East Anglia ONE North Offshore Windfarm

Appendix 9.1

Benthic Ecology Consultation Responses

Environmental Statement
Volume 3

Applicant: East Anglia ONE North Limited
Document Reference: 6.3.9.1
SPR Reference: EA1N-DWF-ENV-REP-IBR-000346_001 Rev 01
Pursuant to APFP Regulation: 5(2)(a)

Author: Royal HaskoningDHV
Date: October 2019
Revision: Version 1

Revision Summary				
Rev	**Date**	**Prepared by**	**Checked by**	**Approved by**
01	08/10/2019	Paolo Pizzolla	Ian McKay	Helen Walker

Description of Revisions			
Rev	**Page**	**Section**	**Description**
01	n/a	n/a	Final for Submission

Appendix 9.1 is supported by the tables listed below.

Table Number	Title
Table A9.1.1	Consultation Responses Related to Chapter 9 Benthic Ecology

Glossary of Acronyms

DCO	Development Consent Order
DDV	Drop Down Video
EA	East Anglia
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
ES	Environmental Statement
ETG	Expert Topic Group
HDD	Horizontal Direct Drilling
HRA	Habitats Regulations Assessment
IFCA	Inshore Fisheries Conservation Authority
MarESA	Marine Evidence Based Sensitivity Assessment
MESH	The Mapping European Seabed Habitat Project
MMO	Marine Management Organisation
MNNS	Marine Non-Native Species
NE	Natural England
NPS	National Policy Statement
PEIR	Preliminary Environmental Information Report
PEMP	Project Environmental Management Plan
SPA	Special Protection Area
SPM	Suspended Particulate Matter
SPR	ScottishPower Renewables
ZEA	Zonal Environmental Appraisal

Glossary of Terminology

Applicant	East Anglia ONE North Limited
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one offshore construction operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia ONE North windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
Inter-array cables	Offshore cables which link the wind turbines to each other and the offshore electrical platforms. These cables will include fibre optic cables.
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land and connect to the onshore cables.
Meteorological mast	An offshore structure which contains metrological instruments used for wind data acquisition.
Marking buoys	Buoys to delineate spatial features / restrictions within the offshore development area.
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall transition jointing bays located at landfall.
Offshore development area	The East Anglia ONE North windfarm site and offshore cable corridor (up to Mean High Water Springs) (described as the ‘order limits‘ within the Development Consent Order).
Offshore electrical platform	A fixed structure located within the windfarm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which would bring electricity from the offshore electrical platforms to the landfall. These will include fibre optic cables.
Offshore construction, operation and maintenance platform	A fixed structure required for construction operation and maintenance personnel and activities.
Offshore platform	A collective term for the offshore construction operation and maintenance platform and the offshore electrical platforms.
Platform link cable	An electrical cable which links one or more offshore platforms. These cables will include fibre optic cables.
Safety zones	A marine area declared for the purposes of safety around a renewable energy installation or works / construction area under the Energy Act 2004.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.

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9.1 Benthic Ecology Consultation Responses

9.1.1 Introduction

1. This appendix covers those statutory consultation responses that have been received as a response to the Scoping Report (2017), the Preliminary Environmental Information Report (PEIR) (2018) and Expert Topic Group (ETG) Meetings.

2. Responses from stakeholders and regard given by the Applicant have been captured in ***Table A9.1.1***.

3. As Section 42 consultation for the proposed East Anglia ONE North project was conducted in parallel with the proposed East Anglia TWO project, where appropriate, stakeholder comments which were specific to East Anglia TWO, but may be of relevance East Anglia ONE North, have also been included in the consultation responses for East Anglia ONE North.

Table A9.1.1 Consultation Responses Related to Chapter 9 Benthic Ecology

Consultee	Date/ Document	Comment	Response / where addressed in the ES
The following comments were received prior to consultation on the PEIR and were in response to the Scoping Report or direct consultation with stakeholders. These comments were taken into account in the production of the PEIR.			
Marine Management Organisation (MMO), Natural England and Cefas	12/04/2017 ETG Meeting 1	Agreed that there is sufficient data currently available from the East Anglia Zone Environmental Appraisal to inform the East Anglia ONE North windfarm site and discreet areas of the offshore cable corridor and therefore further data collection need only focus on areas of the offshore cable corridor where there are data gaps.	Following changes to the offshore cable corridor route it was decided to conduct a more rigorous sampling strategy in the offshore cable corridor. See ***Appendix 9.2 Benthic Ecology Sampling Strategy***. Also see ***section 9.4.2.3*** of this chapter.
Natural England	08/12/2017 Scoping Response	NE doesn't necessarily agree that because the turbine numbers have been reduced the impacts on benthic ecology receptors have been reduced. Admittedly, the impacts will be occurring over a smaller area, but if larger turbines are used this probably equates to larger piles and hammer energies, and could still have potentially large impacts upon benthic ecology, fish, marine mammals and geophysical processes. A full assessment of these larger turbines and thus piles is needed to assess their potential effects.	This section has been deleted. An assessment of the realistic worst case scenario for each impact has been undertaken.
Natural England	08/12/2017 Scoping Response	The developers must ensure sufficient geophysical surveys are carried out to identify the actual areas of *Sabellaria spinulosa* reef to successfully mitigate or microsite around extensive reefs.	The Applicant is committed to micro-siting around *Sabellaria* reef where practicable and in line with best practice guidance. Due to the transient nature of *Sabellaria* reef there is a high chance that any areas identified in 2017/2018 surveys will have moved or changed size by the time construction is due to begin in 2025. Therefore, it is believed there is limited benefit in identifying localised mitigation measures at this stage. Pre-construction geophysical surveys will be undertaken to identify the potential areas of *Sabellaria* reef, any areas to be avoided (i.e. by micrositing of cable routes and turbine foundations) will then be agreed with the MMO in consultation

