

**Port Meridian Project**  
**Addendum 1 – Floating Storage and Regasification Unit**  
**Comments On Environmental Statement**

To: Sarah Pritchard

Signature: *S Pritchard*

From: Carol Newbigging

Date: 09 November 2010

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ES Title:	Port Meridian Project (Addendum 1)
Operator:	Port Meridian Energy Limited (PMEL)
Consultants:	RPS Energy
ES Report Nos:	D/4010/2008
ES Date:	December 2009
Block Nos:	Block 110/7b
Development Type:	Floating Storage and Regasification Unit (FSRU)

**Synopsis:**

The original development proposal for Port Meridian comprised of two Submerged Turret Loading (STL) buoy unloading systems connected to a 36 inch gas pipeline system. PMEL has decided to seek approval to permanently moor a FSRU at STL buoy 1 rather than use the deepwater port to host Shuttle and Regasification Vessels (SRVs).

The FSRU will have onboard equipment capable of converting Liquefied Natural Gas (LNG) into a gaseous state suitable for transportation to shore in a conventional subsea pipeline.

The FSRU will be located around 35km offshore of the coastline of Fylde, NW England and south-west of Barrow-in-Furness.

Disturbance to the seabed was assessed in the original ES. There will be no additional disturbance to the seabed as a result of having a FSRU permanently moored at STL buoy 1. LNG carriers (LNGCs) will be moored to the FSRU using their own mooring outfit with each line secured to a quick release hook equipped on the FSRU.

The noise levels associated with the installation and commissioning of the FSRU and during operation and maintenance activities of the vessel are within the range of those already assessed in the Port Meridian ES.

Construction of the FSRU is planned to start in Q4 2011. The FSRU will be installed on location during Q3 2014, with 1<sup>st</sup> gas expected around October 2014.

As a result of an environmental risk assessment there were the following potentially significant aspects identified and addressed within the ES:

- Physical presence
- Seabed disturbance

- Noise and vibration
- Atmospheric Emissions
- Marine Discharges
- Solid Waste
- Accidental spills

Mitigation measures are in place to ensure that impacts are kept to a minimum.

**Recommendation:** Based on the information in the Environmental Statement, it is recommended that project consent be given.

**Consultees:**

**JNCC & Natural England:** No objections.  
 JNCC advise that a watch is conducted prior to piling commencing as advocated in the piling protocol available on the JNCC website <http://www.jncc.gov.uk/PDF/Piling%20Protocol%20June%202009.pdf>

**Marine and Coastguard Agency** No objections subject to the following conditions being placed on the project:

- Further discussion will need to take place with the Marine Coastguard Agency (MCA) regarding the extent of and the monitoring of the proposed safety zones. Under Article 60.5 of UNCLOS safety zones should not exceed 500m.
- All the recommendations in the Anatec NRA report should be adopted and incorporated by PMEL.

The Marine and Coastguard Agency has the following comments on the Navigational Risk Assessment Addendum:-

1. The Emergency Departure Procedure for the LNGC needs to be carefully aligned to the Warning Levels and any impact those levels may have on the procedure.
2. The Collision Risk assessment would need to include Buoy No 2 if installed. There should be a Collision Risk Management Plan.
3. The risk of vessel impact during mooring should be considered under the specialist procedures

as should un-mooring.

4. Table 6.7 would benefit from the inclusion of a 12nm detection range column as this is one of the available settings on a ships radar. Consideration should also be given to the plotting time taken by observers in the “worst case” scenario, without ARPA.

<u>Ministry of Defence</u>	No objections provided the proposal does not deviate from the current submission.
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<u>Marine &amp; Fisheries Agency</u>	No objections.
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<u>CEFAS Environmental</u>	No objections.
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<u>CEFAS Chemicals</u>	No objections.
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<u>Environment Agency</u>	No objections.
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<u>Trinity House</u>	No objections provided that the following condition is placed on the project:
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- In the interests of safety of navigation, PMEL is required to mark the position of the Submersible Turret Buoy (STL) if it is established in position latitude 53 deg 45'.66N., longitude 003 deg 41'.15W., by a lighted yellow pillar special mark buoy exhibiting a FI Y 5s light with a 5 nautical mile nominal range exhibited at a focal plane height of about 4-5 metres with a yellow X topmark. It is further considered that the FSRU , when permanently moored in position latitude 53 deg 46'.50N., longitude 003 deg 37'.21W should be marked in accordance with the requirements of the UK Standard Marking Schedule for Offshore Structures.

<u>NFFO</u>	<ul style="list-style-type: none"><li>• As the anchors will be 700m outside the safety zone, the NFFO has stated that they will present a major hazard for fishing vessels. The NFFO has requested the following as an effective means of minimising risk and improving understanding for fishermen:-</li></ul>
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1. Data for fishermen should be provided in Lat/Long (WGS 84 format)

2. A detailed diagram of the mooring layout and surface

**buoys should be provided.**

- **The information should be provided to Kingfisher at Seafish, Grimsby for inclusion in the KIS-UKCS database and on the [www.fishsafe.eu](http://www.fishsafe.eu) website.**

#### **Commitments made by PMEL**

- **The MCA has requested that the STL Buoy No. 1 equipment moorings will need to be reassessed to ensure they are adequately designed to withstand both the FSRU and LNGC combined loading. PMEL confirmed that the mooring design will be reassessed and the design altered if applicable, after soil conditions in the anchoring areas have been surveyed.**
- **The FSRU will be fitted with wave radar, which will collect information on wave heights and currents (Wavex system). Weather forecasts for the site from an external source will also be available, ranging from day to hourly forecasts. The information will be fed into a decision making support tool for use by the ship's master.**
- **A support vessel with tug capabilities will patrol the safety zone on a permanent basis.**
- **A standard safety zone will be marked on the sea charts, along with a note on the anchors and extension of anchor chain/wire, as agreed with the MCA and the United Kingdom Hydrographic Office (UKHO). Details of final anchor locations and design will be provided to Kingfisher.**