

# Celtic Sea Floating Offshore Wind Leasing Round 5

Record of Habitats Regulations Assessment

January 2024

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OffshoreWind | **THE CROWN  
ESTATE**

# Celtic Sea Floating Offshore Wind Leasing Round 5 Record of Habitats Regulations Assessment

Undertaken under Regulation 63 of The Conservation of Habitats and Species Regulations 2017  
and Regulation 28 of The Conservation of Offshore Marine Habitats and Species Regulations  
2017

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## 1. Summary of the Conclusions of the Assessment

- 1.1.1. The Celtic Sea Offshore Wind Leasing Round 5 Plan ("the Round 5 Plan") has been considered by The Crown Estate Commissioners ("The Crown Estate") in light of the Habitats Regulations Assessment ("HRA") requirements of Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) and Regulation 28 of The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended).
- 1.1.2. Having carried out a screening assessment of the Plan, The Crown Estate concluded that a likely significant effect ("LSE") could not be discounted for a number of European Sites and European Offshore Marine Sites (together referred to as "European Sites" within the context of the UK's National Site Network) and their qualifying features (NIRAS, 2021)<sup>1</sup>. Consequently, an Appropriate Assessment ("AA") was required of the implications of the plan for the qualifying features of those sites in view of their conservation objectives.
- 1.1.3. Following the production of a Report to Inform an Appropriate Assessment ("RIAA") and the completion of an AA in accordance with the Regulations, The Crown Estate has ascertained that an adverse effect on site integrity ("AEOSI") can be ruled out for all European Sites as a result of the Plan.
- 1.1.4. Natural England, Natural Resources Wales (NRW), the Joint Nature Conservation Committee (JNCC), Department of Agriculture, Environment and Rural Affairs ("DAERA"), and other selected organisations have been consulted throughout the HRA process, and their comments have been taken into account by The Crown Estate.

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<sup>1</sup> That is to say, adopting the approach set out in the '*Waddenzee*' ruling of the Court of Justice of the European Union ("CJEU") Case C – 127/02, it was not possible to exclude, on the basis of objective information, the likelihood of significant effects on those European Sites without reasonable scientific doubt.

## 2. Introduction

### 2.1. Background

- 2.1.1. This is a record of the AA that The Crown Estate has undertaken under the Conservation of Habitats and Species Regulations 2017 (SI No. 2017/1012) ("the Onshore Habitats Regulations"), and The Offshore Marine Habitats and Species Regulations 2017 (SI No. 2017/1013) ("the Offshore Habitats Regulations") collectively referred to as the "Habitats Regulations", in respect of the plan for seabed leasing of the Celtic Sea Floating Offshore Wind Leasing Round 5 Plan, referred to as "the Round 5 Plan", or "the Plan".
- 2.1.2. In contrast to previous HRA undertaken by The Crown Estate, this HRA has been undertaken in parallel to the spatial design, in advance of the commercial tender. The decision to progress with an updated methodology was taken in light of the benefits of doing so in terms of enabling consideration of the potential for adverse effects within the spatial definition of the Plan, alongside an opportunity to increase confidence at the time of tender as to the acceptability of the Plan under the Habitats Regulations.
- 2.1.3. The Round 5 Plan aims to provide Agreements for Lease for areas of seabed with the potential to develop up to 4.8GW<sup>2</sup> of floating offshore wind energy generating infrastructure, whereby floating offshore wind energy generating infrastructure is defined as:
- All wind turbines must utilise floating sub-structures which rely primarily on buoyancy to counteract vertical loading (for example, semi-submersibles, tension-leg platforms, barges, spar-buoys and buoyant columns).*
- 2.1.4. The spatial extent of the Round 5 Plan has been defined in a detailed spatial design process (The Crown Estate, 2023), the methodology for which is published by The Crown Estate<sup>3</sup> and which considers a wide range of technical, environmental and social factors. This process initially defined Areas of Search, which were then reduced in size to 'refined Areas of Search' (rAoS), before final site selection.
- 2.1.5. In April 2023, The Crown Estate further refined the rAoS and selected 3 Project Development Areas (PDAs) to progress into the tender, each with a maximum capacity of 1.5GW of wind energy generation capacity (Figure 1). It is these sites which form the Round 5 Plan, in addition to three

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<sup>2</sup> This incorporates the three Project Development Areas (PDAs) of up to 1.5GW each designed within Offshore Wind Leasing Round 5, in addition to three Test and Development sites of up to 100MW each identified by developers under the now closed Floating Offshore Wind Test and Development leasing offer and which, by virtue of their spatial and temporal proximity to the PDAs were incorporated into this assessment. The three projects are named Llyr 1, Llyr 2 and Whitecross.

<sup>3</sup> Available here:

[https://downloads.ctfassets.net/nv65su7t80y5/20XMBM3YEVQPDkvpRQpkHC/965956e2515fcf98f24c138af6ddba98/Site\\_Selection\\_Methodology\\_V2.pdf](https://downloads.ctfassets.net/nv65su7t80y5/20XMBM3YEVQPDkvpRQpkHC/965956e2515fcf98f24c138af6ddba98/Site_Selection_Methodology_V2.pdf)

Test and Development sites which have been proposed by developers and taken forwards as a part of the Round 5 Plan by The Crown Estate, and which are the subject of this AA, the Agreement for Lease (AfL) will secure the location for floating offshore wind development; and provide the ability to draw down a lease for the export infrastructure asset, subject to project development.

- 2.1.6. The scope of this AA includes the potential for the deployment of offshore wind energy generation with associated infrastructure. The scope has been extended to include consideration of the offshore production of hydrogen. It incorporates pathways identified within the General Principles across all relevant phases of development (construction, operation & maintenance, and decommissioning) where sufficient information is available to undertake a reasonable and meaningful assessment. The pressures considered in the assessment are set out in the General Principles (Table 4.1 in NIRAS, 2022). Assessment of export infrastructure, incorporated into the assessment, is undertaken through a 'risk assessment' approach, recognising the lack of spatial specificity that is available at the plan level.
- 2.1.7. This Record of AA contains The Crown Estate's analysis and assessment of the potential impacts of the Round 5 Plan upon European Sites screened into this assessment.
- 2.1.8. It should be noted that the outcome of this plan does not authorise development: development consent and other key project consents must be obtained for each project in the normal manner under the existing regulatory regime.
- 2.1.9. For reference, The Crown Estate has also undertaken a Marine Conservation Zone assessment considering the features of sites designated under Part 5 of The Marine and Coastal Access Act 2008 separate to this HRA.

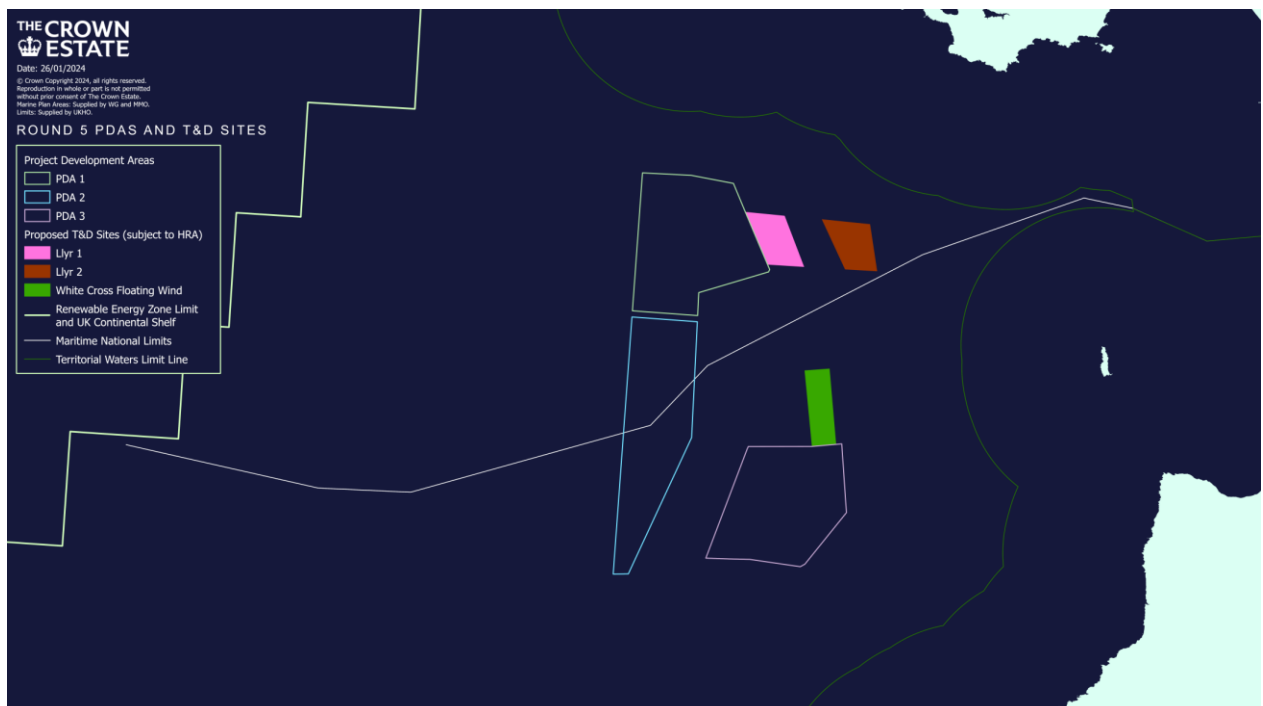


Figure 1 - Location of the Round 5 Plan Project Development Areas and Test and Development sites

## 2.2. Habitats Regulations Assessment

- 2.2.1. Council Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and Council Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") aim to maintain or restore certain species and habitats to a favourable conservation status. Article 6(3) of the Habitats Directive makes specific provisions to protect sites from adverse effects associated with proposed plans and projects.
- 2.2.2. The Habitats Directive provides for the designation of sites for the protection of habitats and species of European importance, known as Special Areas of Conservation ("SACs"). The Birds Directive provides for the classification of sites for the protection of rare and vulnerable birds and for regularly occurring migratory species, known as Special Protection Areas ("SPAs"). SACs and SPAs, and as a matter of Government policy Ramsar Sites (wetlands of international importance designated under the Ramsar Convention 1971) are collectively termed European Sites and form part of a network of European Sites across Europe designated under the Bern Convention 1989 known as the Emerald Network. Prior to the UK's withdrawal from the European Union and subsequent transition period, the UK sites were part of the European Union's Natura 2000 network of European Sites. They now form part of a National Site Network.
- 2.2.3. In the UK, the Onshore Habitats Regulations transposed the Habitats and Birds Directives into national law as far as the 12nm limit of territorial waters. Beyond territorial waters, the Offshore Habitats Regulations serve the same function for the UK's offshore marine area. Following the UK's withdrawal from the European Union and subsequent transition period The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 ensure that the Habitats Regulations continue to operate effectively in the UK. The Round 5 Plan covers areas within and outside the 12nm limit so both sets of Regulations apply.
- 2.2.4. Regulation 63 of the Onshore Habitats Regulations states that:
- A competent authority...before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.*
- 2.2.5. Regulation 28 of the Offshore Habitats Regulations incorporates the equivalent provision.
- 2.2.6. The Round 5 Plan is not directly connected with, or necessary to, the management of European Sites. The Habitats Regulations require that, where it appears to The Crown Estate as a competent authority that the Round 5 Plan is likely to have a significant effect on any such European Site, either alone or in combination with other plans and projects, an AA is carried out in order to determine if it is possible to ascertain that the Plan will not adversely affect the integrity of any European Site in view of that site's conservation objectives.
- 2.2.7. Through a competitive tendering process, The Crown Estate appointed NIRAS as HRA consultant to produce a RIAA to inform this AA. NIRAS are renowned experts, with a wealth of HRA and technical experience, particularly for the offshore wind sector. NIRAS have undertaken a technical



analysis which is presented in the RIAA which provides the information required to enable The Crown Estate to undertake an AA for the Round 5 Plan.

- 2.2.8. The analysis undertaken by NIRAS in the RIAA (NIRAS 2023) was initially underpinned by a series of 30 scenarios, which considered the distribution of capacity across the rAoS, in combination with a Technical Envelope (NIRAS 2023b). The final PDAs which form the Round 5 plan and their capacity have been considered within an additional scenario, captured within the addendum to the RIAA (NIRAS 2024), and which are the subject of this Record of Appropriate Assessment.
- 2.2.9. The analysis also takes consideration of the potential for deployment of export infrastructure. However, as the routing of export infrastructure cannot be defined at the plan level and must be defined using evidence available at project level, the analysis uses an 'export infrastructure region' within which export infrastructure is anticipated to be deployed. This region was developed by The Crown Estate in collaboration with National Grid ESO, validated through consultation with the developer community.
- 2.2.10. In outline, the approach to the HRA undertaken by The Crown Estate centres around three reports produced as part of the NIRAS technical analysis:
- Principles Report - this sets out the criteria that were used in scoping European Sites into the assessment and the assessment methodology (NIRAS, 2022).
  - Screening Report - this report assesses the potential impact of the plan and screens sites in or out of the AA based on the possibility that the plan will have a LSE on them (NIRAS, 2023a).
  - Report to Inform Appropriate Assessment (RIAA) - for those sites screened in, this report assesses the possibility of the plan having an AEOSI and is presented in digital format (NIRAS, 2023b).
  - Addendum to the RIAA - for those sites screened in, this report considers the modifications to the RIAA required to take consideration of the final PDAs, alongside a proposed increase in leasing round capacity and additional assessment information related to project level consenting of the Whitecross project, one of the three Test and Development projects within the Round 5 Plan (NIRAS, 2024). This is presented in digital format, linked to the RIAA.
- 2.2.11. To inform the HRA, The Crown Estate has undertaken statutory consultation with the relevant UK statutory nature conservation bodies ("SNCBs") and with select government departments and non-departmental public bodies, as well as environmental non-governmental organisations ("NGOs"), which have relevant expertise in relation to the Round 5 Plan (namely the Royal Society for Protection of Birds ("RSPB"), the Whale and Dolphin Conservation Society, and The Wildlife Trusts) who collectively form The Crown Estate's HRA Expert Working Group (EWG).
- 2.2.12. Natural England, NRW, the JNCC, DAERA, and other selected organisations have therefore been consulted throughout the HRA process, including four to six week consultations on each document (General Principles, Screening, RIAA and Addendum) and a series of EWG meetings where there were opportunities to discuss the technical content of the documents. Where there were specific concerns raised, The Crown Estate convened topic specific meetings for discussion. The Crown Estate has given significant weight to the views of the SNCBs.

