RISK ASSESSMENT FOR ANNEX IV SPECIES

Remediation of the Former Irish Steel Works Factory Site - Attachment 4.3 Annex IV RA

IE001330-TT-EN-XX-RP-Z-0007

Department of Defence

TETRA TECH

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Table of contents

1 Introduction 1

1.1 Project Background 1

1.2 Purpose of this Report 4

1.3 Statement of Authority 4

2 Project Description 5

2.1 Overview 5

2.2 Estimated Project Schedule / Programme 7

3 Risk Assessment for Annex IV Species 8

3.1 Legislative Context 8

3.2 Interpretation of the 'Disturbance' Offence 8

3.3 Guidance and Methodology 9

3.4 Relevant Annex IV Species 10

3.5 Stage 1: Use existing information to determine the probability of the protected species being present in the area affected by the works. 11

3.5.1 Desk Study 11

3.5.2 Bat Species 11

3.5.3 Cetacean Species 12

3.5.4 Otter 14

3.5.5 Turtle Species 14

3.5.6 Stage 1 Conclusion 15

3.5.7 Stage 2: Ecological Survey 15

3.6 Stage 3: Examination of Impacts and Satisfactory Alternatives (if required) 16

3.6.1 Bat Species 16

3.6.2 Cetacean Species 16

3.6.3 Otter 17

3.6.4 Turtle Species 17

4 Summary and Conclusion 19

References 21

List of tables

Table 2-1: Overview of Proposed SI Activities.....5

List of figures

Figure 1-1 Site Location Map.....2

Figure 1-2 Proposed MUL Area Boundary.....3

Figure 2-1 Proposed geophysical and geotechnical SI location 6

1 Introduction

1.1 Project Background

Haulbowline Island is situated centrally within Cork Harbour, approximately 14 km southeast of Cork City, immediately south of Cobh and west of Spike Island (**Figure 1-1**). Access to the island by road is via a bridge from Ringaskiddy at Paddy's Point. The bridge also provides access to Rocky Island, a small island approximately halfway between Paddy's Point and Haulbowline which accommodates a crematorium.

Haulbowline Island is currently in state ownership (Department of Defence (DoD)) and has undergone extensive industrial, maritime, and defence related use for more than 200 years. The island is circa 35 hectares in total. The area which will be assessed as part of this Maritime Usage Licence (MUL) application is located in central west part of the island and was formerly occupied by the Irish Steelworks Factory (ISPAT), whose operations commenced in 1938 and ran until cessation in 2001 (circa 8.78 hectares).

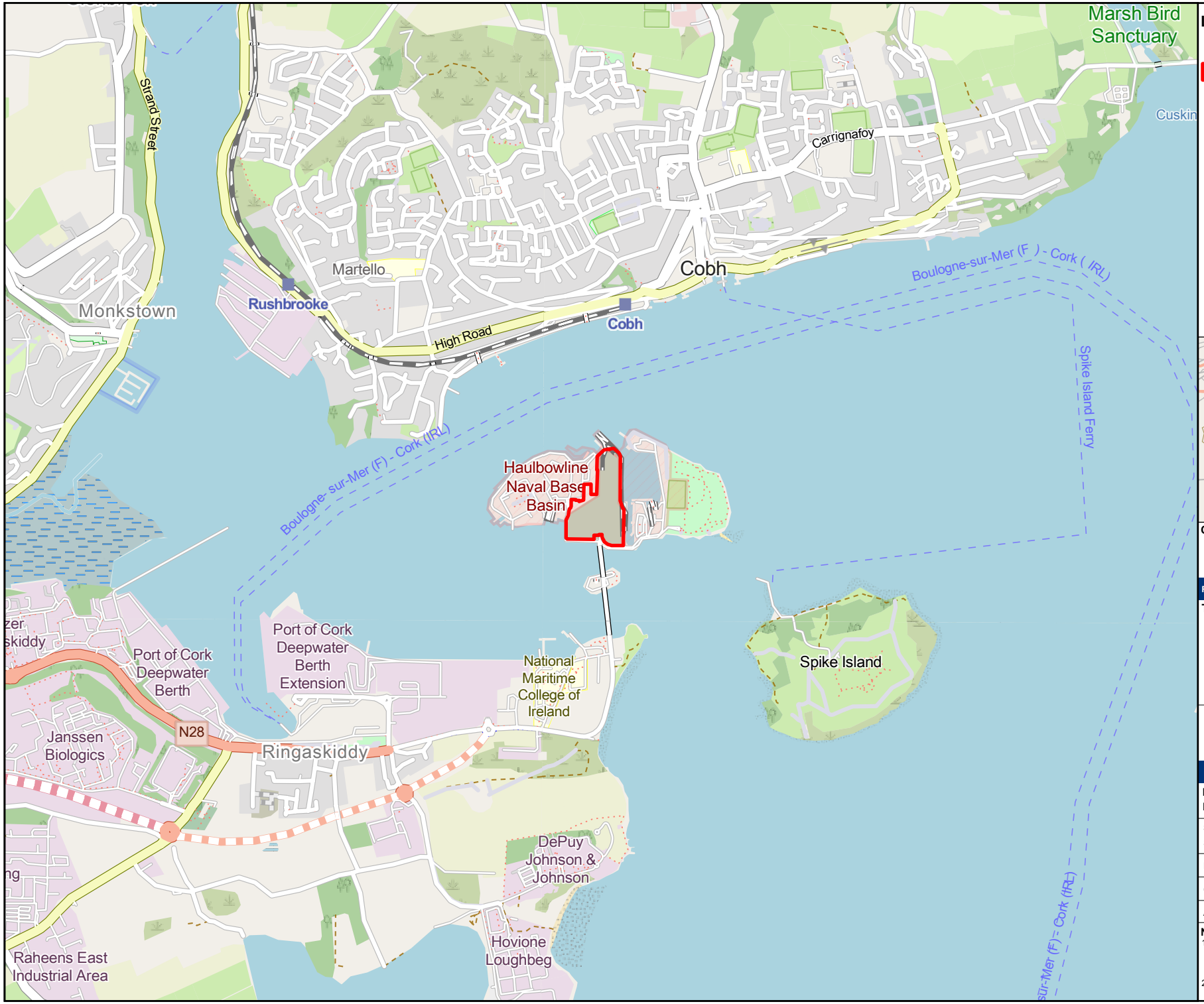
The DoD has identified the strategic need to develop the former ISPAT site to support the naval base to the west and the naval dockyard to the east. To facilitate the design of this development site investigations (SI) are required on the former ISPAT site.

