



The Planning Inspectorate
Yr Arolygiaeth Gynllunio

ADRODDIAD ar y GOBLYGIADAU ar gyfer SAFLEOEDD EWROPEAIDD (RIES)

Prosiect Arfaethedig Wylfa Newydd

Adroddiad gan yr Awdurdod Archwilio a baratowyd gyda
chymorth y Tîm Gwasanaethau Amgylcheddol

Cyfeirnod yr Arolygiaeth Gynllunio: EN010007

27 Mawrth 2019

[Mae'r dudalen hon wedi'i gadael yn wag yn fwriadol]

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ATODIAD 1 DOGFENNAU A DDEFNYDDIWDYD I LYWIO'R RIES

ATODIAD 2 CRYNODEB O YMARFER SGRINIO'R YMGEISYDD AC I BA RADDAU Y CYTUNIR Â PHARTIÖN Â BUDDIANT

ATODIAD 3 MATRICESAU CAM 1 HRA – EFFEITHIAU ARWYDDOCAOL TEBYGOL

ATODIAD 4 MATRICESAU CAM 2 HRA – EFFEITHIAU NIWEIDIOL AR GYFANRWYDD

[Mae'r dudalen hon wedi'i gadael yn wag yn fwriadol]

1 CYFLWYNIAD

1.1 Cefndir

1.1.1 Mae Horizon Nuclear Power Wylfa Limited (yr Ymgeisydd) wedi gwneud cais i'r Ysgrifennydd Gwladol am orchymyn caniatâd datblygu (DCO) o dan Adran 37 Deddf Cynllunio 2008 ar gyfer Prosiect arfaethedig Wylfa Newydd (y cais). Mae'r Ysgrifennydd Gwladol wedi penodi Awdurdod Archwilio i gynnal archwiliad o'r cais, i adrodd ar ei ganfyddiadau a'i gasgliadau, ac i wneud argymhelliad i'r Ysgrifennydd Gwladol ynglŷn â'r penderfyniad i'w wneud am y cais.

1.1.2 Yr Ysgrifennydd Gwladol perthnasol yw'r awdurdod cymwys at ddibenion y Gyfarwyddeb Cynefinoedd¹ a'r Rheoliadau Cynefinoedd² ar gyfer ceisiadau a gyflwynir o dan gyfundrefn Deddf Cynllunio 2008. Bydd y canfyddiadau a'r casgliadau ar faterion cadwraeth natur a adroddir gan yr Awdurdod Archwilio yn helpu'r Ysgrifennydd Gwladol i gyflawni ei ddyletswyddau o dan y Rheoliadau Cynefinoedd.

1.1.3 Mae'r RIES hwn yn crynhoi, dogfennu a chyfeirio at wybodaeth a ddarparwyd yn y cais DCO, a'r wybodaeth a gyflwynwyd drwy gydol yr Archwiliad gan yr Ymgeisydd a Phartïon â Buddiant, hyd at Derfyn Amser 7 yr Archwiliad (14 Mawrth 2019) mewn perthynas ag effeithiau posibl ar Safleoedd Ewropeaidd³. Nid yw'n ddogfen annibynnol a dylid ei darllen ar y cyd â dogfennau'r Archwiliad a grybwyllir. Lle y rhoddir cyfeirnodau dogfennau mewn cromfachau sgwâr [] yn nhestun yr adroddiad hwn, gellir dod o hyd i'r cyfeirnod hwnnw yn Llyfrgell yr Archwiliad a gyhoeddir ar y wefan Cynllunio Seilwaith Cenedlaethol, y gellir ei chyrraedd trwy'r ddolen ganlynol:

<http://infrastructure.planninginspectorate.gov.uk/document/EN010007-001824>

1.1.4 Fe'i cyhoeddir i sicrhau yr ymgynghorir yn ffurfiol â Phartïon â Buddiant, gan gynnwys y corff cadwraeth natur statudol Cyfoeth Naturiol Cymru (CNC), ynglŷn â materion Rheoliadau Cynefinoedd. Gall yr Ysgrifennydd Gwladol ddibynnu ar y broses hon at ddibenion Rheoliad 63(3) y Rheoliadau Cynefinoedd. Yn dilyn ymgynghoriad, bydd yr ymatebion yn cael eu hystyried gan yr Awdurdod Archwilio wrth wneud ei argymhelliad i'r Ysgrifennydd Gwladol, a byddant ar gael i'r Ysgrifennydd Gwladol ynghyd â'r adroddiad hwn. Ni fydd y RIES yn cael ei ddiwygio yn dilyn ymgynghoriad.

¹ Cyfarwyddeb y Cyngor 92/43/EEC, dyddiedig 21 Mai 1992, ar warchod cynefinoedd naturiol a phlanhigion ac anifeiliaid gwyllt (fel y'i codeiddiwyd) (y 'Gyfarwyddeb Cynefinoedd').

² Rheoliadau Gwarchod Cynefinoedd a Rhywogaethau 2017 (y Rheoliadau Cynefinoedd).

³ Yn y cyd-destun hwn, mae'r term Safleoedd Ewropeaidd yn cynnwys Safleoedd o Bwys i'r Gymuned (SCIs), Ardaloedd Cadwraeth Arbennig (ACAau) ac ACAau ymgeisiol, Ardaloedd Gwarchodaeth Arbennig (AGAau), ACAau posibl, AGAau posibl, a safleoedd Ramsar. I gael disgrifiad llawn o'r dynodiadau y mae'r Rheoliadau Cynefinoedd yn berthnasol iddynt, a/neu a gymhwysir fel mater o bolisi'r Llywodraeth, gweler Nodyn Cyngor 10 yr Arolygiaeth Gynllunio.

- 1.1.5 Mae'r RIES hwn yn ymdrin â safleoedd Ewropeaidd y mae'r Deyrnas Unedig (DU) yn gyfrifol amdanynt yn unig.

1.2 Dogfennau a ddefnyddiwyd i lywio'r RIES hwn

- 1.2.1 Cyflwynodd yr Ymgeisydd Adroddiad Asesiad Rheoliadau Cynefinoedd (HRA) cysgodol [APP-050 ac APP-051] ('yr Adroddiad SHRA') gyda'i gais am DCO.
- 1.2.2 Ar ôl i'r cais gael ei dderbyn i'w archwilio, rhoddodd yr Arolygiaeth gyngor a51 [PD-002] i'r Ymgeisydd a oedd yn ei gynghori i ystyried p'un a oedd y dyfarniad gan Lys Cyfiawnder yr Undeb Ewropeaidd ym mis Ebrill 2018 (*People Over Wind and Sweetman v Coillte Teoranta* (C-323/17) ('dyfarniad Sweetman') yn berthnasol i'r HRA. Roedd y dyfarniad yn datgan yn gyffredinol na ddylai mesurau lliniaru gael eu hystyried wrth asesu a yw'r Datblygiad Arfaethedig yn debygol o arwain at effeithiau arwyddocaol ar safle Ewropeaidd.
- 1.2.3 Mewn ymateb, cynhyrchoedd yr Ymgeisydd Atodiad i'r Adroddiad SHRA [AS-010] (Cyflwyniad Ychwanegol) a gyflwynwyd yn ystod y cam cyn-archwilio i fynd i'r afael â'r dyfarniad.
- 1.2.4 Yn ystod yr Archwiliad, cyflwynodd yr Ymgeisydd sawl cais am newid yn cynnig newidiadau i'r cais DCO gwreiddiol mewn perthynas â'r strategaeth ffrwydro [AS-020]; symudiadau llongau [AS-021]; patrymau sifft gweithwyr [REP4-011]; oriau gwaith [REP4-013] a'r adegau danfoniadau gan Gerbydau Nwyddau Trwm (HGV) [REP4-013]. Gwerthusodd yr Ymgeisydd darganfyddiadau y wybodaeth amgylcheddol ac ni amlygodd unrhyw effeithiau amgylcheddol newydd na sylweddol wahanol yn gysylltiedig â'r newidiadau a gynigiwyd a fyddai'n effeithio ar safleoedd Ewropeaidd ([REP6-015] a [rep6-016]). Mae CNC yn cytuno â'r safbwynt hwn ([REP2-325], [REP4-039] a [REP5-081] mewn perthynas â'r strategaeth ffrwydro a symudiadau llongau).
- 1.2.5 Derbyniodd yr Awdurdod Archwilio newidiadau'r Ymgeisydd ac ystyried eu bod yn ansylweddol a dylid eu hystyried yn ystod yr Archwiliad. Cododd ymatebion i'r ymgynghoriad ar y newidiadau rhai bryderon ynglŷn â'r newid i strategaeth ffrwydro'r Ymgeisydd a symudiadau llongau. Roedd y pryderon yn ffocysu ar yr effeithiau a ddisgwylir mewn perthynas ag AGA Môr-wenoliaid Ynys Môn [PD-015].
- 1.2.6 Cyflwynodd yr Ymgeisydd gais arall am newid erbyn Terfyn Amser 7 ynglŷn â gwella cyffordd safle Parcio a Theithio Dalar Hir. Daeth i'r casgliad (yn seiliedig ar farn broffesiynol) na ddisgwylir i gasgliadau [APP-050] newid o ganlyniad i'r newid arfaethedig a'u bod yn parhau i gynrichioli asesiad cywir o effeithiau tebygol y Datblygiad Arfaethedig [REP7-001].
- 1.2.7 Mae'r dogfennau a ddefnyddiwyd i lywio'r RIES hwn wedi'u rhestru yn Atodiad 1 yr adroddiad hwn.

1.3 Matricsau

- 1.3.1 Roedd yr Adroddiad SHRA yn cynnwys matricsau sgrinio a chyfanrwydd yn Atodiadau F a H [APP-051]. Diweddarwyd y rhain gan yr Ymgeisydd yn Atodiadau 1 a 2 yr Atodiad i'r Adroddiad SHRA [AS-010].
- 1.3.2 Mae'r matricsau'n rhestru nodweddion yr amlygwyd llwybrau ar eu cyfer mewn perthynas ag effeithiau posibl yn unig.
- 1.3.3 O ran y safleoedd Ewropeaidd a'r nodweddion cymwys hynny y dadleuwyd neu yr heriwyd casgliadau'r Ymgeisydd amdanynt yn ystod yr Archwiliad, ar ôl i'r Ymgeisydd gyflwyno matricsau wedi'u diweddarau, diweddarwyd y matricsau gan yr Awdurdod Archwilio, gyda chymorth Tîm Gwasanaethau Amgylcheddol yr Arolygiaeth Gynllunio gan ddefnyddio'r dogfennau a restrir isod. Mae'r matricsau diwygiedig wedi'u cynnwys fel Atodiadau 3 a 4 yr adroddiad hwn.

1.4 Strwythur y RIES hwn

- 1.4.1 Mae gweddill yr adroddiad hwn wedi'i strwythuro fel a ganlyn:
 - Mae **Adran 2** yn amlygu'r safleoedd Ewropeaidd a ystyriwyd yn y cais DCO ac yn ystod cyfnod yr Archwiliad, hyd at 14 Mawrth 2019. Mae'n rhoi trosolwg o'r materion sydd wedi dod i'r amlwg yn ystod yr Archwiliad.
 - Mae **Adran 3** yn amlygu'r safleoedd Ewropeaidd a'r nodweddion cymwys a sgriniwyd gan yr Ymgeisydd am effeithiau arwyddocaol tebygol posibl, naill ai'n unigol neu ar y cyd â phrosiectau a chynlluniau eraill. Mae'r adran hefyd yn amlygu lle mae Partïon â Buddiant wedi herio casgliadau'r Ymgeisydd, ynghyd ag unrhyw safleoedd Ewropeaidd a nodweddion cymwys ychwanegol a sgriniwyd am effeithiau arwyddocaol tebygol posibl yn ystod yr Archwiliad.
 - Mae **Adran 4** yn amlygu'r safleoedd Ewropeaidd a'r nodweddion cymwys a ystyriwyd o ran effeithiau niweidiol ar gyfanrwydd safle, naill ai'n unigol neu ar y cyd â phrosiectau a chynlluniau eraill. Mae'r adran yn amlygu lle mae Partïon â Buddiant wedi herio casgliadau'r Ymgeisydd, ynghyd ag unrhyw safleoedd Ewropeaidd a nodweddion cymwys ychwanegol a ystyriwyd o ran effeithiau niweidiol ar gyfanrwydd yn ystod yr Archwiliad.
 - Mae **Atodiad 1** yn cynnwys rhestr o'r dogfennau a gyflwynwyd yn ystod yr Archwiliad sy'n berthnasol i asesu effeithiau ar safleoedd Ewropeaidd.
 - Mae **Atodiad 2** yn cynnwys crynodeb o ymarfer sgrinio'r Ymgeisydd ac i ba raddau y cytunir â Phartïon â Buddiant.

- Mae **Atodiadau 3 a 4** yn cynnwys matricesau ar gyfer y safleoedd Ewropeaidd a'r nodweddion cymwys hynny yr heriwyd casgliadau'r Ymgeisydd amdanynt mewn perthynas ag effeithiau arwyddocaol tebygol posibl ac effeithiau niweidiol ar gyfanrwydd safleoedd Ewropeaidd. Maent yn crynhoi'r dystiolaeth a gyflwynwyd gan yr Ymgeisydd a Phartïon â Buddiant hyd at 14 Mawrth 2019.

2 TROSOLWG O YMAGWEDD YR YMGEISYDD

2.1 Cwmpas Adroddiad SHRA yr Ymgeisydd

- 2.1.1 Roedd Adroddiad SHRA yr Ymgeisydd ([APP-050] ac [APP-051]) yn mynd i'r afael ag effeithiau'r gwaith a'r gweithgareddau sydd i'w caniatáu gan y DCO, yn ogystal â'r rhai sydd i'w caniatáu gan y trwyddedau canlynol a geisir o dan gyfundrefnau caniatáu ar wahân:
- Trwydded Forol ar gyfer y gwaith adeiladu morol ac ar gyfer carthu a gwaredu deunydd wedi'i garthu;
 - Trwydded Amgylcheddol ar gyfer gollwng dŵr yn ystod adeiladu, comisiynu a gweithredu'r Datblygiad Arfaethedig; a
 - Thrwydded Amgylcheddol ar gyfer gweithgarwch hylosgi yn ystod comisiynu a gweithredu'r Datblygiad Arfaethedig.
- 2.1.2 Mae'r Adroddiad SHRA yn datgan bod adroddiad HRA ar wahân wedi'i gynnal ar gyfer y drwydded amgylcheddol Rheoliadau Sylweddau Radiolegol (y mae CNC yn awdurdod cymwys ar ei chyfer).
- 2.1.3 Ar adeg Terfyn Amser 7, cadarnhaodd yr Ymgeisydd ei fod wedi tynnu'n ôl y ceisiadau am Drwyddedau Amgylcheddol ar gyfer gweithgarwch hylosgi a gweithgareddau gollwng dŵr, ond bod y cais am Drwydded Amgylcheddol am ollwng dŵr yn ystod adeiladu yn parhau [REP7-001].
- 2.1.4 Er mwyn osgoi amheuaeth, mae'r RIES hwn yn adrodd ar faterion sy'n ymwneud â'r cais DCO yn unig.

2.2 Amlygu Safleoedd Ewropeaidd ac effeithiau posibl

- 2.2.1 Nid yw'r Datblygiad Arfaethedig yn gysylltiedig â rheolaeth unrhyw rai o'r safleoedd Ewropeaidd a ystyriwyd o fewn asesiad yr Ymgeisydd o safbwynt cadwraeth natur, nac yn angenrheidiol ar gyfer hynny.
- 2.2.2 Mae ymarfer cwmpasu'r Ymgeisydd i amlygu safleoedd Ewropeaidd a nodweddion cymwys i'w hystyried yn ystod y cam sgrinio wedi'i ddisgrifio yn adran 4 yr Adroddiad SHRA [APP-050]. Ystyriodd safleoedd Ewropeaidd a amlygwyd yn yr HRA strategol a gynhaliwyd gan yr Adran Ynni a Newid Hinsawdd (DECC) ac fe'i llywiwyd hefyd gan Barthau Dylanwad ar gyfer y llwybrau effaith canlynol:
- newidiadau i ysgogiadau gweledol ac acwstig;
 - cymryd tir, gan gynnwys gwely'r môr neu dir rhynglanw;
 - newidiadau i ansawdd dŵr morol;
 - newidiadau i ansawdd dŵr daearol;

- newidiadau i hydroleg dŵr wyneb a dŵr daear;
- cyflwyno rhywogaethau estron;
- newid i lefelau dos ymbelydredd;
- newid i ansawdd aer;
- newid hydrodnameg a phrosesau arfordirol; a
- rhyngweithio ffisegol rhwng rhywogaethau a seilwaith y prosiect.

2.2.3 Amlygwyd safleoedd Ewropeaidd o ran y categorïau derbynyddion canlynol:

- cynefinoedd;
- mamaliaid morol;
- pysgod mudol;
- adar môr (bridio)*; ac
- adar eraill.

* eithriwyd adar môr sy'n pasio heibio a rhai nad ydynt yn bridio o'r ymarfer cwmpasu i raddau helaeth oherwydd diffyg cysylltedd rhwng poblogaethau'r safleoedd Ewropeaidd a'r Parthau Dylanwad sy'n gysylltiedig â'r Datblygiad Arfaethedig. Fodd bynnag, cynhwyswyd dwy boblogaeth sy'n pasio heibio y gellid effeithio arnynt yn yr ymarfer cwmpasu. Y rhain oedd nodwedd môr-wenoliaid cyffredin AGA/safle Ramsar Culfor Mersi a Blaendraeth Gogledd Wirral a nodwedd môr-wenoliaid pigddu AGA/safle Ramsar Aber Dyfrdwy (paragraffau 4.7.15-4.7.19 Adroddiad SHRA yr Ymgeisydd [APP-050]).

2.2.4 Ystyriwyd rhydwyf, adar dŵr a rhywogaethau gwylptir ym mharagraffau 4.7.20-4.7.32 Adroddiad SHRA yr Ymgeisydd [APP-050], ond eithriwyd y nodweddion hyn o'r asesiad; dywedwyd bod y safbwynt hwn wedi cael ei gytuno â CNC.

2.2.5 Manylir ar y safleoedd Ewropeaidd a'r nodweddion cymwys perthnasol (y mae'r DU yn gyfrifol amdanynt) a gynhwyswyd yn HRA yr Ymgeisydd yn Atodiad 3 a Thabl 4.1 yr adroddiad hwn. Dangosir lleoliadau'r safleoedd Ewropeaidd hyn yn Ffigurau A1 ac A2 yr Adroddiad SHRA [APP-050].

2.2.6 Cadarnhaodd Adroddiad SHRA yr Ymgeisydd, o ran y safleoedd Ewropeaidd a gynhwyswyd yn HRA strategol DECC, fod ACA Glantraeth, ACA Eryri, ACA Pen y Gogarth, ac AGA Bae Lerpwl wedi'u heithrio. Cadarnhaodd ymhellach fod AGA Ynys Feurig, Bae Cemlyn ac Ynysoedd y Moelrhoniaid a amlygwyd yn HRA strategol DECC yn ffurfio rhan o AGA Môr-wenoliaid Ynys Môn bellach.

2.2.7 Ni amlygwyd unrhyw safleoedd Ewropeaidd na nodweddion ychwanegol gan Bartion â Buddiant erbyn Terfyn Amser 7 yr Archwiliad.

