THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

Outer Dowsing Offshore Wind Farm

Appendix C7 to the Natural England Deadline 6 Submission

Natural England's Advice on Benthic Ecology

For:

The construction and operation of Outer Dowsing Offshore Wind Farm located approximately 54 km from the Lincolnshire Coast in the Southern North Sea.

Planning Inspectorate Reference EN010130

4th April 2025

Appendix C7 - Natural England's Advice Benthic Ecology at Deadline 6

In formulating these comments, the following documents have been considered:

- [REP5-020] 6.1.9 Chapter 9 Benthic and Intertidal Ecology V2 Tracked
- [REP5-146] 22.11 *Sabellaria spinulosa* reef supporting habitat Technical Note V2 Tracked
- [REP5-124] 8.13 Schedule of Mitigation V6 Tracked

1) Introduction

This Appendix draws together Natural England latest advice on benthic ecology technical assessments and associated mitigation and monitoring incorporated within other plans and documents submitted at Deadline 5.

2) 6.1.9 Chapter 9 Benthic and Intertidal Ecology V2 Tracked [REP5-020]

Table 9.11: Embedded mitigation relating to benthic ecology

1. Natural England welcomes the proposal to microsite around potential Annex I Reef habitat. However, the mitigation commitment continues to include caveats of *'where possible'* which gives cause for concern because there remains a risk that Annex I Reef will be adversely impacted. To resolve this issue, we advise that a stronger commitment to avoid impacting Annex I habitats is required. Where avoidance of Annex I habitats during construction is not practicable, outside of IDRBNR SAC and within 12nm under NERC, 2006 Section 41 Priority habitat then there should be a requirement to demonstrate how impacts have been minimised. Should Annex I Reef within IDRBNR SAC be identified in pre-construction surveys and cannot be microsited for, this will be an AEoI to IDRBNR SAC and require compensation in line with our final advice as set out within this Appendix.

2. Natural England notes that the following mitigation has been removed from Table 9.11: "*The installation of the offshore export cables at landfall will be undertaken by HDD. The exit pits will designed to be a target 500m offshore of the Mean Low Water Springs (MLWS) mark."*

   Natural England requires clarification as to why this mitigation has been removed from Table 9.11. We note that the chapter continues to outline the commitment for the HDD

exit pit 500m offshore and suggest this is reinstated in line with the commitment at Point 39 of the Schedule of Mitigation [REP5-124]. Otherwise, Natural England queries what the implications will be for both benthic receptors, and marine and coastal processes, in respect of residual impacts. Please see para. 4. Below in relation to the Applicant's reference to 500m as this figure is not agreed and therefore may not align with our advice, Until further clarification and/or commitments are provided by the Applicant we are unable to provide further advice.

Table 9.12: Additional mitigation relating to benthic and intertidal ecology

3. Natural England welcomes the commitments to avoid Annex I *Sabellaria spinulosa* Reef within Inner Dowsing Race Bank and North Ridge (IDRBNR) Special Area of Conservation (SAC), and any biogenic reef outside of the SAC, when relocating boulders.

4. Natural England welcomes the Applicant's commitment to use removable concrete mattresses in the nearshore. However, as advised at Deadline 4a in Appendix D1 [REP4a-136] further clarification is needed on the anticipated maximum length and height of cable protection within the nearshore, location relative to Mean Low Water Springs (MLWS), and water depth. In addition, we advise that further evidence is presented by the Applicant that concrete mattresses will not be moved in this dynamic environment and/or by fishing activities. We also require clarification of the nearshore definition *"(defined as the inner depth of closure out to 7.1m water depth)*".

5. Natural England notes that in relation to HDD exits pits "*ecological based solutions for scour protection will be prioritised, where practicable."* Natural England advises that until further detail, security and confidence in this measure is provided, this measure can't currently be relied upon. Currently, these are being trialled at two locations outside of designated sites, but there is particular concern about the likelihood of them moving. More information will be available in the next couple of years, when monitoring reports become available. Please see our advice in Section 3 below regarding 'ecological based solutions'.

