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Morlais Project

MOR-MM-DOC-0132

Construction Duct Installation Method Statement

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Acronyms	**Definitions**
AIS	Automatic Identification System
CoCP	Code of Construction Practice
HDD	Horizontal Directional Drill
IoACC	Isle of Anglesey County Council
MDZ	Morlais Demonstration Zone
NRA	Navigational Risk Assessment
NRW	Natural Resources Wales
RSPB	Royal Society for the Protection of Birds
SPA	Special Protection Area

1. Introduction

This method statement details the installation of a construction duct into Horizontal Directional Drill 2 (HDD2) which was drilled in 2022, by pulling the construction duct from offshore to the onshore drilling launch point. The construction duct will be assembled onshore at Holyhead Port and towed by vessels around from Holyhead to Abraham's Bosom. The construction duct will be pulled up HDD2, which exited the seabed in Abraham's Bosom, up to the drilling launch point at Ty Mawr Mynydd Farm at South Stack.

It is expected that this work will be undertaken in 2026. The offshore works would take 4-5 days. Four days being the plan with a fifth for contingency.

If the works are planned for 20th March-31st July i.e. the chough breeding season, Menter Môn request NRW to permit dispensation for the works to go ahead at the HDD2 location in Abraham's Bosom.

1.1 Chough Breeding Season

To aid the request to carry out works during the chough breeding season, chough nesting data for the whole South Stack SPA has been shared with Menter Môn by RSPB. This data contains multiple years of nesting data and identifies three nesting locations that have been observed in proximity to the location of the HDD2 duct pull in works. These locations are shown in Figure 1 Chough nesting locations.

A 500m buffer has been placed around each of the nests to provide an appropriate distance to minimise disturbance to known nest locations. Figure 1 also includes where the drill exited the seabed for HDD2, and where the construction duct will be pulled up to the onshore drilling point from.

