	WDWE	Do NRW or RSPB have any concerns about effects on the Anglesey Terns SPA for impacts resulting from change or loss of foraging habitat, changes in marine water quality or impingement/entrainment of prey species during construction and operation?	NRW advise that impacts resulting from change or loss of foraging habitat, changes in marine water quality or impingement/entrainment of prey species during construction and operation, are not likely to result in adverse effects on site integrity of Anglesey Terns SPA. We refer you to comments 7.8.32 – 7.8.43 in NRW's Written Representations. Please note, however, in relation to impingement/entrainment during the operation of the power station, that detailed monitoring and mitigation should be set out in a detailed CoOP and approved by the discharging authority, in consultation with NRW. This will require an additional DCO Requirement.

Q5.0.33	NRW	WD	Can NRW provide the evidence that supports para 4.3.7 of its RR [RR-088] that some Sandwich Terns that breed at Cemlyn also form part of the passage Tern feature of the Dee Estuary SPA and Ramsar site?	NRW does not have any direct evidence of connectivity between Cemlyn and the Dee. However, there is the potential for the loss of the colony at Cemlyn to have adverse effects on the Dee and therefore under the precautionary principle, we cannot rule out an adverse effect on the Sandwich tern feature of the Dee Estuary SPA.
Q5.0.34	NRW	WD	Do NRW agree that the Sandwich Tern population of the Anglesey SPA is approximately five times larger than it was at the point that the SPA was designated (para 10.3.59 of the Shadow HRA), and if so would the conservation objectives for the SPA be undermined if the Sandwich Tern colony at the Cemlyn Bay colony experienced a reduction in numbers for the period of construction?	NRW agree that the most recent five-year mean population of Sandwich terns was approximately five times larger than it was at the point that the SPA was designated (460 pairs). However, there are more conservation objectives to consider than just the numbers of breeding pairs. If the number of breeding pairs remained above 460 during the construction phase, then this conservation objective would be met; however, when tern colonies are affected by disturbance they do not reduce by small amounts but are well known to fail catastrophically, with all birds leaving. This happened to this colony in 2017 and has been seen in other tern colonies in the UK, for example Shotton common tern colony in the Dee estuary. The conservation objectives for productivity and range within the SPA also require consideration. Looking at the failure in 2017 and the reduction in productivity in recent years it is evident that this colony is stressed and that added disturbance could lead to issues such as abandonment and increased loss of productivity potentially affecting the conservation objectives.

Q5.0.39	RSPB, NWWT, NT and NRW	WD/E	Can RSPB, NWWT, NT and NRW confirm if delivery of the 'resilience measures' proposed in section 11.3 of the Shadow HRA would be sufficient to allay their concerns about the effects on the Anglesey Terns SPA? If not, why not and what additional measures would be required?	NRW consider that the resilience measures may improve the condition of the Anglesey Terns SPA. However, NRW do not consider that the measures will mitigate the disturbance effects of the project. NRW is not aware of mitigation measures that would effectively mitigate the disturbance effects of the project without adding potentially significant constraints to when construction activities could take place (e.g. such as restricting noisy construction activities to outside the tern breeding season). We refer you to section 7.8 of NRW's Written Representations.
Q5.0.41	NRW	WD/E	Can NRW advise if it would be possible to develop a package of compensatory measures for the effects of the Proposed Development on the Anglesey Terns SPA? What measures should be included in such a package?	NRW consider it may be possible to develop a package of compensatory measures for the Anglesey Terns SPA. NRW has been advising the applicant on its development of possible compensatory measures. Measures to be included in the package should include: a selection of suitable compensation sites (due to the uncertainty of success at a single site and the risk of competition between tern species that colonise); initial management works to make the sites appropriate for colonisation; and the subsequent management (both habitat management and wardening, including predator control) of colonised sites. The package should also demonstrate that the sites and their management can be secured. We refer you to comment 7.8.47 in NRW's Written Representations.
Q5.0.44	NRW and NWWT	WF	Can NRW and NWWT confirm if, in their view, the measures proposed in the Workforce Management Strategy [APP-413] would be sufficient to avoid adverse effects on integrity from	NRW consider that the Workforce Management Strategy may reduce effects on the site integrity of protected sites. However, there is insufficient detail to demonstrate that the Strategy will ensure that adverse effects are avoided. The Shadow HRA (table 11-1) and Shadow HRA Addendum (paragraph 4.4.1) state that the Strategy will be agreed with

			trampling and increased visitor use? If not, why not?	NRW prior to works being initiated. However, we also note that the Workforce Management Strategy sets out the principles that will inform the development of the Code of Conduct which will be secured as a DCO Requirement. NRW advise that the Code of Conduct should be approved by the discharging authority, in consultation with NRW.
Q5.0.45	NRW	WF	Can NRW either confirm that the conservation objectives in the Shadow Habitat Regulations Assessment are correct or provide the conservation objectives for the sites for which they feel likely significant effects cannot be excluded?	For the sites in/partly in Wales, NRW advise that the correct conservation objectives, where specified in the Shadow HRA, have been used with the exception of the following where the conservation objectives used are out-of-date. However, the content of the updated conservation objectives are largely the same - we provide a link to the updated versions below. Please also note that this advice is based only on those sites where conservation objectives have been specified in the Shadow HRA. As mentioned above, we advise that the following up to date conservation objectives are used: Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC: https://naturalresources.wales/media/684531/pen-llyn-ar-sarnau-r37.pdf Bae Ceredigion / Cardigan Bay SAC: https://naturalresources.wales/media/684522/cardigan-bay-reg-37.pdf Afon Teifi/ River Teifi SAC: https://naturalresources.wales/media/682845/afon-teifi-river-teifi-management-plan.pdf

				Sir Benfro Forol / Pembrokeshire Marine SAC: https://naturalresources.wales/media/684530/pembrokeshire-marine-council-regulation-37.pdf Ynys Seiriol / Puffin Island SPA: https://naturalresources.wales/media/687220/sac_uk0030202_sumset_reg-37.pdf
Q5.0.46	The Applicant and NRW	WA	Can the Applicant and NRW review the recent judgement Case C-164/17: Reference for a preliminary ruling from Supreme Court (Ireland) made on 3 April 2017 — Edel Grace, Peter Sweetman v An Bord Pleanala and advise on any implications they think the judgement has for the Appropriate Assessment of the Proposed Development?	In this case, the CJEU confirmed that measures designed to compensate for (as distinct from mitigating) the negative effects of a project should <u>not</u> be taken into account in the appropriate assessment carried out under Art. 6(3) of the Habitats Directive. Compensatory measures should be examined at the IROPI stage in accordance with Art. 6(4), it was held. The CJEU reaffirmed that, to avoid having to go to the IROPI stage, the appropriate assessment must contain complete and precise findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the development on the site concerned. The judgment in this Case C-164/17 is recent. NRW considers that the Applicant should issue a note (preferably in table form) confirming that it has taken account of the CJEU's judgment in this case, and confirming which of the measures proposed as part of the project as a whole are (1) mitigating measures designed to avoid or reduce the adverse effects of the project on the protected site (Art. 6(3)); and (2) measures aimed at compensating for the

				adverse effects of the project on a European site (Art. 6(4)). NRW will then advise promptly on whether it agrees with these classifications, expecting the applicant to comply fully with the judgment in Case C-164/17.
7. Landscape and Visual				
Q7.0.1	NRW, IACC, GCC, NT and Cadw	Q	Are you content with the Applicant's approach to the assessment of Landscape and Visual effects as set out in 6.2.10 ES Volume B - <i>Introduction to the environmental assessments</i> B10 - Landscape and visual [APP-075] including: (a) Assessment of parameters (b) Identification of study areas (c) Identification of receptors (d) Identification of baseline conditions (e) Assessment of effects (f) The use of: i. Design Manual for Roads and Bridges assessment methodology for the A5025 Off-line Highway Improvements; and ii. Night-time visual effects assessment methodology for the Power Station (g) Limitations	NRW is content with the Applicant's approach

			If not state your reasons and recommendations for addressing any issues.	
Q7.0.2	NRW, IACC, GCC, Cadw, NT, VCC, LdCC, LPCC, LbCC and TAG	WF	1. Is the Applicant's approach to the landscape and visual effects of the development in relation to the Wylfa Newydd Development Area as set out in 6.4.10 ES Volume D - WNDA Development D10 - Landscape and visual [APP-129] adequate and if not how should any issues be addressed; with reference to: (a) The approach to the Study Area as described in section 10.2; including the Zones of Theoretical Visibility, the main Assessment Points and the extent of theoretical visibility of the different assessment points within the overarching study area, for the different assessment stages presented in figures D10-18 to D10-27 of 6.4.101 ES Volume D - WNDA Development Figure Booklet - Volume D (Parts 1 and 2) [App-237 and APP-238]; (b) The summary of the landscape and visual baseline conditions within the study areas including the Value of Landscape Receptors summarised	We refer you to section 7.19 of NRW's Written Representations for detailed comments in response to this question. NRW's Designated Landscape remit means that we have no comments to make on the residual landscape effects or the approach taken to the assessment of community views.

			in Table D10-3; the selected Representative and Illustrative viewpoints for both daytime and night-time described in Section 3 and shown in Figures D10.14 – D10.17 of 6.4.101 ES Volume D - WND A Development Figure Booklet - Volume D (Part 1 of 2) [APP-237 and APP-238]; (c) Design basis and activities for construction, operation and decommissioning, including Embedded and Good Practice mitigation; (d) Assessment of effects including: • evaluation of sensitivity of receptors • effects on landscape and seascape character • daytime and night-time effects effects on landscape and seascape character • visual effects (e) Additional mitigation during construction, operation and decommissioning; (f) Residual effects and Additional Mitigation for construction, operation and decommissioning summarised in Tables D10.43 to D10 for landscape; daytime visual; night-	
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			time visual; and (ecological compensation sites) receptors. 1. Is the approach of using representative community views as opposed to individual viewpoints sufficient for assessing daytime and nighttime visual effects on community receptors?	
Q7.0.3	NRW, IACC, NT and IPs	Q	(a) Bearing in mind the special qualities of the Isle of Anglesey AONB as set out in the AONB Management Plan (see para 2.1.30 of 8.16 Landscape and Habitat Management Strategy (Part 1 of 2) [APP424]) are the mitigation measures outlined in D10.14 of ES Volume D - WNDA Development D10 - Landscape and visual [APP-129] in relation to the Isle of Anglesey AONB sufficient to meet the policy objectives of EN-1 paras. 5.9.9 to 5.9.11 and both Welsh national and local planning policies, including policies in the AONB Management Plan, as summarised in paragraphs 6.4.244 to 6.4.257 of 8.1 Planning Statement [APP-406]?	We refer you to paragraph 7.19.6 of NRW's Written Representations. There are areas outside of the WNDA where additional measures could mitigate/offset significant effects upon the AONB's special qualities to better support the conservation and enhancement of Statutory Designated Landscapes in accordance with national policy.

			(b) If not what additional measures could be taken to meet the policy objectives and how might they be secured through the dDCO?	
Q7.0.5	NRW, IACC, GCC, Cadw, NT, VCC, LdCC, LPCC, LbCC, NAP, TAG and IPs	WF	Are the photomontage views across all sites as set out in [APP-199]; [APP200]; [APP-261], [APP-378], [APP-296] and [APP-343] adequate and are you satisfied with: • The choice of selected locations; • The methodology for photomontage; • The chosen timeframes for the images? (a) Are there any additional viewpoints that would be helpful? (b) Do the images raise any issues or concerns and how might these be addressed?	We are satisfied with the photomontages. The images illustrate the significant scale and nature of change to AONB views that would occur from the power station and associated buildings within the WNDA. The WNDA and Site Campus have not been illustrated together. Photomontage Viewpoints within the AONB (7,8,11,19,24,25,27,28 and 29) show the effect that building scale and massing would have upon the AONB coastal landscape and its openness. A well-considered colour scheme for the power station, associated buildings and the worker's campus is therefore important to develop to aid the combined development's visual integration. This was done successfully for the existing power station. The ES understands the importance of colour design to landscape and seascape integration and the ES includes an illustrative image for one elevation of the power station, and elevations of the worker's campus. This suggests an appropriate scheme could be developed. What is required next and needs to be enabled through a DCO Requirement is the development of detailed colour proposals for all visible components of the development seen from the AONB; that these proposals are responsive to the land and seascape colour characteristics and season change against which the development would be seen, recognising the variety of angles and distances at which the development

				would be seen; and for the appearance of the campus building and power station to be considered together particularly within AONB views from the east. The use of colour to break up the mass of some of the larger structures is recommended. An iterative process of visual analysis, to test the success of the colour scheme from AONB views, is recommended, with the preparation of photomontage images to help demonstrate the appropriateness of the proposed scheme through a process of visual analysis.
Q7.0.9	NRW, IACC, NT, Cadw and IPs	WE	Is the Applicant's approach to the landscape and visual effects of the development in relation to the Off-Site Power Station facilities as set out in 6.5.10 ES Volume E - Off-Site Power Station Facilities: AECC ESL and MEEG E10 - Landscape and visual [APP-248] adequate and if not how should any issues be addressed; with reference to: (a) The approach to the Study Area as described in section 10.2; including the Zones of Theoretical Visibility (Fig E10.1[APP-265]). (b) The summary of the landscape and visual baseline conditions within the study areas; (c) The selected Representative viewpoints described in 6.5.22 ES	NRW consider that the proposals are unlikely to have significant effects on the special qualities of the AONB. We defer to IACC on local landscape effects.

			Volume E - Off-Site Power Station Facilities: AECC ESL and MEEG App E10-4 - Representative viewpoints [APP-260]; (d) Design basis and activities for construction, operation and decommissioning, including Embedded and Good Practice mitigation; (e) Assessment of effects during construction, operation and decommissioning, including: • evaluation of sensitivity of receptors • effects on landscape character • daytime and night-time effects • visual effects (f) Additional mitigation during operation (Table E10.30); (g) Residual effects (Table E10.4) for construction, operation and decommissioning. (6.5.20 ES Volume E - Off-Site Power Station Facilities: AECC ESL and MEEG App E10-2 - Landscape effects schedule [APP-258] and 6.5.21 ES Volume E - Off-Site Power Station Facilities: AECC ESL and MEEG App	
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			E103 - Visual effects schedule [APP-259])	
Q7.0.10	NRW, IACC, Cadw and NT	ADC	Is the Applicant's approach to the landscape and visual effects of the development in relation to the Logistics Centre as set out in 6.8.10 ES Volume H - Logistics Centre H10 - Landscape and visual [APP-364] adequate and if not how should any issues be addressed; with reference to: (a) The approach to the Study Area as described in section 10.2; including the Zones of Theoretical Visibility (Fig E10.1 [APP-383]). (b) The summary of the landscape and visual baseline conditions within the study areas; (c) The selected Representative viewpoints described in 6.8.24 ES Volume H - Logistics Centre App H10-4 - Representative viewpoints [APP-378]; (d) Design basis and activities for construction, operation and decommissioning, including	NRW consider that the proposals are unlikely to have significant effects on the special qualities of the AONB. We defer to IACC on local landscape effects.

			Embedded and Good Practice mitigation; (e) Assessment of effects during construction, operation and decommissioning, including: • evaluation of sensitivity of receptors • effects on landscape character • visual effects for recreational, community and transient receptors and visitors to the Trefignath Burial Chamber and the Ty Mawr Standing Stone • long distance views • night-time views (f) Additional mitigation during construction (Table H10-3) and operation (Table H10-4); (g) Residual effects for landscape (Table H10.5) and visual (Table H106) for construction and operation.	
Q7.0.11	NRW, IACC and IPs	ADB	Is the Applicant's approach to the landscape and visual effects of the development in relation to the Park and Ride facility at Dalar Hir as set out in 6.6.10 ES Volume F - Park and Ride F10 - Landscape and visual [APP275]	NRW consider that the proposals are unlikely to have significant effects on the special qualities of the AONB. We defer to IACC on local landscape effects.

			adequate and if not how should any issues be addressed; with reference to: (a) The approach to the Study Area as described in section 10.2; including the Zones of Theoretical Visibility (Fig F10.1 [APP-303]). (b) The summary of the landscape and visual baseline conditions within the study areas; (c) The selected Representative viewpoints described in 6.6.30 ES Volume F - Park and Ride App F10-4 - Representative viewpoints [APP-295]; (d) Design basis and activities for construction, operation and decommissioning, including Embedded and Good Practice mitigation; (e) Assessment of effects during construction, operation and decommissioning, including: • evaluation of sensitivity of receptors • effects on local landscape • visual effects for recreational, community and transient receptors ☐ night-time views	
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			(f) Additional mitigation during construction (Fig F10.3), operation (Fig F10.4) and decommissioning (Fig F10.5); (g) Residual effects for landscape (Fig F10.6) and visual (Fig F10-7) for construction, operation and decommissioning. The approach to the Study Area as described in section 10.2; including the Zones of Theoretical Visibility (Fig F10.1 [APP-303]). (h) The summary of the landscape and visual baseline conditions within the study areas; (i) The selected Representative viewpoints described in 6.6.30 ES Volume F - Park and Ride App F10-4 - Representative viewpoints [APP-295]; (j) Design basis and activities for construction, operation and decommissioning, including Embedded and Good Practice mitigation; (k) Assessment of effects during construction, operation and decommissioning, including: • evaluation of sensitivity of receptors	
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			• effects on local landscape • visual effects for recreational, community and transient receptors □ night-time views (l) Additional mitigation during construction (Fig F10.3), operation (Fig F10.4) and decommissioning (Fig F10.5); (m) Residual effects for landscape (Fig F10.6) and visual (Fig F10-7) for construction, operation and decommissioning.	
Q7.0.13	NRW, IACC and IPs	ADC	Is the Applicant's approach to the landscape and visual effects of the development in relation to the A5025 Off-line highway improvements as set out in 6.7.10 ES Volume G - A5025 Off-line Highway Improvements G10 - Landscape and visual [APP-313] adequate for: • Section 1: Valley • Section 2: Llanfachraeth • Section 3: Llanfaethlu • Section 7: Cefn Coch; and • Power Station Access Road Junction and if not how should any issues be addressed; with reference to:	NRW consider that the proposals are unlikely to have significant effects on the special qualities of the AONB. We defer to IACC on local landscape effects.

			(a) The approach to the Study Area as described in section 10.2; including the Zones of Theoretical Visibility (Fig G10-13 to G10-17 [APP-354]). (b) The summary of the landscape and visual baseline conditions within the study areas; (c) The selected Representative and Illustrative viewpoints described in 6.7.37 ES Volume G - A5025 Off-line Highway Improvements App G10-5 - Representative viewpoints [APP=340] and 6.7.38 ES Volume G - A5025 Off-line Highway Improvements App G10-6 - Illustrative viewpoints [APP-341]; (d) Design basis and activities for construction and operation, including Embedded and Good Practice mitigation; (e) Assessment of effects during construction, operation and decommissioning, including: • evaluation of sensitivity of receptors • effects on local landscape	
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			visual effects for residential, users of community areas, users of PROW, transport routes and visitors to selected receptors; □ night-time views (f) Additional mitigation during construction and operation (Table G109); Residual effects for landscape character (Table G10-11) and visual (Table G10-12) for construction and operation?	
8. Marine Environment				
Q8.0.1	NRW and IACC	Q	Are IACC and NRW content that the surveys to inform the baseline assessments of the marine environment given in Chapter B13 [APP-078] are sufficient? If not, why not?	With regard to Table B13-11 (Marine environment baseline characterisation), NRW advise that the baseline surveys are sufficient to inform the assessments, with the exception of the following: a) we refer you to our comments on Q5.0.11 above on seabird baseline information. b) we refer you to comment 7.5.4 in NRW's Written Representations in relation to the water quality surveys. Please also note that NRW has identified gaps in coastal process modelling and in the baseline data available to characterise Cemlyn lagoon - see section 7.10 in NRW's Written Representations.
Q8.0.3	NRW	WCWD	Is NRW content with the assessment in Chapter D13 [APP-132] Table D134 of the value of marine environment receptors, e.g. rocky shore and pool as medium?	NRW considers the assessment of the value of marine receptors such as rocky shore and pool as Medium to be appropriate.

