



Offshore Petroleum Regulator
for Environment & Decommissioning

ES/2022/002

██████████
BP Exploration Operating Company Limited
1-4 Wellheads Avenue
Dyce
Aberdeen
AB21 7PB

Department for Business, Energy
& Industrial Strategy

Offshore Petroleum Regulator for
Environment & Decommissioning
AB1 Building
Wing C
Crimon Place
Aberdeen
AB10 1BJ

31 August 2022

██████████
██████████
www.beis.gov.uk
EMT@beis.gov.uk

Dear ██████████

**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020**

NOTICE UNDER REGULATION 12(1)

**MURLACH FIELD DEVELOPMENT (redevelopment of Skua, part of the
Marnock-Skua field)**

The Offshore Petroleum Regulator for Environment and Decommissioning (“OPRED”) acting on behalf of the Secretary of State for Business, Energy and Industrial Strategy (“the Secretary of State”) is currently considering the Environmental Statement (“ES”) in relation to the above project. BP Exploration Operating Company Limited is hereby required to provide further information in relation to the following:

General Comments

1. Sections 1.9, 2.3.2 and 5.2.1 all discuss a fisheries interaction assessment that will be conducted. Please confirm when this will be completed.
2. When will the Seagull field come online? Is there the potential for any delays in this project that could affect the Murlach project?

Specific comments

1. Section 1.2, pg 1-2 –
 - a. This section should also include reference to the different recommendations/policy drivers that form the pathway to net zero and how BP is implementing these.
 - b. Do BP have any plans in place to decarbonise or use power from renewables at ETAP?
2. Section 1.9 and 8.5 - Table 1-3 – There are several comments relating to drill cuttings modelling not being required.
 - a. It should be clarified what a brownfield site is and why therefore cuttings modelling would not be required.
 - b. Marine Scotland Science (MSS) requested that existing literature was used for comparison, however the Department don't feel this has been

addressed. Can BP confirm if any drill cuttings modelling was conducted for the Skua wells? If so, this should be referred to as well as any other suitable modelling that compares, and used to discuss the potential impact of the drill cuttings from the wells to be drilled that are the subject of this ES.

3. Section 2.3.1, pg 2-3 -
 - a. Were atmospheric emissions considered when identifying options?
 - b. Table 2-2 – Has the difference in atmospheric emissions been considered for each pipeline option.
4. Section 2.5.8, pg 2-10 - In the event that a jack up rig is used will the rig require to be repositioned to access the second well?
5. Section 2.6, pgs 2-11 and 2-12 – Figure 2-4 – The notes in this figure state that existing spools will be replaced, capped, and left on the seabed.
 - a. Will these be flushed first?
 - b. What fluids will remain in the spools?
 - c. Why do they need to be replaced?
 - d. Is it possible to show all the items in Table 2-10 in this Figure?
6. Section 2.6.1, pg 2-13 –
 - a. Will the sand mixture to be discharged contain chemicals?
 - b. More information on the potential sand production is required, how will it be produced, why does it need to be cleaned and how will it be cleaned etc?
 - c. Please confirm whether the wash water used to dilute the salinity of the Murlach PW contains any chemicals
7. Section 2.6.2, pg 2-13 - Will the Skua manifold remain in-situ?
8. Section 2.6.3, pg 2-13 and 2-14 – What would make it not possible to follow the most direct route between locations for the spools and flowline?
9. Section 2.7, pg 2-16 –
 - a. Do BP foresee any compatibility issues with the Murlach and ETAP fluids?
 - b. Has the fit for service assessment been conducted?
 - c. Will any maintenance on R16 be required prior to utilising for the Murlach fluids? Is it currently in a suitable state to be used?
10. Section 2.8, pg 2-17 – 2-20 –
 - a. The Department note that the ETAP platform operates 100% reinjection with no discharge of PW. Is there ever any downtime of the PWRI and is there any discharge during these times?
 - b. For comparison graphs should be provided which show the ETAP data before 2025 and before the Seagull wells came online.
11. Section 3.4.2.2, pg 3-12 - This section states that faunal burrows were recorded at all stations and transects of the 2017 Fugro survey, and that they occurred “frequently” on the SACFOR scale, however the assessment has discounted the OSPAR threatened and/or declining habitat “sea-pen and burrowing megafauna communities” from being present, stating that burrows did not form a prominent feature of the seabed surface. JNCC’s view is that areas with “frequent” burrows are likely to represent the OSPAR habitat. As these two statements seem contradictory, Further explanation should be provided in future applications to justify the habitat not being present. Additionally, as the works are within Scottish waters, it is expected to see consideration given to the Priority Marine Feature (PMF) “burrowed