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			with Natural England through the Construction Method Statement, PEMP and In Principle Monitoring Plan as secured within the DCO. See ***section 9.3.3*** and assessment ***section 9.6.1.1*** of this chapter.
Natural England	08/12/2017 Scoping Response	Impacts during construction do not mention the potential need for sand wave levelling for cable installation. Based on experience from other offshore energy projects, Natural England questions whether the impacts can be regarded as 'relatively small' and urges the developer to assess the worst case scenario with reasonable precaution.	Worst case scenario with regard to sand wave levelling outlined in impact 6 in ***Table 9.2*** and an assessment of the potential for permanent habitat change as a result of sand wave levelling is provided in ***section 9.6.1.6*** of this chapter. Additionally, an assessment of the temporary physical disturbance and increases in suspended sediment due to sand wave levelling is included within ***sections 9.6.1.1*** *and* ***9.6.1.2*** of this chapter.
MMO	08/12/2017 Scoping Response	If there is any possibility that the physical foundation or cable structure is not going to be fully removed below the seabed during decommissioning, the MMO recommends that the potential impact of permanent habitat loss on the benthos should be scoped in for consideration in the ES.	It is envisaged that a worst case of up to 44m of each monopile foundation below the seabed and all buried sections of cables of up to 373km of cable would be left *in situ* following decommissioning. The potential impacts of permanent habitat loss resulting from foundation or cable infrastructure not being fully removed during decommissioning is provided in ***section 9.6.3.2*** of this chapter.
MMO	08/12/2017 Scoping Response	The MMO suggests that additional and more recent evidence is needed to support the exclusion of Electromagnetic fields (EMF) on benthic invertebrates from the impact assessments.	Potential EMF effects on benthic ecology receptors are assessed in ***section 9.6.2.5*** of this chapter.
MMO	08/12/2017 Scoping Response	The MMO recommends that further evidence is provided as to how the conclusion to scope out transboundary impacts was reached.	Further information was provided at ETG meetings to evidence the highly localised nature of the potential impacts on benthic ecology receptors and it was

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			therefore agreed that this impact could be scoped out. See ETG meeting minutes response below.
MMO	08/12/2017 Scoping Response	The MMO agrees that it is important that benthic sampling be undertaken to cover all areas not previously covered by the Zone Environmental Appraisal (ZEA) survey. Of particular importance are any areas where the sediment appears to be muddy, as muddy sediment types are most likely to retain contaminants which are likely to be mobilised when disturbed.	The potential impact of the remobilisation of contaminated sediments on benthic receptors is assessed in ***section 9.6.1.3*** of this chapter. Also see ***Chapter 8 Marine Water and Sediment Quality***.
MMO	08/12/2017 Scoping Response	The MMO requests that SPR provide further justification as to the reasons for scoping out the potential impact of underwater noise and vibration on benthic habitats during the operational phase.	The potential impact of underwater noise during the operational phase is included within the assessment. See ***section 9.6.2.6*** of this chapter.
MMO	08/12/2017 Scoping Response	The MMO recommends that the potential impact of dredged or drilled material disposal on the benthos should be included in the ES.	The potential impact of the disposal of dredged or drilled material is included within the Temporary Physical Disturbance impact assessment, see ***section 9.6.1.1*** of this chapter.
The Planning Inspectorate	08/12/2017 and 20/12/2017 respectively Scoping Response	The Inspectorate does not agree that the impact of permanent habitat loss during construction and decommissioning can be scoped out as no supporting information has been provided.	It was agreed with the MMO at an ETG meeting on 15/05/2018 (see below) that the impact of permanent habitat loss from the installation of foundations and scour protection should be assessed under the operational phase only. Habitat loss resulting from seabed preparation (i.e. sand wave levelling) for foundations and cable installation is assessed as a construction impact in ***section 9.6.1.6*** of this chapter. Regarding decommissioning impacts, an assessment of the potential impacts of permanent habitat loss is provided in ***section 9.6.3.2*** of this chapter.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
The Planning Inspectorate	20/12/2017 Scoping Response	The Inspectorate does not agree that the impact of underwater noise and vibration can be scoped out as no supporting information has been provided.	The impact of underwater noise on benthic invertebrates during the construction, operation and decommissioning phases is considered in ***sections 9.6.1.4, 9.6.2.6*** and ***9.6.3*** of this chapter respectively.
The Planning Inspectorate	20/12/2017 Scoping Response	The Inspectorate does not agree that the impact of the colonisation of foundations and cable protection during construction and decommissioning can be scoped out as no supporting information has been provided.	Discussions with the MMO at an ETG meeting in March 2018 (see below) concluded that colonisation of foundation structures need only be considered as an operational impact as colonisation will increase during the lifetime of the project and will therefore be more significant during the operational phase.
The Planning Inspectorate	20/12/2017 Scoping Response	The Inspectorate advises that consideration should be given to the potential for impacts of dredge material disposal on benthos. If it is concluded that there could be significant impacts, this receptor should be included in the assessment and the scope agreed with the MMO.	Impact of dredge material disposal on benthic receptors considered as part of temporary physical disturbance impact. See ***section 9.6.1.1*** of this chapter.
Natural England	19/01/2018 Response to updated benthic sampling strategy scope	In agreement that data gaps arose following amendment of the offshore cable corridor and that the proposed sampling strategy adequately covers the new proposed offshore cable corridor routes.	See ***Appendix 9.2 Benthic Ecology Sampling Strategy***. Also see ***section 9.4.2.3*** of this chapter.
MMO	04/04/2018 Response to benthic sampling strategy document	The MMO suggests using dropdown camera techniques to survey potential *S. spinulosa* reef areas identified during geophysical surveys.	The Applicant is committed to micro-siting around *Sabellaria* reef where practicable and in line with best practice guidance. Due to the transient nature of *Sabellaria* reef there is a high chance that any areas identified in 2017/2018 surveys will have moved or changed size by the time construction is due to begin in 2026. Therefore, it is believed there is limited benefit in identifying localised mitigation measures at this stage. Pre-construction geophysical surveys will be