Q8.0.15	NRW	WD	Can NRW confirm that they are content that the Disposal Site described in Chapter D13 section 13.7 would be the best available site and would have sufficient capacity? If not, why not?	As of June 2018, NRW's Permitting Service are determining a Marine Licence application that includes - amongst a number of other activities - the disposal of dredge material at Holyhead North. Based on the responses from consultees, we have requested further information and assessments from the Applicant on the suitability of the disposal site however, no other disposal sites are currently being considered. As the marine licence determination is ongoing, no final decision has been made regarding the suitability of the site.
Q8.0.16	NRW	WD	Is NRW content that the additional mitigation outlined in Chapter D13 para13.8.6 would be sufficient to reduce the significance from moderate to minor for the introduction and spread of non-native species? If not, why not?	The additional mitigation (a monitoring programme) outlined in Chapter D13 paragraph 13.8.6 is unlikely to reduce the risk of the introduction and potential spread of marine non-native species. It is well-documented that once invasive marine non-native species have been introduced to an area, they are almost impossible to eradicate, therefore, preventing ingress to the new environment in the first instance is the most effective strategy. The mitigation outlined will therefore act more as a tool to monitor the efficacy of the Biosecurity Risk Assessment Strategy rather than a mitigation measure in itself. We note that the Shadow HRA Addendum (AS-010) submitted by the applicant in response to the Section 51 advice includes a draft Biosecurity Risk Assessment. We consider the report provides a number of appropriate measures in order to minimise the introduction and/or spread of invasive marine

				non-native species. However, there are outstanding gaps that will need to be addressed in the final Biosecurity Risk Assessment which should be set out in the detailed Marine Works Sub-CoCP and approved by the discharging authority (in consultation with NRW) as a DCO Requirement.
Q8.0.17	NRW	WCWD	Is NRW content that the enhancement described in Chapter D13 para13.8.8 would be sufficient to reduce the significance from moderate to minor for effects on subtidal and intertidal habitats from direct loss under the footprint of the Marine Works?	NRW is not content that the marine enhancements proposed would be sufficient to reduce the significance from moderate to minor. We refer you to comment 7.18.4 in NRW's Written Representations.
Q8.0.21	The Applicant and NRW	WCWD	NRW in para 4.2.9 of its RR does not agree that "there are no effects predicted on the bathing water at Cemaes, and that the Wylfa Newydd Project is considered to be compliant with the Bathing Water Directive". Can the two parties resolve NRW's concerns?	NRW's has discussed these concerns with the Applicant and we understand that further modelling is proposed by the Applicant to address the additional information required. We refer to section 7.6 in NRW's Written Representations.
Q8.0.22	NRW	WC	In its RR para 4.3.3 NRW identifies potential increased impingement of fish by the creation of a sheltered bay. Can NRW suggest how this can be predicted?	NRW do not consider it possible accurately to predict changes as a result of creating a sheltered bay. NRW consider that monitoring will be required, both post-construction (but pre-operation) and during the operation of the power station to understand any possible changes to the baseline. The monitoring will need to inform appropriate mitigation in order to optimise the fish deterrents proposed by the applicant. Detailed monitoring and mitigation will need to be set out in a detailed CoOP and approved by the

				discharging authority (in consultation with NRW), as a DCO Requirement.
Q8.0.23	The Applicant and NRW	WD	In its RR para 4.6.1 NRW advise that there is insufficient evidence to demonstrate that cumulative effects of the project on benthic habitats are insignificant? Can the Applicant comment?	NRW consider that cumulative effects on benthic habitats during the operational phase as a result of the footprint of the structures as well as possible changes in coastal process and the operational water discharges (thermal plume and biocide) have not been fully assessed.
Q8.0.24	The Applicant, IACC and NRW	Q	Paragraph 6.4.127 of the Planning Statement [APP-406] makes reference to the fact that there is a flood risk for the proposed Park and Ride. It then states that 'Proposed additional mitigation measures would be implemented...' Can the applicant confirm what these additional mitigation measures would be and whether they would be implemented? Can the IACC and NRW confirm what additional measures they consider would be necessary and how they would wish to see these additional measures secured?	NRW is not aware of additional mitigation measures that would demonstrate that the flood risk at the proposed site would be acceptable and compliant with TAN 15. NRW would expect additional measures to be presented to the Examining Authority / Secretary of State to demonstrate that flood risk can be managed at the site. We refer you to section 9.1 in NRW's Written Representations. We understand the Applicant has undertaken further assessment with regard to flood risk - NRW is awaiting this additional information from the Applicant.
Q8.0.25	IACC and NRW	Q	The requirements as currently worded rely on the CoCP [APP-414-APP-421] to deliver the detail with regards to drainage strategies and flood mitigation plans. Whilst the CoCPs refer to the drafting of these documents by the	NRW has significant concerns with the approach proposed. NRW consider that additional information should be presented to the Examining Authority / Secretary of State to demonstrate that flood risk can be managed at the Main Site, Park and Ride and on the A5025. We advise that this additional information should be agreed in consultation with

			applicant it does not appear that they would have to be submitted to or be approved by either the IACC or NRW (eg section 10.5 of the WNCocP [APP414]). Given the concerns in relation to drainage and flooding (particularly in relation to the proposed Park and Ride) are the IACC and NRW satisfied with these proposals and if they are not what mechanisms would they want to see put in place to control these elements of the scheme?	NRW. In the absence of this information, it cannot be concluded that the proposals are compliant with TAN15.
Q8.0.26	The Applicant, IACC and NRW	WA	The Wylfa Newydd Code of Operational Practice [APP-421] in 10.3 refers to the development of a flood mitigation plan for the operational phase. Applicant – would this plan be drawn up in conjunction with IACC and NRW	We advise that the flood mitigation plan for the operational phase should be approved by the discharging authority in consultation with NRW.
9. Noise and Vibration				
Q9.0.3	IACC and NRW	WF	Paragraph 6.4.61 of ES document D6 Noise and vibration [APP-125] identifies a number of potential noise sources that have been scoped out of the assessment on the basis that they are likely to have negligible effects. It is not indicated whether this approach was agreed with the relevant consultation bodies. Please could IACC and NRW confirm the extent to which they are	NRW would defer to IACC's advice on the methodology described in 6.4.61 for the noise assessment.

			happy that all relevant noise sources have been taken into account?	
Q9.0.4	IACC and NRW	WF	In respect of potential noise from the fans used to push air through the reactor building stacks, paragraph 6.4.62 of ES document D6 Noise and vibration [APP-125] notes that the exhaust system is not yet specified and the noise levels are unknown, and that a combined sound power worst case scenario of approximately 110dB(A) has been assumed based on professional judgement. It is not indicated if this has been discussed with relevant consultation bodies. Please could IACC and NRW indicate if they have any objections to the assumptions made to establish the worst case for the exhaust system, ie the level of 110dB(A).	NRW would defer to IACC's advice in relation to the assumptions made in 6.4.62.
Q9.0.15	IACC and NRW	Q	Section 6.4 of ES document D6 Noise and vibration [APP-125] provides a high level description of the proposed mitigation measures and states in relation to a number of them that they will be implemented 'as far as practicable'. Although cross-reference is made to the Wylfa Newydd Code of Construction Practice [APP-414] no more specific information is provided within that document. Are IACC and	We refer you to IACC's advice in relation to mitigation measures to consider for human receptors. NRW has concerns about the effectiveness and deliverability of the mitigation measures proposed to address disturbance (including as a result of noise) on the tern colony at Cemlyn. We refer you to comments in 7.8.31 in NRW's Written Representations.

			NRW satisfied that implementation of the proposed measures is sufficiently certain?	
Q9.0.18	Interested Parties	Q	No justification has been provided in ES document D6 Noise and vibration [APP-125] for why the significant residual effects cannot be mitigated further. Please could Interested Parties state if they are content that the mitigation proposed is appropriate and if not, why not.	As highlighted for Q9.0.15, NRW does not consider the mitigation proposed for terns at the Cemlyn colony to be appropriate.
10. Socio Economic				
Q10.3.1	IACC, BCUHB, PHW and Interested Parties	Q	Paragraph 6.3.95 of the Planning Statement [8.1] lists potential adverse impacts on health and well-being. Do you agree and if not, why not?	NRW does not have any comments to make on this question
Q10.5.4	IACC, GCC and Interested Parties	Q	The Daily Construction Commuting Zone (DCCZ) is a 90 minute drive time from the main power plant site. Can you provide information on the percentage of Welsh speakers that reside within this area?	NRW does not have any comments to make on this question
Q10.5.5	IACC, GCC and Interested Parties	Q	Reference is made in the documentation to Horizon providing a peripatetic teacher service (paragraph 6.2.28 of the Planning Statement [APP-406]) and indicates that initially two	NRW does not have any comments to make on this question

			teachers would be funded (paragraph 7.4.27). (a) Does a peripatetic teacher service for Welsh language currently exist on Ynys Môn? (b) If it doesn't how would the service operate; who would manage it and how long would it run for eg during construction only? During construction and a time limited period of operation? During construction, operation and decommissioning? (c) Would two teachers be sufficient – given that it has been indicated that any service may potentially need to extend into Gwynedd?	
Q10.5.12	IACC, Welsh Government and Interested Parties	Q	Paragraph 6.4.483 of the Planning Statement [APP-406] states that the measures proposed to support and enhance Welsh language and culture comply with the principles of the various national and local policies relating to the strengthening of the Welsh language. With particular reference to PPW9, TAN20, Cymae 2050 and the Wellbeing of Future Generations (Wales) Act 2015 can the IACC, Welsh Government and any Interested Parties indicate whether	NRW does not have any comments to make on this question

			they agree with this statement and if they don't why?	
Q10.5.23	IACC, GCC, Welsh Government and Interested Parties	Q	The majority of the proposed mitigation and enhancement measures would be secured via a S106 – do you consider: (a) That this is the appropriate mechanism? and (b) Would it meet the test for planning obligations?	NRW does not have any comments to make on this question
Q10.5.24	The Applicant, IACC, GCC, Welsh Government and Interested Parties	Q	The strategy with regards to the Welsh language is predicated on the employment of a certain percentage of Welsh speakers what mitigation is proposed/necessary if these targets cannot be met?	NRW does not have any comments to make on this question
Q10.6.3	IACC, GCC, Welsh Government and Interested Parties	Q	Paragraph 3.2.15 of the Wylfa Newydd Code of Construction Practice (WNCocP) [APP-414] lists a number of socio-economic impacts that the Applicant considers will need monitoring. Do you agree with this list? Has anything been omitted or should anything be removed?	NRW does not have any comments to make on this question

Q10.6.4	The Applicant, IACC and Interested Parties	Q	Can the Applicant confirm whether the Community Liaison Group meetings will have the facility to be bi-lingual? Paragraph 3.2.29 of the WNCocP [APP-414] advises that nearby residents will be provided with information packs. Can the Applicant advise: (a) What they mean by 'nearby'? (b) How often the information packs would be provided? (c) Whether the list should be expanded to include amongst other things hours/days of working and routes/times of delivery vehicles? (d) Whether the packs would be bi-lingual? Do the IACC/IP have any comments they may wish to make on the form and content of information packs?	NRW does not have any comments to make on this question
Q10.6.12	IACC, Welsh Government, NRW, NWP, NWFR, BCUHB, GCC and Welsh Ambulance	Q	The Codes of Construction Practice would rely on an overarching Programme Board and a series of engagement sub-groups (including for accommodation and tourism). (a) How would these boards/sub-groups work in particular who would they be accountable too? (b) Would they have a code of governance? (c) It is indicated that you would be asked to be represented on these boards do you have the resources and the relevant	NRW does not have any comments to make on this question

			personnel available to attend these boards?	
11. Traffic and Transport				
Q11.1.23	The Applicant and IACC	ADB	Due to its location the Park and Ride scheme has the potential to flood. Can the applicant outline what would happen if the facility flooded including what, if any, the alternative parking arrangements would be? Can the IACC/Highways Authority comment on what measures they consider would be appropriate in the event that the Park and Ride flooded?	Flood modelling outputs presented for the Park and Ride proposals indicate significant flood depths. The catchment for the source of flooding is not serviced by flood warning arrangements and as such flooding could be sudden. It would be difficult to consider how damage/risk could be managed to users/vehicles.
12. Coastal Change				
Q12.0.5	The Applicant and NRW	WC	NRW advises in its RR [RR-088] that further information is required to demonstrate that changes in coastal processes due to the presence of the marine structures will not affect the Cemlyn Lagoon shingle ridge. Would the Applicant provide this information?	NRW is awaiting additional information from the Applicant to address this matter.
14. Good Design				

Q14.0.2	The Applicant and IACC, DCfW and IPs	WA	In respect of the Power Station site and the Design and Access Statement, Vol 2 [APP-408]: (a) Are the design principles set out in Part 5 adequate to meet the 'Criteria for Good Design for energy infrastructure' in respect of 'aesthetics' set out in section 4.5 of EN-1 and would they be adequately secured in the dDCO [APP-029]; (b) Is the concept of a 'Grid Framework' (para. 4.1.9) to underpin the approach to design, layout and master planning appropriate and is it well realised in the design and layout proposals set out in the Design and Access Statement Vol. 2 [APP-408]; (c) Are the proposed indicative landscape palette (Section 6.2); overarching materials palette (Section 6.4) and the colour palette (para. 4.1.22 ff) satisfactory and would they be adequately secured in the dDCO [APP-029]?	In relation to (a), we consider the design principles to be adequate in respect to aesthetics. In relation to (b), the proposed grid framework would unify the WNDA and the existing Power Station and give the combined development some visual balance within views from the AONB. In this respect, we consider the design to be appropriate. We have assumed the layout is a function of development need, so have not critiqued the effects of built form and development massing upon views from the AONB. Instead we will be relying on landscape colour design to assist with the development's visual integration. In relation to (c), we consider the proposals present a clear hierarchical approach to design, materials and colour, taking account of the nature of development, the areas used by people, the edges of the site onto open countryside, and the wider views from a rural context. It is primarily the latter two that have a bearing on the development's integration with the AONB. It would have been helpful to have colour representations of the WNDA from all principal angles, similar to Figure 6-7, to fully understand how the indicative landscape palette would assist the development to integrate within the landscape. The images makes a good start in applying colour for landscape integration, but this needs to be tested against specific public viewpoints and particularly those within the AONB and its varying landscape and seascape contexts. We discuss this further within our Written Representations – see section 7.19. Overall, we consider the information is sufficient to guide detailed proposals and provide the basis for the dDCO.
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Q14.0.4	The Applicant, IACC, NRW, NT and IPs	WF	Does the approach to design and the proposals for the WNDA meet the project objectives set out in section 2.3 of the Design and Access Statement Vol.1 [APP-407] with respect to: (a) Integrating sustainability into all physical designs; (b) Developing a green and sustainable approach in the development management of the buildings and operational activities; and (c) Ensuring that all the elements are designed to connect with the varied beauty and character of Ynys Môn and conserve and enhance the natural environment as far as possible? If not, what more should be done and how could it be secured?	Our comments relate to the Ynys Môn Area of Outstanding Natural Beauty (AONB) and question (c). Issues concerning the sustainability of the physical design and development management lie beyond our remit. The approach to design is best represented by the contents of the Design and Access Statement Volume 2 and the Landscape and Habitat Management Strategy at 8.16. Of most importance to minimising significant effects on the AONB, and ensuring that the development integrates successfully within the landscape, are: the landscape design principles of the WNDA; the building design principles of the WNDA and Site Campus – particularly the colour palette; the use of lighting to minimise night-time effects; and the design of the MOLF and the Breakwater. The Design and Access Statement Volume 2 covers these appropriately. Aspects missing from the Design and Access Statement Volume 2 which need to be addressed are: (1) The Site Campus development has not been included. We note that its appearance, materials, colour and lighting will be seen in combination with the WNDA power station and significantly affect views from the AONB. There needs to be a co-ordinated approach to the detailed design of the visual elements of these two components of the project, to ensure they are complementary and take account of viewpoint analysis from the AONB. It would have been helpful to have had this link between the two elements of development expressly made within the Design and Access Statement Volume 2 and the relevant design principles
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				identified. We advise that this matter needs attention in the dDCO. (2) Landscape mitigation/ compensation proposals for areas of the AONB where significant visual effects would occur have not been factored into Design and Access Statement Volume 2. We advise that this needs to be considered further to meet fully the objectives of question (c) and needs to be addressed within the dDCO. We provide more comment on this in our Written Representation – see section 7.19.
Q14.0.5	The Applicant, IACC, DCfW, NRW and IPs	WF	Are the Power Station Design Principles set out in the Design and Access Statement Vol.2 [APP-408] Section 5 (page 700 ff), appropriate and sufficient to achieve the following objectives set out in para. 1.5.2 of this document [APP-408] and if not what can be done about it: (a) Reflect the importance of its setting in Ynys Môn; (b) Uphold the unique culture and language of Ynys Môn; (c) Integrate sustainability into all physical designs; (d) Develop a green and sustainable approach in the development and management of the buildings and operational activities;	We reiterate our comments set out for Q14.0.4.

			(e) Build on the legacy of the Existing Power Station, and help to create a positive for Ynys Môn; (f) Ensure that all the elements are designed to connect with the varied beauty and character of Ynys Môn and conserve and enhance the natural environment as far as possible?	
Q14.0.7	IACC, DCFW and IPs	WE	Bearing in mind its location adjacent to the boundary of the Anglesey AONB, do the Design and Access Statement [APP-409]; the parameter plans identified in Schedule 2, Part 4 and the Requirements in relation to Off-site Power Station Facilities Work Number 5, in Schedule 3 of the dDCO [APP-029] meet the planning policy objectives in respect of achieving high quality, sustainable development for the Off-site Power Station Facilities; with reference to: (a) Design principles; (b) Master planning strategy; (c) Environmental sustainability; (d) Hard and soft landscaping proposals – including planting proposals;	The location of the Off-site Power Station Facilities and nature of development would not significantly affect the AONB (the impact pathway within NRW's remit). It will be for IACC to comment more widely in response to this question.

