

Consultation and Collaboration

The applicant and Harbour Energy (or prior to 31/3/21, Premier Oil) have been in constructive discussions since 2019 concerning how to manage the impact of their respective operations upon one another. There is a large measure of agreement and both parties are hopeful that agreements will be reached that will negate the need for the imposition by the Secretary of State of Protective Provisions. Harbour Energy is committed to successful coexistence with other users of the sea/seabed.

Key features of this consultation and collaboration have been:

1. The Applicant and Harbour Energy participated in a workshop in December 2019 at which marine and aviation technical issues were extensively discussed and a large measure of agreement reached.
2. The workshop led to agreement on the requirements for marine operations in support of the Johnston field.
3. The Applicant and Harbour Energy have used a common dataset to characterise met/ocean conditions.
4. A detailed comparison of the findings from the report by Anatec prepared for the Applicant (*Assessment of Impact of Hornsea Four on Helicopter Operations to Vessels in Vicinity of Johnston Wellheads*, Prepared by Anatec Limited, Document Reference: A4481-ORS-TN-03 Rev 00, 21 July 2020.) was prepared for Harbour Energy in January 2021. This identified the main reasons for differences in conclusions.
5. The Applicants submission: *Hornsea Project Four: Environmental Statement (ES) Appendix A of ES Annex 11.1: Helicopter Access Report* (in EN010098-000654-a5.11.1) incorporates modifications raised through our consultations.
6. Harbour Energy have shared their analysis spreadsheet calculations with the Applicant.
7. A draft Cooperation and collaboration agreement has been prepared and both parties have been exchanging mark-ups and comments.

Nature of Operational Interactions

The wells within the proposed windfarm array are subsea. Should interventions be required, this would be by means of specialist vessels such as dive support vessels or a drilling rig.

Following cessation of production, the field facilities (wells and subsea infrastructure including pipelines) need to be decommissioned. These activities require the use of specialist vessels including a drilling rig and dive support vessel.

The date of cessation of production of the Johnston field will depend on the technical performance of the field and prevailing economic conditions. It is possible that the field will cease production prior to construction of the Hornsea 4 windfarm. It is also possible that production could continue after construction of the windfarm. In either case, it is likely that decommissioning activity would occur after construction of the windfarm has commenced.

Marine access

The operation requiring most space for marine access to the Johnston wells is when a drilling rig is towed to and positioned over one of the subsea wellheads. During the course of the discussions with the Applicant at and following the technical workshop in December 2019, it was agreed that a 1000m wide marine corridor would be provided to permit a rig to be brought to the subsea wellheads.

Aviation access

Whilst a drilling rig is being operated over one of the Johnston wellheads, essential (and time-critical) equipment and personnel would be brought to the vessel(s) by helicopter. Sufficient unobstructed space needs to be available to allow helicopters to safely approach and depart from (in each case flying into the wind) the rig. The Applicant's document: *Hornsea Project Four: Environmental Statement (ES) Appendix A of ES Annex 11.1: Helicopter Access Report* (in EN010098-000654-a5.11.1) examines space requirements for helicopter access in some detail and concludes that a distance of 3.0nm (or 2.7nm if operating with a reduced payload) is required upwind of a vessel from which a helicopter is taking off. The calculations are based on the technical and legal limits of operation of the aircraft when flying on instruments.

The *Helicopter Access Report* does not recognise that each helicopter operator additionally applies its own operating procedures which reflect its experience, learnings from incidents and near misses, and the training schedules for its pilots. These operating procedures may result in requirements for greater distances for manoeuvres and/or more limiting met-ocean conditions. Accordingly, even the Protective Provisions sought here by Harbour Energy may result in flights not being possible after the windfarm array has been constructed on quite a number of days when they would have been possible previously. For example, Harbour Energy is aware of one helicopter operator who requires a minimum distance of 5nm to the nearest obstruction upwind of the take-off/landing site within an array and another operator who will only permit flights within a windfarm array within daylight hours with excellent visibility (visibility of at least 4km and cloudbase of at least 1000'). These practical restrictions, which have been overlooked by the Applicant, would result in delays to the operations being supported (with associated costs and/or potential loss of production).

Harbour Energy has calculated that, whereas normally, an annual average of 8% of days are not suitable for flying, a reduction in available space around a rig could result in an annual average of 48% of days not being suitable for flying. Depending on the time of year, as much as 58% of days may not be suitable for flying.

Collaboration and Cooperation Agreement

The Applicant and Harbour Energy are in discussions and have drafted a collaboration and cooperation agreement. Whilst the terms of this agreement must remain confidential, this agreement seeks to establish a basis which would preclude the need for protective provisions and has mechanisms that would permit some turbines to be installed closer than 3nm to the Johnston wellheads.

Proposed Protective Provisions

In order to enable marine and aviation access to support Johnston production and decommissioning activities, Harbour Energy propose that protective provisions are imposed that provide for:

- a 1000m wide marine corridor along the route of the pipeline which shall be free from surface obstructions;
- a 1000m wide aviation corridor providing clear airspace (free of turbines and incursion by rotors) along the pipeline route between the Johnston wellheads;
- two 1000m wide aviation corridors providing clear airspace (free of turbines and incursion by rotors):
 - from the westernmost Johnstone subsea well to the edge of the array to the SW or W; and
 - from the easternmost Johnstone subsea well to the edge of the array to the S or E.
- an area of clear airspace (free of turbines and incursion by rotors) of radius 3nm around each of the two Johnston wellheads.

These Protective Provisions are shown illustratively below:

