A Consultation

A.1 Introduction

This appendix contains the following information / documentation on consultation to date:

- Summaries of how each of the comments raised in the Scoping Opinions, and for the draft ES review, have been addressed are presented in Table A.1 and Table A.2 respectively. A collaborative approach was taken by the MMO and NRW, who sent back single / identical sets of comments; and
- Details of the wider consultation are provided in Table A.3.

As noted in Section 4.6, prior to receipt of the formal scoping opinion, two regulator meetings also took place, one on 31 July 2018 in London with MMO and its advisors, and one on 1 August 2018 in Cardiff with NRW and its advisors. At these meetings, TM and HAM presented background on the application, and ABPmer set out the proposed approach to the CIS and EIA. Furthermore, a teleconference took place on 30 July 2019 to discuss draft ES comments (attended by TM, HAM, ABPmer, the MMO, NRW, Natural England and Cefas). Comments raised by the regulators and their advisors during these meetings have been highlighted in the individual technical sections of the main ES (i.e. Sections 5 to 18, in the first sub-section of each main section).

A.2 Summary of Comments Addressed

Table A.1 Consultation log for joint MMO/NRW scoping opinion

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
General	The Environmental Statement (ES) must include a non-technical summary	Non-Technical Summary included in ES	Preface
	Statements and conclusions included in the ES should be supported by recent empirical evidence or scientific publications. We welcome the use of the studies mentioned in the scoping report. If it is necessary to make conclusions based on expert judgements this must be clearly described and discussed in the text. Furthermore, the level of uncertainty/confidence associated with each significance assessment must clearly present the type of evidence used and state how it was incorporated into the assessment.	Text identifies all sources of information and notes where expert judgement has been used to inform a decision.	Throughout ES
	Standards from the BMAPA Good Practice Guidance should be taken in consideration, including the use of Active Dredge Zones (ADZs) within any licensed dredging footprint, in order to minimise environmental impacts. This management process ensures that dredging activity is spatially delimited which results in various benefits such as limiting the spatial extent of potential impacts and restricting interactions with other users of the sea and seabed. By limiting the area of licensed seabed to be worked at any one time, the exact location and extent of dredging can be communicated clearly and regularly.	The BMAPA Good Practice Guidance is referred to and taken into consideration	Section 3.5, 20, and also in relevant individual assessment sections.
	Further data may be available from Swansea Bay Tidal Lagoon which could benefit the ES.	Noted and the most up to date information available was used throughout the ES	Where applicable (see 'data sources' sections in individual sections.
Project Description and Need	The ES must include analysis of the activity that has occurred during the current licence period for Area 470, including resource depth assessment accompanied by maps showing the location and intensity of dredging operations over the same time period, as well as any monitoring information that is available (summary of the monitoring results for Area 470).	Summary of the previous activity within the area has been included	Section 2.2
	The ES must expand on the consideration of other marine sources as an alternative; the ES must include adequate justification for the additional tonnage proposed to be extracted, given the additional capacity recently licensed at Culver. The ES must include adequate justification for the proposed operation and for the proposed extraction rate in the context of current operations in the Bristol Channel area and the aggregate demands in the South West and South Wales regions.	Detailed project description given with consideration of alternatives and a clear reason for the need to Area 531.	Section 2.3
	The ES must make clear the relationship of the proposal with current marine aggregate dredging in Area 470, specifically making clear if the intention is that the proposed work will replace the current dredge activity under Area 470.	Intention is for Area 531 to extend and replace Area 470	Section 1.1
Legislative Framework and Requirement for EIA	The ES must include an assessment of the proposal's compliance with all relevant plans and policies. Further information regarding Marine Plans in English waters can be found here: http://mis.marinemanagement.org.uk/south-west and https://www.gov.uk/government/collections/marine-planning-in-england.	ES considers all plans and policies and how the project complies.	Section 1.2, Appendix B
	As there is currently no English Marine Plan in place covering the proposed development, the Marine Policy Statement 2011 which sets the direction for decisions in such marine areas must be used within any associated marine licence application, with particular reference to each relevant section.	Marine Policy Statement used throughout the ES.	Throughout, incl. Sections 2.1, 2.3, Appendix B

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Legislative Framework and Requirement for EIA	We advise that Welsh Government has recently consulted upon a draft Welsh National Marine Plan (WNMP), and as part of this the withdrawal of the interim Marine Aggregates Dredging Policy. Welsh Government is now working to finalise and adopt the plan. In preparation for the adoption of the plan, we recommend that any EIA undertaken reviews the contents of the draft Welsh National Marine Plan, and the Environmental Statement considers how the project complies with the draft Policies, or the final policies once the plan is adopted	Draft WNMP reviewed and referenced	Sections 2.1, 2.3 and Appendix B
	The "Legislative Framework and Requirements for EIA" section of the ES must include the relevant legislation relating to bio-security, for example Schedule 9 Section 14 of the Wildlife and Countryside Act 1981 (as amended) and the EU Invasive Alien Species Regulation.	Added reference to these legislations	Section 8.2.1, Appendix B
Physical and Coastal Processes	The Scoping Report states that the EIA will consider evidence, including: a) Baseline characterisation of the local hydrodynamics; b) Impact assessment for two wave scenarios (10 in 1 and 1 in 200 year return interval); c) Impact assessment of tidal current impacts; d) Impact assessment of sediment mobility, and; e) Cumulative effects of dredging in the Severn Estuary.	Points a-e considered under physical processes section.	Section 5,
	We consider that all the potential coastal processes impacts of extracting sediment in this area are adequately scoped in by points a-e above.	Points a-e considered under physical processes section.	Section 5,
	The ES has scoped out plume modelling due to the low fine content of the sediment and the high turbidity of the Severn Estuary, however the Scoping Report does not define 'fine' and 'medium' sand. The ES must state the scale used and clarify this.	See Section 2.1, in bullet relating to SIZ (MarineSpace, 2015 ref.)	Section 2.1
	With reference to the Coast Protection and Flood Defence cell (Section 4.8 of the Scoping Report) the summary appears to have omitted a vital stage between Bullet points 2 and 3. The missing stage must include site specific impacts along the coast, before considering the potential for coastal change on current policies from the Shoreline Management Plan (SMP and other strategies (Bullet 3). This apparent omission may potentially be addressed in the coastal process assessment however, the applicant must clarify this.	Site specific impacts along the coast considered under physical processes impact assessment	Section 5.2
	We note that the applicants have requested permission to carry out anchor dredging, which may create conical depressions. The ES must provide robust evidence to show this dredging method will not have a significant impact on marine hydrodynamic processes (e.g. currents, waves).	Given the local conditions, such pits would be expected to infill rapidly. This has not been separately assessed with regard to processes, as this would only be practiced occasionally, and as, whilst deeper, the depressions are also smaller, and effects would thus be very localised and temporary. A statement re. anchor dredging and habitat impacts has been included in Section 8 (Benthic Habitats and Species).	Section 8.3.3
	We understand that existing data will be used to inform the ES as much as possible, but the ES must be informed by studies of hydrodynamic and sedimentary regimes which consider Area 531 specifically and potential cumulative effects with the other licences within the Severn Estuary.	The latest full extent data from the 2018 survey (Titan, 2018) was utilised in both the coastal processes and archaeological assessments.	Section 5.1; Section 14.1

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Physical and Coastal Processes	Where existing data is used, this must be the most up to date available data. The numerical outputs of any models must be discussed with respect to significance in terms of impact for each environmental receptor. For example, if the model predicts a 5% change in wave height at a location, a discussion of the significance of the modelled change to sediment stability, particle size distribution and morphology must be presented. In addition, a detailed analysis of the potential impact of the material extracted must be included.	Modelling data considered throughout physical processes impact assessment	Section 5.4
	The Severn Estuary is characterised by extensive sedimentary features which play key biological and physical roles in both the littoral and sub-littoral domains. The strong tidal currents and high mobility of sediments in this region suggest that there is likely to be a degree of connectivity between features. As a consequence it is possible that dredging may result in environmental impacts at considerable distance from the active dredge zone. The ES must take into account the linkages between aggregate dredging and marine geomorphology. Consequently it is important that the spatial scale of the assessment takes this in consideration and incorporates all areas potentially impacted.	The ES considers the effects on bedforms within the Severn Estuary	Section 5.4.4
	It is noted that the 2018 Welsh Grounds survey is to cover the full extent of Area 531; the increased survey area must include a buffer zone around the south west and southern borders in line with other dredge site surveys. The NRW annual bathymetry surveys are single beam surveys. As these were required due to a condition in the NRW licence, data will mostly be for the welsh side of the sandbank. We would like to see this data presented in the ES.	100 m buffer included in surveys, as shown in relevant figures	Figure 3.1, Figure 3.2 Figure 5.3
	The area without data to the south west of Area 531 in Figure 3 of the ES appears to have less resource thickness than areas to the north and east; and it is noted from Figure 2 that there is no vibrocore data for this area. The ES must state how the resource thickness and type will be defined.	Methodology outlined in Section 3.1	
	The proposed modelling refers to modelling of baseline, post dredging and with a future climate change scenario. The ES must include an assessment on the future climate change scenario both with and without dredging applied.	Included	CIS, Section 5.3 of report
	The main concern with respect to the morphology of Middle and Welsh Grounds (and the associated knock-on effects on coastal processes) is the cumulative effect of aggregate extraction arising from all current licences and applications. The ES must include the post-dredge scenario that includes all extraction.	The ES considers the cumulative effects of aggregate extraction from current licences in the vicinity	Sections 5.3, 5.4
	The ES must clearly describe the assumptions that have been made regarding sandbank morphology post dredging; for example, will the volume dredged be distributed evenly across the licence area and/or evenly across the Middle and Welsh Grounds? Any other scenarios must be stated in the ES.	Assumptions used are discussed within the CIS methodology	Section 5.3
	We note in Section 4.8.2 of the ES that the potential supply of aggregates for beach nourishment has been scoped in as a positive impact pathway. However it is not clear how this will be assessed in the ES and balanced in terms of overall impact unless specific tonnages are assigned for this purpose and recipient locations are identified. The ES must therefore include specific tonnages and proposed locations for beach nourishment.	Not possible to estimate future demand. Impact pathway retained.	Section 15.3
	Section 4.8.3 of the ES states that further work is to include a review of the potential net lowering of the seabed as a consequence of the aggregate extraction from Area 531. The assessment must include the whole of the Middle and Welsh Grounds and the inclusion of dredging activity at Bedwyn Sands and North Middle Grounds, in order that cumulative effects can be assessed.	Cumulative effects of all aggregates dredging considered within the ES	Section 5.4.5