			(e) Building and structure footprint, height and massing; (f) Materials and colour palettes; (g) Surface treatments; (i) Lighting; (j) Boundary treatments; (k) Accessibility; (l) Community safety; (m) Maintenance regimes; and (n) Illustrative design proposals. And if not what should be done about it?	
Q14.0.10	IACC, DCfW, NT, NAP and IPs	ADA	Do the Design and Access Statement [APP-409]; the parameter plan identified in Schedule 2, Part 4 and the Requirements in relation to Site Campus Works Work Number 3, in Schedule 3 of the dDCO [APP-029], including the maximum dimensions shown in WN20, meet the planning policy objectives in respect of achieving high quality, sustainable development for the Site Campus; with reference to: (a) Design principles; (b) Master planning strategy; (c) Environmental sustainability; (d) Hard and soft landscaping proposals – including planting proposals;	Our comments relate to the appearance of the development from the AONB. We would defer to IACC for commentary on other visual impacts. We are satisfied that the AONB has been considered within the contextual analysis and the design principles. The form and scale of the development is driven by the needs of the development. Massing appears to have been planned to work within the angle of view presented within figures 28, 30 and 31 (Design and Access Statement Volume 3), however there is no comparable view from the AONB to be able to judge this aspect. We are therefore uncertain as to how this aspect of the design has addressed the AONB. The design principles for the colour palette appropriately draw from the colour of the existing landscape and the development's visual context. We consider the approach set

			(e) Building and structure footprint, height and massing; (f) Materials and colour palettes; (g) Surface treatments; (h) Lighting; (i) Boundary treatments; (j) Accessibility; (k) Community safety; (l) Maintenance regimes; and (m) Illustrative design proposals. If not what should be done about it?	out in Volume 3 makes a good start, but needs to be developed further in the following areas: • The colour scheme needs to be reviewed from a number of angles of view including views from the AONB and Wales Coastal Path and design iteration applied based upon this contextual analysis. • The view is not static and at times the exposed coastal edge combines with woodland to give a strong sense of colour (exposed rock) and to create strong horizontal emphasis within the landscape/ seacape context of the development site. Colour, horizontal form and scale of use could therefore be better echoed in the site campus development. • To be satisfied that the AONB has been fully considered within the development's design at this stage, we recommend drawings similar to figures 30 and 31 (DAS Vol3) be submitted to confirm the development's massing and colour design within views from viewpoint 11 Llanbedrig point (Appendix D10-8 photomontage views). We advise that this information be made a requirement of the DCO and approved by the discharging authority in consultation with NRW.
Q14.0.12	The Applicant, IACC, DCfW and IPs	ADB	Do the Design and Access Statement [APP-410]; the Parameter Plans identified in Schedule 2, Part 4; the Detailed Design Plans identified in Schedule 2, Part 6 and the	We advise that the Park and Ride at Dalar Hir is unlikely to have significant effects on the special qualities of the Ynys Mon Area of Outstanding Natural Beauty. We defer to IACC for commentary on local landscape effects.

			Requirements in relation to Park and Ride Facility Work Number 6 in Schedule 3 of the dDCO [APP-029] meet the planning policy objectives in respect of achieving high quality, sustainable development for the Park and Ride facility at Dalar Hir; with reference to: (a) Design principles; (b) Master planning strategy; (c) Environmental sustainability; (d) Hard and soft landscaping proposals – including planting proposals; (e) Building and structure footprint, height and massing; (f) Materials and colour palettes; (g) Surface treatments; (h) Lighting; (i) Boundary treatments; (j) Accessibility; (k) Community safety; (l) Maintenance regime; and (m) Post-operation strategy. If not, what should be done about it?	
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Q14.0.13	The Applicant, IACC, DCfW and IPs	ADC	Bearing in mind its location within the Anglesey AONB, do the Design and Access Statement [APP-409, APP-410]; the parameter plans identified in Schedule 2, Part 4; the Detailed Design Plans identified in Schedule 2, Part 6 and the Requirements in relation to Logistics Centre Work Number 7 in Schedule 3 of the dDCO [APP-029] meet the planning policy objectives in respect of achieving high quality, sustainable development for the Logistics Centre at Parc Cybi; with reference to: (a) The appropriateness of the proposed use for the site; (b) Hours of operation; (c) Design principles; (d) Master planning strategy; (e) Environmental sustainability; (f) Hard and soft landscaping proposals – including planting proposals; (g) Building and structure footprint, height and massing; (h) Materials and colour palettes; (i) Surface treatments; (j) Lighting; (k) Boundary treatments;	The Parc Cybi site LDP allocation supports a major area of business development within the AONB. Attention to design, and to the existing character and appearance of the area, are important to placemaking. Whilst the development and use of the site for Wylfa Newydd is temporary, the infrastructure it puts in place is likely to remain and be reused. The physical components of the development will have a legacy and will inevitably influence the planning and design of development that will come forward in the future. We consider more could therefore be done to extend the planting strategy of native hedgerow with trees along the frontage of the site with Parc Cybi road, to provide a lasting high-quality landscape infrastructure to the site (subject to CCTV and highway sightlines). We recommend the landscape masterplan (Figure 19 DAS Vol 3 (part2/2) be amended and a commitment made in the dDCO for these proposals to be included within the detailed design.
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			(l) Accessibility; (m) Community safety; (n) Maintenance regimes; and (o) Post-operation strategy. If not, what should be done about it?	
15. Land Use				
Q15.0.2	The Applicant, IACC, National Trust and Interested Parties	Q	PPW9 states that common land should not be developed and access should not be prevented or impeded unnecessarily: (a) Is any of the land within either the WNDAs or for the associated development sites classified as common land? (b) If so can the applicant provide a map or plan which highlights the areas classified as common land? and (c) What measures are proposed to ensure access is maintained or where it is restricted or lost that this is minimised?	NRW does not have any comments to make on this question
17. Policy Context				

Q17.0.4	The Applicant, the Welsh Government and NRW	Q	Does the Application help deliver the following: (a) Climate Change Strategy for Wales (Welsh Government, 2010); (c) Low Carbon Revolution – Welsh Government Energy Policy Statement (2010); (d) Energy Wales : A Low Carbon Transition; (e) Economic Renewal: A New Direction (Welsh Government, 2010) (e) Cymraeg 2050: Welsh Language Strategy (2017)	Natural Resources Wales would defer to Welsh Government as the appropriate body to comment on policy matters in Wales.
Q17.0.6	Welsh Government, the IACC and NRW	Q	The applicant states in the Planning Statement [APP-406] that the Technical Advice Notes (TANs) that were in place prior to the adoption of EN-1 and EN-6 are considered to attract less weight than those that were adopted subsequently. This would include:- • TAN 11: Noise (1997) • TAN 15: Development and Flood Risk (2004) • TAN 18: Transport (1997) Can the parties comment on the weight they consider should be given to these documents?	Natural Resources Wales would defer to Welsh Government as the appropriate body to comment on policy matters in Wales, particularly in relation to the weight that should be given to various policies. As advised in NRW's Written Representations on flood risk (sections 7.1, 9.1 and 10.1), NRW consider that aspects of the proposals are not compliant with TAN15.

			Of the relevant TANs that post-date the NPSs are there any aspects of the application that the parties consider fail to conform with or contradict these TANs?	
Q17.0.11	Welsh Government, IACC and NRW	Q	Do the parties consider that within the Welsh national context, there are any other present or forthcoming future policies, strategies or initiatives that are relevant to the examination and should therefore be considered by the ExA during the examination?	The tenth edition of Planning Policy Wales is due in December 2018 and will be a material consideration for the ExA during the Examination. In relation to the Water Framework Directive, NRW has released an updated WFD classification for freshwaters (rivers and lakes) on Water Watch Wales. The marine classification (transitional and coastal water bodies) is expected during late 2018 or early 2019.
20. Waste Management and Radioactive Waste Management				
Q20.0.8	NRW	Q	Your RR [RR-088] states that there is insufficient detail in ES C6 to demonstrate how construction generated waste will be managed and that the assessment of available waste management capacity will need to be updated prior to and throughout the construction phase. Can NRW explain where the deficiencies lie and why it considers that a Site Waste Management Plan is necessary as opposed to measures set out within the CoCP?	At this stage, details on how construction generated waste will be managed is not available and it is not possible to set out mitigation measures in ES chapter C6 (e.g. until contractors are appointed). NRW consider that it would be appropriate for further detail on waste management methodologies to be set out in a Site Waste Management Plan, which will be governed by the CoCP and relevant Sub-CoCPs. These will need to be approved by the discharging authority in consultation with NRW.

21. Water Quality and Resources

Q21.0.1	The Applicant and IACC	WF	Can the applicant confirm: (a) if they were aware of the EU (WEFO) Bathing Water Quality in Cemaes Bay Study, as is referred to in [RR-017]? (b) Did the report include an assessment of the impact of the proposal on the bay? (c) Was the findings of the report included in the applicants assessment of water quality in the ES and or the Water Framework Directive Compliance assessment? (d) Can IACC expand on its concerns in its RR [RR-020] para5 .7.5 in relation to bathing water quality at Cemaes Bay?	We refer you to section 7.6 of NRW's Written Representations with respect to Cemaes Bathing Waters. As of June 2018, NRW's Permitting Service has been determining an Environmental Permit application (reference PAN-002428) that includes - amongst a number of other discharges - a discharge of up to 990m³/d of sewage effluent. As part of the determination process, NRW will assess the risk of construction water discharges to Bathing Water Quality in Cemaes Bay.
Q21.0.4	The Applicant, IACC and NRW	WF	Section 10.4 of the Main Powers Station Site Sub CoCP [APP-415] sets out a variety of monitoring and survey work that will be undertaken. Who is responsible for assessing all this monitoring and survey work? If it is the IACC or NRW do they have the expertise and/or resources to undertake the work or would a developer contribution be required to fund this aspect of the proposal?	NRW advise that if the DCO is made, detailed Sub-CoCPs will need to be approved by the discharging authority, in consultation with NRW, ahead of the relevant activities taking place. We would expect this to be secured as a DCO Requirement which will require an addition to the Requirements as set out in the current version of the draft DCO (APP-029). NRW in its statutory consultee role will provide advice to the discharging authority on the relevant monitoring and survey work set out within the Sub-CoCPs. NRW aims to discuss the matter of developer contribution with the Applicant during the Examination and make further representations to the Examining Authority.

ANNEX C – STATEMENT OF COMMON GROUND (SoCG)

Tables 4-1 to 4-9 below are taken from the first draft SoCG (for submission for Deadline 2) between NRW and the Applicant (see the Applicant's submission for information on the role of the SoCG)

Table 4-1 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within Environmental Statement Volume C – Project Wide Effects

Environmental Statement Volume C – Project Wide Effects							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
Air Quality							
NRW1	Baseline / Methodology / Modelling	Protected sites (SAC / SPA / SSSI)	APP-091 6.3.4 ES Volume C – Project-wide effects C4 – Air Quality Effects of Traffic	Agreed	It is agreed that sufficient information is provided in the ES and supporting information to inform the assessment of impact for air quality on protected sites.		No further action
NRW2	Assessment / Mitigation	Protected sites (SAC / SPA / SSSI)	APP-091 6.3.4 ES Volume C – Project-wide effects C4 – Air Quality Effects of Traffic	Agreed	It is agreed that protected sites (including Malltraeth Marsh SSSI, Coedydd Afon Menai SSSI, and Beddmanarch-Cymyran SSSI) will not be damaged by the emissions from construction or operational traffic.		No further action
Waste							
NRW3	Baseline / Methodology / Modelling	Waste generation	APP-093 6.3.6 ES Volume C – Project-wide Effects C6 – Waste and Materials Management APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	Detailed information is not yet available in ES chapter C6 to demonstrate how construction generated waste will be managed. It would be appropriate for further detail on waste management methodologies to be set out in a Site Waste Management Plan (SWMP) and governed through the Code of Construction Practice (CoCP) which should be approved by the discharging authority.	Horizon's proposals for managing waste during the construction phase are set out in section 9 (pages 58-63) of the Wylfa Newydd Code of Construction Practice (APP-414). This document will be updated at Deadline 4 to include a commitment to produce a Site Waste Management Plan.	NRW to review the Wylfa Newydd CoCP submitted at Deadline 4.
NRW4	Assessment	Waste generation	APP-093 6.3.6 ES Volume C – Project-wide Effects C6 – Waste and Materials Management APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	The assessment of available waste management capacity will need to be updated prior to and throughout the construction phase, to ensure that appropriate decisions on waste management routes are taken for the duration of the scheme. The principles of the Waste Hierarchy will need to be applied at all times. The above will need to be set out in a Site Waste Management Plan within the CoCP.	Horizon's proposals for managing waste during the construction phase are set out in section 9 (pages 58-63) of the Wylfa Newydd Code of Construction Practice (APP-414). This document will be updated at Deadline 4 to include a commitment to produce a Site Waste Management Plan.	NRW to review the Wylfa Newydd CoCP submitted at Deadline 4.
NRW5	Mitigation	Waste generation	APP-093 6.3.6 ES Volume C – Project-wide Effects C6 – Waste and Materials Management APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	Detailed waste management methodologies should be set out in the Site Waste Management Plan (SWMP) which will be governed through the Code of Construction Practice (CoCP) and the Main Site Sub-CoCP which will need to be approved by the discharging authority.	Horizon's proposals for managing waste during the construction phase are set out in section 9 (pages 58-63) of the Wylfa Newydd Code of Construction Practice (APP-414). This document will be updated at Deadline 4 to include a commitment to produce a Site Waste Management Plan.	NRW to review the Wylfa Newydd CoCP submitted at Deadline 4.

Table 4-2 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within Environmental Statement Volume D – Main Site

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
Air Quality							
NRW6	Baseline / Methodology / Modelling	Construction – protected sites (SAC / SPA / SSSI)	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality	Agreed	It is agreed that sufficient information is provided in the ES and supporting information to inform the assessment of impact on protected sites during construction.		No further Action
NRW7	Baseline / Methodology / Modelling	Operational combustion (back-up generators) – protected sites (SAC / SPA / SSSI)	APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality APP-141 6.4.22 ES Volume D – WNDA Development App D5-3 – Main Site Operational Dispersion – EIA – Dispersion Modelling Report of the Emissions to Air Arising from Operation Combustion Plant	Ongoing	NRW do not agree that the modelling has considered the worst-case scenario. Further information and / or modelling is required to demonstrate whether the modelled outputs represent the worst-case scenario. NRW consider that the impacts of the Operational Combustion emissions will be subject to an Environmental Permit and may be more appropriately assessed under that regime.	Horizon has prepared a response to the Schedule 5 notice for additional information for the Environmental Permit issued by NRW on 17 October 2018 which addresses NRW's concerns regarding modelling of the worst-case scenario for operational combustion emissions. The response was issued to NRW on the 13 th November 2018. Although this is being addressed via the Environmental Permit regime, it also applies to the DCO application.	NRW to consider the information issued in response to the Schedule 5 request.
NRW8	Assessment	Construction dust – protected sites (SAC / SPA / SSSI)	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that detailed monitoring and mitigation proposals for dust generated during the construction works should be approved by the discharging authority, in consultation with NRW. NRW consider that construction dust can be managed to avoid adverse effects on protected sites.	Horizon has set out the proposals for monitoring and mitigating dust during construction in the Wylfa Newydd Code of Construction Practice (APP-414, section 7.5 on pages 44-45) and the Main Power Station Site sub-CoCP (APP-415, section 7.6 on pages 19-21). Since the submission of the DCO application, Horizon has shared proposals with IACC and NRW to provide further detail in respect of the following: • Number, location and type of monitoring stations; • Monitoring data management system and web access to data; • Monitoring thresholds to act as trigger levels; • Further details of the response if a trigger level is exceeded; and • Compliance targets. These proposals are now included in Section 7 of the updated Main Power Station Site sub-CoCP and Section 7 of the updated Wylfa Newydd CoCP that have been submitted at Deadline 2. These matters are now therefore submitted for approval as part of the DCO application rather than being submitted for approval by IACC at a later date. The exception to this is the detail in respect of the micro-siting of	Provision for including submission of the detailed dust monitoring and mitigation measures to NRW for agreement.

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
						the monitoring stations which will be submitted for approval by IACC at a later date. As mentioned in the Wylfa Newydd CoCP (APP-414), the CoCP and the Main Power Station Site sub-CoCP (APP-415) secure Horizon's commitment to mitigating construction-related environmental effects, including dust, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the 'air quality management strategy' contained in the Wylfa Newydd CoCP and the Main Power Station Site sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	
NRW9	Assessment	Construction emissions – Cemlyn Bay SSSI / SAC	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality	Agreed	NRW agree with the conclusions of the Shadow HRA and ES that emissions from construction plant and machinery will not have adverse effects on site integrity of Cemlyn Bay SAC / SSSI.		No further action
NRW10	Assessment	Construction emissions – Tre'r Gof SSSI	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that detailed mitigation will need to be approved by the discharging authority, in consultation with NRW, to ensure that the emissions from construction plant and machinery will not damage the SSSI features.	Horizon have set out the proposed mitigation measures to minimise vehicle and plant emissions during construction in section 7.5 of the Wylfa Newydd Code of Construction Practice (APP-414, pages 40-41) and section 7.5 of the Main Power Station Site sub-CoCP (APP-415, pages 18-19). An amended version of the CoCP and sub-CoCP will be submitted at Deadline 2 which will include improved vehicle and plant emissions commitments.	NRW to review amended CoCP and sub-CoCPs

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SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW11	Assessment	Construction emissions – Cae Gwyn SSSI	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW does not agree with the conclusion of the ES that habitat changes as a result of the exceedances would not constitute damage to the SSSI features. Additional information is required to demonstrate that Cae Gwyn SSSI would not be damaged by the predicted exceedances	Horizon has committed to additional mitigation regarding reducing the emissions of NOx from construction plant in the DCO submission which will act to reduce adverse air quality effects at all ecological receptors. This will be secured in the revised Main Power Station Site sub-CoCP (APP-415) to be submitted at Deadline 2. A revised air quality assessment screens out Cae Gwyn SSSI from requiring further ecological assessment in all aspects except nitrogen deposition, which is only above critical load value during construction year 2 (peak earthworks and marine works), and only by 2%. This revised assessment will be submitted to the Examining Authority at Deadline 3.	NRW to review amended CoCP and sub-CoCPs
NRW12	Assessment	Construction – other protected sites (SAC / SPA / Ramsar / SSSI)	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality	Agreed	It is agreed, except in respect of Cae Gwyn as noted in SOCG issue NRW11, that the main site construction emissions will not have adverse effects on protected sites.		No further action
NRW13	Assessment	Operational (back-up generators) – protected sites (SAC / SPA / SSSI)	APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality APP-141 6.4.22 ES Volume D – WNDA Development App D5-3 – Main Site Operational Dispersion – EIA – Dispersion Modelling Report of the Emissions to Air Arising from Operation Combustion Plant	Ongoing	In view of SOCG issue NRW7 in relation to modelling of the operational combustion emissions, NRW is not in agreement with the predicted emissions outlined in the ES and Shadow HRA. NRW is therefore not in agreement with the conclusions. NRW consider that the impacts of the Operational Combustion emissions will be subject to an Environmental Permit and may be more appropriately assessed under that regime.	As per response to NRW7, Horizon has prepared a response to the Schedule 5 notice for additional information for the Environmental Permit issued by NRW on 17 October 2018 which addresses NRW's concerns regarding modelling of the worst-case scenario for operational combustion emissions. The response was issued to NRW on the 13 th November 2018. Although this is being addressed via the Environmental Permit regime, it also applies to the DCO application.	NRW to consider the information issued in response to the Schedule 5 request.
NRW14	Mitigation	Construction dust – protected sites (SAC / SPA / SSSI)	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that detailed dust mitigation measures will need to be set out in the Main Power Station Site Sub-CoCPs which should be approved by the discharging authority in consultation with NRW.	Horizon has set out the proposed dust mitigation measures for construction in the Wylfa Newydd Code of Construction Practice (APP-414, section 7.5 on pages 44-45) and the Main Power Station Site sub-CoCP (APP-415, section 7.6 on pages 19-21). As mentioned in the Wylfa Newydd CoCP (APP-414), the CoCP and the Main Power Station Site sub-CoCP (APP-415) secure Horizon's commitment to mitigating construction-related environmental effects, including dust, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. It is Horizon's view that the 'air quality management strategy' contained in the Wylfa Newydd CoCP and the Main Power Station Site sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. Since the submission of the DCO application, Horizon has shared proposals with IACC and NRW to provide further detail in respect of the following:	NRW to review amended CoCP and sub-CoCPs

