

From: [Opel, Laura \(MMO\)](#)
To: [Hornsea Project Three](#)
Cc: [West, Richard \(MMO\)](#); [Stephenson, Paul \(MMO\)](#)
Subject: EN010080 - Hornsea Project 3 Deadline 3 submission
Date: 14 December 2018 12:22:06
Attachments: [EN010080 - Annex A - MMO guidance on MCZ assessments.pdf](#)
[EN010080 - Annex B - MMO comments on In Principle Monitoring Plan.pdf](#)
[EN010080 - Annex C - MMO comments on Herring Noise Contours.pdf](#)
[EN010080 - Example MMO MCZ screening document.pdf](#)
[EN010080 - Example MMO MCZ Stage 1 Assessment.pdf](#)
[EN010080 - Hornsea Project Three - Deadline 3 - MMO Post Hearing Submission.pdf](#)

Good afternoon,

Identification Number: 20010662

Please find attached the MMOs Deadline 3 submission for Hornsea Project 3. The following documents have been attached:

- Post hearing submission including written submission of oral cases and comments on the revised draft DCO
- Annex A – MMO guidance on MCZ assessment
- Annex B – MMO comments on In Principle Monitoring Plan
- Annex c – MMO comments on Herring Noise Contours
- Example MCZ screening document
- Example MCZ Stage 1 assessment

Please let me know if you have any questions.

Kind regards,
Laura

Laura Opel BSc. (Hons), MSc., PIEMA | Marine Licensing Case Officer | Her Majesty's Government – Marine Management Organisation.
Direct Line: 020822 57690 | laura.opel@marinemanagement.org.uk | Lancaster House, Newcastle Business Park, Newcastle upon Tyne, NE4 7YH

[Website](#) | [Twitter](#) | [Facebook](#) | [Linkedin](#) | [Blog](#) | [Instagram](#) | [Flickr](#) | [YouTube](#) | [Google+](#) | [Pinterest](#)

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Marine Management Organisation

The Marine and Coastal Access Act (MCAA) (2009): Section 126

Marine Conservation Zone (MCZ) Screening Opinion

This Screening Opinion should be read in conjunction with the guidance in [DN18.1, published online](#) and in the [Conservation Advice Packages](#).

Table 1. MMOs decision-making process with regards to the MCZ Screening Opinion for the project listed below.

Title of project	Thanckes Oil Fuel Depot Loading Facility and Tank Farm Fire Fighting Upgrade
Applicant name	Defence Infrastructure Organisation
Applicant address	1st Floor, Zone 1, Ramillies Bldg, Marlborough Lines, Monxton Rd, Andover SP11 8HJ
Type of licensable activity/ies	Construction of a new jetty, decommissioning of jetty and capital dredging.
Case reference	MLA/2015/00215
Location of works	Proposed construction, decommissioning, and capital dredging will take place at Thanckes Oil Fuel Depot (OFD). Disposal of dredged material at Plymouth Deep Disposal site (PL035).
Description of project	Construction of a new jetty head and approach structure (including piling works), the decommissioning of the existing jetty, and the capital dredge of a new berth and approach channel (68,000 wet tonnes) at Thanckes Oil Fuel Depot (OFD). Capital disposal of dredged material at Plymouth Deep disposal site (PL035) – 57,600 wet tonnes of silt and 10,400 wet tonnes of cobble. The works period at Thanckes will run from January 2018 to December 20120.
Is a licensable activity taking place within or near an area being put forward for or already designated as an MCZ?	Yes, works are near Whitsand and Looe Bay MCZ and Tamar Estuary Sites MCZ.



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ISO 9001
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Table 2. MMOs decision-making process with regards to the MCZ Screening Opinion for Whitsand and Looe Bay MCZ.

MCZ site name		Whitsand and Looe Bay MCZ
Protected feature		
High energy intertidal rock		
Intertidal coarse sediment		
Intertidal sand and muddy sand		
Low energy intertidal rock		
Moderate energy intertidal rock		
Ocean quahog (<i>Arctica islandica</i>)		
Pink sea-fan (<i>Eunicella verrucosa</i>)		
Sea-fan anemone (<i>Amphianthus dohrnii</i>)		
Seagrass beds		
Stalked jellyfish (<i>Haliclystus auricula</i>)		
Subtidal coarse sediment		
Subtidal sand		
Is a licensable activity capable of affecting (other than insignificantly) the protected features of an MCZ or any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant?		
Consider hazard – pathway – receptors to identify how a licensable activity may interact with features of the MCZ. You should also refer to Advice on Marine operations Guidance and supporting excel documents.		
Protected feature	Hazard	Potential exposure to hazard and mechanism of effect/impact if known
High energy intertidal rock	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Intertidal coarse sediment	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Intertidal sand and muddy sand	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could



		reduce light levels and smother sensitive receptors.
Low energy intertidal rock	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Moderate energy intertidal rock	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Ocean quahog (<i>Arctica islandica</i>)	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Pink sea-fan (<i>Eunicella verrucosa</i>)	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Sea-fan anemone (<i>Amphianthus dohrnii</i>)	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Seagrass beds	Increased suspended sediment.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ.