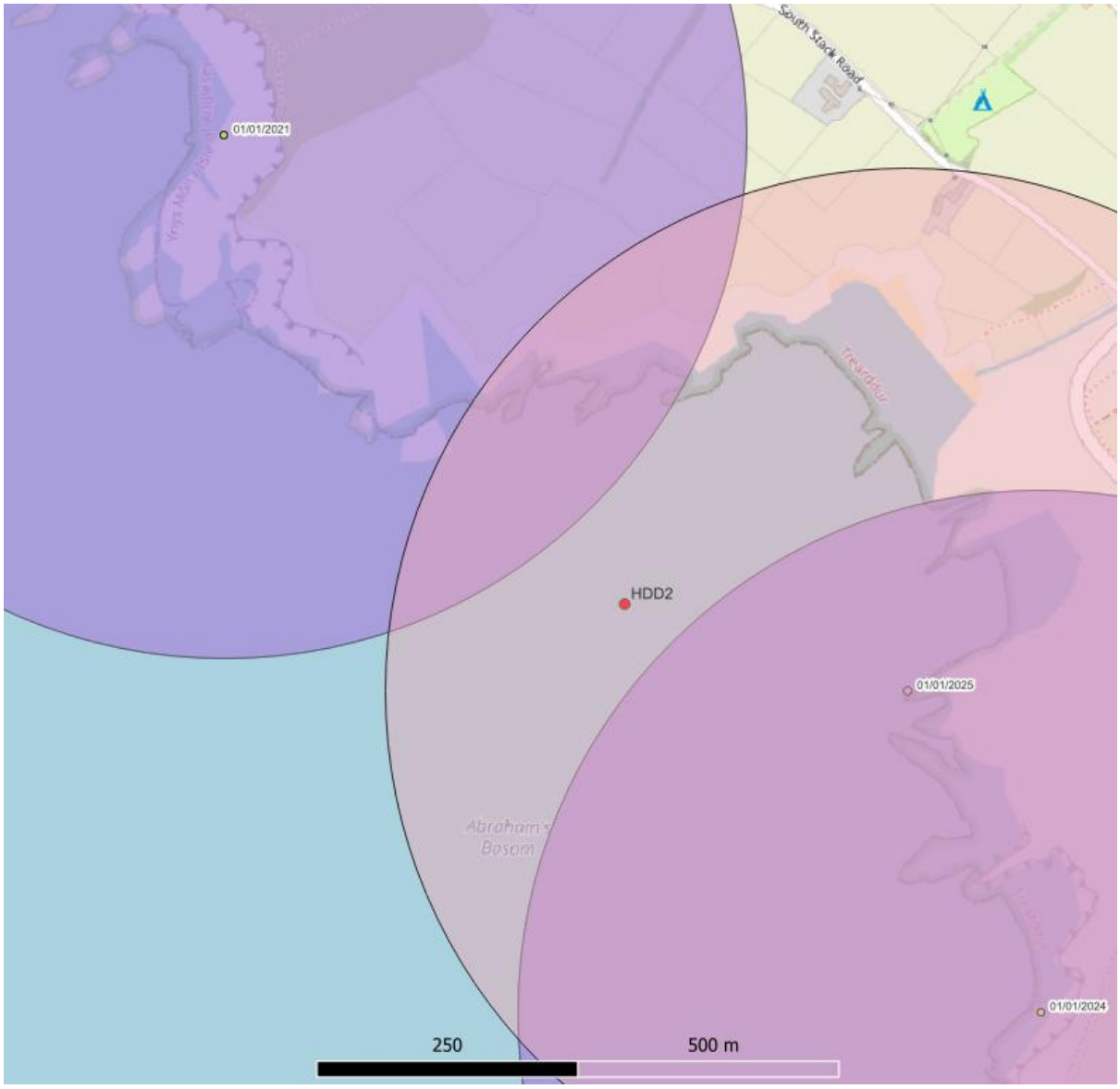

Figure 1 Chough nesting locations

As shown in Figure 1 Chough nesting locations, the purple 500m buffer zones applied to the known nesting locations do not directly overlap with the HDD2 exit point. The pink 500m buffer zone is from a new nest identified in 2025 and is the only additional nest in proximity to the HDD2 exit point.

Noise

As detailed in Section 2 below, the multicat vessel will be stationary and located outside of the purple buffer zones, however, the movement of the other offshore vessels may have a minor, temporary overlap with the buffer zones. Furthermore, noise emissions from the works are expected to be minimal and temporary, with some hydraulic/electrically powered winch noise from the multicat four-point anchoring system. The towing vessel at the far end of the duct will be 'ticking over in first gear' to keep a light tension on the construction duct string whilst it is being pulled in by the onshore drilling rig. According to the IMO Noise Code, noise levels on open deck areas should not exceed 90dB.

Based on a source sound level of 90 dB and typical outdoor conditions (15°C temperature, 70% humidity, and hard ground, appropriate for sound propagation over sea water), the predicted sound pressure level at a distance of 150 m is approximately 39 dB. As this level is already below 40 dB, the sound pressure level at 250 m would be expected to be significantly lower (~35 dB), providing a strong indication that the noise within the 250 m buffer would remain well below the 40 dB threshold. (Calculations undertaken in accordance with ISO 9613-2:2024.)

It should also be noted that 90 dB represents the upper limit for noise levels permitted on open deck areas under IMO guidance. Actual operational noise during HDD activities is therefore likely to be lower than this maximum, resulting in even lower received noise levels at the nearest chough nest and similar to the background noise of a quiet residential area and therefore noise levels which the chough are accustomed to.