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SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
						• Number, location and type of monitoring stations; • Monitoring data management system and web access to data; • Monitoring thresholds to act as trigger levels; • Further details of the response if a trigger level is exceeded; and • Compliance targets. These proposals are now included in Section 7 of the updated Main Power Station Site sub-CoCP and Section 7 of the updated Wylfa Newydd CoCP that have been submitted at Deadline 2. These matters are now therefore submitted for approval as part of the DCO application rather than being submitted for approval by IACC at a later date. The exception to this is the detail in respect of the micro-siting of the monitoring stations which will be submitted for approval by IACC at a later date. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	

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SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW15	Mitigation	Construction emissions – Tre'r Gof SSSI	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology	Ongoing	Table 9-10 of ES chapter D9 states that an additional mitigation measure (regime of annual cutting of vegetation) will be undertaken to reduce the increased biomass which is predicted to occur as a result of the emissions. NRW consider that detailed mitigation should be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW.	The Main Power Station Site sub-CoCP (APP-415) secures the additional mitigation of annual vegetation cutting (paragraph 11.15.1). As mentioned in the Wylfa Newydd CoCP (APP-414), the CoCP and the Main Power Station Site sub-CoCP (APP-415) secure Horizon's commitment to mitigating construction-related environmental effects, including emissions, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the 'air quality management strategy' contained in the Wylfa Newydd CoCP and the Main Power Station Site sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	NRW to review amended CoCP and sub-CoCPs
NRW16	Mitigation	Construction emissions – Cae Gwyn SSSI	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology	Ongoing	NRW advise that additional mitigation measures may be needed to mitigate possible damage to the SSSI features. In view of the nature of the SSSI features and underlying hydrogeology, it is unclear if mitigation measures (e.g. vegetation cutting) can feasibly mitigate the predicted impacts. Note that the Southern basin which is most vulnerable to nutrient pollution is not amenable to harvesting.	Horizon has committed to additional mitigation to reduce the emissions of NOx from construction plant which will act to reduce adverse air quality effects at all ecological receptors. This will be secured in the revised Main Power Station Site sub-CoCP to be submitted at Deadline 2. The mitigation comprises a commitment for 90% of Non Road Mobile Machinery (NRMM) to meet stage IV emissions standards and 10% of NRMM to meet stage IIIB emissions standards. In addition marine plant will comply with Tier III International Maritime Organisation (IMO) emissions standards. A revised air quality assessment screens out Cae Gwyn SSSI from requiring further ecological assessment in all aspects except nitrogen deposition, which is only above critical load value during construction year 2 (peak earthworks and marine works), and only by 2%. This revised assessment will be submitted to the Examining Authority for examination at Deadline 3.	NRW to review amended CoCP and sub-CoCPs
Tre'r Gof SSSI							

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SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW17	Assessment	Air quality effects on Tre'r Gof SSSI	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-124 6.4.5 ES Volume D – WNDA Development D5 – Air Quality	Agreed	For air quality effects on Tre'r Gof SSSI please see SOCG issues NRW10 and NRW15 above in the Air Quality section		No further action
NRW18	Baseline / Methodology / Modelling	Baseline hydrological and hydrogeological information – Conceptual Site Model	APP-158 6.4.30 ES Volume D – WNDA Development App D8-5 – Tre'r Gof Hydroecological Assessment	Do not agree	NRW do not agree that sufficient baseline information is available to inform the modelling and assessment of impact. NRW do not agree that the Conceptual Site Model produced is sufficient to undertake meaningful assessment of risks to the SSSI from dewatering. We welcome acknowledgement in NRW19 of the importance of groundwater contribution to the site however. We advise that available data is re-examined to refine baseline understanding, and if necessary augmented, to the extent required to inform monitoring and mitigation of the potential effects of dewatering activities at the site, both during construction and operation. Please see section 7.13 of NRW's Written Representations	Horizon does not agree that there is insufficient baseline information to inform the modelling and assessment of impact at Tre'r Gof. Within the Tre'r Gof catchment, a number of monitoring programmes have been undertaken since 2012 as set out APP-158. We note that NRW have recognised in past meetings that there will be a degree of uncertainty in the conceptual model. This is a large amount of monitoring and baseline data in a catchment which covers only 1km² with Tre'r Gof SSSI itself occupying only 0.1km². Horizon also recognises that, even with the large amount of monitoring installations in the catchment, the hydrogeology and hydro-ecology of Tre'r Gof is complex and has explicitly recognised uncertainty in the Tre'r Gof conceptual model based on the data. We note that NRW are in broad agreement with the modelling approach for the wider zone of influence and accept the modelling outputs are likely to be of the right order of magnitude at a regional scale. Horizon would agree that the model and monitoring cannot fully characterise the small, but critical, groundwater flows that maintain the rare GWDTE assemblages and have relied upon site specific interpretation to understand these in detail.	No further action
NRW19	Assessment	Damage to SSSI features	APP-127 6.4.8 ES Volume D – WNDA Development D8 – Surface Water and Groundwater	Ongoing	NRW agree with the conclusion in the ES that there may be significant effects on Tre'r Gof SSSI. Impacts on the SSSI include impacts on water quantity (changes in catchment) and water quality (run-off from mounds and changes in drainage). NRW consider that dewatering has the potential to damage the SSSI interest. We welcome recognition that groundwater provides critical support to the SSSI and the stated re-assessment of the potential impacts of dewatering on the site. However, we have not received the additional information to date, and therefore maintain that sufficient assessment of the risks from dewatering to the SSSI has not been provided to date. Please see section 7.13 in NRW's Written Representations	As described in Chapter D8 of the Environmental Statement (APP-127, paragraphs 8.5.53 to 8.5.56), Horizon's modelling predicts a maximum drawdown at Tre'r Gof compared to baseline from dewatering of the Power Station site of up to 0.51m to 0.88m, for the wet and dry periods respectively. This is at its greatest extent during the construction period. Post construction, during the long-term operation of the Power Station, the model predicts that there is only minor drawdown on Tre'r Gof. Horizon has assessed this as a minor adverse dewatering impact. The magnitude of change of the construction works on bedrock groundwater inputs to streams that flow into the high value Tre'r Gof SSSI is considered to be small with an overall minor adverse effect, meaning it is not significant. The key area where interpretation of significant impact differs between Horizon and NRW is the importance of direct bedrock groundwater influence on the qualifying interests of Tre'r Gof SSSI. Horizon continues to work with NRW in respect of this issue including through engagement relating to Water Abstraction Licence applications.	Horizon to prepare and NRW to review the Hydrogeological Impact Assessment expected to be submitted in February.

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NRW20	Mitigation	Damage to SSSI features	APP-128 6.4.9 ES Volume D – WNDA Development APP-128 D9 – Terrestrial and Freshwater Ecology APP-127 6.4.8 ES Volume D – WNDA Development D8 – Surface Water and Groundwater APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW do not agree that all reasonable and feasible mitigation have been considered to mitigate the predicted impacts on Tre'r Gof SSSI. We welcome proposals for monitoring and mitigation of risks to groundwater supply from activities on site, including dewatering. NRW is awaiting the additional information to be provided by Horizon with respect to additional mitigation proposed.	A hydrogeological impact assessment (HIA) which will govern dewatering is under preparation for the abstraction licence application(s). A dewatering monitoring and mitigation strategy is under preparation as a key part of the HIA and is a requirement of the abstraction licence permit application. This will include the potential for direct and indirect impact upon Tre'r Gof of dewatering of bedrock groundwater. The abstraction licence is expected to be submitted to NRW in February.	Horizon to prepare and NRW to review the Hydrogeological Impact Assessment expected to be submitted in February.
Tre'r Gof SSSI Compensation							
NRW21	Baseline / Methodology / Modelling	Fen creation and enhancement	APP-190 6.4.56 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume I APP-191 6.4.57 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume II	Ongoing	NRW do not agree, in the absence of sufficient and robust baseline hydrological and hydrogeological information, that there is sufficient information to inform the preparation and design of fen habitat creation. No hydrological baseline information for the Cors Gwawr and Cae Canol-dydd compensation sites is provided in the ES; however, this information is critical in informing the likely success of the compensation.	Due to land access no baseline information was available for inclusion in the DCO application when it was submitted. Baseline hydrological and hydrogeological monitoring has since been installed at the Cors Gwawr and Cae Canol-dydd SSSI compensation sites and data is currently being collected. The results will be shared with NRW and the DCO examination at Deadline 6. The outline design of the compensation fen habitat is based on detailed vegetation surveys and preliminary soil and hydrology surveys. The outline design will be refined as further detailed soil and hydrology data become available to ensure the schemes are deliverable.	Baseline hydrological and hydrogeological monitoring data from the Cors Gwawr and Cae Canol-dydd SSSI compensation sites.
NRW22	Assessment	Fen creation and enhancement	APP-190 6.4.56 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume I APP-191 6.4.57 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume II	Ongoing	NRW do not agree, based on the available information, that it can be concluded that the fen habitat creation works will deliver sufficient compensation in terms of habitat quality (type of fen) and quantity (extent of fen). Please see section 7.14 in NRW's Written Representations	Initial hydrogeological data has been shared with NRW. Whilst it is acknowledged that it is insufficient on its own to conclude that the full extent of the fen habitat creation can be delivered, it indicates that the sites are suitable for fen habitat creation. The ongoing monitoring data will be used to inform the detailed design to maximise the amount of fen habitat that can be created. Horizon is confident that, with additional data informing the application of a gradual, phased, adaptive approach to the design and implementation of the compensation works, the proposals will result in the establishment of high quality habitat to adequately compensate for the predicted effects on Tre'r Gof SSSI. Discussions with NRW will continue on the emerging detailed design.	Baseline hydrological and hydrogeological monitoring data from the Cors Gwawr and Cae Canol-dydd SSSI compensation sites.
NRW23	Mitigation	Fen creation and enhancement	APP-190 6.4.56 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume I APP-191 6.4.57 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume II APP-415 8.7 Main Power Station Site sub-CoCP	Agreed	It is agreed that there will need to be an adaptive management strategy (APP-415, paragraph 11.7.2, page 38-39) focussed on delivering the agreed quantity and quality of compensation, given the uncertainties inherent in habitat creation schemes.		No further action

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NRW24	Baseline / Methodology / Modelling	Environmental impacts of fen creation works	APP-137 6.4.18 ES Volume D - WNDA Development App D1-2 Ecological Compensation Sites: Assessment of Environmental Effects APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	No baseline information was available for the sites (including hydrological / hydrogeological data or protected species information). It is agreed that pre-commencement surveys will need to be undertaken to inform the detailed mitigation (APP-415, paragraph 11.7.2 page 38-39). In terms of flood risk, a backwater analysis will need to be carried out to determine the extent of water level increases for a range of events (including the more frequent events). Water tables levels will be increased and will have an impact on land drainage which will need to be managed – see Mitigation. Detailed mitigation measures will need to be set out in a detailed Sub-CoCP and approved by the discharging authority	Horizon have undertaken a Flood Consequences Assessment for the Ecological Compensation Sites which forms Annex 2 of APP-137. Paragraph 1.12.67 states that an adaptive management approach would be followed such that there would be no detrimental change to flood risk to the Corsydd Mon SAC or the Cors Bodeilio SSSI (also a component of the Corsydd Mon SAC). These are the only two receptors at risk of flooding from the Ecological Compensation Sites.	NRW to confirm the FCA is sufficient.
NRW25	Assessment	Environmental impacts of fen creation works	APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that impacts on environmental receptors, through agreement of a detailed Sub-CoCP, to be approved by the discharging authority in consultation with NRW, can be ruled out.	Horizon considers that the proposed mitigation measures for the Ecological Compensation Sites, secured in section 11.7 of APP-415, are sufficient. Amended versions of these documents have been submitted at Deadline 2.	NRW to review amended CoCP and sub-CoCPs
NRW26	Mitigation	Environmental impacts of fen creation works	APP-190 6.4.56 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume I APP-191 6.4.57 ES Volume D – WNDA Development App D9-23 – SSSI Compensation Strategy – Volume II	Ongoing	NRW consider that through agreement of a detailed Sub-CoCP to be approved by the discharging authority in consultation with NRW, impacts on other environmental receptors can be mitigated.	Proposed mitigation measures for the Ecological Compensation Sites are secured in section 11.7 of APP-415 which is a control document.	SSSI Compensation Sites sub-CoCP
Cae Gwyn SSSI							
NRW27	Assessment	Air quality effects	N / A	Ongoing	For air quality effects on Cae Gwyn SSSI please see SOCG issues NRW11 and NRW16 above in the Air Quality section		Please see actions for NRW 11 and NRW16

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SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW28	Baseline / Methodology / Modelling	Impacts on water quality and water quantity	APP-159 6.4.31 ES Volume D – WNDA Development App D8-6 – Cae Gwyn Hydroecological Assessment APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW do not agree with the Conceptual Site Model undertaken for Cae Gwyn SSSI. The baseline data for Cae Gwyn is insufficient and, as a result, the Conceptual Site Model is flawed. NRW is in general agreement with the groundwater modelling undertaken. However, it should be noted that the groundwater model is appropriate on a regional scale only. Despite the above disagreement on the CSM, NRW considers that the risk of impact to Cae Gwyn is low. Please see section 7.15 in NRW's Written Representations	Groundwater level data and water quality sampling of surface water and shallow groundwater were carried out for several years in two shallow/weathered bedrock groundwater monitoring boreholes installed within the vicinity of Cae Gwyn SSSI, in piezometers installed into the peat and soils within the four basins identified in Cae Gwyn SSSI, on Outfall channel / Nant Caerdegog Isaf, Nant Caerdegog Isaf (800m downstream), ponds and drains. The conceptual model confirms that this site is at least partly supported by bedrock groundwater, particularly during the wetter winter months. The bedrock groundwater models show the groundwater drawdown for the construction phase dewatering would be up to 0.02m at the north of the SSSI. We note that NRW accept the broad outputs of the model regarding regional drawdown, but that this cannot address detailed site specific impacts. As such we agree with NRW that the risk of impact to Cae Gwyn is low. Nonetheless monitoring is secured in the Main Power Station Site sub-CoCP which will monitor for any effects from the dewatering to confirm or otherwise the impacts on Cae Gwyn and allow for mitigation needs to be assessed (APP-415, paragraph 10.4.6, page 31).	Horizon and NRW to continue discussions on groundwater modelling.
NRW29	Assessment	Impacts on water quality and water quantity	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-127 6.4.8 ES Volume D – WNDA Development D8 – Surface Water and Groundwater APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	It is agreed that Cae Gwyn SSSI is unlikely to be damaged by changes to water quantity (including dewatering) or by changes to water quality. This conclusion is on the basis of detailed monitoring and mitigation being set out in a detailed Sub-CoCP and approved by the discharging authority.	Although additional mitigation measures (APP-128, Table D9-10) are proposed to mitigate hydrological impacts to Cae Gwyn SSSI, the ES concludes that there would be only a minor effect to Cae Gwyn SSSI (APP-128, paragraph 9.5.85). Proposed mitigation measures for water quality impacts at Cae Gwyn SSSI are secured in APP-414 (paragraph 10.4.1) and APP-415 (paragraph 10.2.11 and 11.16.1) which are control documents.	NRW to review amended CoCP and sub-CoCPs.
NRW30	Mitigation	Impacts on water quality and water quantity	APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	Detailed monitoring and mitigation measures will need to be set out in the sub-CoCP and approved by the discharging authority in consultation with NRW. It is agreed that monitoring should be undertaken during the main construction phase to validate the predictions of the groundwater model.	Ground water monitoring is proposed and secured in the Main Power Station Site sub-CoCP which will monitor for any effects from the dewatering to confirm or otherwise the impacts on Cae Gwyn and allow for mitigation needs to be assessed (APP-415, paragraph 10.4.6, page 31).	Groundwater monitoring and mitigation proposals.
European and Nationally protected species							
NRW31	Baseline / Methodology / Modelling	Baseline surveys	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology	Agreed	It is agreed that sufficient baseline information is presented in the ES to inform the impact assessment for European Protected Species (bats, otters, great crested newts, cetaceans), national fully protected species (water voles, red squirrels) and Schedule 1 listed birds (chough, barn owl) which may be affected as a result of the project.		No further action

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NRW32	Assessment	Impacts on protected species	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-187 6.4.53 ES Volume D – WNDA Development App D9-20 – Draft Bat Mitigation Licence APP-188 6.4.54 ES Volume D WNDA Development App D9-21 – Draft Great Crested Newt Licence APP-335 6.7.32 ES volume G – A5025 Off-line Highway Improvements App G9-11 – A5025 Draft Great Crested Newt Mitigation Licence APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that, subject to the agreement of detailed mitigation measures, to be approved by the discharging authority in consultation with NRW, that the project is unlikely to be detrimental to the Favourable Conservation Status of protected species. Impacts on protected species may be subject to species derogation licences from NRW. The DCO application includes draft European Protected Species mitigation licence applications submitted in support of the application for development consent (Wylfa Newydd Development draft bat mitigation licence application APP-187; Wylfa Newydd Development draft great crested newt mitigation licence application APP-188; A5025 draft great crested newt mitigation licence application APP-335). See SOCG issue NRW33.	Horizon considers that the mitigation measures for European Protected Species, secured in the Main Power Station Site sub-CoCP (APP-415) in the respective sections for each species, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW33	Mitigation	Mitigating impacts on protected species	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that the outline mitigation measures identified in ES chapter D9 are appropriate and that detailed mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW For terrestrial protected species, NRW does not agree that the monitoring proposals are appropriate to inform long-term management of the affected species. NRW are awaiting a note updating Horizon's monitoring proposals to address this issue	Mitigation measures for European Protected Species are secured in the Main Power Station Site sub-CoCP (APP-415) in the respective sections for each species. Horizon has agreed to amend the monitoring proposals and these will be included in the Main Power Station Site sub-CoCP (APP-415) which will be submitted at Deadline 2. The amendments will bring the monitoring proposals in line with discussions held with NRW during a teleconference on 14 th September 2018.	NRW to review amended CoCP and sub-CoCPs.
Migratory & Marine Fish							
NRW34	Baseline / Methodology / Modelling	Migratory fish Section 7 fish	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Agreed	It is agreed that sufficient baseline information is presented in the ES to inform the impact assessment.		No further action
NRW35	Assessment	Migratory fish Section 7 fish	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that, subject to the agreement of detailed mitigation measures set out in a detailed Sub-CoCP and CoOP, and approved by the discharging authority in consultation with NRW, that the project is unlikely to have significant impacts on migratory fish and / or Section 7 fish.	As mentioned in the Wylfa Newydd CoCP (APP-414), the CoCP and the Main Power Station Site sub-CoCP (APP-416) secure Horizon's commitment to mitigating construction-related environmental effects, including impacts on fish, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the 'ecology and landscape management strategy' contained in the Wylfa Newydd CoCP and the Marine Works sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion	NRW to review amended CoCP and sub-CoCPs.