Figure 1-1 shows the location and boundary of the of the former ISPAT site (in red) on Haulbowline Island, while **Figure 1-2** shows the boundary of the of the former ISPAT site (in red) relative to the State recognised High Water Mark (HWM, in blue).

This MUL application is required to undertake site investigations (hereafter referred to as the SI works) upon Haulbowline Island in Cork Harbour. The SI works will be undertaken entirely on made land on Haulbowline Island, however, as parts of the area to be investigated fall below the historic, ungeneralised HWM, a MUL is required. MUL Areas A, B, C and D are outlined on **Figure 1-2**.

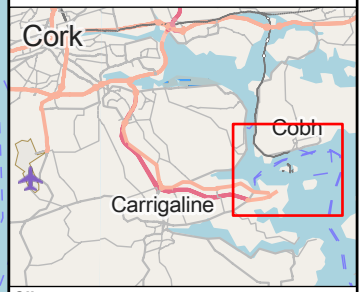
These SI works, which are discussed in more detail in **Section 2**, are required to inform detailed construction and engineering design of the remediation of the former Irish steelworks factory site and to provide baseline data for any subsequent environmental assessments. Information collected by the SI works will support the overall remediation of the former Irish steelworks factory site.

For the avoidance of doubt, no construction works associated with remediation of the former Irish steelworks factory site are included under this MUL application.



Legend

BOUNDARY OF ISPAT SITE



Client

Dept. of Defence

Remediation of the former Irish Steelworks Factory Site

Title

Site Location Map

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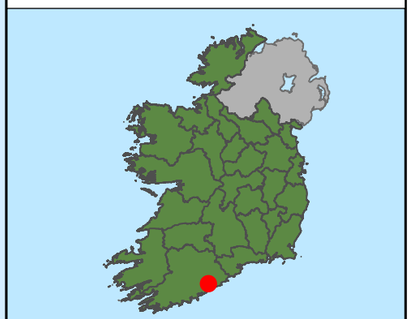
Legend

- Maritime Usage Licence Areas
- High Water Mark

Where the MUL area abuts the land, the boundary of the MUL area should coincide with and follow exactly the High Water Mark as defined by the Chief Boundary Surveyor

Drawn By:
Marcela Tiyoko Passos Kondo, MSc Geographic Information Science
Scientist GIS

Data Sources: Tailte Éireann



Client

Dept. of Defence

Remediation of the former Irish Steelworks Factory Site

Title

Proposed MUL Map

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Issue Details

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1.2 Purpose of this Report

This report has been prepared by Tetra Tech, on behalf of the DoD (hereafter referred to as "the Applicant"), to provide supporting information to accompany an application for a MUL from the Maritime Area Regulatory Authority (MARA). This Risk Assessment for Annex IV Species report provides the required level of detail to inform MARA's own assessment of risks to Annex IV species from the SI works.

1.3 Statement of Authority

The technical competence of the authors is outlined below:

Aoife Edgely is an Associate Marine Scientist in the Environmental Services Business Unit at Tetra Tech. She has over 15 years' experience in the marine science field and is a Chartered Environmentalist and a Full Member of the Institute of Environmental Sciences (IES). Aoife holds an honours degree in Environmental Science from Trinity College Dublin and a Master's in Marine Environmental Protection from Bangor University, Wales. MUL Aoife has delivered the environmental assessments for a wide range of marine and coastal projects, including environmental impact assessment (EIA), appropriate assessment (AA) and Annex IV species reports.

Rachael Shaw is a Project Scientist in the Environmental Services Business Unit at Tetra Tech. She holds a Bachelor's Degree in Marine Science from the University of Galway and Master's Degree in Climate Change and Managing the Marine Environment from Heriot-Watt University Edinburgh. She has five years' experience working in consultancy, assisting on a wide range of projects from offshore renewable energy projects to flood relief schemes, including marine and terrestrial surveys. She is a full member with IES.

Róisín Murphy is a Scientist in the Environmental Services Business Unit at Tetra Tech. She holds an honours degree in Zoology (B.Sc.) and Master's degree in Marine Biology, both from University College Cork. She has two years' experience as a Project Manager at Cork Nature Network, responsible for marine and river surveys, and has one years' experience in marine licensing and environmental assessments at Tt. She is a qualifying member with IES.

2 Project Description

2.1 Overview

In order to provide a reliable basis for design and development, and to support the construction phase of the Project, the following SI works are required.