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Nature Conservation and Ecology	The potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement must be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EcIA) have been developed by the Institute of Ecology and Environmental Management (IEEM) and are available on their website. EcIA is in the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.	Both sources used in the assessment of potential impact and effect	Throughout the ES, in each receptor section.
	We consider that this proposal is not directly connected with or necessary to the conservation management of the site and has the potential to significantly affect features of the sites listed below. A Habitats Regulations Assessment will therefore be required to determine whether there will be a likely significant effect on the European sites listed below. Given the limited information available at this stage on the operational impacts, we are of the view that, at present, it cannot be excluded, on the basis of the objective information supplied in the Scoping Report, that the application will have a likely significant effect on the internationally designated sites listed below	An Appropriate Assessment has been completed	Appendix C
	We recommend the inclusion of a separate section of the ES to address impacts upon European and Ramsar sites entitled 'Information for Habitats Regulations Assessment' as this will assist the Marine Management Organisation and Natural Resources Wales to determine whether the proposal is likely to have a significant effect on the European sites and to undertake an appropriate assessment if required.	An Appropriate Assessment has been completed	Appendix C
	The works, as set out in the information supplied in the Scoping Report, are near to the following designated SPA: • Severn Estuary SPA The ES must thoroughly assess the potential for the proposal to affect the designated site listed above and must identify such mitigation measures, as may be required in order to avoid, minimise or reduce any adverse significant effects.	Ornithological features of the Severn Estuary SPA have been fully assessed	Sections 7 and 10 (Ornithology); 20 (mitigation summary table), and Appendix C
	We note the northern edges of Area 531 are located on the designated Intertidal Mudflats and Sandflats which are used by SPA birds as supporting habitat at low tide. Intertidal mudflats and sandflats are important feeding grounds for water birds in the Severn Estuary, therefore, potential impacts on the qualifying features of the SPA must be assessed.	Only SIZ contains minute area of intertidal. Impacts assessed in Section 8, under benthic habitats.	Section 8 (Ornithology) and Appendix C
	A capping layer as described in the BMAPA Good Practice Guidance should be applied with resource exclusion zones applied to areas of resource thickness either below or reaching 0.5 m depth. This 'capping layer', where sediments are not to be dredged completely but allowing a layer of at least 0.5 m material to remain, should aid re-colonisation.	Noted	Section 3.5, throughout where applicable
	The works, as set out in the information supplied in the Scoping Report, are near to the following designated Special Area of Conservation: • Severn Estuary SAC The ES must thoroughly assess the potential for the proposal to affect the designated site listed above and must identify such mitigation measures, as may be required in order to avoid, minimise or reduce any adverse significant effects.	Designated features of the Severn Estuary SAC have been fully assessed	Sections 7, 8 (benthic) and Appendix C

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Nature Conservation and Ecology	The proposed extraction area lies entirely within the Severn Estuary SAC, which includes subtidal sandbanks and intertidal sand and mud as features. There are two other licensed dredging areas within the SAC, North Middle Ground (Area 455/459) and Bedwyn Sands, both extracting up to 250,000 tonnes annually. In addition to this, dredging at North Bristol Deep (Area 470) has been extended until 2020. In the Scoping Meeting on 31 July 2018 with the MMO it was confirmed that Area 470 will be merged into Area 531, with the maximum tonnage dredged being the tonnage permitted under Area 531. An assessment on the impact of the combined removal of material from the extraction area on the SAC features must be provided in the ES. The sediment budget and potential seabed morphology changes should be clearly defined in the ES.	Cumulative and in-combination effects of these project have been fully assessed	Section 19 (cumulative) and Appendix C
	The works, as set out in the information supplied in the Scoping Report, are near to the following designated Ramsar Sites: • Severn Estuary Ramsar Site The ES must thoroughly assess the potential for the proposal to affect the designated sites listed above and must identify such mitigation measures, as may be required in order to avoid, minimise or reduce any adverse significant effects.	Designated features of the Severn Estuary Ramsar Site have been fully assessed	Sections 7 and 10(Ornithology); 20 (mitigation summary table), and Appendix C.
	We can confirm that the proposed works are located within the vicinity of the following Sites of Special Scientific Interest: • Severn Estuary SSSI The ES must include a full assessment of the direct and indirect effects of the proposal on the features of special interest within this site and must identify such mitigation measures, as may be required in order to avoid, minimise or reduce any adverse significant effects.	Designated features of the Severn Estuary SSSI have been fully assessed	Sections 7, 8 (benthic), 10 (ornithology).
	The ES must thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities to conserve and enhance biodiversity. Further information on Habitats and Species of Principal Importance is available via the following link: http://publications.naturalengland.org.uk/publication/4958719460769792 In line with point 3.4.1 Environment Act (Wales) Section 6 and 7 replaces the Natural Environment and Rural Communities (NERC) Act 2006 within Wales. Section 7 – list of the living organisms of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This interim list, is exactly the same as the previous list under Section 42 of the NERC.	All principle species and habitats that are likely to be present in the wider study area have been fully assessed.	All appropriate receptor sections.
	The ES must demonstrate that the proposal will avoid adversely impacting the most important wildlife areas within the area of the project, and if possible provide opportunities for overall wildlife gain.	Mitigation and monitoring has been detailed fully.	Section 20 (mitigation)
	We advise that the report's invasive and non-native species list is incomplete. The ES should undertake a data pull of all available Invasive Non-Native Species (INNS) data to ensure adequate biosecurity is employed.	Noted, and updated to include all species present.	Section 8 (benthic)
	We note the applicant is seeking consent to undertake hopper washing. The activity can act as a pathway for the introduction of invasive non-native species from residues present in the hopper, particularly if washing is carried out in a different region to where the cargo originally derived. As indicated in the Biosecurity Plan	See biosecurity plan for the Bristol Channel (and Celtic Sea) Region, which includes Area 531.	BMAPA and RMA (2018), referenced in Section 0

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Nature Conservation and Ecology	Guidance notes, the ES must include a biosecurity risk assessment/management plan that includes measures to address the issues of hopper water and ballast water exchange. The assessment must also include an indication of specific hopper washing areas and origin regions allowed.		
	Section 4.4.3 of the Scoping Report states the following: "No dedicated marine ecology surveys are proposed for the EIA phase for Area 531, nor is it thought necessary to review geophysical data for the presence of reefs. Rather, it is considered that sufficient data is available for a high level classification of the area (assuming that pre-dredge sediment characterisation surveys will be undertaken and aligned with the Cefas methodology in relation to Regional Seabed Monitoring Programmes (Cooper and Koch, 2013))". The ES should include acknowledgement that *Sabellaria alveolata* reefs are highly mobile. In a Scoping meeting on 31 July 2018 it was confirmed that recent side scan data would be able to identify the presence of reef features, along with future RSMP grab samples. This data must be included in the ES. Should the recent sidescan sonar data identifies the presence of reefs, exclusion zones should be implemented as a precaution prior to the RSMP grab samples analysis.	As far as we understand, it was agreed to defer this analysis to the pre-dredge stage, due to the highly mobile nature of the sediments.	See Section 8.3 for recommendation, summarised in Section 20.1
	Grab samples data from an Environment Agency survey carried out in 2016 suggests presence of Sabellaria in close proximity to the proposed dredging area, particularly between Newport and Clevedon on the southern edge of the Middle Grounds. Location point data can be requested from the Environment Agency data services.	Data requested from Environment Agency, and included in analysis.	Section 8 (benthic); Figure 8.3
	Intertidal habitats and saltmarsh are listed in the ES but there is no further discussion of these features. All impacts on these receptors must be stated in the ES, including any indirect impacts, and which arise from changes in coastal processes.	Intertidal habitats have been included in Section 8 and the AA (Appendix C).	Section 8.3.1 and Appendix C
	There is no specific mention in the ES of the potential for the proposal to reduce the extent of habitat feature if the morphology of the sandbank is altered; this must be assessed in appropriate detail in the ES	Intertidal habitats have been included in Section 8 and the AA (Appendix C).	Section 8.3.1 and Appendix C
	During dredging operations, marine mammals (including pinnipeds (seals), cetaceans (whales, dolphins and porpoises)), and elasmobranchs (sharks and rays), may exhibit avoidance behaviour leading to potential exclusion from important areas for feeding, breeding or migration. This combined with longer term changes to the seabed and associated food resources may have an impact on marine mammal and elasmobranch populations. The ES must refer to the latest research into potential noise disturbance effects associated with dredger operations. There have been two Marine Aggregate Levy Sustainability funded (MALSF) projects associated with noise disturbance which can be found at http://webarchive.nationalarchives.gov.uk/20140108014407/http://www.cefas.defra.gov.uk//alsf.aspx	Noise disturbance on fish and marine mammals is fully assessed, including using these studies amongst others	Section 9 (elasmobranchs), 11 (mammals)
	For characterisations purposes we recommend referring to the following publications to describe the potential distribution of marine mammals in the two application areas: • SMRU (2006). Small Cetaceans in the European Atlantic and North Sea (SCANS-II). Life Project Number: LIFE04Nat/GB/000245. http://biology.st-andrews.ac.uk/scans2/inner-finalReport.html • Reid, J.B., Evans, P.G.H. and Northridge, S.P. (2003). Atlas of Cetacean distribution in north-west European waters. http://www.jncc.gov.uk/page-2713 • Data from site specific surveys conducted as part of the EIA procedure for offshore developments in the vicinity of the application areas (e.g. offshore wind farms such as Atlantic Array).	Noted and included	Section 11 (mammals)
	We recommend the inclusion of monitoring the benthic ecology receptors within the Regional Seabed Monitoring Programme (RSMP).	Noted	N/A