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
						that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	
NRW36	Mitigation	Migratory fish Section 7 fish	APP-128 6.4.9 ES Volume D – WNDA Development D9 – Terrestrial and Freshwater Ecology APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Ongoing	It is agreed that the outline mitigation measures identified in ES chapters D9 and D13 are appropriate. NRW consider that the detailed mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority, in consultation with NRW,	As mentioned in the Wylfa Newydd CoCP (APP-414), the CoCP and the Main Power Station Site sub-CoCP (APP-416) secure Horizon's commitment to mitigating construction-related environmental effects, including impacts on fish, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the 'ecology and landscape management strategy' contained in the Wylfa Newydd CoCP and the Marine Works sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	NRW to review amended CoCP and sub-CoCPs.
Marine environment- benthic ecology							
NRW37	Baseline / Methodology / Modelling	Main site – impacts on benthic Annex I and Section 7 habitat	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Agreed	It is agreed that sufficient baseline information, and modelling undertaken, is presented in the ES to inform the assessment of impact on benthic habitat.		No further action
NRW38	Baseline / Methodology / Modelling	Holyhead North – impacts on benthic Annex I habitat	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Ongoing	It is agreed that, although there is limited information on the extent of benthic habitats at the disposal site (and subject to the requirements explained below), that there is sufficient baseline information presented in the ES to inform the impact assessment and to identify appropriate mitigation. NRW consider that pre-commencement surveys of the disposal site will be required for the areas that will be used for rock dumping in order to ensure avoidance of areas of Annex 1 reef (notably <i>Sabellaria</i> reef). Sufficient information is already present for sediment disposal areas.	The ES (APP-132, paragraphs 13.7.48 – 13.7.58) considers that any loss of <i>Sabellaria</i> reef due to rock disposal would not be noticeable and no further mitigation or monitoring is proposed.	Horizon and NRW to continue discussions.

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW39	Assessment	Main site – impacts on benthic Annex I and Section 7 habitat	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Not agreed	NRW do not agree with the conclusions of the ES. NRW do not consider that Horizon have assessed all of the impacts on intertidal and subtidal habitats cumulatively. These include the direct and indirect effects during construction and during operation. The ES states that there will be 'moderate adverse effect from the direct loss of subtidal and intertidal habitats of conservation importance under the footprint of the Marine Works'. However, NRW disagree with the downgrading from Moderate adverse to negligible as a result of the mitigation (Marine Ecological Enhancements). See SOCG issue NRW50 below.	The marine environment assessment presented in chapter D13 of the Environmental Statement (APP-132) identified a total of 13 impact pathways via which potential effects to benthic habitats could occur within the Wylfa Newydd Development Area. The assessment presented in section 13.6 of chapter D13 (APP-132), concluded that the Wylfa Newydd Project could potentially result in two significant effects representing a medium magnitude of change and a moderate adverse effect to benthic habitats. Firstly, from the direct loss of habitats and species under the footprint of the Marine Works, and secondly, from the potential introduction of invasive non-native species during Main Construction. When taking into consideration the additional mitigation presented in section 13.8 of chapter D13 of the Environmental Statement (APP-132), it was concluded that in both cases, the residual effects would represent a small magnitude of change and a minor non-significant effect. Two additional minor non-significant effects to benthic habitats were identified due to the discharge of Cooling Water and the associated thermal and Total Residual Oxidants (TRO) (see paragraphs 13.6.679, 13.6.690, 13.6.784 and 13.6.789 of chapter D13 of the Environmental Statement) (APP 132). No other topic assessments presented within the Environmental Statement identified effects to benthic habitats. It is noted that sub lethal effects of TRO and thermal discharge are expected to be highly localised being limited to the immediate zone of discharge (i.e. within a few 100 metres of the outfall). Whilst effects of smaller magnitude may occur further afield, these would remain reasonably localised, covering a subtidal and intertidal area of 4.2ha and 0.3ha, respectively (see paragraphs 13.6.679 and 13.6.690 of chapter D13 of the Environmental Statement) (APP-132). The subtidal and intertidal habitats (including those of conservation importance) that would be affected cumulatively by the Project are considered common on a regional scale and therefore any loss would not result in wider effects on the structure and function of benthic habitats. Consequently, there is not considered to be a combined effect to benthic habitats. Horizon's position regarding the mitigation items is provided in issue NRW50 below.	No further action
NRW40	Assessment	Holyhead North – impacts on benthic Annex I habitat	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Ongoing	NRW consider that, subject to detailed mitigation measures being approved by the discharging authority in consultation with NRW, that the project is unlikely to have significant impacts on Annex I habitat.	The ES (APP-132, paragraphs 13.7.48 – 13.7.58) considers that any loss of <i>Sabellaria</i> reef due to rock disposal would not be noticeable and no further mitigation or monitoring is proposed.	Horizon and NRW to continue discussions.

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW50	Mitigation	Main site – impacts on benthic habitat	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment WN0902-JAC-PAC-TEC-00011 Memorandum on Marine Ecological Enhancement Mitigation	Ongoing	NRW do not consider that sufficient information has been presented to demonstrate that all reasonable and feasible mitigation measures will be implemented to offset the likely impacts on Annex I (ca. 20) and Section 7 (ca. 3 ha intertidal, 0.7 ha subtidal) habitats. The mitigation measures presented (and the level of detail provided on these) in the Marine Enhancement Report remain insufficient to offset the loss of reef habitat of conservation importance. Further details of the feasibility appraisal undertaken for each of the presented mitigation options should be provided, and feasible mitigation to be implemented. Monitoring will also need to be undertaken. Please see section 7.18 in NRW’s Written Representations.	The direct losses of intertidal and subtidal habitats are assessed in DCO ES chapter D13 and in the WFD compliance assessment. There would be a total loss of approximately 30.5ha of marine habitat, of which, 20ha have been classified as subtidal and intertidal habitats of conservation importance. The loss of habitats results from the footprint of the permanent and temporary marine works. This loss of habitat of conservation importance is assessed as being a moderate adverse effect within chapter D13 of the DCO ES. Additional mitigation through ecological enhancement will be provided to increase the diversity and biomass of ecological communities on the new marine structures resulting in a reduction of the effect on subtidal and intertidal habitats of conservation importance to minor adverse. Further details of the proposals for marine ecological enhancement of the breakwater have been provided to NRW in the form of a memorandum. The memorandum provides an appraisal of the available measures and the feasibility and constraints of implementing for the Wylfa Newydd Project to satisfy the requirements of Test (a) of Article 4(7) of the WFD; to ensure that all practicable mitigation measures have been included in the project.	Horizon and NRW to continue discussions.
NRW51	Mitigation	Holyhead North – impacts on benthic habitat	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW. The detailed mitigation will need to include pre-commencement benthic surveys (pre-disposal) to be undertaken within 1 year of disposal taking place. This is to identify the extent of any benthic habitats of conservation importance and enable micro-siting of rock disposal to minimise impacts on these.	The ES (APP-132, paragraphs 13.7.48 – 13.7.58) considers that any loss of benthic habitat due to rock and sediment disposal would not be minor and no further mitigation or monitoring is proposed.	Horizon and NRW to continue discussions.
Invasive Non-Native Species (INNS)							
NRW52	Baseline / Methodology / Modelling	Terrestrial INNS	APP-128 6.4.9 ES Volume D – WND A Development D9 – Terrestrial and Freshwater Ecology	Agreed	It is agreed that sufficient baseline information is provided in the ES to inform assessments of the impacts of terrestrial INNS and identify appropriate mitigation.		No further action
NRW53	Baseline / Methodology / Modelling	Marine INNS	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment	Agreed	It is agreed that sufficient baseline information is provided in the ES to inform assessments of the impacts of marine INNS and identify appropriate mitigation.		No further action
NRW54	Assessment	Terrestrial INNS	APP-414 8.6 Wylfa Newydd Code of Construction Practices	Ongoing	NRW consider that, subject to the agreement of a detailed biosecurity risk assessment which will need to be approved by the discharging authority in consultation with NRW, that the risk of introduction of and / or spread of INNS will be minimised.	Horizon are proposing to prepare a revised biosecurity risk assessment and method statement as stated in the Wylfa Newydd CoCP (APP-414, paragraphs 11.2.41-11.2.46) and the proposals will include submission to, and agreement with NRW.	NRW to confirm mitigation is sufficient.

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW55	Assessment	Marine INNS	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW consider that, subject to detailed biosecurity risk assessment being approved by the discharging authority in consultation with NRW, that the risk of ingress of and / or spread of INNS will be minimised.	Horizon are proposing to prepare a revised biosecurity risk assessment and method statement as stated in the Wylfa Newydd CoCP (APP-414, paragraphs 11.2.41-11.2.46) and the proposals will include submission to, and agreement with NRW. Paragraphs 11.2.41 – 11.2.46 set out the details which will be included in the biosecurity risk assessment and method statement. Additional biosecurity measures, specific to the marine works, are set out in Section 11.3 of APP-416.	NRW to confirm mitigation is sufficient.
NRW56	Mitigation	Terrestrial INNS	APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that detailed INNS mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW	Horizon are proposing to prepare a biosecurity risk assessment and method statement (APP-414, paragraphs 11.2.41-11.2.46) which will set out the detailed INNS mitigation measures. APP-414 is a control document. The proposals will include submission to, and agreement with NRW..	NRW to confirm mitigation is sufficient.
NRW57	Mitigation	Marine INNS	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that detailed INNS mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW. The detailed risk assessment will need to include measures relating to the management of biosecurity measures for vessel activities. This includes management of vessels to and from the Port of Holyhead in relation to preventing the spread of <i>Didemnum vexillum</i> and appropriate management of hopper water discharge for dredging activities.	Horizon are proposing to prepare a biosecurity risk assessment and method statement (APP-414, paragraphs 11.2.41 – 11.2.46) and the proposals will include submission to, and agreement with NRW. Paragraphs 11.2.41 – 11.2.46 set out the details which will be included in the biosecurity risk assessment and method statement. Additional biosecurity measures, specific to the marine works, are set out in Section 11.3 of APP-416.	NRW to confirm mitigation is sufficient.
Protected landscapes – AONB							
NRW58	Baseline / Methodology / Modelling	Impacts on the Ynys Môn AONB	APP-129 6.4.10 ES Volume D – WNDA Development D10 – Landscape and Visual	Agreed	It is agreed that sufficient baseline information on the Ynys Môn / Isle of Anglesey AONB is presented in the ES and that the assessment methodology has followed best practice.		No further action
NRW59	Assessment	Impacts on the Ynys Môn AONB	APP-129 6.4.10 ES Volume D – WNDA Development D10 – Landscape and Visual	Agreed	It is agreed that the ES and its assessment of Landscape and Visual effects relating to the Ynys Môn / Isle of Anglesey Area of Outstanding Natural Beauty (AONB) accurately reflects the predicted effects.		No further action
NRW60	Mitigation	Impacts on the Ynys Môn AONB	APP-129 6.4.10 ES Volume D – WNDA Development D10 – Landscape and Visual	Ongoing	NRW consider that detailed proposals will need to be submitted to ensure mitigation of impacts upon the AONB are fully developed. Detailed mitigation measures will need to be set out in the relevant Sub-CoCPs and approved by the discharging authority.	Horizon's mitigation proposals for impacts to the AONB will be implemented through the design of the restored landscape of the Wylfa Newydd Development Area. DCO Requirement WN9 specifies that the Final Landscape and Habitat Scheme will be submitted to IACC for approval.	NRW to confirm mitigation is sufficient.
Flood Risk							
NRW61	Baseline / Methodology / Modelling	Main site flood risk	APP-160 – APP-166 6.4.32 ES Volume D – WNDA Development App D8-7 – Surface Water and Groundwater Modelling Results	Agreed	It is agreed that the flood modelling has been undertaken appropriately and followed best practice.		No further action

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW62	Assessment	Main site flood risk	APP-127 6.4.8 ES Volume D – WNDA Development D8 – Surface Water and Groundwater APP-150 6.4.29 ES Volume D – WNDA Development App D8-4 Flood Consequences Assessment	Agreed	It is agreed that the ES and FCA concludes, through modifying and increasing catchment areas at the Wylfa Newydd main site, that the project may cause increased flood risk to 3 rd parties.		No further action
NRW63	Mitigation	Main site flood risk	APP-150 6.4.29 ES Volume D – WNDA Development App D8-4 Flood Consequences Assessment APP-167 6.4.33 ES Volume D – WNDA Development App D8-8 – Summary of Preliminary Design for Construction Surface Water Drainage	Ongoing	NRW do not agree with the conclusion of the FCA that the outline landform and drainage scheme can be revised at detailed design stage so as not to exacerbate any existing flood risk. NRW is concerned that no mitigation is presented as part of the DCO application to demonstrate that measures can be delivered to mitigate the increased flood risk. Please see section 7.1 in NRW's Written Representations	Investigations of available options indicate that space is available within the red-line boundary of the site to provide additional attenuation of surface water runoff that would provide a greater design standard than that currently simulated in hydraulic modelling. Options are being further developed and will be presented to the Examining Authority to demonstrate that increased flood risk can be managed and that the proposals are compliant with TAN15.	Horizon to amend proposals for Mound A drainage to show no increase in downstream flooding to replace the design in: APP-167 6.4.33 ES Volume D – WNDA Development App D8-8 – Summary of Preliminary Design for Construction Surface Water Drainage
Contaminated land / Groundwater protection							
NRW64	Baseline / Methodology / Modelling	Baseline information on contaminated land and groundwater.	APP-126 6.4.7 ES Volume D – WNDA Development D7 – Soils and Geology APP-143 6.4.24 ES Volume D – WNDA Development APP D7-1 – Soils and Geology Baseline Conditions Report	Agreed	It is agreed that sufficient baseline information on contaminated land and groundwater is presented in the ES to inform the assessments.		No further action
NRW65	Assessment	Conclusion of the contaminated land impact assessment.	APP-126 6.4.7 ES Volume D – WNDA Development D7 – Soils and Geology	Agreed	It is agreed that the conclusions of the ES accurately reflect the predicted effects on contaminated land and groundwater from the construction and operation of the power station.		No further action

Environmental Statement Volume D – Main Site							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW66	Mitigation	Contaminated land mitigation.	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-415 8.7 Main Power Station Site sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be set out in the Sub-CoCPs and approved by the discharging authority in consultation with NRW.	Horizon consider that all proposed mitigation measures relating to contaminated land, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Main Power Station Site sub-CoCP (APP-415), are sufficient.	NRW to review amended CoCP and sub-CoCPs
Geological sites							
NRW67	Assessment / Mitigation	Geological Conservation Review sites	APP-126 6.4.7 ES Volume D – WNDA Development D7 – Soils and Geology	Agreed	It is agreed that the coastline within the Wylfa Newydd Development Area has not been notified as a Geological Conservation Review site.		No further action

Table 4-3 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within Environmental Statement Volume E – Off Site Power Station Facilities

Environmental Statement Volume E – Off-Site Power Station Facilities							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
HRA							
NRW68	Assessment	SAC / SPA / Ramsar sites in Wales	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that the proposed Off-Site Power Station Facilities is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.		No further action
SSSIs							
NRW69	Assessment	SSSIs	APP-247 6.5.9 ES Volume E – Off-Site Power Station Facilities: AECC ESL and MEEG A9 – Terrestrial and Freshwater Ecology	Agreed	It is agreed that the proposed Off-Site Power Station Facilities is unlikely to damage any SSSIs.		No further action
WFD							
NRW70	Assessment	WFD Waterbodies	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that the proposed Off-Site Power Station Facilities is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.		No further action
European and nationally protected species							
NRW71	Assessment	Assessment of protected species.	APP-247 6.5.9 ES Volume E – Off-Site Power Station Facilities: AECC ESL and MEEG A9 – Terrestrial and Freshwater Ecology	Agreed	It is agreed that the conclusions of the ES for the proposed works accurately conclude that the proposal will not be detrimental to the Favourable Conservation Status of protected species.		No further action

Environmental Statement Volume E – Off-Site Power Station Facilities							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW72	Mitigation	Mitigation for protected species.	APP-417 8.9 Off-Site Power Station Facilities sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority, in consultation with NRW.	Horizon considers that the proposed mitigation measures set out in APP-417 (paragraphs 11.3.1 – 11.4.1), for protected species at the Off-Site Power Station Facilities, are sufficient. Paragraph 11.3.1 specifies that appropriate treatments for otter and water vole would be agreed with NRW. Paragraph 11.4.1 specifies that if demolition works could impact bat roosts, the works would be subject to a European Protected Species licence which would be determined by NRW. As mentioned in the Wylfa Newydd CoCP (APP-414), and the Off-site Power Station Facilities sub-CoCP (APP-417) secure Horizon’s commitment to mitigating construction-related environmental effects, including protected species, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon’s view that the ‘ecology and landscape management strategy’ contained in the Wylfa Newydd CoCP and the Off-site Power Station Facilities sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon’s opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	NRW to review amended CoCP and sub-CoCPs.
Protected landscapes							
NRW73	Assessment	Ynys Môn AONB	APP-248 6.5.10 ES Volume E – Off-Site Power Station Facilities: AECC ESL and MEEG E10 – Landscape and Visual	Agreed	It is agreed that the ES accurately concludes that the proposal is unlikely to affect the special qualities of the AONB.		No further action
Flood risk							

Environmental Statement Volume E – Off-Site Power Station Facilities							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW74	Assessment	Flood Consequences Assessment	APP-254 6.5.16 ES Volume E – Off-Site Power Station Facilities: AECC ESL and MEEG App E8-1 MEEG / AECC / ESL – Flood Consequences Assessment	Agreed	It is agreed that the site is not within Zone C1 / C2, is not at risk of fluvial or tidal flooding, and will not result in increased fluvial flooding elsewhere.		No further action
Pollution prevention / environmental management							
NRW75	Assessment	Assessment of pollution impacts	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-417 8.9 Off-Site Power Station Facilities sub-CoCP	Ongoing	NRW consider that the ES accurately concludes that, through the agreement of detailed mitigation measures, the construction and operational impacts of the proposal will be managed appropriately.	Horizon considers that mitigation measures for pollution impacts, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Off-Site Power Station Facilities sub-CoCP (APP-417), are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW76	Mitigation	Securing pollution prevention mitigation	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-417 8.9 Off-Site Power Station Facilities sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and CoOP approved by the discharging authority in consultation with NRW.	Horizon considers that mitigation measures for pollution impacts, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Off-Site Power Station Facilities sub-CoCP (APP-417), are sufficient.	NRW to review amended CoCP and sub-CoCPs.
Contaminated land / groundwater							
NRW77	Assessment	Assessment of ground conditions	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-417 8.9 Off-Site Power Station Facilities sub-CoCP	Ongoing	It is agreed that the ES accurately concludes that, through the agreement of detailed mitigation measures, the construction impacts of the proposal will be managed appropriately.	Horizon considers that mitigation measures for pollution impacts, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Off-Site Power Station Facilities sub-CoCP (APP-417) are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW78	Mitigation	Mitigation of ground conditions	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-417 8.9 Off-Site Power Station Facilities sub-CoCP	Ongoing	It is agreed that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority in consultation with NRW, as a DCO Requirement.	Horizon considers that mitigation measures for pollution impacts, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Off-Site Power Station Facilities sub-CoCP (APP-417) are sufficient.	NRW to review amended CoCP and sub-CoCPs.