2.2.13. In accordance with the Habitat Regulations, European Sites comprise:

- designated Special Areas of Conservation ("SAC"),
- Sites of Community Importance ("SCI") included on the list of such sites compiled by the European Commission, candidate SAC ("cSAC") submitted to the European Commission for possible inclusion as an SCI, and
- classified Special Protection Areas ("SPA").

2.2.14. As a matter of Government policy, the following should be given the same protection as European Sites:

- potential SPA ("pSPA");
- possible/proposed SAC ("pSAC"); and
- listed Ramsar sites. This protection is extended to proposed Ramsar sites in England and Wales (NPPF 2023; PPW, 2021).
- In England only, sites identified or required as compensatory habitat are also afforded the same protection in policy (NPPF 2023).

### 2.3. Report Structure

2.3.1. In undertaking HRA a competent authority can consider implementing mitigation measures or amending its plan to avoid or reduce potentially damaging effects on European Sites. As part of the HRA process, the competent authority may agree to a plan only if the authority has ascertained that it will not adversely affect the integrity of a European Site. The only exception to this is where there are no alternative solutions and the plan must be carried out for imperative reasons of overriding public interest, in which case the authority must secure that all necessary compensatory measures are taken.

2.3.2. The rest of this report is structured to present key information from the documents used to inform the AA (listed in section 2.2.10) along with representations from the SNCBs pertinent to the key points. This structure is summarised below:

- Section 3: Non-UK European Sites
- Section 4: Screening
- Section 5: Appropriate Assessment
- Section 6: Assessment Findings
- Section 7: Mitigation Measures
- Section 8: Conclusion

2.3.3. Section 4 should be read in conjunction with:

- NIRAS, 2022. Celtic Sea Floating Wind: Principles Report.
- NIRAS, 2023a. Celtic Sea Floating Wind: Screening Report.

2.3.4. Sections 5 to 8 should be read in conjunction with:

- NIRAS, 2023b. Celtic Sea Floating Wind: RIAA.
- NIRAS, 2024. Celtic Sea Floating Wind: Addendum to the RIAA.

### 3. Non-UK European Sites

3.1.1. The potential for LSE was identified for a number of Non-UK European Sites which were screened into the assessment (NIRAS, 2023a), and therefore the RIAA drafted by NIRAS included non-UK European sites, these are:

- Aran Island (Donegal) Cliffs SAC
- Arcipelago delle Egadi - area marina e terrestre
- Arcipelago delle Eolie - area marina e terrestre
- Ardmore Head SAC
- Arxipèlag de Cabrera
- Aughris Head SPA
- Baie de Morlaix
- Ballyhoorisky Point to Fanad Head SAC
- Barley Cove to Ballyrisode Point SAC
- Beara Peninsula SPA
- Bills Rocks SPA
- Blasket Islands SAC
- Blasket Islands SPA
- Bray Head SAC
- Bunduff Lough and Machair/Trawalua/Mullaghmore SAC
- Camaret
- Cap de cala Figuera
- Cap d'Erquy-Cap Fréhel
- Cap Sizun
- Carrowmore Point to Spanish Point and Islands SAC
- Clare Island Cliffs SAC
- Clare Island SPA
- Cliffs of Moher SPA
- Costa e Caldeirão - Ilha do Corvo
- Costa Nordeste - Ilha das Flores
- Cote de Granit Rose-Sept Iles
- Cruagh Island SPA
- Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
- De s'Albufera a la Mola
- Deenish Island and Scariff Island SPA

- Dels Alocs a Fornells
- Dingle Peninsula SPA
- Duvillaun Islands SAC
- Duvillaun Islands SPA
- Erris Head SAC
- Es Vedrà - Es Vedranel
- Espacio marino de Formentera y del sur de Ibiza
- Espacio marino del levante de Ibiza
- Espacio marino del norte y oeste de Menorca
- Espacio marino del poniente de Mallorca
- Espacio marino del poniente y norte de Ibiza
- Espacio marino del sur de Mallorca y Cabrera
- Espacio marino del sureste de Menorca
- Galley Head to Duneen Point SPA
- Glenamoy Bog Complex SAC
- Helvick Head SAC
- Helvick Head to Ballyquin SPA
- High Island, Inishshark and Davillaun SPA
- Hook Head SAC
- Horn Head and Rinclevan SAC
- Horn Head to Fanad Head SPA
- Howth Head Coast SPA
- Howth Head SAC
- Iles Houat-Hoedic
- Illa de l'Aire
- Illaunonearaun SPA
- Îlot du Trévors
- Inishbofin and Inishshark SAC
- Inishkea Islands SPA
- Inishmore Island SAC
- Inishmore SPA
- Inishmurray SPA
- Inishtrahull SAC
- Inishtrahull SPA

- Ireland's Eye SAC
- Ireland's Eye SPA
- Isola di Favignana
- Isola di Levanzo
- Isola di Marettimo
- Iveragh Peninsula SPA
- Keel Machair/Menaun Cliffs SAC
- Kerry Head SPA
- La Mola i s'Albufera de Fornells
- La Trapa
- Lambay Island SAC
- Lambay Island SPA
- Littoral seino-marin
- Loop Head SPA
- Lower River Shannon SAC
- Maciço Montanhoso Central da Ilha da Madeira
- Maciço Montanhoso Oriental da Ilha da Madeira
- Magharee Islands SPA
- Mid-Waterford Coast SPA
- Mount Brandon SAC
- North Inishowen Coast SAC
- Old Head of Kinsale SPA
- Ouessant-Molène
- Puffin Island SPA
- Rathlin O'Birne Island SAC
- Roaringwater Bay and Islands SAC
- Rockabill SPA
- Sa Dragonera
- Saltee Islands SAC
- Saltee Islands SPA
- Seevogelschutzgebiet Helgoland
- Ses Salines d'Eivissa i Formentera
- Sessiagh Lough SAC
- Sheep's Head SAC

- Sheep's Head to Toe Head SPA
- Skelligs SPA
- Skerries Islands SPA
- Slieve League SAC
- Slieve Tooney/Tormore Island/Loughros Beg Bay SAC
- Slyne Head Islands SAC
- Stags of Broad Haven SPA
- Tagomago
- The Bull and The Cow Rocks SPA
- Three Castle Head to Mizen Head SAC
- Tory Island Coast SAC
- Tory Island SPA
- Tranarossan and Melmore Lough SAC
- Tregor Goëlo
- West Donegal Coast SPA
- West of Ardara/Maas Road SAC
- Wicklow Head SPA

- 3.1.2. Of the above non-UK SACs all of which are designated for marine mammals NIRAS (2023a) did not identify any potential for AEOSI from the Round 5 Plan given the distance between the European Sites and the nearest Project Development Area (i.e. over 26km); but on a precautionary basis assumed there was the potential for individual animals ranging from these European Sites to be present and subject to risk of injury or death. NIRAS noted that this risk can be reduced to negligible levels by the implementation of standard best practice guidance as recommended by JNCC (JNCC, 2010a&b). NIRAS concluded that there is negligible risk from disturbance and that any additional impact from the Round 5 Plan alone would not make an appreciable difference to any in-combination impact for the above SACs.
- 3.1.3. The Crown Estate has considered the assessment of non-UK SACs carefully and agrees with the conclusions from NIRAS.
- 3.1.4. Of the above non-UK SPAs, NIRAS (2023a) did not identify any potential for LSE from the Round 5 Plan. For some sites the species in question are not a designated feature of the site, or have a population of zero, whilst a number of sites have been discounted on the basis of distance by sea being greater than the foraging range. For non-UK SPAs where the Round 5 Plan is within non-overland foraging range of the relevant species and that species is a feature of the designated site, collision risk modelling has been undertaken. In all cases this has estimated an impact of less than 0.5% of baseline mortality and less than 5 individual collisions for the final scenario, as presented in the Screening Report (NIRAS 2023a), the RIAA (NIRAS, 2023b) and the RIAA

addendum (NIRAS, 2024). As such NIRAS (2023b) concludes that the impact was considered to be negligible and more likely indistinguishable from background mortality, and it was considered that these effects would not undermine the site conservation objectives for the relevant sites.

- 3.1.5. Having considered the potential for AEOSI in-combination with other plans or projects NIRAS also concluded that Round 5 Plan alone is not expected to make an appreciable difference to any in-combination impact for these SPAs.
- 3.1.6. The Crown Estate has considered the assessment of the above sites carefully and agrees with the conclusions from NIRAS (2023a, 2023b, and 2024).
- 3.1.7. The Crown Estate considered the assessment of transboundary impacts carefully and agrees with the conclusions from NIRAS. To inform The Crown Estate's assessment of these sites the relevant international organisations as appropriate for the sites screened into the assessment were contacted and did not raise any concerns in relation to transboundary effects from the Round 5 Plan and implications for the European Sites highlighted above ([Error! Reference source not found.](#) to [Error! Reference source not found.](#)). As a result, The Crown Estate has concluded that the Round 5 Plan will not result in an AEOSI for any non-UK European Sites and this AA does not consider these sites further.



## 4. Screening

### 4.1. The Likely Significant Effects Test

- 4.1.1. Under Regulation 63 of the Onshore Habitats Regulations and Regulation 28 of the Offshore Habitats Regulations, a competent authority must consider whether a plan or project may result in a LSE on a European Site, either alone or in combination with other plans or projects. A LSE is, in this context, any effect that may be reasonably predicted as a consequence of a plan that may undermine the conservation objectives of the features for which the site was designated but excluding trivial or inconsequential effects. An AA is required if a plan is likely to have a significant effect on a European site, either alone or in combination with other plans or projects.
- 4.1.2. The purpose of this test is to identify if there is potential for LSEs on any European Sites that may result from the implementation of the Round 5 Plan, and to record The Crown Estate's conclusions on the need for an AA. For those features where a LSE cannot be ruled out, these must be subject to an AA. This review of potential implications can be described as a 'two-tier process' with the LSE test as the first tier and the AA of effects on integrity as the second tier.
- 4.1.3. This section addresses this first step of the HRA process, for which The Crown Estate considered the potential impacts of the Round 5 Plan either alone or in combination with other plans and projects on European Sites to determine whether there is a risk of LSEs.

### 4.2. Screening - Identification of Likely Significant Effects

- 4.2.1. A screening exercise was undertaken to identify European Sites where there may be an LSE arising from the Round 5 Plan, based on impact pathways and criteria as set out in the Principles Report (NIRAS, 2022). For the purposes of undertaking the screening, a worst-case scenario has been adopted based on the project envelope developed by The Crown Estate in collaboration with technical expertise and consultation with the Floating Offshore Wind Market Developers (see NIRAS, 2023a [here](#)).
- 4.2.2. For the screening exercise both the rAoS and the export infrastructure region identified were utilised to ensure any uncertainty around project design did not impact upon the assessment of potential risk of LSE. All European Sites (including pSPAs, pSACs and Ramsar sites) were included in the HRA screening exercise (excluding European Sites supporting terrestrial and freshwater habitats and species, and migratory birds where there is no pathway of connectivity with the plan).
- 4.2.3. The criteria outlined in the Principles Document were applied to the qualifying features of European Sites, based on the impact pathways (as defined in the Principles Document) from the rAoS and the export infrastructure. For the purposes of this plan-level HRA, LSE was assumed to arise where there is the potential presence of an impact pathway resulting from any phase of development that may comprise part of the Round 5 Plan, including pre-construction, construction, operation, maintenance and decommissioning. Each pathway identified can potentially lead to a variety of impacts, which can affect receptors in different ways. Further analysis was undertaken to identify the 'pressures' that could arise through these pathways. The

use of pressures in this way is consistent with approaches taken for previous plan-level HRA undertaken by The Crown Estate.

- 4.2.4. To ensure compliance with recent case law<sup>4</sup>, no mitigation measures to avoid or reduce any potential harmful effects of the plan were assumed or applied at the screening stage.
- 4.2.5. The Screening Report (NIRAS, 2023a) identified the qualifying sites and features under the Habitat Regulations and the Ramsar Convention that ought to be included for assessment. The qualifying sites and features for which the possibility of LSE (as a result of the Plan) could not be excluded are listed in section 3 of the Screening Report. A full list of the sites and qualifying features screened into the assessment is detailed in Appendix C of the Screening Report.
- 4.2.6. Natural England, NRW, JNCC, DAERA and other selected organisations were consulted on the Principles Document and the Screening Report, and their views taken into account.
- 4.2.7. The Crown Estate reviewed the Screening Report, and the feedback provided by the SNCBs and is satisfied that the screening exercise has been conducted in an appropriate manner. The Crown Estate is further satisfied that an appropriate list of European Sites and their qualifying features (as detailed in Appendix C of the Screening Report (based on the potential for LSE)) has been taken forward for assessment.
- 4.2.8. Given the findings of the screening assessment, and the fact that the Round 5 Plan is not directly connected with or necessary to the management of a European Site, The Crown Estate made an AA of the implications of the Round 5 Plan for these sites in view of the sites' conservation objectives. The AA has been informed by the detail of the Screening Report (NIRAS, 2023a), the RIAA produced by NIRAS, (2023b) and the addendum to the RIAA (NIRAS, 2024).
- 4.2.9. During the consultation on the RIAA, further comments were received which are relevant to screening, specifically on the screening of Kittiwake at Flamborough and Filey Coast SPA, and screening of specific fish species, outlined below.
- 4.2.10. Natural England raised a comment on the potential impact of the plan on Kittiwake at the Flamborough and Filey Coasts SPA and requested that this was screened into the assessment. Kittiwake at the Flamborough and Filey Coast SPA were screened out of the RIAA by NIRAS, on the basis of no LSE arising, due to the estimated impacts of the Plan, using highly precautionary parameters, being less than 0.5% of baseline mortality. Whilst Natural England requested that the SPA was screened in, they also recognised that the impact is likely to be negligible. The Crown Estate therefore agrees with NIRAS that there is no potential for LSE arising from the plan on Kittiwake from Flamborough and Filey Coasts SPA and that it should be screened out from assessment.
- 4.2.11. Natural England questioned the screening out of sea lamprey and river lamprey at Severn Estuary SAC and River Wye SAC from the detailed assessment. Based on the screening distance of 100km detailed in the HRA Principles (NIRAS, 2022), these features were not raised as a concern

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<sup>4</sup> See judgment of the CJEU 12 April 2018, *People Over Wind and Others*, Case C-323/17, EU:C:2018:244, paragraph 40

in the Screening Report (NIRAS, 2023a) and therefore screened out. This is considered to be an appropriate test for LSE at the plan level.

