

**From:** Colm Sheehan <colm@Batespartnership.com>  
**Sent:** Friday 9 January 2026 11:03  
**To:** MARA Licence  
**Cc:** Ian Moriarty  
**Subject:** RE: Public Consultation: Port of Waterford Application (LIC230025)

**Categories:** Paula

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Dear Joanne,

For clarity, this letter was submitted on behalf of the Port of Waterford (the applicant), not as a private individual or third party.

It was submitted by on the recent experience of the Port with regard to the interpretation of MMO requirements. The Port would like this submission taken into consideration with regard to the specific potential requirement of an MMO and ensure conformity between potential licenses/permits granted by MARA and the EPA.

Le dea mhéin,  
Colm



**Dr. Colm Sheehan**  
**BEng PhD FIEI**  
**Dredging Consultant**  
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**From:** MARA Licence <licence@mara.gov.ie>  
**Sent:** Thursday 8 January 2026 15:52  
**To:** Colm Sheehan <colm@Batespartnership.com>  
**Cc:** MARA Licence <licence@mara.gov.ie>  
**Subject:** Public Consultation: Port of Waterford Application (LIC230025)

Dear Colm,  
I hope you are well.

I am writing to formally note that the public consultation period for the Port of Waterford application (LIC230025) commenced on December 16, 2025, and is scheduled to close on January 24, 2026. Please advise if you wish to formally lodge the attached submission.

Kind regards,

Joanne Staunton  
Licence Authorisation Team  
MARA

**An tÚdarás Rialála Limistéir Mhuirí (MARA)**  
Maritime Area Regulatory Authority

**An Dara hUirlár, Teach Menapia, Páirc Gnó Dhraighní,  
Draighneach, Loch Garman, Y35RF29.**

2<sup>nd</sup> Floor, Menapia House, Drinagh Business Park,  
Drinagh, Wexford, Y35RF29.  
W: [www.maritimeregulator.ie](http://www.maritimeregulator.ie)



---

**From:** Colm Sheehan <[colm@Batespartnership.com](mailto:colm@Batespartnership.com)>  
**Sent:** Tuesday 13 May 2025 11:23  
**To:** MARA Licence <[licence@mara.gov.ie](mailto:licence@mara.gov.ie)>  
**Cc:** [im@portofwaterford.com](mailto:im@portofwaterford.com); darren doyle ([dd@portofwaterford.com](mailto:dd@portofwaterford.com))  
<[dd@portofwaterford.com](mailto:dd@portofwaterford.com)>  
**Subject:** RE: LIC230025 Port of Waterford

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Dear Sir/Madam,

Please find an unsolicited submission from the Port of Waterford in relation to the above application.

Could you please acknowledge this submission?

Le dea mhéin,  
Colm



**Dr. Colm Sheehan**  
BEng PhD FIEI  
Dredging Consultant  
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Maritime Usage Licensing,  
Maritime Area Regulatory Authority (MARA),  
2nd Floor, Menapia House,  
Drinagh Business Park,  
Wexford, Y35RF29.

13<sup>th</sup> May 2025  
Our Ref:636/CMS/20250513

Dear Sir/Madam,

**Re: LIC230025 Port of Waterford Maintenance Dredging**

On behalf of the Port of Waterford, we would like to make a further submission to its current Maritime Usage Licence (MUL) application concerning marine mammals. This is due to the current interpretation by the Maritime Area Regulatory Authority (MARA) of the applicable guidelines “*Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters*” and the subsequent application of mitigation measures, specifically Marine Mammal Observer (MMO).

For decades, the Port of Waterford has undertaken routine but critical maintenance of its designated navigation channels. Throughout this time, there have been no recorded instances of adverse effects on marine mammals nor any indication of deterioration of their condition in the local environment.

Within previous applications, the Port has been supported by local marine mammal tour companies, whose livelihood depends on a healthy environment for marine mammals being maintained. They have testified that:

- “*I have not noticed the activities of the marine mammals have been altered in any way from the dredging or dumping carried out compared to any other times throughout the year*” and
- “*I have not seen any negative effect on the native population of porpoises in Waterford harbour due to dredging operation*”.

These letters of support are appended to this letter for reference.

Further, within its current application, the Port included a Species IV Risk Assessment which concluded: “*the continuation of the maintenance dredging project.....will not significantly affect any Annex IV species or other non-Annex IV species within the vicinity of the Waterford Estuary or disposal site*”.

Furthermore, a recent independent report produced in April 2025 by IWDG Consulting concluded that “*it is highly unlikely the maintenance dredging operations in the Port of Waterford had any significant impact on marine mammals in the area.*” This report is also appended to this letter.

While the Port does not object in principle to the deployment of MMOs where a demonstrable risk to marine mammals exists, it is the Port’s position that, in the context of this application, such a measure is unwarranted. Where a robust assessment has determined that the risk is negligible, the imposition of MMOs would be disproportionate and inconsistent with the intent of the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters.



For Waterford estuary and the Port's dredging and disposal activities, all evidence – historic, observational, and scientific – is that the risk/impact to the local marine mammals is negligible. On this basis, the Port submits that the application of onerous mitigation measures, such as Marine Mammal Observers, is not appropriate. Evidence, contrary to that referenced herein, would be required to substantiate any requirement for MMOs.

The Port of Waterford makes this submission in good faith and remains open to further consultation if required.

Yours sincerely,

---

Colm Sheehan  
Partner  
The Bates Partnership

Enc: Marine Mammal Observations\_Letters of Support  
Marine Mammal Observer Report

Cc: Capt. Darren Doyle, Harbour Master, Port of Waterford Company  
Capt. Ian Moriarty, Deputy Harbour Master, Port of Waterford Company

10/2/14

11 FEB 2014

DEAR SIR,

WITH REGARDS TO YOUR CONCERNS REGARDING THE IMPACT OF DREDGING OPERATIONS IN THE WATERFORD RIVER AND ESTUARY ON THE NATIVE POPULATION OF PORPOISES, THE FOLLOWING ARE MY OBSERVATIONS.

THERE ARE THREE MAIN PODS OF HARBOUR PORPOISES IN THE HARBOUR.

THE FIRST GROUP LIVE ALONG THE COAST BETWEEN PORTALLY COVE AND DUNMORE EAST. THE SECOND GROUP LIVE IN AN AREA BETWEEN CREDAN HEAD AND DUNCANNON. THE THIRD GROUP OF PORPOISES LIVE BETWEEN PASSAGE EAST AND CHECKPOINT. THE GROUP OF PORPOISES BETWEEN CREDAN AND DUNCANNON LIVE HAPPILY ALONGSIDE THE DREDGING SITE IN THIS AREA.

I OPERATE AN ANGLING BOAT BUSINESS OUT OF DUNMORE EAST. WE ALSO BRING PEOPLE OUT WHALE AND DOLPHIN WATCHING. I WOULD BE VERY CONCERNED ABOUT ANY ACTIVITY WHICH WOULD HAVE A NEGATIVE IMPACT ON MY BUSINESS. I AM ALSO A MEMBER OF THE IRISH WHALE AND DOLPHIN GROUP, AND WOULD BE CONCERNED FOR THE SAFETY OF THESE ANIMALS.

I CAN REPORT TO YOU THAT I HAVE NOT SEEN ANY NEGATIVE EFFECT ON THE NATIVE POPULATION OF PORPOISES IN WATERFORD HARBOUR DUE TO DREDGING OPERATIONS.

THE WHALE AND DOLPHIN GROUPS ARE NOT NATIVE TO WATERFORD

HARBOUR AND THEREFORE WOULD NOT BE  
AFFECTED BY THE DREDGING. THESE ARE  
MIGRATORY PODS ALWAYS ON THE MOVE LOOKING  
FOR FOOD.

I HOPE THIS LETTER ANSWERS ANY QUESTIONS  
OR FEARS YOU MAY HAVE FOR THE WELLBEING  
OF THE HARBOUR PORPOISE POPULATION IN  
WATERFORD HARBOUR.

YOURS SINCERLY



## Contact

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Proprietor: Brendan Glody

## Colm Sheehan

---

**From:** Martin Colfer <info@charterangling.ie>  
**Sent:** 29 November 2017 09:59  
**To:** Colm Sheehan  
**Subject:** RE: Mammal Observation Letter

To whom it may concern,

I have been asked to provide input in relation to the Port of Waterford's dredging and dumping at sea activities that take place off Hook Head outside of the Waterford estuary.

I operate a charter vessel along the south and south east coastline. I have regularly operated in the Waterford estuary both for angling and mammal sightseeing tours for the last 10 years. The mammals present in the Waterford area include Dolphins, Fin Whales, Seals and Humpback Whales, they are generally located southeast of the Hook Lighthouse. These whales and dolphins are an important feature of the coastline and are very important to my ongoing business

During sightseeing tours the Port of Waterford have been dredging on many occasions. However, I have not noticed the activities of the marine mammals have been altered in any way from the dredging or dumping carried out compared to any other times throughout the year. I would have no objection to dredging continuing as it has previously.

Should further opinion be needed I would be happy to answer any specific questions if needed.

Yours Sincerely,

Martin Colfer.



# **Marine Mammal Observer Report**

**Maintenance Dredging - Port of Waterford**

**Client:** Port of Waterford

**Consultants:** IWDG Consulting

**Marine Mammal Observer:** Sorcha Maguire

**Dredging Contractor:** Boskalis Ltd.

**Dates:** 16-26 March 2025

**Irish Whale and Dolphin Group,  
Merchant's Quay, Kilrush, Co. Clare, Ireland.**

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## Executive Summary

Irish Whale and Dolphin Group (IWDG) Consulting were contracted by Port of Waterford (PoW) to provide an experienced Marine Mammal Observer (MMO) to conduct marine mammal observations from the Trailing Suction Hopper Dredger (TSHD) Shoalway, during maintenance dredging operations in Waterford harbour. Maintenance dredging operations took place over ten days from 16 March to 26 March 2025. Dredging operations were inclusive of loading and dumping activity, as well as transiting to and from the loading areas in Waterford Harbour and the designated spoil ground outside the harbour. The material extracted during loading operations was safe to be disposed of at a designated disposal site as specified in the Foreshore License (FS) (FS299445) issued by the Department of Housing, Local Government and Heritage and the Environmental Protection Agency.

A Joint Nature Conservation Committee (JNCC) certified MMO was present during dredging operations, to implement the National Park and Wildlife Service (NPWS) *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (2014). This involved a minimum thirty-minute visual monitoring watch of a 500m mitigation zone for the presence of marine mammals before commencement of dredging operations. A total of three pre-start watches took place, totalling two hours and three minutes, and sixty-nine effort watches totalling forty-five hours and fifty-six minutes. Forty-seven hours and fifty-nine minutes of visual observation were conducted by the MMO during the project.

There were a total of eight sightings of marine mammals throughout the project. Species sighted included the grey seal (*Halichoerus grypus*) with three sightings; a sperm whale (*Physeter macrocephalus*), also observed on three occasions; a harbour porpoise (*Phocoena phocoena*) with one sighting; and a single sighting of an unidentified dolphin species. None of the sightings occurred during mandatory pre-watches prior to commencement of dredging operations. There were no mitigating actions implemented during the maintenance dredging project. Operations were permitted to commence thirty minutes after the MMO had completed the mandatory 30-minute pre-watch and confirmed that the 500m mitigation zone was free of marine mammals in accordance with the *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014).

No instances of non-compliance were observed, with all operations carried out in accordance with the *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014) and Foreshore License (FS299445). IWDG Consulting concludes that it is highly unlikely the maintenance dredging operations in the Port of Waterford had any significant impact on marine mammals in the area.

## Introduction

Irish waters including the Irish Exclusive Economic Zone (EEZ) are designated as a Whale and Dolphin sanctuary since 1991 with twenty-six species of cetacean, two species of pinniped, and the Eurasian otter (*Lutra lutra*) present. All cetaceans are protected under national and international legislation including the Wildlife Act (1976), Wildlife Act amendments (2000, 2005, 2010 and 2012), and the EU Habitats Directive (1992). All cetacean species are listed under Annex IV of the EU Habitats Directive. Additionally, harbour porpoise (*Phocoena phocoena*), bottlenose dolphin (*Tursiops truncatus*), grey seal (*Halichoerus grypus*) and harbour seal (*Phoca vitulina*) are listed as Annex II species meaning they are species of community interest and are classified as needing strict protection. Under these legislations it is legally prohibited to hunt, kill or disturb any protected species or their breeding, feeding, or resting places. As cetaceans' primary sense is sound, they rely heavily on their use of the soundscape to communicate, forage, and to navigate. The most frequently recorded marine mammal species in Waterford harbour were the grey seal, harbour porpoise and common dolphin (*Delphinus delphis*). Other species commonly occurring outside the harbour (10 km radius south of Hook Head and Dunmore East) are fin whale (*Balaenoptera physalus*), humpback whale (*Megaptera novaeangliae*) and minke whale (*Balaenoptera acutorostrata*) (National Biodiversity Data Centre).