Table 4-4 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within Environmental Statement Volume F – Dalar Hir Park and Ride

Environmental Statement Volumes F – Dalar Hir Park and Ride							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
HRA							
NRW79	Assessment	SAC / SPA / Ramsar sites in Wales	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	NRW agree that the proposed Offsite Power Station Facility is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.		No further action
SSSI							

Environmental Statement Volumes F – Dalar Hir Park and Ride							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW80	Assessment	Llyn Traffwl SSSI	APP-273 6.6.8 ES Volume F - Park and Ride F8 - Surface water and groundwater APP-274 6.6.9 ES Volume F – Park and Ride F9 – Terrestrial and freshwater ecology	Ongoing	The proposal includes a foul water treatment plant, which will discharge treated effluent (with elevated nutrients) into a watercourse upstream of Llyn Traffwl SSSI. NRW do not agree with the conclusions of the ES that there is no risk of damage to the SSSI features.	Application reference 6.6.8 ES Volume F - Park and Ride F8 - Surface water and groundwater (APP-273) presents information on the proposed sewage treatment facilities at the Dalar Hir Park and Ride development. APP-273 describes the site as containing a package sewage treatment plant that will discharge treated runoff to the Nant Dalar Hir. As there is no foul sewer within close proximity of the Park and Ride, foul water from the building facilities would be treated via a package treatment plant before discharging to the Nant Dalar Hir. APP-273 states that discharge from the treatment plant would be subject to an Environmental Permit with conditions bespoke for the Nant Dalar Hir and downstream receptors, including Llyn Traffwl. The assessment stated that the on-site sewage treatment plant would: - be designed to treat water to appropriate standards set out in the consenting conditions (bespoke for the Nant Dalar Hir and downstream receptors, including Llyn Traffwl SSSI), of the Environmental Permit and agreed with NRW; - would be fitted with monitoring and controls to check discharge quality; and - if necessary prevent discharge of water that does not meet the limits of the Environmental Permit. Along with management and maintenance procedures for the treatment plant, the assessment concluded that the above would mean that the magnitude of change to water quality in the Nant Dalar Hir would be negligible to small and the effects would be negligible to minor; not a significant effect.	Horizon and NRW to continue discussions.
NRW81	Mitigation	Llyn Traffwl SSSI	APP-274 6.6.9 ES Volume F – Park and Ride F9 – Terrestrial and freshwater ecology	Ongoing	NRW do not agree that the mitigation specified is sufficient to demonstrate there will be no damage to the SSSI features. Further mitigation (e.g. tertiary treatment) may demonstrate no damage.	Please see response to SOCG issue NRW80	Horizon and NRW to continue discussions.
WFD							
NRW82	Assessment	WFD Waterbodies	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that the Dalar Hir proposal is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.		No further action
Protected species							
NRW83	Baseline / Methodology / Modelling	Protected species at Dalar Hir	APP-274 6.6.9 ES Volume F – Park and Ride F9 – Terrestrial and Freshwater Ecology	Agreed	It is agreed that sufficient baseline information is presented in the ES to inform the impact assessment for European Protected Species (bats, otters, great crested newts), and national fully protected species (water voles) which may be affected as a result of the Dalar Hir proposals.		No further action

Environmental Statement Volumes F – Dalar Hir Park and Ride							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW84	Assessment	Impacts on protected species	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-418 8.10 Park and Ride sub-CoCP	Ongoing	NRW considers that, subject to detailed mitigation measures being approved by the discharging authority in consultation with NRW, that the project is unlikely to be detrimental to the Favourable Conservation Status of protected species. Impacts on protected species may be subject to species derogation licences from NRW.	Horizon considers that the proposed mitigation measures, set out in sections 11.3 – 11.5 inclusive in APP-418 and section 11.2 of APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW85	Mitigation	Mitigating impacts on protected species	APP-187 6.4.53 ES Volume D – WNDA Development App D9-20 – Draft Bat Mitigation Licence APP-188 6.4.54 ES Volume D WNDA Development App D9-21 – Draft Great Crested Newt Licence APP-335 6.7.32 ES volume G – A5025 Off-line Highway Improvements App G9-11 – A5025 Draft Great Crested Newt Mitigation Licence APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-418 8.10 Park and Ride sub-CoCP APP-029 3.1 Draft Development Consent Order	Ongoing	NRW does not agree that the monitoring proposals are appropriate to inform long-term management of the affected species. NRW agree that the outline mitigation measures identified in ES chapter D9 are appropriate but that detailed mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority, in consultation with NRW. NRW considers that the detailed landscape and habitat masterplan for the site will need to be approved by the discharging authority in consultation with NRW. The detailed masterplan will need to provide suitable habitat for GCNs and water voles following decommissioning of the site.	Horizon has agreed to amend the monitoring proposals and these will be included in the Park and Ride sub-CoCP (APP-418) which will be submitted at Deadline 2. The amendments will bring the monitoring proposals in line with discussions held with NRW during a teleconference on 14 th September 2018. Proposed mitigation measures are set out in sections 11.3 – 11.5 inclusive in APP-418, and section 11.2 of APP-414. DCO Requirement PR3 requires the Park and Ride facility to be constructed in accordance with the Approved Detailed Design Drawings. Any change to this must be in accordance with the principles set out in Volume 3 of the DAS and must be approved by IACC.	NRW to review amended CoCP and sub-CoCPs.
Protected landscapes							
NRW86	Assessment	Ynys Mon AONB	APP-275 6.6.10 ES Volume F - Park and Ride F10 - Landscape and visual	Agreed	It is agreed that the conclusions of the ES that the proposal is unlikely to affect the special qualities of the AONB		No further action
Flood risk							
NRW87	Baseline / Methodology / Modelling	Flood risk at Dalar Hir	APP-218 6.6.16 ES Volume F - Park and Ride App F8-1 - Dalar Hir - Flood Consequence Assessment	Agreed	It is agreed that the modelling undertaken is sufficient to inform the Flood Consequence Assessment. From the works undertaken on flood risk to the other receptors we would suggest that the modelling work reflects the existing and proposed situation. It is therefore suggested that the baseline / methodology / modelling is fit for purpose. The site is not modelled by NRW’s nationalised modelling technique (JFlow) for catchments in excess of 3km²).		No further action

Environmental Statement Volumes F – Dalar Hir Park and Ride							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW88	Assessment / Modelling	Flood risk at Dalar Hir	APP-281 6.6.16 ES Volume F - Park and Ride App F8-1 - Dalar Hir - Flood Consequence Assessment	Ongoing	NRW has significant concerns that the proposal will result in unacceptable increased flood risk. NRW is awaiting additional information from Horizon to address this matter	The proposals at Dalar Hir have been amended and additional modelling undertaken. The results of the additional modelling were presented to NRW at a flood risk meeting on 14 th September 2018 where it was agreed, subject to NRW's review of the revised FCA, that the flood risk was acceptable. The amended Dalar Hir FCA will be submitted to the Examining Authority at Deadline 2.	NRW to review the amended Dalar Hir FCA.
Pollution prevention / environmental management							
NRW89	Baseline / Methodology / Modelling	Pollution prevention	APP-273 6.6.8 ES Volume F - Park and Ride F8 - Surface water and groundwater	Agreed	It is agreed that there is sufficient information to inform the impact assessment and mitigation measures required in relation to pollution prevention / environmental management.		No further action
NRW90	Assessment	Pollution prevention	APP-274 6.6.9 ES Volume F – Park and Ride F9 – Terrestrial and freshwater ecology APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-418 8.10 Park and Ride sub-CoCP	Ongoing	NRW do not agree with the conclusions of the ES in relation to water quality impacts (see comments above relating to Llyn Traffwl SSSI (SOCG issue NRW80). NRW do not agree that the foul drainage connection to the nearby watercourse will have insignificant impacts on water quality. NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority in consultation with NRW.	Please see response to SOCG issue NRW80. As mentioned in the Wylfa Newydd CoCP (APP-414), and the Park and Ride sub-CoCP (APP-418) secure Horizon's commitment to mitigating construction-related environmental effects, including protected species, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the 'water management strategy' contained in the Wylfa Newydd CoCP and the Park and Ride sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	Horizon and NRW to continue discussions.
NRW91	Mitigation	Pollution prevention	APP-274 6.6.9 ES Volume F – Park and Ride F9 – Terrestrial and freshwater ecology	Ongoing	NRW do not agree that there is mitigation specified to mitigate water quality impacts (see comments on SSSI above, SOCG issue NRW80).	Please see response to SOCG issue NRW80	Horizon and NRW to continue discussions.
Contaminated land / groundwater							

Environmental Statement Volumes F – Dalar Hir Park and Ride							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW92	Assessment	Contaminated land / groundwater	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW agree with the conclusions of the ES. NRW consider that through the agreement of detailed mitigation measures, the construction impacts of the proposal will be managed appropriately.	Horizon considers that the proposed mitigation measures, set out in section 9.4 of APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW93	Mitigation	Contaminated land / groundwater	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in section 9.4 of APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.

Table 4-5 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within Environmental Statement Volume G – A5025 Offline Highways Improvements

Environmental Statement Volumes G – A5025 Offline Highways Improvements							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
HRA							
NRW94	Assessment	SAC / SPA / Ramsar sites in Wales	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW consider that, subject to the agreement of detailed mitigation measures the proposed A5025 highway improvements is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.	Horizon considers that the proposed mitigation measures, set out in sections 11 of APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW95	Mitigation	SAC / SPA / Ramsar sites in Wales	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority, in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in sections 11 of APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
SSSI							
NRW96	Assessment	Beddmanarch-Cymyran SSSI	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW consider that, subject to the agreement of detailed mitigation measures, the proposed A5025 highway improvements is unlikely to damage the SSSI interest.	Horizon considers that the proposed mitigation measures, set out in sections 11 of APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW97	Mitigation	Beddmanarch-Cymyran SSSI	APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority, in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in sections 11 of APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
WFD							
NRW98	Assessment	WFD Waterbodies	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	NRW agree that the proposed A5025 Highway Improvements is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.		No further action

Environmental Statement Volumes G – A5025 Offline Highways Improvements							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
European and Nationally protected species							
NRW99	Baseline / Methodology / Modelling	Baseline surveys	APP-312 6.7.9 ES Volume G - A5025 Off-line Highway Improvements G9 - Terrestrial and freshwater ecology	Agreed	It is agreed that sufficient baseline information is presented in the ES to inform the impact assessment for European Protected Species (bats, otters, great crested newts), and national fully protected species (water voles) which may be affected as a result of the A5025 Highway Improvements.		No further action
NRW100	Assessment	Impacts on protected species	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW consider that, subject to the agreement of detailed mitigation measures in consultation with NRW, that the project is unlikely to be detrimental to the Favourable Conservation Status of protected species. Note, impacts on protected species may be subject to species derogation licences from NRW	Horizon considers that the proposed mitigation measures, set out in sections 11.3 – 11.7 inclusive in APP-420 and section 11.2 of APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW101	Mitigation	Mitigating impacts on protected species	APP-187 6.4.53 ES Volume D – WNDA Development App D9-20 – Draft Bat Mitigation Licence APP-188 6.4.54 ES Volume D WNDA Development App D9-21 – Draft Great Crested Newt Licence APP-335 6.7.32 ES volume G – A5025 Off-line Highway Improvements App G9-11 – A5025 Draft Great Crested Newt Mitigation Licence APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP APP-029 3.1 Draft Development Consent Order	Ongoing	NRW does not agree that the monitoring proposals are appropriate to inform long-term management of the affected species. [Note – awaiting note updating Horizon’s monitoring proposals to address this issue – should then be agreed] NRW agree that the outline mitigation measures identified in ES chapter G9 are appropriate and that detailed mitigation measures will need to be set out in the Sub-CoCP and approved by the discharging authority in consultation with NRW. NRW agree that the detailed landscape and habitat masterplan for the site will need to be agreed by the discharging authority in consultation with NRW. The detailed masterplan will need to provide suitable habitat for GCNs and water voles following decommissioning of the site.	Horizon has agreed to amend the monitoring proposals and these will be included in the A5025 Off-line Highway Improvements sub-CoCP (APP-420) which will be submitted at Deadline 2. The amendments will bring the monitoring proposals in line with discussions held with NRW during a teleconference on 14 th September 2018. Proposed mitigation measures are set out in sections 11.3 – 11.7 inclusive in APP-420, and section 11.2 of APP-414. DCO Requirement OH2 requires the Park and Ride facility to be constructed in accordance with the Approved Detailed Design Drawings. DCO Requirement OH3 requires any change to this to be in accordance with the principles set out in Volume 3 of the DAS and these must be approved by IACC.	NRW to review amended CoCP and sub-CoCPs.
Protected landscapes							
NRW102	Baseline / Methodology / Modelling / Assessment / Mitigation	Ynys Mon AONB	APP-313 6.7.10 ES Volume G - A5025 Off-line Highway Improvements G10 - Landscape and visual	Agreed	NRW agree with the conclusions of the ES that the proposal is unlikely to affect the special qualities of the AONB		No further action
Flood risk							

Environmental Statement Volumes G – A5025 Offline Highways Improvements							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW103	Assessment / Modelling	Breach modelling at Valley		Ongoing	NRW does not agree with the modelling undertaken. The tidal breach scenario has not been modelled. NRW advise that should a failure (breach) occur to the defences affording tidal protection to the area, then existing properties (and land) may be inundated to deeper flooding following the development in Section 1.	Horizon have undertaken further modelling to show the flood risk for a breach scenario and have shared the results with NRW at a meeting on the 14 th September 2018. The modelling results have been submitted to NRW in the form of a technical note for their review and consideration.	NRW to review the technical note on the Valley breach flood risk modelling.
NRW104	Assessment / Modelling	Flooding of third party land at Llanfachraeth	APP-323 6.7.20 ES Volume G – A5025 Off-line Highway Improvements App G8-1 – A5025 Off-line Highway Improvements – Flood Consequences Assessment	Ongoing	The proposal is not compliant with TAN15 in terms of flood risk. Mitigation measures have either not been provided, are unclear, or no evidence has been provided to demonstrate that the proposal would comply with TAN15. We advise that the FCA is unacceptable to NRW in terms of addressing the flood risks of the proposal.	The modelling that Horizon have undertaken (APP-323) shows that there is predicted to be a small increase (+0.01m to +0.09m) under fluvial flooding scenarios (APP-323, table G8-01.19) to an agricultural field but no impact (0.00m) on an existing property. Discussions with the landowner about possible compensation are ongoing.	Horizon and NRW to continue discussions.
Pollution prevention / environmental management							
NRW105	Baseline / Methodology / Modelling	Pollution prevention / environmental management	APP-310 6.7.7 ES Volume G - A5025 Off-line Highway Improvements G7 - Soils and geology	Agreed	NRW agree that there is sufficient information to inform the impact assessment and mitigation measures required in relation to pollution prevention / environmental management		No further action
NRW106	Assessment	Pollution prevention / environmental management	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW agree with the conclusions of the ES. NRW consider that, through the agreement of detailed mitigation measures, the construction and operational impacts of the proposal will be managed appropriately.	Horizon considers that the proposed mitigation measures, set out in APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW107	Mitigation	Pollution prevention / environmental management	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority, in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
Contaminated land / groundwater							
NRW108	Assessment	Contaminated land / groundwater	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW agree with the conclusions of the ES. NRW considers that, through the agreement of detailed mitigation measures, the construction impacts of the proposal will be managed appropriately.	Horizon considers that the proposed mitigation measures, set out in APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW109	Mitigation	Contaminated land / groundwater	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-420 8.12 A5025 Off-line Highway Improvements sub-CoCP	Ongoing	NRW agree that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority, in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in APP-420 and APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.

Table 4-6 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within Environmental Statement Volume H – Logistics Centre

Environmental Statement Volumes H – Logistics Centre							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
HRA							
NRW110	Assessment	SAC / SPA / Ramsar sites in Wales	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that the proposed Logistics Centre is unlikely to adversely affect any SAC, SPA or Ramsar site in Wales.		No further action
SSSI							
NRW111	Assessment	SSSIs	APP-363 6.8.9 ES Volume H - Logistics Centre H9 - Terrestrial and freshwater ecology	Agreed	It is agreed that the proposed Logistics Centre is unlikely to damage any SSSIs.		No further action
WFD							
NRW112	Assessment	WFD Waterbodies	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that the proposed Logistics Centre is not likely to result in deterioration of any quality elements and that the works would not prevent any of the WFD water bodies from achieving Good Status or Potential.		No further action
European and Nationally protected species							
NRW113	Assessment	Impacts on protected species	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW agree with the conclusions of the ES. NRW consider that the proposed works, through the agreement of detailed and routine mitigation measures, that the proposal will not be detrimental to the Favourable Conservation Status of protected species.	Horizon considers that the proposed mitigation measures, set out in section 11.2 of APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW114	Mitigation	Protected species	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in section 11.2 of APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
Protected landscapes							
NRW115	Assessment	Ynys Mon AONB	APP-364 6.8.10 ES Volume H - Logistics Centre H10 - Landscape and visual	Agreed	It is agreed that the proposed Logistics Centre is unlikely to affect the special qualities of the AONB		No further action
Flood risk							
NRW116	Assessment	Flood risk	APP-362 6.8.8 ES Volume H - Logistics Centre H8 - Surface water and groundwater	Agreed	NRW agree that the site is not within Zone C1 / C2, is not at risk of fluvial or tidal flooding, and will not result in increased fluvial flooding elsewhere.		No further action
Pollution prevention / environmental management							

Environmental Statement Volumes H – Logistics Centre							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW117	Assessment	Pollution prevention	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW agree with the conclusions of the ES. NRW consider that, through the agreement of detailed mitigation measures, the construction and operational impacts of the proposal will be managed appropriately.	Horizon considers that the proposed mitigation measures, set out in APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW118	Mitigation	Pollution prevention	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority in consultation with NRW, as a DCO Requirement.	Horizon considers that the proposed mitigation measures, set out in APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
Contaminated land / groundwater							
NRW119	Assessment	Contaminated land	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW agree with the conclusions of the ES. NRW consider that, through the agreement of detailed mitigation measures, the construction impacts of the proposal will be managed appropriately.	Horizon considers that the proposed mitigation measures, set out in APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW120	Mitigation	Contaminated land	APP-414 8.6 Wylfa Newydd Code of Construction Practice	Ongoing	NRW consider that detailed mitigation measures will need to be specified in the detailed Sub-CoCP and approved by the discharging authority in consultation with NRW.	Horizon considers that the proposed mitigation measures, set out in APP-414, are sufficient.	NRW to review amended CoCP and sub-CoCPs.