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Nature Conservation and Ecology	The scoping report lists the possible source of data that the applicant will be consulting in order to characterise the ecological receptors that should be considered for the Environmental Impact Assessment (EIA). The applicant must provide the site-specific data (macrofauna and sediment particle size) arising from the monitoring in the Area 470 to Cefas (keith.cooper@cefas.co.uk) so they can be incorporated into the wider Regional Seabed Monitoring Plan (RSMP) dataset and displayed in the Marine Aggregates App (https://www.benthosapps.net/ma_tool/). If a licence is determined, this will allow the developer to produce a RSMP baseline report which would be beneficial to place the fauna and sediment characteristics found within the boundaries of the Area 531 in a regional context.	Noted	N/A
	No receptors were selected in the Scoping Report, only data sources. Provided that the relevant information is used (see 3.6.2 above), we are confident that the appropriate receptors will be scoped in. Any decision to scope receptors or impacts out of the assessment will have to be fully justified in the EIA.	Noted, no benthic receptors were scoped out.	N/A
	The Scoping Report cites various site-specific reports (Henderson and Bird, 2010; HR Wallingford, 2003; Emu, 2001) to characterise the surrounding environment in terms of fish abundance and diversity. It is stated that "Dedicated herring and sandeel assessments will be included; these will apply the assessment methodology developed by the Marine Aggregate EIA Working Group in 2013". The Anglian regional assessment is currently being updated with a 2018 baseline and once this is finalised and agreed with the MMO, Cefas, Natural England (NE) and Joint Nature Conservation Committee (JNCC), then all the other aggregate regional assessments will be updated. We recommend that if the Bristol Channel assessment is updated with the 2018 baseline and completed in time for the Environmental Impact Assessment (EIA) then it is included within the EIA.	Updated assessment is not yet available and is therefore not included.	N/A
	The ES must clearly define the survey sampling methodology including the timings, gear type, sampling duration etc. and acknowledge the limitations and selectivity of the survey methodologies as well as any data sets used to support the application.	The ES includes a note regarding the limitations of the survey methodologies	Section 9.3
	Sampling methodology and gear selectivity can influence survey results and associated determination and analysis of fish assemblages present in the sampling location and wider vicinity, therefore any such data used or interpreted to inform the EIA should be sufficiently explained.	Data used in the ES fisheries baseline is linked to the survey methodologies and explained.	Section 9.2
	Additional sampling must be considered to fill knowledge gaps, if the evidence base is determined to not be sufficient to characterise the fish ecology at the site. Any proposed monitoring should be considered when undertaking any sampling to inform the characterisation and setting the baseline for fish ecology, as this may influence data collection techniques. The applicant has stated that they will seek stakeholder engagement with fishermen and Devon and Severn IFCA, and some of this liaison may help to fill some of the knowledge gaps.	There are no perceived significant knowledge gaps following review of available data and consultation.	N/A
	It is noted that the following sources intend to be used within the ES; MMO, Devon and Severn Inshore Fisheries Conservation Agency (IFCA) and Environment Agency (EA)/ Natural Resources Wales (NRW) transitional and coastal waters (TraC) fish surveys, Vessel Monitoring System (VMS) and other vessel surveillance data, the Area 470 Environmental Statement (ES), and Severn Tidal Power SEA and Hinkley Point C and consultation with fishermen. These sources are considered appropriate.	Noted	N/A
	If a licence is determined, an RSMP-compliant pre-dredge survey must be undertaken to provide a baseline for future monitoring and assessment. Analysis of particle size from grab samples in this type of survey could inform the site-specific assessment on habitat suitability for sandeel and herring spawning habitats.	As a precautionary assessment presence of sandeels is considered as an impact pathway under a specific assessment	Section 9.3.4

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Nature Conservation and Ecology	Section 4.14 of the ES states: "Given the distance from receptors and the existing level of aggregate extraction in the area, there will be no significant lighting effects due to the dredger activity. Therefore, this issue has been scoped out." The applicant must clarify whether this refers to impacts upon human populations as indicated by its location in the report. There is no mention in Section 4.4.2 concerning the potential impact of artificial light on fish receptors, so the applicant must clarify their assessment concerning this. Whilst resident fish species may be somewhat sensitised to artificial light from existing and previous dredging activities, conversely, the consideration of cumulative impact and increased vulnerability should be made, particularly concerning migratory fish species which may be especially sensitive. The ES must include at least an assessment of the potential impact and sufficient justification as to the scoping decision.	The ES considers the potential impact of lighting on fish.	Section 9.3.3
	The primary concern for spawning, nursery, foraging and overwintering grounds is related to seabed removal and resuspension of sediments, particularly for the benthic spawning species herring. They can be considered to be very sensitive to such impacts given that their eggs are deposited *in situ* on the seabed and require specific substrate for spawning. Consequently maintaining spawning habitat integrity could be a concern. Changes in water quality are likely to arise given the increased sediment suspension in the water column. This potentially could disrupt any migratory activity within the estuary undertaken by anadromous and catadromous fish. Anadromous fish of conservational and ecological importance which would be affected by this include; Atlantic salmon, sea trout, seabass; twaite shad, allis shad, river lamprey, sea lamprey and European eel (Anguilla anguilla). The Scoping Report has accurately identified these receptors and must ensure that they will be appropriately assessed.	Impacts on fish from increased SSC are assessed in Section 9.3.2, incl. herring and migratory species	Section 9.3.2
	The ES must consider the increased vulnerability of seabass in the EIA, as fishing restrictions are still in place for the UK given the current health of the stock. This is particularly relevant when considering the assessment of any cumulative stress. Seabass have been placed under special protection measures as scientific advice has clearly identified the need to drastically reduce catches of this species, following an increase in the fishing pressure and a reduction in reproduction (Marine Management Organisation, 2018).	Increased vulnerability acknowledged in Section 9.3 introduction.	Section 9.3
Commercial and Recreational Navigation	There is an oyster fishery in Porlock Bay. Concerns were raised by Porlock fishers previously regarding the potential impacts from dredging at Area 526 near Steep Holm. We advise that the applicant must consult with the Porlock Bay Oyster fishers. The ES must include an assessment of any impacts on Porlock Bay Oyster fishery, including an assessment of in combination effects of existing and planned marine aggregate dredging in the Severn Estuary.	Porlock Bay Oyster fishery contacted and scoping out justified in Section 12.3 introduction.	Section 12.3
	We note that the Scoping Report proposes to use MMO landings statistics (incorrectly labelled 'catch data' in the report), IFCA, Welsh Government and VMS data. The report will also make use of the Area 470 ES, Severn tidal power SEA, and Hinkley Point C ES.	Noted	N/A
	The ES must include an assessment of the impact of the proposal on commercial fisheries, including any navigational impacts.	Impacts on commercial fisheries are specifically considered in the ES and included as part of the navigation assessment	Section 12 and Section 13
	We note that the Scoping Report states an assessment on the effects of dredging on the identified navigational impact pathways will be carried out. We advise that that a Navigational Risk Assessment (NRA) must be undertaken as part of the EIA. The NRA must include a baseline study, which summarises the available background navigation data and focuses on any key shipping routes and / or anchoring areas and fishing activity in the vicinity of the proposed dredging area.	A baseline and impact assessment for Commercial and Recreational Navigation is included in the ES	Section 13