- 4.2.12. However, noting that Natural England have raised this comment, further consideration by The Crown Estate at Appropriate Assessment stage has been given to this feature / site combination (captured here for context and clarity). The same features have been screened in at designated sites more proximate to the Plan and, noting that with the exception of distance there are no significant differences between the potential interactions of these features from different designated sites with the Plan, the conclusions and mitigation associated with sea lamprey and river lamprey in the RIAA can therefore be extended to these features at the Severn Estuary and River Wye SACs with a conclusion of no AEOSI.
- 4.2.13. Storm Petrel
- 4.2.14. NRW have commented on the assessment of European storm petrel ("storm petrel") within the Round 5 HRA, noting that there is uncertainty over the potential impacts of large-scale development of offshore wind on this species in the context of a limited evidence base. In common with other plan and project-level impact assessments, the RIAA has relied upon Wade et al. (2016) as the primary source of evidence for calibrating the sensitivity of storm-petrel to offshore wind farms, there being no other empirical evidence available at this stage. In this respect it should be noted that Deakin et al. (2022) has also flagged critical data gaps that currently prevent a reliable assessment of population-level impacts on storm-petrel from offshore wind, recommending urgent studies. However, it is not known when relevant information will be available to inform impact assessments.
- 4.2.15. The assessment of impact on storm -petrel therefore relies on an assessment of this species' sensitivity to offshore wind farms based on Wade et al. (2016) (who refer to sensitivity as "Vulnerability"). This indicates that the species is amongst the least Vulnerable seabirds to collision mortality, due to its habitually low flight heights - the species is typically and consistently observed close to the sea surface and not at flight heights that would normally put it at risk of collision with wind turbine blades. As a consequence, storm petrel is typically not screened in for this impact pathway and The Crown Estate agrees that this is the case for this assessment and no LSE is identified.
- 4.2.16. Wade et al. (2016) also indicates low Vulnerability to displacement effects, assigning a score of 1 (the lowest available using their methodology) to each of the three component variables (displacement from structures and vessels together with habitat flexibility). The associated uncertainty score for the Vulnerability of this species is, however, Very High, which likely reflects a particularly high reliance on expert opinion rather than empirical data.
- 4.2.17. In this context, it is therefore appropriate to capture the above uncertainty within this AA and make the following recommendations, to be addressed during assessment at project level of any project brought forward under this plan:

- Projects coming forward under the Plan must endeavour to secure reliable information on the distribution, abundance and flight heights of this species during pre-construction surveys. Any pre-construction surveys coordinated by The Crown Estate will explore opportunities to obtain reliable information on the distribution, abundance and flight heights of storm-petrels. This may entail appropriate methodological changes to current survey practices to ensure the species is reliably detected.
- Project-level assessments will, in any case, be required to consider all available information in relation to the sensitivity of storm-petrel to displacement effects, including the Vulnerability score of Wade et al. (2016) together with any additional insights produced by studies that may result from Deakin et al. (2022) gap analysis.

## 5. Appropriate Assessment

### 5.1. Test for Adverse Effect on Site Integrity

- 5.1.1. The requirement to undertake an AA is triggered when a competent authority, in this case The Crown Estate, determines that a plan or project may have a LSE on a European Site either alone or in combination with other plans or projects. Guidance issued by the European Commission states that the purpose of an AA is to enable a competent authority to ascertain that the plan or project will not adversely affect the integrity of any European Site, either alone or in combination with other plans and projects, and in view of the site's conservation objectives (European Commission, 2018).
- 5.1.2. If the competent authority cannot ascertain the absence of an AEOSI beyond reasonable scientific doubt, then under the Habitats Regulations it may not agree to the plan or project unless the competent authority decides to pursue a 'derogation.' Such a derogation allows a plan or project to proceed notwithstanding the risk of an AEOSI but only if there is no alternative solution, the plan or project must be carried out for imperative reasons of overriding public interest ("IROPI") and compensatory measures necessary to ensure the overall coherence of the National Site Network are secured.
- 5.1.3. Guidance from the European Commission confirms that disturbance to a species or deterioration of habitats, for which a European Site has been designated, must be considered in relation to the integrity of that site and its conservation objectives (European Commission, 2018 para 4.6.3):

*"The appropriate assessment focuses on assessing the implications for the site of the plan or project, individually or in combination with other plans or projects, in view of the site's conservation objectives. Article 6(3) must therefore be read in close conjunction with Article 6(1) and 6(2) since the conservation objectives to be used in the appropriate assessment are linked also to these two earlier paragraphs."*

- 5.1.4. Section 4.6.4 of the guidance defines site integrity as:

*"...the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is or will be classified."*

- 5.1.5. Conservation objectives outline the desired state for a European Site, in terms of the interest features for which it has been designated.
- 5.1.6. There are no set thresholds at which impacts on site integrity are considered to be adverse. This is a matter for interpretation on a site-by-site basis, depending on the designated feature and nature, scale and significance of the impact.
- 5.1.7. Conservation objectives have been used by The Crown Estate to consider whether the Round 5 Plan has the potential to result in an AEOSI, either alone or in combination with other plans or projects.

## 5.2. RIAA Methodology

- 5.2.1. The assessment undertaken by NIRAS sought to determine whether the potential for LSEs identified during the Stage 1 Screening exercise could result (either alone or in-combination with other plans or projects) in an AEOSI. For all European Sites/features that were screened in, an assessment was made of whether it could be ascertained that the Round 5 Plan would not lead to an AEOSI.
- 5.2.2. The RIAA was undertaken in three assessment stages to account for the different pressures associated with the Export Infrastructure Region and the Project Development Areas (within which arrays would be identified). However, the final conclusions on the risk of the Preferred Projects having an AEOSI of any European Sites were reached based on a comprehensive view of all three assessment stages.
- 5.2.3. The methodology of all three assessment stages follows the key assessment principles as described previously in the Round 5 Plan Level HRA Principles Report (NIRAS, 2022). A fundamental principle of the RIAA is the commitment to undertake a reasonable and meaningful assessment where possible. This allows The Crown Estate to determine which of the assessments can be concluded at the plan level, and which can only be meaningfully assessed within HRA's undertaken at project level.
- 5.2.4. There are two key areas which the EWG have questioned whether a reasonable and meaningful assessment can be undertaken, this being port infrastructure development and wet storage of floating turbines. In both cases, although neither is part of the Plan' (i.e. there are not provisions to lease seabed for these activities within the Plan), both could be incidental to the progression of the Plan. However, there remains significant uncertainty as to the likely location, scale and details of such infrastructure or activities, and thus assessments of this can only be meaningfully assessed within HRA's undertaken at project level.
- 5.2.5. Stage one of the AA assesses the risk of the Export Infrastructure Regions (the Export Infrastructure Risk Assessment ("EIRA")) having an AEOSI of the European Sites and associated features screened in for pressures associated with cable and / or pipeline infrastructure.
- 5.2.6. Stages two and three of the assessment together make up the Array Assessment, which assess the risk of the Preferred Project arrays having an AEOSI on the European Sites and associated features that were screened in for pressures associated with the array areas, including intra-array cabling.
  - Stage two assesses if the risk of an AEOSI can be excluded at a number of SPAs in view of the characteristics associated with three categories of seabird features (foraging range over land, SPAs designated as foraging areas and species with large foraging ranges). These characteristics were previously considered within the Screening Report, but the associated level of impact is assessed.
  - Stage three provides additional quantitative and qualitative analysis to assess the risk of an AEOSI for all other European Sites and associated features screened in for pressures associated with the array.

5.2.7. The Crown Estate is satisfied that this is an appropriate approach to undertaking the assessment.

### 5.3. In Combination Assessment

5.3.1. The approach to the in-combination assessment undertaken by NIRAS builds upon the assessments undertaken for each European Site with respect to Round 5 Plan-related effects acting alone. An initial search was undertaken to capture broad plan or project categories with the following criteria:

- applications for a new consent;
- applications to change an existing consent;
- granted consents that have not begun or been completed;
- granted consents that need renewing; and
- plans that have been adopted or drafted but not yet adopted.

5.3.2. Specific plans and projects were then identified for inclusion in the in-combination assessment (NIRAS, 2023b (shortcut available [here](#))), by means of a quantitative exercise involving interrogation of a number of data sources in addition to a manual search.

5.3.3. The project data sources were interrogated using spatial criteria against the European Sites which were identified in the Screening Report. For most receptors the criteria chosen are specific to the type of activity and reflects the furthest distance within which the pressures associated with that activity can cause an effect. In addition to the use of spatial criteria, a final search was carried out to identify any plans and projects not captured in the data sources. This involved a search of the websites of the key UK and devolved Governments (and their agencies) with statutory responsibilities for projects in UK territorial waters and the Exclusive Economic Zone.

5.3.4. Following the identification of specific plans and projects, the SNCB tiering system for offshore windfarms was applied (NIRAS, 2023b available [here](#)). The plans and projects included in the tiers were then further categorised to determine how they would be treated in the in-combination assessment. There are three categories taken into account in the SNCB tiering system, and that logic has been applied to other types of development and activity as part of the in-combination assessment (NIRAS, 2023b).

5.3.5. Following the completion of the RIAA, Hornsea Project Four Offshore Wind Farm (Hornsea 4) was granted development consent under the Planning Act 2008 and the Erebus Offshore Wind Farm was granted consent under the Marine and Coastal Access Act and Section 36 of the Electricity Act 1989. The Crown Estate has undertaken a review of the RIAA in light of these decision and considers that Hornsea 4 should be moved from Tier 5 (projects that have not yet submitted an application to the appropriate regulatory body) to Tier 3 (projects that have been consented but construction has not yet commenced) and Erebus should be moved from Tier 4 (projects that have an application submitted to the appropriate regulatory body that have not yet been determined) to Tier 3 (projects that have been consented but construction has not yet commenced). This change in status has been considered and for both Hornsea 4 and Erebus does not materially alter the in-combination assessment.

5.3.6. The Crown Estate is satisfied that a suitable approach has been taken to consideration and assessment of in-combination effects.

#### 5.4. Uncertainties

5.4.1. A precautionary approach has been taken to assumptions about Round 5 Plan activities based on the development of a technical envelope, in coordination with the technical team within The Crown Estate and engagement with the Offshore Wind market, with a 'worst-case' for various Round 5 Plan activities and potential impact pathways used for the assessment (NIRAS, 2023a<sup>5</sup>). The RIAA utilised the best available information at the time of assessment, to make a determination of whether it can be concluded that the plan will not have an AEOSI. In cases where uncertainties about the magnitude of likely effects arose (e.g. based on uncertainty about the scale, design, configuration or precise location of the Preferred Projects, or limitations in the available data), it was not always possible to undertake a meaningful, quantitative assessment of the effects that are likely to arise.

5.4.2. Because the integrity test incorporates the application of the precautionary principle as a matter of law, and because plan assessments are, by their nature, less precise than project assessments, it is important for the assessment process to eliminate the prospect of AEOSI in so far as that is possible at the level of specificity inherent in the nature and purpose of the particular plan. This can be achieved through the incorporation of plan specific mitigation or incorporation of specific restrictions with regard to plan delivery, or the addition of further mitigation measures in lower plans or projects.

5.4.3. The Crown Estate is satisfied that the approach to uncertainties adopted by the RIAA is appropriate, namely that where meaningful assessment cannot be undertaken at plan level (owing to this absence of key information), reliance can be placed on the project-level assessment (specifically the project-level HRA). This is on the basis that project-level HRA:

- Will be required as a matter of law at that stage;
- Will need to identify and assess the magnitude of all LSEs including those effects identified at plan level which are affected by uncertainty;
- Will be able to determine and secure, where necessary, appropriate and feasible mitigation measures;
- Will be able to more precisely identify the nature timing, duration, scale or location of development, based on further detailed information and data, and therefore will be able to ascertain with more certainty the magnitude of the effects of each project to enable an AEOSI to be avoided.

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<sup>5</sup> Plan details are available [here](#).



- 5.4.4. The Crown Estate also agrees that there will be sufficient flexibility and scope for avoidance and appropriate mitigation to be implemented at project level to avoid AEOSI in respect of European Sites in relation to certain elements of the Round 5 Plan. The Crown Estate notes to the Advocate General's opinion in the CJEU case C-6/04 European Commission v United Kingdom confirming that the progression of assessment that must take place as a plan becomes more specific whereby 'adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure.'
- 5.4.5. The EIRA was undertaken for European Sites and features for which the Screening Report identified a risk of LSE from an Export Infrastructure Region. The export cable or pipeline infrastructure routes for PDAs have not yet been defined, and consequently there is considerable uncertainty associated with the spatial parameters required for detailed assessment. The EIRA was used to evaluate the overall risk of an AEOSI from the Export Infrastructure Region, alone and in-combination with other plans and projects.
- 5.4.6. The Crown Estate reviewed the consultation responses submitted by members of the HRA Expert Working Group ("EWG"), which was established to enable effective technical engagement and includes SNCBs as well as Government Departments and eNGOs that have relevant expertise in relation to the Round 5 Plan, and is satisfied that the assessment has been conducted in an appropriate manner.

## 6. Assessment Findings

### 6.1. Introduction

- 6.1.1. The following sections provide a summary of the key findings of the assessment in relation to the European Sites and features screened into the assessment, and a summary of any relevant feedback provided by the SNCBs and other consultees.
- 6.1.2. As highlighted previously, the RIAA included non-UK European Sites within the assessment. Having reviewed the assessment on those non-UK sites (see [Section 3](#)), The Crown Estate agrees with the conclusions from NIRAS that an AEOSI from the Round 5 Plan can be excluded and this AA does not consider these sites further.