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			undertaken to identify the potential areas of *Sabellaria* reef, any areas to be avoided (i.e. by micrositing of cable routes and turbine foundations) will then be agreed with the MMO in consultation with Natural England through the Construction Method Statement, PEMP and In Principle Monitoring Plan, secured within the DCO. See assessment ***section 9.6.1.1*** of this chapter.
MMO	04/04/2018 Response to benthic sampling strategy document	Agree that single grab samples at 1km intervals using a grid-based approach is acceptable however recommended that survey locations are overlaid onto UK SeaMap to ensure adequate coverage of habitats present.	Grab sample locations within the offshore cable corridor are overlaid onto UK SeaMap and presented in ***Figure 9.1***.
MMO	04/04/2018 Response to benthic sampling strategy document	The MMO suggests surveying at a similar time of year and using the same type of sediment grab as the Zonal Environmental Appraisal (ZEA).	A 0.1m^2 Hamon sediment grab was used to collect samples in the offshore cable corridor and for the ZEA. Grabs in the offshore cable corridor were taken between the 30th of March and the 19th of May and grabs for the ZEA were undertaken between July 2010 and January 2011.
MMO, Natural England and CEFAS	15/05/2018 Comments on Expert Topic Group (ETG) meeting 2 minutes – Agreement Log	Agree that data sources outlined in the benthic ecology method statement (SPR 2017) provide sufficient baseline information for robust EIA without the need for dedicated benthic faunal surveys.	The data sources which have been used to inform the assessment are detailed in ***section 9.4.2*** of this chapter and include those stated in the Method Statement.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
MMO, Natural England and Cefas	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Content that results of the project and cumulative wave modelling shows no potential for significant effect on benthic receptors.	***Appendix 7.2 and 7.3*** describe the results of the wave modelling. This impact is assessed within ***Chapter 7 Marine Geology, Oceanography and Physical Processes***.
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Content with the approach to minimise impacts on Coraline Crag and local sandbanks through routing export cable to the south of the Coraline Crags.	A discussion of the routeing of the export cable to avoid local sandbanks and areas of Coraline Crag is provided in the assessment of temporary physical disturbance in the offshore cable corridor, see ***section 9.6.1.1.2*** of this chapter and ***Figure 9.13***.
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Agree that transboundary effects on benthic ecology to be scoped out on the basis of localised effects.	***Appendix 7.3*** shows transboundary impacts on benthic ecology receptors are highly unlikely and therefore can be scoped out of the assessment.
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Evidence provided for scoping out EMF impacts on benthic receptors suggest that EMF does have the potential to affect benthic invertebrates, although studies undertaken to date are limited in terms of species tested. Therefore, EMF effects should be scoped in to the EIA assessment.	Potential EMF effects on benthic ecology receptors are considered in ***section 9.6.2.5*** of this chapter.
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Agree that the impact of permanent habitat loss from the placement of foundations and scour protection should be assessed under the operational phase only.	Potential effects from a loss of habitat as a result of the placement of turbine foundations and scour protection are assessed in ***section 9.6.2.1*** of this chapter.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Agreed that the impact of permanent habitat loss as a result of seabed preparation should be considered a part of the construction phase impacts.	Potential effects from a permanent change of habitat resulting from sea bed preparation are assessed in ***section 9.6.1.6*** of this chapter.
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Agreed that colonisation of foundation structures should be included as an operational impact only.	Potential effects from the colonisation of foundations and cable protection are considered during the operational phase only. See ***section 9.6.2.4*** of this chapter.
MMO	15/05/2018 Comments on ETG meeting 2 minutes – Agreement Log	Agreed that the impact of the introduction of non-native species to be included as a separate impact and not included in the assessment of colonisation of foundations, scour and cable protection (introduced artificial substrate).	Potential effects from the introduction of marine non-native species (MNNS) is presented in ***section 9.6.2.7*** of this chapter. This has been included as an operational impact only as this is when it is likely to be most significant. This is as a result of the introduced artificial substrate, over time, acting as a potential vector / 'stepping stone' for MNNS and allowing them to become established.
The following comments were made in response to the PEIR and were taken into account in the production of this ES.			
MMO	22/03/2019 Section 42 Consultation Response	The MMO notes that decommissioning only considers impacts due to the loss of habitat (turbines), however the complete removal of the structures in relation to deep depressions left in the seabed and how long recovery of associated habitats and communities needs to be considered. This should be amended in future documents. Consideration should also be made to whether the habitat and communities will return to baseline conditions after decommissioning has taken place. Where possible	An assessment of the potential effects of deep depressions being left in the sea bed following complete removal of structures has not been undertaken. During decommissioning, piled foundations will be cut to 1 to 2m below the sea bed and allowed to naturally backfill (see ***Chapter 6 Project Description***). Given that these are not 'deep depressions' no further assessment has been undertaken. Any impact of cutting piles 1-2m below

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		evidence of such recovery should be referenced. This should be amended in future documents.	the sea bed is envisioned to be less than that during construction (see ***section 9.6.1*** of this chapter).
MMO	22/03/2019 Section 42 Consultation Response	The MMO has noted that Chapter 9 paragraph 198 (EA2) and section 9.6.1.1.2, para 197 (EA1N) states that the export cable corridor has been re-routed to avoid Coralline crag. However in chapter 7 figure 7.7 Coralline Crag has been identified within the nearshore area of the export cable. This should also be acknowledged and assessed for impact on the benthic communities associated with the feature. Impacts including: increases and persistence in Suspended Particulate Matter (SPM) and smothering due to trenching around the Horizontal Directional Drilling (HDD) punch-out point and export cable installation. This should be amended for future documents.	Text has been added to ***section 6.6.1*** of ***Chapter 6 Project Description*** stating that the Coralline Crag will be avoided by the HDD and the export cable routeing. ***Figure 7.7*** shows areas suitable for HDD punch out, i.e. it shows how the Coralline Crag will be avoided during HDD process.
MMO	22/03/2019 Section 42 Consultation Response	The MMO has noted some inconsistencies in Chapter 9 paragraph 203 (202 and 203 for 1N) regarding animal habituation and tolerance of smothering. Paragraph 204 (203 for 1N) states that sediment deposits are likely to be 10s of centimetres to a few metres high. Under the Marine Evidence based Sensitivity Assessment (MARESA) which supersedes MarLIN, light and heavy smothering should be assessed separately. Light smothering is considered as up to 5cm and most species will be able to adapt via vertical migration. Heavy smothering is considered up to 30cm of fine materials, and most species will be unable to adapt. It is therefore recommended that in impact assessments for smothering both light and heavy should be assessed and be assessed separately.	Text in ***section 9.6.1.2*** of this chapter has been updated to differentiate between light and heavy smothering criteria. ***Table 9.13*** has been updated to show sensitivities of benthic communities to heavy smothering. Assessment based on heavy smothering which represents the worst case.
MMO	22/03/2019	There is a lacking in temporal scale in the predicted sediment plume described in Chapter 9 paragraph 204 (203 in 1N). A plume of 10s of mg/l is predicted for up to 6hrs. Extended periods of SPM above background levels may	Text has been added to ***section 9.6.1.2*** of this chapter to indicate that sediment released during construction would be primarily associated with sea bed preparation for wind turbines and offshore