mud.” Please note, JNCC have published the following report on the UK interpretation of the feature:

JNCC clarifications on the habitat definitions of two habitat Features of Conservation Importance: Mud habitats in deep water, and; Sea-pen and burrowing megafauna communities

In advice to Defra (concerning data from the Nephrops fisheries stock assessments) the threshold considered to demonstrate the presence of the OSPAR habitat Sea-pen and burrowing megafauna communities is a burrow density of >0.2/m². For further information on classifying Sea-pen and burrowing megafauna communities from Nephrops stock surveys see Section 5.1 of the JNCC’s 2014 advice on possible offshore Marine Conservation Zones considered for consultation in 2015, available at:

<http://data.jncc.gov.uk/data/91e7f80a-5693-4b8c-8901-11f16e663a12/2-pre-consultation-T2mcz-advice-140627-V5.0.pdf>

12. Section 3.4.3, pg 3-12 – 3-14 - reference to the Lancaster et al, 2014 and Holland et al, 2005 reports are welcomed, but it is advised that the percentage fines as identified at the Murlach and ETAP areas are compared to the findings from this report to better understand the likelihood of sediments suited to sandeel spawning being present.
13. Section 3.6, pg 3-24 – A discussion of the renewable or aggregate extraction industries should also be included.
14. Section 3.6.7, pg 3-29 – 3-30 - It is advised that a figure showing the location of previously drilled wells is provided. The North Sea Transition Authority quadrant maps would be a useful addition (<https://www.nstauthority.co.uk/data-centre/nsta-open-data/pdf-maps/>).
15. Section 5.3, pg 5-4 - This section states that it is expected that at the end of field life it will be ‘technically feasible’ to recover the subsea infrastructure and stabilisation material at decommissioning? It should be noted that a clear seabed is expected at decommissioning. Have BP considered this as part of the planning of the project? How confident are BP that a pipeline covered in rock could easily be removed?
16. Section 6 – pg 6-1 –
 - a. Please clarify why the GHG emissions are more for the base case?
 - b. Tables of the expected emissions are provided throughout this section, however there is no explanation of what the figures in the tables mean or comparison to current or other proposed developments and how the emissions from the proposed Murlach development compare.
 - c. There is no discussion of how BP may minimise emissions during each activity, i.e Have BP considered any methods to reduce emissions in all aspects of the development.
 - d. Can BP clarify whether the EF factors used lead to the worst case potential emissions. The factors used should be added to all the tables in this section.
17. Section 6.1.1 pg 6-1 and 6-2 –
 - a. Were the levels of emissions considered when selecting a drilling rig?
18. Section 6.1.2, pg 6-2 –
 - a. Has there been any further progress been made on the assessment being conducted to determine if ETAP can accept the clean-up fluids?