The proposed works consist of up to 20 No. trial pits, up to 6 No. boreholes (incl. SPT), and land-based geophysical surveys anywhere within the MUL Areas, all located below the ungeneralised HWM. No other SI works are proposed as part of this MUL.

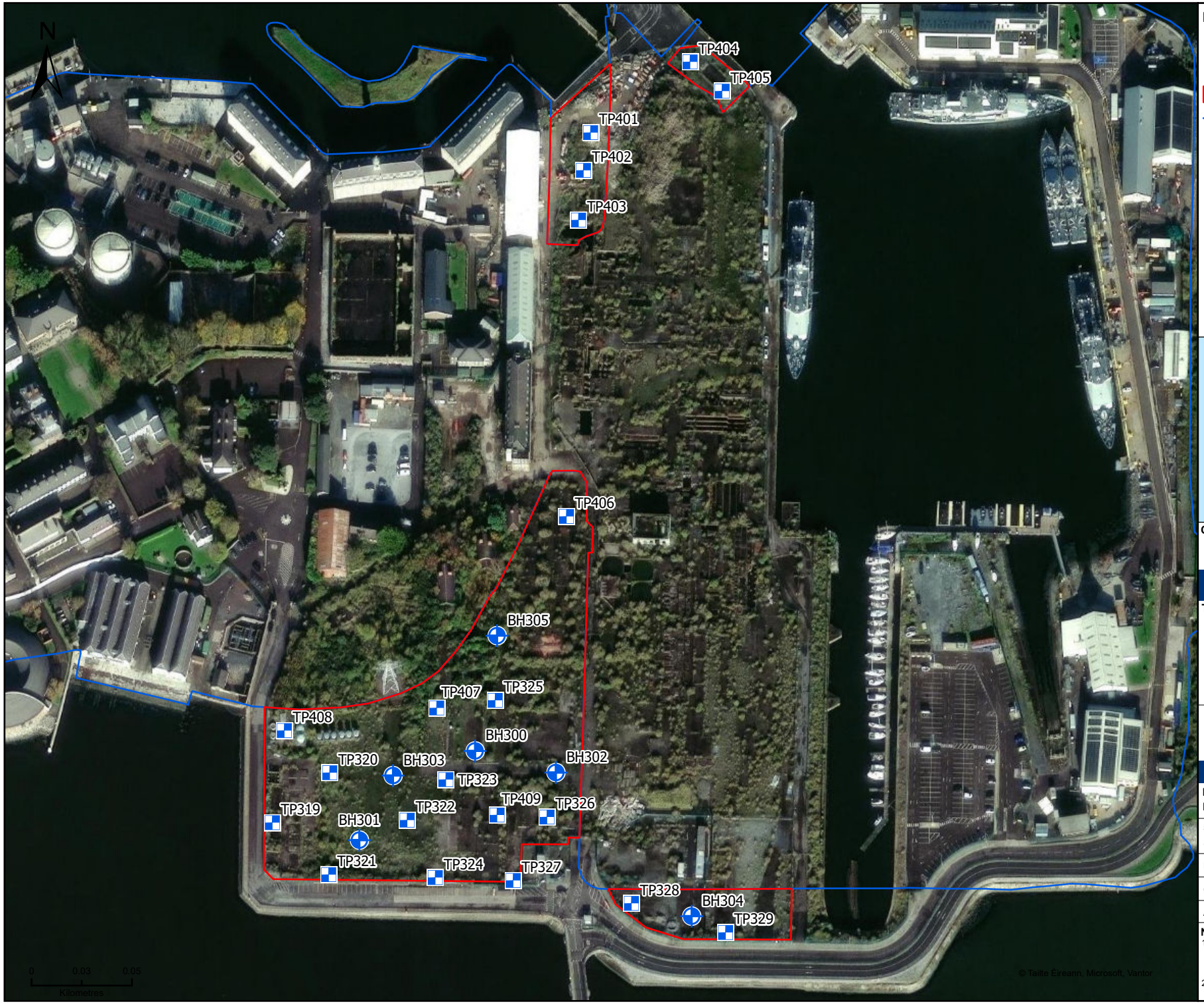
The proposed SI locations are provided in **Figure 2-1**. These proposed locations are subject to minor refinement. Similarly, a proposed borehole location may be moved due to the presence of obstructions/refusals, i.e., where a subsurface object (large boulder), prevents the advancement of the borehole. In such circumstances, the borehole will be moved to another nearby location (as close as practical to the original point) and re-drilled.

The proposed SI works as detailed in this MUL include contingencies in the event that follow up investigations that may be undertaken at refined locations.

An overview of the SI works is presented in **Table 2-1**. A more detailed breakdown of the proposed investigation methodologies is provided in **Attachment 3.1** – Proposed Maritime Usage Licence (report ref:IE001330-TT-EN-XX-RP-Z-0005).