Consultee	Date/ Document	Comment	Response / where addressed in the ES
	Section 42 Consultation Response	indirectly affects the benthos (e.g. phytoplankton growth and benthic egg and larval survival). With the expected construction period lasting 27months with either the presence or absence of EA1N construction, both scenarios need to be assessed for these potential impacts. Cefas has developed monthly suspended sediment climatologies which can be accessed via the Cefas data hub: http://data.cefas.co.uk/#/View/18133	platforms which would make up a relatively short period of the overall 27 month construction window.
MMO	22/03/2019 Section 42 Consultation Response	When assessing the impact of disposal, installation of cable and scour protection, the Environmental Statement (ES), and subsequent consent, should detail the impact in both volume and area. Volumes and areas of disposal should also be further broken down into types of disposal (sand, drill arisings, rock, mud, etc.) wherever possible.	***Chapter 6 Project Description section 6.5.10.15*** and the Site Characterisation Report (Windfarm Site) (document reference 8.15) and the Site Characterisation Report (Offshore Cable Corridor) (document reference 8.16) provide detailed information on the construction activities (e.g. dredging and cable laying) which interact with the sediment, including the likely volumes affected and the fate of sediment. Greater detail on the anticipated volumes of disposal and anticipated nature of sediment has been provided in ***sections 9.3.2.4.2*** and ***9.3.2.4.2*** of this chapter and further detail provided in ***Chapter 6 Project Description section 6.5.10.15.*** The worst case assumptions have been incorporated into the assessments in ***sections 9.6.1.2, 9.6.1.5*** and ***9.6.1.6*** in this chapter.
MMO	22/03/2019 Section 42 Consultation Response	It should be noted that new disposal site designations cannot overlap open disposal sites and that a disposal site will only be required if the material is considered a waste product; a disposal site is not normally required for plough dredging/jetting techniques. In light of this, it should be confirmed whether it remains necessary to designate the export cable corridor as a disposal site and if the	Noted that plough dredging / jetting techniques do not require a disposal licence. There may be a requirement for backhoe dredging (see ***Chapter 6 Project Description section 6.5.10.15***) in the offshore cable corridor which may require disposal of sediment and therefore it is the intention of the

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		boundaries of the disposal site(s) have been amended to avoid overlap with existing open sites.	Applicant to seek to designate the offshore cable corridor as a disposal site. The Site Characterisation Report (Offshore Cable Corridor) (Document Reference: 8.16) sets out the request for approval to designate a shared disposal site (encompassing the East Anglia ONE North offshore cable corridor and East Anglia TWO northern offshore cable corridor route option), in the event that the East Anglia TWO northern route option is chosen resulting in both projects sharing a cable corridor.
MMO	22/03/2019 Section 42 Consultation Response	Figure 9.3 shows the sampling intensity of all samples used in the analysis. The text within the benthic chapter states that EA One export cable corridor data have been used to characterise the area, but it does not state whether the EA One array data has also been used. In the original scoping report for EA1N (20171116 DCO201600004 East Anglia One North Offshore Windfarm Consultation 2 Scoping Report) it states that benthic samples from both the cable corridor and the windfarm site of EA One will be used to characterise the EA1N Project area. Please clarify why the sampling density as displayed in Fig 9.3 does not currently appear to reflect the sampling density from Figure 9.10 of the EA One ES.	***Figures 9.1, 9.3a*** and ***9.3b*** have been updated to show the benthic sampling data used in the assessment. This analysis has incorporated samples from the East Anglia ONE offshore development area. Also, multivariate analysis has been carried out to characterise the infaunal communities in the offshore development area and former East Anglia Zone (see ***Appendix 9.4***).
MMO	22/03/2019 Section 42 Consultation Response	Please review and expand upon the following sentence, in section 4.1.1 of Appendix 9.3, to ensure the meaning is clear; 'any material retained on the sieve such as small shells, shell fragments and stones were removed, and the weight recorded'.	Please take the following response as clarification of the methodology, ***Appendix 9.3*** has not been updated: Sample from each station was homogenised and split into a small sub-sample for laser diffraction (<1000µm fraction) and into a larger sample for dry or wet sieving of the coarser sediment component (>1000µm fraction). The small sub-sample was wet screened (wet sieved) through a

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			1000µm sieve and determined using a Malvern Mastersizer 2000 particle sizer whereas the larger sub-sample was passed through stainless steel sieves with mesh apertures of 8000µm, 4000µm, 2000µm and 1000µm. Any material retained on the sieves >1000µm from the larger sub-sample, such as small shells, shell fragments and stones were weighted and recorded to be later included in the particle size analysis. The separate assessment of the fractions above and below 1000µm were combined using a specialist computer software.
MMO	22/03/2019 Section 42 Consultation Response	Additionally, Clarification/expansion on the sediment analysis methodology detailed in Section 4.1.1 of Appendix 9.3 as it is not clear where the samples were dry sieved or wet sieved and how the sieve and laser data were combined.	See above response.
MMO	22/03/2019 Section 42 Consultation Response	Clarification is required regarding section 9.6.2.6, paragraph 267, as it is not clear if the turbines and environmental conditions at EA1N are comparable to the previous windfarms that are being used to broadly inform the likely significance of noise. The following paragraph is noted in appendix 11.4 'The considered turbine size for (operational noise) modelling at this wind farm is larger than those for which data is available. EA2 and EA1N are also in greater water depths, and as such, estimations of a scaling factor must be conservative to minimise the risk of underestimating the noise.' This suggests that the previous wind farm may not be a suitable comparison. Similarities and differences should be made clear in the ES to demonstrate the turbines and environmental conditions at EA1N are comparable to previous wind farms.	A linear fit was applied to data available for current operational wind turbine noise, as this was considered to be a method of estimating operational turbine noise that would lead to the highest, and thus worst case, estimation of source noise level from the larger 300m wind turbine. This resulted in an estimated source level of 164 dB SPL_{RMS}, 18 dB higher than the 6 MW turbine, the largest for which noise data currently exists. The alternative method of using a logarithmic fit (with an increase of 3 dB per doubling of power output) to data would lead to a source level of 151 dB SPL_{RMS}. A more extreme and unlikely 6 dB increase per doubling of power output would lead to 156 dB SPL_{RMS}. Taking into consideration the above, the method of using a linear