- 2.2.8 Amlygodd Adroddiad SHRA yr Ymgeisydd effeithiau posibl ar safleoedd Ewropeaidd yng Ngwladwriaethau eraill yr Ardal Economaidd Ewropeaidd [APP-050 ac APP-051], ond dim ond safleoedd Ewropeaidd y mae'r DU yn gyfrifol amdanynt sy'n derbyn sylw yn y RIES hwn.

2.3 Materion HRA a Ystyriwyd yn ystod yr Archwiliad

- 2.3.1 Mae CNC, yr Ymddiriedolaeth Genedlaethol* (NT), Ymddiriedolaeth Natur Gogledd Cymru* (NWWT) a'r Gymdeithas Frenhinol er Gwarchod Adar* (RSPB) oll wedi mynegi pryder trosfwaol ynglŷn ag ymagwedd yr Ymgeisydd at sicrhau mesurau lliniaru ar gyfer effeithiau ar safleoedd Ewropeaidd. Mae mesurau lliniaru arfaethedig yr Ymgeisydd wedi'u sicrhau trwy ddogfennau rheoli gan gynnwys:

- God Ymarfer Adeiladu (CoCP) Wylfa,
- yr is-Godau Ymarfer Adeiladu (SCoCP)
- a'r Cod Ymarfer Gweithredol (CoOP) ('y dogfennau rheoli').

* Mae'r NT, NWWT, a'r RSPB wedi cyd-weithio; lle mae'r adroddiad hwn yn cyfeirio at ymateb ar y cyd, ymddangosir y cyrff yma gyda'i gilydd fel 'y Cyrff Anllywodraethol amgylcheddol (eNGOs)'.

- 2.3.2 Mae DCO drafft yr Ymgeisydd yn cynnig y bydd y dogfennau rheoli uchod yn ddogfennau ardystiedig at ddibenion y DCO. Mae'r DCO drafft yn cynnwys gofynion (PW7, WN1, WN10, WN17 ac WN24 [REP5-003]) sy'n ymwneud â chamau adeiladu a gweithredu y Datblygiad Arfaethedig. O dan y gofynion hyn, bydd rhaid i'r adeiladu fod yn unol â'r dogfennau rheoli hyn oni chytunir yn wahanol gan Gyngor Sir Ynys Môn (IACC) mewn ymgynghoriad â CNC.

- 2.3.3 Mae CNC o'r farn nad yw'r dogfennau rheoli'n cynnwys digon o fanylion. Maent yn cynghori y dylai'r DCO gynnwys gofyniad sy'n datgan y dylai'r Ymgeisydd baratoi fersiynau manwl o'r dogfennau rheoli i'w cymeradwyo gan yr awdurdod cyflawni mewn ymgynghoriad â CNC ([REP2-325], [REP4-039] a [REP6-047]) cyn adeiladu. Mae NWWT, yr RSPB a'r NT wedi mynegi pryderon hefyd ynglŷn â'r ymagwedd at sicrhau mesurau lliniaru ar gyfer safleoedd Ewropeaidd trwy'r dogfennau hyn ([REP2-048], [REP2-358] a [REP2-318]).

- 2.3.4 Mae'r Ymgeisydd yn dadlau ei bod yn briodol sicrhau mesurau lliniaru trwy'r dogfennau rheoli yn hytrach nag yn uniongyrchol trwy ofyniad yn y DCO ([REP2-375], [REP3-035], [REP3-026], [REP4-005], [REP5-084], [REP6-009] a [REP6-047]). Mae'r dogfennau hyn yn cael eu diweddarau yn ystod yr Archwiliad; mae'r Ymgeisydd yn disgwyl y bydd y dogfennau rheoli'n ddigon manwl erbyn diwedd yr Archwiliad iddynt gael eu cymeradwyo yn rhan o'r DCO ac i beidio â bod yn destun unrhyw brosesau cymeradwyo ychwanegol [REP3-035].

- 2.3.5 Heriodd y Partïon â Buddiant y casgliadau y daethpwyd iddynt yn [APP-050] ynglŷn â'r effeithiau ar nodweddion AGA Môr-wenoliaid Ynys Môn ac ACA Bae Cemlyn hefyd.

AGA Môr-wenoliaid Ynys Môn

- 2.3.6 Dyma'r meysydd allweddol a oedd yn destun dadlau (gweler y troednodiadau i'r matricesau yn Atodiad 4 am gyfeirnodau dogfennau):
- Yr effeithiau posibl ar boblogaethau bridio Môr-wenoliaid sy'n nodweddion cymhwysol yr AGA (yn enwedig Môr-wenoliaid Pigddu) o ganlyniad i aflonyddu gweledol a sŵn yn ystod y cam adeiladu;
 - Perthnasedd llenyddiaeth wyddonol gyhoeddedig a ddefnyddiwyd i lywio'r asesiad o'r effeithiau ar Fôr-wenoliaid Pigddu yn lagŵn Bae Cemlyn; ac
 - Effeithiolrwydd ac ymarferoldeb y mesurau a gynigiwyd i reoli sŵn ac aflonyddu gweledol.

ACA Bae Cemlyn

- 2.3.7 Dyma'r meysydd allweddol a drafodwyd (gweler y troednodiadau i'r matricesau yn Atodiad 4 am gyfeirnodau dogfennau):
- Yr effeithiau posibl ar geomorffoleg a'r patrwm tonnau sy'n effeithio ar y gefn graean bras yn Esgair Gemlyn (gallai effeithiau ar y gefn graean bras hefyd effeithio ar y lagŵn lle mae'r gytrf Môr-wenoliaid Pigddu yn nythu);
 - Yr effeithiau ar faint ac ansawdd y llifoedd dŵr daear a dŵr wyneb i lagŵn Bae Cemlyn o ganlyniad i ddraenio o brif safle'r orsaf bŵer yn ystod y cam adeiladu; ac
 - Effeithiolrwydd ac ymarferoldeb y mesurau a gynigiwyd i reoli draenio o brif safle'r orsaf bŵer yn ystod y cam adeiladu.
- 2.3.8 Mae CNC wedi dweud bellach eu bod yn fodlon y bydd y mesurau lliniaru a gynigiwyd gan yr Ymgeisydd yn ddigonol i reoli dŵr ffo wyneb i ACA Bae Cemlyn. Maent hefyd yn fodlon bod cynigion yr Ymgeisydd ar gyfer monitro ac, os bydd angen, rheolaeth addasol yn darparu mesurau addas i osgoi effeithiau niweidiol ar gyfanrwydd yr ACA o ganlyniad i'r effeithiau ar Esgair Gemlyn (yn amodol ar rai diwygiadau). Mae'r Partïon â Buddiant yn parhau i bryderu, fodd bynnag (gweler Cam 2 Matrics 2 yn Atodiad 4 yr adroddiad hwn ar gyfer cyfeiriadau dogfennau).

3 EFFEITHIAU ARWYDDOCAOL TEBYGOL

3.0 Cyflwyniad

- 3.0.1 Cyflwynir asesiad sgrinio'r Ymgeisydd ar gyfer effeithiau arwyddocaol tebygol (yr asesiad Cam 1) yn adran 5 yr Adroddiad SHRA, Atodiadau C - F [APP-050] ac Adran 4 yr Atodiad i'r HRA [AS-010]. Mae Atodiadau C- F yn cynnwys ffigurau sy'n dangos lleoliad y safleoedd Ewropeaidd a ystyriwyd wrth sgrinio ar gyfer effeithiau arwyddocaol tebygol a rhestr o'r nodweddion dynodedig na ellir eithrio effeithiau arwyddocaol tebygol ar eu cyfer.
- 3.0.2 Mae Tablau 5-1 i 5-4 [APP-050] yn darparu'r sail resymegol sy'n cefnogi'r casgliadau ynglŷn ag effeithiau arwyddocaol tebygol sy'n deillio o'r Datblygiad Arfaethedig ar ei ben ei hun. Daethpwyd i'r casgliad na fyddai unrhyw effeithiau arwyddocaol tebygol o ganlyniad i gyflwyno rhywogaethau estron goresgynnol a mwy o sathru/aflonyddu gan weithwyr sy'n byw yng nghampws y safle oherwydd y mesurau lliniaru a gynigiwyd. Mae [AS-010] yn nodi, yn dilyn dyfarniad Sweetman, na ellir dibynnu ar fesurau lliniaru i eithrio effeithiau arwyddocaol tebygol mwyach, ac felly mae'r asesiad sgrinio wedi cael ei ddiweddarau i ddod i'r casgliad y byddai'r effeithiau hyn yn arwain at effeithiau arwyddocaol tebygol.
- 3.0.3 Dywedir bod yr asesiad o effeithiau arwyddocaol tebygol mewn perthynas â datgomisiynu yn 'broblemus', o ystyried oes weithredu 60 mlynedd y Datblygiad Arfaethedig (paragraffau 5.6.1 i 5.6.2, [APP-050]). Mae gan yr Ymgeisydd strategaeth ddatgomisiynu sy'n gwneud tybiaethau ynglŷn â'r technegau a fyddai'n cael eu defnyddio ar yr adeg ddatgomisiynu (paragraff 1.1.15 [APP-050]). Felly, mae'r asesiad o effeithiau arwyddocaol tebygol o ganlyniad i ddatgomisiynu wedi cael ei seilio ar gyfres o dybiaethau a ddisgrifir ym mharagraffau 5.6.3 – 5.6.5 a Thabl 5-6 [APP-050], yn nodedig y dybiaeth na fydd yr effeithiau o ganlyniad i ddatgomisiynu yn fwy na'r effeithiau posibl o ganlyniad i adeiladu a'r effeithiau radiolegol yn ystod gweithredu (gweler paragraff 5.6.5, [APP-050]). Ni ragwelir unrhyw effeithiau arwyddocaol tebygol yn ystod datgomisiynu o ganlyniad i:
- Gymryd tir, gan gynnwys gwely'r môr neu dir rhynglanw;
 - Newidiadau i ansawdd dŵr daearol;
 - Newidiadau i hydroleg dŵr wyneb a dŵr daear;
 - Rhywogaethau estron goresgynnol (INNS);
 - Newid i lefelau dos ymbelydredd;
 - Newid i ansawdd aer;
 - Newid hydrodynameg a phrosesau arfordirol; a
 - Rhyngweithio ffisegol rhwng rhywogaethau a seilwaith y prosiect.

- 3.0.4 Yr unig effeithiau arwyddocaol tebygol a amlygwyd oedd newidiadau i ansawdd dŵr morol a newidiadau i ysgogiadau gweledol ac acwstig (paragraff 1.1.18, [APP-050]).
- 3.0.5 Holodd yr Awdurdod Archwilio i ba raddau, yng ngoleuni dyfarniad Sweetman, y mae'r strategaeth ddatgomisiynu a sicrheir trwy'r DCO (gweler Gofyniad PW10, [REP5-003]) yn cynrychioli mesur i osgoi neu leihau effeithiau'r Datblygiad Arfaethedig ar safleoedd eraill (Q. 5.0.17 [PD-009] a Q.2.5.1 [PD-013]). Mae'r Ymgeisydd yn honni bod y tybiaethau a amlinellir yn Nhabl 5-6 [APP-050] yn cyfeirio at brif nodweddion disgwylidig y gwaith datgomisiynu yn hytrach na mesurau i liniaru effeithiau'r Datblygiad Arfaethedig ar safleoedd Ewropeaidd (Q.5.0.17 [REP2-375] a Q.2.5.1 [REP5-002]).

Asesiad ar y cyd

- 3.0.6 Mae paragraff 3.3.34 [APP-050] yn diffinio'r effeithiau a gynhwyswyd yn yr asesiad ar y cyd. Mae effeithiau ychwanegol neu ryngweithiol o wahanol elfennau o'r Datblygiad Arfaethedig wedi cael eu trin fel effeithiau 'unigol'; fe'u cariwyd ymlaen i'r adran asesu briodol o [APP-050] sy'n ymdrin â'r effeithiau sy'n deillio o'r Datblygiad Arfaethedig ar ei ben ei hun. Mae'r asesiad ar y cyd yn ymdrin yn unig â'r effeithiau sy'n deillio o effeithiau ychwanegol neu ryngweithiol â chynlluniau neu brosiectau eraill.
- 3.0.7 Mae paragraff 5.3.12 APP-050 yn datgan bod yr ymagwedd at yr asesiad Sgrinio Cam 1 'ar ei ben ei hun' yn fwriadol ragofalus, yn yr ystyr y daethpwyd i'r casgliad y byddai effeithiau arwyddocaol tebygol lle'r oedd posibilrwydd yn bodoli y gallai fod unrhyw effaith negyddol ar nodwedd o ddiddordeb (paragraff 5.3.12 [APP-050]). Felly, mae'r asesiad ar y cyd ond yn ystyried effeithiau o'r Datblygiad Arfaethedig sydd eisoes wedi cael eu hamlygu'n rhai sy'n debygol o gael effaith arwyddocaol.
- 3.0.8 Mae Atodiad B Adroddiad SHRA yr Ymgeisydd [APP-051] yn rhestru'r prosiectau eraill a ystyriwyd gan yr Ymgeisydd ac yn cyfiawnhau pam y'u heithriwyd neu y'u cynhwyswyd yn yr asesiad ar y cyd a pha safleoedd Ewropeaidd y gellid effeithio arnynt. Mae Tabl 5.5 [APP-050] yn rhestru'r cynlluniau a amlygwyd gan yr Ymgeisydd a allai arwain at effeithiau ar y cyd â'r Datblygiad Arfaethedig. Mae prosiectau a chynlluniau a gynhwyswyd yn yr asesiad sgrinio wedi'u manylu ym mharagraffau 5.5.2 i 5.5.3 [APP-050] hefyd.
- 3.0.9 Mae ymagwedd yr Ymgeisydd at yr asesiad ar y cyd o effeithiau ar ansawdd aer wedi cael ei herio gan CNC (gweler Cam 2, Matrics 1 Atodiad 3 yr adroddiad hwn am ragor o fanylion).

3.1 Casgliadau'r Ymgeisydd

- 3.1.1 Fel y nodwyd uchod yn y RIES hwn, ystyriodd yr Ymgeisydd fesurau lliniaru yn yr Adroddiad SHRA [APP-050] ac [APP-051] a gyflwynwyd gyda'r cais DCO. Fodd bynnag, mewn ymateb i ddyfarniad Sweetman, diwygiodd yr Ymgeisydd ei asesiad sgrinio yn yr Atodiad i'r Adroddiad SHRA [AS-010] i eithrio mesurau lliniaru o'r cam

sgrinio. Daeth hyn i'r casgliad bod y Datblygiad Arfaethedig yn debygol o arwain at effeithiau arwyddocaol, naill ai ar ei ben ei hun neu ar y cyd â chynlluniau neu brosiectau eraill, ar 38 o safleoedd Ewropeaidd (17 ACA/ACA ymgeisiol, 16 AGA/AGA bosibl a phum safle Ramsar) yn y DU⁴.

- 3.1.2 Mae'r safleoedd Ewropeaidd a'r nodweddion cymwys a gynhwyswyd yn yr HRA a chasgliad sgrinio'r Ymgeisydd (yn unigol neu ar y cyd â chynlluniau neu brosiectau eraill) a graddau'r cytundeb rhwng yr Ymgeisydd a Phartïon â Buddiant wedi'u crynhoi yn Atodiad 2 yr adroddiad hwn.
- 3.1.3 Wrth ymateb i Q5.0.16, cadarnhaodd CNC, o ran y safleoedd a'r effeithiau arwyddocaol tebygol yng Nghymru, eu bod yn fodlon ar gasgliadau'r Ymgeisydd yn yr Adroddiad SHRA a'r Atodiad i'r Adroddiad SHRA [REP2-325]. Mae CNC hefyd wedi dweud eu bod yn cytuno bod y gwaith priffyrdd arfaethedig ar yr A5025 yn annhebygol o gael effaith niweidiol ar unrhyw ACA, AGA neu safle Ramsar yng Nghymru, yn amodol ar gytuno ar fesurau lliniaru manwl ([REP2-049]). Yn y Datganiad Tir Cyffredin (SoCG) a gyflwynwyd erbyn Terfyn Amser 6, ymddangosai fod CNC yn cytuno bod y gwelliannau arfaethedig i briffordd yr A5025 yn annhebygol o gael effaith niweidiol ar unrhyw ACA, AGA neu safle Ramsar yng Nghymru [REP6-047]. Fodd bynnag, dylid nodi hefyd bod CNC wedi dweud ar adeg Terfyn Amser 6 fod CNC yn ystyried [REP6-047] yn ddrafft terfynol. Nid yw'r gwahaniaeth rhwng 'drafft terfynol' a SoCG terfynol wedi'i ddiffinio'n glir.
- 3.1.4 Fodd bynnag, roedd yr RSPB, NWWT a'r NT o'r farn y dylai effeithiau posibl dadleoli ysglyfaethwyr o Ardal Ddatblygu Wylfa Newydd ar nodweddion o ddiddordeb AGA Môr-wenoliaid Ynys Môn (yn benodol cytref Môr-wenoliaid Lagŵn Cemlyn) gael eu cynnwys yn yr asesiad Cam 2 (gweler Cam 1 Matrics 1 yn Atodiad 3 yr adroddiad hwn).

⁴ Cymru, Lloegr, Gogledd Iwerddon a'r Alban

4 EFFEITHIAU NIWEIDIOL AR GYFANRWYDD

4.1 Amcanion Cadwraeth

- 4.1.1 Darparwyd yr amcanion cadwraeth ar gyfer yr holl safleoedd Ewropeaidd a dducwyd ymlaen i Gam 2 ac a drafodir yn yr adran hon o'r adroddiad gan yr Ymgeisydd yn yr Adroddiad SHRA [APP-050].
- 4.1.2 Wrth ymateb i Q5.0.45, dywedodd CNC [REP2-325], o ran safleoedd Ewropeaidd sy'n gyfan gwbl/yn rhannol yng Nghymru, fod yr amcanion cadwraeth yn gywir, ac eithrio'r canlynol:
- ACA Pen Llŷn a'r Sarnau;
 - ACA Bae Ceredigion;
 - ACA Afon Teifi;
 - ACA Sir Benfro Forol; ac
 - AGA Ynys Seiriol.
- 4.1.3 Darparodd CNC ddolenni gwe i'r amcanion cadwraeth cyfredol ar gyfer y safleoedd hyn [REP2-325]. Mewn ymateb i gwestiwn gan yr Awdurdod Archwilio [PD-013] darparodd CNC gopïau llawn o amcanion cadwraeth yn [REP5-081]. Mae [REP5-081] hefyd yn cynnwys amcanion cadwraeth ar gyfer safle Ramsar Aber Dyfrdwy.