		transported to the MCZ. Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Stalked jellyfish (<i>Haliclystus auricula</i>)	Increased suspended sediment.	- Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. - Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. - Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. - Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Subtidal coarse sediment	Increased suspended sediment.	- Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. - Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. - Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. - Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Subtidal sand	Increased suspended sediment.	- Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. - Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. - Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. - Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Is an activity capable of affecting (other than insignificantly) either:	(i) the protected features of an MCZ?	No. <u>Dredge</u> Dredge activities are approximately 11km upstream from the MCZ. Due to the distance from the dredge site to the MCZ, it is considered that dredging activities will not increase suspended sediment volumes to a level that will significantly impact the MCZ. <u>Disposal</u> Disposal activities are approximately 5km from the MCZ. Modelling of the sediment plume and deposition for this site has been provided as part of the Plymouth Deep Site Characterisation Report and Addendum (Cefas, 2017) and no interaction with the protected features was identified. <u>Construction</u> Construction activities are approximately 11km upstream from the MCZ. Due to the distance from the dredge site to the MCZ, it is considered that construction activities, including piling, will not increase suspended sediment volumes to a level that will

		significantly impact the MCZ. <u>Decommissioning</u> Decommissioning activities are approximately 11km upstream from the MCZ. The MMO has not identified any pathways by which these activities could impact the MCZ. <u>Operation</u> Operation activities will be approximately 11km upstream from the MCZ. The MMO has not identified any pathways by which these activities could impact the MCZ.
	(ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant?	No. The MMO has not identified any process by which the activities could impact any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant.
Conclusion		The MMO has determined that the proposed dredge and disposal activities are not capable of affecting either (i) the protected features of Whitsand and Looe Bay MCZ; or (ii) any ecological or geomorphological process on which the conservation of any protected feature of the above MCZ is (wholly or in part) dependant.

Table 3. MMOs decision-making process with regards to the MCZ Screening Opinion for Tamar Estuary Sites MCZ.

MCZ site name		Tamar Estuary Sites MCZ
Protected feature		
Blue mussel (<i>Mytilus edulis</i>) beds		
Intertidal biogenic reefs		
Intertidal coarse sediment		
Native oyster (<i>Ostrea edulis</i>)		
Smelt (<i>Osmerus eperlanus</i>)		
Is a licensable activity capable of affecting (other than insignificantly) the protected features of an MCZ or any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant?		
Consider hazard – pathway – receptors to identify how a licensable activity may interact with features of the MCZ. You should also refer to Advice on Marine operations Guidance and supporting excel documents.		
Protected feature	Hazard	Potential exposure to hazard and mechanism of effect/impact if known
Blue mussel (<i>Mytilus edulis</i>) beds	Increased suspended sediments.	- Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. - Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. - Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. - Increased suspended sediment concentrations could



		reduce light levels and smother sensitive receptors.
Intertidal biogenic reefs	Increased suspended sediments.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Intertidal coarse sediment	Increased suspended sediments.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Native oyster (<i>Ostrea edulis</i>)	Increased suspended sediments.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors.
Smelt (<i>Osmerus eperlanus</i>)	Increased suspended sediments. Barrier to species movement. Disturbance.	• Dredge activities may increase suspended sediment levels; increased levels may be transported downstream to the MCZ. • Disposal activities may increase suspended sediment levels; increased levels may be transported to the MCZ. • Piling activities during construction may increase suspended sediment levels; increased levels may be transported to the MCZ. • Increased suspended sediment concentrations could reduce light levels and smother sensitive receptors. • Dredging activities may disturb smelt and create a barrier to species movement. • Piling activities may disturb smelt and create a barrier to species movement.
Is an activity capable of affecting (other than insignificantly) either:	(i) the protected features of an MCZ?	Yes. <u>Dredge</u> The disturbance of sediment could increase suspended sediment volumes in the water column impacting designated features. Dredging activities could disturb designated features. <u>Disposal</u> Disposal activities are approximately 21km from the MCZ. Modelling of the sediment plume and deposition for this site has been provided as part of the Plymouth Deep Site

		Characterisation Report and Addendum (Cefas, 2017) and no significant interaction with the protected features was identified. <u>Construction</u> The disturbance of sediment could increase suspended sediment volumes in the water column impacting designated features. Piling activities could disturb designated features. <u>Decommissioning</u> Decommissioning activities are approximately 2km downstream from the MCZ. The MMO has not identified any pathways by which these activities could impact the MCZ. <u>Operation</u> Operation activities will be approximately 2km downstream from the MCZ. The MMO has not identified any pathways by which these activities could impact the MCZ.
	(ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant?	No. The MMO has not identified any process by which the activities could impact any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant.
Conclusion		The MMO has determined that the proposed disposal activities at Plymouth Deep (PL035) are not capable of affecting either (i) the protected features of Tamar Estuary Sites MCZ; or (ii) any ecological or geomorphological process on which the conservation of any protected feature of the above MCZ is (wholly or in part) dependant. The MMO has determined that the proposed activities at Thanckes Oil Fuel Depot are capable of affecting either (i) the protected features of Tamar Estuary Sites MCZ; or (ii) any ecological or geomorphological process on which the conservation of any protected feature of the above MCZ is (wholly or in part) dependant.

References

Cefas (2017) Plymouth Dredged Material Disposal Site Selection – Addendum. Report C7041.