### 6.2. Sites Where No Significant Comments Have Been Raised by the EWG

- 6.2.1. The RIAA provides detailed assessment of the potential for AEOSI for all features and pathways screened into the HRA, Where no significant comments have been raised by stakeholders during consultation on the RIAA, or have been addressed by NIRAS in updates to the RIAA, The Crown Estate has carefully considered the content presented in the RIAA and Addendum and agrees with the conclusions of NIRAS (2023b,2024) and the justification in the RIAA<sup>6</sup> should be referred to. A full set of conclusions, and relevant mitigation for the sites screened into this HRA can be found in Appendix B of this report. Where additional consideration is required, this is presented below in section 6.3 onwards.
- 6.2.2. For the following sites, The Crown Estate agrees with NIRAS (2023b,2024) and considers that no further consideration is necessary within this AA.

Table 1 - Sites where no AEOSI has been concluded in agreement with NIRAS (2023b and 2024)

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
Afon Eden - Cors Goch Trawsfynydd SAC	Atlantic salmon Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Afon Gwyrfai a Llyn Cwellyn SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate

<sup>6</sup> Access the RIAA [Results Dashboard](#)

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
			mitigation, such as finer gauge screens and/or fish deterrents should be used.
Afon Teifi/ River Teifi SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Afon Teifi/ River Teifi SAC	River lamprey Sea lamprey Allis shad Sea lamprey Twaite shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Afonydd Cleddau / Cleddau Rivers SAC	River lamprey Sea lamprey	P4 to P6 Collision	n/a
Aran Island (Donegal) Cliffs SAC	Fulmar	n/a	n/a
Arcipelago delle Egadi - area marina e terrestre SPA	Manx shearwater	n/a	n/a
Arcipelago delle Eolie - area marina e terrestre SPA	Manx shearwater	n/a	n/a
Aughris Head SPA	Fulmar	n/a	n/a
Ballyhoorisky Point to Fanad Head SAC	Fulmar	n/a	n/a
Beara Peninsula SPA	Fulmar	n/a	n/a
Bills Rocks SPA	Fulmar	n/a	n/a
Buchan Ness to Collieston Coast SPA	Fulmar	n/a	n/a
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Fulmar	n/a	n/a
Calf of Eday SPA	Fulmar	n/a	n/a
Cape Wrath SPA	Fulmar	n/a	n/a

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
Cardigan Bay/ Bae Ceredigion SAC	Bottlenose dolphin Grey seal River lamprey Sea lamprey	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Carmarthen Bay and Estuaries/ Bae Caerfyrddin ac Aberoedd SAC	Allis shad River lamprey Sea lamprey Twaite shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Cladagh (Swanlinbar) River SAC	Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Copeland Islands SPA	Manx shearwater	n/a	n/a
Copinsay SPA	Fulmar	n/a	n/a
Coquet Island SPA	Fulmar	n/a	n/a
Costa e Caldeirão - Ilha do Corvo SPA	Manx shearwater	n/a	n/a
Costa Nordeste - Ilha das Flores SPA	Manx shearwater	n/a	n/a
Cruagh Island SPA	Manx shearwater	n/a	n/a
Dartmoor SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Dingle Peninsula SPA	Fulmar	n/a	n/a
Duvillaun Islands SAC	Fulmar	n/a	n/a
Duvillaun Islands SPA	Fulmar	n/a	n/a

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
East Caithness Cliffs SPA	Fulmar	n/a	n/a
Erris Head SAC	Fulmar	n/a	n/a
Fetlar SPA	Fulmar	n/a	n/a
Flannan Isles SPA	Fulmar	n/a	n/a
Foula SPA	Fulmar	n/a	n/a
Fowlsheugh SPA	Fulmar	n/a	n/a
Galley Head to Duneen Point SPA	Fulmar	n/a	n/a
Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA	Manx shearwater	n/a	n/a
Glenamoy Bog Complex SAC	Fulmar Manx shearwater	n/a	n/a
Haig Fras SAC	Reefs	n/a	n/a
High Island, Inishshark and Davillaun SPA	Fulmar Manx shearwater	n/a	n/a
Hook Head SAC	Common Guillemot	n/a	n/a
Horn Head and Rinclevan SAC	Fulmar	n/a	n/a
Horn Head to Fanad Head SPA	Fulmar	n/a	n/a
Iles Houat-Hoedic SPA	Manx shearwater	n/a	n/a
Illaunonearaun SPA	Fulmar	n/a	n/a
Inishkea Islands SPA	Fulmar	n/a	n/a
Inishmurray SPA	Fulmar	n/a	n/a
Inishtrahull SAC	Fulmar	n/a	n/a
Inishtrahull SPA	Fulmar	n/a	n/a
Isles of Scilly Complex SAC	Grey seal	n/a	n/a
Isola di Favignana SPA	Manx shearwater	n/a	n/a
Isola di Levanzo SPA	Manx shearwater	n/a	n/a

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
Isola di Marettimo SPA	Manx shearwater	n/a	n/a
Keel Machair/Menaun Cliffs SAC	Fulmar	n/a	n/a
Kerry Head SPA	Fulmar	n/a	n/a
Littoral seino-marin SPA	Fulmar	n/a	n/a
Lough Melvin SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Lundy SAC	Grey seal	n/a	n/a
Maciço Montanhoso Central da Ilha da Madeira SPA	Manx shearwater	n/a	n/a
Maciço Montanhoso Oriental da Ilha da Madeira SPA	Manx shearwater	n/a	n/a
Magharee Islands SPA	Fulmar Lesser black-backed gull	n/a	n/a
Mingulay and Berneray SPA	Fulmar	n/a	n/a
Mount Brandon SAC	Fulmar	n/a	n/a
North Anglesey Marine / Gogledd Môn Forol SAC	Harbour Porpoise	n/a	n/a
North Caithness Cliffs SPA	Fulmar	n/a	n/a
North Inishowen Coast SAC	Fulmar	n/a	n/a
Outer Ards Ramsar Site	Manx shearwater	n/a	n/a
Owenkillew River SAC	Atlantic salmon Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
			any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Pembrokeshire Marine/ Sir Benfro Forol SAC	Allis shad Grey seal River lamprey Sea lamprey Twaite shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Pen Llyn a`r Sarnau/ Llyn Peninsula and the Sarnau SAC	Grey seal	n/a	n/a
Plymouth Sound and Estuaries SAC	Allis shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Rathlin Island SPA	Fulmar	n/a	n/a
Rathlin O'Birne Island SAC	Leach's Petrel	n/a	n/a
River Avon SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Bladnoch SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Camel SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
			mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Clun SAC	Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Derwent and Bassenthwaite Lake SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Eden SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Ehen SAC	Atlantic salmon Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Faughan and Tributaries SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.



Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
River Foyle and Tributaries SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Itchen SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Kent SAC	Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Roe and Tributaries SAC	Atlantic salmon	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Usk/ Afon Wysg SAC	Allis shad Atlantic salmon Twaite shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
River Wye/ Afon Gwy SAC	Allis shad Atlantic salmon Twaite shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Ronas Hill - North Roe and Tingon SPA	Fulmar	n/a	n/a

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
Rousay SPA	Fulmar	n/a	n/a
Rum SPA	Manx shearwater	n/a	n/a
Seevogelschutzgebiet Helgoland SPA	Fulmar	n/a	n/a
Sessiagh Lough SAC	Fulmar	n/a	n/a
Severn Estuary/ Môr Hafren SAC	Twaite shad	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Sheep's Head SAC	Fulmar	n/a	n/a
Sheep's Head to Toe Head SPA	Fulmar	n/a	n/a
Shiant Isles SPA	Fulmar	n/a	n/a
Skerries Islands SPA	Fulmar	n/a	n/a
Slieve League SAC	Fulmar	n/a	n/a
Slieve Tooy/Tormore Island/Loughros Beg Bay SAC	Fulmar	n/a	n/a
Stags of Broad Haven SPA	Fulmar Leach's Petrel	n/a	n/a
Sumburgh Head SPA	Fulmar	n/a	n/a
Tory Island Coast SAC	Fulmar	n/a	n/a
Tory Island SPA	Fulmar	n/a	n/a
Tranarossan and Melmore Lough SAC	Fulmar	n/a	n/a
Tregor Goëlo SPA	Fulmar Lesser black-backed gull	n/a	n/a
Troup, Pennan and Lion's Heads SPA	Fulmar	n/a	n/a
Upper Ballinderry River SAC	Freshwater pearl mussel	P4 to P6 Collision	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates

Site Name	Feature Screened into AA	Pressure(s) Requiring Mitigation	Mitigation
			any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
West Donegal Coast SPA	Fulmar	n/a	n/a
West of Ardara/Maas Road SAC	Fulmar	n/a	n/a
West Wales Marine / Gorllewin Cymru Forol SAC	Harbour porpoise	n/a	n/a
West Westray SPA	Fulmar	n/a	n/a
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Fulmar	n/a	n/a

### 6.3. Sites requiring Additional Consideration

- 6.3.1. In a number of areas, stakeholders have commented on the conclusions of, or methodology used by, the RIAA (NIRAS, 2023a). The Crown Estate has carefully considered these comments, and the relevant evidence presented by both NIRAS and the HRA EWG to reach its conclusions.
- 6.3.2. Site / feature combinations relevant to comments that have been raised are presented below in Table 2. Further detail on the relevant pathways are presented below in Table 3, and detail of the comments, consideration of the evidence, and conclusions are below in section 6.5.

Table 2 Site / feature combinations for further discussion, and topic raised in comments.

Site Name	Feature	Reason for further consideration in AA
Ailsa Craig SPA	Gannet (breeding) Gannet (non-breeding)	Collision risk
Alderney West Coast & the Burhou Islands Ramsar	Gannet (breeding)	Collision risk
Ardmore Head SAC	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Arxipèlag de Cabrera SPA	Balearic shearwater (non-breeding)	

Baie de Morlaix SPA	Manx shearwater (breeding) Puffin (breeding) Storm petrel (breeding)	Storm petrel methodology
Barley Cove to Ballyrisode Point SAC	Fulmar (breeding) Lesser black-backed gull (breeding)	Collision risk
Basket Islands SAC	Fulmar (breeding) Kittiwake (breeding) Leach's Petrel (breeding) Manx shearwater (breeding) Puffin (breeding) Storm petrel (breeding)	Collision risk Storm petrel methodology
Basket Islands SPA	Fulmar (breeding) Kittiwake (breeding) Leach's Petrel (breeding) Manx shearwater (breeding) Puffin (breeding) Storm petrel (breeding)	Collision risk Storm petrel methodology
Bray Head SAC	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC	Harbour porpoise	Underwater Noise
Camaret SPA	Fulmar (breeding) Storm petrel (breeding)	Storm petrel methodology
Cap d'Erquy-Cap Fréhel SPA	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Cap de cala Figuera SPA	Balearic Shearwater (non-breeding)	Non-breeding bird methodology
Cap Sizun SPA	Fulmar (breeding) Kittiwake (breeding) Storm petrel (breeding)	Collision risk Storm petrel methodology
Clare Island Cliffs SAC	Fulmar (breeding) Gannet	Collision risk
Clare Island SPA	Gannet	Collision risk
Cliffs of Moher SPA	Fulmar (breeding) Kittiwake (breeding) Puffin (breeding)	Collision risk
Cote de Granit Rose-Sept Iles SPA	Fulmar (breeding) Gannet Kittiwake (breeding) Lesser black-backed gull (breeding)	Collision risk

	Manx shearwater (breeding) Storm petrel (breeding)	
Deenish Island and Scariff Island SPA	Fulmar (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Storm petrel (breeding)	Storm petrel methodology
Fair Isle SPA	Fulmar (breeding) Great skua Gannet (breeding) Gannet (non-breeding)	Collision risk
Flamborough and Filey Coast SPA	Gannet	Collision risk
Grassholm SPA	Gannet (breeding) Gannet (non-breeding)	Collision risk
Handa SPA	Fulmar (breeding) Great skua	Collision risk
Helvick Head SAC	Common guillemot (breeding) Fulmar (breeding) Kittiwake (breeding) Razorbill (breeding)	Kittiwake methodology Collision risk
Helvick Head to Ballyquin SPA	Common guillemot (breeding) Fulmar (breeding) Herring gull (breeding) Kittiwake (breeding) Razorbill (breeding)	Collision risk
Hermaness, Saxa Vord and Valla Field	Fulmar (breeding) Gannet (non-breeding)	Collision risk
Howth Head Coast SPA	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Howth Head SAC	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Hoy SPA	Fulmar (breeding) Great skua	Collision risk
Îlot du Trévors SPA	Lesser black-backed gull (breeding)	Collision risk
Inishbofin and Inishshark SAC	Fulmar (breeding) Manx shearwater (breeding) Storm petrel (breeding)	Storm petrel methodology
Inishmore Island SAC	Fulmar (breeding) Kittiwake (breeding)	Collision risk

Inishmore SPA	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Ireland's Eye SAC	Gannet (breeding) Kittiwake (breeding) Puffin (breeding)	Collision risk
Ireland's Eye SPA	Gannet (breeding) Kittiwake (breeding) Puffin (breeding)	Collision risk
Isles of Scilly SPA/ Ramsar	Common guillemot (breeding) Common tern (breeding) Cormorant (breeding) Fulmar (breeding) ( Great black-backed gull (breeding) Great black-backed gull (non- breeding) Herring gull (breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Puffin (breeding) Razorbill (breeding) Shag (breeding) Storm petrel (breeding)	Collision risk  Storm petrel
Iveragh Peninsula SPA	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Lambay Island SAC	Fulmar (breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Puffin (breeding)	Collision risk
Lambay Island SPA	Fulmar (breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Puffin (breeding)	Collision risk
Loop Head SPA	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Lower River Shannon SAC	Fulmar (breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Razorbill (breeding)	Collision risk