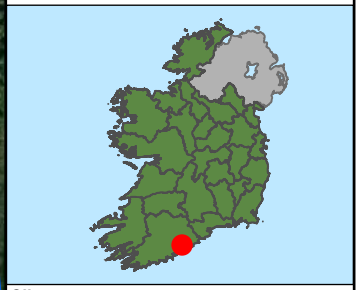
Table 2-1: Overview of Proposed SI Activities

Survey	Type	Equipment / Method	Number (No.)
Ground Investigation Works	Trial pit	22-tonne tracked mechanical excavator	20
Ground Investigation Works	Borehole drilling (incl. SPT)	Geobor S rotary core drilling rig	6
Geophysical Survey	Geophysical	Ground Penetrating Radar (GPR) transects	12



Legend

- Trial Pit Locations
- Borehole Locations
- Maritime Usage Licence Areas
- High Water Mark



Client

Dept. of Defence

Remediation of the former Irish Steelworks Factory Site

Title

Proposed Geophysical and Geotechnical SI Locations

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2.2 Estimated Project Schedule / Programme

While the MUL application is for a five-year period, the SI works are anticipated to be phased as follows:

- Initial investigations in 2027 (circa 3 months duration) to support preliminary design of the capping system, roads and drainage systems; and
- Further follow up investigations at key locations to support the detailed design of structures in 2028-2031.

3 Risk Assessment for Annex IV Species

3.1 Legislative Context

Under Article 12 and 13 of the Habitats Directive, Member States must establish systems of strict protection for animal and plant species which are particularly threatened, and which are listed on Annex IV of the Directive. Article 16 provides for derogations from these legal protections under certain, specific, circumstances. Article 12, 13 and 16 of the Habitats Directive are transposed into Irish law by Regulations 51, 52 and 54 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended.

Annex IV species are afforded strict protection throughout their range, both inside and outside of designated protected areas. It is an offence to:

- Deliberately capture or kill any specimen of the relevant species in the wild;
- Deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration;
- Deliberately take or destroy eggs of the relevant species in the wild;
- Damage or destroy a breeding or resting place of such an animal;
- Deliberately pick, collect, cut, uproot, or destroy any specimen of [plant] species in the wild; or
- Keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of the relevant species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive.

This protection applies to the species listed above in their “natural range” in Ireland.

The granting of another statutory consent (e.g., planning permission; foreshore licence; MUL) does not remove the obligation to obtain a derogation licence in the event of the consented works being likely to not conform with the strict protections afforded to Annex IV species. As such, an application for derogation may have to be made to the Minister for Housing, Local Government & Heritage via the National Parks and Wildlife Service (NPWS) under Regulation 54, in addition to an application for development consent. If satisfied that an application meets the criteria for derogation, the Minister may grant a derogation licence, which may be subject to such conditions, restrictions, limitations, and requirements as the Minister considers appropriate, and these will be specified in the licence.

3.2 Interpretation of the ‘Disturbance’ Offence

The disturbance offence refers to disturbance which is likely to be detrimental to the strictly protected species or affect their local abundance or distribution (NPWS, 2021). Such disturbance could therefore be likely to increase the risk of a negative impact to a population of a protected species at Favourable Conservation Status (FCS) in their natural range.

The term “disturbance” is not defined in Article 1 or Article 12 of the Habitats Directive. It is clear, however, that activities that disturb a species to the extent that it could affect its chances of survival, breeding success or reproductive ability, or lead to a reduction in the occupied area or the relocation or displacement of the species, should be regarded as a ‘disturbance’ under the terms of Article 12 (European Commission Guidance document on the strict protection of animals species of community interest under the Habitats Directive 92/43/EEC’, 2021) (the EC guidance).

The EC guidance also states that a case-by-case approach is required and that *“the competent authorities will have to reflect carefully on the level of disturbance that is to be considered harmful, taking into account the specific characteristics of the species concerned and the situation”*. The guidance goes on to state *“sporadic disturbances without any likely negative impact on the individual animal or local population…should not be considered as disturbance under Article 12”*. Thus, where disturbance is not in breach of Article 12 because it is considered not likely to have a negative impact on the individual animal or local population, we have referred to it as “sporadic” for the purpose of this assessment.

Regarding the offences listed above in relation to the ‘deliberate’ nature of actions, the EC Guidance offers the following definition:

“The term ‘deliberate’ is interpreted by the CJEU [Court of Justice of the European Union] as going beyond ‘direct intention’. ‘Deliberate’ actions are to be understood actions by a person or body who knows that their action will most likely lead to an offence against a species, but intends his offence or, at least, consciously accepts the foreseeable results of his action”.

Therefore, anyone engaging in activities that they should reasonably have known could cause injury and/or disturbance as defined in the 2011 Regulations could be committing an offence.

This risk assessment has assumed that the proposed activities described herein can be considered to be ‘deliberate’ actions and therefore the risk to protected species has been assessed in each case. In light of the findings, and subject to standard industry mitigation to reduce the risks, most activities have been determined to result in a “sporadic” disturbance i.e. disturbance which is not in breach of Article 12 because it is considered not likely to have a negative impact on the individual animal or local population and therefore do not require a derogation licence.

3.3 Guidance and Methodology

This risk assessment for Annex IV species has had regard to the following guidance:

- NPWS (2025a) Applications for Regulation 54 Derogations for Annex IV species – Guidance for Applicants. Department of Housing, Local Government and Heritage.
- European Commission (2021) Guidance document on the strict protection of species of community interest under the Habitats Directive. C. (2021) 7301 final. Brussels.

- Mullen, E., Marnell, F. & Nelson, B. (2021) Strict Protection of Animal Species: Guidance for Public authorities on the Application of Articles 12 and 16 of the EU Habitats Directive to development/works undertaken by or on behalf of a Public authority NPWS Guidance Series, No. 2. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
- NPWS (2021) Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland. National Parks and Wildlife Service Guidance Series, No. 1. Department of Housing. Local Government and Heritage
- Department of Arts, Heritage and the Gaeltacht (DAHG, 2014) Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters.