4.2 Y Prawf Cyfanrwydd

Dim Effeithiau Niweidiol ar Gyfanrwydd Safleoedd

- 4.2.1 Cyflwynir asesiad yr Ymgeisydd o effeithiau ar gyfanrwydd safleoedd Ewropeaidd (yr asesiad Cam 2) yn adrannau 7 (cynefinoedd a rhywogaethau daearol, dŵr croyw ac arfordirol), 8 (mamaliaid morol), 9 (eog yr Iwerydd a misglod perlog) a 10 (adar) yr Adroddiad SHRA [APP-050] ac Adran 4 yr Atodiad i'r Adroddiad SHRA [AS-010]. Rhoddir rhagor o fanylion am yr asesiad o effeithiau ar gyfanrwydd yn adran 4 y RIES hwn.
- 4.2.2 Daeth yr Adroddiad SHRA [APP-050] [APP-051] a'r Atodiad i'r Adroddiad SHRA [AS-010] i'r casgliad na fyddai unrhyw effaith niweidiol ar gyfanrwydd safleoedd Ewropeaidd na'u nodweddion cymwys sydd o ddiddordeb o ganlyniad i effeithiau o'r prosiect.
- 4.2.3 Mae Tabl 11-1 yr Adroddiad SHRA [APP-050] a [AS1010] yn rhestru'r mesurau lliniaru a ystyriwyd yn yr asesiad o effeithiau niweidiol ar gyfanrwydd safleoedd.
- 4.2.4 Dywedodd CNC eu bod yn cytuno â chasgliadau'r Ymgeisydd ynglŷn â dim effeithiau niweidiol ar gyfanrwydd nodweddion cymwys

mamaliaid morol o ganlyniad i effeithiau adeiladu neu weithredol. Fodd bynnag, dywedasant hefyd [REP2-325]:

- Y dylai Cynllun Rheoli Llongau (VMP) gael ei amlinellu yn yr is-God Ymarfer Adeiladu Gwaith Morol (MWSCoCP) a'i gymeradwyo gan yr awdurdod cyflawni mewn ymgynghoriad â CNC fel gofyniad yn y DCO cyn adeiladu;
- Y dylai ymrwymiad i ddarparu mesurau manwl gael ei nodi yn y MWSCoCP;
- Y dylai gofyniad gael ei gynnwys yn y DCO sy'n mynnu bod mesurau lliniaru manwl ar gyfer lleihau effeithiau sŵn tanddwr gael eu cymeradwyo gan yr awdurdod cyflawni mewn ymgynghoriad â CNC. Dylai ymrwymiad i ddarparu mesurau lliniaru manwl gael ei amlinellu hefyd yn y fersiwn o'r MWSCoP a gymeradwyir gan yr Ysgrifennydd Gwladol; ac
- Y dylai gofyniad gael ei gynnwys yn y DCO bod cynigion monitro manwl yn cael eu hamlinellu yn y CoOP a'u cymeradwyo gan yr awdurdod cyflawni mewn ymgynghoriad â CNC.

4.2.5 Ar adeg Terfyn Amser 4, gwnaethant nodi y byddai'n anodd darparu gwybodaeth fanwl cyn diwedd yr Archwiliad, gan ddweud y dylai'r wybodaeth gael ei hamlinellu mewn SCoCP manwl, i'w gymeradwyo gan yr awdurdod cyflawni mewn ymgynghoriad â CNC cyn i'r gweithgarwch ddigwydd [REP4-039].

4.2.6 Safbwynt yr Ymgeisydd yw y byddai egwyddorion y VMP (a restrir yn [REP3-035]) yn cael eu hamlinellu yn y MWSCoCP. Mae'r mesurau lliniaru ar gyfer sŵn tanddwr, fel y'u rhestrir yn Nhabl 11-1 [APP-050], wedi'u cynnwys yn y MWSCoCP. Fel y nodwyd yn flaenorol, mae'r gofynion yn y DCO drafft yn datgan bod rhaid i'r Datblygiad Arfaethedig gael ei adeiladu yn unol â'r dogfennau rheoli oni chytunir yn wahanol gyda IACC. Bydd y CoCP a'r is-CoCPs yn ddogfennau ardystiedig at ddibenion y DCO. Felly, bydd y mesurau lliniaru a sicrhau o fewn y CoCPs yn cael eu sicrhau trwy gyfrwng gofynion DCO [REP3-035].

4.2.7 Nododd CNC fod y meini prawf a ddefnyddir i bennu anaf neu aflonyddwch i famaliaid morol o ganlyniad i sŵn tanddwr wedi newid ers i [APP-050] gael ei ysgrifennu. Dywedasant y dylai'r asesiad o sŵn tanddwr gael ei ddiweddarau gan ddefnyddio'r meini prawf newydd (y Gwasanaeth Pysgodfeydd Morol Cenedlaethol (2018)) gan fod y meini prawf hyn yn cynrychioli'r wyddoniaeth orau sydd ar gael bellach [REP2-235]. Darparodd yr Ymgeisydd nodyn ar oblygiadau defnyddio'r meini prawf newydd (Atodiad D, [REP3-035]) a modelu sŵn wedi'i ddiweddarau [REP4-009].

4.2.8 Dywedodd CNC fod angen eglurhad pellach o'r modelu wedi'i ddiweddarau, yn enwedig yng ngoleuni'r cyfeiriad at stancio ergydol yn y cais am newid ansylweddol yn [REP4-012] a [REP5-081]. Ymatebodd yr Ymgeisydd i bryderon CNC erbyn Terfyn Amser 6 [REP6-027].

- 4.2.9 Mae Tabl 4.1 isod yn dangos lle mae casgliad yr Ymgeisydd ynglŷn â dim effaith niweidiol ar gyfanrwydd safleoedd mewn perthynas â'r safleoedd Ewropeaidd a'r nodweddion cymwys a restrwyd yn cael ei herio gan Bartion â Buddiant hyd at Derfyn Amser 7. Mae matricesau Cam 2 wedi'u diweddarau wedi'u cynhyrchu ar gyfer y safleoedd Ewropeaidd lle mae casgliadau'r Ymgeisydd wedi cael eu dadlau (gweler Atodiad 4).
- 4.2.10 Fel y nodwyd yn flaenorol, mae CNC wedi dweud bod eu pryderon ynglŷn â'r effeithiau ar gyfanrwydd ACA Bae Cemlyn o ganlyniad i newidiadau i ddraenio dŵr wyneb a'r effeithiau ar Esgair Gemlyn wedi cael eu datrys i raddau helaeth, er bod ganddynt bryderon o hyd ynglŷn â materion ansawdd aer. Mae'r eNGOs yn parhau i bryderu am yr effeithiau hyn (gweler Cam 2 Matrics 1 am gyfeiriadau dogfennau manwl).
- 4.2.11 Nid yw CNC na'r eNGOs yn cytuno â chasgliad yr Ymgeisydd ynglŷn â dim effeithiau niweidiol ar AGA Môr-wenoliaid Ynys Môn. Nid yw CNC yn cytuno â chasgliad yr Ymgeisydd ynglŷn â dim effeithiau niweidiol ar AGA Aber Dyfrdwy (gweler Cam 2 Matrics 2 a 3 ar gyfer cyfeiriadau dogfennau manwl).
- 4.2.12 Mae Atodiad 4 yr adroddiad hwn yn cynnwys matricesau wedi'u diweddarau sy'n crynhoi'r materion a drafodwyd yn ystod yr Archwiliad hyd at Derfyn Amser 7.

Tabl 4.1: Aseiad priodol cysgodol yr Ymgeisydd ac i ba raddau y cytunir â Phartïon â Buddiant

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
<u>Afon Eden – ACA Cors Goch Trawsfynydd</u>			
Eog yr Iwerydd* Misglod perlog dŵr croyw*	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>ACA Afon Dyfrdwy a Llyn Tegid</u>			
Eog yr Iwerydd*	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] and [REP6-047])	Na
<u>ACA Afon Gwyrfai a Llyn Cwellyn</u>			
Eog yr Iwerydd*	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>ACA Afon Teifi</u>			
Eog yr Iwerydd	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>ACA Bae Cemlyn</u>			

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
Lagwnau arfordirol Llystyfiant parhaol ar fanciau caregog*	Nac oes [APP-050] [APP-051] [AS-10]	Cytunwyd yn rhannol â CNC, ni chytunwyd â'r eNGOs	Gweler Matrics 1 Cam 2 am sylwadau manwl
<u>ACA Bae Ceredigion</u>			
Dolffiniaid trwyn potel Morloi llwyd	Nac oes [APP-050] [APP-051] [AS-10]	Do (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA Corsydd Môn</u>			
Gweundir gwlyb Gogledd yr Iwerydd* Dolydd <i>Molinia</i> ar briddoedd calchaid, mawnaidd neu gleiog sy'n llawn silt* Corsydd calchaid sy'n cynnwys <i>Cladium mariscus</i> a rhywogaethau <i>Caricion davallianae</i> * Dyfroedd oligo-mesotroffig caled gyda llystyfiant môr-waelodol <i>Chara</i> spp.* Mursen y de*	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
Britheg y gors* Malwen droellog Geyer*			
<u>ACA ymgeisiol Dynesfeydd Môr Hafren</u>			
Llamhidyddion harbwr	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA Glannau Ynys Gybi</u>			
Clogwyni môr â llystyfiant arfordir yr Iwerydd a'r arfordir Baltig* Gweundir gwlyb Gogledd yr Iwerydd* Gweundir sych Ewropeaidd*	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>ACA ymgeisiol Gogledd Môn Forol</u>			
Llamhidyddion harbwr	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA ymgeisiol Gorllewin Cymru Forol</u>			

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
Llamhidyddion harbwr	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA Llyn Dinam</u>			
Llynnoedd ewtroffig naturiol*	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>ACA Pen Llŷn a'r Sarnau</u>			
Morloi llwyd Dolffiniaid trwyn potel	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA Sir Benfro Forol</u>			
Morloi llwyd	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>Safle Ramsar Aber Dyfrdwy – Cymru/Lloegr</u>			
Môr-wenoliaid pigddu	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>Safle Ramsar Corsydd Môn a Llŷn</u>			
Corsydd calchaid tra-fasig Anifeiliaid a phlanhigion amrywiol gyda	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
rhywogaethau prin cysylltiedig, sydd o werth arbennig i gynnal amrywiaeth genetig ac ecolegol y rhanbarth			
<u>AGA Aber Dyfrdwy – Cymru / Lloegr</u>			
Môr-wenoliaid pigddu	Nac oes [APP-050] [APP-051] [AS-10]	Na	Gweler Cam 2 Matrics 3 yn Atodiad 4 yr adroddiad hwn
AGA Glannau Ynys Gybi			
Brain coesgoch	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>AGA Glannau Aberdaron ac Ynys Enlli</u>			
Adar drycin Manaw Brain coesgoch	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>AGA Grassholm</u>			
Huganod	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>AGA Môr-wenoliaid Ynys Môn</u>			
Môr-wenoliaid y Gogledd Môr-wenoliaid pigddu	Nac oes [APP-050] [APP-051] [AS-10]	Na	Gweler Cam 2 Matrics 2 yn Atodiad 4 yr adroddiad hwn

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
Môr-wenoliaid rhosliw Môr-wenoliaid cyffredin			
<u>ACA Mynydd Cilan, Trwyn yr Wylfa ac Ynysoedd Sant Tudwal</u>			
Brain coesgoch	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>AGA Ynys Rathlin</u>			
Crynodiad adar môr gan gynnwys adar drycin y graig	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>AGA Sgomer, Sgogwm a moroedd Sir Benfro</u>			
Adar drycin Manaw Crynodiad adar môr	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>AGA Ynys Seiriol</u>			
Mulfrain mwyaf	Nac oes [APP-050] [APP-051] [AS-10]	Mae CNC yn cytuno â'r casgliad ([REP2-325] a [REP6-047])	Na
<u>Gogledd Iwerddon</u>			
<u>ACA Murlough</u>			
Morloi harbwr	Nac oes [APP-050] [APP-051] [AS-10]	Do (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
<u>ACA ymgeisiol Sianel y Gogledd</u>			
Llamhidyddion harbwr	Nac oes [APP-050] [APP-051] [AS-10]	Do (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA Strangford Lough</u>			
Morloi harbwr	Nac oes [APP-050] [APP-051] [AS-10]	Do (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>ACA The Maidens</u>			
Morloi llwyd	Nac oes [APP-050] [APP-051] [AS-10]	Do (ond gweler y sylwadau yn adran 4.2 yr adroddiad hwn)	Na
<u>AGA bosibl Forol yr Arfordir Dwyreiniol</u>			
Adar drycin Manaw	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>Lloegr</u>			
<u>Safle Ramsar Aberoedd Ribble ac Alt</u>			
Gwylanod cefnddu lleiaf	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>Safle Ramsar Culfor Mersi a Blaendraeth Gogledd Wirral</u>			
Môr-wenoliaid cyffredin	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>Safle Ramsar Bae Morecambe</u>			

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
Gwylanod cefnddu lleiaf	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>AGA Gweunydd Bowland – Lloegr</u>			
Gwylanod cefnddu lleiaf	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>AGA Culfor Mersi a Blaendraeth Gogledd Wirral</u>			
Môr-wenoliaid cyffredin	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>AGA Bae Morecambe</u>			
Crynodiad adar môr (gwylanod penwaig a gwylanod cefnddu lleiaf)	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>AGA Bae Morecambe ac Aber Duddon</u>			
Gwylanod cefnddu lleiaf Crynodiad adar môr (gwylanod penwaig a gwylanod cefnddu lleiaf)	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na
<u>AGA Aberoedd Ribble ac Alt</u>			
Gwylanod cefnddu lleiaf	Nac oes [APP-050]	Ni dderbyniwyd sylwadau	Na

Nodweddion	A oes Effaith Niweidiol Bosibl ar Gyfanrwydd?	A gytunwyd â chyrrff cadwraeth natur statudol (SNCB) a Phartïon eraill â Buddiant?	A gynhyrchwyd matrices wedi'i ddiweddarau?
	[APP-051] [AS-10]	penodol	
Yr Alban			
<u>AGA Ailsa Craig</u>			
Huganod	Nac oes [APP-050] [APP-051] [AS-10]	Ni dderbyniwyd sylwadau penodol	Na

*Amlygwyd yn [APP-050] eu bod mewn cyflwr anffafriol/anffafriol a dirywiol.

4.3 Dewisiadau Amgen ac IROPI

- 4.3.1 Mae'r eNGOs wedi awgrymu, o ystyried eu pryderon ynghylch effeithiau andwyol ar gyfanrwydd safleoedd Ewropeaidd, y dylai'r Ysgrifennydd Gwladol ystyried a oes achos dros barhau â'r Datblygiad Arfaethedig ar y sail na ellir dangos datrysiadau amgen na rhesymau hanfodol o fudd cyhoeddus gor-redol (IROPI), ac y gellir sicrhau'r mesurau cydadferol angenrheidiol ([RR-084], [REP2-054], [REP2-318], [REP2-348], [REP2-360], [REP6-046], [REP6-049] a [REP6-052]).
- 4.3.2 Mewn ymateb i gwestiynau ysgrifenedig ychwanegol yr Awdurdod Archwilio (Q2.5.10, [PD-013]), cyflwynodd yr Ymgeisydd wybodaeth am ddatrysiadau amgen [REP5-044], IROPI [REP5-045] a mesurau digolledu posibl [REP5-046] mewn perthynas ag effeithiau ar AGA Môr-wenoliaid Ynys Môn. Cynigodd yr Ymgeisydd ddull posibl o sicrhau mesurau digolledu o fewn y DCO [REP7-001].
- 4.3.3 Gwnaed sylwadau hefyd gan yr eNGOs [REP7-015 a CNC [REP7-012].
- 4.3.4 Mae'r eNGOs wedi awgrymu y dylai unrhyw fesurau cydadferol ystyried meta-boblogaeth môr-wenoliaid Môr Iwerddon [REP2-054]. Nid yw'r Ymgeisydd yn cytuno ei bod yn angenrheidiol i ddyluniad mesurau cydadferol ystyried y deinameg meta-boblogaeth [REP3-026].



The Planning Inspectorate
Yr Arolygiaeth Gynllunio

REPORT on the IMPLICATIONS for EUROPEAN SITES (RIES)

Proposed Wylfa Newydd Project

An Examining Authority report prepared with the
support of the Environmental Services Team

Planning Inspectorate Reference: EN010007

27 March 2019

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1 INTRODUCTION

1.1 Background

1.1.1 Horizon Nuclear Power Wylfa Limited (the Applicant) has applied to the Secretary of State for a development consent order (DCO) under Section 37 (s37) of the Planning Act 2008 (PA2008) for the proposed Wylfa Newydd Project (the application). The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.

1.1.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive¹ and the Habitats Regulations² for applications submitted under the PA2008 regime. The findings and conclusions on nature conservation issues reported by the ExA will assist the Secretary of State in performing its duties under the Habitats Regulations.

1.1.3 This RIES compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the examination by both the Applicant and Interested Parties, up to Deadline 7 of the examination (14 March 2019) in relation to potential effects to European Sites³. It is not a standalone document and should be read in conjunction with the examination documents referred to. Where document references are presented in square brackets [] in the text of this report, that reference can be found in the Examination Library published on the National Infrastructure Planning website at the following link:

<http://infrastructure.planninginspectorate.gov.uk/document/EN010007-001824>

1.1.4 It is issued to ensure that Interested Parties, including the statutory nature conservation body (Natural Resources Wales (NRW)), are consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 63(3) of the Habitats Regulations. Following consultation the responses will be considered by the ExA in making its recommendation to the Secretary of State and made available to the Secretary of State along with this report. The RIES will not be revised following consultation.

¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the 'Habitats Directive').

² The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

³ The term European Sites in this context includes Sites of Community Importance (SCIs), Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), possible SACs, potential SPAs and Ramsar sites. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see PINS Advice Note 10.

- 1.1.5 This RIES only addresses European sites for which the UK is responsible.

1.2 Documents used to inform this RIES

- 1.2.1 The Applicant submitted a shadow HRA Report [APP-050 and APP-051] ('the SHRA Report') with its application for a DCO.
- 1.2.2 Following acceptance of the application for examination, the Inspectorate issued s51 [PD-002] advice to the Applicant advising it consider whether the April 2018 ruling by the Court of Justice of the European Union (*People Over Wind and Sweetman v Coillte Teoranta* (C-323/17) ('the Sweetman judgement') had implications for the HRA. The ruling stated generally that mitigation measures should not be taken into account when considering if the Proposed Development is likely to lead to significant effects on a European site.
- 1.2.3 In response, the Applicant produced a SHRA Report Addendum [AS-010] (an Additional Submission) which was submitted during the pre-examination stage to address the ruling.
- 1.2.4 During the examination, the Applicant submitted several change requests proposing alterations to the original DCO application in relation to the blasting strategy [AS-020]; marine vessel movements [AS-021]; worker shift patterns [REP4-011]; working hours [REP4-013] and the Heavy Goods Vehicles (HGV) delivery window [REP4-013]. The Applicant evaluated the findings in their environmental information and did not identify any new or significantly different environmental effects associated with the change requests which would affect European sites ([REP6-015] and [rep6-016]). NRW agree with this position ([REP2-325], [REP4-039] and [REP5-081] in relation to the blasting strategy and the marine vessel movements).
- 1.2.5 The ExA accepted the Applicant's change request and considers them to be non-material changes that should be considered in the course of the examination. The consultation responses to the change request raised concerns regarding the alterations to the Applicant's blasting strategy and marine vessel movements. The concerns focussed on the impacts anticipated to on the Anglesey Terns SPA [PD-015].
- 1.2.6 At Deadline 7 the Applicant submitted another change request in relation to the Dalar Hir Park and Ride junction improvement. It concludes that (based on professional judgement) the assessment conclusions reached in [APP-050] are unaffected by the proposed change and still represent an accurate assessment of the Proposed Development's likely effects [REP7-001].
- 1.2.7 The documents used to inform this RIES are listed in Annex 1 of this report.