Under the 2014 *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014), a qualified and experienced MMO must be appointed to monitor for marine mammals before the commencement of any operations involving anthropogenic sound. The MMO must log all necessary data using the NPWS standard data recording forms, implement mitigation measures where appropriate, and advise operations crew of best practice procedures to minimise risk to marine mammals and ensure full compliance in adherence with the *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014). As per the NPWS (2014) once operations are underway there is no requirement to halt or discontinue operations at night-time, nor if weather or visibility conditions deteriorate, nor if marine mammals occur within the mitigation zone.

Boskalis Ltd were contracted by PoW to undertake maintenance dredging operations during March 2025 within Waterford harbour. IWDG Consulting were contracted by PoW to provide an experienced MMO to carry out marine mammal observation and to implement the *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014).

# Dredging and Dumping Operational Areas

An experienced MMO was present on board the TSHD Shoalway observing during daylight hours for dredging operations at Belview, Checkpoint and Duncannon bar dredge areas (Figure 1), as well as dumping within the spoil ground in Waterford estuary (Figure 2). The NPWS *Guidance to Manage the Risk to Marine Mammals from Man-made Sounds Sources in Irish Waters* (2014) were implemented throughout the project. This involved a minimum 30-minute visual monitoring of a 500m mitigation zone for the presence of marine mammals before commencement of dredging operations.

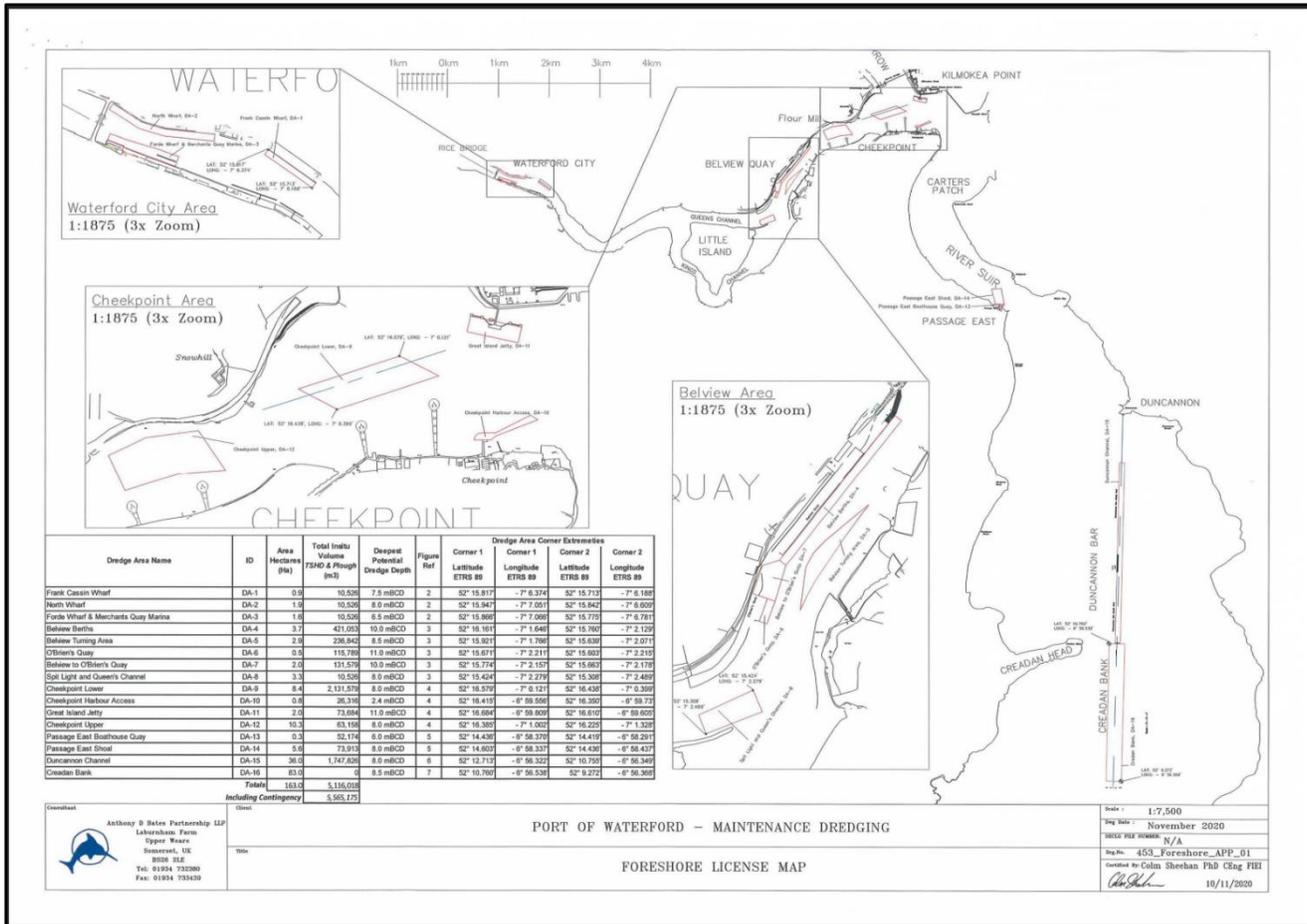


Figure 1: Map of loading areas in the Port of Waterford (Source: PoW)

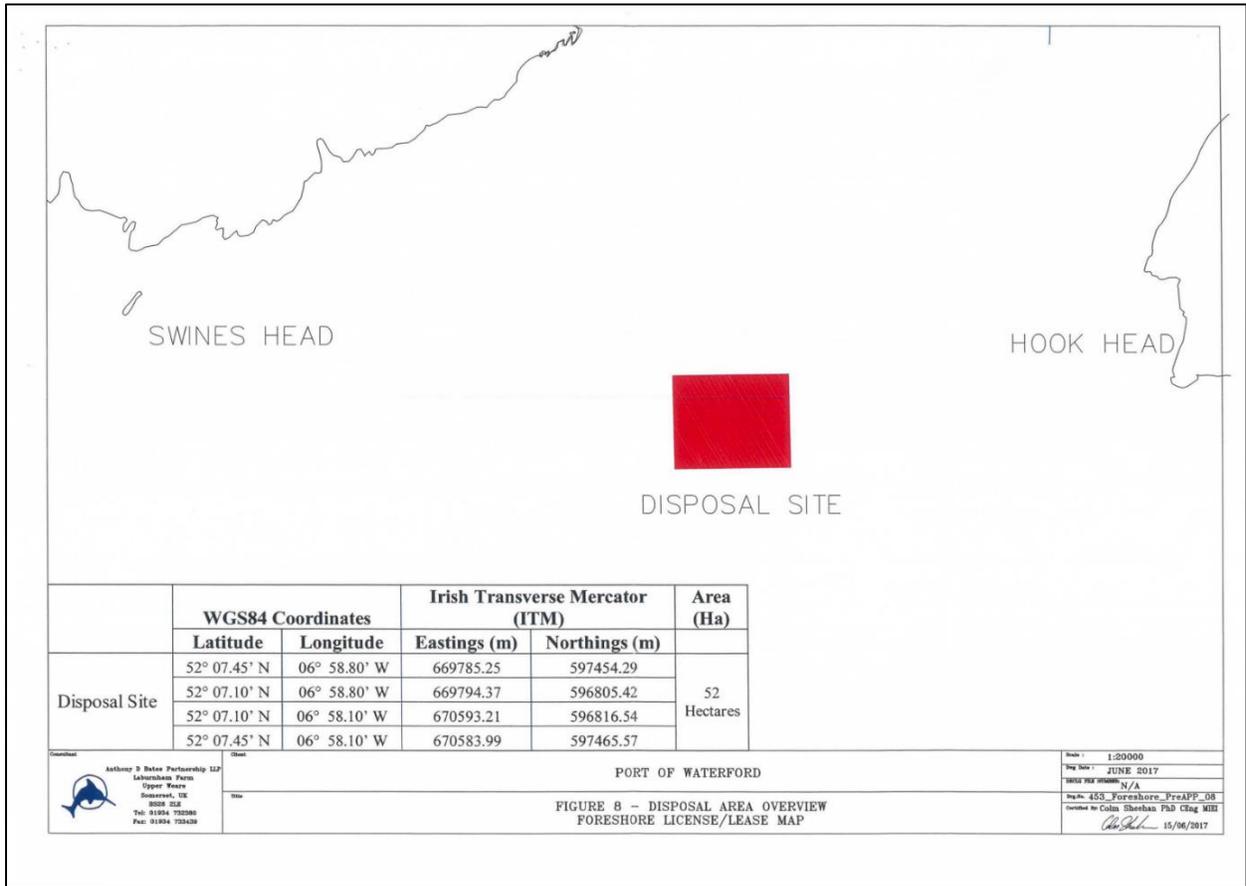


Figure 2: Map of spoil grounds in Waterford estuary (Source: PoW)

## Vessel

Dredging operations were conducted by the Shoalway TSHD (Figure 3). Vessel specifications are available in Table 1.



Figure 3: Shoalway TSHD (Source: Boskalis)

Table 1: Specifications of the Shoalway TSHD (Boskalis)

<b>Hopper capacity</b>	4,500 m <sup>3</sup>
<b>Length</b>	90.00 m
<b>Breadth</b>	19,00 m
<b>Max draught Int. load line</b>	5,93 . / DWT 5392
<b>Max draught dredging</b>	6,82 m/ DWT 7650
<b>Suction pipe diameter</b>	900 mm
<b>Maximum dredging depth</b>	30 m
<b>Propulsion</b>	2x 1,491 kW
<b>Bowthruster</b>	500 kW
<b>Sand pump output</b>	1,680 Kw
<b>Jet pump output</b>	2x 746 kW
<b>Sailing speed loaded</b>	11 kn

## Marine Mammal Observer

A JNCC certified MMO was present during daylight hours to implement the NPWS *Guidelines to Minimise the Acoustic Impacts on Marine Mammals* (2014). Sorcha Maguire acted as the IWDG Consulting MMO on board during the maintenance dredging operations.

## Results

### Details of Sound Producing Activity

Loading and dumping operations were carried out by the Shoalway TSHD. Dredging operations were continuous during day and night, inclusive of loading and dumping activity, as well as transiting to and from the loading areas and spoil grounds. Dredging operations took place across ten days from 16 to 26 March 2025.

A 30-minute pre-watch was conducted by the MMO prior to commencement of dredging operations. However, once operations commenced, there was no requirement under the NPWS Guidelines to discontinue operations, providing they were continuous and there were no breaks in sound production greater than 30-minutes. Where breaks did occur, a pre-watch was carried out by the MMO before the recommencement of dredging activities. A total of seventy-two hours and forty minutes of total sound production was conducted during the project. Recorded durations for loading and dumping operations are recorded in Table 3. All further details regarding recorded times for all sound producing activities can be found in Appendix III.

Table 3: Total duration of sound production during maintenance dredging at PoW (2025)

<b>Sound Production</b>	<b>Time (hh:mm)</b>
<b>Total loading operations</b>	64:22
<b>Total dumping operations</b>	08:18
<b>Total sound production</b>	72:40

## Marine Mammal Observation

During daylight hours, visual monitoring was conducted from the bridge of the Shoalway. The 500m mitigation zone was visually surveyed by the MMO with the aid of Marine 7x50 binoculars (Braun marine-binoculars). A total of forty-seven hours and fifty-nine minutes of visual observation was conducted by the MMO during the project. A total of three pre-start watches and sixty-nine effort watches were conducted. Pre-start watches accounted for a total of two hours and three minutes of marine mammal observation, with effort watches accounting for a total of forty-five hours and fifty-six minutes. Forty-seven hours and fifty-nine minutes of visual observation was conducted throughout the project. Durations of visual effort across dredging operations are recorded in Tables 4 and 5. All further information regarding visual effort can be found in Appendix IV.

If dredging operations ceased for more than 30 minutes, due to crew change or breakdowns, a pre-watch was conducted before operations could re-commence in accordance with *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014).

Table 4: Pre-watch monitoring details for maintenance dredging at PoW (2025)

Pre-watch Number	Date	Time (GMT)	Sightings	Delay
1	16/03/2025	14:07-14:46	0	00:00
2	19/03/2025	12:39-13:25	0	00:00
3	26/03/2025	15:17-15:55	0	00:00

Table 5: Marine mammal monitoring details for maintenance dredging at PoW (2025)

Marine Mammal Monitoring	Number of watches	Time (hh:mm)
Total pre-watches	3	02:03:00
Total effort watches	69	45:56:00
Total Monitoring Effort		47:59:00

## Marine Mammal Sightings

A total of eight marine mammal sightings occurred during maintenance dredging. The distance of the animals from the noise source was estimated by using known distances within the port and shipping channels. Distances from the animal to the noise source in the outer shipping channel and spoil grounds were estimated using the range finding scale to calculate reticles on 7x50 Braun Marine Binoculars. The bearing from the MMO to the animal was obtained using the bearing relative to the vessel, assuming the bow of the vessel was 0 degrees of 360 degree radially around the vessel.