- b. Is it possible to show what the difference in emissions would be if the well clean up fluids are routed to ETAP? How would the ETAP emissions change with this additional fluid?
19. Section 6.2.1, pg -
- a. It would be useful to show the current fuel use and emissions from the ETAP for comparison.
 - b. Table 6-4 - The Department note there is a spike in Fuel use and resultant emissions for 2026 and that this is due to running a second compressor. Can BP provide the calculations to further explain how the extra 0.34 Mm³/day from Murlach leads to the requirement to use 2 compressors and why the predicted fuel use to account for this is expected to be more than 47 times more than 2025?
 - c. What is the smaller spike in 2029 due to?
 - d. The text states 'Beyond 2031 production of Murlach will not place any additional power demand on ETAP.' However, there is still an incremental gas flow from Murlach for this period as shown in Table 2-17. Please clarify this.
20. Section 6.3.2, pg 6-6 - Table 6-8 - Why is the flare value relatively steady when Murlach production is continuously declining after 2026?
21. Section 6.4.1, pg 6-7 - The significance of the impact has been assessed as low. What is this based on? Have BP compared the data to other installation and commissioning phases?
22. Section 6.4.2, pg 6-7 –
- a. It would be useful to provide a table showing the data for the emission study from 2006 for comparison.
 - b. Should references to CO be CO₂?
23. Section 7.1, pg 7-1 - Please include a discussion of the well clean up and completion chemicals?
24. Section 8.1.2, pg 8-1 - Is there potential for any cuttings piles, and what is the potential seabed area that could be impacted from this? This should be included in Table 8.1.
25. Section 8.5, Table 8-1, pg 8-3 –
- a. Why is Option 3 not included? Is this accounted for in item no 11?
 - b. No₂ – Please clarify how the temporary impact is calculated. The Department cannot calculate the same number.
 - c. No 4 – Do the impacts account for the piles?
 - d. No 6 and 9 – please confirm how the impacts were calculated. The Department cannot calculate the same figures.
 - e. No 7 – should the temporary impact not be (7000 x 14)- perm impact? As was done for the manifold.
26. Section 8.5, pg 8-2 - 8-6 –
- a. Will the removal of the anchors leave depressions? Will these be a snagging risk?
 - b. It is noted that burial depths for which *artica islandica* are not sensitive to are discussed. However, how does this compare to the expected depth of cuttings that will occur at these wells?
 - c. It is advised further consideration is provided in this section on the impact of discharged cuttings on sandeel and Nephrops spawning. Can particle size analysis be referred to which would determine the likelihood of sandeel being present (see comment 12)? In addition, it

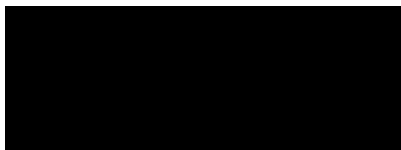
is advised the application refers to The Marine Life Information Network (MarLIN) which contains a sensitivity review showing that Nephrops are tolerant to pressures such as smothering (by 5 cm of sediment). It would be useful to compare this information to the expected deposits associated with the drilling of these wells. More information can be obtained here: <https://www.marlin.ac.uk/species/detail/1672>

27. Section 9.2.2, pg 9-2 - This section states 'The exact details of the piling activity (e.g. size of piles, hammer energy, rate of blows etc.) was not known at the time of writing the ES, but the following parameters have been assumed based on experience.' Can BP provide a reference for this or is this just experience from other projects BP have conducted?
28. Section 11.1.3, pg 11-3 - It is welcomed that the assessment considers release from the gas lift pipeline, but the conclusions reached only refer to impacts on the benthos. Can the same conclusions be reached for water column impacts given the potential for oxygen depletion leading to stress in marine organisms, declines in species and changes in species composition? An exposed gas lift pipeline carries a higher risk of being damaged by other sea users and modelling of a gas release may provide additional reassurances on the fate and impact of a gas release.

Your response will be reviewed, and consideration given as to whether the information provided ought to be made public because the information is directly relevant to reaching a conclusion on whether the project is likely to have a significant effect on the environment. If so, OPRED will notify BP Exploration Operating Company Limited under Regulation 12(3), and BP Exploration Operating Company Limited will have to take further steps to publish information and make provision for further public consultation under Regulations 12(5) to 12(9).

OPRED looks forward to receiving your response so that we can progress our consideration of the ES.

Yours sincerely



.....



The Offshore Petroleum Regulator for Environment and Decommissioning
For and on behalf of the Secretary of State for Business, Energy and Industrial
Strategy.