Table 4-7 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within the Shadow Habitats Regulations Assessment

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
HRA – Anglesey Terns SPA (& Cemlyn Bay SSSI tern features)							
NRW121	Baseline / Methodology / Modelling	Noise and visual disturbance	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Do not agree	NRW do not consider that there is sufficiently robust information / literature / evidence available on the sensitivity of Sandwich terns to similar disturbance as proposed by the project to be able to conclude, beyond reasonable scientific doubt, that birds won't be disturbed.	Horizon's position is that the best available science with respect to the potential effect of the Project on all tern species has been used to inform the Shadow HRA and that this information is sufficiently robust. It includes all relevant literature and disturbance data from two years of monitoring the Cemlyn Bay colony. Horizon is confident in its conclusion that an adverse effect on the integrity of the Anglesey Terns SPA would not arise.	No further action
NRW122	Baseline / Methodology / Modelling	Tern foraging	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment	Agreed	It is agreed that sufficient baseline information on fish (as prey items) has been collected. It is agreed that sufficient information on tern foraging (through tern tracking surveys) has been collected.		No further action
NRW123	Baseline / Methodology / Modelling	Supporting habitat	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that sufficient baseline information on supporting habitat has been presented in the ES to inform the assessments.		No further action

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW124	Baseline / Methodology / Modelling	Coastal processes effects on the shingle ridge	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment APP-218 6.4.82 ES Volume D – WND A Development App D12-3 Wylfa Newydd Main Site Wave Modelling Report	Ongoing	Impacts on the Esgair Gemlyn shingle ridge may potentially affect the functioning of the lagoon and the islands which the terns use for breeding. See SOCG issue NRW132 below in relation to modelling impacts on Esgair Gemlyn (Cemlyn Bay SAC / SSSI)	Since the submission of the DCO application, Horizon have undertaken further modelling assessments which couple the model for the worst case 99%ile NE wave scenario with the coastal processes model to identify any impacts to Esgair Gemlyn. The additional information was sent to NRW on 21 st September 2018 and was discussed at a meeting on the 27 th September 2018. This information was submitted to the Examining Authority at Deadline 2. The results show that the bed shear stresses predicted to arise due to the marine works would not change sufficiently to cause an increase in sediment mobilisation, which could have an adverse impact on Esgair Gemlyn. Moreover, there is not predicted to be a significant change in the energetics of the water body within / adjacent to Cemlyn lagoon. Consequently, the functioning of the lagoon and islands that terns use for breeding would not be adversely affected.	NRW to consider the results of the additional modelling.
NRW125	Assessment	Noise and visual disturbance	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Do not agree	NRW considers that the evidence and mitigation presented in the Shadow HRA does not demonstrate that disturbance associated with the construction phase will not have adverse effects on the Sandwich, arctic and common tern populations at the Cemlyn colony. NRW considers that adverse effects on the SPA (relating to sensitivity of Sandwich, arctic and common terns to construction disturbance) cannot be ruled out.	Horizon's position is that the best available evidence has been used and a high degree of conservatism has been built into the Shadow HRA (e.g. regarding the generation of construction noise). This demonstrates beyond reasonable scientific doubt that no adverse effect on the integrity of the Anglesey Terns SPA, including the populations of Sandwich, Arctic and common terns, would arise because of the Project. Moreover, the mitigation proposed includes measures that would result in works being amended if disturbance reactions are observed.	No further action

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW126	Assessment	Tern foraging	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Ongoing	Following further consideration of available data, NRW consider that there will be no adverse effects as a result of impacts on prey items (fish). NRW consider detailed monitoring and mitigation will need to be set out in the CoOP and approved by the discharging authority.	Wylfa Newydd CoCP (APP-414) and the Marine Works sub-CoCP (APP-416) secure Horizon's commitment to mitigating construction-related environmental effects, including fish, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the 'landscape and ecology management strategy' contained in the Wylfa Newydd CoCP and the Marine Works sub-CoCP contains sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	NRW to review amended CoCP and sub-CoCPs.
NRW127	Assessment	Supporting habitat	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that the Wylfa Newydd Project will not have adverse effects on supporting habitat of the Anglesey Terns SPA.		No further action
NRW128	Mitigation	Noise and visual disturbance	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Ongoing	NRW do not agree that the mitigation measures specified demonstrates that measures can be delivered to avoid adverse effects on site integrity.	Horizon has had further constructive discussion with NRW on each element of the mitigation relevant to potential noise and visual disturbance to the Anglesey Terns SPA. Horizon understands NRW's position to be that the proposed mitigation would reduce the potential effect on the breeding tern population, but NRW has a residual concern. Horizon's position is that the mitigation proposed offers sufficient certainty for a conclusion to be reached that an adverse effect on site integrity would not arise. In short, Horizon plans to monitor noise levels at the colony during breeding seasons and maintain noise levels on site that do not cause disturbance. Regarding tern foraging, the WNDA boundary is more than 500m at its closest point to the nesting islands within Cemlyn Lagoon. A considerable body of evidence from the scientific literature suggests that visual disturbance from construction activities is highly unlikely at this distance. The effects of the works on tern foraging, therefore, would be insignificant and do not require mitigation.	Horizon and NRW to continue discussions.

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW129	Mitigation	Tern foraging	APP-421 8.13 Wylfa Newydd Code of Operational Practice	Ongoing	The Code of Operational Practice (CoOP) proposes to monitor the entrapment of fish. NRW consider that detailed monitoring proposals, which will be used to optimise the mitigation, should be set out in a detailed CoOP and approved by the discharging authority, in consultation with NRW.	Horizon considers that the proposals for monitoring fish entrapment in the cooling water intake, set out in paragraph 14.2.1 of APP-421, are sufficient.	Horizon and NRW to continue discussions.
HRA – Dee Estuary SPA							
NRW130	Assessment	Terns	APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Ongoing	Sandwich terns that breed at Cemlyn could also form part of the Passage Sandwich Tern feature of the Dee Estuary SPA. Abandonment of the Cemlyn population as a result of Wylfa Newydd project could therefore impact the conservation objective for the Dee Estuary SPA which is to maintain the population of passage Sandwich terns at the 5-year peak mean population of 957 individuals from 1995 – 1999. NRW therefore advises that an adverse effect on site integrity cannot be ruled out.	Given Horizon's conclusion with respect to the Anglesey Terns SPA (i.e. no adverse effect on integrity), Horizon's view is that an adverse effect on the Dee Estuary SPA can be ruled out. Notwithstanding this position, Horizon considers that NRW's concerns relating to the Dee Estuary SPA are directly linked to the effects at the Cemlyn Bay tern colony site and that, provided effects at Cemlyn Bay can be mitigated or (if required) compensated, there are no further requirements in relation to the Dee Estuary SPA.	Horizon and NRW to continue discussions.
HRA – Cemlyn Bay SAC / SSSI							
NRW131	Assessment	Air quality	N / A	Ongoing	For air quality effects on the lagoon and vegetated shingle feature of the SAC / SSSI please see SOCG issue NRW7 above in the Air Quality section.		See issue NRW7.
NRW132	Baseline / Methodology / Modelling	Coastal processes	APP-131 6.4.12 ES Volume D – WNDA Development D12 – Coastal Processes and Coastal Geomorphology APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Ongoing	NRW advises that Esgair Gmlyn, which is critical to the functioning of the lagoon and in supporting the shingle ridge vegetation, may be affected by the marine structures. Further information is required with respect to coastal processes modelling to understand whether the Wylfa Newydd project may cause an adverse effect on Esgair Gmlyn. There are still outstanding issues as follows: No coupled wave-bed shear stress modelling of a North West 99%ile storm event to show morphological impacts on Esgair Gmlyn; There are protective structures (rock foundation overlain by concrete mats) surrounding the waste water outfall pipe (adjacent the western breakwater) which will be in place for the length of the construction phase. The impact of this structure has not been modelled and assessed. There may also be an effect from the cooling water discharge on the hydrodynamics. We refer you to section 7.10 in NRW's Written Representations.	With regard to the coupled wave-bed shear stress model, please see Horizon's Position for SOCG issue NRW124. The issue of the protective rock structures surrounding the waste water outfall pipe was discussed with NRW in a meeting on the 27 th September 2018. The rock structure would be approximately 1m high and 6m wide and it was agreed that it was too small to include in the model as any effect it might have on wave conditions would be masked by the effect of the breakwater. The effects of cooling water discharge on the hydrodynamics, in light of the revised modelling, was also discussed on the 27 th September 2018. It was agreed that a revised memorandum would be submitted to NRW which provided additional narrative as to why the conclusions of the Shadow HRA and ES remain valid.	NRW to consider the results of the additional modelling.

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW133	Baseline / Methodology / Modelling	Terrestrial water quality	Groundwater APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Ongoing	The western half of Mound E drains into Cemlyn lagoon (feature of the SSSI / SAC) via Nant Cemlyn. Horizon propose to pump run-off from the mound (which will include elevated suspended solids) into the Afon Cafnan but propose to restore drainage into Nant Cemlyn when the mound is re-vegetated. NRW does not agree that sufficient baseline water quality information (including on suspended solids) is available for Nant Cemlyn. This information will be needed in order to inform when run-off from Mound E is of sufficient quality that it can be re-connected to Nant Cemlyn. We refer you to section 7.10 in NRW's Written Representations.	It is proposed (as per the Shadow HRA, APP-050 and APP-051) that runoff from Mound E would only be discharge to Nant Cemlyn when the slope of Mound E is adequately vegetated to maintain the water quality of the waterway. Horizon acknowledge NRW's concern and have agreed that monitoring Nant Cemlyn and the quality of the discharged water would be a more appropriate indicator of when to allow discharge to Nant Cemlyn. Paragraph 10.2.10 of the Main Power Station Site sub-CoCP (APP-415) will be amended to include a written scheme of baseline water quality monitoring in Nant Cemlyn to be agreed with NRW. The amended APP-415 will be submitted to the Examination at Deadline 2.	Baseline monitoring proposals for Nant Cemlyn to inform the threshold at which the discharge of runoff to Nant Cemlyn would be agreed.
NRW134	Baseline / Methodology / Modelling	Hydrology and hydrogeology	APP-128 6.4.9 ES Volume D – WND A Development D9 – Terrestrial and Freshwater Ecology APP-127 6.4.8 ES Volume D – WND A Development D8 – Surface Water and Groundwater APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	The Wylfa Newydd project will affect groundwater and surface water flows into Cemlyn lagoon. It is agreed that sufficient information is available to inform the impact assessments.		No further action
NRW135	Assessment	Coastal processes	APP-127 6.4.8 ES Volume D – WND A Development D8 – Surface Water and Groundwater APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Ongoing	NRW does not agree that adverse effects on site integrity of Cemlyn Bay SAC / SSSI can be ruled out. Further information is required with respect to coastal processes modelling, as identified above, in order to inform the assessments in the Environmental Statement and Shadow HRA.	As described above in SOCG issues NRW132 and NRW124, further modelling has been undertaken to address NRW's concerns about the integrity of Esgair Gemlyn. The results confirm the conclusions set out in the ES and Shadow HRA. In this context adverse effects on the integrity of the Cemlyn Bay SAC can be ruled out.	NRW to confirm the additional modelling is sufficient.
NRW136	Assessment	Terrestrial water quality	APP-127 6.4.8 ES Volume D – WND A Development D8 – Surface Water and Groundwater APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Ongoing	NRW does not agree that adverse effects on site integrity of Cemlyn Bay SAC / SSSI can be ruled out. Further information is required to demonstrate that Cemlyn Lagoon will not be affected by impacts on water quality due to surface water run-off from Mound E - see 'Mitigation' below.	See Horizon's response to SOCG issue NRW133 above.	See issue NRW133
NRW137	Assessment	Hydrology and hydrogeology	APP-127 6.4.8 ES Volume D – WND A Development D8 – Surface Water and Groundwater APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that impacts on hydrology and hydrogeology will not affect the functioning of the lagoon feature and that there will not be adverse effect on site integrity as a result of this pathway.		No further action

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW138	Mitigation	Coastal processes	N / A	Ongoing	Ongoing – subject to updated assessments to be submitted by HNP.	As described above in SoCG issues NRW124 and NRW132, further modelling has been undertaken to address NRW's concerns about the integrity of Esgair Gemlyn. NRW are currently reviewing the additional information which is also submitted to the Examining Authority at Deadline 2.	NRW to consider the additional information.
NRW139	Mitigation	Terrestrial water quality	APP-6.4.33 ES Volume D – WNDA Development App D8-7 – Summary of Preliminary Design for Construction Surface Water Drainage	Ongoing	The project design has been amended so that no construction water discharge is now proposed to be discharged into Nant Cemlyn via discharge location E1 until vegetation has been re-established on the western slope of Mound E. Further clarity is required in relation to the mitigation measures detailed in 7.4.5 of the Shadow HRA and in relation to the drainage proposed on and around Mound E. It appears to NRW that pumping capacity is limited and that in extreme events some runoff will enter Nant Cemlyn; clarification is required on the level and frequency of such occurrence.	In addition to the information set out in Horizon's Position to SOCG issue NRW133 above, Horizon can confirm that the Mound E drainage system is designed to accommodate a 1 in 30 year (plus a 20% uplift for climate change) event; and, although the Mound has been designed to encourage water to flow towards the drainage ponds (which are designed to accommodate a 1 in 100 year (plus 20%) event), the drains would overtop in the face of an event larger than 1 in 30 (plus 20% uplift) years, and some of this water (not diverted to the ponds or soaked away by the 15m vegetated buffer strip) would reach the Nant Cemlyn.	NRW to confirm proposals are sufficient.
HRA – Marine mammal features of Welsh SACs (including North Anglesey Marine SCI)							
NRW140	Baseline / Methodology / Modelling	Disturbance / Injury / Mortality Fish Prey Supporting habitat	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Agreed	It is agreed that sufficient information has been collected and / or is available to inform the assessment of impacts as a result of the construction and operation of Wylfa Newydd.		No further action
NRW141	Assessment	Disturbance / Injury / Mortality Fish Prey Supporting habitat	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that, subject to the implementation of detailed mitigation measures, the construction and operation of Wylfa Newydd will not have adverse effects on site integrity of SACs with marine mammal features in Welsh waters.	Horizon considers that the mitigation measures for marine mammals, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Marine Works sub-CoCP (APP-416), are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW142	Mitigation	Disturbance / Injury / Mortality	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be set out in the Marine Works Sub-CoCP and approved by the discharging authority in consultation with NRW.	Horizon considers that the mitigation measures for marine works, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Marine Works sub-CoCP (APP-416), are sufficient.	NRW to review amended CoCP and sub-CoCPs.
HRA – Chough features of Welsh SPAs (including Glannau Ynys Gybi SPA)							
NRW143	Baseline / Methodology / Modelling	Breeding chough Foraging chough	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that sufficient information is presented in the ES and supporting information to inform the assessment of impacts as a result of the construction and operation of Wylfa Newydd.		No further action

Shadow Habitats Regulations Assessment (HRA)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW144	Assessment / Mitigation	Breeding chough Foraging chough	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that the construction and operation of Wylfa Newydd will not have adverse effects on site integrity of chough SPAs in Wales.		No further action
HRA - Other European Sites in Wales							
NRW145	Assessment		APP-050 / 051 5.2 Shadow Habitats Regulations Assessment Report	Agreed	It is agreed that the construction and operation of Wylfa Newydd will not have adverse effects on site integrity of other SPAs, SACs and Ramsar sites in Wales i.e. other than those specifically referred to above.		No further action

Table 4-8 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within the Water Framework Directive compliance assessment

Water Framework Directive (WFD)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
WFD – Skerries coastal water body							
NRW146	Baseline / Methodology / Modelling	Waterbody / Quality Elements	APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment APP-444 8.26 Water Framework Directive Compliance Assessment	Ongoing	NRW agree that sufficient baseline and / or modelling information is available to inform the assessment of impact on The Skerries Coastal Water Body in terms of the hydromorphological quality element. NRW do not agree that sufficient baseline and / or modelling information is available to inform the assessment of impact on The Skerries Coastal Water Body in terms of the biological quality element. Further information is required in terms of operational water discharge. NRW note that for the 23°C absolute temperature target mixing zone, the hydrodynamic model uses a background temperature of 16.44°C. The applicant has produced further statistical modelling (WYL-PD-PAC-REP-00012, version 2.0) using more up-to-date data (1993 to 2013 or 2003-2012) where the 98%ile is 16.6°C or 16.7°C, respectively. We note that using the more up to date data could impact on the area extent calculated for absolute temperature / mixing zone. See section 7.4 of NRW's Written Representations.	SOCG issues NRW39 and NRW50 present information associated with this issue. Where NRW identifies specific requirements, Horizon is collating this material and will submit it to NRW and the DCO examination at Deadline 6 for consideration.	Horizon and NRW to continue discussions.
NRW147	Assessment	Hydromorphological Quality Elements	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that the WFD Compliance Assessment accurately concludes that the hydromorphological conditions quality element may deteriorate from high to good status.		No further action

Water Framework Directive (WFD)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW148	Assessment	Biological Quality Elements (benthic invertebrates)	APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment APP-444 8.26 Water Framework Directive Compliance Assessment	Ongoing	NRW does not agree with the conclusions of the WFD Compliance Assessment. NRW advise that further information is required to demonstrate that benthic invertebrates would not be at risk of deterioration.	Please see Horizon's response to SOCG issues NRW39 and NRW50.	Horizon and NRW to continue discussions.
NRW149	Mitigation	Waterbody / Quality Elements	APP-414 8.6 Wylfa Newydd Code of Construction Practice APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be set out in the detailed Marine Works Sub-CoCP and approved by the discharging authority in consultation with NRW.	Horizon considers that mitigation measures for marine works, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Marine Works sub-CoCP (APP-416), are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW150	Article 4(7) Derogation Information	Hydromorphological Quality Elements	APP-445 8.27 Water Framework Directive Information to Support Article 4(7) Derogation	Ongoing	NRW agrees that, for this quality element, there will be a need for a derogation under Article 4(7) of the WFD. NRW does not agree that sufficient information is provided in the Article 4(7) Information report. Further information (including quantitative) is required on technical feasibility and disproportionate costs. Information will also be required with regard to mitigation proposed as part of the marine ecological enhancements proposals.	Horizon is progressing work to feed into the development of a derogation under Article 4(7) of the WFD and this will be submitted into the Examination at Deadline 6. This work relates to test (a) all practicable mitigation measures and test (d) significantly better environmental options. The scope of this work has been shaped by discussions held between Horizon and NRW. Discussions of scope focused on how best to present material when considering technical feasibility, disproportionate cost.	Additional information to support Article 4(7) derogation.
NRW151	Article 4(7) Derogation Information	Biological Quality Elements (benthic invertebrates)	APP-445 8.27 Water Framework Directive Information to Support Article 4(7) Derogation	Ongoing	Any requirement for Article 4(7) derogation will be confirmed following provision of additional information to inform the WFD Compliance Assessment (see SOCG issue NRW150 above).	Following discussions with NRW at a meeting on the 10 th September, Horizon are currently preparing additional information to supplement the Article 4(7) derogation report. This will be provided to NRW and submitted to the DCO Examination at Deadline 6.	Additional information for the Article 4(7) derogation report
WFD – Anglesey North coastal water body							
NRW152	Baseline / Methodology / Modelling	Waterbody / Quality Elements	N / A	Ongoing	The Anglesey North WFD water body is currently failing for mercury. Further information is required to assess the impact on load and distribution of additional mercury due to the cooling water discharge. The application does not provide an assessment of the impact of the cooling water discharge upon coastal processes. It is unclear whether the water discharge velocities and volumes over the water column could have a detectable change on the local dynamics; stratification, scour and sediment movement for an appreciation of impact. See section 7.4 of NRW's Written Representations.	Horizon has received more detailed feedback from NRW regarding the H1 assessment through the Environmental Permitting process. Horizon continues to liaise with NRW to address concerns regarding the H1, including consideration of mercury. SOCG issues NRW39 and NRW50 present information associated with this issue.	Additional information requirements as specified by NRW.