The most frequently sighted species was the grey seal with three sightings. An individual sperm whale was sighted on three occasions on 25 March 2025. A dolphin species (possible common dolphin) was sighted on 18 March, and a harbour porpoise on the 24 March 2025 (Figure 4). Of these sightings, none occurred during mandatory pre-watches prior to commencement of dredging operations. Additional information regarding marine mammal sightings can be found in Appendix II.

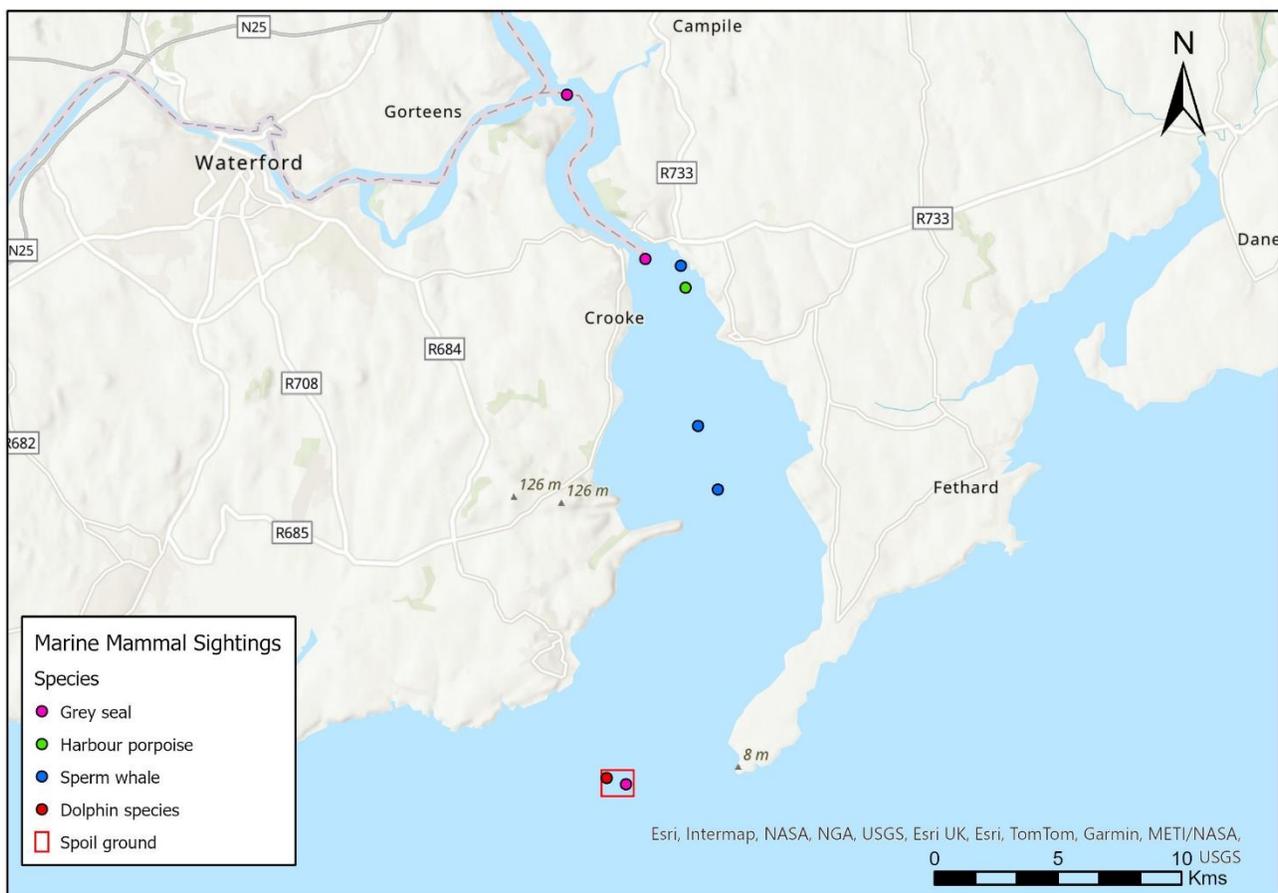


Figure 4: Marine mammal sightings during maintenance dredging operations at PoW (2025)

## Environmental Details

Environmental data was recorded by the MMO before each watch during daylight hours. All pre-watches were carried out in suitable conditions for marine mammal observation (Beaufort wind force 4 or less, sea state World Meteorological Organisation (WMO) 4 or less) in accordance with 2014 *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014). Environmental conditions were unsuitable for marine mammal observation on two occasions, resulting in two missed effort watches during the project.

The first instance occurred on the 22 March 2025 while transiting to the spoil ground during trip 175. A Beaufort wind force 5 and sea state WMO 5 were recorded, with a moderate swell (1-2 m) and moderate visibility (1-5 km).

The second occasion occurred on the 23 March 2025 while transiting to the spoil grounds during trip 182. A Beaufort wind force of 6 and sea state WMO 6 were recorded, with a moderate swell (1-2 m).

Operations were underway on both occasions, therefore there was no requirement to halt or discontinue operations in accordance with 2014 *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014).

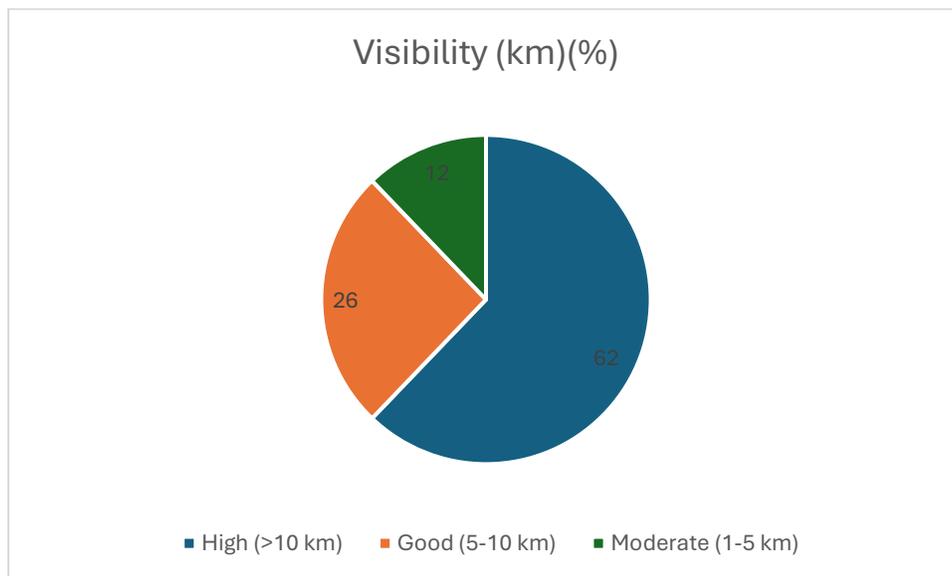


Figure 5: Visibility during maintenance dredging operations at PoW (2025)

Visibility was high (>10km), or good (5-10 km) for most observations during the project, totalling 46 watches (62%) and 19 watches (26%) respectively. Moderate visibility (1-5 km) was recorded on nine occasions (12%) (Figure 5).

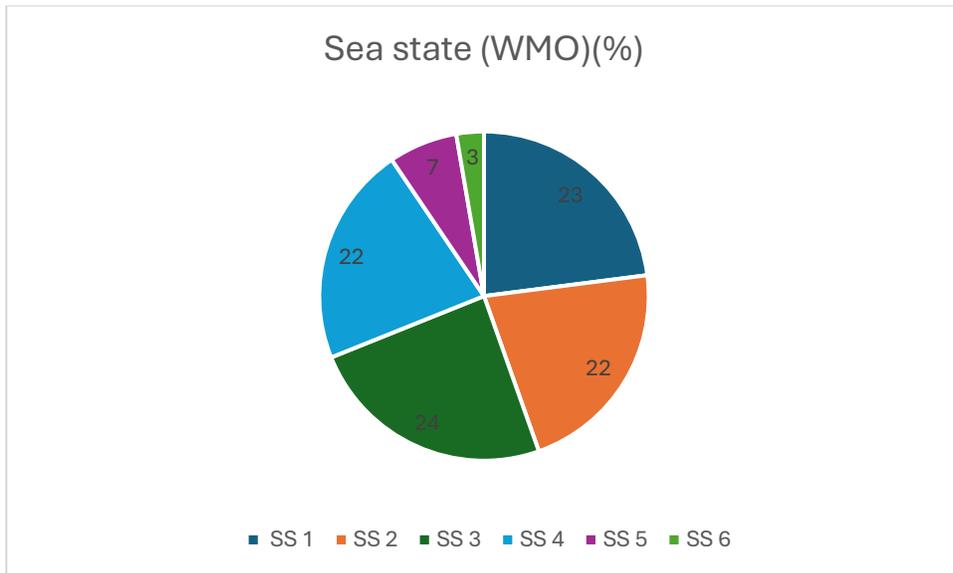


Figure 6: Summary of sea state recorded during maintenance dredging operations at PoW (2025)

The sea state was favourable for marine mammal observation for the majority of observations during dredging operations. Sea state 1 was observed during 17 watches (23%), sea state 2 during 16 watches (22%), and sea state 3 during 18 watches (24%). Sea states 4 and 5 were recorded during 16 watches (22%) and 5 watches (7%), respectively. Sea state 6 was observed on two occasions (3%) (Figure 6).

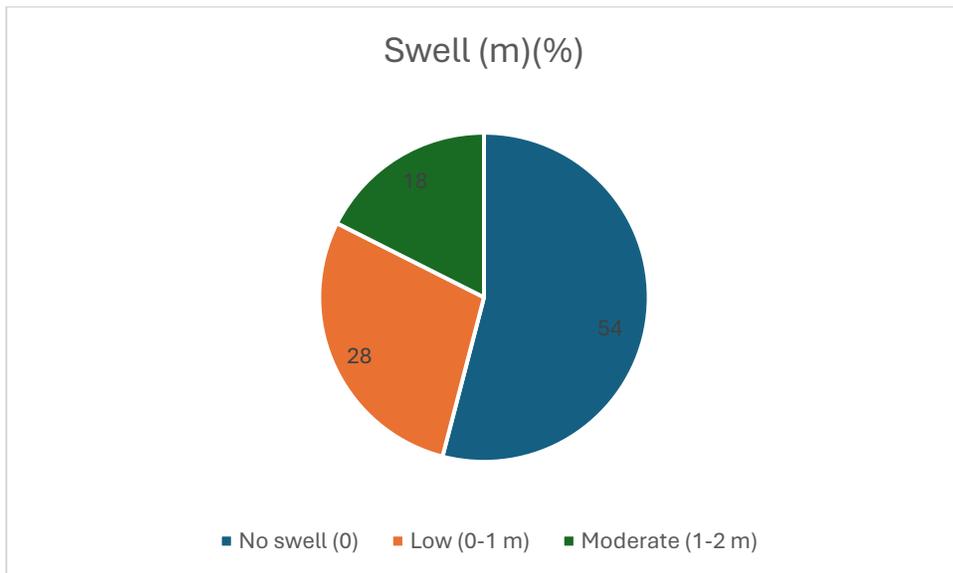


Figure 7: Swell recorded during maintenance dredging operations at PoW (2025)

No swell was recorded during marine mammal observation on 40 occasions (54%), followed by low swell (0-1m) observed on 21 occasions (28%) and 13 occasions during a moderate swell (1-2m) (18%) (Figure 7).

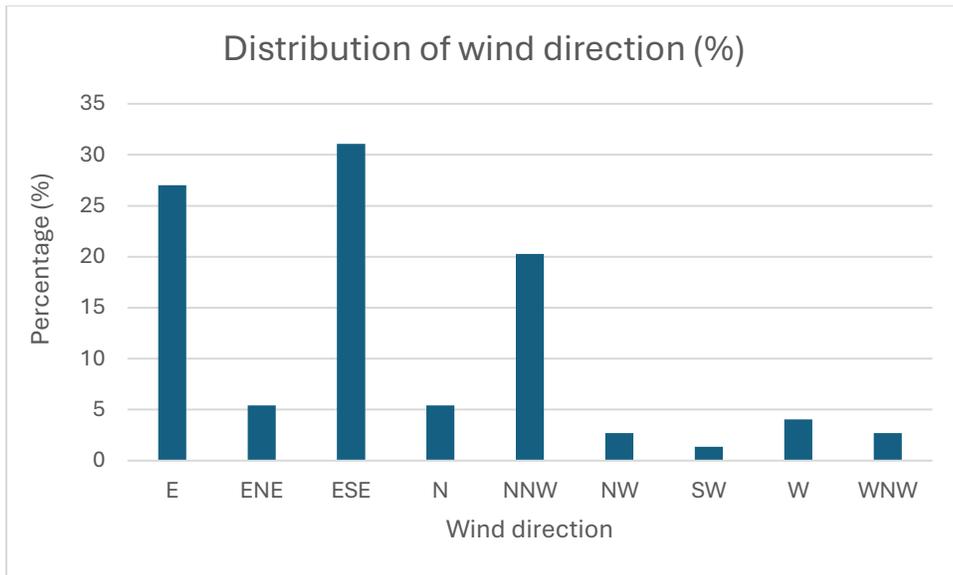


Figure 8: Summary of wind direction recorded during maintenance dredging operations at PoW (2025)

The most frequently recorded wind directions were East-southeast (23 watches, 31%), East (20 watches, 27%), and North-northwest (15 watches, 20%). Other common wind directions included North and East-northeast (four occasions, 5% respectively), West (three occasions, 4%), North-west and West (two occasions, 3% respectively) (Figure 8).