3) 'Ecological based solutions' for scour protection

6. At Deadline 4a, Natural England requested further clarification from the Applicant following the introduction of the benthic mitigation measure for *'Ecological based solutions for scour protection will be prioritised, where practicable'* in the Outline Scour

Protection and Cable Protection Management Plan [REP4-079] and the Schedule of Mitigation [REP4-074]. This has also been included in the updated 6.1.9 Chapter 9 Benthic and Intertidal Ecology V2 Tracked [REP5-020], however no further detail has been provided nor in the Schedule of Mitigation update at Deadline 5 [REP5-124].

7. Through direct engagement, the Applicant has advised Natural England *"The Applicant notes this reference and has previously discussed the use of novel engineering solutions such as reef cubes or scour protection that promote ecological biodiversity"*.

8. In response, Natural England has advised the Applicant directly via our discretionary advice service on 25 March 2025 and 31 March on our views on their use within designated sites. Our advice is included in Annex I for transparency. However, we note that the Applicant intends to clarify their position at Deadline 6 that this commitment is not a mitigation measure and one from an engineering position outside of designated sites. If this is confirmed including not using them at the ORCP locations given the proximity to IDRBNR SAC, then Natural England raises no further risk to the designated site features.

4) 22.11 *Sabellaria spinulosa* reef supporting habitat Technical Note V2 Tracked [REP5-146]

9. Since Deadline 5 Natural England has engaged directly with the Applicant to provide advice to their updated *Sabellaria spinulosa* reef supporting habitat Technical Note [REP5-146]. This is in regard to agreeing the spatial extent of Annex I *Sabellaria spinulosa* reef supporting habitat within the export cable corridor, which overlaps with IDRBNR SAC. The Applicant has then provided a worst-case scenario for the total area of cable protection within supporting habitat for Annex I reef. Natural England advises that compensation for Annex I reef will be required for these impacts See further advice in Section 5.

10. Natural England provided advice on the assessment directly to the Applicant on 25 March 2025 through our discretionary advice service (DAS). This advice is included in Annex 1 for transparency.

    Natural England welcome the updates to the areas identified as suitable supporting habitat for Annex I *Sabellaria spinulosa* Reef. And we agree with the final area

delineated as supporting habitat for Annex I *Sabellaria spinulosa* Reef totalling **31.23km^2.**

This is on the basis that, all areas coloured 'green' and labelled '*Sabellaria spinulosa* on stable circalittoral mixed sediment' should be accompanied with a purple hash fill.

11. Natural England does not agree with the Applicant's conclusion as set out in Section 3 Para 18 [REP5-146] that "*the conservation objectives of the SAC do not require that habitat with the potential to support designated habitats receive the same level of protection as the designated habitats themselves*" within IDRBNR SAC, owing to the restore objective. We draw the ExA to out Deadline 3 Appendix C2 and C3 for our rationale [REP3-067] and [REP3-068].

12. Whilst we welcome that ODOW have committed to installing removable cable protection within areas identified as potential supporting processes and habitat for Annex 1 *Sabellaria spinulosa* Reef within IDRBNR SAC, and agree this demonstrates adoption of the mitigation hierarchy in minimising the impacts; it does not secure the removal of the cable protection and nor does it avoid hindering the conservation objectives for the site to restore 'the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely'. Therefore, we continue to advise an Adverse Effect on Integrity alone cannot be excluded to both the Annex I reef and Annex I Sandbank feature of the IDRBNR SAC.

5) Worst-case scenario for the total area of cable protection within supporting habitat for Annex I *Sabellaria spinulosa* reef

13. In response to Natural England's request to the Applicant (see Annex 1 Section 4) the Applicant (via E-mail dated 27 March 2024) provided their worst-case scenario for the total area of cable protection predicted within supporting habitat for Annex I *Sabellaria spinulosa* reef (see Annex 2). This is based on a worst case scenario that 20% of the area of supporting reef habitat for Annex I reef will require cable protection with an additional contingency of 20% for installation and slippage, this footprint is 95,407.2m^2 (9.54ha) with a volume of 33,292,52m^3.

14. In order to agree with the information provided, Natural England requires more information from the Applicant as to how the length of transit for each cable through supporting habitat (16562m each cable) was determined. Further, we advise the Applicant must make it transparently clear in all documents that the width of cable

protection within this feature will not exceed 6m width. Each of these parameters underpin the WCS calculations for cable protection on IDRBNR SAC Annex I supporting habitat for *Sabellaria spinulosa* reef.