Water Framework Directive (WFD)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW153	Assessment	Waterbody / Quality Elements	WYN-JAC-PAC-TEC-00027 – Supplementary Information on Coastal Processes to Support Wylfa Newydd EIA and Shadow HRA	Ongoing	NRW does not agree with the conclusion of the WFD Compliance Assessment that there is no risk of deterioration to the water body. The issues identified above will need to be addressed to inform the assessment.	Please see Horizon's response to SOCG issues NRW39 and NRW50.	Additional information requirements as specified by NRW.
NRW154	Mitigation	Waterbody / Quality Elements	APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be set out in the detailed Marine Works Sub-CoCP and approved by the discharging authority in consultation with NRW.	Horizon considers that the mitigation measures for marine works, secured through the Wylfa Newydd Code of Construction Practice (APP-414) and Marine Works sub-CoCP (APP-416), are sufficient.	NRW to review amended CoCP and sub-CoCPs.
NRW155	Article 4(7) Derogation Information	Waterbody / Quality Elements	APP-445 8.27 Water Framework Directive Information to Support Article 4(7) Derogation	Ongoing	Any requirement for Article 4(7) derogation will be confirmed following provision of additional information to inform the WFD Compliance Assessment (see above).	Horizon notes that NRW and the Secretary of State, as the competent authorities in respect of applications relating to the Wylfa Newydd Project, are ultimately responsible for assessing WFD compliance, including in respect of any Article 4(7) derogation. In order to assist this process, Horizon has prepared the Water Framework Directive Compliance Assessment (APP-444) and Information to Support Article 4(7) Derogation (APP-445). Horizon continues to liaise with NRW to ensure that materials can be made available to inform the assessment to inform this work.	Additional information requirements as specified by NRW and / or PINS.
WFD – Ynys Môn minor ground water body							
NRW156	Baseline / Methodology / Modelling	Waterbody / Quality Elements	APP-158 6.4.30 ES Volume D – WNDA Development App D8-5 – Tre'r Gof Hydroecological Assessment	Ongoing	NRW does not agree with the Conceptual Site Model for Tre'r Gof SSSI. We also note that the impacts of the outfall tunnel construction dewatering could be significant and has not been included in the assessments to date. We agree with the overall outcomes of the WFD Compliance Assessment, but insufficient information is available to inform assessment of all pathways, which has implications for monitoring / mitigation and the Article 4(7). See section 7.4 of NRW's Written Representations.	Horizon considers that its Conceptual Site Model for Tre'r Gof SSSI, and groundwater in general, is robust. However, actions described for SOCG issue NRW20 explain how Horizon has worked to accommodate NRW's position by progressing further work.	Horizon to prepare and NRW to review the Hydrogeological Impact Assessment expected to be submitted in February.
NRW157	Assessment	Saline intrusion	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that the WFD Compliance Assessment accurately concludes that there is potential for the Wylfa Newydd Project (including dewatering effects) to cause a deterioration in the Ynys Môn Secondary groundwater body due to saline intrusion. This effect is relevant to both quantitative and chemical tests for saline intrusion.		No further action
NRW158	Assessment	Groundwater Dependent Terrestrial Ecosystem (GWDTE)	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that the Wylfa Newydd Project could cause deterioration in the status of the Ynys Môn Secondary groundwater body with respect to the effects on Tre'r Gof Site of Special Scientific Interest (SSSI) GWDTE.		No further action
NRW159	Mitigation	Waterbody / Quality Elements	APP-416 8.8 Marine Works sub-CoCP	Ongoing	NRW consider that detailed mitigation measures will need to be set out in the detailed Sub-CoCPs and agreed in consultation with NRW. NRW do not agree that sufficient mitigation and monitoring have been proposed.	As noted in SOCG issue NRW20, Horizon have agreed that a proposal for groundwater monitoring and mitigation will be submitted, as part of the hydrogeological impact assessment (HIA), to NRW and the DCO examination in February 2019 for consideration.	Groundwater monitoring and mitigation proposals and feasibility study.

Water Framework Directive (WFD)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW160		Article 4(7) Derogation Information	APP-444 8.26 Water Framework Directive Compliance Assessment APP-445 8.27 Water Framework Directive Information to Support Article 4(7) Derogation	Ongoing	NRW agrees that for the Ynys Môn secondary groundwater body, there will be a need for derogation under Article 4(7) of the WFD. NRW does not agree that sufficient information is provided in the Article 4(7) Information report. Further quantitative information is required on technical feasibility and disproportionate costs	As noted in SOCG issue NRW20, Horizon have agreed that a proposal for groundwater monitoring and mitigation will be submitted to NRW and the DCO examination for consideration in February 2019. The proposal will include a feasibility study of all mitigation options and will provide a rationale for why certain mitigation options have been excluded. Horizon and NRW have discussed how best to approach considerations of technical feasibility and disproportionate cost. Horizon have extended the consideration of test (a) all practicable mitigation measures and test (d) significantly better environmental options, to include certain aspects where it consider the project to be compliant with the WFD (e.g. dewatering, cooling water discharge tunnels).	Groundwater monitoring and mitigation proposals and feasibility study.
WFD – Cemlyn Lagoon coastal water body							
NRW161	Assessment	Waterbody / Quality Element	APP-444 8.26 Water Framework Directive Compliance Assessment	Ongoing	NRW does not agree with the conclusions of the WFD Compliance Assessment that the Cemlyn Lagoon coastal water body is not at risk of deterioration. We refer you to SOCG issues NRW132, NRW133, and NRW135 above in relation to Cemlyn Bay SAC / SSSI.	SOCG issue NRW124, NRW132, NRW133 and NRW135 summarise Horizon's position with respect to Cemlyn Lagoon and Esgair Gernlyn. Horizon notes that NRW and the Secretary of State, as the competent authorities in respect of applications relating to the Wylfa Newydd Project, are ultimately responsible for assessing WFD compliance, including in respect of any Article 4(7) derogation. In order to assist this process, Horizon has prepared the Water Framework Directive Compliance Assessment (APP-444) and Information to Support Article 4(7) Derogation (APP-445). Horizon continues to liaise with NRW to ensure that materials can be made available to inform the assessment to inform this work.	See issues NRW124, NRW132, NRW133 and NRW135
WFD – Cemaes bathing water							
NRW162	Baseline / Methodology / Modelling	Water quality	APP-444 8.26 Water Framework Directive Compliance Assessment APP-132 6.4.13 ES Volume D – WND A Development D13 – The Marine Environment	Ongoing	NRW does not agree that the sewage modelling has been conducted appropriately. NRW advises that further modelling should be undertaken to examine how both the construction sewage discharge and site campus discharges (via the Dŵr Cymru Welsh Water (DCWW) sewage works) impact the Bathing Water. NRW also advises that further information is required regarding the suspended sediment modelling undertaken.	Horizon met NRW and DCWW on the 1st October 2018 where the need and requirements for a Bathing Water Compliance Assessment were discussed. The issue of Bathing Water Compliance was discussed with NRW and DCWW and the modelling will be reviewed. Advection dispersion modelling is proposed to predict the combined effects of the Horizon and DCWW discharges. This will be developed in conjunction with NRW and DCWW specialists and the results reviewed to examine the significance of the discharge on the Bathing Water. This work will be submitted to NRW and the DCO examination for consideration.	Additional modelling on bathing water quality.

Water Framework Directive (WFD)							
SOCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW163	Assessment	Water quality	APP-444 8.26 Water Framework Directive Compliance Assessment APP-132 6.4.13 ES Volume D – WNDA Development D13 – The Marine Environment	Ongoing	NRW does not agree with the conclusion that “there are no effects predicted on the bathing water at Cemaes, and that the Wylfa Newydd Project is considered to be compliant with the Bathing Water Directive”. NRW consider that discharges of elevated suspended solids and sewage discharges into the marine environment has the potential to affect Cemaes Bathing Water.	It is Horizon’s assertion, as presented in summary in the WFD Compliance Assessment, that the project will not risk further deterioration in bathing water quality. Horizon concludes that its assessment is conservative due to the assumptions incorporated into the modelling and assessment work. As noted with respect to SOCG issue NRW162, Bathing Water Compliance was discussed with NRW and DCWW and the modelling will be reviewed. This work will be submitted to NRW and the DCO examination for consideration.	Additional modelling on bathing water quality.
NRW164	Mitigation	Water Quality	APP-444 8.26 Water Framework Directive Compliance Assessment	Agreed	It is agreed that in the eventuality that additional modelling indicates there is a risk to Cemaes Bathing Water, as a result of the works proposed in the DCO application, then mitigation will need to be implemented.		Additional modelling on bathing water quality.

Table 4-9 Statement of Common Ground between the Natural Resources Wales and Horizon on issues contained within the draft Development Consent Order

Draft Development Consent Order							
SoCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW165	Baseline / Methodology / Modelling / Assessment / Mitigation	Marine jurisdiction	N / A	Ongoing	NRW is working with IACC, Welsh Government and Horizon to consider whether Horizon’s proposal is acceptable and if so, how the proposal could be practically implemented. NRW aims to reach agreement between parties prior to the end of Examination		NRW to continue discussions with relevant stakeholders.

Draft Development Consent Order							
SoCG ID	Baseline / Method / Modelling / Assessment / Mitigation	Issue	Evidence base	Status (Agree / Do not agree / Ongoing)	NRW Position	Horizon Position	Further actions required to progress discussion on the issue
NRW166	Baseline / Methodology / Modelling / Assessment / Mitigation	CoCPs / Sub-CoCPs, CoOP and DCO Requirements	APP-029 3.1 Draft Development Consent Order	Ongoing	NRW advise that there is insufficient detail in the submitted Sub-CoCPs to demonstrate that construction activities will be managed appropriately. NRW also consider there is insufficient detail in the CoOP. See sections 4 and 5 in NRW's Written Representations. NRW advise that if the DCO is made, that detailed Sub-CoCPs, and a detailed CoOP, will need to be approved by the discharging authority, as well as NRW as a statutory consultee, ahead of the relevant activities taking place. We would expect this to be secured as a DCO Requirement. This will require an additional DCO Requirement to be incorporated into the draft DCO.	The Code of Construction Practice (APP-414) and the sub-CoCPs (APP-415 to APP-420 inclusive) secure Horizon's commitment to mitigating construction-related environmental effects, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd Project on people, businesses and the natural and historical environment. Its Horizon's view that the Code of Construction Practice and the sub-CoCPs 'management strategies' contain sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as NRW. It is Horizon's opinion that the Code of Construction Practice and sub-CoCPs are sufficient but Horizon will continue to work with stakeholders throughout the process, which is likely to result in further refinement. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the examination process, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.	NRW to review amended CoCP and sub-CoCPs.

ANNEX D – NRW RESPONSE TO THE ‘NON-MATERIAL CHANGE’ CONSULTATION



Ein cyf/Our ref: CAS-68891-T8P2
Eich cyf/Your ref: HNP-HZDCO-PAC-LET-00001

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28 September 2018

Dear Sir/Madam,

PLANNING INSPECTORATE REFERENCE: EN10007

RE: WYLFA NEWYDD PROJECT – REQUEST FOR NON-MATERIAL CHANGE

1. INTRODUCTION

- 1.1. Thank you for your letter dated 14 August 2018 inviting Natural Resources Wales (NRW) to provide representations on Horizon Nuclear Power's (HNP) request for non-material change to the Development Consent Order (DCO) application.
- 1.2. We note that the consultation comprises the following documents:
 - Info Sheet: Proposed Changes to Blasting on Site (August 2018)
 - Technical Note: Request for Non-Material Change no.1 – Blasting Strategy (August 2018)
 - Info Sheet: Proposed changes to vessel movements (August 2018)
 - Technical Note: Request for Non-Material Change no.2 – Marine Vessel Movements (August 2018)
- 1.3. NRW provide the representations below with respect to the proposed request for non-material change in relation to blasting (comments 2.1 to 2.8) and marine vessel movements (comments 3.1 to 3.6). Planning Inspectorate's Advice Note 16 (*Advice Note Sixteen: How to request a change which may be material*, March 2018) states in paragraph 2.1 that whether a proposed change would be considered to be a material change "is a question of planning judgment which may be based on criteria including, for example, whether the change would generate a new or different likely significant environmental effect(s)". This is ultimately a judgment for the Examining Authority however NRW provides the advice below in respect of the proposed amendments.

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Croesewir gohebiaeth yn y Gymraeg a'r Saesneg
Correspondence welcomed in Welsh and English

2. BLASTING STRATEGY

- 2.1. Paragraph 1.14 of the Blasting Strategy states that *“the non-material change proposed relates to the time frame within which blasting would be permitted to occur. Horizon is seeking to extend the weekday hours for blasting from between 10.00 and 16.00, to between 09.00 and 19.00, and Saturday blasting from between 10.00 and 13.00, to between 09.00 and 13.00”*. We also note paragraph 2.7.3 which states that *“there is no increase in the number of blasts which would be required, and the blasting vibration limits remain unaltered”*.
- 2.2. NRW have the following comments to make on the Topic Assessments in section 2.7 of the Blasting Strategy.
- *Terrestrial and Freshwater Ecology*
- 2.3. NRW note that European and nationally protected species (including bats and otters) are present within the Wylfa Newydd Development Area and could potentially be affected by noise and visual disturbance as a result of the construction works. The Environmental Statement (ES) and supporting appendices submitted as part of the DCO proposes mitigation measures to avoid and reduce impacts on protected species.
- 2.4. NRW agrees that the proposed change is not likely to result in new or different likely significant environmental effects on European and/or Nationally Protected Species.
- *Landscape and Visual*
- 2.5. Paragraph 2.7.8 states that the change to allow extended blasting hours *“remains within the wider Main Construction working hours outlined in the Main Site Power Station Sub Code of Construction Practice”*. Paragraph 2.7.8 also states that no additional lighting will therefore be required.
- 2.6. The Wylfa Newydd Project is located partly within the Ynys Môn / Anglesey Area of Outstanding Natural Beauty. NRW advises that the proposed change is not likely to result in new or different likely significant environmental effects on the Ynys Môn / Anglesey Area of Outstanding Natural Beauty.
- *Morwenoliaid Ynys Môn / Anglesey Terns Special Protection Area (SPA)*
- 2.7. Paragraph 2.7.15 of the Blasting Strategy states the proposed change does not affect the assessments undertaken in D13 of the ES and the Shadow Habitats Regulations Assessment (HRA). It is also stated that no new or different likely significant environmental effects are generated as a result of the change. NRW agree that no new or different likely significant environmental effects are generated by the proposed change.

- 2.8. Please note however, that NRW does not agree with the conclusions of the assessments in D13 and the Shadow HRA with respect to the Anglesey Terns SPA. As detailed in NRW's Relevant Representations, we do not consider that the evidence and mitigation presented in the Shadow HRA demonstrates that noise and vibration (including partly as a result of blasting) associated with the construction phase will not have adverse effects on the sandwich, arctic and common tern populations at the Cemlyn colony. NRW considers that adverse effects on the SPA (relating to sensitivity of sandwich, arctic and common terns to construction noise) cannot be ruled out. The proposed change has the potential to increase the risk of disturbance to the tern colony. As detailed above, and for the purpose of this consultation specifically, NRW agree that no new or different likely significant environmental effects are generated by the proposed change, however NRW does not agree with the conclusions of the assessment with respect to the impacts on the Anglesey Terns SPA and this should be addressed.

3. MARINE VESSEL MOVEMENTS

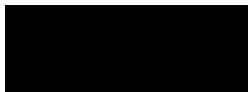
- 3.1. Paragraph 1.1.4 of the Marine Vessel Movements document states that *"the non-material change proposed relates to the upper daily limit of vessel movements to and from the Marine Off-Loading Facility (MOLF). Horizon is seeking to increase the upper daily limit from four movements per day (two vessels) to 16 movements per day (eight vessels) within the total vessel movements described and assessed in the Wylfa Newydd DCO application"*.
- 3.2. NRW have the following comments to make on the Topic Assessments in section 2.4.
- *Air Quality*
- 3.3. Paragraphs 2.4.14 – 2.4.24 and Table 2-4 describe the possible effects of increased emissions of the peak marine vessel movements on Tre'r Gôf and Cae Gwyn Sites of Special Scientific Interests (SSSI) and Bae Cemlyn / Cemlyn Bay Special Area of Conservation / SSSI. NRW agree that the proposed change would not result in new or different likely significant environmental effects.
- *Marine mammals*
- 3.4. Paragraphs 2.4.30 – 2.4.36 and Table 2-4 considers potential impacts of the proposed change on marine mammals and states that the proposed change does not affect the assessments undertaken in D13 of the ES and the Shadow HRA. NRW agrees that the proposed change would not result in new or different likely significant environmental effect on marine mammals (as European Protected Species and/or designated features of Welsh Special Areas of Conservation).

- *Seabirds*

- 3.5. Paragraph 2.4.37 of the Marine Vessel Movements document states that *“the proposed change would not alter the magnitude of visual disturbance effects to seabirds, remaining as reported in chapter 13 of the Environmental Statement... and the Shadow Habitats Regulation Assessment Report”*. It is also stated that no new or different likely significant environmental effects are generated as a result of the change. NRW agree that no new or different likely significant environmental effects are generated by the proposed change.
- 3.6. Please note however, that NRW does not agree with the conclusions of the assessments in D13 and the Shadow HRA with respect to the Anglesey Terns SPA. We do not consider that the evidence and mitigation presented in the Shadow HRA demonstrates that noise and vibration cumulatively with the visual effects (including partly as a result of marine vessel movements) associated with the construction phase will not have adverse effects on the sandwich, arctic and common tern populations at the Cemlyn colony. NRW considers that adverse effects on the SPA (relating to sensitivity of sandwich, arctic and common terns to construction disturbance) cannot be ruled out. The proposed change has the potential to increase the risk of disturbance to the tern colony. As detailed above at paragraph 2.8, and for the purpose of this consultation specifically, NRW agrees that no new or different likely significant environmental effects are generated by the proposed change, however NRW does not agree with the conclusions of the assessment with respect to the impacts on the Anglesey Terns SPA and this should be addressed.

Please do not hesitate to contact us should you require further advice.

Yours sincerely



Bryn Griffiths
Senior Development Planning Adviser