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			fit estimate is considerably higher than alternatives and is a highly precautionary approach. Additional text has been added to ***section 9.6.2.6*** for clarification.
Natural England	26/03/2019 Section 42 Consultation Response	There needs to be a greater consideration of the impact of development on the nearby Orford Inshore proposed MCZ (pMCZ). As a pMCZ this site is now a material consideration and although there is no overlap with the development area it should be factored into the impact assessment and a separate MCZ assessment carried out to rule out any significant indirect affects upon the interest features of the site.	Text has been added to ***section 9.5.5.2*** which references the assessment carried out for East Anglia THREE. There is no pathway for impact with the East Anglia ONE North project.
Natural England	26/03/2019 Section 42 Consultation Response	What is the maximum cable depth of 5 m based on? 1 - 2 m is the usual quoted cable burial depth for offshore windfarms.	Maximum cable burial depth has now been reduced to 3m based on realistic experience from the under construction East Anglia ONE project.
Natural England	26/03/2019 Section 42 Consultation Response	Faunal data from the EA 2 offshore cable corridor grab samples have only been included in the current PEIR as number of individuals and number of species. Community data has not been included and as such there is no data on the biotopes present on the cable corridor besides the small area of the cable corridor already covered by the East Anglia Offshore Wind Zonal Environmental Appraisal (ZEA). Also there is no further indication if these data are going to be integrated at the Environmental Statement (ES) stage. Current impact sensitivity and recoverability assessment is conducted based on the biotopes identified on the ZEA. Considering that on the cable corridor close to the coast there is an area of sediment dominated by silty sediments, biotopes identified in this area will most likely differ from those identified in the ZEA where sediments were	As was stated in paragraph 137 of the PEIR chapter, multivariate analysis has been conducted for the ES and a report has been produced (see ***Appendix 9.4***) and the relevant information has been updated / added to ***sections 9.5*** and ***9.6*** of the chapter. Also, ***Figures 9.4a*** and ***b*** have now been produced which display the biotopes present throughout the offshore development area and within the context of the former East Anglia Zone respectively.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		dominated by sand and gravel. As such the sensitivity analysis and conclusions drawn from that analysis might be based on an incomplete picture and therefore need to be reassessed including the full data set.	
Natural England	26/03/2019 Section 42 Consultation Response	The impact of deposition / disposal of sediment from dredging has been considered as the following: sand wave levelling / pre-sweeping activities associated with the export cable would result in the removal and disposal of sediment which would result in a temporary increase in suspended sediment concentrations. The impact of disposing of dredged sediment has other implications besides a temporary increase in suspended sediment concentrations. This has been addressed only within Increased Suspended Sediment Concentrations and Associated Potential Smothering of Benthic Receptors. Disposal of sediment also has the potential to cause habitat change if the sediment on the disposal site and the sediment disposed are not of the same type. A clearer separation of the impacts of disposal of sediment would be welcome.	Text on the potential impact of sediment disposal has been added to ***section 9.6.1.1***. Please note that the impact of deposition / disposal of dredged sediment is also considered in ***section 9.6.1.1*** of this chapter.
Natural England	26/03/2019 Section 42 Consultation Response	What is the reasoning for disturbance of the sea bed down to a sediment thickness of 5 metres? Further information on cable laying activities, how sea bed levelling would take place and where sediments are to be deposited should be provided pre-consent rather than post-consent. There could be habitats of conservation importance (NERC 2006) within array and along the export cable corridors which should be avoided. Therefore, for Natural England to be able to sufficiently assess the impacts from sandwave clearance and for it to be permitted in the DML the worst case scenario needs to be assessed including methodology, volumes, location of deposition and potential impacts. Natural England requires more detail on the volume and sediments to be removed.	The maximum depth of cable installation has been reduced from 5 to 3m following review of East Anglia ONE experience. Further detail on cable laying activities and the volume of sediment affected has been provided in ***Table 9.1 of this chapter*** and in ***Chapter 6 Project Description section 6.5.10.15*** with further detail / assessment on the disposal of sediments provided in ***sections 9.6.1.5*** and ***9.6.1.6*** of this chapter. Furthermore, a Site Characterisation Report (Windfarm Site) (Doc ref number: 8.15) and Site Characterisation Report (Offshore Cable Corridor) (Doc ref number: 8.16) have been submitted with the DCO application which sets out the proposed

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			disposal volumes, the disposal locations and potential impacts.
Natural England	26/03/2019 Section 42 Consultation Response	A few of the assumptions that could be easily justified are not clarified (e.g. disturbance from jack-up vessels is assumed to be 3000 m2; vessel trips for maintenance repair 687 per year). It is therefore difficult to understand on what these assumptions are based on and if they are adequate.	3,000m^2 per jack-up vessel operation is based the footprint of the spud-cans. Text has been added to ***section 9.3.2.2*** of this chapter.
Natural England	26/03/2019 Section 42 Consultation Response	Natural England advises that the sufficient survey effort should be undertaken to characterise the seabed pre-construction including identifying potential areas of *Sabellaria spinulosa* reef. Geophysical surveys have already been committed which Natural England welcome however additional ground truthing (e.g. DDV camera surveys) are needed to further understand if mitigation measures are fit for purpose. Even for EA1 it is proving difficult to avoid all areas of Sabellaria Spinulosa reef within the area. Therefore, the avoidance mitigation measure may not be fit for purpose especially if there is no space within the redline boundary. Rather than doing Annex I surveys to inform the application SPR propose: Pre-construction geophysical surveys will be undertaken to identify the potential areas of *Sabellaria* reef, any areas to be avoided (i.e. by micrositing of cable routes and turbine foundations) will then be agreed with the MMO in consultation with Natural England and secured through the Monitoring Plan and Annex 1 Mitigation Plan. This would therefore leave MMO open to having to make significant risk based decisions post consent with limited options to minimise the impacts to an acceptable level.	Clarification text has been added to ***section 9.3.3.2*** of this chapter which further details the anticipated nature of the pre-construction surveys.