15. Natural England has concerns that given the inherent difficulty found by neighbouring cable installations with installing cables to a sufficient depth within the prevailing sediment type for this predominantly mixed sediment habitat, a 20% WCS is not realistic. We consider that the WCS of cable protection required across the supporting habitat for Annex I *Sabellaria spinulosa* reef, should be higher somewhere between 20% and 100%. Based on calculations provided by the Applicant directly to Natural England by e-mail on 27 March 2025 (see Annex 2), these WCSs are presented in Table 1 below.

16. As such we advise that compensation will be required at a greater scale to allow for this contingency.

17. Please refer to Appendix A1 where Natural England advises that in agreement with the MMO, the specific amounts (area and volume) of cable protection for both the Annex I sandbank and Annex I Reef (including supporting habitat) features and that as part of the remaining site fabric of the IDRBNR SAC should be set out within the DCO/DML or set out and agreed in consultation with Natural England and the MMO within a named document secured by the DCO/DML. This is critical to inform post consent licence discharge.

Cumulative Impact Assessment

18. We note that removal of the Galahad gas platform topsides and monopod is due to take place in 2026 and this may overlap with ODOW construction (2026-7). The Galahad platform is located directly within the ODOW array area. However, we note that this has not been considered in the Cumulative Impact Assessment for marine physical processes, marine water and sediment quality, and/or benthic ecology chapters [REP5-065], [REP5-036], [REP4a-151], [REP5-018] and [REP5-020]. We advise that this needs to be considered in the relevant impact assessments and the relevant documents updated. Natural England considers this is a new issue which is reflected within Appendix J6 - Natural England's NE Risk and Issues Log Deadline 6.

Table 1 Worst Case Scenarios for Cable Protection in IDRBNR SAC supporting habitat for Anex I Reef

WCS % length of IDRBNR SAC Annex I Supporting Reef Habitat requiring cable protection (all cables)	WCS Length of cable protection within IDRBNR SAC Annex I supporting habitat (all cables) (m)	Number of Mattresses required	WCS Footprint within IDRBNR SAC Annex I Supporting Habitat (m^2)	20% allowance for installation accuracy and slippage (m^2)	Total Footprint for IDRBNR SAC Annex I Supporting Habitat (m^2)	Total volume for IDRBNR SAC Annex Supporting Habitat (0.35m high) m^3
10%	6625	2209	39753	7951	47703.6	16696.3
20%	**13250**	**4417**	**79506**	**15901**	**95407.2**	**33392.5**
30%	19875	6626	119259	23852	143110.8	50088.8
40%	26500	8834	159012	31802	190814.4	66785.0
50%	33125	11043	198765	39753	238518.0	83481.3
60%	39750	13251	238518	47704	286221.6	100177.6
70%	46375	15460	278271	55654	333925.2	116873.8
80%	53000	17668	318024	63605	381628.8	133570.1
90%	59625	19877	357777	71555	429332.4	150266.3
100%	66250	22085	397530	79506	477036.0	166962.6

Annex 1 – Advice provided to ODOW on 25th March 2025, through Natural England's Discretionary Advice Service.

Date: 25 March 2025

Outer Dowsing Offshore Windfarm (ODOW) *Sabellaria spinulosa* reef supporting habitat Technical Note: February 2025 Document Reference: 22.11 Rev: 0.1

The following Natural England advice is provided to GTR4 (ODOW) under our DAS contract on 25th March 2025. Our direct response/advice on your response to our advice on *Sabellaria spinulosa* supporting habitat Technical Note 2025 Document Reference: 22.11 Rev: 0.1 is highlighted in blue text below.