North Rona and Sula Sgeir SPA	Fulmar (breeding) Gannet (non-breeding)	Collision risk
Noss	Fulmar (breeding) Gannet (non-breeding)	Collision risk
Old Head of Kinsale SPA	Common Guillemot (breeding) Fulmar (breeding) Kittiwake (breeding) Razorbill (breeding)	Collision risk
Ouessant-Molène SPA	Fulmar (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Puffin (breeding) Storm petrel (breeding)	Collision risk Storm petrel methodology
Puffin Island SPA	Fulmar (breeding) Gannet (Non-breeding) Kittiwake (breeding) Manx shearwater (breeding) Puffin (breeding) Storm petrel (breeding)	Collision risk Storm petrel methodology
Roaringwater Bay and Islands SAC	Fulmar (breeding) Lesser black-backed gull (breeding) Razorbill (breeding)	Collision risk
Rockabill SPA	Kittiwake (breeding)	Collision risk
Saltee Islands SAC	Common guillemot (breeding) Fulmar (breeding) Gannet (Breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Puffin (breeding) Razorbill (breeding) Grey seal	Collision risk
Saltee Islands SPA	Common guillemot (breeding) Fulmar (breeding) Gannet (breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding)	Collision risk

	Puffin (breeding) Razorbill (breeding)	
Severn Estuary SPA	Lesser black-backed gull (breeding)	Collision risk
Skelligs SPA	Fulmar (breeding) Gannet (Breeding) Gannet (Non-breeding) Kittiwake (breeding) Manx shearwater (breeding) Puffin (breeding) Storm petrel (breeding)	Collision risk
Skomer, Skokholm and the Seas off Pembrokeshire SPA	Common guillemot (breeding) Kittiwake (breeding) Lesser black-backed gull (breeding) Manx shearwater (breeding) Puffin (breeding) Razorbill (breeding) Storm petrel (breeding)	Collision risk
St Kilda SPA	Fulmar (breeding) Gannet (Non-breeding) Great skua Manx shearwater (breeding)	Collision risk
Sule Skerry and Sule Stack SPA	Gannet (breeding)	Collision risk
The Bull and The Cow Rocks SPA	Fulmar (breeding) Gannet (Breeding) Gannet (Non-breeding) Kittiwake (breeding) Puffin (breeding) Storm petrel (breeding)	Collision risk  Storm petrel methodology
Three Castle Head to Mizen Head SAC	Fulmar (breeding) Kittiwake (breeding)	Collision risk
Wicklow Head SPA	Fulmar (breeding) Kittiwake (breeding) Razorbill (breeding)	Collision risk

#### 6.4. Feature/Pressure Combinations Requiring Additional Justification for o AEOSI due to Stakeholder Comments

Table 3 below sets out further detail on the specific feature / pressure combinations, drawn from the sites in Table 2, which are discussed further in Section 6.5. For all features referenced in Table 2 that are not taken forwards into Table 3 below, no significant comments have been raised or any comments have been



addressed by NIRAS in updates to the RIAA. The Crown Estate has carefully considered the content presented in the RIAA and Addendum and agrees with the conclusions of NIRAS (2023b,2024) and the justification in the RIAA (see Results Dashboard).

Table 3 Feature / pathway combination for further discussion

Feature	Pressure (codes taken from NIRAS, 2022)	Sites
Gannet	P4 to P6 Collision	Ailsa Craig SPA Alderney west coast & the Burhou Islands SPA Clare Island Cliffs SAC Clare Island SPA Cote de Granit Rose-Sept Iles SPA Flamborough and Filey Coast SPA Grassholm SPA Ireland's Eye SAC Ireland's Eye SPA Saltee Islands SAC Saltee Islands SPA Skelligs SPA The Bull and The Cow Rocks SPA
Great black-backed gull	P4 to P6 Collision	Isles of Scilly SPA
Great skua (breeding)	P4 to P6 Collision	Handa SPA Hoy SPA St Kilda SPA
Harbour porpoise	P8 Underwater Noise	Bristol Channel Approaches SAC
Herring gull (breeding)	P4 to P6 Collision	Isles of Scilly SPA
Kittiwake (breeding)	P4 to P6 Collision P7 Physical Presence	Ardmore Head SAC Blanket Islands SAC Blanket Islands SPA Bray Head SAC Cap d'Erquy-Cap Fréhel SPA Cap Sizen SPA Cliffs of Moher SPA Cote de Granit Rose-Sept Iles SPA Helvick Head SAC Helvick Head to Ballyquin SPA Howth Head Coast SPA Howth Head SAC Inishmore Island SAC Inishmore SPA

		Ireland's Eye SAC Ireland's Eye SPA Isles of Scilly SPA Iveragh Peninsula SPA Lambay Island SAC Lambay Island SPA Loop Head SPA Old Head of Kinsale SPA Puffin Island SPA Rockabill SPA Saltee Islands SAC Saltee Islands SPA Skelligs SPA Skomer, Skokholm and the Seas off Pembrokeshire SPA The Bull and The Cow Rocks SPA Three Castle Head to Mizen Head SAC Wicklow Head SPA
Lesser black-backed gull (breeding)	P4 to P6 Collision P7 Physical Presence	Barley Cove to Ballyrisode Point SAC Cote de Granit Rose-Sept Iles SPA Deenish Island and Scariff Island SPA Îlot du Trévors SPA Isles of Scilly SPA Lambay Island SAC Lambay Island SPA Lower River Shannon SAC Ouessant-Molène SPA Roaringwater Bay and Islands SAC Saltee Islands SAC Saltee Islands SPA Severn Estuary SPA Skomer, Skokholm and the Seas off Pembrokeshire SPA

## 6.5. Consideration of Features/Pathways Attracting Stakeholder Comments

- 6.5.1. Quantitative analysis for bird species (Gannet, Great black-backed gull, Great skua, Herring gull, Kittiwake, Lesser black-backed gull)
- 6.5.2. In undertaking the assessment within the RIAA, NIRAS presented results having taken into account sabbatical birds, i.e. birds which are present, but in any given year are not breeding and thus are not part of the designated breeding population. NIRAS deemed this appropriate, noting that there is extant SNCB (NatureScot, 2023) guidance that recommends it, and that it is recognised that sabbatical birds exist within the wider population. The HRA EWG raised a

significant concern regarding the use of sabbatical rates in the consideration of population level impacts on breeding bird populations. Recognising the level of concern, the RIAA Addendum presents updated results for the final scenario both with and without the use of sabbaticals (NIRAS 2024). The Crown Estate has carefully considered the concern raised by the EWG and evidence presented in the RIAA Addendum when reaching its conclusion.

- 6.5.3. The SNCBs raised comments that the parameters used for the Collision Risk Modelling (CRM) are not in-line with their current interpretation of the available evidence. Updated parameters were recommended by SNCBs following the publication of Cook (2021), but this implementation of this advice was paused following a jackknife analysis by MacArthur Green in 2021. Following discussion, it was agreed via e-mail with Natural England, copying the other SNCBs, that it would be appropriate to use the currently published parameters, noting that if updated parameters constituting formal guidance were released these would in any event be required to be used in project level assessments for projects brought forwards under the plan. NRW have highlighted that they do not agree with this position on the basis that they may advocate for the use of updated parameters at project level. The results presented in the RIAA (NIRAS, 2023b) and RIAA Addendum (NIRAS, 2024) are based on the current published guidance on CRM parameters and are therefore consistent with the approach agreed with Natural England.
- 6.5.4. NRW have raised a comment on collision risk requesting the use, and presentation, of a range of scenarios based on a variety on input parameters. NIRAS have confirmed that the numbers presented in the Addendum represent the upper value of the collision risk estimate (i.e. the most precautionary) and this is therefore appropriate to support The Crown Estate's conclusions.
- 6.5.5. Natural England, JNCC and NRW disagree with the use of specific displacement and mortality rates and, although noting that full displacement matrices are presented as requested, have raised concerns regarding the integration of figures based on displacement and mortality rates into Population Viability Analysis (PVA). Whilst these concerns are acknowledged, NIRAS have followed guidance in JNCC et al. (2016) including section 7 which encourages developers to "seek and present emerging sources of empirical evidence" and have presented a robust evidence base to support this approach, referencing both guidance by JNCC and evidence collated in Orsted (2018) and noting that the approach used is also recommended by another UK SNCB. The Crown Estate is therefore satisfied that the methodology applied by NIRAS in this case is robust.
- 6.5.6. NRW and other EWG members have flagged the potential impact of Highly Pathogenic Avian Influenza (HPAI) on the population of some species relevant to this assessment, particularly Gannet, where significant mortality has been observed at Grassholm SPA. Whilst it is recognised that the impact of HPAI is a concern for bird populations, there is considerable uncertainty at this stage as to the medium- and long-term impacts of HPAI and the potential rate of recovery. Given this uncertainty, is it not possible to integrate the impacts of HPAI into this assessment in such a way as to undertake a reasonable and meaningful assessment. This approach was previously agreed with the HRA EWG. It is further recognised that evidence on the impact of HPAI will be available to support project level assessment, at which time the project level HRA will be able to incorporate updated colony numbers and initial understanding of rates of recovery into PVA.

- 6.5.7. The Crown Estate has considered the results presented in the addendum and has concluded no AEOSI.
- 6.5.8. Kittiwake and Lesser black-backed gull
- 6.5.9. In undertaking the Assessment, NIRAS have undertaken PVA where the impact on bird species is greater than 0.5% of baseline mortality, or greater than 5 birds<sup>7</sup>. Whilst it is recognised that there is inherent uncertainty in the application of PVA over long timescales, the outcome of the PVA suggests that there is potential for the impact of the Plan on Lesser black-backed gull and Kittiwake at the Skomer, Skokholm and Seas off Pembrokeshire SPA to lead to populations which are lower than they would be in the absence of the Plan. There are no species-specific conservation objectives currently in place for this site, although draft conservation objectives were prepared during its designation (JNCC, 2020). For Lesser black-backed gull, the draft conservation objective relevant here is that the breeding population size should be stable or increasing, aiming for 20,300 individuals. For Kittiwake, which is part of the wider breeding seabird assemblage feature, but not individually designated as a feature, the draft conservation objective is that breeding population should be stable or increasing based on a total population of 394,260.
- 6.5.10. In order to reduce this impact, and provide confidence in the conclusion of no AEOSI, it has been recommended that the rotor swept area with which birds in flight could interact is reduced. NIRAS (2024) recommend this is achieved by raising the minimum tip height of the turbines to 25m above mean sea level. This would reduce the rotor swept area that is below 80m (See Figure 2) to 2,786,850m<sup>2</sup> across the entire Plan. This mitigation reduces the impact of the plan by 18% for LBBG and by 25% for Kittiwake.
- 6.5.11. For Kittiwake, there are no species-specific conservation objectives or draft conservation objectives at this designated site, as the species forms part of the breeding bird assemblage feature, and, following the application of mitigation, the scale of impact is considered to be lower than would be distinguishable from natural variation in the breeding bird assemblage.
- 6.5.12. For Lesser black-backed gull, in the absence of the Plan the PVA predicts a long-term reduction in the population. Following the impacts associated with the Plan, alone and in-combination, this reduction is increased. However, the inherent uncertainty in PVA whereby it is recognised as valid in the consideration of trend but not specific numbers, over the 60 year life of the Plan is such that the scale of reduction is indistinguishable from potential natural variation over that time period. It

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<sup>7</sup> The Crown Estate has considered comments from the EWG received regarding this approach, noting that a number of EWG members would prefer to see all impacts progressed to PVA, and agrees with NIRAS that the defined thresholds are appropriately precautionary and set at a level that is appropriate for all populations regardless of other factors.

is considered that, should the factors leading to the current trend of population decline predicted by the PVA (in the absence of the plan) be addressed, the impact of the Plan would not prevent the Lesser black-backed gull feature at this designated site from achieving its conservation objectives.

- 6.5.13. For both species, it is further recognised that there is precaution within each stage of assessment, which is anticipated to lead to an over-estimate of the impact in this plan-level assessment. A number of the uncertainties that lead to this precaution within the assessment will be addressed through the collection of project-specific data, to inform more detailed consideration of the impact on these species during project-level HRA, which will include in-combination assessment of the potential impact across the Round 5 project sites.
- 6.5.14. At the plan level, it is therefore concluded that, on the basis of a precautionary assessment and following the implementation of the proposed mitigation, the impact of the Plan alone would be indistinguishable from natural variation, and that this would not make an appreciable contribution to any in-combination impacts. It can therefore be concluded that there is no AEOSI with respect to these species at the Skomer, Skokholm and Seas off Pembrokeshire SPA.
- 6.5.15. Although the above mitigation has been identified against Kittiwake and Lesser black-backed gull, it should be noted that the mitigation, secured through the Agreements for Lease, will reduce the potential level of impact from the Round 5 Plan across all bird species where there is potential for collision risk.

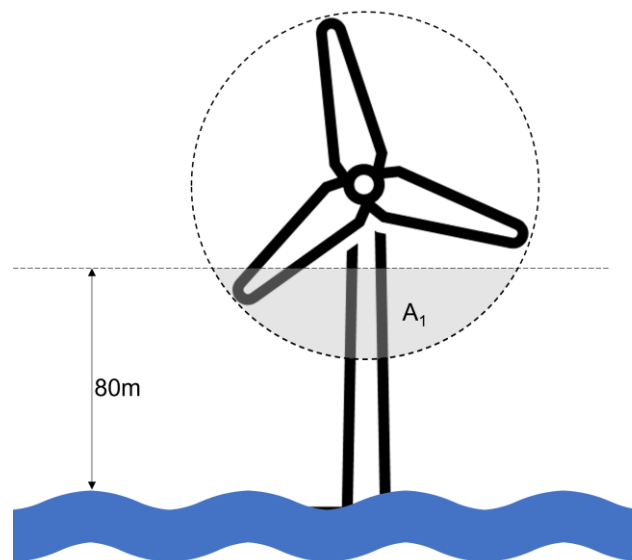


Figure 2 - representation of rotor swept area below 80m.

- 6.5.16. Underwater Noise (Harbour porpoise)
- 6.5.17. The SNCBs have commented on a number of issues relating to the assessment of impacts on marine mammals, including the use of Permanent Threshold Shift distances; the application of Management Units in determination of reference population; setting thresholds for significant effects; and the determination of appropriate density estimates. There is particular concern that

the application of the approach contained in the RIAA for projects brought forwards under the Plan at project level would not be considered by the SNCBs to be appropriate.