1.3 Matrices

- 1.3.1 The SHRA Report contained screening and integrity matrices in Appendices F and H [APP-051]. These were updated by the Applicant in Appendices 1 and 2 of the SHRA Report Addendum [AS-010].
- 1.3.2 The matrices only list features for which pathways for potential effects have been identified.
- 1.3.3 For those European sites and qualifying features where the Applicant's conclusions have been disputed or queried during the examination, following the submission of the Applicant's updated matrices, the matrices have been updated by the ExA, with the support of the Environmental Services Team of the Planning Inspectorate using the documents listed below. The revised matrices are included as Annexes 3 and 4 of this report.

1.4 Structure of this RIES

- 1.4.1 The remainder of this report is structured as follows:
 - **Section 2** identifies the European sites that have been considered within the DCO application and during the examination period, up to 14 March 2019. It provides an overview of the issues that have emerged during the examination.
 - **Section 3** identifies the European sites and qualifying features screened by the Applicant for potential likely significant effects, either alone or in-combination with other projects and plans. The section also identifies where Interested Parties have disputed the Applicant's conclusions, together with any additional European sites and qualifying features screened for potential likely significant effects during the examination.
 - **Section 4** identifies the European sites and qualifying features which have been considered in terms of adverse effects on site integrity, either alone or in-combination with other projects and plans. The section identifies where Interested Parties have disputed the Applicant's conclusions, together with any additional European sites and qualifying features considered for adverse effects on integrity during the examination.
 - **Annex 1** contains a list of the documents submitted during the examination which are relevant to the assessment of effects on European sites.
 - **Annex 2** contains a summary of the Applicant's screening exercise and the degree of agreement with Interested Parties.

- **Annexes 3 and 4** comprise matrices for those European sites and qualifying features for which the Applicant's conclusions were disputed in relation to potential likely significant effects and adverse effects on the integrity of European sites. They summarise the evidence submitted by the Applicant and interested parties up to 14 March 2019.

2 OVERVIEW OF THE APPLICANT'S APPROACH

2.1 Scope of the Applicant's SHRA Report

2.1.1 The Applicant's SHRA Report ([APP-050] and [APP-051]) assessed the effects of the works and activities to be consented by the DCO, as well as those to be consented by the following licences and permits which are being sought under separate consenting regimes:

- a Marine Licence for the marine construction works and for dredging and dredged material disposal;
- an Environmental Permit for water discharge during construction, commissioning and operation of the Proposed Development; and
- an Environmental Permit for combustion activity during commissioning and operation of the Proposed Development.

2.1.2 The SHRA Report states that a separate HRA report has been undertaken for the Radiological Substances Regulations environmental permit (for which NRW is the competent authority).

2.1.3 At Deadline 7, the Applicant confirmed that their applications for Environmental Permits concerning combustion activity and water discharge activities have been withdrawn. However, the Environmental Permit application in relation to water discharges during construction is still being progressed [REP7-001].

2.1.4 For the avoidance of doubt, this RIES reports on matters related to the DCO application only.

2.2 Identification of European Sites and potential impacts

2.2.1 The Proposed Development is not connected with or necessary to the management for nature conservation of any of the European sites considered within the Applicant's assessment.

2.2.2 The Applicant's scoping exercise to identify European sites and qualifying features for consideration within the screening stage is described in section 4 of the SHRA Report [APP-050]. It took into account European sites identified in the strategic level HRA undertaken by the Department for Energy and Climate Change (DECC) and was also informed by Zones of Influence for the following impact pathways:

- changes in visual and acoustic stimuli;
- land-take, including seabed or intertidal land;

- changes in marine water quality;
- changes in terrestrial water quality;
- changes in surface and groundwater hydrology;
- introduction of non-native species;
- change in radiation dose levels;
- change in air quality;
- alteration of coastal processes and hydrodynamics; and
- physical interaction between species and Project infrastructure.

2.2.3 European sites were identified for the following receptor categories:

- habitats;
- marine mammals;
- migratory fish;
- seabirds (breeding)*; and
- other birds.

* passage and non-breeding seabirds were largely scoped out because of the lack of connectivity between the European site populations and the Zones of Influence associated with the Proposed Development. However, two passage populations which could be affected were scoped in. These were the common tern feature of the Mersey Narrows and North Wirral Foreshore SPA/Ramsar site and the Sandwich tern feature of the Dee Estuary SPA/Ramsar site (paragraphs 4.7.15-4.7.19 of the Applicant's SHRA Report [APP-050]).

2.2.4 Waders, wildfowl and wetland species were considered in paragraphs 4.7.20-4.7.32 of the Applicant's SHRA Report [APP-050], however these features were scoped out of further assessment; this position is stated to have been agreed with NRW.

2.2.5 The European sites and relevant qualifying features (for which the UK is responsible) that were scoped in to the Applicant's HRA are detailed in Annex 3 and Table 4.1 of this report. The locations of these European sites are shown in Figures A1 and A2 of the SHRA Report [APP-050].

2.2.6 The Applicant's SHRA Report confirmed that of the European Sites scoped into DECC's strategic HRA, Glantraeth SAC, Snowdonia SAC, Great Orme's Head SAC, and Bae Lerpwl/Liverpool Bay SPA have been scoped out. It further confirmed that the Ynys Feurig, Cemlyn Bay and The Skerries SPA identified in DECC's strategic HRA now forms part of the Morwenoliaid Ynys Môn/Anglesey Terns SPA.

- 2.2.7 No additional European sites or features were identified by Interested Parties by Deadline 7 of the examination.
- 2.2.8 The Applicant's SHRA Report identified potential impacts on European sites in other European Economic Area (EEA) States [APP-050 and APP-051], however only European sites for which the UK is responsible are addressed in this RIES.

2.3 HRA Matters Considered During the Examination

- 2.3.1 NRWthe National Trust* (NT), the North Wales Wildlife Trust* (NWWT) and the Royal Society* for the Protection of Birds (RSPB)) have all expressed overarching concerns about the Applicant's approach to securing mitigation measures for effects on European sites. The Applicant's proposed mitigation measures are secured by the 'control documents that comprise:
- the Wylfa Code of Construction Practice (CoCP);
 - the sub-Codes of Construction practice (SCoCP);
 - and the Code of Operational Practice (CoOP) ('the control documents').

*The NT, NWWT and RSPB have worked together; where a joint response is referred to in this report, these bodies have been referred to collectively as 'the environmental NGOs'.

- 2.3.2 The Applicant's draft DCO proposes that the control documents would be certified documents in the DCO. The draft DCO also includes requirements (PW7, WN1, WN10 and WN24 [REP5-003] relating to the construction and operational phases of the Proposed Development. Under these requirements, construction must be carried out in accordance with the control documents unless otherwise agreed by the Isle of Anglesey County Council (IACC) in consultation with NRW
- 2.3.3 NRW's view is that there is insufficient detail in the control documents. They advise that the DCO should include a requirement for the Applicant to prepare detailed versions of the control documents for approval by the discharging authority in consultation with NRW ([REP2-325], [REP4-039] and [REP6-047]) prior to construction. NWWT, the RSPB and the NT have also raised concerns about the approach to securing mitigation for European sites through these documents ([REP2-348], [REP2-358], [REP2-360] and [REP2-318]).
- 2.3.4 The Applicant maintains that it is appropriate to secure mitigation through the control documents rather than directly through a requirement in the DCO ([REP2-375], [REP3-035], [REP3-026], [REP4-005], [REP5-084], [REP6-009] and [REP6-047]). These documents are being updated during the examination; the Applicant expects that the control documents will be sufficiently

detailed by the end of the examination for them to be approved as part of the DCO and not to be subject to any further approval processes [REP3-035].

- 2.3.5 The conclusions reached in [APP-050] regarding the effects on the features of the Anglesey Terns SPA and the Cemlyn Bay SAC were also disputed by the IPs.

Anglesey Terns SPA

- 2.3.6 The key areas of dispute were (see footnotes to matrices in Annex 4 for document references):

- The potential effects on the breeding populations of tern species which are the qualifying features of the SPA (particularly Sandwich tern) resulting from noise and visual disturbance during the construction phase;
- The applicability of published scientific literature used to inform the assessment of effects on the Sandwich tern breeding colony in the Cemlyn Bay lagoon; and
- The effectiveness and feasibility of the measures proposed to control noise and visual disturbance.

Cemlyn Bay SAC

- 2.3.7 The key areas of discussion were (see footnotes to matrices in Annex 4 for document references):

- The potential effects on the geomorphology and wave regime affecting the shingle ridge at Esgair Cemlyn (effects on the shingle ridge could also affect the lagoon where the SPA Sandwich tern colony nests);
- The effects on the quantity and quality of groundwater and surface water flows into the Cemlyn Bay lagoon as a result of drainage from the main power station site during construction; and
- The effectiveness and feasibility of the measures proposed to manage drainage from the main power station site during construction.

- 2.3.8 NRW has now advised that they are satisfied that the mitigation measures proposed by the Applicant will be sufficient to control surface water run-off to Cemlyn Bay SAC. They are also satisfied that the Applicant's proposals for monitoring and if necessary, adaptive management provide a suitable measure to avoid adverse effects on the integrity of the SAC as a result of the effects on Esgair Cemlyn (subject to certain amendments). The IPs however remain concerned (see Stage 2 Matrix 2 in Annex 4 of this report for document references).

3 LIKELY SIGNIFICANT EFFECTS

3.0 Introduction

- 3.0.1 The Applicant's screening assessment for likely significant effects (LSE) (the Stage 1 assessment) is presented in section 5 of the SHRA Report, Appendices C - F [APP-050] and Section 4 of the HRA Addendum [AS-010]. Appendices C- F include figures showing the location of the European sites considered in the screening for LSE and a list of the designated features for which LSE cannot be excluded.
- 3.0.2 Tables 5-1 to 5-4 of [APP-050] provide the rationale supporting the conclusions about LSE from the Proposed Development alone. A conclusion of no LSE was reached in relation to effects resulting from the introduction of invasive non-native species and from increased trampling/disturbance from workers living in the site campus because of the mitigation measures proposed. [AS-010] notes that following the Sweetman judgement, mitigation measures can no longer be relied on to exclude LSE and therefore the screening has been updated to conclude that these impacts would lead to LSE.
- 3.0.3 The assessment of LSE for decommissioning is described as 'problematic', given the 60 year operational lifetime of the Proposed Development (paragraphs 5.6.1 to 5.6.2, [APP-050]). The Applicant has a decommissioning strategy which makes assumptions about the techniques which would be adopted at the time of decommissioning (paragraph 1.1.15 [APP-050]). The assessment of LSE from decommissioning has therefore been based on a series of assumptions described in paragraphs 5.6.3 – 5.6.5 and Table 5-6 of [APP-050], notably the assumption that the effects from decommissioning will be no greater than the potential effects from construction and radiological effects during operation (see paragraph 5.6.5, [APP-050]). No LSE is predicted to arise during decommissioning from:
- Land-take, including seabed or intertidal land;
 - Changes in terrestrial water quality;
 - Changes in surface and groundwater hydrology;
 - Invasive Non-Native Species (INNS);
 - Change in radiation dose levels;
 - Change in air quality;
 - Alteration of coastal processes and hydrodynamics; and
 - Physical interaction between species and Project infrastructure.
- 3.0.4 The only potential LSE's identified were changes to marine water quality and changes in visual and acoustic stimuli (paragraph 1.1.18, [APP-050]).

- 3.0.5 The ExA queried to what extent, in the light of the Sweetman judgement, the decommissioning strategy secured through the DCO (see Requirement PW10, [REP5-003]) constituted a measure to avoid or reduce the effects of the Proposed Development on other sites (Q. 5.0.17 [PD-009] and Q.2.5.1 [PD-013]). The Applicant maintains the position that the assumptions set out in Table 5-6 of [APP-050] refer to the anticipated main features and characteristics of the decommissioning works rather than measures to mitigate the effects of the Proposed Development on European sites (Q.5.0.17 [REP2-375] and Q.2.5.1 [REP5-002]).

In-combination assessment

- 3.0.6 Paragraph 3.3.34 of [APP-050] defines the effects that have been included in the in-combination assessment. Additive or interactive effects from different elements of the Proposed Development have been treated as 'alone' effects; they have been carried forward into the appropriate assessment section of [APP-050] which deals with the effects from the Proposed Development alone. The in-combination assessment only deals with the effects arising from additive or interactive effects with other plans or projects.
- 3.0.7 Paragraph 5.3.12 of APP-050 states that the approach to the 'alone' Stage 1 Screening assessment was deliberately precautionary, in that LSE was concluded where the potential existed for any conceivable negative effect on an interest feature (paragraph 5.3.12 of [APP-050]). The in-combination assessment therefore only considers effects from the Proposed Development which have already been identified as being likely to have a significant effect.
- 3.0.8 Appendix B of the Applicant's SHRA Report [APP-051] lists the other projects considered by the Applicant and provides justifications as to why they have been screened in or out of the in-combination assessment and which European sites could be affected. Table 5.5 of [APP-050] lists the plans identified by the Applicant which could lead to in-combination effects with the Proposed Development. Projects and plans screened in are also detailed in paragraphs 5.5.2 to 5.5.3 of [APP-050].
- 3.0.9 The Applicant's approach to the in-combination assessment of effects on air quality has been disputed by NRW (see Stage 2, Matrix 1 of Annex 3 of this report for further details).

3.1 Applicant's conclusions

- 3.1.1 As noted above in this RIES, the Applicant took mitigation into account in the SHRA Report [APP-050] and [APP-051] submitted with the DCO application. However, in response to the Sweetman judgement, the Applicant revised its screening assessment within the SHRA Report Addendum [AS-010] to exclude mitigation

measures from the screening stage. This concluded that the Proposed Development is likely to give rise to significant effects, either alone or in-combination with other plans or projects, to 38 European sites (17 SACs/cSACs, 16 SPAs/pSPAs and five Ramsar Sites) within the UK⁴.

- 3.1.2 The European sites and qualifying features scoped into the HRA and the Applicant's screening conclusion (alone or in-combination with other plans or projects) and the degree of agreement between the Applicant and Interested Parties is summarised in Annex 2 of this report.
- 3.1.3 In response to Q5.0.16, NRW confirmed that with regard to the Welsh sites and LSEs, it was content with the Applicant's conclusions in the SHRA Report and the SHRA Report Addendum [REP2-325]. NRW has also advised that they agree that the proposed A5025 highway works are unlikely to adversely affect any SAC, SPA or Ramsar site in Wales subject to the agreement of detailed mitigation measures ([REP2-049]). In the Statement of Common Ground (SoCG) submitted at Deadline 6 NRW apparently agreed that the proposed A5025 highway improvements are unlikely to adversely affect any SAC, SPA or Ramsar site in Wales [REP6-047]. However, it should also be noted that NRW advised at Deadline 6 that NRW view [REP6-047] as a final draft. The distinction between a 'final draft' and a final SoCG has not been clearly defined.
- 3.1.4 However, RSPB, NWWT and NT considered that potential impacts of predator displacement from the Wylfa Newydd Development Area on the interest features of the Anglesey Terns SPA (specifically the Cemlyn Lagoon tern colony) should be screened in for Stage 2 assessment (see Stage 1 Matrix 1 in Annex 3 of this report).

⁴ Wales, England, Northern Ireland and Scotland

4 ADVERSE EFFECTS ON INTEGRITY

4.1 Conservation Objectives

- 4.1.1 The conservation objectives for all of the European sites taken forward to Stage 2 and discussed in this section of the report were provided by the Applicant in the SHRA Report [APP-050].
- 4.1.2 In response to Q5.0.45, NRW [REP2-325] advised that for European sites in/partly in Wales, the conservation objectives were correct, with the following exceptions:
- Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC;
 - Bae Ceredigion / Cardigan Bay SAC;
 - Afon Teifi/ River Teifi SAC;
 - Sir Benfro Forol / Pembrokeshire Marine SAC; and
 - Ynys Seiriol / Puffin Island SPA.
- 4.1.3 NRW provided web-links to the up-to-date conservation objectives for these sites [REP2-325]. In response to a question from the ExA [PD-013] NRW provided full copies of the 1 conservation objectives in [REP5-081]. [REP5-081] also includes conservation objectives for the Aber Dyfrdwy/Dee Estuary Ramsar site.

4.2 The Integrity Test

No Adverse Effects on Site Integrity

- 4.2.1 The Applicant's assessment of effects on the integrity of European sites (the Stage 2 assessment) is presented in sections 7 (terrestrial, freshwater and coastal habitats and species), 8 (marine mammals), 9 (Atlantic salmon and freshwater pearl mussel) and 10 (birds) of the SHRA Report [APP-050] and Section 4 of the SHRA Report Addendum [AS-010]. Further details of the assessment of effects on integrity are provided in section 4 of this RIES.
- 4.2.2 The SHRA Report [APP-050] [APP-051] and SHRA Report Addendum [AS-010] concluded that there would be no adverse effect on the integrity of European sites or their qualifying interest features arising due to effects from the project.
- 4.2.3 Table 11-1 of the SHRA Report [APP-050] and [AS-010] lists the mitigation measures which have been taken into account in the assessment of adverse effects on site integrity.
- 4.2.4 NRW advised that they agreed with the Applicant's conclusions of no adverse effects on the integrity of marine mammal qualifying features from construction or operational effects. However, they also advised that [REP2-325]:

- A Vessel Management Plan (VMP) should be set out in the Marine Works sub-Code of Construction Practice (MWSCoCP) and be approved by the discharging authority in consultation with NRW as a DCO requirement prior to construction;
 - A commitment to provide detailed measures should be specified in the MWSCoCP;
 - A requirement should be included in the DCO requiring detailed mitigation measures for reducing the effects of underwater noise and which should be approved by the discharging authority in consultation with NRW. A commitment to providing detailed mitigation measures should also be set out in the version of the MWSCoP approved by the Secretary of State; and
 - A requirement should be included in the DCO for detailed monitoring proposals to be set out in the CoOP and approved by the discharging authority in consultation with NRW.
- 4.2.5 At Deadline 4, NRW noted that it would be difficult to provide the detailed information prior to the end of the examination and advised that the information should be set out in a detailed SCoCP, to be approved by the discharging authority in consultation with NRW before the activity takes place [REP4-039].
- 4.2.6 The Applicant's position is that the principles of the VMP (listed in [REP3-035]) would be set out in the MWSCoCP. The mitigation measures for underwater noise, as listed in Table 11-1 of [APP-050], are included in the MWSCoCP. As previously noted, the requirements in the draft DCO state that the construction of the Proposed Development must be undertaken in accordance with the control documents unless otherwise agreed with the IACC. The CoCP and sub-CoCPs will be certified documents for the purposes of the DCO. The mitigation secured within the CoCPs will therefore be secured by way of DCO requirements [REP3-035].
- 4.2.7 NRW noted that since [APP-050] was written, the criteria used to determine injury or disturbance to marine mammals from underwater noise have altered. They advised that the underwater noise assessment should be updated using the new criteria (National Marine Fisheries Service (2018)) as these criteria now represent the best available science [REP2-235]. The Applicant provided a note on the implications of using the new criteria (Appendix D, [REP3-035]) and updated noise modelling [REP4-009].
- 4.2.8 NRW advised that further clarifications on the updated modelling were required, particularly in the light of the reference to percussive piling in the request for non-material change in [REP4-012] and [REP5-081]. The Applicant provided a response to NRW's concerns at Deadline 6 [REP6-027].