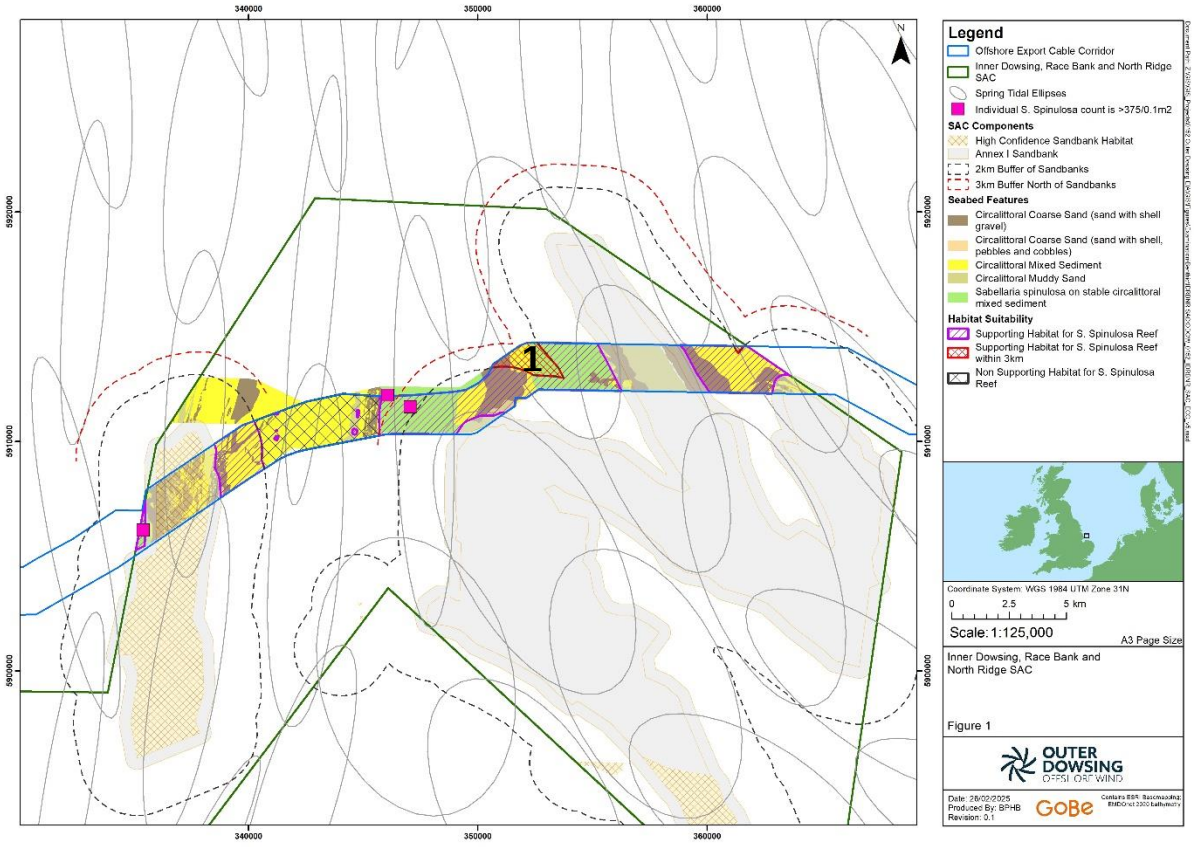
Methodology

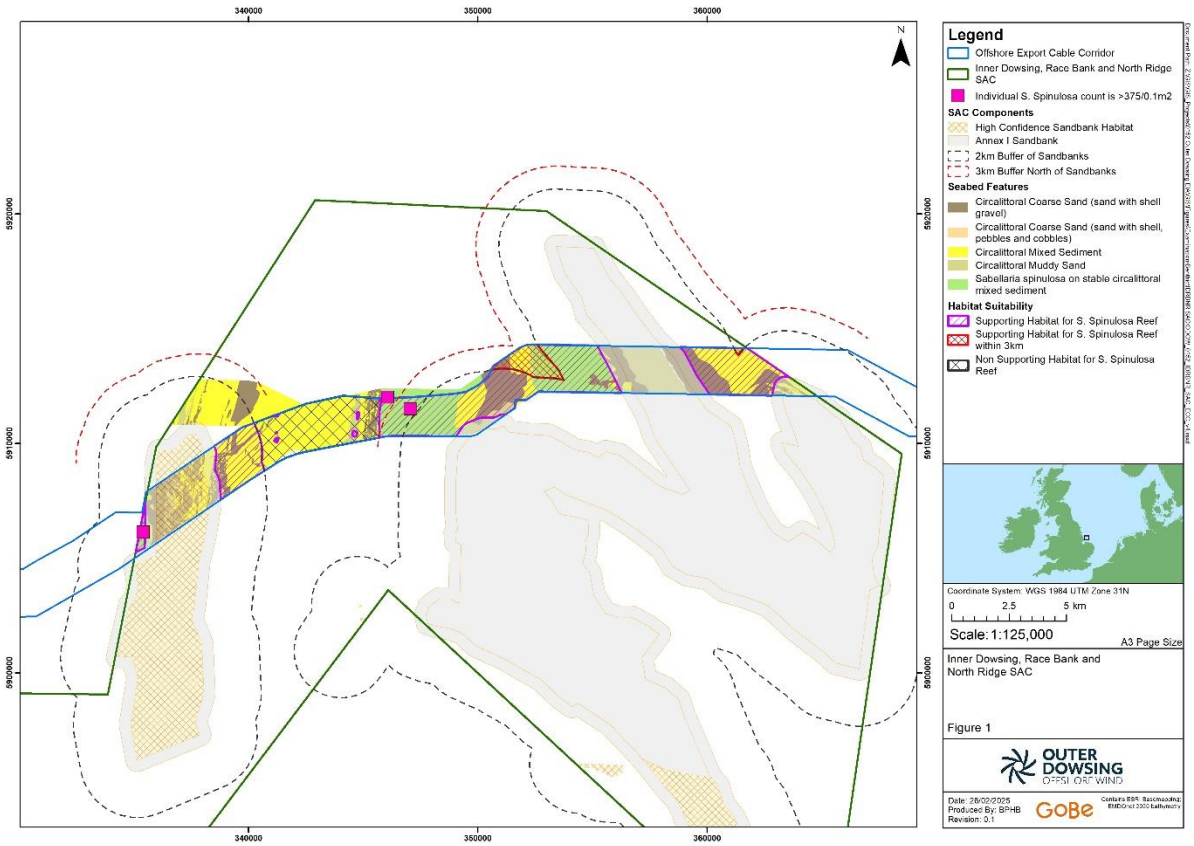
1. ***NE previous advice: Table 2, optional parameter 1 – It is not clear if this parameter has considered dominant direction tidal flows which would require an increase in the buffer from 2km to 3km. The figures in 'Chapter 7 Marine Physical Processes Figures Part 1 of 2' demonstrate that the dominant tidal flows and bedload transport across the ECC are in the NNW and SSW directions, and as such, we advise that the 2km buffers applied should be extended to 3km to align with the description of optional parameter 1 within the Technical Note.***

ODOW response: The Applicant notes difficulty in interpreting 'Optional parameter 1,' specifically the phrasing: "*within 2 km of sandbanks in any direction OR within 3km in the direction of tidal stream, whichever is the greater 2*." Our initial interpretation was that the worst-case area for the majority of the Offshore ECC was 'within a 2 km radius of the sandbanks'. This interpretation arose due to the direction of the tidal stream (approximately NW-SE/ N-S, see Figure below which presents tidal ellipses), we therefore did not anticipate that this would have a greater impact on the width of the corridor than the 2 km buffer applied around the entire sandbank.

Furthermore, there was additional confusion surrounding the phrase "OR within 3km in the direction of tidal stream," as it does not clearly state what the 3km buffer is associated in relation to the tidal stream – we assume that this would be the northern points of the sandbanks for the current features of interest. We have mapped the tidal ellipse data (see figure below), which demonstrates that a 3 km buffer could be applied to the north of the sandbank features, specifically "in the direction of tidal stream." This would result in two small areas highlighted by the red cross hatch in the figure below being included as supporting habitat. This additional area is 2.5km^2. As illustrated in the figure, no other additional adjustments in relation to 'Optional parameter 1' are necessary.

Natural England welcomes the addition of the 3km buffer to the north of the sandbank features. While this satisfies our previous advice; to ensure joint understanding of the approach, we highlight that according to the methods outlined within the Applicants [*Sabellaria spinulosa* reef supporting habitat Technical Note: February 2025], much of the red cross hatch area which we have annotated with number '1' below should have been already included as supporting habitat owing to the presence of the 'SS.SBR.PoR.SspiMx - *Sabellaria spinulosa* on stable circalittoral mixed sediment' which has been mapped in that location (in alignment with optional parameters 2 and 4).