This risk assessment for Annex IV species follows the methodology structure outlined in Mullen et al (2021) and NPWS (2021), as follows:

- Stage 1: Use existing information to determine the probability of the protected species being present in the area affected by the works.
- Stage 2: Ecological survey, if required.
- Stage 3: Examination of impacts and mitigation measures and satisfactory alternatives (if required).

For each of the relevant Annex IV species identified below, an impact assessment will be made following Stages 1 to 3 above. Should the examination of impacts conclude that the SI works will not conform with the strict protections afforded to any Annex IV species, and there is no satisfactory alternative to proceeding with the works, then the decision-making process must move to Stage 4: Application for Regulation 54 Derogation Licence.

3.4 Relevant Annex IV Species

The SI works will be undertaken within the MUL Areas, as shown in **Figure 1-2**.

The Habitats Directive lists species of community interest ‘in need of strict protection’ within Annex IV. This list was reviewed and all species/species groups with the potential to occur within the MUL Areas were considered further. Of the animal and plant species on Annex IV known to occur in Ireland, the following species were identified as potentially relevant:

- All bat species;
- Otter;
- All cetacean species; and
- All turtle species.

While cetaceans and turtles do not have potential to occur within the MUL areas of the proposed SI works, out of an abundance of caution, these are considered further as the works will take place on an island within Cork Harbour.

Other Annex IV species found in Ireland, namely the natterjack toad and the Kerry slug have not been recorded within the MUL Area by the National Biodiversity Data Centre (NBDC). Therefore, these Annex IV species are not considered in this assessment.

3.5 Stage 1: Use existing information to determine the probability of the protected species being present in the area affected by the works.

3.5.1 Desk Study

In order to assess the probability of the above species/species groups being present in the MUL Area or the zone of impacts of SI works, a desk study was undertaken, in addition to application of professional judgement and knowledge of the geographical area.

The following sources were consulted during the desk study in October 2026:

- Irish Whale and Dolphin Group Sightings Log for cetacean species https://iwdg.ie/browsers/sightings.php/;
- Distribution records for Annex IV species held online by the NBDC https://biodiversityireland.ie/; and
- NPWS (2025b) The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished Report, National Parks and Wildlife Service. Department of Culture, Heritage and the Gaeltacht, Dublin.

3.5.2 Bat Species

All native bat species in Ireland receive the same level of strict protection. According to the NBDC records (2026), between October 2016 and October 2026, at least six bat species were recorded within the wider Cork Harbour area, including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Leisler's bat (*Nyctalus leisleri*), brown long-eared bat (*Plecotus auritus*), Daubenton's bat (*Myotis daubentonii*) and Natterer's bat (*Myotis nattereri*). However, none of these records were recorded within the MUL Area or on Haulbowline Island.

Common pipistrelle was recorded along multiple shorelines and coastal areas within Cork Harbour. These records comprise a live sighting at Crosshaven in 2022, approximately 4 km south of the MUL Area, a live sighting at Saleen, approximately 9 km east of the MUL Area, and a roost recorded in Monkstown, approximately 2.5 km east of the MUL Area.

One soprano pipistrelle was identified at Harper's Island in 2018. No other soprano pipistrelle was recorded in Cork Harbour between October 2016 and October 2026.

Leisler's bat was recorded at two locations within Cork Harbour. These records include one live sighting was recorded at Harper's Island in 2018, approximately 7 km north of the MUL Area, and a roost located in Curraghbinny, a woodland area approximately 2.5 km south of the MUL Area.

There have been multiple brown long-eared bat roosts identified at coastal locations within Cork Harbour. Between 2017 and 2023, there are records of 15 roosts located in Curraghbinny. One live sighting of a brown long-eared bat was recorded on Harper's Island in June 2018. One month later a roost was identified at the same location on Harper's Island. No other records of brown long-eared bats or roosts were recorded on the NBDC biodiversity maps.

Daubenton's bat was not recorded within Cork Harbour, however, was recorded in multiple tributaries leading into the wider Harbour. This includes 13 live records at Owenabue River in Carrigaline between 2017 and 2021, approximately 7.5 km southwest of Haulbowline Island, and 7 live records at the Dungourney and Owennacorra Rivers in Middleton, along with one roost in the same location. These were located approximately 12 km northeast of the MUL Area. All of these records occurred along narrow waterways that are dissimilar in character to Haulbowline Island and the expansive region of Cork Harbour the MUL Area is located in.

A live Natterer's bat and roost were identified at Harper's Island in 2018. No other Natterer's bat were recorded in Cork Harbour between October 2016 and October 2026.

3.5.3 Cetacean Species

Twenty-seven species of cetacean have been recorded in the waters around Ireland (NBDC, 2026). In order to establish the probability of cetacean species being present in the wider area, this section of the report has been informed primarily by data available from the Irish Whale and Dolphin Group (IWDG).

No cetacean species have been recorded within the MUL Area. While located below the mapped HWM, the ISPAT area(of which the MUL Area is confined) is located wholly on terrestrial lands with no SI works proposed within the marine environment. There is no potential for interaction with cetaceans who spend their entire lifecycle in water i.e. harbour porpoise, dolphin or whale species. However, within the wider Cork Harbour there is a possibility of occurrence of cetacean species. According to the IWDG (2026), there have been sightings of 302 individual cetaceans within Cork Harbour and estuary (north of Roches Point) between October 2025 and October 2026. These sightings comprised just two species: common dolphin (*Delphinus delphis*) and bottlenose dolphin (*Tursiops truncates*).