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Commercial and Recreational Navigation	The NRA must also include appropriate risk mitigation measures and a detailed methodology, to ensure the risk remains reduced to 'As Low As Reasonably Practicable' (ALARP). This must include assessments on collision risk, emergency response, marking and lighting during dredging activities and the promulgation of Notices to Mariners.	Clarified in impact assessment sections	Section 13.3
Marine Archaeology	We consider that this project has the potential to impact the marine historic environment. The impacts are likely to be direct, which would result in permanent physical changes to the historic environment, and potentially indirect, through changes to localised environment.	Noted, included in the impact assessment in the ES (undertake by Wessex Archaeology)	Section 14.4
	The ES must include a common approach to the analysis of potential impact on historic environment assets and any necessary mitigation north and south of the boundary between English and Welsh waters.	The ES includes assessment using the same methodologies both north and south of the England-Wales boundary	Section 14
	We are content with the outline methodology set out in Section 4.7.1. The methodology must combine a desk-based review with new marine geophysical survey data gathered specifically for this environmental impact assessment.	The ES baseline includes a review of survey data for Area 531	Section 14.2
	In Section 4.7.3 there appears to be confusion with regard to the sources of historic environment information for Wales. We advise that information on the following website defines the records on historic assets maintained in Wales (http://cadw.gov.wales/historicenvironment/recordsv1/?lang=en).	Noted	N/A
	Please also note the following information sources which must be used to inform the EIA: • The National Record of the Historic Environment is the record maintained by Historic England. The correct name for the Welsh equivalent which should also appear here is the National Monuments Record of Wales (https://rcahmw.gov.uk/about-us/). • The correct form of reference to the records maintained by the Welsh Archaeological Trusts should, in this instance referring to a marine aggregates areas in the upper Severn estuary, be the Regional Historic Environment Record maintained by Glamorgan Gwent Archaeological Trust (http://www.ggat.org.uk/her/her.html) • Online access to the Regional Historic Environment Record maintained by Glamorgan Gwent Archaeological Trust is facilitated by Archwilio (https://www.archwilio.org.uk/arch/). Online access to the National Monuments Record of Wales is facilitated by Coflein (http://www.coflein.gov.uk/). Neither of these online datasets are designed to be used for commercial or development management purposes and doing so puts commercial organisations in breach of the access agreements and terms of use. Glamorgan Gwent Archaeological Trust and the Royal Commission on Ancient and Historic Monuments of Wales must be contacted directly to obtain up to date and fully referenced data to support the development of the EIA. • Access to Cadw's records on scheduled monuments, listed buildings, registered landscapes of historic interest, protected wrecks and World Heritage Sites is facilitated by Cof Cymru (http://cadw.gov.wales/historicenvironment/recordsv1/cof-cymru/?lang=en). The information provide online is also covered by Terms and Conditions including attribution under Open Government Licence.	Noted, and included within the baseline	Section 14.2
	Any ES submitted in support of this licence application must address the requirements of Environmental Impact Assessment (EIA), which includes the historic environment. In brief outline, the historic environment comprises features that may be affected by the proposed developments include the remains of wreckage from vessels and aircraft, and the archaeological evidence of human activity on relic land surfaces now submerged by marine transgression. As such, submerged prehistoric landscapes may contain palaeo-environmental deposits, and evidence of occupation in the form of artefacts and associated buried archaeology.	Noted, included within the ES impact assessment	Section 14.4

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Marine Archaeology	An archaeological desk based assessment must be commissioned from a specialist marine archaeological contractor working to recognised professional standards, such as those defined by the Chartered Institute for Archaeologists. This is essential to qualify any material or features of historic environment interest revealed by geophysical or geotechnical surveys, and create a comprehensive baseline for the proposed licence area. As such, the MMO welcomes the inclusion of Section 4.7.3 'Further work required for EIA', which details the standards to which the archaeological desk based assessment will be conducted.	Archaeological assessment undertaken by specialist marine archaeological contractor (Wessex Archaeology).	Section 14.4
	The desk-based archaeological assessment must draw on a range of information sources in order to adequately inform the EIA. It is essential that the archaeological analysis reviews historic environment information held by adjacent local authorities (via Historic Environment Records), the National Record of the Historic Environment maintained by Historic England and the wrecks database of the UK Hydrographic Office and The National Monuments Record of Wales. Other sources of data, including those held by the Receiver of Wreck, must be utilised where appropriate.	The ES utilises the full range of data sources	Section 14.1
	In addition to desk based sources, as a standard approach, we expect existing up to date and relevant site specific geophysical and geotechnical survey data to be made available for archaeological assessment, in order to place Area 531 within the regional palaeo-environmental context. This is necessary to further characterise and assess the palaeo-environmental and prehistoric archaeological interest of the areas. Should such surveys be planned, archaeological advice must be sought to maximise its potential to enable archaeological questions to be answered and impacts to be understood.	Geophysical surveys have been utilised to inform the assessment	Section 14.1
	For historic wreck sites and aircraft crash sites, side scan sonar and bathymetric data (and magnetometer where possible) must be made available to qualified archaeologists to categorise potential features of historic environment interest, and help develop mitigation and monitoring strategies. Side scan sonar data must be made available to archaeologists to identify any wreck or aircraft crash sites of archaeological interest. Bathymetric data should be made available to aid archaeological interpretation of side scan sonar data, and most importantly to allow an on-going assessment of the stability of the seabed in and around any known sites of archaeological interest.	No known maritime and aviation sites are within Area 531, appropriate data has been used to develop the assessment baseline.	Section 14.2
	Any ES must also include detail on the required mitigation and monitoring strategies to be adopted, with particular reference to the procedures detailed in the guidance published by the British Marine Aggregate Producers Association and English Heritage (2003), and to the 'Marine Aggregate Industry Protocol for the Discovery of Finds of Archaeological Interest' (2005), to ensure that they are in line with current industry standards. Such strategies must also include full consideration of the requirements for archaeological review of geophysical and geotechnical data during any operational monitoring works to allow the archaeological curator to fully assess any potential impacts of dredging on the historic environment over the course of the licence term. In order for this to be effectively achieved it is imperative that the archaeological baseline is determined prior to any change in the environment due to the proposed activity.	Mitigation and monitoring strategies are already in place and are discussed in the ES.	Section 14.4.1
	Any archaeological reports produced as a part of this proposed development must be recorded via OASIS (Online AccesS to the Index of archaeological InvestigationS).	Noted	n/a
Water Quality	If the sediment sampling shows high contamination levels, the applicant must establish whether or not modelling the dispersal of contaminated sediments is required.	Discussion of contaminant levels in sediments in the region included in Section 6.2.2. Modelling not considered to be required.	Sections 6.2.2 (baseline); 6.3.4 (assessment)
	Additionally, the report references a maximum secondary impact zone of 500 m as being scientifically justifiable for all plume and bedform effects for Area 531, due to the high tidal flows and natural turbidity observed in the Severn Estuary / Bristol Channel region.	Justification is contained within the MarineSpace 2015 report referenced	Section 4.1

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Water Quality	There does not appear to be any specific reference in Section 4.2 that proves 500 m is reasonable and justifiable however, it is acknowledged that this issue may be defined in the MarineSpace, 2015 paper. Clarification regarding this point must be provided.		
	The proposal will require a Water Framework Directive (WFD) Compliance Assessment following the process set out in: https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters Data for Welsh Waters you will require to complete a WFD assessments is available on the Water Watch Wales website: http://waterwatchwales.naturalresourceswales.gov.uk/en/	WFD compliance assessment included as appendix to the ES	Appendix D
Cumulative impact and in-combination assessment	The ES must identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. To conduct the assessment of cumulative and in combination effects, the following types of projects must be included (subject to the availability of information): • Existing completed projects; • Approved but uncompleted projects; • Ongoing activities; • Plans or projects for which an application has been made and which are under consideration by the consenting authorities; and • Plans or projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.	Noted- all points addressed in ES	Section 19
	All potential pathways linking this proposal with other plans or projects to designated features or sensitive receptors within the surrounding sites must be assessed.	The ES considers all potential pathways with all other proposals or plans	Section 19.3
	Information on transboundary impacts and effects on the environment must be provided in the potential cumulative effects assessment.	The ES includes an assessment of cumulative effects on the environment	Section 19.3
	Should any other projects come to light during the EIA process, these must also be included in the cumulative and in combination assessment of the EIA.	All applicable projects have been considered by the ES	Section 19.3
	Further information regarding other projects within the general vicinity of the proposal can be found at the MMO Public Register: https://marinelicensing.marinemanagement.org.uk/mmofox5/fox/live/MMO_PUBLIC_REGISTER. Information can also be found on the MMO Marine Information System: http://mis.marinemanagement.org.uk/ Information on projects in Welsh waters can be obtained from the Welsh Government Marine Planning Portal (http://lle.gov.wales/apps/marineportal) or GIS data on marine licences in welsh waters cab be obtained from Lle (http://lle.gov.wales/home)	Noted	Section 19
	We note that a number of aggregate extraction areas are operational within the Estuary and without the results of the hydrodynamic and physical modelling studies it is difficult to interpret how extraction at these spatially separated sites affects the overall movement and supply of sediment in the estuary. We advise that all other extractive activities in the Severn Estuary must be considered within a cumulative impact assessment. The degree to which each cumulative operation is considered within the assessment will depend upon the outputs of the modelling study.	Modelling of cumulative aggregates dredging has been considered in the ES	Section 5.4.5; 19.3

Topic	Comment	Action (Incl. Clarification Sought/ Received, if Applicable)	Section(s) in ES
Cumulative impact and in-combination assessment	The In-combination assessment must include any tidal barrier/lagoon projects, including the Bridgwater tidal barrier.	Projects discussed, but not considered for detailed assessments, for reasons set out in Section 19.2	Section 19.2
Cumulative impact and in-combination assessment	We note from Section 3.4 'Cumulative and In-combination Assessment' of the Scoping report, that a cumulative assessment will be conducted to address known and planned developments occurring in the wider regional context to assess the potential for in-combination impacts upon the historic environment. We welcome this, as it is vital to ensure any future extraction of marine minerals in the region are only undertaken with full consideration of the potential for cumulative effects from dredging activities on the survival of archaeological sites and features.	Noted	N/A
	The proposed extraction area lies entirely within the Severn Estuary SAC, which includes subtidal sandbanks and intertidal sand and mud as features. There are two other licensed dredging areas within the SAC, North Middle Ground (Area 455/459) and Bedwyn Sands, both extracting up to 250,000 tonnes annually. An assessment on the impact of the combined removal of material from the extraction area on the conservation features must be provided, including features which are indirectly associated with sandbank features. The sediment budget and potential seabed morphology changes should be clearly defined in the ES.	Modelling of cumulative aggregates dredging has been considered in the ES	Section 5.4.5 Section 19.3
	Area 526 should be included in cumulative aggregate area assessments. If it is not included justification for why extraction at Area 526 will not change modelled results should be provided. It should be noted that part of Area 526 is within the Severn Estuary SAC and therefore the cumulative impact on the SAC should be considered.	Justification for the exclusion of Area 526 in the modelling is included in the ES. Qualitative assessment re. nature conservation included in Section 19.3	Sections 5.4.5, 19.3.