340000
350000
360000
5920000
5910000
5900000
N
1
Legend
Offshore Export Cable Corridor
Inner Dowsing, Race Bank and North Ridge SAC
Spring Tidal Ellipses
Individual S. Spinulosa count is >375/0.1m2
SAC Components
High Confidence Sandbank Habitat
Annex I Sandbank
2km Buffer of Sandbanks
3km Buffer North of Sandbanks
Seabed Features
Circalittoral Coarse Sand (sand with shell gravel)
Circalittoral Coarse Sand (sand with shell, pebbles and cobbles)
Circalittoral Mixed Sediment
Circalittoral Muddy Sand
Sabellaria spinulosa on stable circalittoral mixed sediment
Habitat Suitability
Supporting Habitat for S. Spinulosa Reef
Supporting Habitat for S. Spinulosa Reef within 3km
Non Supporting Habitat for S. Spinulosa Reef
Coordinate System: WGS 1984 UTM Zone 31N
0 2.5 5 km
Scale: 1:125,000
A3 Page Size
Inner Dowsing, Race Bank and North Ridge SAC
Figure 1
OUTER DOWSING OFFSHORE WIND
Date: 26/02/2025
Produced By: BPHB
Revision: 0.1
GoBe


340000
350000
360000
5920000
5910000
5900000
N
Legend
Offshore Export Cable Corridor
Inner Dowsing, Race Bank and North Ridge SAC
Individual S. Spinulosa count is >375/0.1m2
SAC Components
High Confidence Sandbank Habitat
Annex I Sandbank
2km Buffer of Sandbanks
3km Buffer North of Sandbanks
Seabed Features
Circalittoral Coarse Sand (sand with shell gravel)
Circalittoral Coarse Sand (sand with shell, pebbles and cobbles)
Circalittoral Mixed Sediment
Circalittoral Muddy Sand
Sabellaria spinulosa on stable circalittoral mixed sediment
Habitat Suitability
Supporting Habitat for S. Spinulosa Reef
Supporting Habitat for S. Spinulosa Reef within 3km
Non Supporting Habitat for S. Spinulosa Reef
Coordinate System: WGS 1984 UTM Zone 31N
0 2.5 5 km
Scale: 1:125,000
A3 Page Size
Inner Dowsing, Race Bank and North Ridge SAC
Figure 1
OUTER DOWSING OFFSHORE WIND
Date: 26/02/2025
Produced By: BPHB
Revision: 0.1
GoBe

2. ***NE previous advice: In addition, for the avoidance of doubt, Figure 1 of the report should be updated and areas of Annex I sandbank delineated as potentially supporting habitat to Annex I Sabellaria spinulosa Reef (i.e. using the purple hash) included/differentiated.***

ODOW Response: The Applicant notes that the Annex I sandbanks are not identified as supporting habitats for Annex I *S. spinulosa* reefs, in accordance with the methodology documentation and as established in the research. Sandbank features have been addressed with specific mitigation measures in their own context.

Natural England are satisfied with the Applicants proposed approach in this respect for this project and within this designated site.

3. ***NE previous advice: Table 2, optional parameter 2 and 4 – Natural England advises that were this parameter to be appropriately applied to the data presented in Figure 1, then all areas of the SS.SBR.PoR.SspiMx biotope (including that outside of 2km sandbank buffer) should have been included as supporting habitat for Annex I Sabellaria spinulosa Reef.***

ODOW Response: The Applicant notes that this area has now been included as supporting habitat for Annex I *Sabellaria spinulosa* Reef as demonstrated in the Figures above, when applying the 3 km buffer to the north of the middle sandbank feature.

See response to point 1 above.

4. ***NE Previous Advice: In addition, Figure 1 does not appear to include all areas that were identified as SS.SBR.PoR.SspiMx within the Offshore Export Cable Corridor Sabellaria Spinulosa Reanalysis and Report Date: December 2024 Document Reference: 15.13 V2 Revision: 2.0 and labelled as "Figure 2. Marine habitat map at Level 4 MNCR for the Project ECC, produced using project specific data from the most recent benthic habitat surveys (ENVISION, 2024)."***

ODOW Response: The Applicant notes that there is no figure labelled *"Figure 2. Marine habitat map at Level 4 MNCR for the Project ECC, produced using project specific data from the most recent benthic habitat surveys (ENVISION, 2024)"* however, the Applicant has applied the SS.SBR.PoR.SspiMx biotope that has been identified across all figures within this report. Most of these areas correspond with the site-specific data [APP-155], however 4 discreet patched have been identified and included in the supporting habitat for *S. spinulosa* reef area, as identified in the Figures above.