According to NBDC (2026), common dolphin, harbour porpoise, bottlenose dolphin, fin whale and minke whale have all been recorded within Cork Harbour in the last 10 years. All other cetacean species were noted as occurring further offshore in the Celtic Sea beyond Roches Point.

Management Unit (MU) boundaries, defined by the IAMMWG (2015, 2022, 2023), refer to geographical areas in which the animals of a particular cetacean species are found, to which management of human activities is applied. These geographical areas are delineated based on the best scientific knowledge of the population structure of the species while taking into account jurisdictional boundaries or divisions which are already used for manging human activities (IAMMWG, 2023).

The following sections provide more detail on the confirmed cetacean species occurring within Cork Harbour between October 2025 and October 2026.

3.5.3.1Common dolphin

Common dolphin was recorded within the wider Cork Harbour area as part of the IWDG records and NBDC records.

Common dolphin is present all year round in Irish waters and is the most frequently observed and stranded species, particularly along the west and south coast of Ireland (IWDG, 2026). Common dolphins have been assigned to a single MU, the Celtic & Greater North Seas MU with an abundance estimate of 102,656 animals (IAMMWG, 2022). Densities appear to be highest during autumn and summer off the south and southwest coasts, displaying a preference for continental shelf waters (Giralt Paradell et al., 2024),

According to IWDG (2026) there have been sightings of 221 common dolphin within Cork Harbour between October 2025 and October 2026. These were the most frequently recorded cetacean species within Cork Harbour for that period. The nearest recorded harbour porpoise to the MUL area comprised a pod of 15 individuals located approximately 500 m northeast of Haulbowline Island in January 2026.

Primary pressures placed upon common dolphins involve commercial vessel-based activities, with impacts arising from geophysical surveys or from prey removal by fisheries or bycatch. (NPWS, 2025c). The most recent Article 17 conservation assessment for common dolphin in Ireland deemed the species as being in favourable conservation status (NPWS, 2025).

3.5.3.2Bottlenose dolphin

Bottlenose dolphin was recorded within the wider Cork Harbour area as part of the IWDG records and NBDC records.

Bottlenose dolphin is found in both inshore and offshore waters and has been recorded all around the Irish coast. This species can also be found in much deeper waters off the continental shelf (NPWS, 2025). Three distinct populations have been identified in Irish waters including an offshore group, a coastal transient group and a smaller resident population in the Shannon Estuary, Co. Clare. According to Giralt Paradell et al. (2024), bottlenose dolphins were not recorded in the coastal waters off the south coast of Ireland during the ObSERVE surveys. Bottlenose dolphins off the south to south east coast of Ireland have been assigned to the Offshore Channel and Southwest England (OCSW) MU, with an estimated abundance of 10,653 animals (IAMMWG, 2023).

The IWDG (2026a) holds records of 43 sightings of bottlenose dolphins within Cork Harbour between October 2025 and October 2026. The closest IWDG sighting to the MUL Area comprised eight individuals west of Roches Point located approximately 5 km south the MUL Area in July 2026.

Primary pressures placed upon bottlenose dolphins involve commercial vessel-based activities, with impacts arising from geophysical surveys or from prey removal by fisheries

or bycatch, however, these are not considered of sufficient magnitude to adversely impact Irish populations of bottlenose dolphins (NPWS, 2025c). The most recent Article 17 conservation assessment for bottlenose dolphin in Ireland deemed the species as being in favourable conservation status (NPWS, 2025).

3.5.4 Otter

Otter (*Lutra lutra*) occurs throughout Ireland, including within Cork Harbour, with populations found along rivers, lakes, and coasts, where fish and other prey are abundant, and where the bank-side habitat offers plenty of cover (NPWS, 2025).

They have diverse habitat preferences: lakes, canals, riverine (streams up to major river systems) marshland and estuaries. Otters are a mobile species and maintain territories. In lowland rivers and fish-rich lakes otters only need to maintain small territories (up to 6km), but along smaller river systems and in upland areas where prey may be less abundant, otter territories can stretch to 20 km (Mullen et al., 2021). Female territories range between 7.5 ± 1.5 km for riverine and 6.5 ± 1.0 km for coastal environments, whereas male territories are approximately 13.2 ± 5.3 km along rivers but with a high degree of variability (Reid et al., 2013). In general, otters exploit a narrow strip of habitat, about 10 m wide at the aquatic-terrestrial interface (Mullen et al., 2021). Eurasian otters have been observed foraging as far as 80 m from shorelines (NPWS, 2009). Otters are opportunistic predators with a broad and varied diet. In coastal areas fish, crabs and molluscs are eaten (NPWS, 2025c).

A desk-based study utilising records from NBDC (2026)[1] indicated that there have been no otter sightings within the MUL Area within the last 10 years. The closest otter sighting was recorded off at Glenbrook Co. Cork in 2022, 2 km northwest of the MUL Area and off Camden Pier in Crosshaven Co. Cork, 3 km southeast of the MUL Area in 2018.

The most recent Article 17 conservation assessment for otters in Ireland deemed the species as being in favourable conservation status (NPWS, 2025b).

Impacts to otters can occur as a result of permanent loss of breeding or resting sites, habitat loss, disturbance/displacement and injury or mortality. The main threats to otter in Ireland include pollution, habitat disturbance and accidental deaths, e.g., road traffic (NPWS, 2025c). The most recent Article 17 conservation assessment for otters in Ireland deemed the species as being in favourable conservation status (NPWS, 2025c).