- 6.5.18. It is noted by the SNCBs that in a number of cases, the management of underwater noise can be more appropriately addressed during the assessment of projects rather than plans. During the consenting process, as a matter of law, any project brought forward under the plan will be required to undertake an impact assessment, including project level HRA if a LSE on a European Site cannot be excluded, on the basis of objective information, beyond reasonable scientific doubt. This assessment will be used by the consenting body, as the competent authority, to undertake a statutory HRA, the outcome of which will ensure that the integrity of any relevant European Sites will be safeguarded.
- 6.5.19. The comments raised by SNCBs and technical advice received from NIRAS have been carefully considered. It is noted that the comments raised do not impact the conclusions of this AA at plan level. This was agreed by JNCC and NRW, and mitigation has been identified to manage underwater noise impacts of projects brought forwards under this plan. This is considered sufficient for The Crown Estate to agree with the conclusions of the RIAA that there is no AEOSI on any European Site as a result of the Round 5 Plan (alone and in-combination with other plans or projects).

## 7. Mitigation Measures

### 7.1. Mitigation Introduction

- 7.1.1. The Crown Estate identified mitigation measures relevant to the Round 5 Plan to mitigate potential adverse effects on specific European Sites, and these are outlined in Section 6 of this report and detailed in Appendix B. In addition to mitigation measures secured at the plan level, mitigation may be identified in project level HRA to be considered and implemented (if required) at the project level, for any projects brought forwards under this plan where there is potential for an AEOSI on a European Site from a Round 5 project.
- 7.1.2. Where the potential for LSE cannot be discounted, a project level HRA will be required for individual projects arising from the Round 5 Plan as a matter of law during the consenting process. Individual projects must have due regard to the outcomes and recommendations of this AA in determining project specific mitigation measures that may be identified and implemented in the light of detailed project design and greater certainty about the magnitude of the effects that will be available at that stage.
- 7.1.3. This section outlines plan level mitigation identified for the PDAs and Export Infrastructure Region. This also includes consideration of potential impacts from co-located hydrogen projects brought forward under this plan.
- 7.1.4. Mitigation measures identified in Section 7.2 will be secured through inclusion in the Agreements for Lease.

### 7.2. Plan Level Mitigation

- 7.2.1. Export Infrastructure Routes
- 7.2.2. NIRAS (2023) undertook an Export Infrastructure Risk Assessment ("EIRA") for European Sites and features for which the Screening Report (NIRAS, 2022) identified a risk of LSE from an Export Infrastructure Region. Due to the considerable uncertainty associated with export infrastructure routes for the PDAs (not yet defined) the EIRA has taken a risk-based approach (considering both the vulnerability of features and the vulnerability of the Protected Sites) to identifying the potential impacts arising from the installation of offshore wind farm export cables or pipelines and their associated infrastructure. The Crown Estate concluded that it is not possible to undertake a reasonable and meaningful assessment of export infrastructure route impacts due to this uncertainty and considered that the risk-based approach was appropriate having regard to the fact that a detailed impact assessment of cable routes, including project-level HRA, will be required as a matter of law as part of the consenting process.
- 7.2.3. Feature Vulnerability was determined on the basis of the feature's risk ("Feature risk") to the pressures screened in and the nature of a feature's interaction ("Feature Interaction") with the Export Infrastructure Regions. For all features a risk score has been assigned to each pressure screened into the assessment (see Screening Report). Feature risks were scored as low, medium or high. The nature of a feature's interaction with the Export Infrastructure Regions was also scored as low, medium or high, based on the receptor specific criteria.

- 7.2.4. For SACs and SPAs Protected Site Vulnerability was determined on the basis of the condition of the Protected Sites ("Protected Site Condition") and any other impacting activities (e.g. from different marine industries) present at each Protected Site that have the potential to interact in-combination ("Protected Site In-combination").
- 7.2.5. The EIRA has been used to evaluate the overall risk of an AEOSI from the Export Infrastructure Region, alone and in-combination with other plans and projects. The assessment does not replace the information requirements of project level HRAs and does not attempt to pre-empt their conclusions.
- 7.2.6. The EIRA drafted by NIRAS (2023) is useful at the plan level, as it provides indicative forecasts of risk that can be used to identify where interventions are likely to be required at the project level. Outcomes of the EIRA include mitigation measures detailed below and apply to features which have been categorised in relation to the level of mitigation required (Appendix A).
- 7.2.7. The mitigation identified in Appendix A matches that within the EIRA, with one exception, following a request from NRW to increase the Sandbanks which are slightly covered by seawater all the time feature within Pembroke Marine SAC from Category 2 to Category 3, The Crown Estate has considered this and has implemented this change. This will ensure that there is a requirement to demonstrate the avoidance of irreparable harm to this feature associated with any projects brought forwards under the plan.
- 7.2.8. The mitigation measures identified will be secured through the Agreements for Lease and leaseholders will be required to demonstrate compliance with the mitigation measures in order to obtain an AfL for any transmission assets.
- 7.2.9. For Category 1 features, specific mitigation measures are not required. Developers will still be required to undertake their activities in line with industry best practice included, but not limited to, application of an environmental management plan, pollution control plan and spillage response plan, along with adherence to international conventions such as MARPOL and COLREGS.
- 7.2.10. For Category 2 features, specific details, outlined in Table 4 below, will be required at route selection and refinement stages and detailed within Project Level HRA. Specific mitigation measures can only be defined at the project level when information is made available. Examples of mitigation could include limitations on the use of specific infrastructure (e.g. cable/pipeline protection) or seasonal or spatial avoidance.

Table 4 - Additional feature specific information required for category 2 features at Project Level

Feature Type	Additional information required at Project Level
Habitat features	A cable/pipeline burial feasibility study ("BFS"), to establish expected feasibility of cable burial and inform the need for any cable/pipeline protection measures in areas of relevance to sensitive features, must be undertaken. The BFS should take into account the natural variability of seabed topography, the



	<p>requirement for any pre-sweeping or other seabed preparation, and evaluate the range of cable/pipeline burial methods available.</p> <p>Where additional cable/pipeline protection is required, a cable/pipeline risk assessment must be undertaken including the type of material(s) used; the quantity; the location; and the dimensions; depth, width &amp; length of cable sections requiring protection. Cable/pipeline protection requirement should be established in view of the specific impacts assessed for each feature within the project level HRA. To inform decommissioning considerations, an assessment of feasibility of cable/pipeline protection removal must also be provided.</p>
Fish	<p>Seasonality of fish migrations/movements.</p> <p>Programme of works, including avoidance of sensitive periods if required.</p> <p>Assessment of Unexploded Ordnance (UXO) risk (quantified) must be undertaken, including disposal method(s), noise abatement method(s), noise levels (including range to injury and disturbance thresholds), and any other necessary mitigation.</p> <p>BFS required, as above, to establish expected feasibility of cable burial and depth of burial.</p>
Birds	<p>Site investigations to determine the quality of habitat present at the export cable/pipeline landfall.</p> <p>Detailed information on the abundance and distribution of the relevant features, supported by survey data, undertaken following standard survey techniques, where necessary to support assessments associated with the landfall and the offshore cable/pipeline route; and</p> <p>Programme of works, informing the identification of potentially sensitive periods.</p>
Marine Mammals	<p>Detailed information on the abundance and distribution of the relevant features, supported by survey data, undertaken following standard survey techniques, where necessary to support assessments associated with the offshore cable/pipeline route; and</p>

	Programme of works, informing the identification of potentially sensitive periods and use of the area by marine mammals.
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- 7.2.11. For Category 3 features, a condition will need to be added to the AfL for the leased area to ensure affected developers must avoid irreparable damage to these high-risk features, or any damage where confidence in recovery from habitat damage is not high. Exact details will be agreed on a case by case basis, and are likely to include, but are not limited to spatial avoidance, temporal avoidance or use of technology and different installation methods to reduce the impacts, depending on the type of risk. Evidence must be submitted to The Crown Estate at the route selection and refinement stage, showing how this will be achieved, and should also be included within an affected developer's Project Level HRA.
- 7.2.12. Site Specific Mitigation
- 7.2.13. Site specific mitigation relates to the arrays and to co-located hydrogen production within the PDAs or T&D site boundaries. Mitigation cannot be secured at the plan level due to uncertainties about project design and location. To provide an adequate level of confidence that the Round 5 Plan will not cause AEOSI and to ensure that the potential effects of development brought forward under the Plan are minimised, the following site-specific mitigation will be applied.
- 7.2.14. Marine Mammals and Underwater Noise Related to Arrays.
- 7.2.15. It is not possible, at the plan level, to be certain on specifics such as whether anchors will require piling and, if so, piling type, location and timing. To ensure marine mammal features are protected from underwater noise, which could cause injury and/or disturbance, project level Site Integrity Plans (SIPs) will be required for all array areas within 26km of the Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC (to protect Harbour Porpoise. To facilitate coordination between project level SIPs for projects coming forwards under the Plan, The Crown Estate will draw together an overarching SIP for Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC.
- 7.2.16. Fish and Entrainment related to Co-located Hydrogen.
- 7.2.17. It is not possible, at the plan level, to be certain on specifics such as mesh size or success in relation to co-located hydrogen intake pipes. To ensure migratory fish features are protected from entrainment, assessment (and, if required, monitoring) of fish entrainment will be required at the project level. If this assessment (and monitoring) indicates risk to migratory fish species then appropriate mitigation, for example finer gauge screens and/or fish deterrents, may be required.
- 7.2.18. Collision Risk related to the Arrays.
- 7.2.19. In order to reduce the impact of the plan on Kittiwake and Lesser Black-Backed Gull at the Skomer, Skokholm and Seas off Pembrokeshire SPA, and provide confidence in the conclusion of no AEOSI, it has been recommended that the rotor swept area with which birds in flight could interact is reduced, and therefore that there is a cap, across the plan areas, below 80m of 2,786,850m<sup>2</sup>, which is equivalent to raising the minimum tip height of the turbines to 25m (NIRAS, 2024). The Crown Estate will implement this maximum cap through conditions within the AfLs for projects

brought forwards under the plan, breaking the total area into a maximum cap for each of the six projects.

### 7.3. General Mitigation

7.3.1. The site specific mitigation measures identified above, which will be required at the project level in relation to export cables, arrays and co-located hydrogen, are needed to ensure adequate protection for relevant qualifying features. In addition to these, a range of general mitigation measures are anticipated to be implemented at the project level to reduce potential impacts for interest features of European sites. These are set out below in Table 5.

Table 5 General mitigation measures, expected to be applied as best practice at project level.

Pressure	Receptors	Mitigation / Best Practice to be applied at Project Level
Collision (P4-P6)	Marine mammals	To minimise the risk of accidental collisions, a Vessel Traffic Management Plan should be developed to ensure that construction and operational vessels are not routed through areas known to support aggregations of marine mammals.
Physical Presence (P7)	Marine mammals, birds	A Vessel Traffic Management Plan should be developed to ensure that construction and operational vessels take all possible steps to minimise disturbances to Annex II marine mammal species and rafting seabird species.
Underwater Noise (P8)	Fish	To reduce the risk of injury, soft start piling protocols and the use of fish scaring charges for UXO disposal should be applied.
Underwater Noise (P8)	Marine mammals	To reduce the risk of injury (PTS-onset) in marine mammals, appropriate best practice will be applied to all relevant activity (expected to include percussive piling, UXO clearance and some seismic survey) through the development and application of a project level Marine Mammal Mitigation Plan and application of relevant guidance (e.g. JNCC 2010a; 2010b, Gov.UK 2022).
Toxic Contaminants (P10)	All features	To reduce the risk of the accidental release of toxic contaminants during construction a Construction Environmental Management Plan should be developed. To reduce the risk of the accidental release of toxic contaminants during operation an Operation and Maintenance (O&M) Environmental Management Plan should be developed.
EMF (P11)	Marine mammals	To ensure any EMF effects are negligible, cable burial should be undertaken in accordance with requirements of National Policy Statement EN-3.
Light (P12)	Birds	It is assumed lights on turbines will meet the minimum regulatory requirements as set out in the International Association of Marine Aids

Pressure	Receptors	Mitigation / Best Practice to be applied at Project Level
		to Navigation and Lighthouse (IALA) Recommendation O117 on 'The Marking of Offshore Wind Farms' for navigation lighting and by the Civil Aviation Authority in the Air Navigation Orders (CAP 393 and guidance in CAP 764). In keeping with the minimum legal requirements, this will minimise the risks of migrating birds becoming attracted to, or disorientated by, turbines at night or in poor weather. Meeting these requirements would mean the Plan is consistent with OSPAR guidance and NPS EN-3 with the design of projects aiming to minimise the emission of light whilst still complying with safety protocols and regulations in relation to aviation and shipping navigation.
Invasive Non-native Species (INNS) (P15)	Habitats	To reduce the risk of the spread of INNS, it is recommended that best practice (including preparation of a biosecurity plan) is implemented during the construction, operation and decommissioning of projects coming forward under this Plan.
Entanglement (P16)	Marine mammals, birds	Regular underwater visual inspections and monitoring of the condition of mooring lines (including drag detection and monitoring of lines) to be undertaken as part of an O&M Environmental Management Plan.

#### 7.4. Recommendations

7.4.1. In addition to the above general mitigation measures as captured in the RIAA (NIRAS 2023), and following consultation with NRW (see Section Error! Reference source not found.), the following recommendations are included for consideration of Storm Petrel:

- Projects coming forward under the Plan must endeavour to secure reliable information on the distribution, abundance and flights heights of this species during pre-construction surveys. Any pre-construction surveys coordinated by The Crown Estate will explore opportunities to obtain reliable information on the distribution, abundance and flight heights of Storm-Petrels. This may entail appropriate methodological changes to current survey practices to ensure the species is reliably detected.
- Project-level assessments will, in any case, be required to consider all available information in relation to the sensitivity of Storm-Petrel to displacement effects, including the Vulnerability score of Wade et al. (2016) together with any additional insights produced by studies that may result from Deakin et al. (2022) gap analysis.