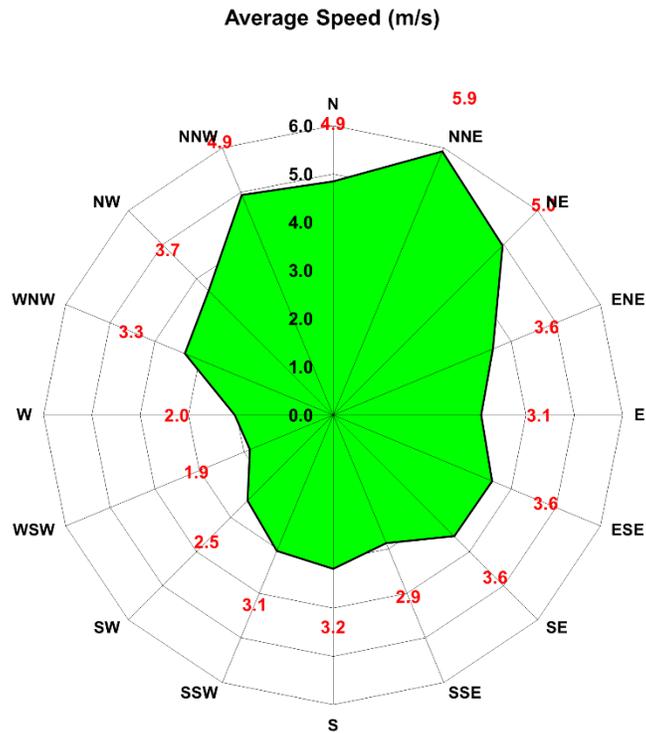


Figure 9: Summary of wind speed and direction during maintenance dredging operations at PoW (2025)

Wind speed was recorded using the Beaufort wind scale, with typical wind speed recorded between Beaufort 3 and 4. Beaufort 3 was most frequently recorded, accounting for 32% of the total wind speeds during the project. Beaufort 4 accounted for 22% and Beaufort 2 for 18% of total wind speeds. A wind speed of Beaufort 5 and above was recorded on 13 occasions accounting for 13% of total wind speeds (Figure 9).

## Conclusions

Overall, the environmental conditions throughout the 2025 maintenance dredging project at PoW were favourable for visual monitoring of marine mammals. A qualified MMO was present prior to the commencement of dredging operations to ensure no marine mammals were within the 500m mitigation zone. Once dredging operations commenced, there was no requirement to halt or discontinue the activity during darkness, nor if weather or visibility conditions deteriorate, nor if marine mammals occur within a 500m radial distance of the sound source (NPWS, 2014).

Three pre-watches were conducted throughout the project. Effort watches were conducted throughout the project to ensure best practice protocol was followed for both loading and dumping operations. No mitigation actions were implemented throughout the duration of the project. A total of eight marine mammal sightings were observed, with the grey seal as the most frequently observed species followed by sperm whale and harbour porpoise. There were no sightings during pre-watches, and therefore, no delays occurred in the commencement of dredging operations due to the presence of marine mammals within the mitigation zone.

No instances of non-compliance were observed with all dredging and dumping operations carried out in accordance with the *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* (NPWS, 2014) and Foreshore License (FS299445).

IWDG Consulting concludes that it is highly unlikely the maintenance dredging operations at the Port of Waterford had any significant impact on marine mammals in the area during the project.

## References

National Parks and Wildlife Service (NPWS) (2014). *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters*. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland

Boskalis. 2025. Shoalway. Available at: <https://boskalis.com/media/nh4bn2oh/shoalway.pdf> (Accessed: 08 April 2025)

National Biodiversity Data Centre. 2025. Marine Mammals – Biodiversity maps. Available at: <https://maps.biodiversityireland.ie/Species?speciesGroup=129> (Accessed: 08 April 2025)

# Appendix I: Curriculum Vitae of Marine Mammal Observer

**Sorcha Maguire**

[sorchamaguire@live.ie](mailto:sorchamaguire@live.ie)

## Profile Summary

I am a graduate with a BSc (Hons) in Applied Freshwater and Marine biology from Atlantic Technological University, Galway. I am skilled in marine mammal surveying, data management and report writing with four years' professional experience. I have an excellent ability to work as part of a team and equally capable of working on my own initiative.

## Technical skills

Marine mammal surveying

Line-transect surveying

Photo Identification skills

Scientific report writing

Microsoft Office - Word, Excel, Access and PowerPoint

Minitab 18/19

SPSS

ArcGIS

Ecopath and Ecosim

R Studio

LOGGER

Excellent identification skills

Excellent communication skills

## Professional Experience - Marine Mammal Observer (MMO)

### January- March 2025, Dublin Port Company, Dublin Port.

- Dredging contractor – Wills Bros. using Spud leg barge, Dredging Excavator and split hopper barge.
- MMO for Capital Dredging as part of MP2 Project.

### July-August 2024, Dublin Port Company, Dublin Port.

- Dredging contractor – Dutch Dredging using TSHD Mahury.
- MMO for maintenance dredging operations.

### February-March 2024, Dublin Port Company, Dublin Port.

- Dredging contractor - Cunninghams Civil and Marine using Spud Leg Barge and Dredging Excavator.
- Dumping contractor - O'Malley's Marine Plant using Split Hopper Barge.
- MMO for Capital Dredging as part of MP2 Project.

### May, October-December 2023, Sorensen Ireland, Killybegs Harbour, Co. Donegal.

- MMO for dredging and drilling operations.

### July-August 2023, Dublin Port Company, Dublin Port.

- Dredging contractor - Jan de Nul Ltd using a Trailing Suction Hopper Dredger.
- MMO for maintenance dredging operations.

### June 2023, Rusal Aughinish Alumina Ltd, Askeaton, Co. Limerick.

- Dredging contractor - Fastnet Shipping Ltd using the *M.V. Fastnet Sound Delta MP2650 Multicat* dredge vessel.
- MMO for maintenance plough dredging operations.

### April 2023, Dublin Port Company, Dublin Port.

- MMO for Piling operations as part of MP2 Project.

### March-April 2023, Off Arklow Bank, Irish Sea.

- MMO for geophysical survey using USBL, MBES, SBP, SSS, UHRS for proposed offshore wind farm aboard RV Tom Crean.

### December 2022, Malahide Marina, Malahide, Co. Dublin.

- Dredging contractor - Van Oord Ltd using a Water Injection Dredger.
- MMO for maintenance dredging in Malahide Marina.

### October – December 2022, Dublin Port Company, Dublin Port.

- Dredging contractor - Van Oord Ltd using a Backhoe Dredger, Suction Hopper Dredger and two Split Hopper Barges.
- MMO for dredging operations on board a split hopper barge, as part of Dublin Port MP2 Project.

## Relevant qualifications

Marine Mammal Observer  
JNCC Certified (2020)

Personal Survival  
Certificate (PST),  
The Seamanship Centre,  
Killybegs, Co. Donegal  
(2022)

ENG11 Seafarers Medical  
(Valid until 2026)

Manual handling

Life saver first aid  
certificate in CPR

Proficiency in Security  
Awareness, Securewest  
training (2023)

## Education

**BSc (Hons) in Applied  
Freshwater and Marine  
Biology**

Atlantic Technological  
University, Dublin Road,  
Galway.

### September 2022, Dublin Port Company, Dublin Port.

- Drilling contractor - Fugro Ltd.
- MMO for Drilling operations on board a jack-up rig as part of MP2 and 3FM project in Dublin Port.

### September 2022, SubCom, LLC. / Oldhead Marine Services, Oldhead, Co. Mayo.

- MMO for Shore-end Cable Installation, land-based.

### August 2022, Rusal Aughinish Alumina Ltd, Askeaton, Co. Limerick.

- Dredging contractor - Fastnet Shipping Ltd using the *M.V. Fastnet Sound Delta MP2650 Multicat* dredge vessel.
- MMO for 2022 maintenance plough dredging campaign.

### August 2021 – July 2022, XOcean Ltd/ Shannon Estuary Marine Ltd, Co. Clare.

- MMO for the deployment of an Unmanned Surface Vessel (USV) for reconnaissance geophysical surveys using a Multibeam Echo Sounder (MBES) and Sub-Bottom Profiler (SBP).

### May 2022, Lower River Shannon, Co. Clare.

- Scribe for boat-based Seabird Survey.

### August 2021, NPWS, Connemara Coast.

- Assisted on a boat-based Bottlenose Dolphin survey carrying out visual watches for Bottlenose Dolphins, captured Photo ID, recorded sighting and environmental data.

### July 2021, Rusal Aughinish Alumina Ltd, Askeaton, Co. Limerick.

- Dredging contractor - Fastnet Shipping Ltd using the *M.V. Fastnet Sound Delta MP2650 Multicat* dredge vessel.
- MMO for 2021 maintenance plough dredging campaign.

### May 2020 – July 2020, LNG.

- Assisted in land-based marine mammal surveys for potential Natural Gas terminal, Co. Kerry.
- Conducted visual watches for marine mammals and recorded environmental and sighting data.

## Relevant Experience

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### R.V. Celtic Mist - July 2021 (1&2), August 2021, August 2022

I have completed four legs on R.V Celtic Mist to date, both as a volunteer and a marine biologist. I was Lead marine biologist on two of the cruises where I was responsible for conducting marine mammal surveys and logging any sighting data and environmental data using LOGGER software. I also assisted the crew in manning and maintaining the vessel, including safety briefing and emergency procedures on board.

## Appendix II: Record of Marine Mammal Sightings

### DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<input checked="" type="checkbox"/> <b><u>Dredging</u></b>	<input type="checkbox"/> <b>Drilling</b>	<input type="checkbox"/> <b>Pile Driving</b>	<input type="checkbox"/> <b>Blasting</b>	<input type="checkbox"/> <b>Other</b> (specify)
<b>Date</b> (dd/mm/yyyy) 18/03/2025	<b>Time</b> (Local) 12:39	<b>Time</b> (GMT/UTC) 12:39		<b>Sighting Record no.</b> 1		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					___	
Spotted incidentally by you or someone else					X	
Other (please specify)					___	
Details: Spotted by crew member while leaving spoil ground. 50 m from dredger, bearing 70, heading SW.						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland) Shoalway TSHD			<b>Observer's name</b> Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference) 52.1226, -6.97759				<b>Water depth</b> (metres) (if available)		
<b>Species recorded</b> Unidentified dolphin species Possible Common dolphin			<b>Certainty of identification</b> (underline) Definite / <u>probable</u> / possible			
<b>Total number of animals</b> (best estimate) 1		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
<b>Maximum number</b> (estimated total) 1		<b>Minimum number</b> (estimated total) 1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)  Falcate dorsal fin halfway along the back				<b>Photograph or video taken</b> Yes / No		
				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)  		
<b>Behaviour</b>  Swimming				<b>Direction of travel of animals</b> (compass points or degrees)  SW		
<b>Activity of platform/vessel</b> Leaving spoil ground to transit back to loading area	<b>Operation/activity under way</b> (when animals first seen)  <u>Yes</u> / No / Pre-Start watch		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)  50			

**DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS**

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<u>Dredging</u>	Drilling	Pile Driving	Blasting	Other (specify)
<b>Date</b> (dd/mm/yyyy)	<b>Time</b> (Local)	<b>Time</b> (GMT/UTC)		<b>Sighting Record no.</b>		
24/03/2025	12:43	12:43		2		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					X	
Spotted incidentally by you or someone else					___	
Other (please specify)					___	
Details: Grey seal bottling 200 m from dredger while transiting to spoil ground, sighted again 12:49 300 m from dredger swimming E then dive.						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland)			<b>Observer's name</b>			
Shoalway TSHD			Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference)					<b>Water depth</b> (metres) (if available)	
52.1209736, -6.9710445 (animal's position)						
<b>Species recorded</b>			<b>Certainty of identification</b> (underline)			
Grey seal ( <i>Halichoerus grypus</i> )			<u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate)		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
1						
<b>Maximum number</b> (estimated total)		<b>Minimum number</b> (estimated total)				
1		1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)				<b>Photograph or video taken</b> Yes / <u>No</u>		
Large grey body, parallel nostrils, elongated muzzle				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)		
						
<b>Behaviour</b>				<b>Direction of travel of animals</b> (compass points or degrees)		
Swimming				E		
<b>Activity of platform/vessel</b>	<b>Operation/activity under way</b> (when animals first seen)		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)			
Transiting to spoil ground			100			
		<i>Yes / No / Pre-Start watch</i>				

**DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS**

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<u>Dredging</u>	Drilling	Pile Driving	Blasting	Other (specify)
<b>Date</b> (dd/mm/yyyy)	<b>Time</b> (Local)	<b>Time</b> (GMT/UTC)		<b>Sighting Record no.</b>		
24/03/2025	13:32	13:32		3		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					X	
Spotted incidentally by you or someone else					—	
Other (please specify)					—	
Details: Harbour porpoise swimming SE towards Duncannon 100 m from dredger while transiting to Cheekpoint. Bearing 270						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland)			<b>Observer's name</b>			
Shoalway TSHD			Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference)				<b>Water depth</b> (metres) (if available)		
52.2319, -6.94824						
<b>Species recorded</b>			Certainty of identification (underline)			
Harbour porpoise ( <i>Phocoena phocoena</i> )			<u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate)		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
1						
<b>Maximum number</b> (estimated total)		<b>Minimum number</b> (estimated total)				
1		1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)				<b>Photograph or video taken</b> <u>Yes</u> / No		
Small grey body, small triangular dorsal fin halfway along the back				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)		
						
<b>Behaviour</b>				<b>Direction of travel of animals</b> (compass points or degrees)		
Swimming				SE		
<b>Activity of platform/vessel</b>		<b>Operation/activity under way</b> (when animals first seen)		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)		
Transiting to loading area				100		
		<u>Yes</u> / No / Pre-Start watch				

## DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<input checked="" type="checkbox"/> <u>Dredging</u>	<input type="checkbox"/> Drilling	<input type="checkbox"/> Pile Driving	<input type="checkbox"/> Blasting	<input type="checkbox"/> Other (specify)
<b>Date</b> (dd/mm/yyyy) <b>24/03/2025</b>	<b>Time</b> (Local) 13:36	<b>Time</b> (GMT/UTC) <b>13:36</b>		<b>Sighting Record no.</b> 4		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					X	
Spotted incidentally by you or someone else					—	
Other (please specify)					—	
Details: Grey seal swimming 150 m from dredger while transiting to loading area, bearing 200, heading SE.						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland) Shoalway TSHD			<b>Observer's name</b> Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference) 52.2393, -6.96508				<b>Water depth</b> (metres) (if available)		
<b>Species recorded</b> Grey seal ( <i>Halichoerus grypus</i> )			<b>Certainty of identification</b> (underline) <u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate) 1		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
<b>Maximum number</b> (estimated total) 1		<b>Minimum number</b> (estimated total) 1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)  Large grey body, parallel nostrils, elongated muzzle				<b>Photograph or video taken</b> Yes / <u>No</u>		
				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)  		
<b>Behaviour</b> Swimming				<b>Direction of travel of animals</b> (compass points or degrees) SE		
<b>Activity of platform/vessel</b> Transiting to spoil ground		<b>Operation/activity under way</b> (when animals first seen)  <u>Yes</u> / No / Pre-Start watch		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)  150		

**DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS**

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<u>Dredging</u>	Drilling	Pile Driving	Blasting	Other (specify)
<b>Date</b> (dd/mm/yyyy) 25/03/2025	<b>Time</b> (Local) 08:23	<b>Time</b> (GMT/UTC) 08:23		<b>Sighting Record no.</b> 5		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					X	
Spotted incidentally by you or someone else					—	
Other (please specify)					—	
Details: Sperm whale logging at the surface of the water between Broomhill Point and Creadan Head. 650 m from dredger while transiting to spoil ground, bearing 330, heading NW						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland) Shoalway TSHD			<b>Observer's name</b> Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference) 52.1921, -6.94055				<b>Water depth</b> (metres) (if available)		
<b>Species recorded</b> Sperm whale ( <i>Physeter macrocephalus</i> )			<b>Certainty of identification</b> (underline) <u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate) 1		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
<b>Maximum number</b> (estimated total) 1		<b>Minimum number</b> (estimated total) 1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)  Square shaped head, rounded dorsal fin, lumps on the tail stock, blowhole to the left of the head, left slanted blow.				<b>Photograph or video taken</b> <u>Yes</u> / No		
				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)  		
<b>Behaviour</b> Logging at the surface, blow, swimming				<b>Direction of travel of animals</b> (compass points or degrees)  NW		
<b>Activity of platform/vessel</b> Transiting to spoil ground	<b>Operation/activity under way</b> (when animals first seen)  <u>Yes</u> / No / Pre-Start watch		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)  650			

**DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS**

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<input checked="" type="checkbox"/> <u>Dredging</u>	<input type="checkbox"/> Drilling	<input type="checkbox"/> Pile Driving	<input type="checkbox"/> Blasting	<input type="checkbox"/> Other (specify)
<b>Date</b> (dd/mm/yyyy) 25/03/2025	<b>Time</b> (Local) 09:25	<b>Time</b> (GMT/UTC) 09:25		<b>Sighting Record no.</b> 6		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals				X		
Spotted incidentally by you or someone else				___		
Other (please specify)				___		
Details: Sperm whale sighted 3 km from dredger while transiting back to loading area, bearing 350. 09:35 swimming 450 m from dredger, heading W, bearing 270, changed direction to NW once dredger had passed.						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland) Shoalway TSHD			<b>Observer's name</b> Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference) 52.2009, -6.93837				<b>Water depth</b> (metres) (if available)		
<b>Species recorded</b> Sperm whale ( <i>Physeter macrocephalus</i> )			<b>Certainty of identification</b> (underline) <u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate) 1		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
<b>Maximum number</b> (estimated total) 1		<b>Minimum number</b> (estimated total) 1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)  Square shaped head, rounded dorsal fin, lumps on the tail stock, blowhole to the left of the head, left slanted blow.				<b>Photograph or video taken</b> <u>Yes</u> / No		
				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)  		
<b>Behaviour</b> Swimming, blow				<b>Direction of travel of animals</b> (compass points or degrees)  W/NW		
<b>Activity of platform/vessel</b> Transiting to loading area	<b>Operation/activity under way</b> (when animals first seen)  <u>Yes</u> / No / Pre-Start watch		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)  450			

## DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<input checked="" type="checkbox"/> <u>Dredging</u>	<input type="checkbox"/> Drilling	<input type="checkbox"/> Pile Driving	<input type="checkbox"/> Blasting	<input type="checkbox"/> Other (specify)
<b>Date</b> (dd/mm/yyyy) 25/03/2025	<b>Time</b> (Local) 11:20	<b>Time</b> (GMT/UTC) 11:20		<b>Sighting Record no.</b> 7		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					X	
Spotted incidentally by you or someone else					—	
Other (please specify)					—	
Details: Sperm whale sighted 600 m from dredger while transiting back to spoil ground, bearing 300. Listing to one side in shallow water close to Arthurstown pier, fishing vessel and kayak very close. 300 m from dredger while passing, very little movement. Sighted again in the same place at 13:00 while transiting back to loading area, very little movement. Not sighted again						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland) Shoalway TSHD			<b>Observer's name</b> Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference) 52.275, -6.99152					<b>Water depth</b> (metres) (if available)	
<b>Species recorded</b> Sperm whale ( <i>Physeter macrocephalus</i> )			<b>Certainty of identification</b> (underline) <u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate) 1		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
<b>Maximum number</b> (estimated total) 1		<b>Minimum number</b> (estimated total) 1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)  Square shaped head, rounded dorsal fin, lumps on the tail stock, blowhole to the left of the head, left slanted blow.				<b>Photograph or video taken</b> <i>Yes / No</i>		
				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)  		
<b>Behaviour</b> Listing to one side, blow				<b>Direction of travel of animals</b> (compass points or degrees)  Milling		
<b>Activity of platform/vessel</b> Transiting to spoil ground		<b>Operation/activity under way</b> (when animals first seen)  <i>Yes / No / Pre-Start watch</i>		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)  300		

**DATA FORM FOR COASTAL/MARINE WORKS - MARINE MAMMAL SIGHTING RECORDS**

*Options in italics should be circled or underlined as appropriate. Complete 1 record per sheet.*

<b>Operation/Activity</b> (please tick)		<input checked="" type="checkbox"/> <u>Dredging</u>	<input type="checkbox"/> Drilling	<input type="checkbox"/> Pile Driving	<input type="checkbox"/> Blasting	<input type="checkbox"/> Other (specify)
<b>Date</b> (dd/mm/yyyy) 25/03/2025	<b>Time</b> (Local) 17:15	<b>Time</b> (GMT/UTC) 17:15		<b>Sighting Record no.</b> 8		
<b>How did this sighting occur?</b> (please tick)						
While you were keeping a continuous watch for marine mammals					X	
Spotted incidentally by you or someone else					___	
Other (please specify)					___	
Details: Grey seal swimming 80 m from dredger while leaving Cheekpoint transiting to spoil ground, bearing 150, heading SE.						
<b>Platform type &amp; name</b> (e.g. ship, rig, headland) Shoalway TSHD			<b>Observer's name</b> Sorcha Maguire			
<b>Observer's position</b> (Latitude/Longitude or 6-figure Grid reference) 52.275, -6.99152				<b>Water depth</b> (metres) (if available)		
<b>Species recorded</b> Grey seal ( <i>Halichoerus grypus</i> )			<b>Certainty of identification</b> (underline) <u>Definite</u> / probable / possible			
<b>Total number of animals</b> (best estimate) 1		<b>No. of adults</b>	<b>No. of juveniles</b>	<b>No. of calves</b>		
<b>Maximum number</b> (estimated total) 1		<b>Minimum number</b> (estimated total) 1				
<b>Description</b> (include features such as overall size; shape of head; position, shape and size of dorsal fin; colour and patterning; height, direction, shape of blow)  Large grey body, parallel nostrils, elongated muzzle				<b>Photograph or video taken</b> Yes / <u>No</u>		
				<b>Direction of travel of animals in relation to platform/vessel</b> (draw arrow)  		
<b>Behaviour</b>  Swimming				<b>Direction of travel of animals</b> (compass points or degrees)  SE		
<b>Activity of platform/vessel</b>  Transiting to spoil ground	<b>Operation/activity under way</b> (when animals first seen)  <u>Yes</u> / No / Pre-Start watch		<b>Closest distance of animals from platform/vessel</b> (metres) (Record even if not operating)  80			

### Appendix III: Record of Operation/Activity

#### DATA FORM FOR COASTAL/MARINE WORKS - RECORD OF OPERATION/ACTIVITY

Platform name: Shoalway

Platform type: TSHD

Client: Contractor: Boskalis

MMO: Sorcha Maguire

Complete this form every time the sound-producing operation or activity (e.g., drilling, pile driving, blasting) occurs including overnight, whether for testing, full operation or any other purpose.

Type of operation or activity  Dredging, Drilling, Pile driving, Blasting, other	Date  (dd/mm/yyyy)	Sound-producing operation or activity			Pre-Start Monitoring effort for marine mammals					Action necessary		
		Time when ramp-up/soft-start began [if any] (GMT/UTC)	Time when equipment reached full power (GMT/UTC)	Time when equipment stopped or shut down (GMT/UTC)	Who carried out the monitoring for marine mammals?  (Job Title)	Start time of monitoring for marine mammals [Pre-start-up] (GMT/UTC)	End time of monitoring for marine mammals (GMT/UTC)	Reason for non-detection of marine mammals?  (e.g. sea state, swell, glare, poor light, fog, rain, etc.)	Were hydro-phones used?  (Yes/No)	Were marine mammals present in the 30/60 mins before start-up? (Yes/No)	If Yes, give time when marine mammals were last seen (GMT/UTC)	If marine mammals were present, what action was taken?  (e.g., delay ramp-up/soft start, delay full start-up)
Trip 113/DR1/PW 1	16/03/2025	-	14:46	15:34	MMO	14:07	14:46	None	-	No	-	-
DU1	16/03/2025	-	16:58	17:03	MMO	16:05	16:58	None	-	No	-	-
Trip114/DR2	16/03/2025	-	18:03	18:41	MMO	18:00	18:34	None	-	No	-	-
DU2	16/03/2025	-	20:07	20:10	-	DARK	DARK	None	-	No	-	-
Trip 115/DR3	16/03/2025	-	20:44	21:19	-	DARK	DARK	None	-	No	-	-
DU3	16/03/2025	-	21:54	21:59	-	DARK	DARK	None	-	No	-	-
Trip 116/DR4	16/03/2025	-	22:35	23:10	-	DARK	DARK	None	-	No	-	-
DU 4	16/03/2025	-	23:46	23:53	-	DARK	DARK	None	-	No	-	-
Trip 117/ DR5	17/03/2025	-	00:29	00:54	-	DARK	DARK	None	-	No	-	-
DU5	17/03/2025	-	01:35	01:39	-	DARK	DARK	None	-	No	-	-
Trip 118/DR6	17/03/2025	-	02:04	02:53	-	DARK	DARK	None	-	No	-	-
DU 6	17/03/2025	-	03:29	03:35	-	DARK	DARK	None	-	No	-	-
Trip 119/ DR7	17/03/2025	-	04:05	04:45	-	DARK	DARK	None	-	No	-	-
DU7	17/03/2025	-	05:32	05:38	-	DARK	DARK	None	-	No	-	-
Trip 120/ DR8	17/03/2025	-	06:06	06:54	-	DARK	DARK	None	-	No	-	-
DU8	17/03/2025	-	07:29	07:33	MMO	07:03	07:29	None	-	No	-	-
Trip 121/ DR9	17/03/2025	-	08:38	09:33	MMO	08:01	08:50	None	-	No	-	-

DU9	17/03/2025	-	10:42	10:46	MMO	10:19	10:42	None	-	No	-	-
Trip 122/ DR10	17/03/2025	-	12:04	12:47	MMO	11:50	12:53	None	-	No	-	-
DU10	17/03/2025	-	14:27	14:32	MMO	14:04	14:27	None	-	No	-	-
Trip 123/ DR11	17/03/2025	-	15:34	16:13	MMO	15:23	16:13	None	-	No	-	-
DU11	17/03/2025	-	17:38	17:44	MMO	17:05	17:39	None	-	No	-	-
Trip 124/ DR12	17/03/2025	-	18:48	19:34	-	DARK	DARK	None	-	No	-	-
DU12	17/03/2025	-	20:58	21:02	-	DARK	DARK	None	-	No	-	-
Trip 125/ DR13	17/03/2025	-	21:33	22:12	-	DARK	DARK	None	-	No	-	-
DU13	17/03/2025	-	22:47	22:52	-	DARK	DARK	None	-	No	-	-
Trip 126/ DR14	17/03/2025	-	23:19	23:48	-	DARK	DARK	None	-	No	-	-
DU14	17/03/2025	-	00:21	00:26	-	DARK	DARK	None	-	No	-	-
Trip 127/ DR15	17/03/2025	-	00:56	01:30	-	DARK	DARK	None	-	No	-	-
DU15	18/03/2025	-	02:02	02:08	-	DARK	DARK	None	-	No	-	-
Trip 128/ DR16	18/03/2025	-	02:38	03:11	-	DARK	DARK	None	-	No	-	-
DU16	18/03/2025	-	04:04	04:09	-	DARK	DARK	None	-	No	-	-
Trip 129/ DR17	18/03/2025	-	04:37	05:13	-	DARK	DARK	None	-	No	-	-
DU17	18/03/2025	-	05:51	05:55	-	DARK	DARK	None	-	No	-	-
Trip 130/ DR18	18/03/2025	-	06:24	07:15	MMO	06:25	06:45	None	-	No	-	-
DU18	18/03/2025	-	07:50	07:53	MMO	07:16	07:50	None	-	No	-	-
Trip 131/ DR19	18/03/2025	-	08:20	08:54	MMO	07:50	08:50	None	-	No	-	-
DU19	18/03/2025	-	09:21	09:26	MMO	08:50	09:21	None	-	No	-	-
Trip 132/ DR20	18/03/2025	-	10:40	11:21	MMO	10:30	11:00	None	-	No	-	-
DU20	18/03/2025	-	12:34	12:38	MMO	11:58	12:35	None	-	No	-	-
Trip 133/ DR21	18/03/2025	-	13:52	14:33	MMO	13:10	13:55	None	-	No	-	-
DU21	18/03/2025	-	15:54	16:00	MMO	14:46	15:55	None	-	No	-	-
Trip 134/ DR 22	18/03/2025	-	16:56	17:39	MMO	16:48	17:39	None	-	No	-	-
DU22	18/03/2025	-	19:05	19:10	-	DARK	DARK	None	-	No	-	-

Trip 135/ DR23	18/03/2025	-	19:39	20:21	-	DARK	DARK	None	-	No	-	-
DU23	18/03/2025	-	20:57	21:03	-	DARK	DARK	None	-	No	-	-
Trip 136/ DR24	18/03/2025	-	21:36	22:16	-	DARK	DARK	None	-	No	-	-
DU24	18/03/2025	-	22:47	22:51	-	DARK	DARK	None	-	No	-	-
Trip 137/ DR25	18/03/2025	-	23:26	00:05	-	DARK	DARK	None	-	No	-	-
DU25	19/03/2025	-	00:39	00:43	-	DARK	DARK	None	-	No	-	-
Trip 138/ DR26	19/03/2025	-	01:10	01:42	-	DARK	DARK	None	-	No	-	-
DU26	19/03/2025	-	02:14	02:19	-	DARK	DARK	None	-	No	-	-
Trip 139/ DR27	19/03/2025	-	02:46	03:19	-	DARK	DARK	None	-	No	-	-
DU27	19/03/2025	-	03:52	03:56	-	DARK	DARK	None	-	No	-	-
Trip 140/ DR28	19/03/2025	-	04:24	04:59	-	DARK	DARK	None	-	No	-	-
DU28	19/03/2025	-	05:37	05:42	-	DARK	DARK	None	-	No	-	-
Trip 141/ DR29	19/03/2025	-	06:10	06:58	MMO	06:32	07:00	None	-	No	-	-
DU29	19/03/2025	-	07:31	07:35	MMO	07:02	07:31	None	-	No	-	-
Trip 142/ DR30	19/03/2025	-	08:01	08:48	MMO	07:35	08:06	None	-	No	-	-
DU30	19/03/2025	-	09:21	09:24	MMO	09:04	09:21	None	-	No	-	-
Trip 143/ DR31/ PW2	19/03/2025	-	13:22	13:58	MMO	12:39	13:25	None	-	No	-	-
DU31	19/03/2025	-	15:23	15:28	MMO	14:40	15:24	None	-	No	-	-
Trip 144/ DR32	19/03/2025	-	16:37	17:13	MMO	15:52	17:14	None	-	No	-	-
DU32	19/03/2025	-	18:40	18:45	MMO	17:49	18:31	None	-	No	-	-
Trip 145/ DR33	19/03/2025	-	19:13	19:56	-	DARK	DARK	None	-	No	-	-
DU33	19/03/2025	-	20:26	20:33	-	DARK	DARK	None	-	No	-	-
Trip 146/ DR34	19/03/2025	-	21:00	21:39	-	DARK	DARK	None	-	No	-	-
DU34	19/03/2025	-	22:13	22:17	-	DARK	DARK	None	-	No	-	-
Trip 147/ DR35	19/03/2025	-	22:46	23:34	-	DARK	DARK	None	-	No	-	-
DU35	20/03/2025	-	00:06	00:10	-	DARK	DARK	None	-	No	-	-
Trip 148/ DR36	20/03/2025	-	00:39	01:14	-	DARK	DARK	None	-	No	-	-

DU36	20/03/2025	-	01:43	01:47	-	DARK	DARK	None	-	No	-	-
Trip 149/ DR37	20/03/2025	-	02:15	02:49	-	DARK	DARK	None	-	No	-	-
DU37	20/03/2025	-	03:19	03:24	-	DARK	DARK	None	-	No	-	-
Trip 150/ DR38	20/03/2025	-	03:48	04:24	-	DARK	DARK	None	-	No	-	-
DU38	20/03/2025	-	04:56	05:02	-	DARK	DARK	None	-	No	-	-
Trip 151/ DR39	20/03/2025	-	05:30	06:19	-	DARK	DARK	None	-	No	-	-
DU39	20/03/2025	-	06:53	06:58	MMO	06:39	07:00	None	-	No	-	-
Trip 152/ DR40	20/03/2025	-	08:04	08:37	MMO	07:06	07:50	None	-	No	-	-
DU40	20/03/2025	-	09:53	10:01	MMO	09:09	09:53	None	-	No	-	-
Trip 153/ DR41	20/03/2025	-	11:16	11:50	MMO	10:37	11:18	None	-	No	-	-
DU41	20/03/2025	-	13:00	13:07	MMO	12:26	13:00	None	-	No	-	-
Trip 154/ DR42	20/03/2025	-	14:21	14:55	MMO	14:28	14:58	None	-	No	-	-
DU42	20/03/2025	-	16:15	16:24	MMO	15:33	16:15	None	-	No	-	-
Trip 155/ DR43	20/03/2025	-	17:29	18:09	MMO	16:59	18:05	None	-	No	-	-
DU43	20/03/2025	-	19:38	19:42	-	DARK	DARK	None	-	No	-	-
Trip 156/ DR44	20/03/2025	-	20:10	20:49	-	DARK	DARK	None	-	No	-	-
DU44	20/03/2025	-	21:25	21:29	-	DARK	DARK	None	-	No	-	-
Trip 157/ DR45	20/03/2025	-	21:58	22:35	-	DARK	DARK	None	-	No	-	-
DU45	20/03/2025	-	23:07	23:11	-	DARK	DARK	None	-	No	-	-
Trip 158/ DR46	20/03/2025	-	23:41	00:24	-	DARK	DARK	None	-	No	-	-
DU46	21/03/2025	-	00:58	01:02	-	DARK	DARK	None	-	No	-	-
Trip 159/ DR47	21/03/2025	-	01:30	02:11	-	DARK	DARK	None	-	No	-	-
DU47	21/03/2025	-	02:44	02:48	-	DARK	DARK	None	-	No	-	-
Trip 160/ DR48	21/03/2025	-	03:16	03:50	-	DARK	DARK	None	-	No	-	-
DU48	21/03/2025	-	04:26	04:29	-	DARK	DARK	None	-	No	-	-
Trip 161/ DR49	21/03/2025	-	04:55	05:29	-	DARK	DARK	None	-	No	-	-
DU49	21/03/2025	-	06:01	06:05	-	DARK	DARK	None	-	No	-	-

Trip 162/ DR50	21/03/2025	-	07:10	07:57	MMO	06:53	07:34	None	-	No	-	-
DU50	21/03/2025	-	09:20	09:26	MMO	08:50	09:25	None	-	No	-	-
Trip 163/ DR51	21/03/2025	-	10:35	11:10	MMO	10:20	11:00	None	-	No	-	-
DU51	21/03/2025	-	12:27	12:32	MMO	12:04	12:30	None	-	No	-	-
Trip 164/ DR52	21/03/2025	-	13:50	14:22	MMO	13:32	15:02	None	-	No	-	-
DU52	21/03/2025	-	15:42	15:47	MMO	15:32	15:46	None	-	No	-	-
Trip 165/ DR53	21/03/2025	-	17:00	17:37	MMO	17:12	17:40	None	-	No	-	-
DU53	21/03/2025	-	19:02	19:07	-	DARK	DARK	None	-	No	-	-
Trip 166/ DR54	21/03/2025	-	19:36	20:17	-	DARK	DARK	None	-	No	-	-
DU54	21/03/2025	-	20:54	20:59	-	DARK	DARK	None	-	No	-	-
Trip 167/ DR55	21/03/2025	-	21:28	22:09	-	DARK	DARK	None	-	No	-	-
DU55	21/03/2025	-	22:45	22:50	-	DARK	DARK	None	-	No	-	-
Trip 168/ DR56	21/03/2025	-	23:21	00:02	-	DARK	DARK	None	-	No	-	-
DU56	22/03/2025	-	00:34	00:38	-	DARK	DARK	None	-	No	-	-
Trip 169/ DR57	22/03/2025	-	01:06	01:44	-	DARK	DARK	None	-	No	-	-
DU57	22/03/2025	-	02:13	02:18	-	DARK	DARK	None	-	No	-	-
Trip 170/ DR58	22/03/2025	-	02:43	03:17	-	DARK	DARK	None	-	No	-	-
DU58	22/03/2025	-	03:49	03:53	-	DARK	DARK	None	-	No	-	-
Trip 171/ DR59	22/03/2025	-	04:19	04:52	-	DARK	DARK	None	-	No	-	-
DU59	22/03/2025	-	05:27	05:31	-	DARK	DARK	None	-	No	-	-
Trip 172/ DR60	22/03/2025	-	05:57	06:39	-	DARK	DARK	None	-	No	-	-
DU60	22/03/2025	-	07:15	07:19	MMO	06:48	07:16	None	-	No	-	-
Trip 173/ DR61	22/03/2025	-	07:43	08:22	MMO	07:16	07:46	None	-	No	-	-
DU61	22/03/2025	-	08:56	09:04	MMO	08:32	08:58	None	-	No	-	-
Trip 174/ DR62	22/03/2025	-	10:25	11:25	MMO	09:43	10:32	None	-	No	-	-
DU62	22/03/2025	-	12:50	12:54	MMO	12:18	12:50	None	-	No	-	-
Trip 175/ DR63	22/03/2025	-	14:23	15:06	MMO	14:05	14:30	None	-	No	-	-