3.5.5 Turtle Species

Five Annex IV species of turtle are known to occur in Ireland: leatherback turtle (*Dermochelys coriacea*), Kemp's Ridley turtle (*Lepidochelys kempii*), loggerhead turtle (*Caretta caretta*), green turtle (*Chelonia mydas*) and hawksbill turtle (*Eretmochelys imbricata*). This section has been informed by data from the NBDC.

[1] NBDC Biodiversity Maps accessed October 2026

Only one turtle species has been recorded in Cork Harbour according to the NBDC data. This comprised of the single recorded hawksbill turtle in occurrence in Ireland, identified off Cobh Island in 1983, 6 km east of the MUL Area.

The closest live sighting of leatherback turtle was at the Old Head of Kinsale in 2017, approximately 30 km southwest of the MUL Area. The closest record of a loggerhead turtle was a stranded live individual in 2025 at Ballycrenane, Co. Cork, 22 km east of the MUL Area. The closest sighting of a Kemp's Ridley turtle was a dead individual at Rossbeigh, Co. Kerry in 2021. There have been two recorded sightings of the vagrant green turtle along the west coast of Ireland. A stranding of a live female was recorded at Quilty Beach, Clare in December 2024. Another live stranding occurred in November 2007 at Dingle Bay, Kerry.

No turtle species have been recorded within the Cork Harbour since 1983.

3.5.6 Stage 1 Conclusion

Based on the desk study, it is considered highly unlikely that any Annex IV species occur within the MUL Area, however, in line with the precautionary principle, the assessment will progress to Stage 2 Ecological Survey for relevant species (i.e. bats and otter). Due to the transient and wide-ranging nature of cetacean and turtle species, it would not be proportionate to carry out ecological surveys of these species to inform this Annex IV risk assessment. While specific surveys were not undertaken, a detailed ecological desktop study was carried out to inform the baseline (See Stage 1 above) and to establish likely presence of Annex IV species in the marine waters surrounding within the MUL Areas.

3.5.7 Stage 2: Ecological Survey

The methodology outlined in Mullen et al (2021) and NPWS (2021) recommends Stage 2 of the assessment requires an ecological survey to be carried out by an ecologist who is competent in relation to the species to be surveyed.

Two field surveys have been conducted in support of the proposed project. A specific invasive alien plant species (IAPS) survey across the ISPAT site area was carried out on the 16/04/2026 by a qualified ecologist in order to inform the IAPS report for the wider project.

A site visit was conducted on 26/08/2026 by a qualified ecologist to identify the potential for otter activity within the site boundary and the MUL Area. The results of the survey concluded that no evidence of otter was identified within the site boundary or MUL Area. The ISPAT site was characterised by a highly modified shoreline and industrialisation, resulting in habitat that is unsuitable for otter behaviours, including holting, couching, foraging and commuting.

During these non-dedicated walkover surveys for otter and IAPS, no obvious structures suitable for bat roosting were noted (RPS, 2025).

Taking into account the results of the Stage 1 Desk Study and Stage 2 Ecological Survey, it is concluded that Annex IV species are highly unlikely to be present within the MUL Area.

3.6 Stage 3: Examination of Impacts and Satisfactory Alternatives (if required)

Although Stages 1 and 2 above have determined that Annex IV Species are highly unlikely to be present within the MUL Area, a precautionary examination of impacts will be carried out.

3.6.1 Bat Species

The proposed SI works, including access/egress will not result in any direct or indirect interaction with any structure or feature which could be used by roosting bats. Therefore, there is no likelihood of the SI works resulting in any bats being captured or killed and disturbed during periods of breeding, rearing or hibernation. No breeding site or resting place of such animals will be damaged or destroyed during the SI works.

The SI works within the MUL Area may be carried out day or night. Any artificial lighting, if used, will be localised to the sampling locations within the MUL Area. Given the baseline level of artificial lighting and industrial activity within and close to Haulbowline, and the lack of evidence of bat activity within the MUL Area, there is no likelihood of any significant disturbance or displacement of foraging, commuting, or migrating bats above baseline levels as a result of the proposed SI works.

The proposed SI works conform with the strict protection afforded to bats under Article 12 of the Habitats Directive, and therefore, it is considered that no derogation is required.

3.6.2 Cetacean Species

The MUL Area is located below the mapped ungeneralised HWM, however, it is located wholly on terrestrial lands with no SI works within the marine environment proposed. As outlined in **Attachment 3.1** – Proposed Maritime Usage, the SI works will take place a minimum of 20 m from the water's edge/sea wall and will not introduce underwater noise directly below the HWM.

The possibility for sound introduced by SI works to travel via air and/or soil and reach the waters of Cork harbour was assessed in the Underwater Airborne Noise Assessment Report (report ref: IE001330-TT-EN-XX-RP-Z-0009). The indicative SI works nearest the water are at a range of c. 20 m to the water (southernmost sampling points). These locations were used to estimate the worst-case noise levels. It is noted that none of the sound reaching the water will be of impulsive character. Therefore, depending on the precise soil conditions present there will be various transitions between the soil, made ground and concrete associated with the coastal defence and road foundations. The assessment concluded that all in-water noise levels from the SI works are below the thresholds for auditory injury and temporary threshold shift (TTS) for all marine mammal species. Furthermore, the applicability of the behavioural thresholds for noise transmitted though land is not straightforward and given the effects of in-soil transmission (lengthening and absorption of higher frequencies) the anticipated noise will be similar in character to vessel noise (typically 150-180 dB SPL), at or below exiting noise levels in the area, and

therefore unlikely to elicit any behavioural responses. Therefore, the noise contribution to the surrounding water will be negligible.