Table A.2 Consultation log for joint MMO/NRW draft ES comments

Topic	Comment [Showing Numbering as Per MMO/NRW Response Report, and Comment Type Assigned by Latter]	Action (Incl. Clarification Sought/Received, if Applicable)	Section(s) in ES
General comments	[5.1.1, Observation] The project is clearly described in the first section of the report.	Noted, none required	n/a
	[5.1.2, Observation] The methodology and assessment protocol are clearly presented.	Noted, none required	n/a
	[5.1.3, Observation] The final ES should include appropriate reference to details of any quality standards or assurance methods.	Section on 'Competency and Quality Standards' added	4.4
	[5.1.4, Observation] Industry specific good practice guidelines and regulatory protocols are referenced throughout the environmental statement and the coastal impact study.	Noted, none required.	n/a
	[5.1.5, Observation] The grab samples shown are labelled as NRW grab samples 2012. Please confirm if any grab samples been collected to support this application specifically. It is noted that there are no samples taken within the vicinity of Area 531.	Confirmed no further grab samples, but client has dredge cargo load gradings information	Updated CIS Section 3.3.2 and ES Section 5.2.3
	[5.1.6, Observation] It appears that the bathymetry data collected across Middle and Welsh Grounds as part of the annual monitoring for Areas 470, 455/459 and Bedwyn Sands has not been included in the baseline bathymetry for the modelling. Due to the quite extensive erosion evident across Middle and Welsh Grounds between the 2017 and 2018 annual surveys, as reported in HR Wallingford 2018, it is important this is included.	Clarification on bathy datasets added to CIS	CIS Section A.2.2 and ES Section 5.1.1
	[5.1.7, Observation] The baseline bathymetry used for the modelling does not include the regional survey data and therefore the bank levels are assumed to be higher (outside the Area 531 survey area) than the most recent data shows	As above	As above
	[5.1.8, Observation] It is not clear what the rationale for the wider area for dredge effects to be assessed is in the north of Area 531. Whilst it is acknowledged that the effects of aggregate extraction will not be confined to the licence area itself it is not clear why this area has been chosen. We recommend further explanation is provided.	Rationale added to CIS Section 4.1.2	CIS Section 4.1.2
	[5.1.9, Observation] Whilst the analysis of change in bed shear stress and consequent effects on sediment transport is noted and welcomed, there is no discussion within the Coastal Impact Study (CIS) of the cumulative effects of aggregate extraction on sediment budgets. With rising sea-level, the estuary will require more sediment not less to adjust morphologically to the changing hydrodynamic regime, and therefore the impacts of aggregate extraction should be discussed in this context.	Consideration added to Cumulative Effects section of CIS	CIS Section 5.7.2
	[5.1.10, Observation] Previous modelling scenarios were for MHWS and MHWN, the MHWN is important as it effectively represents where Middle and Welsh grounds are not exposed but water depths are sufficiently limited that they are likely to have a significant effect regarding wave energy dissipation. As such additional modelling runs (e.g. 1 in 200 SW wave) must be undertaken for MHWN in addition to those already presented. The previous modelling study also included an allowance for sea-level rise. Whilst relative sea-level rise is discussed in section 3.5.1, please clarify whether any modelled scenarios have included these effects.	Expanded approach added to CIS Section 4.2.2. Updated modelling results included and discussed in CIS text	CIS Section 4.2.2, results added to CIS Section 5.2.2 and new Figure added at Fig. 18
	[5.1.11, Observation] Please provide a discussion of the ongoing Annual Monitoring work for Area 470 (North Bristol Deep) including a description of changes and any trends both associated with Area 470 and regionally across Middle & Welsh Grounds.	New Section 3.7 added to CIS	CIS Section 3.7 and ES Section 2.2
	[5.1.12, Change required] A technical competency statement must be included in the ES.	Section on 'Competency and Quality Standards' added.	4.4

Topic	Comment [Showing Numbering as Per MMO/NRW Response Report, and Comment Type Assigned by Latter]	Action (Incl. Clarification Sought/Received, if Applicable)	Section(s) in ES
Habitats Directive	[5.2.1, Observation] Information should be provided in the ES to enable the MMO to undertake a Habitats Regulations Assessment (HRA) ensuring that the potential for loss of habitat in the form of aggregate extraction/removal of coarse sediment from the sediment system of Severn Estuary/Bristol Channel and Severn Estuary Special Area of Conservation (SAC) is assessed sufficiently.	Noted, provided in Appendix C, as per the draft ES.	Appendix C.
	[5.2.2, Observation] The MMO will not be considering mitigation at the likely significant effect (LSE) stage of the HRA.	Noted	-
	[5.2.3, Observation] Conservation Objectives from Natural England for the Severn Estuary have not been agreed with NRW. The current reference should be the Severn Estuary Regulation 33 Advice package and should be used in conjunction with NE data when undertaking any assessments	Noted	-
Benthic Ecology	[5.3.1, Observation] It should be noted that if Sabellaria reefs are present within 50 meters of the Active Dredge Area (ADA), an exclusion zone to protect the reef from abrasion and smothering will be needed. The MMO and Natural England should be consulted on proposed restriction zones prior to dredging outside of Area 470 to ensure appropriate mitigation is implemented to maintain the Annex I reef extent and function.	Noted, clarification inserted in ES	3.5.3
	[5.3.2, Change required] The term 'microbenthic' is used instead of 'macrobenthic' in section 8.2.2 (p106).	Amended.	8.2.2
	[5.3.3, Observation] The ES needs to adequately consider Invasive Non Native Species (INNS), and appropriate mitigation. Dredge vessels could be used elsewhere in UK waters and therefore the origin of hopper water and associated residual sediment must be considered to enable the level of INNS spread risk to be assessed.	Area 531 had already been included in the (accepted) Bristol Channel Biosecurity Plan. This was clearly referenced in Section 8.3.6 in the draft ES. For improved reference, this has now been included as an appendix to the ES (F)	8.3.6, Appendix F.
Coastal Processes	[5.4.1, Change required] As this is a new area to be used for aggregate extraction, and in order to understand how the baseline evidence has been selected and how modelling has been set and applied, the following changes and/or clarifications are to be addressed in both the Coastal Impact Study (CIS) document and ES. The CIS document is the evidence base for the assessment for impacts on coastal and physical processes so comments pertaining to the evidence base mostly concern this document, however corrections to text and graphs have to be implemented in both the CIS and the ES.	See below items	-
	[5.4.2, Change required] Figure 5 (page 13 in the CIS) shows the surface sediment classification from samples collected by NRW in 2012 and information from British Geological Survey (BGS), with no recent samples in the area of interest. Other sources should be explored to identify the latest available information on sediment samples. If unavailable, this should be confirmed in the documents.	No further sampling confirmed and added to CIS text, noting Client also has PSD gradings from dredge load cargoes.	CIS Section 3.3.2 and ES Section 5.2.3
	[5.4.3, Change required] Fine to medium sand (page 12 and 28 in the CIS) should be defined in the text.	Definition added to CIS and ES	CIS Section 3.3.2 and ES Section 5.2.3
	[5.4.4, Change required] Table 3 (page 20 in the CIS) shows the predicted sea level rise according to UKCP09. The latest available information should be used. UKCP18 was published in late 2018.	CIS Table 3 and ES Table 5.2 updated to provide UKCP18 values.	CIS Table 3 and ES Table 5.2
	[5.4.5, Change required] Table 4 (page 21 of the CIS) shows the tidal stream information close to Area 351. The UKHO station that these numbers are from should be identified.	Information already included in Table 4 and on Figure 8 and referred to in CIS text.	CIS Table 4 and Figure 8, ES Table 5.3 and Figure 5.4
	[5.4.6, Change required] As peak period (Tp) and maximum wave height (Hmax) are included in the	Tp and Hmax info added to CIS	CIS Table 5 and ES Table