DU63	22/03/2025	-	16:42	16:47	MMO	-	-	None	-	No	-	-
Trip 176/ DR64	22/03/2025	-	18:01	18:43	MMO	17:35		None	-	No	-	-
DU64	22/03/2025	-	20:05	20:10	-	DARK	DARK	None	-	No	-	-
Trip 177/ DR65	22/03/2025	-	20:41	21:11	-	DARK	DARK	None	-	No	-	-
DU65	22/03/2025	-	21:48	21:52	-	DARK	DARK	None	-	No	-	-
Trip 178/ DR66	22/03/2025	-	22:21	22:56	-	DARK	DARK	None	-	No	-	-
DU66	23/03/2025	-	23:32	23:37	-	DARK	DARK	None	-	No	-	-
Trip 179/ DR67	23/03/2025	-	00:07	00:39	-	DARK	DARK	None	-	No	-	-
DU67	23/03/2025	-	01:13	01:17	-	DARK	DARK	None	-	No	-	-
Trip 180/ DR68	23/03/2025	-	01:49	02:23	-	DARK	DARK	None	-	No	-	-
DU68	23/03/2025	-	03:00	03:04	-	DARK	DARK	None	-	No	-	-
Trip 181/ DR69	23/03/2025	-	03:43	04:20	-	DARK	DARK	None	-	No	-	-
DU69	23/03/2025	-	04:48	04:52	-	DARK	DARK	None	-	No	-	-
Trip 182/ DR70	23/03/2025	-	05:21	05:53	-	DARK	DARK	None	-	No	-	-
DU70	23/03/2025	-	06:41	06:45	-	-	-	Sea- state/swell	-	-	-	-
Trip 183/ DR71	23/03/2025	-	08:07	08:59	MMO	07:44	08:10	None	-	No	-	-
DU71	23/03/2025	-	10:32	10:36	MMO	09:23	09:50	None	-	No	-	-
Trip 184/ DR72	23/03/2025	-	12:05	12:40	MMO	11:39	12:16	None	-	No	-	-
DU72	23/03/2025	-	14:17	14:21	MMO	14:12	14:20	None	-	No	-	-
Trip 185/ DR73	23/03/2025	-	15:50	16:32	MMO	15:13	16:52	None	-	No	-	-
DU73	23/03/2025	-	18:06	18:12	MMO	17:55	18:06	None	-	No	-	-
Trip 186/ DR74	23/03/2025	-	19:22	20:10	-	DARK	DARK	None	-	No	-	-
DU74	23/03/2025	-	21:29	21:34	-	DARK	DARK	None	-	No	-	-
Trip 187/ DR75	23/03/2025	-	22:02	22:34	-	DARK	DARK	None	-	No	-	-
DU75	23/03/2025	-	23:12	23:16	-	DARK	DARK	None	-	No	-	-
Trip 188/ DR 76	24/03/2025	-	23:46	00:16	-	DARK	DARK	None	-	No	-	-
DU76	24/03/2025	-	00:51	00:55	-	DARK	DARK	None	-	No	-	-

Trip 189/ DR77	24/03/2025	-	01:24	01:55	-	DARK	DARK	None	-	No	-	-
DU77	24/03/2025	-	02:31	02:35	-	DARK	DARK	None	-	No	-	-
Trip 190/ DR78	24/03/2025	-	03:02	03:46	-	DARK	DARK	None	-	No	-	-
DU78	24/03/2025	-	04:20	04:24	-	DARK	DARK	None	-	No	-	-
Trip 191/ DR79	24/03/2025	-	04:54	05:30	-	DARK	DARK	None	-	No	-	-
DU79	24/03/2025	-	06:04	06:11	-	Before	shift	-	-	No	-	-
Trip 192/ DR80	24/03/2025	-	07:23	07:58	MMO	07:07	07:50	None	-	No	-	-
DU80	24/03/2025	-	09:19	09:25	MMO	Breakfast	-	None	-	No	-	-
Trip 193/DR81	24/03/2025	-	10:32	11:22	MMO	10:17	10:47	None	-	No	-	-
DU81	24/03/2025	-	12:45	12:51	MMO	12:07	12:50	None	-	No	-	-
Trip 194/ DR82	24/03/2025	-	13:58	14:36	MMO	13:31	14:00	None	-	No	-	-
DU82	24/03/2025	-	15:53	16:04	MMO	15:02	15:54	None	-	No	-	-
Trip 195/ DR83	24/03/2025	-	17:18	17:55	MMO	16:58	17:34	None	-	No	-	-
DU83	24/03/2025	-	19:14	19:19	MMO	18:22	19:08	None	-	No	-	-
Trip 196/ DR84	24/03/2025	-	20:26	21:05	-	DARK	DARK	None	-	No	-	-
DU 84	24/03/2025	-	22:23	22:30	-	DARK	DARK	None	-	No	-	-
Trip 197/ DR85	25/03/2025	-	22:58	23:36	-	DARK	DARK	None	-	No	-	-
DU85	25/03/2025	-	00:08	00:13	-	DARK	DARK	None	-	No	-	-
Trip 198/ DR86	25/03/2025	-	00:38	01:17	-	DARK	DARK	None	-	No	-	-
DU86	25/03/2025	-	01:47	01:52	-	DARK	DARK	None	-	No	-	-
Trip 199/ DR87	25/03/2025	-	02:18	02:59	-	DARK	DARK	None	-	No	-	-
DU87	25/03/2025	-	03:31	03:35	-	DARK	DARK	None	-	No	-	-
Trip 200/ DR88	25/03/2025	-	04:03	04:43	-	DARK	DARK	None	-	No	-	-
DU88	25/03/2025	-	05:15	05:19	-	DARK	DARK	None	-	No	-	-
Trip 201/ DR89	25/03/2025	-	07:00	07:36	MMO	06:56	07:26	None	-	No	-	-
DU89	25/03/2025	-	08:53	09:05	MMO	08:16	08:54	None	-	No	-	-
Trip 202/ DR90	25/03/2025	-	10:13	10:48	MMO	08:54	11:10	None	-	No	-	-

DU90	25/03/2025	-	12:14	12:20	MMO	11:10	12:13	None	-	No	-	-
Trip 203/ DR91	25/03/2025	-	13:25	13:54	MMO	12:40	13:30	None	-	No	-	-
DU91	25/03/2025	-	15:17	15:22	MMO	14:15	15:18	None	-	No	-	-
Trip 204/ DR92	25/03/2025	-	16:35	17:13	MMO	15:18	16:36	None	-	No	-	-
DU92	25/03/2025	-	18:24	18:29	MMO	17:33	18:28	None	-	No	-	-
Trip 205/ DR93	25/03/2025	-	19:41	20:41	-	DARK	DARK	None	-	No	-	-
DU93	25/03/2025	-	21:58	22:03	-	DARK	DARK	None	-	No	-	-
Trip 206/ DR94	25/03/2025	-	23:00	23:34	-	DARK	DARK	None	-	No	-	-
DU94	26/03/2025	-	00:05	00:09	-	DARK	DARK	None	-	No	-	-
Trip 207/ DR95	26/03/2025	-	00:33	01:06	-	DARK	DARK	None	-	No	-	-
DU95	26/03/2025	-	01:35	01:39	-	DARK	DARK	None	-	No	-	-
Trip 208/ DR96	26/03/2025	-	02:04	02:46	-	DARK	DARK	None	-	No	-	-
DU96	26/03/2025	-	03:13	03:17	-	DARK	DARK	None	-	No	-	-
Trip 209/ DR97	26/03/2025	-	03:41	04:09	-	DARK	DARK	None	-	No	-	-
DU97	26/03/2025	-	04:33	04:36	-	DARK	DARK	None	-	No	-	-
Trip 210/ DR98	26/03/2025	-	04:58	05:20	-	DARK	DARK	None	-	No	-	-
DU98	26/03/2025	-	05:42	05:46	-	DARK	DARK	None	-	No	-	-
Trip 211/ DR99/ PW3	26/03/2025	-	15:51	16:23	-	15:17	15:55	None	-	No	-	-
DU99	26/03/2025	-	17:39	17:45	-	-	-	None	-	No	-	-
Trip 212/ DR100	26/03/2025	-	19:00	19:37	-	-	-	None	-	No	-	-
DU100	26/03/2025	-	20:46	20:54	-	-	-	None	-	No	-	-
		-										

## Appendix IV: Record of Monitoring Effort

### DATA FORM FOR COASTAL/MARINE WORKS – RECORD OF MONITORING EFFORT

**Location: Waterford Harbour Platform name: Shoalway Platform type: TSHD Client: Port of Waterford MMO(s): Sorcha Maguire**

Please record the following information every day (as many lines per day as you wish), even if no marine mammals are seen.