- 4.2.9 Table 4.1 below identifies where the Applicant's conclusion of no adverse effect on site integrity in relation to the European sites and qualifying features listed is disputed by Interested Parties up to Deadline 7. Updated Stage 2 matrices have been produced for the European sites where the Applicant's conclusions have been disputed (see Annex 4).
- 4.2.10 As previously noted, NRW has advised that their concerns about the effects on the integrity of Cemlyn Bay SAC from alterations to surface water drainage and the effects on Esgair Gemlyn have largely been resolved, although they have outstanding concerns about air quality issues. The environmental NGOs remain concerned about these effects (see Stage 2 Matrix 1 for detailed document references).
- 4.2.11 NRW and the environmental NGOs do not agree with the Applicant's conclusion of no adverse effects on the Morwenoliaid Ynys Môn/Anglesey Terns SPA. NRW do not agree with the Applicant's conclusion of no adverse effects on the Aber Dyfrdwy/Dee Estuary SPA (see Stage 2 Matrices 2 and 3 for detailed document references).

Table 4.1: The Applicant's SHRA and degree of agreement reached with Interested Parties

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
<u>Afon Eden – Cors Goch Trawsfynydd SAC</u>			
Atlantic salmon* Freshwater pearl* mussel	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Afon Dyfrdwy a Llyn Tegid/River Dee and Bala Lake SAC</u>			
Atlantic salmon*	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Afon Gwyrfai a Llyn Cwellyn SAC</u>			
Atlantic salmon*	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Afon Teifi/River Teifi SAC</u>			
Atlantic salmon	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Bae Cemlyn/Cemlyn Bay SAC</u>			
Coastal lagoons	No [APP-050] [APP-051] [AS-10]	Partially agreed with NRW, not agreed by environmental NGOs	See Stage 2 Matrix 1 for detailed comments

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
Perennial vegetation of stony banks*			
<u>Bae Ceredigion/Cardigan Bay SAC</u>			
Bottlenose dolphin Grey seal	No [APP-050] [APP-051] [AS-10]	Yes (but see comments under section 4.2 of this report)	No
<u>Corsydd Môn/Anglesey Fens SAC</u>			
Northern Atlantic wet heath* <i>Molinia</i> meadow on calcareous, peaty or clayey-silt laden soils* Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> * Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.* Southern damselfly* Marsh fritillary butterfly* Geyer's whorl snail*	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Dynesfeydd Môr Hafren/Bristol Channel Approaches cSAC</u>			

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
Harbour porpoise	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion (but see comments under section 4.2 of this report)	No
<u>Glannau Ynys Gybi/Holy Island Coast SAC</u>			
Vegetated sea cliffs of the Atlantic and Baltic coasts* Northern Atlantic wet heaths* European dry heaths*	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Gogledd Môn Forol/North Anglesey Marine cSAC</u>			
Harbour porpoise	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion (but see comments under section 4.2 of this report)	No
<u>Gorllewin Cymru Forol/West Wales Marine cSAC</u>			
Harbour porpoise	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion (but see comments under section 4.2 of this report)	No
<u>Llyn Dinam SAC</u>			
Natural eutrophic lakes*	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Pen Llyn a'r Sarnau/Llyn Peninsula and the Sarnau SAC</u>			

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
Grey seal Bottlenose dolphin	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion (but see comments under section 4.2 of this report)	No
<u>Sir Benfro Forol/Pembrokeshire Marine SAC</u>			
Grey seal	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion (but see comments under section 4.2 of this report)	No
<u>Aber Dyfrdwy/Dee Estuary Ramsar site – Wales/England</u>			
Sandwich tern	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Corsydd Môn a Llyn/Anglesey and Llyn Fens Ramsar</u>			
Base-rich calcareous fens Diverse fauna and flora with associated rare species, of special value for maintaining the genetic and ecological diversity of the region	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Aber Dyfrdwy/Dee Estuary SPA – Wales / England</u>			
Sandwich tern	No [APP-050] [APP-051] [AS-10]	No	See Stage 2 Matrix 3 in Annex 4 of this report.
Glannau Ynys Gybi/Holy Island Coast SPA			

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
Chough	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Glannau Aberdaron and Ynys Enlli/Aberdaron Coast Bardsey Island SPA</u>			
Manx shearwater Chough	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Grassholm SPA</u>			
Gannet	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Morwenoliaid Ynys Môn/Anglesey Terns SPA</u>			
Arctic tern Sandwich tern Roseate tern Common tern	No [APP-050] [APP-051] [AS-10]	No	See Stage 2 Matrix 2 in Annex 4 of this report.
<u>Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal/Mynydd Cilan, Trwyn y Wylfa and the St. Tudwal Islands SPA</u>			
Chough	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Rathlin Island SPA</u>			
Seabird assemblage including fulmar	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Sgomer, Gogwm a moroedd Benfro/Skomer, Skokholm and the seas off Pembrokeshire SPA</u>			

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
Manx shearwater Seabird assemblage	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
<u>Ynys Seiriol/Puffin Island SPA</u>			
Great cormorant	No [APP-050] [APP-051] [AS-10]	NRW agree with conclusion ([REP2-325] and [REP6-047])	No
Northern Ireland			
<u>Murlough SAC</u>			
Harbour seal	No [APP-050] [APP-051] [AS-10]	Yes (but see comments under section 4.2 of this report)	No
<u>North Channel cSAC</u>			
Harbour porpoise	No [APP-050] [APP-051] [AS-10]	Yes (but see comments under section 4.2 of this report)	No
<u>Strangford Lough SAC</u>			
Harbour seal	No [APP-050] [APP-051] [AS-10]	Yes (but see comments under section 4.2 of this report)	No
<u>The Maidens SAC</u>			
Grey seal	No [APP-050] [APP-051] [AS-10]	Yes (but see comments under section 4.2 of this report)	No
<u>East Coast Marine pSPA</u>			
Manx shearwater	No [APP-050] [APP-051] [AS-10]	No specific comments received	No

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
England			
<u>Ribble and Alt Estuaries Ramsar site</u>			
Lesser black-backed gull	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Mersey Narrows and North Wirral Foreshore Ramsar site</u>			
Common tern	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Morecambe Bay Ramsar site</u>			
Lesser black-backed gull	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Bowland Fells SPA – England</u>			
Lesser black-backed gull	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Mersey Narrows and North Wirral Foreshore SPA</u>			
Common tern	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Morecambe Bay SPA</u>			
Seabird assemblage (herring gull and lesser black-backed gull)	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Morecambe Bay and Duddon Estuary SPA</u>			

Features	Potential Adverse Effect on Integrity?	Agreed with SCNB and other Interested Parties?	Updated matrix produced?
Lesser black-backed gull Seabird assemblage (herring gull and lesser black-backed gull)	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
<u>Ribble and Alt Estuaries SPA</u>			
Lesser black-backed gull	No [APP-050] [APP-051] [AS-10]	No specific comments received	No
Scotland			
<u>Ailsa Craig SPA</u>			
Gannet	No [APP-050] [APP-051] [AS-10]	No specific comments received	No

*Identified in [APP-050] as being in unfavourable/unfavourable declining condition.

4.3 Alternatives and IROPI

- 4.3.1 The environmental NGOs have suggested that, given their concerns about adverse effects on the integrity of European sites, the Secretary of State should consider if there is a case for progressing the Proposed Development on the basis that it can be demonstrated that there are no alternative solutions, imperative reasons of overriding public interest and if the necessary compensatory measures can be secured ([RR-084], [REP2-054], [REP2-318], [REP2-348], [REP2-360], [REP6-046], [REP6-049] and [REP6-052]).
- 4.3.2 In response to the ExA's further written questions (Q2.5.10, [PD-013]), the Applicant provided information on alternative solutions [REP5-044], IROPI [REP5-045] and potential compensatory measures [REP5-046] in relation to effects on the Anglesey Terns SPA. The Applicant proposed a mechanism for securing compensatory measures within the DCO [REP7-001].
- 4.3.3 Comments have also been made by the environmental NGOs [REP7-015] and NRW [REP7-012].
- 4.3.4 The environmental NGOs have suggested that any compensatory measures should take into account the Irish Sea meta-population of terns [REP2-054]. The Applicant does not agree that it is necessary for the design of compensatory measures to take the meta-population dynamics into account [REP3-026].

ANNEX 1: DOCUMENTS USED TO INFORM THE RIES

Procedural decisions

- Section 51 advice to the Applicant [PD-002];
- Written Questions [PD-009];
- Further Written Questions [PD-013];

Application documents

- Draft Development Consent Order [APP-029];
- Shadow Habitats Regulations Assessment (Part 1 of 2) [APP-050];
- Shadow Habitats Regulations Assessment (Part 2 of 2) [APP-051];
- ES Volume B – Introduction to the environmental assessments B5 – Air quality [APP-070];
- ES Volume D – WNDA Development D5 – Air quality (excluding emissions from traffic) [APP-124];
- ES Volume D – WNDA Development D6 – Noise and vibration [APP-125];
- ES Volume D – WNDA Development D8 – Surface water and groundwater [APP-127];
- ES Volume D – WNDA Development D12 – Coastal processes and coastal geomorphology [APP-131];
- ES Volume D – WNDA Development D13 – The marine environment [APP-132];
- ES Volume D - WNDA Appendix D5-3 – Main Site Operational Dispersion – EIA – Dispersion Modelling Report of the Emissions to Air Arising from Operational Combustion Plan (Scenarios to Support DCO Application) [APP-141];
- ES Volume D - WNDA App D8-4 – Flood Consequence Assessment [APP-150 to APP-157];
- ES Volume D - WNDA App D8-7 – Surface water and groundwater modelling results [APP-160 to APP-166];
- ES Volume D - WNDA App D8-8 – Summary of preliminary design for construction surface water drainage [APP-167];
- ES Volume D - WNDA App D9-14 – Chough Baseline Report [APP-181];
- ES Volume D - WNDA App D12-1 – Coastal Geomorphology Baseline for the Wylfa Newydd Project - 2014 [APP-216];
- ES Volume D - WNDA App D12-2 – Sediment Regime [APP-217];

- ES Volume D - WNDA App D12-3 – Wylfa Newydd Main Site Wave Modelling Report [APP-218];
- ES Volume D – WNDA App D13-6 – Marine Mammal Baseline Review [APP-222];
- ES Volume D – Wylfa Newydd Development Area (WNDA) App D13-7 – Seabird Baseline Review [APP-225];
- ES Volume D – Wylfa Newydd Development Area (WNDA) App D13-8 – Marine Hydrodynamic Modelling Report - Wylfa Newydd Development Area [APP-226];
- ES Volume D – Wylfa Newydd Development Area (WNDA) App D13-9 – Underwater Noise Baseline and Modelling [APP-227];
- ES Volume D – Wylfa Newydd Development Area (WNDA) App D13-12 – Marine Hydrodynamic Modelling Report [APP-230];
- ES Volume D – Wylfa Newydd Development Area (WNDA) App D13-14 – Marine Modelling of the Construction Discharge [APP-232];
- Workforce Management Strategy [APP-413];
- Wylfa Newydd Code of Construction Practice [APP-414];
- Main Power Station Site sub-CoCP [APP-415];
- Marine Works sub-CoCP [APP-416];
- Wylfa Newydd Code of Operational Practice [APP-421];

Additional submissions

- Shadow Habitats Regulations Assessment Addendum [AS-010];
- Request for Non-Material Change no. 1 – Blasting Strategy [AS-020];
- Request for Non-Material Change no. 2 – Marine Vessel Movement [AS-021];

Relevant representations

- Natural Resources Wales (NRW) [RR-088];
- National Trust (NT) [RR-053];
- North Wales Wildlife Trust (NWWT) [RR-125];
- Royal Society for the Protection of Birds Cymru (RSPB) [RR-084];

Issue Specific Hearings

- Recording of ISH 4 on Biodiversity - Sessions 1 to 4;
-

Deadline 1

- NRW Summary of relevant representation [REP1-028];

Deadline 2

- Horizon Nuclear Power Wylfa Limited – Response to ExA’s written questions [REP2-375];
- Horizon Nuclear Power Wylfa Limited – Response to ExA’s written questions - Appendices [REP2-002];
- Horizon Nuclear Power Wylfa Limited – Written representation [REP2-003];
- Horizon Nuclear Power Wylfa Limited – Supplementary information on coastal processes to support Wylfa Newydd EIA and Shadow HRA [REP2-007];
- Horizon Nuclear Power Wylfa Limited – Draft Development Consent Order [REP2-020];
- Horizon Nuclear Power Wylfa Limited - Wylfa Newydd Code of Construction Practice [REP2-031];
- Horizon Nuclear Power Wylfa Limited - Wylfa Newydd Main Power Station Site sub-CoCP [REP2-032];
- Horizon Nuclear Power Wylfa Limited - Wylfa Newydd Marine Works sub-CoCP [REP2-033];
- Statement of Common Ground between Horizon Nuclear Power Wylfa Limited and NRW [REP2-049];
- Statement of Common Ground between Horizon Nuclear Power Wylfa Limited and the RSPB [REP2-054];
- Statement of Common Ground between Horizon Nuclear Power Wylfa Limited and NWWT [REP2-056];
- Statement of Common Ground between Horizon Nuclear Power Wylfa Limited and NT [REP2-058];
- NT - Written representation on Biodiversity Cemlyn Nature Reserve [REP2-318]¹;
- NT – Written representation on coastal processes and geomorphology [REP2-316];
- NRW - Written Representation, Response to the Examining Authority's Written Questions, Statement of Common Ground tables and advice on the Blasting and Vessel Movement Change Request [REP2-325];
- NWWT – Response to ExA’s first written questions [REP2-346];
- NWWT – Written representation on biodiversity – Cemlyn Nature Reserve [REP2-348]¹;

¹ The contents of representations [REP2-318], [REP2-348] and [REP2-360] are the same and were produced jointly by RSPB, NT and NWWT.

- RSPB – Response to ExA’s first written questions [REP2-358];
- RSPB – Biodiversity Cemlyn Nature Reserve [REP2-360]¹;

Deadline 3

- Horizon Nuclear Power Wylfa Limited’s Response to Interested Parties’ responses to the Examining Authority’s First Round Written Questions [REP3-005];
- Horizon Nuclear Power Wylfa Limited’s Response to Written Representation - eNGO Biodiversity Cemlyn Nature Reserve [REP3-026];
- Horizon Nuclear Power Wylfa Limited’s Response to NWWT’s written representation [REP3-027];
- Horizon Nuclear Power Wylfa Limited’s Response to NT’s written representation [REP3-028];
- Horizon Nuclear Power Wylfa Limited’s Response to NRW’s written representation [REP3-035];
- Horizon Nuclear Power Wylfa Limited – Addendum to seabird baseline report disturbance monitoring at Cemlyn Lagoon [REP3-045];
- Horizon Nuclear Power Wylfa Limited – Illustrative lighting spill technical note and associated appendices [REP3-047];
- Horizon Nuclear Power Wylfa Limited – Technical note indicating how Horizon would meet committed noise levels [REP3-048];
- Horizon Nuclear Power Wylfa Limited – Air quality mitigation quantification report [REP3-052];
- NT – Deadline 3 submission [REP3-056];
- NRW – Deadline 3 submission [REP3-054];

Deadline 4

- Horizon Nuclear Power Wylfa Limited Post oral hearing summaries – Thursday 10 January 2019 [REP4-005];
- Horizon Nuclear Power Wylfa Limited – Response to action points set in ISH on the 10 January 2019 [REP4-009];
- Horizon Nuclear Power Wylfa Limited – Request for non-material change – Worker shift patterns [REP4-011];
- Horizon Nuclear Power Wylfa Limited – Request for non-material change – Working hours [REP4-012];
- Horizon Nuclear Power Wylfa Limited – Request for non-material change – HGV delivery window [REP4-013];
- Horizon Nuclear Power Wylfa Limited – Phasing strategy [REP4-014];

- Horizon Nuclear Power Wylfa Limited – Cemlyn Bay baseline noise measurements [REP4-022];
- Isle of Anglesey County Council (IACC) – Post hearing submissions including written submissions of oral cases [REP4-034];
- NT – Post hearing submissions including written submissions of oral cases [REP4-038];
- NRW – Post hearing submissions including written submissions of oral cases and comments on change requests relation to the information submitted by the Applicant at Deadline 1 in relation to REP1-014, REP1-016 and REP1-017 [REP4-039];
- NWWT – Post hearing submissions including written submissions of oral cases [REP4-044];

Deadline 5

- Horizon Nuclear Power Wylfa Limited – Responses to the Examining Authority’s further written questions [REP5-002];
- Horizon Nuclear Power Wylfa Limited – Draft Development Consent Order [REP5-003];
- Horizon Nuclear Power Wylfa Limited – Wylfa Newydd Code of Construction Practice [REP5-020];
- Horizon Nuclear Power Wylfa Limited – Main power station site sub-CoCP [REP5-022];
- Horizon Nuclear Power Wylfa Limited – Marine works sub-CoCP [REP5-022];
- Horizon Nuclear Power Wylfa Limited – Wylfa Newydd Code of Operational Practice [REP5-034];
- Horizon Nuclear Power Wylfa Limited – Workforce Management Strategy [REP5-037];
- Horizon Nuclear Power Wylfa Limited – Phasing strategy [REP5-039];
- Horizon Nuclear Power Wylfa Limited – Biosecurity risk assessment strategy [REP5-041];
- Horizon Nuclear Power Wylfa Limited – HRA Stage 3 Assessment of alternative solutions [REP5-044];
- Horizon Nuclear Power Wylfa Limited – Imperative reasons of overriding public interest (IROPI) report [REP5-045];
- Horizon Nuclear Power Wylfa Limited – Position paper on compensation measures [REP5-046];
- Horizon Nuclear Power Wylfa Limited – Responses to eNGOs Post January hearing submission documents [REP5-051];

- Horizon Nuclear Power Wylfa Limited – Responses to the Isle of Anglesey County Council Deadline 4 submission [REP5-052];
- Horizon Nuclear Power Wylfa Limited – ISH actions on 10 January 2019 [REP5-084];
- NT – Response to the Examining Authority’s further written questions [REP5-076];
- NRW - Response to any other information as requested by the Examining Authority [REP5-081];
- RSPB - Response to the Examining Authority’s further written questions [REP5-077];
- NWWT – Response to the Examining Authority’s further written questions [REP5-075];

Deadline 6

- Horizon Nuclear Power Wylfa Limited – Comments to responses on Examining Authority’s further written questions [REP6-009];
- Horizon Nuclear Power Wylfa Limited – Code of Construction Practice update [REP6-014];
- Horizon Nuclear Power Wylfa Limited – Environmental statement addendum [REP6-015];
- Horizon Nuclear Power Wylfa Limited – Environmental statement addendum - Appendices [REP6-016];
- Horizon Nuclear Power Wylfa Limited – Response to Natural Resources Wales’ Deadline 5 submission [REP6-027];
- Horizon Nuclear Power Wylfa Limited – Statement of Common Ground between Horizon Nuclear Power and the Royal Society for the Protection of Birds [REP6-046];
- Horizon Nuclear Power Wylfa Limited – Statement of Common Ground between Horizon Nuclear Power and Natural Resources Wales [REP6-047];
- Horizon Nuclear Power Wylfa Limited – Statement of Common Ground between Horizon Nuclear Power and National Trust [REP6-049];
- Horizon Nuclear Power Wylfa Limited – Statement of Common Ground between Horizon Nuclear Power and North Wales Wildlife Trust [REP6-052];
- NRW – Clarification on the status of the Statement of Common Ground between Horizon Nuclear Power and Natural Resources Wales [REP6-064];

Deadline 7

- Horizon Nuclear Power - Response to Deadline 7 [REP7-001];
- NT – Response to Deadline 7 [REP7-010];

- NRW – Response to Deadline 7 [REP7-012];
- NWWT – Response to Deadline 7/environmental NGOs joint statement on Anglesey Terns SPA [REP7-015].