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Natural England	26/03/2019 Section 42 Consultation Response	The Applicant is considering several different sizes of wind turbine between 250 and 300m blade tip height for the proposed East Anglia ONE North project. To achieve the maximum 800MW installed capacity there would be between 67 (250m) and 42 (300m) turbines. The remainder of the document refers to up to 53 x 300m turbines. This requires further clarification.	Clarification text has been added to ***section 9.3.2.1*** of this chapter***.*** The worst case scenario is based on wind turbines with a blade tip height of between 250 and 300m, therefore the worst case is based on either 53 x 300m or 67 x 250m wind turbines. This is reflected in the worst case calculations in ***Table 9.1***.
Natural England	26/03/2019 Section 42 Consultation Response	The potential for sand wave levelling (pre-sweeping) has been assessed as a potential strategy for cable installation to ensure the cables are installed at a depth below the seabed surface that is unlikely to require reburial throughout the life of the project. A final decision on this would be made post-consent, following acquisition of high-resolution geophysical data to inform final project design. The worst case scenario is defined from EA1 considering it is similar in extent and it is in the same area. Whilst Natural England supports options that reduces the likelihood of rock armouring being used, we believe that sandwave levelling would need further consideration in the application in relation to potential impacts to supporting habitats for the Outer Thames Estuary SPA that were not considered by the EA1 project. But we agree the size and scale of levelling could be informed by the EA1 preconstruction surveys, until detailed post construction surveys are available.	Additional assessment text has been added to ***section 9.6.1.5***.
Natural England	26/03/2019 Section 42 Consultation Response	Where percentage areas affected have been calculated, these are based on a total windfarm site area of 255 km^2 and an offshore cable corridor area of 123 km^2. The project description has no reference to an offshore cable corridor of 123 km^2 but only to a cable corridor maximum area of 180 km^2. It is explained, that it is the northern route, but there is no reference to this area in the project description chapter. The fact a smaller area is considered to calculated	Clarification has been added to ***Chapter 6 Project Description***.

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		percentage of affected areas is more precautious, and welcome.	
Natural England	26/03/2019 Section 42 Consultation Response	Boulder clearance around wind turbine foundations – 600 boulders of up to 300 mm diameter = 180 m^2. The numbers do not add up 180m^2 /600 boulders is an area of 0.3 m^2 per boulder, but coincidently (or not) 0.3m is the diameter of the boulders. 600 boulders with a diameter of 300 cm occupy an area of 42.4m^2. This requires further clarity.	This was an error and has been recalculated. ***Chapter 9 Benthic Ecology section 9.3.2.2*** and other relevant chapters.
Natural England	26/03/2019 Section 42 Consultation Response	Drill arisings are included within Increased suspended sediment. Consideration needs to be given to the possibility of drill arisings needed to be disposed of and not just as increased suspended sediment since not all drill arisings will be entering the water column. See main comment regarding disposal of sediment. This also has implications with disposal of potential contaminated sediments.	Inclusion of an assessment in ***section 9.6.1.6*** of this chapter on the potential impact of the disposal of spoil material generated from drilling
Natural England	26/03/2019 Section 42 Consultation Response	As noted in section 9.3.2.4.2 it is difficult to accurately estimate the volumes of sediment likely to be affected during cable installation however it would be much less than that affected during foundation installation. Therefore, this figure has not been calculated. Just because the volumes of sediment likely to be affected during cable installation are likely to be much less than during foundation does not justify the removal from the assessment.	Worst case estimates for the volume of sediment interaction from cable installation have now been included (see ***section 9.3.2.4.2*** of this chapter***)*** and the volumes have been incorporated into the relevant assessments.
Natural England	26/03/2019 Section 42 Consultation Response	Impact 6: Permanent habitat loss resulting from seabed preparation. Shouldn't this be permanent habitat change rather than loss?	Yes, the wording has been updated.
Natural England	26/03/2019	It is difficult to estimate the area of disturbance as the size of vessel anchors varies however a worst case of 647 trips to the site by work vessels has been assessed. Some	The majority of the referenced 647 vessel trips involved in the maintenance of the proposed East Anglia ONE North project would be from Crew

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Natural England	26/03/2019 Section 42 Consultation Response	The removal of cable protection would be agreed with the relevant authority at the time. It has been assumed that cable protection associated with cable crossings would be left in-situ. Unless we are mistaken, this doesn't take into account the 10% of cable protection required along the export cable lengths. And whilst it is recognised that rock armouring at cable crossings is least likely to be removed at decommissioning consideration should be given to the removal of cable protection more generally and the need to return the seabed to its pre impact state. Especially in areas that are supporting habitats for protected features.	It is assumed that all cable protection would be left *in-situ***.** Text in ***Table 9.2*** decommissioning impact 1 of this chapter and relevant text in ***Chapter 6 Project Description*** has been amended. Additionally, the worst case scenario for export cable protection has reduced from 10 to 5% of the cable requiring protection due to ground conditions which is based on East Anglia ONE experience.
Natural England	26/03/2019 Section 42 Consultation Response	Several commitments are included in this section, such as sediment would not be disposed of within 50 m of known *Sabellaria* reef. How are these embedded mitigation measures proposed to be secured? This has been specified for marine non-native invasive species: These commitments would be secured in the Project Environmental Management Plan (PEMP), but that is the only case.	Text updated in ***sections 9.3.3.2*** of this chapter to specify the plans through which the embedded mitigation commitments will be secured.
Natural England	26/03/2019	The use of anti-fouling paint might be minimised on subtidal surfaces, to encourage species colonisation on the	Noted