Onshore planning condition number 4, the Code of Construction Practice, originally detailed restrictions to construction during the chough breeding season 20th March-31st July. In January 2023 this was updated following consultation with NRW, RSPB and IoACC and discharged in order to allow onshore construction to continue during the breeding season. This was due to the planned onshore works in the vicinity of chough nests creating no more noise than the usual traffic noise experienced at South Stack. The noise generated by the cable winch was measured with a handheld meter and peaked at 77dB at 5m distance. For comparison, a 70kW (94 hp) tractor towing a trailer is rated at 79dB maximum when passing a receiver at 10m distance.

Existing Activity

Within Chapter 19 Onshore Ecology of the Morlais Environmental Statement, the following mitigation is included:

Works at the cable landfall will not be permitted within 500m of an active nest site during the breeding season, with the possible exception of some works within areas of existing anthropogenic activity, such as along roads. This will require the collection of survey data to ensure a sufficiently up to date picture of chough nesting activity is available.

Providing that this mitigation measure is implemented where works within 500m of an active chough nest are proposed during the chough breeding season, it is predicted that the construction, operation and decommissioning of the project would not compromise the conservation objectives for this SPA, and site integrity would therefore be unaffected.

It is considered that Abrahams Bosom is included as an area of 'existing anthropogenic activity' as it receives a significant amount of vessel traffic each year, mainly consisting of small recreational craft and fishing vessels. AIS density data included in Figure 2 shows vessel traffic by vessel length during the two assessment periods as part of the Morlais Demonstration Zone Phase 1 deployment Navigation Risk Assessment (NRA). As shown in Figure 2, a significant number of vessel tracks were in the vicinity of Abrahams Bosom, dominated by vessels with an overall length of between 1- 50m.