As the proposed SI works will be confined to the ISPAT site and are wholly on land, there is no potential for interaction with cetacean species who spend their entire lifecycle in water.

The SI works are therefore compliant with Regulations 51 and 52 with respect to cetacean species and it is considered that no derogation is required.

3.6.3 Otter

Desk-based research shows that otter activity occurs within Cork Harbour but has not been recorded within the MUL Area. The intrusive sampling works will not interact with otter holts or couches as these are not present within the MUL Area where sampling will take place. The site is a heavily industrialised area with existing high levels of baseline activity with a highly modified shoreline. The MUL Area does not represent a critical habitat type utilised by otters.

Geotechnical surveys (boreholes incl. SPT) will produce airborne noise and vibration which could disturb otters within or close to the MUL Area. However, this airborne noise disturbance will be temporary and limited in extent, given the limited scope for geotechnical sampling (6 boreholes incl. SPT over the course of three phases of work). If an otter is utilising the MUL Area or the waters surrounding the MUL Area, temporary displacement will not affect the favourable conservation status of the species.

It is possible, though unlikely that otters may be present in foraging in the nearshore marine area (within 80 m of the shore) outside of the MUL Area. As outlined above for cetaceans, any noise transmitted through land to the marine environment will be similar in character to vessel noise (typically 150-180 dB SPL), at or below exiting noise levels in the area, and therefore unlikely to elicit any behavioural responses. The noise contribution to the surrounding water will be negligible.

As the proposed SI works will be confined to the ISPAT site and are wholly on land with negligible transfer of noise to the water, with a highly modified shoreline, and there is no desk-based or survey evidence of otter activity on the site, it is concluded that there will be no killing, deliberate non-trivial disturbance or displacement of breeding, resting or commuting otters due to the proposed SI works in the MUL Area. Therefore, the SI works are compliant with Regulations 51 and 52 and it is considered that no derogation is required.

3.6.4 Turtle Species

As stated above in **Section 3.5.5**, no turtle species have been recorded within Cork Harbour since 1983. Data on turtle hearing is limited; however, marine reptiles have relatively poor hearing, lacking a good acoustic coupling mechanism from sea water to the inner ear. Turtles detect sound in water at a much narrower hearing range than that of dolphins and whales; less than about 1,000 Hz (Popper et al., 2014).

As outlined above for cetaceans, any noise transmitted through land to the marine environment will be similar in character to vessel noise (typically 150-180 dB SPL), at or below exiting noise levels in the area, and therefore unlikely to elicit any behavioural responses. The noise contribution to the surrounding water will be negligible.

Due to the lack of evidence of turtles occurring regularly within the MUL Area and the limited scale and duration of the survey activities, it is concluded that there will be no significant disturbance, injury, or death of turtle species as a result of the SI works. There will be no deterioration or destruction of breeding sites or resting places. Therefore, in view of the current evidence base, the SI works are compliant with Regulations 51 and 52 and it is considered that no derogation is required with respect to turtles.

As the proposed SI works will be confined to the ISPAT site and are wholly on land with negligible transfer of noise to the water, and there is no recent evidence of turtle activity in the area, it is concluded that there will be no killing, deliberate non-trivial disturbance or displacement of breeding, resting or commuting turtles due to the proposed SI works in the MUL Area. Therefore, the SI works are compliant with Regulations 51 and 52 and it is considered that no derogation is required.

4 Summary and Conclusion

The proposed SI works will not:

- Deliberately capture or kill any specimen of Annex IV species in the wild;
- Deliberately take or destroy eggs of these species in the wild;
- Damage or destroy a breeding or resting place of such an animal; or
- Keep, transport, sell, exchange offer for sale or offer for exchange any specimen of these species taken in the wild.

The potential for deliberate disturbance to Annex IV species was considered in detail in this risk assessment, and the following conclusions have been reached.

There is no likelihood of significant disturbance of bat species due to the low likelihood of bats being present during the SI works and the low likelihood of interaction with the survey activities.

There is no potential for disturbance to cetacean species as a result of auditory injury or TTS from underwear noise impacts. The noise produced by SI works will be similar in character to vessel noise, at or below exiting noise levels in the area, and therefore unlikely to elicit any behavioural responses.

There is no potential for disturbance to otters as a result of auditory injury or TTS from underwear noise impacts. The noise produced by SI works will be similar in character to vessel noise, at or below exiting noise levels in the area, and therefore unlikely to elicit any behavioural responses. Based on site surveys (**Section 3.5.7**), the ISPAT area in which the works take place is characterised by a highly modified shoreline and industrialisation, resulting in habitat that is unsuitable for otter behaviours, including holting, couching, foraging and commuting. It is concluded that there will be no significant disturbance, injury, or death of otter as a result of the SI works.

There is no potential for disturbance to Annex IV turtle species as a result of auditory injury from underwear noise. It is concluded that there will be no significant disturbance, injury, or death of turtle species as a result of the SI works.

The conservation status of Annex IV species will not be impacted by the proposed SI works. The habitat available to Annex IV species will also continue to be sufficiently large to maintain their populations on a long-term basis.

It is concluded that the proposed SI works comply with the system of strict protections afforded by Article 12 of the Habitats Directive and Regulations 51 and 52 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, and that a derogation is not required.

This applies to the following Annex IV species:

- All bat species;
- Otter;

- All cetacean species; and
- All turtle species.

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