
# Hornsea Project Four

## Applicant's comments on Harbour Energy's Deadline 7 submissions

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# Table of Contents

# 1 Applicant's response to Harbour Energy's (Harbour) submissions at Deadline 7 (REP7-100)

## 1.1 Decommissioning v Optimisation of Grid Capacity

1.1.1.1 The Applicant is confident that the amended protective provisions submitted at DL7 (**REP7-039 and REP7-089**) address the concerns as raised by Harbour in their submission at DL7 (**REP7-100**) (The Applicant acknowledges that Harbour did not have the benefit of reading the amended protective provisions in full before their submission at DL7). The purpose of this submission is to reiterate why the Applicants proposed protective provisions contained within the amended DCO submitted at DL7 should be preferred by the Examiners and to address any residual points raised by Harbour at DL7.

1.1.1.2 The Applicant acknowledges that the North Sea Transmission Authority (NSTA) can require oil and gas operators to maximise economic recovery of their field. The likelihood however of further intervention to restore or improve the productivity of the wells at the Johnston Field is considered minimal based on evidence in the public domain. The Applicant has reviewed the "Prospectus"[1] in connection with the Premier Oil Merger with Chrysaor and the Debt Restructuring from Harbour's website. Part III, clause 6.3 D states that at 31st December 2019, Johnston's reserves (the gas considered to be economically viable and therefore capable of being exploited) was at 1.2 million barrels of oil equivalent. The Oil & Gas Authority (now the NSTA) report: "UK Oil and Gas Reserves and Resources as at end 2019"[2] states in Table 1 that as at the same date, 31st December 2019 the UK had reserves of 5.2 billion barrels of oil equivalent. Evidently the Johnston Field makes up a very small percentage of the UK reserves.

1.1.1.3 The Johnston Field started production in 1994 and is now a significantly depleted reservoir. As set out at para. 1.1.1.2 of the Applicants DL7 submission (**REP7-089**) the information in the public domain on submission of the Application suggested that cessation of production would take place early 2020s prior to the construction of Hornsea Four. Whilst high gas prices and further technical work has prolonged the life of the field, it is highly speculative to suggest that there would be further intervention to increase productivity post 2027 when the interface between the Applicant and Harbour would arise requiring the Applicant to sterilize a significant area within the array. The Applicant would reiterate that Hornsea Four will provide a significant capacity of electricity to the national grid from a clean power source. Optimising the grid capacity of Hornsea Four contributes to energy security and resilience to a far greater extent than the remaining production from the Johnston Field. Ultimately the decommissioning of the Johnston Field is a temporary activity and should not be at the expense of any turbine positions or result in any more of a sub-optimal layout than is absolutely necessary. For the avoidance of doubt any area in excess of the necessary wtg exclusion zone (as defined in the protective provisions) to undertake safe helicopter

[1] Prospectus relating to the readmission of Existing Ordinary Shares, admission of 14,253,203,210 Consideration Shares, admission of up to 3,331,917,634 Creditor Shares and offer of up to 148,085,228 New Equity Warrants, in connection with the Merger with Chrysaor and the Debt Restructuring. Link: [redacted]

[2] UK Oil and Gas Reserves and Resources as at end 2019. Link: [redacted]

operations around the wellheads results in a sub-optimal layout. The Applicant has already made a significant concession by offering a greater than 347.5m radius exclusion zone.

**1.2 Visual Meteorological Conditions and data analysis**

1.2.1.1 All Commercial Air Transport (CAT) helicopter flights within a windfarm are operated in Day Visual Meteorological Conditions (VMC). CAT flights to gas installations are covered by the same regulations as flights within wind farms by renewable energy operators; namely, the CAA's Helicopter Offshore Operations (HOFO) Regulations.

1.2.1.2 The Applicant accepts that decommissioning wells is a significant capital expenditure but does not accept that timings for decommissioning would be substantially increased by the presence of the windfarm. Harbour has provided no evidence to support this assertion.

1.2.1.3 Through-out the Examination the Applicant has taken an evidence-based approach (**APP087 OII Part 2 Appendix A 4.2.4**) analysing the 7 years of meteorological data referenced by Harbour at paragraph 4 of their DL7 submission (**REP7-100**). The data shows that, routine daytime access will be available for an average of 89% of daytime conditions. An average of 6% of daytime flying hours are lost due to the weather, or sea state being out of limits for CAT flights (unrelated to the presence of the windfarm), so the actual loss of day access shown by the data would be 5% (100%-89%-6%). Night access would be lost but the majority of CAT flights occur in daylight hours, so the loss of night CAT access is not significant. In summary the impact of the location of the windfarm upon helicopter operations is that theoretically 5% of daylight hours would not be available.

**1.3 Precedent – Hornsea One and Hornsea Two**

1.3.1.1 Ørsted has extensive experience of operating helicopters to its windfarms, including the nearby Hornsea One and Two. The proposed protective provisions are based on operational experience. Ørsted has contracts with two North Sea operators, CHC and NHV, who operate to their wind farms safely on a daily basis (and also serve oil and gas platforms). It should be noted that Ørsted flies the AW169 which is a smaller helicopter for many of their routine operations and maintenance activities, however they also use the AW139 (fully laden) within their windfarms which is the helicopter used by oil and gas operators in the southern North Sea.

1.3.1.2 The Applicant currently flies helicopters and as referred above including the AW139, into the Hornsea Two windfarm to land on a helideck situated 914m from the nearest wind turbine blade tip. This is conducted safely under the same operating regulations as will apply to any helideck located over the Johnston Wellheads, using the standard Southern North Sea helicopter, the AW139. The Applicant's proposed protective provisions of a 900m radius wtg exclusion zone free from obstructions is supported by evidence from other nearby windfarms where landing on platforms within a windfarm are a daily occurrence.

1.3.1.3 The Applicant has suggested sharing helicopter operations as Ørsted has contracted to do with other oil and gas operators in the UK. This, plus the precedent set by Hornsea One and Two should provide Harbour with sufficient comfort that their decommissioning activities can be undertaken safely and efficiently.

1.3.1.4 In answer to para. 4 of **REP7-100** it is the Applicant's submission, from both a safety regulations and practical operational perspective, that a 900m radius exclusion zone from

the centre of the production wellheads together with an 800m aviation corridor addresses Harbour's concerns.