Topic	Comment [Showing Numbering as Per MMO/NRW Response Report, and Comment Type Assigned by Latter]	Action (Incl. Clarification Sought/Received, if Applicable)	Section(s) in ES
Coastal Processes	modelling, these parameters should be included in Table 5 (page 22 of the CIS).	Table 5.	5.4
	[5.4.7, Change required] The wave directions shown in the wave roses in Figure 9 (page 22 of the CIS), do not match the peak directions shown in Table 5 of the same page. Figure 9 or Table 5 should be corrected.	Discrepancy addressed with update to analysis and direction values in CIS Table 5.	CIS Table 5 and Figure 9; ES Table 5.4 and Figure 5-4
	[5.4.8, Change required] There should be greater justification for selecting the NCEP II reanalysis dataset to inform wind climate representation. The grid point that was chosen needs to be identified and why analysis of the dataset stops at 2009 should be clarified.	Description of wind climate and use of source data expanded in CIS Section 3.5.3 and CIS Figure 10.	CIS Section 3.5.3 and Figure 10; ES Section 5.2.4 and Figure 5-3
	[5.4.9, Change required] 5UKCP18 states that mean significant wave height in the Severn Estuary will decrease up to 10% whilst annual maximum significant wave height could increase up to 8% (depending on scenario and reference period). It is not clear from the evidence provided whether these cases have been considered, this should be clarified.	CIS Section 3.5.3 updated with clarification.	CIS Section 3.5.3 and ES Section 5.2.4
	[5.4.10, Change required] In the selection of input conditions, the 1 in 5-year return period events has been completed for the SW incoming waves and for Mean High Water Springs (MHWS) only. It should be clarified why the 1 in 5-year event is not applied for the other directions as well and for Mean Low Water Springs (MLWS). Changes should be made to Appendix A of the CIS as necessary.	CIS Section 4.2.2 updated to include rationale for approach.	CIS Section 4.2.2
	[5.4.11, Change required] It should be clarified why the 99th percentile wave height has been selected as a threshold (Wave direction section, page 101 in the CIS).	Clarification added to CIS approach	CIS Section A.4.2
	[5.4.12, Change required] It should be clarified why relative magnitude is presented in Table A8 (page 102 in the CIS) but is not clearly defined in the text.	Described in 'Boundary' section of CIS Appendix A	CIS Section A.4.2
	[5.4.13, Change required] Further detail on the selection process for the 2.5th, 50th and 97.5th percentiles should be included. Changes should be made to Appendix A of the CIS as necessary.	Clarification added to CIS approach	CIS Section A.4.2
	[5.4.14, Change required] A storm threshold (Hs) of 5.5 m has been selected (page 102 in the CIS), but in Table A9 the 10 in 1-year Hs value is 3.5 m, for the NW direction. There should be greater justification as to why this storm threshold has not been considered.	Text description expanded in boundary section of CIS Appendix A	CIS Section A.4.2
	[5.4.15, Change required] The 10 in 1-year and the 1 in 200-year wind speeds (page 105 in the CIS) are presented but not discussed according to direction. These should be added, as well as the 1 in 5-year event, in order to compare wind-wave directionality and wind directionality. Changes should be made to Appendix A of the CIS as necessary.	Clarification added to CIS approach	CIS Section A.4.2
	[5.4.16, Change required] The overall presentation of the ES and the CIS is adequate, however the following minor changes are required:	See below items	-
	[5.4.17, Change required] Figure 12, page 32 in the CIS, requires the names of the dredging areas-polygons (in both figures) to be added in the legend.	Outlines added to CIS Figure 12 and ES Fig 5.6	CIS Figure 12 and ES Figure 5.6
	[5.4.18, Change required] Figure 30, page 64 in the CIS, requires the results from the 1 in 5-year simulation to be included and described in the text.	Figure 30 updated to include 1 in 5-year event results. (new figure added earlier in document in response to another regulator comment)	CIS Figure 31
	[5.4.19, Change required] Figure A18, page 110 in the CIS, requires the 5th and 95th percentile of the "scaled from measured Hs" line to be included to assist in detecting the variation between the model and	The data provided in Figure A18 provides the 99%ile, as described	No change

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Coastal Processes	the measured dataset.	and explained in the expanded text of Section A.4.2. 5 and 95%ile values would not provide any further information with reference to the selected 99%ile values.	
	[5.4.20, Change required] Even though there is extensive analysis on the in-combination impacts from third party projects and plans in the wider area, it is not clear if the intrinsic impacts as a result of the proposed works on a temporal and a spatial scale have been adequately considered. Clear justification within the text should be provided to detail the impacts of partial spatial and temporal process over a 15 year licence.	Text added to Section 4.1.2 of CIS to explain rationale of approach	CIS Section 4.1.2
	[5.4.21, Change required] Although it is acknowledged that the proposal constitutes a small loss when checked against the total volume of sand in the Severn Estuary, further evidence is required in the ES to conclude beyond reasonable doubt that the aggregate extraction will not result in impacts on the sediment budget and dynamics of the estuary.	Text added to CIS and ES cumulative assessment.	CIS Section 5.7.2 and ES Section 5.4.5
	[5.4.22, Change required] Appropriate consideration of cumulative effects should be provided in the ES, including existing and future potential, in relation to the closed nature of the sediment system within the Severn Estuary/Bristol Channel, to ensure that aggregate areas in combination will not exceed extraction limits.	Text added to CIS and ES cumulative assessment.	CIS Section 5.7.2 and ES Section 5.4.5
	[5.4.23, Change required] There is a typographical error in Table 19, page 111 of the CIS; 'SW 10 in 1' should read 'SW 5 in 1'.	Typo corrected – '10 in 1' now reads '1 in 5'.	CIS Table A.19
Fish Ecology and Fisheries	[5.5.1, Minor comment] The evidence sources are largely based on the 2003 Area 470 licence renewal ES and the Bristol Channel regional cumulative herring and sandeel habitat assessments (MarineSpace. 2014ab). The latter assessment is currently being updated with a 2018 baseline. If the Bristol Channel sandeel assessment is updated in sufficient time then it should be presented in the final ES. If not, then the 2018 assessments should be reviewed and included at the five-year substantive review stage, if the Marine Licence is granted.	There was never such an assessment for the BC, and hence no update	-
	[5.5.2, Minor comment] While it is appreciated the consideration of the herring and the inclusion of sandeel species specific spawning habitat assessments, as well as reference to the cumulative assessments for both species (MarineSpace, 2014ab), it would be beneficial to present these habitats within the proposed licence area as 'heat' maps alongside the sediment maps (Figure 3.2 and 5.2). It is recommended that the latest Regional Seabed Monitoring Plan (Particle Size Analysis) data from the Bristol Channel is incorporated into an updated spawning habitat assessment for sandeel. If the suggested 'heat' maps are not presented, for example due to lack of necessary data, this should be stated within the ES.	There is no RSMP in the Severn/Bristol Channel. There are no sandeel heat maps available for the Severn/Bristol Channel, as this region was also not covered by the sandeel/herring cumulative assessments, or its updates. MarineSpace et al. (2013) used the following spatial layers to create heat maps in the regions covered by the project:: ▪ Seabed sediment/Folk classification ▪ Fishing Fleet: VMS; ▪ Fishing Fleet: MMO sightings; ▪ Fishing Fleet: IFCA sightings; ▪ Spawning Grounds: Coull et	-

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Fish Ecology and Fisheries		al. (1998). Of these, only seabed sediment maps applicable to Area 531 (no commercial fishing in the area, and Coull et al does not cover the Severn Estuary). Thus, a heat map, if it were to be created, would show a 'low' confidence. Whereas the available evidence would suggest presence of sandeel. Thus, it was not considered suitable to produce /present a heatmap.	
	[5.5.3, Minor comment] It is recommended that that a minimum of 0.5 m sediment should be left across the whole application area to enable any sandeels present within the vicinity of the application area to recolonise the area and have sufficient depth to bury in. The current wording regarding the capping layer should be amended to clarify that the capping layer, of 50 cm or more, will be left across the whole of the application area.	Have inserted standard wording as per the common licencing conditions.	9.3.4 (habitat change pathway)
	[5.5.4, Minor comment] Surveys conducted in the Bristol Channel show that glass eels are present within the Severn Estuary (Walmsely et al., 2017). This life stage may be vulnerable to entrainment by dredging and has not been specifically considered in the ES assessment. Although fish entrainment has been considered within the assessment and the impact significance has been determined to be between insignificant to minor adverse, the MMO considers the impact for this receptor to be minor adverse. The ES does not require an extensive update to include this receptor, rather a brief consideration and acknowledgement is required in the final ES	Have assessed glass eels separately under 'direct effects (uptake) pathway in Section 9.3.1, & referred to reference in baseline section 9.2.1.	9.2.1, 9.3.1 (direct effects (uptake) pathway)
	[5.5.5, Minor comment] The ES presents an assessment of the potential effects of underwater noise impacts generated by dredging vessels upon fish receptors. It is noted that the range of various response thresholds for fish species is presented in Table 9.10 which is derived from Parvin et al. (2008). These thresholds are based on the dBht metric which the MMO does not consider an appropriate metric. As stated in other cases, this metric is neither accepted nor supported among the scientific community, and the self-published grey literature which purports to support it has not been peer reviewed; it is not underpinned by peer-reviewed science. The assessment does consider the sound exposure guidelines by Popper et al. (2014) for assessing the impact of anthropogenic noise on fish and this has been used to support the impact assessment. Consequently, it is preferred that Popper et al., (2014) is used for noise impact thresholds for fish rather than reference to Parvin et al., (2008).	We agree that the dBht metric is not an appropriate measure to determine the potential effects of noise on fish as it has not been validated by experimental study and has not been published in an independent peer-reviewed paper. In accordance with published guidance and recent advice from regulators for other marine and coastal projects, we have only referred to published sound exposure guidelines for fish (Hawkins and Popper, 2016; Popper et al., 2014).Parvin et al (2008) reference/table deleted.	9.3.3
Archaeology / Cultural Heritage	[5.6.1, Minor comment] Any survey data collected for use in an archaeological review must be suitable for this purpose, and the review must be undertaken by an accredited and experienced maritime archaeologist.	Noted, Wessex Archaeology is such a company	-

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	[5.6.2, Minor comment] Any archaeological reports produced as a part of this development are to be recorded via Online AccesS to the Index of archaeological InvestigationS (OASIS).	Noted.	-
	[5.6.3 & 4, Minor comments] Maritime and aviation archaeology, which is currently deeply buried within mobile sediments, may become exposed as a result of both natural sediment movement and seabed level reductions due to dredging. Further detail on recorded losses and obstructions that are not visible in current data would be welcomed within the final ES.	Addressed in Section 14.2.2 of the ES	14.2.2
	[5.6.5.1 -5, Minor comments] Please consider the Welsh National Marine Plan policy 'SOC_05: Historic assets': "Proposals should demonstrate how potential impacts on historic assets and their settings have been taken into consideration and should, in order of preference: a) avoid adverse impacts on historic assets and their settings; and/or b) minimise impacts where they cannot be avoided; and/or] c) mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.	Observing the mitigation hierarchy is part and parcel of any EIA, so would have been considered automatically, see Section 4.5.	4.5
	[5.6.5.6 &7, Minor comment] Opportunities to enhance historic assets are encouraged. Please consider the new guidance document 'Managing the Marine Historic Environment of Wales' presently undergoing public consultation until early June, which explains the Welsh Government's approach to underwater heritage and offers best-practice guidance for its protection and management. https://gov.wales/managing-marine-historic-environment-wales	Noted and referenced in Section 14.1.1 of the ES.	14.1.1
	[5.6.6, Minor comment] Paragraph 6.2 – should be amended to include the RCAHMW (National Monuments Record of Wales) as the primary offshore archaeological dataset and should be set as the primary receiver of new finds and site information reported through the protocol.	The NMRW is already referred to in both the ES, and the accompanying DBA appendix.	14.1.1, Appendix E
	[5.6.7, Minor comment] A summary of past marine geophysical surveys of the licence area must be included to provide clarity about the nature, extent and quality of data previously gathered and the time periods between surveys.	DBA Technical Appendix already includes previous Wessex Archaeology work in the area and surrounding region.	14.1.1, Appendix E
	[5.6.8, Minor comment] The significance of known heritage assets along the Welsh coastline is high. The potential for more archaeological material, deposits and sites to be located within marine, intertidal and coastal areas is also high. Please include the integration of the archaeological assessment of sites along the Welsh coastline with regard to the implications of the review of impact of dredging on coastal processes.	Already discussed in Section 14.4.2 – 'With regard to sites not within the immediate study area, the CIS has identified no significant impacts at the coasts (see Section 5.4); thus, sites such as Goldcliffe would not be affected.'	14.4.2
	[5.6.9, Minor comment] Mitigation for archaeological features should reflect those outlined in the 2003 BMAPA/English Heritage guidance document 'Marine Aggregate Dredging and the Historic Environment'	Already the case in the draft ES.	-
Project needs and Alternatives	[5.7.1, Change required] Natural England have previously stated that 'Area 470 monitoring data must be presented in the ES to inform historical extraction and potential impact that could extend into Area 531'. The MMO request that this is addressed and the ES includes analysis of the activity that has occurred during the current licence period, including surface difference charts accompanied by maps showing the location and intensity of dredging operations over the same time period, as well as any older historic monitoring information that is available (summary of the monitoring results for Area 470).	Summary of annual monitoring now added to CIS and ES	CIS Section 3.7 and ES Sections 2.2 and 5.4.5

Topic	Comment [Showing Numbering as Per MMO/NRW Response Report, and Comment Type Assigned by Latter]	Action (Incl. Clarification Sought/Received, if Applicable)	Section(s) in ES
	[5.7.2, Change required] Robust evidence based statements are required to demonstrate why an alternative area does not have the capacity to increase supply. It is noted that the assessment is currently supported by practical statements for the developers.	Alternatives statement revised, noting that TM and HAM are not able to provide capacity evidence on areas which are not theirs.	
	[5.7.3, Minor comment] Overlapping the boundary of the proposed area on bathy map image 2.3 would enhance the understanding on resource thickness, this should be provided in the ES.	Area 471 is shown on HR maps.	-
	[5.7.4, Minor comment] The annual monitoring survey reports are provided for Area 470 which recently showed some extensive erosion over the wider monitoring area in 2018. Extensive and significant change in the seabed (up to 1 metre lowering) can be observed. Whilst the MMO understand the survey represents a point in time, we recommend signs of erosion are monitored closely. We also advise such data should be presented and assessed in the ES in order to inform the baseline for Area 531.	Summary of annual monitoring now added to CIS and ES	CIS Section 3.7 and ES Section 2.2
Project Description and Methodology	[5.8.1, Change required] Include a robust justification of why no Active Dredging Zones will be put in place if a licence is granted	Inserted	3.5.3
Monitoring	[5.9.1, Observation] As discussed previously, during the EIA Scoping meeting on 31st of July 2018, due to the strong tidal currents and shifting sediments of the Severn Estuary, RSMP sample stations could fail to show true sediment conditions. The applicant has proposed to instead monitor the gradings of cargoes taken off the Area when possible, and report on these in the review of the bathymetric monitoring results, making regulators aware of any noticeable changes in the particle size. Further comments are expected from Cefas and the final consolidated way forward will be agreed at the Marine Licence Application stage.	ES reworded accordingly	20.2.2
Conclusion	[-, Observation] After review of the ES, no major concerns have been identified by the MMO or its advisory bodies, however minor comments have been submitted and changes have been requested. The topics highlighted in this ES review should be addressed and documented in the final ES, or other suitable document, in support of the marine licence application.	Noted	
	[-, Observation] This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and programme of these planned works other work may prove necessary.	Noted	

Table A.3 Consultation with other stakeholders

Topic	Contact/organisation	Comment
Navigation	Gloucester Harbour Trustees	[summary; 29/08/18] Consultation with [GHT] pilots has confirmed that, aggregate dredging in the proposed area at the times indicated ... will not give any cause for concern to vessels traveling through the area when bound to or from Sharpness. We [the GHT] are not in a position to offer observations regarding leisure/recreational vessels or vessels bound to/from other ports.
	TBPC	[summary; 08/10/18] The Proposed Dredging area has been considered and no concerns are expressed, the vessel will of course be required to liaise with Bristol VTS who provide Information Navigation Services in the proposed Licence Area.
	ABP South Wales	[summary; 20/08/18] Considering safety of navigation, no specific concerns were raised. Their initial thoughts are that the area is on the edge of the area of interest for ABP SW ports in respect to navigation and covered by the Bristol VTS area. The area would be marked on navigation charts. Dredging operations would be a navigational consideration in respect to traffic between Newport and Bristol.
	RYA	[28/08/18] "The RYA would not expect any additional hazards compared with the existing activity."
Fisheries	Charter Fisherman	19/10/18. Telcon. [summary] A full time charter fisherman with a 38 ft charter boat, now retired. Aware of where Area 531 is. Generally, fishes within a 20 mile radius of Minehead, mostly down channel towards Foreland Point. Very rarely fishes within the vicinity of Area 531. Usually catches bull huss, smooth hound, conger eel and occasionally rays. Uses rod and line. Is Secretary Treasurer of the Charter Angling Society so would be pleased to receive further information to share amongst fishermen. [further information was sent by ABPmer via email on 24/10/18]
	Charter Fisherman	19/10/18. Telcon. [summary] Was busy at time of phone call - asked for information to be provided via email. [further information was sent by ABPmer via email on 23/10/18]
	Charter Fisherman	19/10/18. Telecon [summary] Asked where the area was and stated that he would not be affected by the dredging activities (a very short phone call).
	Charter Fisherman	23/10/2018. Telecon [summary] Asked to be sent further information via email - will respond if he has any concerns. [further information sent by ABPmer on 23/10/18]
	Charter Fisherman	23/10/2018. Telecon [summary] Asked to be sent further information via email - will respond if he has any concerns. [further information sent by ABPmer on 23/10/18]
	Charter Fisherman	19/10/18. Telecon. [summary] Full time charter fisherman, rod and line, 35 ft boat. Goes to that area to fish for cod in winter on neap tides, about three times every two weeks. Is not particularly concerned with the dredging as the dredging occurring now on the English and Welsh border is not affecting his fishing.
	Charter Fisherman	19/10/18. Telecon. [summary] Part time charter fisherman, rod and line, with a 10.5 m / 34 ft vessel. Fishes on the sandbank for cod in winter, and goes there as much as every weekend if cod are present. Tends to favour going on smaller tides and if the weather is favourable. Otherwise fishes all over Bristol Channel (Cardiff Grounds to Nash Point, and over to Foreland Point on the English coast). Doesn't think the proposed dredging will make much difference to him - dredging the Bristol Channel so far has not affected him.
	Charter Fisherman	19/10/2018. Telecon. [summary] Full time rod and line charter fisherman with two vessels (9 m and 11 m). Fishes near/in Area 531 for cod in winter (main trade in winter), and get be quite often depending on how the fishing is. Is able to fish during most tides since sandbar offers deflection of flow. Other fishing grounds include west Wales, Celtic Deep, north Cornwall. Feels there is a high risk he could be affected by the aggregate dredging. Concerned it could reduce catches, which will reduce bookings and impact his business (which is he invested in). Greatest worry is unknown nature of impact, and it is difficult to tell if impacts will occur - won't be known fully until they happen. Would like to be kept updated and sent further general background information on proposal. [further information sent by ABPmer via email on 23/10/18]