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	Section 42 Consultation Response	structures. This has not been discussed in the mitigation measures section 9.3.3	
Natural England	26/03/2019 Section 42 Consultation Response	Table 9.5 shows that the EA2 array sidescan sonar (SSS) survey provided complete coverage of the array and the northern cable corridor. However, there is also the cable corridor SSS survey with complete coverage of the offshore cable corridor. Does this then include the Northern and Southern cable corridor? Has the Northern cable corridor been surveyed twice (2017 and 2018)? This is not clear. Also the number of grab samples is stated to be 65 within the North cable corridor but looking at Figure 9.1 about half of the 65 sampling stations are exclusively within the south corridor. This table needs further clarification or amendment.	There were errors in this table. These have been corrected and the table has been simplified.
Natural England	26/03/2019 Section 42 Consultation Response	When characterising the overall former East Anglia Zone, reference is made to the figures in Chapter 9 – Benthic Ecology – Figures. However, apart from Figure 9.17, these figure only display results from a small portion of the former East Anglia Zone, the area that includes the East Anglia ONE North development area and as such it is not possible to visualise and confirm the statements made in the text regarding the East Anglia Zone, or put the results from the East Anglia ONE North development into context.	Additional figures have been included (***Figures 9.4b – 9.12b***) to provide the context of the offshore development area within the former East Anglia Zone.
Natural England	26/03/2019 Section 42 Consultation Response	The following analyses of the infaunal communities of the former East Anglia Zone uses 654 samples; 643 from the ZEA surveys, 49 from the East Anglia THREE and former East Anglia FOUR surveys and 39 samples from the East Anglia ONE offshore cable corridor survey. These numbers don't add up, requires further clarity.	This was an error. This has now been updated to 852 samples following the collation of the full suite of data used in the multivariate analysis.
Natural England	26/03/2019	Nemotoda should be Nematoda	Noted, text updated.

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Natural England	26/03/2019 Section 42 Consultation Response	Table 9.12 Faunal group J has no number of stations but it was observed in the Former East Anglia Zone.	This table has been deleted following completion of the multivariate analysis. See ***Table A9.4.3*** of ***Appendix 9.4*** for an equivalent table.
Natural England	26/03/2019 Section 42 Consultation Response	Inconsistencies exist between table 9.12 and text regarding occurrences of faunal groups in the EA 2 windfarm area: Table 9.12 Text in page 57 Group M - (27 locations); Group M - (27 locations); Group N - (1 locations); Group N - (5 locations); Group O - (1 location); Group O - (1 location); Group Q - (6 location) Group Q - (1 location).	Location incidences in bullet points in ***section 9.5.2.2*** of this chapter have been updated following multivariate analysis.
Natural England	26/03/2019 Section 42 Consultation Response	Data for faunal groups in cable corridor seen in figure 9.7 is not consistent with what is presented in table 9.12. Some groups displayed in the figure are not marked as present in the table (e.g. G, H or P).	***Table 9.12*** has been deleted and ***Figure 9.7*** has been updated following completion of the multivariate analysis. See ***Table A9.4.3*** of ***Appendix 9.4*** for an equivalent table to ***Table 9.12***.
Natural England	26/03/2019 Section 42 Consultation Response	Legend in Plate 9.3 is not complete.	Noted, plate updated.
Natural England	26/03/2019 Section 42 Consultation Response	While it is stated in paragraph 139 that many fish species (including sandeels) were recorded within the epifaunal data; these have been removed from this analysis, as fish are not considered part of the benthic community for the purposes of this assessment. If fish were included in the multivariate analysis it is not explained why. If only some	Fish species were indeed removed from the multivariate analysis, the characterisation of these groups was included in error. Bullet points in ***section 9.5.3.1*** of this chapter updated.

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		fish species were removed than this is not clearly stated either.	
Natural England	26/03/2019 Section 42 Consultation Response	Results from the side scan sonar survey carried out in 2018 (Bibby HydroMap 2018) show that there is no evidence of *Sabellaria* reef in the offshore cable corridor. Minor or relict patches of *Sabellaria* were found at a number sample locations (10) (see Appendix 9.3) however nothing which constitutes a reef was identified. Ground truthing of SSS data (e.g. DDV camera) was not conducted. Grab samples would not successfully be able to confirm the presence of *Sabellaria* reef. As such there is little confidence based on SSS and grab samples alone that *Sabellaria* reef is not present in the area. However, SPR has adopted a precautious approach and the presence of *Sabellaria* reef has not been ruled out. Further to this Natural England welcomes that a detailed pre-construction geophysical survey will identify any areas of *Sabellaria* reef which are required to be avoided in agreement with the MMO in consultation with Natural England and secured through the Monitoring Plan and Annex 1 Mitigation Plan.	Acknowledged, text in ***section 9.5.5.1.1*** of this chapter has been updated.
Natural England	26/03/2019 Section 42 Consultation Response	Table 9.13 - Recoverability has been categorised as both medium and moderate which are equivalent terms, better to use one or the other. Similarly both terms medium and moderate have also been used to categorised sensitivity, although in tables 9.10 and 9.11 (page 45) where sensitivity is described the term medium has not been included, just moderate.	The usage of both 'medium' and 'moderate' was to reflect the terms used in the original references from which these classifications were obtained, however it is acknowledged that for clarity and consistency it is easier if these are the same. ***Table 9.14*** updated.
Natural England	26/03/2019 Section 42 Consultation Response	According to Table 9.12 SS.SSa.IFiSa should have also been considered (biotope listed within faunal group M). This is also relevant for the following sections since reference to this table is done. On the other hand the biotope SS.SMx.CMx appears twice in the table.	***Table 9.14*** has been updated to include relevant information for SS.SSa.IFiSa and duplicate SS.SMx.CMx has been removed.

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Natural England	26/03/2019 Section 42 Consultation Response	While seabed preparation for the worst case turbine, offshore platform and meteorological mast foundation option (four-legged jacket with suction caissons) and for inter-array and platform link cable installation covers a relatively large area (6,208,999m^2) any direct effects such as injury or mortality to benthic individuals from project construction activities would only occur on a temporary basis and therefore direct impacts would be limited. The magnitude of effect is therefore considered to be low. It is wrong to state that mortality to benthic organisms is temporary – requires rewording.	Acknowledged, text in ***section 9.6.1.1.1*** of this chapter updated.
Natural England	26/03/2019 Section 42 Consultation Response	Any areas of *Sabellaria* reef in the offshore cable corridor identified via a detailed pre-construction geophysical survey which are required to be avoided (i.e. by micrositing of cable routes and turbine foundations) will be agreed with the MMO in consultation with Natural England and secured through the Monitoring Plan and Annex 1 Mitigation Plan. Natural England welcomes the approach however notes that it refers to the cable corridor only where turbines are not anticipated, should this apply to the whole development area instead? Furthermore, this geophysical survey should be ground truthed (e.g. DDV camera surveys).	Micrositing of wind turbine foundations will also be carried out. Clarification text added to ***section 9.6.1.1.2*** of this chapter.
Natural England	26/03/2019 Section 42 Consultation Response	The communities present within the northern coastal section of the Outer Thames Estuary SPA (see Figure 9.12). Figure 9.12 refers to *Sabellaria* reef distribution so it is not clear to which Figure this refers to and it would be beneficial to see data regarding coastal communities, which is currently lacking.	Reference should be to ***Figure 9.14*** – updated. Since the PEIR, Multivariate Analysis incorporating grab sample data from the offshore cable corridor has been undertaken to characterise the coastal communities. See ***Appendix 9.4*** and ***section 9.5.2.3***.
Natural England	26/03/2019	Up to 58 anchored vessel visits per month placed temporarily on site to maintain wind turbines. This is inconsistent with what is in table 9.12 and other sections of	This is a rounding error. For clarity, text in bullet points ***section 9.6.2.2*** of this chapter has been updated but the number of vessel trips left at 58 on