ANNEX 2: SUMMARY OF THE APPLICANT'S SCREENING EXERCISE AND DEGREE OF AGREEMENT WITH INTERESTED PARTIES

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Site	Features for which LSE identified (alone or in combination)	Agreed with Interested Parties
Afon Eden – Cors Goch Trawsfynydd SAC	Atlantic salmon Freshwater pearl mussel	No specific comments received.
Afon Dyfrdwy a Llyn Tegid/River Dee and Bala Lake SAC	Atlantic salmon	No specific comments received.
Afon Gwyrfai a Llyn Cwellyn SAC	Atlantic salmon	No specific comments received.
Afon Teifi/River Teifi SAC	Atlantic salmon	No specific comments received.
Bae Cemlyn/Cemlyn Bay SAC	Coastal lagoons Perennial vegetation of stony banks	No specific comments received.
Bae Ceredigion/Cardigan Bay SAC	Bottlenose dolphin Grey seal	No specific comments received.
Corsydd Môn/Anglesey Fens SAC	Northern Atlantic wet heath <i>Molinia</i> meadow on calcareous, peaty or clayey-silt laden soils Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Southern damselfly Marsh fritillary butterfly Geyer’s whorl snail	No specific comments received.
Dynesfeydd Môr Hafren/Bristol Channel Approaches cSAC	Harbour porpoise	No specific comments received.
Glannau Ynys Gybi/Holy Island Coast SAC	Vegetated sea cliffs of the Atlantic and Baltic coasts Northern Atlantic wet heaths European dry heaths	No specific comments received.

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Gogledd Môn Forol/North Anglesey Marine cSAC	Harbour porpoise	No specific comments received.
Gorllewin Cymru Forol/West Wales Marine cSAC	Harbour porpoise	No specific comments received.
Llyn Dinam SAC	Natural eutrophic lakes	No specific comments received.
Pen Llyn a'r Sarnau/Llyn Peninsula and the Sarnau SAC	Grey seal Bottlenose dolphin	No specific comments received.
Sir Benfro Forol/Pembrokeshire Marine SAC	Grey seal	No specific comments received.
Aber Dyfrdwy/Dee Estuary Ramsar site – Wales/England	Sandwich tern	No specific comments received.
Corsydd Môn a Llyn/Anglesey and Llyn Fens Ramsar	Base-rich calcareous fens Diverse fauna and flora with associated rare species, of special value for maintaining the genetic and ecological diversity of the region	No specific comments received.
Aber Dyfrdwy/Dee Estuary SPA – Wales / England	Sandwich tern	No specific comments received.
Glannau Ynys Gybi/Holy Island Coast SPA	Chough	No specific comments received.
Glannau Aberdaron and Ynys Enlli/Aberdaron Coast Bardsey Island SPA	Manx shearwater Chough	No specific comments received.
Grassholm SPA	Gannet	No specific comments received.
Morwenoliaid Ynys Môn/Anglesey Terns SPA	Arctic tern Sandwich tern	Conclusions on LSE disputed by Interested Parties – see Stage 1 Matrix

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	Roseate tern Common tern	1 in Annex 3 of this report.
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal/Mynydd Cilan, Trwyn y Wylfa and the St. Tudwal Islands SPA	Chough	No specific comments received.
Rathlin Island SPA	Seabird assemblage including fulmar	No specific comments received.
Sgomer, Gogwm a moroedd Benfro/Skomer, Skokholm and the seas off Pembrokeshire SPA	Manx shearwater Seabird assemblage	No specific comments received.
Ynys Seiriol/Puffin Island SPA	Great cormorant	No specific comments received.
Northern Ireland		
Murlough SAC	Harbour seal	No specific comments received.
North Channel cSAC	Harbour porpoise	No specific comments received.
Strangford Lough SAC	Harbour seal	No specific comments received.
The Maidens SAC	Grey seal	No specific comments received.
East Coast Marine pSPA – Northern Ireland	Manx shearwater	No specific comments received.
England		
Ribble and Alt Estuaries Ramsar site	Lesser black-backed gull	No specific comments received.
Mersey Narrows and North Wirral Foreshore Ramsar site	Common tern	No specific comments received.
Morecambe Bay Ramsar site	Lesser black-backed gull	No specific comments received.
Bowland Fells SPA – England	Lesser black-backed gull	No specific comments received.
Mersey Narrows and North Wirral Foreshore SPA	Common tern	No specific comments received.

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Morecambe Bay SPA	Seabird assemblage (herring gull and lesser black-backed gull)	No specific comments received.
Morecambe Bay and Duddon Estuary SPA	Lesser black-backed gull Seabird assemblage (herring gull and lesser black-backed gull)	No specific comments received.
Ribble and Alt Estuaries SPA	Lesser black-backed gull	No specific comments received.
Scotland		
Ailsa Craig SPA	Gannet	No specific comments received.

[AS-010] also states that in addition to the sites listed above, Y Fenai a Bae Conwy/Menai Strait and Conway Bay SAC, Coedydd Aber SAC and Mynydd Helygain/Halkyn Mountain SAC were considered in the Stage 1 Screening assessment as they are within the Zone of Influence defined for emissions from road traffic. However, the Applicant concluded (Table 5-1, [APP-050]) that the emissions from traffic would not lead to significant effects and therefore screened them out.

ANNEX 3: STAGE 1 MATRICES: SCREENING FOR LIKELY SIGNIFICANT EFFECTS

Stage 1 Matrices: Screening for Likely Significant Effect

This annex of the RIES identifies the European sites and features for which the Applicant's conclusions were disputed by Interested Parties. Therefore, revised screening matrices have been produced by the Planning Inspectorate

Key to Matrices:

- ✓ Applicant concludes that likely significant effect cannot be excluded
- × Applicant concludes that likely significant effect can be excluded
- ? Applicant's conclusion disputed
- C construction
- O operation
- D decommissioning

Information supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European Site the cell in the matrix is formatted as follows:

n/a

Stage 1 Matrix 1: Morwenoliaid Ynys Môn/Anglesey Terns SPA

Site Code: UK9013061

Distance to project: 0km

NB The footnotes to the Applicant’s original matrix have not been disputed so have not been reproduced here. The point of dispute relates to effects that were not referred to in the Applicant’s screening matrices in [AS-101].

European site features	Likely effects of Proposed Development		
	Effects from predator displacement		
	C	O	D
Arctic tern	x?a		
Sandwich tern	x?a		
Roseate tern	x?a		
Common tern	x?a		

Notes

- a. NWWT, the RSPB and the NT (‘the environmental NGOs’) have raised concerns about the potential for changes to habitats within the Wylfa Newydd Development Area to affect predator population dynamics and behaviour such that the Cemlyn Bay tern colony would be adversely affected. They suggest that the predator control measures identified in the ‘resilience measures’ described in [APP-050] should be adopted as mitigation for the effects on the SPA. (See [RR-125], [REP2-348], [REP2-056] and [REP6-052] for NWWT responses, [REP2-360], [REP2-358] and [REP6-046] for RSPB responses and [REP2-318] and [REP6-049] for NT responses). [APP-050] does not identify any potentially significant effects from altered impacts from predators. The Applicant has maintained the position that changes to

predation risk are likely to be imperceptible because (see [REP2-045], [REP2-056], [REP3-005], [REP3-026], [REP6-046] and [REP6-049] for the Applicant's responses):

- It is unlikely that Cemlyn lagoon would be the focus of displaced mammalian and avian predators, due to the abundance of suitable alternative habitats immediately outside the WNDA;
- Cemlyn lagoon is already within the foraging range of most mammalian predators likely to be associated with the Project site and so displacement would not necessarily increase the likelihood of the tern breeding areas being favoured for foraging;
- Territoriality would operate to limit local densities; and
- Cemlyn lagoon is already within the foraging range of corvids (and other species) that may have territories on the Project site, so the opportunities to exploit this resource are already present and unlikely to increase.

NRW has advised, in response to the ExA's further written questions, that as the site preparation and clearance work west of the Cafnan would take place before the return of the tern colony, predators would have attempted to find new territories before the breeding season begins. If the tern colony was a suitable food source for existing predators then predation incidents would have been observed (as happened with the otter predation in 2017) (Q2.5.9, [REP5-081]).

ANNEX 3: STAGE 2 MATRICES: ADVERSE EFFECT ON INTEGRITY

Stage 2 Matrices: Adverse Effect on Integrity

This annex of the RIES identifies the European sites and features for which the Applicant's conclusions with regards to adverse effects on integrity were disputed by Interested Parties. Revised integrity matrices have therefore been produced by the Planning Inspectorate.

Key to Matrices:

- ✓ Applicant concludes that adverse effects on integrity cannot be excluded
- × Applicant concludes that adverse effects on integrity can be excluded
- ? Applicant's conclusion is disputed
- C construction
- O operation
- D decommissioning

Information supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European Site the cell in the matrix is formatted as follows:

n/a

Stage 2 Matrix 1: Bae Cemlyn/Cemlyn Bay SAC

Site Code: UK0030114

Distance to project: 0.1km

European site features	Adverse effects on integrity														
	Changes in marine water quality			Changes in terrestrial water quality			Changes in surface & groundwater hydrology			Introduction of invasive non-native species			Change in air quality		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Coastal lagoons	x?b	x _C ,?w	x _D	x _b	x _C ,?w	a	x _e	x _f	a	x?u	x _u	x _u	x _g	x?h	a
Perennial vegetation of stony banks	x?m	x _n	x _o	x _m	x _n	l	x _p	x _p	l	x?u	x _u	x _u	x _q	x?r	l
	Alteration of coastal processes & hydrodynamics			Physical interaction between species & project infrastructure			In-combination effects								
	C	O	D	C	O	D	C	O	D						
Coastal lagoons	x _i ,?w	x _j ,?w	a	a	a	a	x _k	x?k	x _k						
Perennial vegetation of stony banks	x _s ,?w	x _t ,?w	l	x _v	x _v	x _v	x _k	x?k	x _k						

Notes

- a. Excluded in the LSE screening stage ([APP-050] and [AS-010]).
- b. Section 7.4, item A1 (Increase in suspended sediment from drainage discharge, dewatering, sewage, capital dredging & disposal of dredged material) [APP-050], item A2 (Change in water chemistry) [APP-050] and item A3 (Change in surface and groundwater flow – affecting salinity) [APP-050].

NRW requested further information on the mitigation proposed to deal with surface water run-off from Mound E ([RR-088], [REP2-325] and [REP2-049]). The environmental NGOs queried the adequacy of the assessment of the effects of construction drainage, particularly in relation to the baseline data used and the proposed mitigation measures and raised particular concerns about the re-working of Mound E ([REP2-318], [REP2-348], [REP2-360], [REP2-056], [REP2-058], [REP4-044], [REP6-049] and [REP6-052]). They have identified the information they feel is required to address their concerns [REP4-044]. In the Applicant's view, the detailed information would be provided (if required) at the post-consent stage [REP5-051].

The Applicant maintains the position that the baseline water quality data is adequate [REP3-026] but has provided an updated version of the Main Power Station Site sub-Code of Construction Practice (MPSSCoCP) at Deadline 2 [REP2-032] which includes a commitment to baseline water quality monitoring in Nant Cemlyn to be agreed with NRW ([REP2-049], [REP2-056], [REP4-005] and [REP6-049]). The Applicant provided further clarification on the drainage proposals for Mound E ([REP2-375] and [REP3-035]) and the capacity of the Mound E drainage system ([REP2-049] and [REP3-035]).

NRW agreed, following the updates to the MPSSCoCP [REP2-032], that the drainage impacts from Mound E can be mitigated; they advise that the detailed mitigation (including monitoring proposals) should be set out in the SCoCP to be approved by the discharging authority in conjunction with NRW ([REP4-039], [REP5-081] and [REP6-047]). The Applicant has addressed this advice through the inclusion of Requirements WN[A] and WN1 in the version of the DCO submitted at Deadline 5 [REP5-003].

In view of the natural fluctuations in salinity in the lagoon NRW agree with the Applicant's conclusion that changes in surface water and groundwater flows predicted in [APP-050] are unlikely to affect the functioning of the lagoon [REP2-

325]. The environmental NGOs do not agree that the lagoon specialist species will necessarily be able to tolerate fluctuations in salinity and advocate additional mitigation measures such as a monitoring and remediation strategy ([REP2-318], [REP2-348] and [REP2-360]).

- c.** Section 7.4, item A4 (Change in salinity due to overtopping of the shingle ridge (Esgair Gemlyn)) [APP-050], item A5 (Potential for increase in suspended sediment) [APP-050] and item A6 (Thermal and chemical changes due to discharge from the cooling water system) [APP-050].
- d.** Section 7.10 [APP-050] (Decommissioning).
- e.** Section 7.4 item B1 (Change in groundwater recharge, availability and supply) [APP-050] and item B2 (Change in surface water flow in the Cemlyn catchment) [APP-050].
- f.** Section 7.4 item B3 (Change in groundwater recharge and availability and supply) [APP-050], item B4 (Change in surface water flow in the Cemlyn catchment) [APP-050] and item B5 (Change in flood risk in the Cemlyn catchment) [APP-050] .
- g.** Section 7.4 item C1 (Construction dust (earthworks and material handling)) [APP-050] and item C2 (Construction plant, machinery and marine vessels emissions) [APP-050]. NRW agrees with the Applicant's conclusion that nitrogen or acid deposition is unlikely to have adverse effects on the integrity of the SAC ([REP2-325] and [REP6-047]).

NRW advise that detailed dust monitoring and mitigation measures should be set out in the MPSSCoCP and approved by the discharging authority in consultation with NRW ([REP2-325], [REP2-049]). The Applicant provided an updated CoCP, MPSSCoCP and MWSCoCP at Deadline 2 ([REP2-031], [REP2-032] and [REP2-033]) with increased detail. Their position is that by including the details in the CoCP and MPSSCoCP, the matters covered in these documents should be approved as part of the DCO application rather than being submitted for approval by IACC at a later date ([REP2-049] and [REP3-035]).

- h.** Section 7.4 item C3 (Combustion plant emissions) [APP-050]. NRW queried the Applicant's approach to modelling operational effects ([REP2-325] and [REP2-049]). The Applicant provided additional information to NRW ([REP2-049])

and [REP3-035]). In the Applicant's view, the modelling is appropriate and adequately considers the worst-case scenario (REP3-035)).

- i.** Section 7.4 item D1 (Change in waves, tidal currents, bed shear stress and sediment regime and effect on Esgair Gemlyn) [APP-050] and item D2 (Potential for blockage of the outflow from Cemlyn lagoon due to sediment deposition during dredging activities) [APP-050].
- j.** Section 7.4 item D3 (Change in wave, tidal currents, bed shear stress and sediment regime and effect on Esgair Gemlyn) [APP-050] and D4 ('Coastal squeeze') [APP-050].
- k.** Section 7.5 (Assessment of potential effects (in-combination) [APP-050] on Bae Cemlyn/Cemlyn Bay SAC) and ([REP2-375], [REP4-005] and [REP4-009]).

Table 5-1 of [APP-050] excludes significant effects from changes in the levels of nitrogen oxides and sulphur dioxide are less than 1% of the relevant air quality objective. The ExA questioned whether this approach was in line with the judgement on the assessment of in-combination effects on air quality in *Wealden v SSCLG* [2017] EWHC 351 (Admin) (Q. 5.0.15 [PD-009]). The Applicant has maintained that the approach in [APP-050] is correct [REP2-0375]. NRW do not agree with the Applicant's interpretation of the judgement but has advised that they are not aware of any other relevant projects which could lead to an in-combination effect on Cemlyn Bay SAC during construction of the Proposed Development ([REP2-325] and [REP4-039]). As of Deadline 7, NRW has not been able to confirm that there would be no in-combination effects on air quality during operation as they require further clarification on the modelling carried out by the Applicant ([REP4-039] and [REP6-047]).

- l.** The Stage 1 Screening assessment concluded that LSE could be excluded and, therefore, no adverse effect on integrity can be concluded ([APP-050] and [AS-010]).
- m.** Section 7.4 item E1 (Increase in suspended sediment from drainage discharge, dewatering, sewage, capital dredging and disposal of dredged material) [APP-050]. The Applicant's conclusions have been disputed by Interested Parties, see footnote b.
- n.** Section 7.4 item E2 (Potential for increase in suspended sediment) [APP-050].

- o.** Section 7.10 (Decommissioning) [APP-050].
- p.** Section 7.4 item F1 (Change in groundwater recharge and availability and supply) [APP-050] and item F2 (Change in surface water flow in the Cemlyn catchment) [APP-050].
- q.** Section 7.4 item G1 (Construction dust (earthworks and material handling)) [APP-050], item G2 (Construction plant, machinery and marine vessels emissions) [APP-050]. See comments under footnote g.
- r.** Section 7.4 item G3 (Combustion plant emissions) [APP-050]. See comments under footnote h.
- s.** Section 7.4 item H1 (Increase in sediment deposition during dredging activities) [APP-050].
- t.** Section 7.4 item H2 (Change in wave, tidal currents, bed shear stress and sediment regime and effect on Esgair Gemlyn) [APP-050].
- u.** The Applicant has committed to preparing one (or more) Biosecurity Risk Assessment(s) and Method Statement(s) to cover all activities and to implement a monitoring programme for non-native species, with reporting to be in a form agreed with NRW. Monitoring survey requirements for specific sites will be set out in the sub-CoCPs. Where new presence of INNS is discovered, Biosecurity Risk Assessments and Method Statements would be reviewed and amended where necessary. Wherever appropriate, workers would be given an activity specific tool-box talk from an Ecological Clerk of Works (ECoW). For the marine environment, an initial pre-construction survey would be undertaken and regular surveys would begin once construction of the breakwaters and MOLF is completed. The frequency and extent of monitoring would reduce over time, particularly once the MOLF is no longer operational. The ongoing requirement for monitoring would be regularly reviewed and agreed with NRW ([APP-014], [AS-010] and [REP3-035]).

While NRW agree that the risk of introduction and/or spread of INNS can be minimised ([REP2-049] and draft SoCG [REP6-047]), they did not initially agree that CoCPs and SCoCPs ([APP-414] to [APP-416]) provided sufficient detail. They advised that detailed mitigation measures should be set out in the relevant SCoCP and approved by the discharging authority in consultation with NRW ([REP2-049] and [REP4-039]) for both marine and terrestrial INNS.

The Applicant's position is that the CoCP includes a commitment to prepare a revised biodiversity risk assessment and method statements which would be reviewed and agreed with NRW. Additional principles relevant to the control of marine INNS would be contained in the MWSCoCP [REP2-049]. The biosecurity risk assessment would be required for the Marine Licence and would be enforced by NRW under that licence. If the biodiversity risk assessment is included in the DCO as well as the Marine Licence then the Applicant would have to discharge requirements/conditions under both consenting regimes [REP4-005]. The Applicant produced an initial biodiversity risk assessment [AS-010] which was updated at Deadline 5 [REP5-041] in response to NRW's comments at Deadline 2 [REP2-325].