Topic	Contact/organisation	Comment
Fisheries	Charter Fisherman	19/10/2018. Telecon. [summary] Full time rod and line charter fisherman (generally fishes just weekends), 35 ft vessel. Fishes in area from November onwards for cod, weather permitting, on neap tides. Otherwise and other times of year can fish all over Bristol Channel. Feels dredging affects him to a degree, as does the dumping of waste/material as it all changes the position of the banks. Safety is key (i.e. knowing position of sandbanks and depths) though recognises the environment is constantly changing anyway. Would like to be kept informed and provided a map of the location. [further information sent by ABPmer on 23/10/18]
	Charter Fisherman	23/10/2018. Telecon [summary] Full time rod and line charter fisherman with 33 ft. vessel. Fishes close/within Area 531 regularly, mainly for cod during winter (October through to March). Also fishes all over Bristol Channel. Generally quite aggrieved and frustrated that his concerns in the past had not been listened to (particularly regarding dumping of material off Cardiff and Culver Sands). However, personal opinion is that dredging won't affect fishing in the area (though fishing has got worse on Culver Sands but that might be due to increased netting). Would like to be kept updated and sent further background information. [further information sent by ABPmer on 23/10/18]
	Charter Fisherman	23/10/2018. Telecon [summary] Full time rod and line charter fisherman with 10 m catamaran. Fishes close/within Area 531 for cod in winter. Prefers smaller neap tides but can fish during most tides. Otherwise, fishes all over Bristol Channel. Raised noise and disturbance to fish as a concern. Also has been unable to fish where originally planned due to dredger presence in the past. However, suggested there are lots of fishing grounds and its usually easy to find another place (though best fishing grounds are on south side of the sandbanks). Would like to be kept updated and sent further background information. [further information sent by ABPmer on 23/10/18]
	Charter Fisherman	23/10/2018. Telecon [summary] Short phone call - does not think dredging affects his fishing. Dredging has been going on for years and that area. Would like to be kept updated and for further background information to be sent. [further information sent by ABPmer on 23/10/18] 28/10/2018. Email: Fished around 531 for last couple of days, was surprised at how much some of these sand banks have moved according to his GPS systems, nearly nearly ran aground on English side of the sand bar. That bank should have been at least 700 yards away. These areas need to be properly surveyed and updated to put down on admiralty charts.
	Charter Fisherman	28/10/2018 Email [summary] After fishing the area near/within Area 531, raised concerns that sandbank had shifted compared to location noted on admiralty charts, noting a difference of 700 yards. Advised that the area should be surveyed and admiralty charts updated.
	Charter Fisherman	19/10/2018. Telecon. [summary] Will not affect him - does not travel that far up the Bristol Channel.
	Charter Fisherman	23/10/2018. Telecon [summary] Asked to be sent further information via email - will respond if he has any concerns. [further information sent by ABPmer on 23/10/18]
	Charter Fisherman	23/10/2018. Telecon [summary] Full time charter fisherman, rod and line, with 33 ft vessel. Licenced to fish within a 60 mile radius (as far as Celtic Deep off Milford up to Severn Bridge). Fishes around Area 531 in autumn and winter about once a month, and catches cod, ray and conger. Has some concerns, as dredging may affect life that lives in the top few feet of the sand (e.g. sandeels and smaller fish) and species such as turbot, rays and bass feed on these. So it may affect how fish feed/what they can feed on. Noticed that dredging in Elwick and Nash has caused a deterioration in the fishing in the area. Would like to be informed of when the licence application has been submitted.
	Charter Fisherman	23/10/2018. Telecon [summary] Short phone call - does not go to area so won't affect him.
	Charter Fisherman	19/10/18. Telecon. [summary] Stated that a lot of aggregate dredging occurs in the Bristol Channel anyway, and that he is not affected (a very short phone call).
	Charter Fisherman	19/10/18. Telecon. [summary] Full time charter fisherman using rod and line, has a 10.5 m/34 ft fishing boat. Very rarely goes up channel, towards Area 531. Generally, fishes in a 15 mile radius of Watchet and has no concerns regarding the dredging proposed in Area 531.

Topic	Contact/organisation	Comment
Fisheries	Charter Fisherman	19/10/19. Telecon. [summary] Not concerned with aggregate dredging in Area 531 as it is quite a bit further than he would normally fish.
	Charter Fisherman	25/10/2018. Telecon. [summary] Weekend charter fisherman, rod and line. Fishes near/within Area 531 for cod in winter. Not particularly concerned by dredging in area (more concerned over the affect dumping of hazardous waste off Cardiff). Asked to be kept informed of licence application and to be sent further background information. [further information sent by ABPmer on 25/10/2018] 25/10/2018. Email: "We fish this side of the bank for cod in the winter and bass in the spring therefore this would alter the ground and potentially disturb the fishing in this area, forcing us charter skippers to lose a good fishing ground. However the impact isn't as devastating as having 100,000 tons of radioactive mud dumped on the Cardiff grounds from Hinckley Point power station. Please consider our long term losses and advise, will the sand bank be completely lost as a result over the 15 years?"
	Charter Fisherman	25/10/2018. Email. [summary] Follow up email received following further information sent by ABPmer on 25/10. Reiterated concerns of dredging and asked if the sandbank would 'be completely lost as a result [for the proposed dredging] over the 15 years?'.
	Porlock Bay Oysters	22/11/2018. Telcon [summary] Consultation was undertaken with Porlock Futures CIC, which cultivates Pacific oysters in Porlock Bay, to discuss the location of Area 531 and potential issues relating to water quality and cumulative impacts arising from aggregate dredging within this and other licenced or application areas in the Severn Estuary. Porlock Futures C.I.C were satisfied with the information provided, including that Area 531 was over 40 km from their aquaculture production business, and confirmed that they had no outstanding concerns.
	Welsh Fishermen's Association	26/10/18. Telcon [summary] discussed possible fishing activity in area. Has asked for further detail from members. Suggested also contacting the NFFO. Have had limited feedback so far (will chase up with the members), but enough to know that there is interest (i.e. fishing activity) in that area. In general, it is likely that mobile and static gear (static likely being pots, nets and possibly longlining) will be used in that area – but he can't narrow this down any further until they get more information from their members. These initial responses suggests that fishers from Newport to Swansea fish in that area. He felt that ABPmer had listed the key sources of information. Highlighted the limitations of the available data (i.e. under-represents the activity of 10 m and under vessels which are not statutorily monitored and are not required to report private sales and hence a chunk of value is not represented – this should already be explained in the text). He suggested there may be merit in looking at landings to Welsh ports (Newport, Cardiff) – BUT agreed that one didn't know where the fish was caught and hence may not have any relevance to Area 531. He also recommended that ABPmer talk to the NFFO as they have a regional committee in that area. He asked about the likely frequency of dredging and the area of dredging within Area 531 in the figure. He asked because, given that fishing is already going on in that area (including in the vicinity of Area 470) he wondered if there was already an element of co-existence between the sectors. [Further information email sent]
	NFFO	30/10/2018: Email (in response to information email by ABPmer). "For your attention, none of the North Devon vessels at present work up as far as that in the Bristol Channel."

B Regulatory and Planning Framework

B.1 Introduction

This appendix outlines the regulatory and planning framework which the licence applications for Area 531 are required to adhere to. Relevant consents, approvals and legislation are summarised in Section B.2. Sections B.3 and B.4 outline planning policy and strategic guidance, and regional and local plans and strategies respectively. Section B.5 outlines the key legislation and planning guidance with respect to marine archaeology.

B.2 Consents, Approvals and Legislation

Obtaining the proposed licences for Area 531 will require a range of consents and approvals under different legislative acts, supported by detailed technical and environmental investigations to inform an Environmental Impact Assessment (EIA), a Water Framework Directive (WFD) Assessment and Appropriate Assessment (AA), if required. The principal consents are summarised in the following paragraphs although there is in addition a wide range of related environmental legislation with which the proposal will need to comply. These have also been specifically identified, as appropriate, in the relevant sections of the main Environmental Statement (ES).

B.2.1 Seabed ownership and marine licence permission

The seabed encompassing Area 531 is owned by The Crown Estate (TCE) who own the mineral rights of the seabed out to 12 nautical miles throughout the majority of UK territorial waters. If a marine licence is granted under the Marine and Coastal Access Act 2009 (MCAA) by the MMO and NRW, agreement to dredge Area 526 will therefore also be required from The Crown Estate.

B.2.2 Marine licence permission

The marine licencing system under the Marine and Coastal Access Act 2009 came into force on 6 April 2011 (see Section B.2.9). A new marine licence will be required before aggregate dredging can commence. Given the cross-border nature of Area 531 two sub-areas have been created, both wholly located within either Welsh or English waters, two licences application will therefore be submitted, one to the Welsh authority Natural Resources Wales (NRW) and one to the English authority the Marine Management Organisation (MMO). In considering the applications, NRW and the MMO will act in accordance with Government policy statements and guidance, and with the principles of sustainable development, namely:

- Achieving a sustainable marine economy;
- Ensuring a strong, healthy and just society;
- Living within environmental limits;
- Promoting good governance; and
- Using sound science responsibly.

B.2.3 Environmental impact assessment

The Marine and Coastal Access Act 2009 and its secondary legislation repealed the EIA and Natural Habitats (Extraction of Minerals by Marine Dredging) Regulations 2007. An EIA for Area 531 will be required in accordance with the Marine Works (EIA) Regulations 2007 (as amended). This EIA has