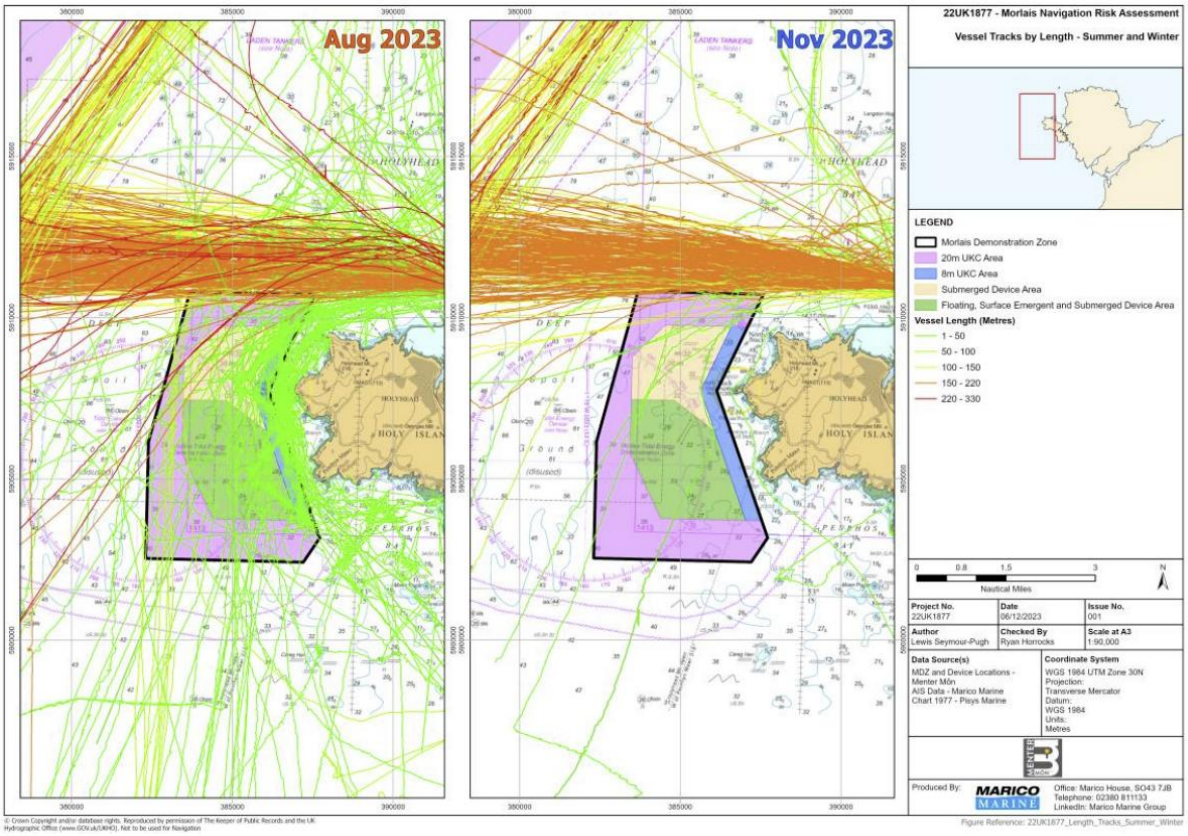

Figure 2 Vessel density in project area

The works are expected to take up to a total of 5 days including weather contingency. Due to the short duration, and high levels of existing vessel traffic in the area, it is not expected that the works would cause a greater level of disturbance than the baseline activity.

2. Method

Stockton Drilling will be carrying out this work and utilising local vessels. Stockton were the company that completed the drilling work on HDD2 in 2022.

Sections of the construction duct will be welded together onshore at Holyhead Port to form the entire length. The full 660 metre length of duct will be towed from Holyhead Port offshore, round to Abraham's Bosom for the pulling in.

In the meantime, the drilling rig will be mobilised to the launch point onshore and the drill will be sent down HDD2 to clear the drilled hole of any debris. The drill will then be retracted, the drill head changed and sent down HDD2 with the attachment ready to pull the construction duct in.

Four total vessels will be utilised for the offshore element; two towing vessels (one of which is the dive vessel), one safety vessel and one multicat barge. The towing vessels will manoeuvre the construction duct from the Holyhead Port. The multicat will be anchored using a four-point anchoring system. Once the front of the duct is landed on the deck of the multicat, the second towing vessel will maintain tension on the duct and the first towing vessel (dive vessel) will assist if necessary to control the centre of the duct. The multicat barge will be moored approximately 70 metres beyond the subsea exit point of HDD2 and in line with the HDD exit direction, i.e. 70 metres further offshore.

2.1 Seabed

The confirmed coordinates of HDD2 seabed exit point are:

53.297876,-4.684246

2.2 Divers

Two divers will be involved in the offshore works, usually with only one in the water at a time. Divers will be used to attach the construction duct to the drill head attachment, ready for the onshore drilling rig to pull the construction duct up into HDD2.

2.3 Navigational risk

The 660 metre duct will be towed round in one whole piece from Holyhead Port to Abraham's Bosom – this activity will be weather dependent. All vessels will exhibit the correct lights, day-marks, and take steps for the prevention of danger to navigation. A notice to mariners will be issued prior to the commencement of works to ensure marine users are informed.

2.4 Schedule for works

The works will be undertaken over an expected maximum of 5 days. An outline of the expected works schedule is as follows:

- Day 1: Multicat (no other vessels) will travel from Holyhead Port to Abraham's Bosom to look at the HDD2 seabed exit location area and check that the drill head attachment is on the seabed.
- Day 2: Construction duct (660 metre length) will be towed round from Holyhead Port to Abraham's Bosom. The duct will be attached to the drill head attachment utilising divers. The construction duct will be pulled in by the drilling rig from offshore to onshore up HDD2. Offshore works would aim to be contained to a 12 hour period but contingency to work into the night would be required if the pulling in is slower than anticipated as the pulling in activity cannot stop once started.
- Day 3: Contingency day if pull back is slower than anticipated due to geology/weather/sea state.
- Day 4 – 5: Contingency days for demobilisation.

Works are anticipated to be undertaken during the day. A night shift should only be required if the pulling of the construction duct into HDD2 is slower than anticipated. Once this operation is started, it cannot stop.