Type of operation or activity <small>Dredging, Drilling, Pile driving, Blasting, other</small>	Date <small>(dd/mm/yyyy)</small>	Marine Mammal Observer <small>(name/initials)</small>	Time you began monitoring for marine mammals <small>(GMT/UTC)</small>	Time you stopped monitoring for marine mammals <small>(GMT/UTC)</small>	Duration of monitoring watch <small>(minutes)</small>	Duration of the sound-producing operation/activity while you were monitoring for marine mammals <small>(minutes)</small>	Start Lat/Long position <small>(if static/moving)</small>	End Lat/Long position <small>(if moving)</small>	Wind direction & Beaufort wind force <small>(e.g., SW 2)</small>	Sea State (WMO) <small>(0 to 9)</small>	Swell height	Visibility
											<small>Choose from: 0 = no Swell L = 0-1 m M = 1-2 m H = 2+ m</small>	<small>Choose from: P = &lt; 1 km M = 1-5 km G = 5-10 km H = &gt;10 km</small>
Trip 113/DR1/PW 1	16/03/2025	SM	14:07	14:46	30	0	52°16'22.44' 7°0'42.12'	52°16'38.28' 7°0'4.284'	ENE 3	1	0	H
Trip 113/DR1	16/03/2025	SM	15:15	15:35	20	20	52°16'34.32' 7°0'12.996'	52°16'12.3' 7°0'12.3'	ENE 3	1	0	H
DU1	16/03/2025	SM	16:05	16:58	53	53	52°14'19.32' 6°57'42.36'	52°07'22.8' 6°58'9.696'	ENE 3	3	0	H
Trip 114/ DR2	16/03/2025	SM	18:00	18:34	34	34	52°16'21.72' 6°59'5.064'	52°16'26.76' 7°0'24.3'	ENE 3	3	0	H
DU2	16/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 115/DR3	16/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU3	16/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 116/DR4	16/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU 4	16/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 117/ DR5	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU5	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 118/DR6	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU 6	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 119/ DR7	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU7	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 120/ DR8	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU8	17/03/2025	SM	07:03	07:29	26	26	52°10'46.56' 6°56'23.172'	52°08'21.84' 6°57'35.964'	E 4	4	L	H
Trip 121/ DR9	17/03/2025	SM	08:01	08:50	49	49	52°12'8.7' 6°56'19.2'	52°16'29.28' 7°0'21.312'	E 4	2	0	H
DU9	17/03/2025	SM	10:19	10:42	23	23	52°11'20.5404' 6°56'23.0352'	52°07'22.8' 6°58'17.256'	ESE 4	4	L	H
Trip 122/ DR10	17/03/2025	SM	11:50	12:53	63	63	52°15'31.68' 6°59'35.628'	52°16'34.2' 7°0'0.18'	ESE 4	3	0	H
DU10	17/03/2025	SM	14:04	14:27	23	23	52°10'8.4' 6°56'27.096'	52°07'15.6' 6°58'18.624'	ESE 4	4	L	H
Trip 123/ DR11	17/03/2025	SM	15:23	16:13	50	50	52°15'9.36' 6°59'40.416'	-	ESE 4	2	0	H
DU11	17/03/2025	SM	17:05	17:39	34	34	52°11'55.32' 6°56'20.292'	52°07'15.24' 6°58'35.868'	ESE 4	4	M	H
Trip 124/ DR12	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU12	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 125/ DR13	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU13	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 126/ DR14	17/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU14	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 127/ DR15	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU15	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 128/ DR16	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU16	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 129/ DR17	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU17	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 130/ DR18	18/03/2025	SM	06:25	06:45	20	20	52°11'39.12' 6°56'19.464'	52°11'52.44' 6°58'22.26'	ESE 4	3	0	H
DU18	18/03/2025	SM	07:16	07:50	34	34	52°11'38.64' 6°56'18.06'	52°07'13.08' 6°58'21.756'	ESE 5	4	M	G
Trip 131/ DR19	18/03/2025	SM	07:50	08:50	60	60	52°07'13.08' 6°58'21.756'	52°10'58.44' 6°56'21.912'	ESE 5	4	0	G
DU19	18/03/2025	SM	08:50	09:13	23	23	52°10'58.44' 6°56'21.912'	52°07'14.88' 6°58'24.672'	ESE 5	5	M	G
Trip 132/ DR20	18/03/2025	SM	10:30	11:00	30	30	52°15'33.84' 6°59'44.7'	52°16'29.28' 7°0'18.396'	ESE 4	2	0	G
DU20	18/03/2025	SM	11:58	12:35	38	38	52°12'38.16' 6°56'16.692'	52°07'21.36' 6°58'39.324'	ESE 6	6	M	H
Trip 133/ DR21	18/03/2025	SM	13:10	13:55	45	45	52°11'50.28' 6°56'22.2'	-	ESE 5	4	L	H
DU21	18/03/2025	SM	14:46	15:55	69	69	52°15'30.6' 6°59'47.4'	52°07'23.52' 6°58'21.252'	ESE 5	4	M	H
Trip 134/ DR22	18/03/2025	SM	16:48	17:39	51	51	52°15'31.32' 6°59'47.04'	52°16'32.52' 7°0'12.6'	ESE 4	3	0	H
DU22	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 135/ DR23	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU23	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 136/ DR24	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU24	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 137/ DR25	18/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU25	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 138/ DR26	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU26	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 139/ DR27	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU27	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 140/ DR28	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU28	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 141/ DR29	19/03/2025	SM	06:32	07:00	28	28	52°12'24.12' 6°56'18.492'	52°12'10.8' 6°56'16.908'	E 3	2	0	H
DU29	19/03/2025	SM	07:02	07:31	29	29	52°11'13.56' 6°56'22.56'	52°07'24.24' 6°58'15.24'	E 3	2	L	H
Trip 142/ DR30	19/03/2025	SM	07:35	08:06	31	31	52°07'28.56' 6°58'15.852'	52°11'38.76' 6°56'19.392'	E 4	3	L	H
DU30	19/03/2025	SM	09:04	09:21	17	17	52°09'39.24' 6°56'29.832'	52°07'14.88' 6°58'15.348'	E 3	3	L	G
Trip 143/ DR31/ PW2	19/03/2025	SM	12:39	13:25	46	3	52°16'18.48' 7°0'58.932'	52°16'29.64' 7°0'10.44'	ESE 3	2	0	G
DU31	19/03/2025	SM	14:40	15:24	44	44	52°13'0.12' 6°56'24.504'	52°07'12' 6°58'31.476'	E 4	4	L	G
Trip 144/ DR32	19/03/2025	SM	15:52	17:14	22	22	52°10'53.76' 6°56'22.416'	52°16'33.96' 7°0'8.1'	E 3	2	0	G
DU32	19/03/2025	SM	17:49	18:31	42	42	52°14'1.32' 6°57'0.9'	52°08'25.44' 6°57'22.824'	E 3	2	L	G
Trip 145/ DR33	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU33	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 146/ DR34	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU34	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 147/ DR35	19/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU35	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 148/ DR36	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU36	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 149/ DR37	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU37	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 150/ DR38	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU38	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 151/ DR39	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU39	20/03/2025	SM	06:39	07:00	21	21	52°08'56.22' 6°56'35.4'	52°07'6.6' 6°58'41.268'	E 3	2	0	M
Trip 152/ DR40	20/03/2025	SM	07:06	07:50	44	44	52°08'32.28' 6°57'20.484'	52°14'29.04' 6°58'5.952'	E 3	2	0	M
DU40	20/03/2025	SM	09:09	09:53	44	44	52°13'44.4' 6°56'41.352'	52°07'22.44' 6°58'27.912'	E 3	1	L	G
Trip 153/ DR41	20/03/2025	SM	10:37	11:18	41	41	52°12'50.76' 6°56'21.084'	52°16'30.36' 7°0'1.728'	E 3	4	0	G
DU41	20/03/2025	SM	12:26	13:00	34	34	52°12'51.48' 6°56'23.28'	52°07'20.28' 6°58'11.964'	ESE 4	4	L	H
Trip 154/ DR42	20/03/2025	SM	14:28	14:58	30	30	52°16'28.56' 7°0'15.552'	52°16'34.68' 6°59'58.092'	ESE 3	3	0	H
DU42	20/03/2025	SM	15:33	16:15	42	42	52°12'47.16' 6°56'21.516'	52°07'13.8' 6°58'11.208'	ESE 4	4	L	G
Trip 155/ DR43	20/03/2025	SM	16:59	18:05	66	66	52°13'5.52' 6°56'23.892'	52°16'32.88' 7°0'8.208'	ESE 4	4	0	H
DU43	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 156/ DR44	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU44	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 157/ DR45	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU45	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 158/ DR46	20/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU46	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 159/ DR47	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU47	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 160/ DR48	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU48	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 161/ DR49	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU49	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 162/ DR50	21/03/2025	SM	06:53	07:34	41	41	52°14'39.12' 6°58'48.432'	52°16'33.6' 6°59'30.048'	ESE 4	2	0	G
DU50	21/03/2025	SM	08:50	09:25	35	35	52°11'6.72' 6°56'21.624'	52°07'10.56' 6°58'20.712'	ESE 4	2	M	G
Trip 163/ DR51	21/03/2025	SM	10:20	11:00	40	40	52°15'0.36' 6°59'31.488'	52°16'29.64' 7°0'8.568'	ESE 4	3	0	H
DU51	21/03/2025	SM	12:04	12:30	36	36	52°10'28.56' 6°56'28.104'	52°07'13.08' 6°58'37.344'	ESE 4	3	M	M
Trip 164/ DR52	21/03/2025	SM	13:32	14:02	30	30	52°14'37.68' 6°58'43.428'	52°16'29.64' 7°0'16.812'	E 3	3	0	M
DU52	21/03/2025	SM	15:32	15:46	14	14	52°08'41.64' 6°57'11.52'	52°07'21' 6°58'41.52'	E 4	3	M	M
Trip 165/ DR53	21/03/2025	SM	17:12	17:40	28	28	52°16'31.8' 7°0'12.06'	52°16'33.96' 6°59'53.268'	E 3	2	0	G
DU53	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 166/ DR54	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU54	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 167/ DR55	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU55	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 168/ DR56	21/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU56	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 169/ DR57	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU57	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 170/ DR58	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU58	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 171/ DR59	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU59	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 172/ DR60	22/03/2025	SM	-	-	-	-	No monitoring	Hours of darkness	-	-	-	-
DU60	22/03/2025	SM	06:48	07:16	28	28	52°10'50.52' 6°56'22.056'	52°07'21.72' 6°58'32.592'	E 2	2	M	M
Trip 173/ DR61	22/03/2025	SM	07:16	07:46	30	30	52°07'21.72' 6°58'32.592'	52°11'5.28' 6°56'23.028'	E 2	2	L	M
DU61	22/03/2025	SM	08:32	08:58	26	26	52°10'37.2' 6°56'22.128'	52°07'19.92' 6°58'16.32'	E 2	2	M	M
Trip 174/ DR62	22/03/2025	SM	09:43	10:32	49	49	52°13'43.32' 6°56'35.844'	52°15'57.24' 7°1'53.04'	E 2	1	0	G
DU62	22/03/2025	SM	12:18	12:50	42	42	52°12'2.88' 6°56'18.672'	52°07'14.16' 6°58'13.224'	N 2	4	M	G
Trip 175/ DR63	22/03/2025	SM	14:05	14:30	25	25	52°16'13.08' 6°59'6.18'	52°15'58.32' 7°1'51.744'	N 3	1	0	G
DU63	22/03/2025	SM	-	-	-	-	Unsuitable	Environmental	WNW 5	5	M	M
Trip 176/ DR64	22/03/2025	SM	17:35	18:28	53	53	52°14'1.32' 6°56'52.188'	52°16'29.64' 6°59'25.008'	NNW 5	3	0	G
DU64	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 177/ DR65	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU65	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 178/ DR66	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

DU66	22/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 179/ DR67	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU67	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 180/ DR68	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU68	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 181/ DR69	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU69	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 182/ DR70	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU70	23/03/2025	SM	-	-	-	-	Unsuitable	Environmental	NNW 6	6	M	H
Trip 183/ DR71	23/03/2025	SM	07:44	08:10	26	26	52°15'11.52' 6°59'41.928'	52°15'50.4' 7°01'54.804'	NNW 4	3	0	H
DU71	23/03/2025	SM	09:23	09:50	27	27	52°15'48.96' 6°59'30.984'	52°13'10.56' 6°56'25.944'	NW 5	6	L	H
Trip 184/ DR72	23/03/2025	SM	11:39	12:16	37	37	52°15'4.32' 6°59'30.48'	52°15'50.76' 7°02'1.32'	NNW 4	3	0	H
DU72	23/03/2025	SM	14:12	14:20	8	8	52°08'6.72' 6°58'4.872'	52°07'18.12' 6°58'34.356'	NNW 5	5	L	H
Trip 185/ DR73	23/03/2025	SM	15:13	16:52	99	99	52°14'18.24' 6°57'45.396'	-	NNW 5	3	0	H
DU73	23/03/2025	SM	17:55	18:06	11	11	52°08'52.44' 6°56'49.308'	52°07'19.56' 6°58'24.672'	NNW 5	5	L	H
Trip 186/ DR74	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU74	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 187/ DR75	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU75	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 188/ DR 76	23/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU76	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 189/ DR77	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU77	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 190/ DR78	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU78	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 191/ DR79	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU79	24/03/2025	SM	07:07	07:50	43	43	52°14'43.44' 6°58'59.44'	52°16'31.08' 7°0'8.748'	NNW 3	4	0	H
Trip 192/ DR80	24/03/2025	SM	-	-	-	-	Meal	time	-	-	-	-
DU80	24/03/2025	SM	10:17	10:47	30	30	52°14'43.8' 6°58'57.54'	52°16'33.6' 6°59'55.788'	NNW 3	1	0	H
Trip 193/ DR81	24/03/2025	SM	12:07	12:50	43	43	52°12'39.96' 6°56'20.652'	52°07'18.84' 6°58'21.432'	NNW 3	1	L	H
DU81	24/03/2025	SM	13:31	14:00	29	29	52°13'41.52' 6°56'35.628'	52°16'30.72' 6°0'1.44'	NNW 3	3	0	H
Trip 194/ DR82	24/03/2025	SM	15:02	15:54	52	52	52°14'16.8' 6°57'37.548'	52°07'13.08' 6°58'19.128'	NNW 3	3	L	H
DU82	24/03/2025	SM	16:58	17:34	36	36	52°14'32.64' 6°58'26.076'	52°16'28.92' 7°0'19.62'	W 2	1	0	H
Trip 195/ DR83	24/03/2025	SM	18:22	19:08	46	46	52°14'31.56' 6°58'26.256'	52°08'2.04' 6°57'44.244'	W 2	4	L	H
DU83	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 196/ DR84	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU 84	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 197/ DR85	24/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU85	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 198/ DR86	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU86	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 199/ DR87	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU87	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 200/ DR88	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU88	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 201/ DR89	25/03/2025	SM	06:56	07:26	30	30	52°16'32.88' 6°59'59.784'	52°16'35.4' 6°59'45.456'	W 2	1	0	H
DU89	25/03/2025	SM	08:16	08:54	38	38	52°12'38.88' 6°56'17.916'	52°07'21.72' 6°58'19.776'	WNW 2	1	L	H
Trip 202/ DR90	25/03/2025	SM	08:54	11:10	136	136	52°07'21.72' 6°58'19.776'	52°15'7.92' 6°59'37.428'	NNW 2	1	0	H
DU90	25/03/2025	SM	11:10	12:13	63	63	52°15'7.92' 6°59'37.428'	52°07'16.68' 6°58'24.564'	NNW 2	1	0	H
Trip 203/ DR91	25/03/2025	SM	12:40	13:30	50	50	52°10'27.48' 6°56'30.3'	52°16'26.76' 7°0'22.176'	N 2	1	0	H
DU91	25/03/2025	SM	14:15	15:18	62	62	52°14'26.76' 6°59'30.372'	52°07'9.84' 6°58'35.076'	N 2	1	0	H
Trip 204/ DR92	25/03/2025	SM	15:18	16:36	78	78	52°07'9.84' 6°58'35.076'	52°16'30.36' 6°59'57.84'	NW 1	1	0	H
DU92	25/03/2025	SM	17:33	18:28	55	55	52°14'34.08' 6°58'34.58'	52°07'18.48' 6°58'42.276'	NNW 1	1	L	H
Trip 205/ DR93	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU93	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 206/ DR94	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU94	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 207/ DR95	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU95	25/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 208/ DR96	26/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU96	26/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-

Trip 209/ DR97	26/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU97	26/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 210/ DR98	26/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
DU98	26/03/2025	SM	DARK	DARK	-	-	No monitoring	Hours of darkness	-	-	-	-
Trip 211/ DR99/ PW3	26/03/2025	SM	15:17	15:55	38	4	52°16"20.64' 6°59"45.708'	52°16"20.64' 6°59"45.708'	SW 3	1	0	H
DU99	26/03/2025		-	-	-	-	-	-	-	-	-	-
Trip 212/ DR100	26/03/2025		-	-	-	-	-	-	-	-	-	-
DU100	26/03/2025		-	-	-	-	-	-	-	-	-	-