Natural England uphold our previous reference to "*Figure 2. Marine habitat map at Level 4 MNCR for the Project ECC, produced using project specific data from the most recent benthic habitat surveys (ENVISION, 2024i)"* which exists with within [REP4a-070]. However, we are now satisfied that optional parameter 2 has now been met and that areas which have been previously identified as SS.SBR.PoR.SspiMx biotope have now also been included as supporting habitat.

NE Previous advice: Accordingly, we believe that the area of supporting habitat for Annex I S. spinulosa reef should be greater than that represented in Figure 1 of the S. spinulosa reef supporting habitat Technical Note.

Taking the above points into consideration the difference in supporting habitat for *S. spinulosa* reef from that previously presented is 2.64 km^2, equating to a total area of 31.23 km^2.

Natural England welcomes this adjustment to the area delineated as supporting habitat and agree the area of cable corridor overlap with supporting habitat impacted is 31.23km2. In order to address some of the outstanding issues raised by the ExA in their Rule 17 request, Natural England would welcome a realistic worst-case figure for the total area of cable protection predicted within Annex I supporting habitat being provided directly to NE by yourselves **in advance of Deadline 6**. We also acknowledge that there is likely to be a need for further dialogue with yourselves on the likely implications of those impacts. Please see next point.

Mitigation measures

5. ***NE previous advice: Natural England notes that ODOW are proposing to commit to installing removable cable protection within areas identified as potentially supporting for S. spinulosa reef. Whilst this is welcomed and demonstrates adoption of the mitigation hierarchy in minimising the impacts; it does not secure the removal of the cable protection and nor does it avoid hindering the conservation objectives for the site to restore 'the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely'. Natural England advises that this requires further consideration by ODOW.***

The Applicant notes that, at Deadline 4 (REP4-137), Natural England commented: '*NE advises the Applicant undertakes and submits into examination an assessment of supporting habitats and processes for potential Annex I S. spinulosa Reef, to demonstrate that the recovery of this feature will not be hindered by the installation of the export cable and/or the lasting placement of cable protection. This will provide the Secretary of State comfort an adverse effect on integrity to IDRBNR SAC Annex I Reef features and habitats/processes in which it relies upon will be avoided.*' The Applicant's commitment to installing removable cable protection within areas identified as potentially supporting for *S. spinulosa* reef is detailed within the 8.21 Outline Scour and Cable Protection Management (REP4a-104) and the Outline Cable Specification and Layout Plan (REP4a-097).

Whilst Natural England welcomes the commitment to use only removable cable protection, we highlight that any removability shouldn't be to the wider detriment of the Annex I features, which would be the case currently in relation to rock protection. In addition, and as highlighted by the Secretary of State Decision for Norfolk Boreas, that even with the commitment to using removable cable protection and committing to removing said protection at the time of decommissioning, the impacts over the lifetime of the project, while the protection is *in situ*, were considered by the SoS to hinder the conservation objectives and have an adverse effect on integrity. Therefore, further consideration of the implications are required by the project.

Other Matters

6. ***NE previous Advice: We note the mitigation measure 'Ecological based solutions for scour protection will be prioritised where practicable' has been included in several documents. It is not clear to Natural England what is meant by this mitigation measure and we would welcome some clarity on this.***

The Applicant notes this reference and has previously discussed the use of novel engineering solutions such as reef cubes or scour protection that promote ecological biodiversity.

Natural England advises that the use of reef cubes within the designated site and/or solutions which promote ecological biodiversity would not mitigate the impacts to interest features of the designated site because the outcome would be the same as that as cable protection i.e. a loss of Annex I *Sabellaria* Reef support habitat.
Natural England's (and other SNCBs) agree that *Sabellaria spinulosa* could colonise rock protection/artificial substrate, but we consider the establishment of *Sabellaria spinulosa* Reef on artificial substrate as not "counting" towards favourable condition of the feature and/or designated site. This is because it is not a replacement for **Annex I *Sabellaria spinulosa* reef on natural site sediment as set out at the time of designation and within the conservation advice package for the site**.