## 8. Conclusions

- 8.1.1. The Crown Estate has undertaken an AA of the effects of the proposed Round 5 Plan in respect of those European Sites and their qualifying features screened into the assessment (as detailed in the Screening Report (NIRAS, 2023a), and in consideration of their conservation objectives and the condition of the features. The Crown Estate has considered the information and analysis provided by NIRAS in the Principles Document (NIRAS, 2022), the Screening Report (NIRAS, 2023a), the RIAA (NIRAS, 2023b) and Addendum (NIRAS, 2024), as well as the advice from Natural England, NRW Technical Advisory, JNCC and other stakeholders, including but not limited to The Wildlife Trusts and RSPB, provided over the course of the development of the HRA, to inform this Record of AA.
- 8.1.2. The Crown Estate considered the potential for AEOSI in respect of European Sites that may be affected by the Plan and, with the adoption of the mitigation measures as identified in Section 7.2 of this report and in the knowledge that there is sufficient scope for project specific mitigation measures and best practice to be applied at the project level by developers within the context of project level consenting, concludes that AEOSI can be excluded.
- 8.1.3. The assessment has identified a number of areas where it has not been possible to conduct a reasonable and meaningful assessment due to the lack of key project specific information. As a matter of law, each project brought forwards under the plan will be required to undertake an impact assessment during the consenting process, including project level HRA, where LSE on a European Site cannot be excluded on the basis of objective information, beyond reasonable scientific doubt. These assessments will take account of the detailed project design, informed by site-specific information, the distribution of the habitat features and species, and their sensitivity to the proposed works. If necessary, project level HRA may also involve detailed site surveys and modelling work. The integrity of the European Site(s) will be safeguarded because no project will be awarded consent where it is considered that it will lead to an AEOSI in respect of a European Site following the application of mitigation measures unless a derogation case is sought on the basis that there are no alternative solutions, the project should proceed for Imperative Reasons of Overriding Public Interest (IROPI) and necessary compensation is secured.
- 8.1.4. The views of stakeholders on the uncertainties of the Round 5 Plan, and its effects, as well as specific matters to be addressed by developers at project level will be provided to successful bidders following the conclusion of the commercial tender and successful bidders will have regard to these in the development of Round 5 Plan Projects.
- 8.1.5. As such, The Crown Estate concludes that there will be no AEOSI in respect of any European Site or Offshore European Sites (based on the ability to achieve its conservation objectives) as a result of the Round 5 Plan, both alone and in combination with other reasonably foreseeable plans and projects.
- 8.1.6. The Crown Estate has also undertaken a Marine Conservation Zone assessment considering the features of sites designated under Part 5 of The Marine and Coastal Access Act 2008 separate to

this HRA and has determined that there is no significant risk of hindering the conservation objectives as a result of the Round 5 Plan.

## 9. References

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## Appendix A - EIRA Mitigation

See Excel file – “43528-TCE-DOC-007 Appendix A - EIRA Mitigation.xlsx”

## Appendix B: Site/feature/pathway combinations for all sites screened in to AA

### Afon Eden - Cors Goch Trawsfynydd SAC

Features screened into AA:	Atlantic salmon (primary) Freshwater pearl mussel
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

### Afon Gwyrfai a Llyn Cwellyn SAC

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.

Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.
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Afon Teifi/ River Teifi SAC

Features screened into AA:	Atlantic salmon (primary) River lamprey (primary) Sea lamprey
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

Afon Tywi/ River Tywi SAC

Features screened into AA:	Allis shad River lamprey Sea lamprey Twaite shad (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### Afonydd Cleddau / Cleddau Rivers SAC

Features screened into AA:	River lamprey (primary) Sea lamprey
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### Ailsa Craig SPA

Features screened into AA:	Gannet (Breeding) Gannet (Non-Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence

	<p>P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 temperature P14 Suspended Sediments P16 Entanglement</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA regarding no AEOSI for this site.</p> <p>Additional consideration of Collision Risk (Gannet) is presented in Section 6.5.1</p>

Alderney west coast & the Burhou Islands Ramsar

Features screened into AA:	Gannet (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA regarding no AEOSI for this site.</p> <p>Additional consideration of Collision Risk (Gannet) is presented in Section 6.5.1</p>

Aran Island (Donegal) Cliffs SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Arcipelago delle Egadi - area marina e Terrestre

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Arcipelago delle Eolie - area marina e Terrestre

Features screened into AA:	Manx shearwater (Breeding)
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Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Ardmore Head SAC

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1

### Arxipèlag de Cabrera

Features screened into AA:	Balearic Shearwater
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

### Aughris Head SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

### Baie de Morlaix



Features screened into AA:	Manx shearwater (Breeding) Puffin (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of storm petrel is presented in Section Error! Reference source not found.

#### Ballyhoorisky Point to Fanad Head SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a

Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Barley Cove to Ballyrisode Point SAC

Features screened into AA:	Fulmar (Breeding) Lesser black-backed gull (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Lesser black-backed gull) is presented in Section 6.5.1

Beara Peninsula SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature

	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Bills Rocks SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Blasket Islands SAC

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding) Leach's Petrel (Breeding) Manx shearwater (Breeding) Puffin (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise

	<p>P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of storm petrel is presented in Section Error! Reference source not found.</p> <p>Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1</p>

Blasket Islands SPA

Features screened into AA:	<p>Fulmar (Breeding) Kittiwake (Breeding) Leach's Petrel (Breeding) Manx shearwater (Breeding) Puffin (Breeding) Storm petrel (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of storm petrel is presented in Section Error! Reference source not found.</p> <p>Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1</p>

#### Bray Head SAC

Features screened into AA:	<p>Fulmar (Breeding)</p> <p>Kittiwake (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1</p>

#### Bristol Channel Approaches / Dynesfeydd Môr Hafren

Features screened into AA:	Harbour porpoise (primary)
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Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P8 Underwater Noise
Mitigation	For array areas within 26 km a project level SIP is required to ensure disturbance within acceptable limits.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level.  See more detailed discussion in section 6.5.16

Buchan Ness to Collieston Coast

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a

Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.
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Bunduff Lough and Machair/Trawalua/Mullaghmore SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Calf of Eday

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Camaret

Features screened into AA:	Fulmar (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of storm petrel is presented in section Error! Reference source not found..

Cap d'Erquy-Cap Fréhel

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a



Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1

#### Cap de cala Figuera

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Cap Sizun

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light

	P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of storm petrel is presented in section Error! Reference source not found..  Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1

#### Cape Wrath

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Cardigan Bay/ Bae Ceredigion

Features screened into AA:	Bottlenose dolphin (primary) Grey seal River lamprey Sea lamprey
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Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

Carmarthen Bay and Estuaries/ Bae Caerfyrddin ac Aberoedd

Features screened into AA:	Allis shad River lamprey Sea lamprey Twaite shad (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.

Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.
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Carrowmore Point to Spanish Point and Islands SAC

Features screened into AA:	Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of storm petrel is presented in section Error! Reference source not found..

Cladagh (Swanlinbar) River

Features screened into AA:	Freshwater pearl mussel
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species

	appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### Clare Island Cliffs SAC

Features screened into AA:	Fulmar (Breeding) Gannet (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of Collision Risk (Gannet) is presented in Section 6.5.1

#### Clare Island SPA

Features screened into AA:	Gannet (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise

	<p>P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of Collision Risk (Gannet) is presented in Section 6.5.1</p>

#### Cliffs of Moher SPA

Features screened into AA:	<p>Fulmar (Breeding) Kittiwake (Breeding) Puffin (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of Collision Risk (Kittiwake) is presented in Section 6.5.1</p>

Copeland Islands

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Copinsay

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Coquet Island

Features screened into AA:	Fulmar (Breeding)
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Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Costa e Caldeirão - Ilha do Corvo

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Costa Nordeste - Ilha das Flores

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage



	<p>P7 Physical Presence  P8 Underwater Noise  P9 Above Water Noise  P10 Toxic Contaminants  P12 Light  P13 Temperature  P14 Suspended Sediments  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Cote de Granit Rose-Sept Iles

Features screened into AA:	<p>Fulmar (Breeding)  Gannet (Breeding)  Kittiwake (Breeding)  Lesser black-backed gull (Breeding)  Manx shearwater (Breeding)  Puffin (Breeding)  Storm petrel (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss  P2 Direct Physical Damage  P3 Indirect Physical Damage  P4 to P6 Collision  P7 Physical Presence  P8 Underwater Noise  P9 Above Water Noise  P10 Toxic Contaminants  P12 Light  P13 Temperature  P14 Suspended Sediments  P16 Entanglement  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

	<p>Additional consideration of Collision Risk (Gannet, Kittiwake and Lesser black-backed gull) is presented in Section 6.5.1</p> <p>Additional consideration of storm petrel is presented in Section Error! Reference source not found.</p>
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#### Cruagh Island SPA

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

Features screened into AA:	Fulmer (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P17 Salinity</p>

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Dartmoor

Features screened into AA:	Atlantic Salmon
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### De s'Albufera a la Mola

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Deenish Island and Scariff Island SPA

Features screened into AA:	Fulmer (Breeding) Lesser black-backed gull (Breeding) Manx shearwater (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of Collision Risk (Lesser black-backed gull) is presented in Section 6.5.1  Additional consideration of storm petrel is presented in Section Error! Reference source not found.

Dels Alocs a Fornells

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence

	<p>P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### Dingle Peninsula SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Duvillaun Islands SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise</p>

	P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Duvillaun Islands SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### East Caithness Cliffs

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature

	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Erris Head SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Es Vedrà - Es Vedranell

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Espacio marino de Formentera y del sur de Ibiza

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Espacio marino del levante de Ibiza

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity



Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Espacio marino del norte y oeste de Menorca

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P16 Entanglement</p> <p>P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Espacio marino del poniente de Mallorca

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P16 Entanglement</p> <p>P17 Salinity</p>

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Espacio marino del poniente y norte de Ibiza

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P16 Entanglement</p> <p>P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Espacio marino del sur de Mallorca y Cabrera

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P16 Entanglement</p> <p>P17 Salinity</p>

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### Espacio marino del sureste de Menorca

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### Fair Isle

Features screened into AA:	Fulmar (Breeding) Gannet (Non-breeding) Great skua (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments

	P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet) is presented in Section 6.5.1

#### Fetlar

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Flamborough and Filey Coast

Features screened into AA:	Gannet (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants

	<p>P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Gannet) is presented in Section 6.5.1</p>

#### Flannan Isles

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Foula

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise</p>

	P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Fowlsheugh

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Galley Head to Duneen Point SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature

	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Glenamoy Bog Complex SAC

Features screened into AA:	Fulmer (Breeding) Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments

	P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Grassholm

Features screened into AA:	Gannet (Breeding) Gannet (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet) is presented in Section 6.5.1

#### Haig Fras SAC

Features screened into AA:	Reefs
Pressures where no AEOSI is concluded:	P3 Indirect Physical Damage P10 Toxic Contaminants P13 Temperature P14 Suspended Sediments P15 Invasive Species P17 Salinity



Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Handa

Features screened into AA:	Fulmar (Breeding) Great skua (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Great skua) is presented in Section 6.5.1

#### Helvick Head SAC

Features screened into AA:	Common Guillemot (Breeding) Fulmar (Breeding) Kittiwake (Breeding) Razorbill (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise

	<p>P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1</p>

#### Helvick Head to Ballyquin SPA

Features screened into AA:	<p>Common Guillemot (Breeding) Fulmar (Breeding) Herring gull (Breeding) Kittiwake (Breeding) Razorbill (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1</p>

Hermaness, Saxa Vord and Valla Field

Features screened into AA:	Fulmar (Breeding) Gannet (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

High Island, Inishshark and Davillaun SPA

Features screened into AA:	Fulmar (Breeding) Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a

Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Hook Head SAC

Features screened into AA:	Common Guillemot (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Horn Head and Rinclevan SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Horn Head to Fanad Head SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Howth Head Coast SPA

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

	Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1
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Howth Head SAC

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1

Hoy

Features screened into AA:	Fulmar (Breeding) Great Skua (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature

	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Great skua) is presented in Section 6.5.1

#### Iles Houat-Hoedic

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Illa de l'Aire

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light

	P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### Illauonearaun SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Îlot du Trévors

Features screened into AA:	Lesser black-backed gull (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature



	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of Collision Risk (Lesser black-backed gull) is presented in Section 6.5.1

#### Inishbofin and Inishshark SAC

Features screened into AA:	Fulmar (Breeding) Manx shearwater (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of storm petrel is presented in Section Error! Reference source not found.