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	Section 42 Consultation Response	the text: Vessels using anchors also have potential to impact on the benthos and so up 687 trips to the site per annum for work vessels has been assessed. (58 x 12 = 696). Moreover Paragraph 272: During operation vessel activity (up to 657 trips per annum).	the assumption that this would be the maximum number of trips in any particular month. However, over the course of a year, as a worst case, it has been assumed that there could be up to 687 vessel trips to the site The 657 trips in paragraph 272 (new paragraph 288) was an error and has been corrected to 687.
Natural England	26/03/2019 Section 42 Consultation Response	9.6.2.2 Para. 244 (EA2) Para. 242 (EA1N) Assessment of impacts of events that are anticipated to occur every five year is done providing average impacted areas per year. This is misleading since it will not happen in that way, a bigger area will be impacted every five years. It would be preferable to see the total impacted area, stating this would happen every five years and then if needed for further calculations the average per year can be provided as well.	Text has been updated in ***section 9.6.2.2*** of this chapter to include total disturbance footprint for each maintenance activity as well as average disturbance over the anticipated frequency of occurrence.
Natural England	26/03/2019 Section 42 Consultation Response	It would be useful to know which projects were scoped out for cumulative impact assessment and why.	As stated in ***section 9.7***, all projects that are not planned to be constructed at the same or similar time or which are greater than 50km from the offshore development area were screened out of the cumulative impact assessment.
Natural England	26/03/2019 Section 42 Consultation Response	Potential Interaction between impacts Operation: The two halves of the matrix should be mirrored images and that is not the case e.g. Increased suspended sediment x Physical disturbance is different from Physical disturbance x Increased suspended sediment. Hard to know which is the correct assessment.	Acknowledged, ***Table 9.19*** of this chapter has now been updated.
Natural England	26/03/2019 Section 42 Consultation Response	Interactions: Potential interactions are presented as a table of yes or no, however those categorised as yes have not been further assessed. Also regarding operations it is not	The worst case impacts assessed within the chapter take these interactions into account and therefore the impact assessments are considered conservative and robust. It is therefore not considered necessary

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		clear on some cases if there is or not an interaction (see comment above).	to conduct a separate assessment of the potentially synergistic impacts.
Eastern IFCA	12/03/2019 Section 42 Consultation Response	Micrositing the offshore cable route to avoid *Sabellaria* spinulosa reef Although *Sabellaria* reef is not a designated feature of the Outer Thames Estuary SPA, it is an Annex 1 protected species and the cable corridor could result in the permanent loss of seabed habitat utilised by the species from within the SPA. Eastern IFCA defer to Natural England to provide formal conservation advice, and appreciate, as highlighted in the PEIR, ongoing discussions with Natural England will agree suitable mitigation to reduce potential impacts on S. spinulosa during cable installation. Eastern IFCA support and strongly encourage the decision to use micrositing within the identified offshore cable corridor for known areas of *S. spinulosa* reef identified in the footprint following the pre-construction surveys and Natural England's formal advice on the distribution and extent of *Sabellaria* reef in this area.	Noted
Eastern IFCA	12/03/2019 Section 42 Consultation Response	BIO1 and MPA1 Any activity that disturbs the seabed has the potential to have negative impacts on habitats and biodiversity. Aspects of offshore wind farm construction, operation and decommissioning that this community is sensitive to include temporary disturbance to and/or loss of habitat and changes in water quality. Impact extent depends on habitat type, coupled with the nature and extent of the disturbance. The PEIR identified that the offshore cable corridor is dominated by two faunal communities, the polychaete worms *Nephtys cirrosa* and *Spiophanes bombyx*, found on circalittoral coarse sediment. Biotopes identified include *Sabellaria spinulosa* on circalittoral coarse sediment within the offshore cable corridor, with results of the ZEA surveys	Noted

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		indicating the potential for aggregations and potentially reef. Further biotopes include *Mediomastus fragilis* and venerid bivalves in circalittoral coarse sand and gravel, and circalittoral mixed, silt and fine sediments.	
Eastern IFCA	12/03/2019 Section 42 Consultation Response	CAB1 Using cable armouring instead of burial increases the likelihood of adverse environmental and fisheries impacts. If cables are left unburied, the presence of exposed export cable can result in snagging of fishing gear. Aside from damage to cables, this poses a significant safety risk, particularly for small vessels operating in the area, and could result in semi-permanent exclusion of fishing activities from the area. This is therefore a concern for Eastern IFCA. Recently, Eastern IFCA have become aware of offshore wind farm developments that have required application for additional cable reburial/remedial works from those anticipated when the licence was first granted. Evidence has shown that cables are resurfacing primarily due to sediments that are unsuitable for cable burial not providing sufficient hold for the cable. This has resulted, in some cases, in extensive lengths of cable resurfacing with snagging hazards for vessels fishing in the area and repetition of the impacts caused to sensitive habitats through the reburial of exposed cables. Eastern IFCA would like to highlight that events of this nature have the potential to cause significant impacts on both habitats and commercial fisheries, therefore we would request that careful consideration is applied prior to establishing the exact cable route and method of burial.	Cables will be buried as far as possible using techniques most suitable for the ground conditions in the particular installation area. Where areas of the sea bed in which there is high potential for mobile sediments (e.g. in and around sand waves) are identified, sand wave levelling will be carried out and the cables buried below the lowest level of the sea bed, as far as possible, in order to prevent the cables resurfacing. In areas where cables are unable to be buried due to ground conditions or because of cable crossings, appropriate protection measures will be used which will be implemented through the Scour Protection and Cable Protection Plan.

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