This is Natural England's consistent advice, which is also included within the conservation advice package for Inner Dowsing, Race Bank and North Ridge Special Area of Conservation (SAC), which was produced in consultation with JNCC. The same advice has been included in our advice across multiple offshore wind farm examinations including Hornsea Project 3 OWF (2019), Norfolk Vanguard (2019), Norfolk Boreas (2019), and in particular Outer Dowsing OWF (2024) which impacts upon IDRBNR SAC [REP3-068].

Whilst Natural England believes that the detail and evidence in the conservation advice package, and further set out in our examination advise, is sufficient justification of our position on the matter, in order to be helpful, we have provided additional potentially useful ecological information below.

The conservation objectives for IDRBNR SAC include an objective to restore *'the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely'* but artificial substrate does not maintain/restore the seabed/supporting habitats within the designated sites. As stated in our conservation advice, the development of Annex I *Sabellaria spinulosa* Reef acts to stabilise the sediment and provide structural complexity, including an attachment surface for other species. We advise that it follows that the lasting placement of introduced materials, such as cable/scour protection fundamentally changes the underlying seabed conditions, which would make *Sabellaria spinulosa* reef on such introduced material ecologically different to the Annex I *Sabellaria spinulosa* reef on natural site sediment as set out at the time of designation and as included within the conservation advice package for the site.

We noted as part of a brief literature review that it has been found that *'S. spinulosa communities on infralittoral rock and circalittoral rock (Sabellaria reefs on rock CR.MCR.CSab/EUNIS A4.22) cannot be considered as biogenic reef since many of the associated species are capable of living on stable rock, irrespective of the presence of S. spinulosa reef (Foster-Smith and Hendrick (2003)).* Another supplementary point is that the habitat complexity offered by *S. spinulosa* reef on sediments results in the provision of habitats similar to both sedimentary and hard substratum environments, a complexity which *S. spinulosa* reef on rock does not offer. The number of potential niches offered by *S. spinulosa* reef on sediment are therefore increased and support a broader range of taxa ranging from sessile or sedentary epifauna, to burrowing fauna (Tillin et al., 2024). These, points offer further support for maintaining our conservation advice that in an area where artificial substate is present, *Sabellaria spinulosa* is not providing the same structure and function.

References

Tillin, H.M., Marshall, C.E., Garrard, S.L.,, Gibb, N., & Watson, A., (2024). Sabellaria spinulosa on stable circalittoral mixed sediment. In Tyler-Walters H. and Hiscock K. (eds) Marine Life Information Network: Biology and Sensitivity Key Information Reviews, [on-line]. Plymouth: Marine Biological Association of the United Kingdom. [cited 09-12-2024]. Available from: [redacted]

Foster-Smith, R.L. & Hendrick, V.J., (2003). *Sabellaria spinulosa* reef in The Wash and North Norfolk cSAC and its approaches: Part III, summary of knowledge, recommended monitoring strategies and outstanding research requirements. Rep. 543.

Annex 2 E-mail from ODOW Dated 27 March 2025 11.10am

'…please see the realistic worst-case figure for the total area of cable protection predicted within Annex I supporting habitat in table form below. This is to satisfy the request you made below:

"Natural England welcomes this adjustment to the area delineated as supporting habitat and agree the area of cable corridor overlap with supporting habitat impacted is 31.23km2. In order to address some of the outstanding issues raised by the ExA in their Rule 17 request, Natural England would welcome a realistic worst-case figure for the total area of cable protection predicted within Annex I supporting habitat being provided directly to NE by yourselves in advance of Deadline 6."

Calculation Step Description	Value	Unit
Number of Cables	4	each
Length of transit for each cable through Supporting Habitat	16562.5	m
Length of transit for all cables through Supporting Habitat	66250	m
20% of total length	13250	m
Number of mattresses required (rounded up)	4417	each
Each mattress footprint	18	m2
Footprint within Supporting Habitat	79506	m2
20% allowance for installation accuracy and slippage	15901.2	m2
Total Footprint for Supporting Habitat	**95407.2**	**m2**
Total volume for Supporting Habitat (0.35m high)	**33392.52**	**m3**