#### Inishkea Islands SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence

	<p>P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Inishmore Island SAC

Features screened into AA:	<p>Fulmar (Breeding) Kittiwake (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1</p>

#### Inishmore SPA

Features screened into AA:	<p>Fulmar (Breeding) Kittiwake (Breeding)</p>
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Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1

#### Inishmurray SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Inishtrahull SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Inishtrahull SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Ireland's Eye SAC

Features screened into AA:	Fulmar (Breeding) Gannet (Breeding) Kittiwake (Breeding)
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	Puffin (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet and Kittiwake) is presented in Section 6.5.1

Ireland's Eye SPA

Features screened into AA:	Fulmar (Breeding) Gannet (Breeding) Kittiwake (Breeding) Puffin (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet and Kittiwake) is presented in Section 6.5.1

Isles of Scilly

Features screened into AA:	Common Guillemot (Breeding) Common tern (Breeding) Cormorant (Breeding) Fulmar (Breeding) Great black-backed gull (Breeding) Great black-backed gull (non-breeding) Herring gull (Breeding) Kittiwake (Breeding) Lesser black-backed gull (Breeding) Manx shearwater (Breeding) Puffin (Breeding) Razorbill (Breeding) Shag (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a

Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Great black-backed gull, Herring gull, Lesser black-backed gull, Kittiwake) is presented in Section 6.5.1</p> <p>Additional consideration of Storm petrel is presented in Section Error! Reference source not found.</p>
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#### Isles of Scilly Complex SAC

Features screened into AA:	Grey seal
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P4 to P6 Collision</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p> <p>P10 Toxic Contaminants</p> <p>P12 Light</p> <p>P13 Temperature</p> <p>P14 Suspended Sediments</p> <p>P16 Entanglement</p> <p>P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Isola di Favignana

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain</p> <p>P2 Direct Physical Damage</p> <p>P3 Indirect Physical Damage</p> <p>P7 Physical Presence</p> <p>P8 Underwater Noise</p> <p>P9 Above Water Noise</p>

	P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Isola di Levanzo

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Isola di Marettimo

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants



	P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Iveragh Peninsula SPA

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1

#### Keel Machair/Menaun Cliffs SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence

	<p>P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Kerry Head SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### La Mola i s'Albufera de Fornells

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants</p>

	P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### La Trapa

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### Lambay Island SAC

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding) Lesser black-backed gull (Breeding) Manx shearwater (Breeding) Puffin (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision

	<p>P7 Physical Presence  P8 Underwater Noise  P9 Above Water Noise  P10 Toxic Contaminants  P12 Light  P13 Temperature  P14 Suspended Sediments  P16 Entanglement  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Lesser black-backed gull and Kittiwake) is presented in Section 6.5.1</p>

Lambay Island SPA

Features screened into AA:	<p>Fulmar (Breeding)  Kittiwake (Breeding)  Lesser black-backed gull (Breeding)  Manx shearwater (Breeding)  Puffin (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss  P2 Direct Physical Damage  P3 Indirect Physical Damage  P4 to P6 Collision  P7 Physical Presence  P8 Underwater Noise  P9 Above Water Noise  P10 Toxic Contaminants  P12 Light  P13 Temperature  P14 Suspended Sediments  P16 Entanglement  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a

Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Lesser black-backed gull, Kittiwake) is presented in Section 6.5.1
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Littoral seino-marin

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Loop Head SPA

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1

#### Lough Melvin

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### Lower River Shannon SAC

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding) Lesser black-backed gull (Breeding) Razorbill (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise

	<p>P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Lesser black-backed gull and Kittiwake) is presented in Section 6.5.1</p>

Lundy

Features screened into AA:	Grey seal
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Maciço Montanhoso Central da Ilha da Madeira

Features screened into AA:	Manx shearwater (Breeding)
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Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Maciço Montanhoso Oriental da Ilha da Madeira

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Magharee Islands SPA

Features screened into AA:	Fulmar (Breeding) Lesser black-backed gull
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Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Mingulay and Berneray

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Mount Brandon SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage

	<p>P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

North Anglesey Marine / Gogledd Môn Forol

Features screened into AA:	Harbour Porpoise
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

North Caithness Cliffs

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence</p>

	P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### North Inishowen Coast SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### North Rona and Sula Sgeir

Features screened into AA:	Fulmar (Breeding) Gannet (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise

	P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Noss

Features screened into AA:	Fulmar (Breeding) Gannet (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Old Head of Kinsale SPA

Features screened into AA:	Common Guillemot (Breeding) Fulmar (Breeding) Kittiwake (Breeding) Razorbill (Breeding)
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Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss                  P2 Direct Physical Damage                  P3 Indirect Physical Damage                  P4 to P6 Collision                  P7 Physical Presence                  P8 Underwater Noise                  P9 Above Water Noise                  P10 Toxic Contaminants                  P12 Light                  P13 Temperature                  P14 Suspended Sediments                  P16 Entanglement                  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1</p>

Ouessant-Molène

Features screened into AA:	<p>Fulmar (Breeding)                  Lesser black-backed gull (Breeding)                  Manx shearwater (Breeding)                  Puffin (Breeding)                  Storm petrel (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss                  P2 Direct Physical Damage                  P3 Indirect Physical Damage                  P4 to P6 Collision                  P7 Physical Presence                  P8 Underwater Noise                  P9 Above Water Noise                  P10 Toxic Contaminants                  P12 Light                  P13 Temperature                  P14 Suspended Sediments                  P16 Entanglement</p>

	P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Lesser black-backed gull) is presented in Section 6.5.1  Additional consideration of Storm petrel is presented in Section Error! Reference source not found.

#### Outer Aards Ramsar Site

Features screened into AA:	Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Owenkillew River

Features screened into AA:	Atlantic salmon Freshwater pearl mussel (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF

	P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

Pembrokeshire Marine/ Sir Benfro Forol

Features screened into AA:	Allis shad Gery seal (primary) River lamprey Sea lamprey Twaite shad
Pressures where no AEOSI is concluded:	P1 Habitat loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.

Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.
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Pen Llyn a`r Sarnau/ Lleyn Peninsula and the Sarnau

Features screened into AA:	Gery seal
Pressures where no AEOSI is concluded:	P1 Habitat loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

Plymouth Sound and Estuaries

Features screened into AA:	Allis shad
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision



Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

Puffin Island SPA

Features screened into AA:	Fulmar (Breeding) Gannet (Non-breeding) Kittiwake (Breeding) Manx shearwater (Breeding) Puffin (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1 Additional consideration of storm petrel is presented in Section Error! Reference source not found.

Rathlin Island

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Rathlin O'Birne Island SAC

Features screened into AA:	Leach's Petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

River Avon

Features screened into AA:	Atlantic salmon
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Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Bladnoch

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Camel

Features screened into AA:	Atlantic salmon
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

River Clun

Features screened into AA:	Freshwater pearl mussel
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

River Derwent and Bassenthwaite Lake

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

River Eden

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

River Ehen

Features screened into AA:	Atlantic salmon Freshwater pearl mussel (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.

Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.
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#### River Faughan and Tributaries

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Foyle and Tributaries

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species

	appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Itchen

Features screened into AA:	Atlantic salmon
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Kent

Features screened into AA:	Freshwater pearl mussel
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision



Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Roe and Tributaries

Features screened into AA:	Atlantic salmon (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Usk/ Afon Wysg

Features screened into AA:	Allis shad Atlantic salmon (primary) Twaite shad (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement

	P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### River Wye/ Afon Gwy

Features screened into AA:	Allis shad Atlantic salmon (primary) Twaite shad (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### Roaringwater Bay and Islands SAC

Features screened into AA:	Fulmar (Breeding) Lesser black-backed gull (Breeding) Razorbill (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage

	<p>P3 Indirect Physical Damage  P4 to P6 Collision  P7 Physical Presence  P8 Underwater Noise  P9 Above Water Noise  P10 Toxic Contaminants  P12 Light  P13 Temperature  P14 Suspended Sediments  P16 Entanglement  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Lesser black-backed gull) is presented in Section 6.5.1</p>

Rockabill SPA

Features screened into AA:	Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss  P2 Direct Physical Damage  P3 Indirect Physical Damage  P4 to P6 Collision  P7 Physical Presence  P8 Underwater Noise  P9 Above Water Noise  P10 Toxic Contaminants  P12 Light  P13 Temperature  P14 Suspended Sediments  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

	Further consideration of collision risk (Kittiwake) is presented in Section 6.5.1
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Ronas Hill - North Roe and Tingon

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Rousay

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Rum

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Sa Dragonera

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

Saltee Islands SAC

Features screened into AA:	Common Guillemot (Breeding) Fulmar (Breeding) Gannet (Breeding) Grey seal Kittiwake (Breeding) Lesser black-backed gull (Breeding) Manx shearwater (Breeding) Puffin (Breeding) Razorbill (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet, Kittiwake and Lesser black-backed gull) is presented in Section 6.5.1

Saltee Islands SPA

Features screened into AA:	Common Guillemot (Breeding) Fulmar (Breeding) Gannet (Breeding) Grey seal Kittiwake (Breeding) Lesser black-backed gull (Breeding) Manx shearwater (Breeding)
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	Puffin (Breeding) Razorbill (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet, Kittiwake and Lesser black-backed gull) is presented in Section 6.5.1

#### Seevogelschutzgebiet Helgoland

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Ses Salines d'Eivissa i Formentera

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	<ul style="list-style-type: none"> <li>P1 Habitat Loss</li> <li>P2 Direct Physical Damage</li> <li>P3 Indirect Physical Damage</li> <li>P7 Physical Presence</li> <li>P8 Underwater Noise</li> <li>P9 Above Water Noise</li> <li>P10 Toxic Contaminants</li> <li>P12 Light</li> <li>P13 Temperature</li> <li>P14 Suspended Sediments</li> <li>P16 Entanglement</li> <li>P17 Salinity</li> </ul>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA

#### Sessiagh Lough SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<ul style="list-style-type: none"> <li>P1 Habitat Loss Gain</li> <li>P2 Direct Physical Damage</li> <li>P3 Indirect Physical Damage</li> <li>P7 Physical Presence</li> <li>P8 Underwater Noise</li> <li>P9 Above Water Noise</li> <li>P10 Toxic Contaminants</li> <li>P12 Light</li> <li>P13 Temperature</li> <li>P14 Suspended Sediments</li> <li>P16 Entanglement</li> <li>P17 Salinity</li> </ul>



Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Severn Estuary

Features screened into AA:	Lesser black-backed gull (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Lesser black-backed gull) is presented in Section 6.5.1

#### Severn Estuary/ Mor Hafren

Features screened into AA:	Twaite shad (primary)
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### Sheep's Head SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Sheep's Head to Toe Head SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature

	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Shiant Isles

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Skelligs SPA

Features screened into AA:	Fulmar (Breeding) Gannet (Breeding) Gannet (Non-breeding) Kittiwake (Breeding) Manx shearwater (Breeding) Puffin (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise

	<p>P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Gannet and Kittiwake) is presented in Section 6.5.1</p> <p>Additional consideration of Storm petrel is presented in Section Error! Reference source not found.</p>

#### Skerries Islands SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Skomer, Skokholm and the Seas off Pembrokeshire

Features screened into AA:	<p>Common Guillemot (Breeding) Kittiwake (Breeding)</p>
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	<p>Lesser black-backed gull (Breeding)                  Manx shearwater (Breeding)                  Puffin (Breeding)                  Razorbill (Breeding)                  Storm petrel (Breeding)</p>
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss                  P2 Direct Physical Damage                  P3 Indirect Physical Damage                  P4 to P6 Collision                  P7 Physical Presence                  P8 Underwater Noise                  P9 Above Water Noise                  P10 Toxic Contaminants                  P12 Light                  P13 Temperature                  P14 Suspended Sediments                  P16 Entanglement                  P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Lesser black-backed gull and Kittiwake) is presented in Section 6.5.1, with specific discussion of Skokholm, Skomer and Seas off Pembrokeshire SPA in 6.5.8.</p> <p>Additional consideration of Storm petrel is presented in Section Error! Reference source not found.</p>

Slieve League SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain                  P2 Direct Physical Damage                  P3 Indirect Physical Damage                  P7 Physical Presence                  P8 Underwater Noise                  P9 Above Water Noise</p>

	P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Slieve Toey/Tormore Island/Loughros Beg Bay SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Slyne Head Islands SAC

Features screened into AA:	Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments

	P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of Storm petrel is presented in Section Error! Reference source not found.

#### St Kilda

Features screened into AA:	Fulmar (Breeding) Gannet (Non-breeding) Great skua (Breeding) Manx shearwater (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet and Great skua) is presented in Section 6.5.1

#### Stags of Broad Haven SPA

Features screened into AA:	Fulmar (Breeding)
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	Leach's Petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Sule Skerry and Sule Stack

Features screened into AA:	Gannet (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet) is presented in Section 6.5.1



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Sumburgh Head

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Tagomago

Features screened into AA:	Balearic Shearwater (Non-breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

The Bull and The Cow Rocks SPA

Features screened into AA:	Fulmar (Breeding) Gannet (Breeding) Gannet (Non-breeding) Kittiwake (Breeding) Puffin (Breeding) Storm petrel (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Gannet and Kittiwake) is presented in Section 6.5.1  Additional consideration of Storm petrel is presented in Section Error! Reference source not found.

Three Castle Head to Mizen Head SAC

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage

	<p>P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	<p>TCE agrees with NIRAS's conclusions in the RIAA.</p> <p>Additional consideration of collision risk (Kittiwake) is presented in Section 6.5.1</p>

#### Tory Island Coast SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity</p>
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Tory Island SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	<p>P1 Habitat Loss Gain P2 Direct Physical Damage</p>

	P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Tranarossan and Melmore Lough SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### Tregor Goëlo

Features screened into AA:	Fulmar (Breeding) Lesser black-backed gull
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence

	P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Troup, Pennan and Lion's Heads

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Upper Ballinderry River

Features screened into AA:	Freshwater pearl mussels
Pressures where no AEOSI is concluded:	P7 Physical Presence P8 Underwater Noise P10 Toxic Contaminants P11 EMF P13 Temperature P14 Suspended Sediments P17 Salinity

Pressures where no AEOSI (with mitigation) is concluded:	P4 to P6 Collision
Mitigation	Monitoring of fish entrainment is undertaken at project level for co-located hydrogen and if this indicates any risk to migratory species appropriate mitigation, such as finer gauge screens and/or fish deterrents should be used.
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA and agrees that the proposed mitigation will result in no AEOSI if applied at the project level to co-located hydrogen projects.

#### West Donegal Coast SPA

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

#### West of Ardara/Maas Road SAC

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature

	P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

West Wales Marine / Gorllewin Cymru Forol

Features screened into AA:	Harbour porpoise (primary)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P16 Entanglement P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

West Westray

Features screened into AA:	Fulmar (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss Gain P2 Direct Physical Damage P3 Indirect Physical Damage P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments

	P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.

Wicklow Head SPA

Features screened into AA:	Fulmar (Breeding) Kittiwake (Breeding) Razorbill (Breeding)
Pressures where no AEOSI is concluded:	P1 Habitat Loss P2 Direct Physical Damage P3 Indirect Physical Damage P4 to P6 Collision P7 Physical Presence P8 Underwater Noise P9 Above Water Noise P10 Toxic Contaminants P12 Light P13 Temperature P14 Suspended Sediments P17 Salinity
Pressures where no AEOSI (with mitigation) is concluded:	n/a
Mitigation	n/a
Assessment Conclusion	TCE agrees with NIRAS's conclusions in the RIAA.  Additional consideration of collision risk (Kittiwake) is presented in Section 6.5.1



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