According to the draft SoCG with NRW [REP6-047], NRW are satisfied that subject to a detailed biodiversity risk assessment the risk of the spread of both terrestrial and marine INNS will be minimised but there is still dispute as to how the relevant mitigation measures should be secured. NRW and the Applicant agree that detailed mitigation for marine INNS will be secured through a condition of the Marine Licence and it will be for the Secretary of State to decide if the detailed biodiversity risk assessment should also be secured through a condition on the DCO. With regard to terrestrial INNS, NRW has maintained their position that the CoCP does not contain sufficient detail and a biosecurity risk assessment should be produced and approved by the discharging authority in consultation with NRW (nb this is in relation to the version of the CoCP submitted at Deadline 2 [REP2-031]).

- v. Workers living in the Site Campus could potentially affect the Bae Cemlyn/Cemlyn Bay SAC (i.e. perennial vegetation) if visitor pressure was to increase significantly. However, a Workforce Management Strategy (WMS) would be implemented to keep workers on site and control their interactions with the people and environment around them. Given these measures, adverse effect on integrity has been excluded by the Applicant [AS-010].

NRW advise that there is insufficient detail in the WMS to demonstrate that adverse effects would be avoided [REP2-325]. The WMS sets out the principles that would inform the development of the Code of Conduct which is secured through Requirement PW8 in the draft DCO [REP5-003]; NRW advise that the Code of Conduct should be approved by the discharging authority in consultation with NRW [REP2-325]. The Applicant's view is that adequate mitigation for potential effects would be provided through the WMS and section 106 contributions, including a commitment to funding additional reserve wardens ([REP2-375], [REP3-005], [REP4-005] and [REP5-051]).

The environmental NGOs do not consider that the WMS provides sufficient detail to protect the conservation objectives of the SAC and advise that measures to secure the control of visitors/resident workers should be achieved through a requirement in the DCO which should be linked to a section 106 agreement on funding of measures. They raised concerns as to whether the WMS could be enforced ([REP2-318], [REP2-348], [REP2-360], [REP2-346] and [REP4-044]). They remain concerned about the delivery mechanisms for the various mitigation methods ([REP4-044] and [REP7-015]).

NRW dispute the Applicant's conclusions on effects on coastal processes in relation to the potential effects on the Esgair Gemlyn shingle ridge leading to increased overtopping by waves and alterations to the shape/height or breaches of the ridge ([RR-088], [REP2-325] and [REP2-049]). The environmental NGOs raised similar concerns, especially in relation to the adequacy of the Applicant's modelling of coastal processes (see [RR-125], [REP2-348], [REP6-052] and [REP7-015] for NWWT responses and [RR-053], [REP2-316], [REP2-318], [REP2-056], [REP4-038] and [REP6-049] for NT responses and [REP2-360], [REP2-053] and [REP6-046] for the RSPB responses). The environmental NGOs advise monitoring the ridge and adjoining areas and to have a strategy in place to deal with any geomorphological changes ([REP2-318], [REP2-348], [REP2-360] and [REP4-038]). They have suggested various options including the re-use of material removed during marine construction works ([REP2-316], [REP2-318], [REP2-348], [REP2-360], [REP4-038], [REP4-044] and [REP7-010]). The Applicant has advised that material excavated during the marine works would either be disposed of sea to maintain the sediment budget or re-used in the construction of the Proposed Development ([REP3-026] and [REP5-051]). The material derived from the marine environment during construction would be re-used wherever possible but would require additional handling facilities and may not be suitable for re-use on Esgair Gemlyn [REP5-051].

The Applicant produced additional coastal processes modelling work [REP2-007] in response to Interested Parties' concerns. Additional information was also provided on the effects of cooling water discharge and sediment re-suspension after dredging [REP5-084]. The Applicant concluded that coastal processes would not be significantly different from the baseline situation as a result of the Proposed Development ([REP2-007], [REP2-375], [REP3-028], [REP3-035], [REP4-005] and [REP6-0165]). They do not agree that their modelling is inadequate or that there is any requirement for monitoring or further data collection ([REP2-375], [REP3-028], [REP4-005] and [REP5-051]). NRW agree that there is no risk from changes to coastal processes due to the cooling water discharge [REP7-012] but

remained concerned about the degree of certainty around the modelling of effects on the shingle ridge but do not consider that further modelling or gathering further data would be likely to resolve the uncertainty. They advise the use of monitoring and adaptive management ([REP4-039], [REP5-076] and [REP6-047]). Notwithstanding their own position, to address NRW's concerns, the Applicant undertook to develop a monitoring and adaptive management approach ([REP4-005], [REP5-051] and [REP6-027]). The Coastal Processes Monitoring and Mitigation Strategy [REP6-010] was submitted at Deadline 6. Delivery of the strategy is included in the version of the MWSCoCP submitted at Deadline 5 [REP5-025]. NRW welcomed the submission of [REP6-010] and consider that with some amendments it provides a suitable measure to avoid adverse effects on the integrity of the SAC in relation to Esgair Cemlyn [NRW7-012]. NRW also advise that further details should be added to [REP5-025], including securing adaptive management in the event that it is needed [REP7-012].

Stage 2 Matrix 2: Morwenoliaid Ynys Môn/Anglesey Terns SPA

European site features	Adverse effects on integrity														
	Changes in visual & acoustic stimuli			Land take including seabed or intertidal land			Changes in marine water quality			Changes in surface & groundwater hydrology			Change in air quality		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Sandwich tern	x?a	x?b	xc	xd	xe	f	xg	xh	xc	xj	xj	f	xj	xj	f
Common tern	x?o	x?p	xq	xr	xs	f	xt	xt	xq	xu	xu	f	xv	xv	f
Arctic tern	x?aa	x?bb	xcc	xdd	xee	f	xff	xff	xcc	xgg	xgg	f	xhh	xhh	f
Roseate tern	x?mm	x?mm	x?mm	x?mm	x?mm	f	x?mm	x?mm	x?mm	x?mm	x?mm	f	x?mm	x?mm	f
	Alteration of coastal processes & dynamics			Physical interaction between species & project infrastructure			Introduction of invasive non-native species			In-combination effects					
	C	O	D	C	O	D	C	O	D	C	O	D			
Sandwich tern	x?k	x?k	f	xl	xm	f	x?oo	xoo	xoo	xn	xn	xn			

Common tern	x?w	x?w	f	xx	xy	f	x?oo	xoo	xoo	xz	xz	xz			
Arctic tern	x?ij	x? ii	f	xjj	xkk	f	x?oo	xoo	xoo	xll	xll	xll			
Roseate tern	x?mm	x?mm	f	x?mm	x?mm	f	x?oo	xoo	xoo	x?nn	x?nn	x?nn			

Notes

a. Sandwich tern (alone) Disturbance at the breeding colony (Section 10.3, Item A1, [APP-050]):

Based on a combination of literature reviews and monitoring of the tern colony, the Applicant has concluded that the terns show a low or moderate response to noise levels of 60 dB(A) including impulsive noise. Noise from blasting on the site of the Proposed Development is predicted to measure 80 dB(A) or above at the colony for unconfined blasting. For confined blasts, the noise at the colony is predicted to generally be less than 60 dB(A) but may occasionally be higher. A package of mitigation measures has been proposed which would be secured through the MPSSCoCP and MWSCoCP.

Control of blasting and earthworks noise

During the period that the main earthworks were being carried out (expected to be the first 2 years but subject to change if the construction programme changes), blasting would only be carried out if the predicted noise blast at the colony would be less than 60 dB or daily ambient noise at the colony. Daytime construction noise at the colony would not exceed 59 dB $L_{Aeq, 1-hour}$. The maximum night time construction noise would not exceed 43 dB $L_{Aeq, 1-hour}$. These controls would be in place from 15 April to 15 August.

During the 'establishment period' when the birds are beginning to nest, blasting would only be undertaken when blast noise calculations predict noise levels at the colony would be less than 55 dB $L_{AF, max}$. The establishment period would run from 15 April (or earlier if there were signs of significant nest establishment before then) and run for 4 weeks.

From the third year of construction, modelling of construction noise predicts noise levels at the colony of 43.7 dB $L_{Aeq, 1-hour}$ (day-time) and 42.4 dB $L_{Aeq, 1-hour}$ (night-time) so no noise commitments have been proposed. However, during the establishment period, blasting would only be undertaken where noise levels at the colony are predicted to be 54 dB $L_{AF, max}$.

Reactive monitoring

As an additional mitigation measure, the colony would be monitored to establish if there was an increase in terns flying away from their nests ('fly-ups'). If the increase over the baseline number of fly-ups exceeded 3 per hour the most obviously disturbing activity would cease; if more than 2 fly-ups were observed in the following hour, the next most disturbing activity would cease. Activities which had been halted would re-start 7 days later under observation.

NRW accept the validity of the baseline surveys for seabirds ([REP2-325] and [REP4-039]) but do not agree that the field evidence and scientific literature relied on in the Applicant's assessment supports the Applicant's conclusions, particularly in view of the fact that field evidence was collected in 2017 when the colony collapsed ([REP2-325] and [REP4-039]). In their view, disturbance may also lead to stress leading to changes in hormone levels which could affect body condition or breeding performance or lead to total abandonment of the colony ([REP2-049], [REP2-325] and [REP4-039]).

NRW has advised that the colony is currently very vulnerable because there has been a sudden decline in the population (although it is still considerably above the number of breeding pairs specified in the SPA conservation objectives) ([REP2-325], [REP4-039]). Sandwich tern are known to sometimes desert a colony as a result of disturbance or predation ([REP2-325], [REP4-039] and [REP5-081]). Productivity (measured as the estimated number of chicks per year) is also declining. Birds are provisioning chicks with multiple small prey items in one trip, rather than one prey item per trip which is interpreted as further evidence of stress on the colony ([REP2-325] and [REP4-039]).

The Applicant disputes the statement that the colony is vulnerable, as the population has shown considerable fluctuations in the past, including recovery following previous abandonment of the colony, which is typical for this species [REP3-035]. Stress at the colony may be a result of increased competition for food as a result of increases in colony size [REP4-005]. The Applicant has queried whether the decline in productivity does represent a sign of stress and suggests that it could be a density dependent effect related to the high population size [REP3-005].

NRW agree that the decline in productivity and the move to bringing back several food items could be linked to the overall increase in tern numbers but maintain that there is significant uncertainty about what stresses are currently affecting the colony [REP5-081]. The environmental NGOs agree that it is theoretically accepted that there could be an effect on productivity if the ecosystem's carrying capacity has been reached. However, in their view, on basis of the evidence currently available there is nothing to support this conclusion. The environmental NGOs give examples of possible alternative explanations for the decline in productivity and in food provisioning behaviour; they suggest that without detailed study it is not possible to determine the cause of declining productivity ([REP5-075] and [REP5-076]). The Applicant does not agree that any evidence has been provided which suggests that the colony is vulnerable to the noise and visual disturbance associated with the Proposed Development [REP6-009].

The environmental NGOs queried the validity of the baseline survey data (see [REP2-054], [REP2-360], [REP2-358] and [REP6-046] for RSPB comments, [REP2-348] for NWWT comments, and [REP2-318] and [REP6-049] for NT comments) although they subsequently confirmed that it was the Applicant's interpretation of the data that was their principal concern ([REP4-038] and [REP4-044]). They also dispute the adequacy of the evidence base that supports the Applicant's conclusions and share NRW's concerns about the effect of the 2017 colony collapse on the Applicant's assessment. They do not agree with the characterisation of the noise environment, especially in relation to impulsive noise (see [REP2-054], [REP2-360], [REP2-358] and [REP5-076] for RSPB comments, [REP2-348] and [REP5-075] for NWWT comments, and [REP2-318] for NT comments), although they do agree that the proposed noise levels during the establishment period are appropriate ([REP4-038] and [REP4-044]). They do not agree that the Applicant's study of noise disturbance adequately captured the behavioural indicators of stress and agitation; in their view, the birds are likely to respond to disturbance even if they do not fly up and the colony may still be subject to stress (see [REP2-054], [REP2-360] and [REP2-358] for RSPB comments, [REP2-348] for NWWT comments, and [REP2-318] for NT comments). They do not agree that the assessment is in line with the precautionary principle as outlined in relevant EU

guidance ([REP4-038] and [REP4-044]). In response to a question from the ExA [PD-013], the environmental NGOs provided references to evidence which support the position that the Sandwich tern is sensitive to disturbance ([REP5-075] and [REP5-076]). The Applicant disputes the environmental NGO's interpretation of this evidence [REP6-009].

The Applicant maintains the position that the evidence base is robust and precautionary ([REP2-375], ([REP2-049], [REP3-005], [REP3-026], [REP3-035], [REP4-005], [REP5-051], [REP6-009], [REP6-046], [REP6-049], [REP6-052]). They dispute the interpretation of the scientific literature by the IPs ([REP3-026], [REP3-035]). They do not agree that physiological stress responses in the birds are likely to be significant as the studies that describe these effects are describing effects caused by the direct presence of people rather than construction noise ([REP2-375], [REP3-026], [REP4-005], [REP4-009]). They do not agree that the field studies were affected by the 2017 colony collapse as the measured fly up rate was recorded during the day, while the predation that caused the colony collapse happened at night [REP3-005]. Fly ups represent a simple, measurable threshold of tolerance to disturbance; the results of the 2018 disturbance monitoring (provided in [REP3-045]) show similar results to those found in the 2017 monitoring ([REP3-005], [REP3-026] and [REP3-035]. The published scientific literature supports the use of fly ups as a metric of disturbance [REP3-035]. The baseline noise levels recorded at Cemlyn Bay was provided at Deadline 4 [REP4-022].

The ExA queried if there were any published scientific papers which dealt directly with construction disturbance on Sandwich terns or closely related species [PD-013]. The Applicant provided abstracts for several papers but noted that they had all been referred to in [APP-050] [REP5-002]. NRW also provided references for two papers (which were also referred to in the Applicant's response but advised that the information in one paper should be treated with caution as it dealt with crested terns in Australia rather than Sandwich terns [REP5-081]. The Applicant disputes NRW's interpretation of these papers [REP6-009]. The environmental NGOs referred to papers discussed in [REP2-348].

NRW does not agree that the proposed mitigation would be adequate to avoid adverse effects on integrity ([REP2-049], [REP2-325]). They do not agree that the evidence presented by the Applicant supports the position that the terns would not be disturbed if noise levels at the colony are kept to the levels specified in [APP-050]. They query how the noise controls and reactive monitoring could be effectively implemented ([REP2-325], [REP4-039]). They advise that the establishment period should begin no later than 15 March to include the time when the black-headed gull colony is becoming established (the black-headed gulls have a sympatric relationship with the tern colony). They do not accept

that fly ups are a reliable indicator of stress in relation to disturbance and query the reasons for the thresholds proposed for the reactive monitoring. They do not view the reactive monitoring as a 'fail-safe' mechanism because in their view, it does not manage the risk of colony abandonment or a decrease in productivity because of noise-induced stress ([REP2-325] and [REP4-039]).

The environmental NGOs do not agree that the mitigation proposed would be adequate to avoid adverse effects on the integrity of the SPA ([REP2-054], [REP2-056], [REP2-058], [REP6-046] and [REP6-052]). They do not agree that the Applicant's evidence base supports the position that the terns would not be disturbed if noise levels at the colony are kept to the levels specified in [APP-050]; they advise that if noise controls are used then they should be applied throughout the construction period. They also advise that the establishment period should begin early enough to cover the establishment of the black-headed gull colony. They are also concerned that the establishment period is too short to cover Sandwich tern nesting later in the season (see [REP2-318] and [REP4-038] for NT responses, [REP2-348] and [REP4-044] for NWWT responses and [REP2-360] and [REP2-358] for RSPB responses). With regard to the reactive monitoring proposals they do not agree with the thresholds for action specified in [APP-050] as they feel the thresholds have not been adequately justified and would mean the colony was already under threat. They also queried the practicality of delivering the proposed measures (see [REP2-318] for NT responses, [REP2-348] for NWWT responses and [REP2-360] and [REP2-358] for RSPB responses).

The Applicant maintains the position that the mitigation measures are precautionary and robust and will minimise the risk of causing fly up responses in the birds ([REP3-275] and [REP6-046]). Fly ups are not expected to increase as a result of construction noise ([REP2-375], [REP3-026] and [REP3-035]). The tern colony is approximately 1km from the construction site and noise from blasting at the colony would be 62.9 Db L_{AF} , max with multiple noise levels being heard as one noise; high frequency sound would decrease through attenuation [REP4-005]. Extension of the establishment period would increase the length of time required to complete the earthworks and add considerably to construction costs; if extended to cover the whole breeding season it could prevent the Proposed Development becoming operational in 2025 [REP3-005]. The beginning of the establishment period would be guided by information from NWWT on when the first black-headed gulls/terns typically arrive to set up a colony ([REP3-035] and [REP4-005]). Sandwich tern are the first of the tern species to return (and account for 95% of the birds in the tern colony) so the establishment of the colony is determined by the arrival of this species [REP5-051]. The reactive monitoring proposals have been amended so

noise levels are monitored against 'red' and 'amber' thresholds, so that when the amber thresholds are reached, a specific set of actions can be taken to ensure that the red noise thresholds are not reached ([REP2-375], [REP3-005] and [REP3-035]). Instead of the 'fly ups' threshold, action would be initiated when disturbance is observed that could be attributed to construction activities ([REP3-005] and [REP3-035]). The Applicant has provided clarification on how noise level commitments would be met during construction ([REP3-048] and [REP3-005]). The Applicant has provided additional information on how actions under the reactive monitoring would be implemented ([REP4-005], [REP5-002] and [REP6-027]). They have provided updated versions of the MPSSCoCP [REP5-022] and MWSCoCP [REP5-024] which incorporate the changes to the mitigation measures.

NRW remain concerned about the likely effectiveness and deliverability of the proposed mitigation ([REP5-081], draft SoCG [REP6-047] and [REP7-011]) as do the environmental NGOs. The environmental NGOs are also concerned about the effects of repeated disturbance over several breeding seasons ([REP4-038], [REP4-038], [REP6-046], [REP6-049] and [REP6-052]). The Applicant does not agree that the IP's concerns have been substantiated ([REP5-051], [REP6-046], draft SoCG [REP6-047], [REP6-049] and [REP6-052]).

Visual disturbance

The Applicant's assessment considers that it is highly unlikely that visual disturbances from the works within the Wylfa Newydd Development Area would affect the colony as they would be over 500m apart. Between 15 April and 15 May there would be no works undertaken within 500m of the nesting islands or the areas on Esgair Cemlyn which are also used occasionally by nesting terns. The modelling of indicative light spill predicts that it would not affect the tern colony in Cemlyn Bay.

NRW do not agree that the buffer area will be sufficient to address the potential risks from visual disturbance (but also state that noise and visual disturbance cannot be separated and should be considered cumulatively) ([REP5-081] and draft SoCG [REP6-047]). The Applicant maintains the position that the 500m distance will provide a sufficient buffer ([REP6-009] and draft SoCG [REP6-047]). The environmental NGOs accept that a 500m buffer is likely to be sufficient but is still concerned about the re-commencement from mid-May of bulk earthworks on late-arriving Sandwich tern. The environmental NGOs are also concerned about the combined noise and visual effects from the re-working of Mound E ([REP5-075], [REP5-076] and [REP6-052]).

The environmental NGOs queried why the area west of the Afon Cafnan was not included in the area where works would be avoided [REP2-318], [REP2-360] and [REP2-348]. The Applicant maintains that their assessment is robust [REP3-275] and the point has been addressed in the updated version of the MPSSCoCP [REP5-022].

Noise and visual disturbance from residential workers/other leisure users

Potential effects have been excluded by the Applicant on the grounds that the Workforce Management Strategy would provide mitigation for any effects [AS-010]. The environmental NGOs have queried the adequacy of the WMS as mitigation for effects on the tern colony and also raised concerns about the impact of non-worker visitors [see REP2-0256] and [REP2-348] for NWWT responses, [REP2-318] for NT responses and [REP2-360] for RSPB responses). The Applicant maintains the position that the measures in the WMS, in conjunction with the measures secured in the other control documents, the Landscape and Habitat Management Strategy ([APP-424] and [APP-425]) and the draft s106 agreement will be sufficient to avoid adverse effects [REP6-052]. See footnote v to Stage 2 Matrix 1 above for further detail.

Disturbance in the marine environment (Item A2, [APP-050] and [AS-010]).

Noise disturbance

The Applicant's assessment concludes that Sandwich terns are unlikely to show marked responses to noise levels below 70 dB(A) in the offshore environment. The assessment assumes that all the terns would avoid offshore areas where noise was predicted to exceed 65 dB(A) and calculates the additional foraging trip length. The additional energy costs associated with the added trip length represent an additional 1 – 2% increase in daily energy expenditure. Effects from underwater noise on prey species are not predicted to lead to adverse effects on integrity.

Visual disturbance

The Applicant's assessment predicts that the effects from construction activities, including vessel movements and dredging would affect a smaller offshore area than would be affected by noise. On the basis of available scientific literature, the Applicant concludes that Sandwich tern are relatively insensitive to anthropogenic disturbance in the

offshore environment and it is unlikely that any effects (including cumulative effects from noise and visual disturbance) would adversely affect the integrity of the SPA.

The environmental NGOs do not agree with the Applicant's conclusions on the significance of effects in the offshore environment, particularly in relation to the potential increases in energy expenditure by the birds (see [REP2-054] and [REP2-360] for RSPB responses, [REP2-348] and [REP4-044] for NWWT responses and [REP2-318] and [REP4-038] for NT responses). The Applicant maintains that the evidence base and analysis is robust ([REP2-375], [REP3-005], [REP3-026], [REP4-005], [REP5-051], [REP6-046]). In addition, the zone of influence associated with the Proposed Development covers only a small extent of the available foraging area [REP3-026].

The Applicant concludes that cumulative effects from noise and visual disturbance at the colony or offshore, would not lead to adverse effects on integrity (Section 10.3, [APP-050] and [REP2-375]). NRW advise that there is significant uncertainty about the combined effect of visual and noise disturbance result from activities on both land and sea ([REP5-081] and [REP7-011]). The Applicant does not agree, given the assessments they have undertaken, that there is significant uncertainty over the cumulative effects [REP6-009]. The environmental NGOs raised concerns about the visual impacts and barriers resulting from the marine works in combination with the visual disturbance and does not feel that there are any measures which could be used to mitigate these effects ([REP5-075] and [REP5-076]). NWWT does not agree that adverse effects on the integrity of the SPA from combined effects can be excluded; the Applicant does not agree with this position [REP6-052].

The environmental NGOs have produced an ecological options paper [REP2-361] which suggests measures they feel should be adopted by the Applicant as mitigation for effects on the SPA ([RR-084], [REP2-054], [REP2-358], [REP6-046]). The Applicant's position is that although these measures are not necessary for mitigation, they may improve the resilience of the site; the measures have been secured through the draft s106 agreement ([REP2-049], [REP2-054], [REP3-005], [REP3-026], [REP5-51] and [REP6-046]).

The environmental NGOs are concerned about the approach to securing mitigation through the control documents rather than defining it in the DCO and the potential effects on delivery (see [REP2-054] and [REP2-360] for RSPB comments, [REP2-056] and [REP2-348] for NWWT comments, [REP2-318] for NT comments and [REP7-014] for joint comments). See section 2.3 of the report for details of NRW's overarching concerns on the Applicant's approach to

securing mitigation through the control documents rather than through specific requirements on the DCO. In the Applicant's view, the mitigation relevant to the SPA is set out in the MPSSCoCP [REP5-022] and MWSCoCP [REP5-024] which are certified documents; Requirements WN1 and WN24 require the Applicant to comply with these control documents. Failure to comply with the SCoCP would be a breach of the terms of the DCO which would be a criminal offence under the Planning Act 2008 so the measures are both secure and enforceable [REP5-084].

Overall, the position of NRW and the environmental NGOs is that it is unlikely that any mitigation measures would be sufficient to support a conclusion of no adverse effects on integrity resulting from noise and visual disturbance (see [REP2-325] and [REP5-081] for NRW comments and [RR-084], [REP2-056], [REP2-358] and [REP6-046] for RSPB comments, [REP6-049] for NT comments and [REP6-052] for NWWT comments). The Applicant maintains the position that they have provided sufficient evidence to support a conclusion of no adverse effect on integrity and despite reaching this conclusion, has provided a range of measures which would provide additional controls ([REP40-005], [REP5-051], [REP6-027], [REP6-046], [REP6-049], [REP6-052] and [REP7-001]).

- b.** Sandwich tern (alone) (Section 10.3, Item A3 (Noise and visual disturbance during operation), [APP-050]). The environmental NGOs expressed concerns that it is not possible, on the basis of the information currently available, to reach firm conclusions on the long-term effects of the operation of the Proposed Development so a future monitoring scheme is required ([REP2-318], [REP2-360] and [REP2-348]).
- c.** Decommissioning (Section 10.3, [APP-050]). The environmental NGOs expressed concerns that it is not possible, on the basis of the information currently available, to reach firm conclusions on the effects of decommissioning the Proposed Development ([REP2-318], [REP2-360] and [REP2-348]).
- d.** Sandwich tern (alone) (Section 10.3, Item B1 (Change and/or loss of habitat), [APP-050]). NRW agree that change or loss of foraging habitat is not likely to result in adverse effects on the integrity of the SPA ([REP2-049] and [REP2-325]). The RSPB agree that the loss of potential foraging habitat is likely to be relatively minor in isolation but raise concerns about the cumulative impacts of the Proposed Development on tern foraging and feeding [REP2-358].

- e.** Sandwich tern (alone) (Section 10.3, Item B2 (Change and/or loss of habitat), [APP-050]). NRW agree that change or loss of foraging habitat is not likely to result in adverse effects on the integrity of the SPA ([REP2-325] and draft SoCG [REP6-047]).
- f.** The Stage 1 Screening assessment concluded that LSE could be excluded (HRA Screening Matrix F2.1) and, therefore, no adverse effect on integrity can be concluded ([APP-050] and [AS-010]).
- g.** Sandwich tern (alone) (Section 10.3, Item C1 (Suspended sediment input to the marine environment (drainage, dewatering, sewage discharge and capital dredging)), Item C2 (Increase in suspended sediment concentration during disposal of dredged material and Item C3 (Chemical discharges from the drainage system) [APP-050]). NRW agree that changes in marine water quality are not likely to result in adverse effects on the integrity of the SPA [REP2-325].
- h.** Sandwich tern (alone) (Section 10.3, Item C4 (Water discharge from the cooling water system) [APP-050]). NRW agree that changes in marine water quality are not likely to result in adverse effects on the integrity of the SPA [REP2-325].
- i.** Sandwich tern (alone) (Section 10.3, Item D (Changes in surface and groundwater hydrology) [APP-050]).
- j.** Sandwich tern (alone) (Section 10.3, Item E (Changes in air quality) [APP-050]).
- k.** Sandwich tern (alone) (Section 10.3, Item F (Alteration of coastal processes and hydrodynamics) [APP-050]). NRW raised concerns about the potential for harm to the shingle ridge at Esgair Gemlyn and the potential implications for the breeding tern colony ([RR-088], [REP2-049]). The environmental NGOs expressed similar concerns (see [RR-053] and [REP2-318] for NT comments, [REP2-054] and [REP2-360] for RSPB comments, and [REP2-056] and [REP2-348] for NWWT comments). The Applicant maintains the position that there would not be significant effects on the ridge as a result of the Proposed Development but has committed to undertaking a programme of monitoring and adaptive management – see footnote v under Stage 2, Matrix 1 above for detailed comments.
- l.** Sandwich tern (alone) (Section 10.3, Item G1 (Physical interaction between species and Project infrastructure) [APP-050]). NRW agree that impingement/entrainment of prey species is not likely to lead to adverse effects on the integrity of the SPA (but see also comments under footnote m).

- m.** Sandwich tern (alone) (Section 10.3, Item G1 (Entrapment of prey) [APP-050]). NRW expressed concerns about the potential for increased impingement rates for some fish species which could affect tern prey [RR-088]. They subsequently agreed with the Applicant's conclusion that there would be no adverse effects as a result of impacts on prey items but advised that detailed monitoring and mitigation measures should be set out in the CoOP and approved by the discharging authority ([REP2-325] and [REP2-049]). The Applicant's position is that the CoCP and the MWSCoCP will contain sufficient detail by the close of the examination and there is no need for a subsequent approvals process ([REP2-049] and [REP2-035]). According to the draft SoCG submitted at Deadline 6 [REP6-047], NRW and the Applicant now agree that detailed mitigation measures could be secured through the Marine Licence and/or Operational Water Discharge Permit.
- n.** Sandwich tern (in-combination) (Section 10.3, [APP-050] and [REP2-375]).
- o.** Common tern (alone) (Section 10.3, Item A1 (Disturbance at the breeding colony) and Item A2 (Disturbance in the marine environment), [APP-050] and [AS-010]). NRW has advised that noise and vibration during construction could lead to reduced breeding success or complete abandonment of the colony at Cemlyn ([RR-088], [REP2-049] and [REP2-325], draft SoCG [REP6-047]). The environmental NGOs have advised that the establishment period would be too short to avoid effects on nesting birds from this species as they usually arrive at Cemlyn at the end of April ([REP2-318], [REP2-348], [REP2-360], [REP4-038] and [REP4-044]). However, in relation to disturbance in the offshore environment they advise that as this species uses foraging and commuting routes to the west of the routes used by Sandwich tern, any mitigation for impacts on Sandwich tern will ameliorate effects on this species as well. The Applicant considers that the evidence provided is sufficiently robust to support a conclusion of no adverse effects on the integrity of the SPA in relation to this species ([REP3-035], draft SoCG [REP6-047]).
- p.** Common tern (alone) (Section 10.3, Item A3 (Noise and visual disturbance during operation) [APP-050]). The environmental NGOs expressed concerns that it is not possible, on the basis of the information currently available, to reach firm conclusions on the long-term effects of the operation of the Proposed Development so a future monitoring scheme is required ([REP2-318], [REP2-360] and [REP2-348]).

- q.** Decommissioning (Section 10.3, [APP-050]). The environmental NGOs expressed concerns that it is not possible, on the basis of the information currently available, to reach firm conclusions on the effects of decommissioning the Proposed Development ([REP2-318], [REP2-360] and [REP2-348])
- r.** Common tern (alone) (Section 10.3, Item B1 (Change and/or loss of habitat) [APP-050]). NRW agree that change or loss of foraging habitat are not likely to result in adverse effects on the integrity of the SPA ([REP2-325] and draft SoCG [REP6-047]).
- s.** Common tern (alone) (Section 10.3, Item B2 (Change and/or loss of habitat) [APP-050]). NRW agree that change or loss of foraging habitat is not likely to result in adverse effects on the integrity of the SPA ([REP2-049] and [REP2-325]).
- t.** Common tern (alone) (Section 10.3, Item C (Changes in marine water quality) [APP-050]). NRW agree that changes in marine water quality are not likely to result in adverse effects on the integrity of the SPA [REP2-325].
- u.** Common tern (alone) (Section 10.3, Item D (Changes in surface and groundwater hydrology) [APP-050]).
- v.** Common tern (alone) (Section 10.3, Item E (Changes in air quality) [APP-050]).
- w.** Common tern (alone) (Section 10.3, Item F (Alteration of coastal processes and hydrodynamics) [APP-050]). See comments under footnote k.
- x.** Common tern (alone) (Section 10.3, Item G (Physical interaction between species and Project infrastructure) [APP-050]).
- y.** Common tern (alone) (Section 10.3, Item G1 (Entrapment of prey) [APP-050]). See comments under footnote m.
- z.** Common tern (in-combination) (Section 10.3, ([APP-050] and [REP2-375]).
- aa.** Arctic tern (alone) (Section 10.3, Item A1 (Disturbance at the breeding colony) and Item A2 (Disturbance in the marine environment), [APP-050] and [AS-010]). NRW has advised that noise and vibration during construction could lead to reduced breeding success or complete abandonment of the colony at Cemlyn ([RR-088], [REP2-049], [REP2-325] and

draft SoCG [REP6-047]). The environmental NGOs have advised that the establishment period would be too short to avoid effects on nesting birds from this species as they usually arrive at Cemlyn at the end of April ([REP2-318], [REP2-348], [REP2-360] [REP4-038] and [REP4-044]). However, in relation to disturbance in the offshore environment they advise that as this species uses foraging and commuting routes to the west of the routes used by Sandwich tern, any mitigation for impacts on Sandwich tern will ameliorate effects on this species as well. The Applicant considers that the evidence provided is sufficiently robust to support a conclusion of no adverse effects on the integrity of the SPA in relation to this species ([REP3-035], draft SoCG [REP6-047]).

- bb.** Arctic tern (alone) (Section 10.3, Item A3 (Noise and visual disturbance during operation) [APP-050]). The environmental NGOs expressed concerns that it is not possible, on the basis of the information currently available, to reach firm conclusions on the long-term effects of the operation of the Proposed Development so a future monitoring scheme is required ([REP2-318], [REP2-360] and [REP2-348]).
- cc.** Decommissioning (Section 10.3, [APP-050]). The environmental NGOs expressed concerns that it is not possible, on the basis of the information currently available, to reach firm conclusions on the effects of decommissioning the Proposed Development ([REP2-318], [REP2-360] and [REP2-348]).
- dd.** Arctic tern (alone) (Section 10.3, Item B1 (Change and/or loss of habitat) [APP-050]). NRW agree that change or loss of foraging habitat is not likely to result in adverse effects on the integrity of the SPA ([REP2-049] and [REP2-325]).
- ee.** Arctic tern (alone) (Section 10.3, Item B2 (Change and/or loss of habitat) [APP-050]). NRW agree that change or loss of foraging habitat is not likely to result in adverse effects on the integrity of the SPA ([REP2-325] and draft SoCG [REP6-047]).
- ff.** Arctic tern (alone) (Section 10.3, Item C (Changes in marine water quality), [APP-050]). NRW agree that changes in marine water quality are not likely to result in adverse effects on the integrity of the SPA [REP2-325].
- gg.** Arctic tern (alone) (Section 10.3, Item D (Changes in surface and groundwater hydrology) [APP-050]).
- hh.** Arctic tern (alone) (Section 10.3, Item E (Changes in air quality) [APP-050]).

- ii.** Arctic tern (alone) (Section 10.3, Item F (Alteration of coastal processes and hydrodynamics) [APP-050]). See comments under footnote k.
- jj.** Arctic tern (alone) (Section 10.3, Item G (Physical interaction between species and Project infrastructure) [APP-050]).
- kk.** Arctic tern (alone) (Section 10.3, Item G1 (Entrapment of prey) [APP-050]). See comments under footnote m.
- ll.** Arctic tern (in-combination) (Section 10.3, [APP-050] and [REP2-375]).
- mm.** Roseate tern (alone) (Section 10.3, [APP-050]). The environmental NGOs agree that this species has not bred at Cemlyn in recent years but a project has been in place to establish a breeding population at Cemlyn and at the Skerries colony of the SPA. The environmental NGOs are concerned that the species breeds much later in the season than the Sandwich tern and therefore would not be covered by the 'establishment period' ([REP2-318], [REP2-348] and [REP2-360]).
- nn.** Roseate tern (in-combination) (Section 10.3, [APP-050]). See comments under footnote mm.
- oo.** The Applicant would prepare one (or more) Biosecurity Risk Assessment(s) and Method Statement(s) to cover all activities; and implement a monitoring programme for non-native species, with reporting to be in a form agreed with NRW. Monitoring survey requirements for specific sites would be set out in the sub-CoCPs. The Biodiversity Risk Assessments and Method Statements would be reviewed and updated if the surveys recorded new INNS. For the marine environment, an initial pre-construction survey would be undertaken and regular surveys would begin once construction of the breakwaters and MOLF is completed. The frequency and extent of monitoring would reduce over time, particularly once the MOLF is no longer operational. The ongoing requirement for monitoring would be regularly reviewed and agreed with NRW. See footnote u of Stage 2 Matrix 1 for detailed comments.

Stage 2 Matrix 3: Aber Dyfrydwy/Dee Estuary SPA

Site Code: UK9013011

Distance to project: 60.2 km

European site features	Adverse effects on integrity														
	Changes in visual & acoustic stimuli			Land take, including seabed or intertidal land			Introduction of invasive non-native species			Alteration of coastal processes & hydrodynamics			Physical interaction between species and project infrastructure		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Sandwich tern	x?a	xa	xa	xa	xa	xb	xd	xd	xd	x?a	x?a	xb	xa	xa	xb
	In-combination effects														
	C	O	D	C	O	D	C	O	D	C	O	D			
Sandwich tern	xc	xc	xc												

Notes

- a. Appropriate assessment for SPAs and Ramsar sites screened in for passage seabird populations (Section 10.5, [APP-050]). NRW advised that they are aware that some sandwich terns that breed at Cemlyn also form part of the passage

sandwich tern feature of this SPA and therefore an adverse effect on site integrity cannot be ruled out, given its concerns about adverse effects on the integrity of the Anglesey Terns SPA ([RR-088], [REP2-049], [REP2-325] and draft SoCG [REP6-047]). In response to a question from the ExA [PD-009], NRW stated that they do not have any direct evidence of connectivity [REP2-325]. The Applicant acknowledges the potential link between the two SPAs [REP2-375] but does not agree that adverse effects on integrity cannot be excluded ([REP2-049], [REP2-375]). If effects on the Anglesey Terns SPA can be mitigated or compensated for, then adverse effects on the integrity of the Dee Estuary can be excluded ([REP2-375] and draft SoCG [REP6-047]).

- b.** The Stage 1 screening assessment concluded that LSE could be excluded (HRA Screening Matrix F2.6) ([APP-050] and [AS-010]).
- c.** Appropriate assessment for SPAs and Ramsar sites screened in for passage seabird populations (Section 10.5, [APP-050]).
- d.** The Applicant would prepare one (or more) Biosecurity Risk Assessment(s) and Method Statement(s) to cover all activities; and implement a monitoring programme for non-native species, with reporting to be in a form agreed with NRW. Monitoring survey requirements for specific sites would be set out in the sub-CoCPs. The Biodiversity Risk Assessments and Method Statements would be reviewed and updated if the surveys recorded new INNS. For the marine environment, an initial pre-construction survey would be undertaken and regular surveys would begin once construction of the breakwaters and MOLF is completed. The frequency and extent of monitoring would reduce over time, particularly once the MOLF is no longer operational. The ongoing requirement for monitoring would be regularly reviewed and agreed with NRW.