ATTACHMENT 4.6 CONSISTENCY WITH THE OBJECTIVES OF THE MARINE STRATEGY FRAMEWORK DIRECTIVE

Remediation of the Former Irish Steel Works Factory Site

IE001330-TT-EN-XX-RP-Z-0008

Department of Defence

TETRA TECH

Tetra Tech Dublin, West Pier Business Campus, Old Dunleary Road, Dún Laoghaire, Co. Dublin, A96 N6T7, Ireland

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Registered Office: West Pier Business Campus, Old Dunleary Road, Dún Laoghaire, Co. Dublin, A96 N6T7, Ireland

1.1 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 Compliance with Marine Strategy Framework Directive

The EU Marine Strategy Framework Directive, 2008 (MSFD)[1] aims to protect the marine environment and requires the application of an ecosystem-based approach to the management of marine human activities, enabling a sustainable use of marine goods and services. The MSFD aims to ensure clean, healthy, and productive oceans and seas and sustainable use of marine environment for current and future generations.

In order to implement the MSFD each member state is required to:

- Describe what they consider is a clean, healthy, and productive sea, i.e., Good Environmental Status (GES);
- Monitor and assess the quality of their seas against GES; and
- Ensure they take appropriate action by 2020 to maintain or achieve GES.

GES is key to compliance with the MSFD. GES is described by 11 descriptors, namely: marine biodiversity; non-indigenous species; commercial fish/shellfish; elements of marine food webs; eutrophication; sea floor integrity; alteration of hydrographical conditions; contaminants; contaminants in fish and seafood for human consumption; marine litter; and introduction of energy, including underwater noise. Ireland's 2024 assessment under Article 8 of the MFSD[1] sets out the status of the eleven qualitative descriptors that describe the state of the marine environment and the pressures it faces.

As stated in the Proposed Maritime Usage Document (**Attachment 3.1**), although below the mapped high-water mark (HWM), the proposed SI works will be conducted wholly on reclaimed land on Haulbowline Island in Cork Harbour. Therefore, there is no potential for direct impacts on the GES status of MSFD descriptors which are set out for the maritime area. However, the proposed SI works will contribute to the development of Haulbowline Island as a naval base for the Department of Defence (DoD), and as proposed works will be below the mapped HWM, MSFD descriptors are assessed below in **Table 1-1**.

The basic principle of GES is to ensure sustainable use of marine resources. When assessing a project against MSFD requirements, it is assessed on its impact on GES. A project may not improve a GES, but it should not have a permanent negative impact on any of the GES Descriptors. **Table 1-1** sets out the current status of each of the descriptors and an assessment of the proposed SI works against the 11 descriptors of GES.

[1] Directive - 2008/56 - EN - EUR-Lex accessed October 2026

Table 1-1: Current status of GES descriptors in Ireland, and assessment of the proposed Maritime Usage

MSFD Descriptor		Objective	Current National Status (DHLGH, 2024)	Controls and Evidence	Assessment of Consistency
D1	Marine biodiversity	Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.	GES has been achieved for some elements of biological diversity, but the status for many species groups is unknown. Numerous species, in particular a significant proportion of fish species, are not in GES.	The Applicant has provided **Attachment 3.3** - Appropriate Assessment (AA) Screening Report (report ref IE001330-TT-RP-XX-EN-0011) and **Attachment 3.4** - Risk Assessment for Annex IV Species (Annex IV RA) (report ref: IE001330-TT-RP-XX-EN-00) in respect to the proposed SI activities. These reports address potential impacts on biological diversity (including protected habitats and species).	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for marine biodiversity.
D2	Non-indigenous species (NIS)	Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.	GES has been achieved within Ireland's marine environment.	Invasive non-native species (INNS) have been recorded within the MUL Area at Haulbowline Island. According to the Invasive Alien Plant Species (IAPS) Report (report ref: IE001330_Invasive Alien Plant Species Report_A01). During the IAPS survey across the central west part of the island (which overlaps the MUL Area), carried out on the 16/04/2026 by a qualified ecologist, the Scheduled Species identified during the field survey included Spanish/hybrid bluebell (*Hyacinthoides hispanica/Hyacinthoides x massartiana*) and Rhododendron (*Rhododendron ponticum*). These infestations were located within the western half of the site, primarily adjacent to existing buildings Further details are provided in the Invasive Alien Plant Species Report carried out for the site.	Due to the implementation of standard measures, the proposed SI works will not contribute to the spread of non-indigenous species. Therefore, the status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for non-indigenous species.

MSFD Descriptor		Objective	Current National Status (DHLGH, 2024)	Controls and Evidence	Assessment of Consistency
				No other INNS were recorded within the MUL Area or Haulbowline Island according to NBDC (2026[2]). All equipment used as part of the SI works will take actions to prevent the spread of INNS as part of their standard operating procedures. These include washing equipment before and after arrival to the site in a designated area, desk-based research of INNS within the area and avoidance where possible.	
D3	Commercial fish and shellfish	Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.	GES has been achieved for 29 stocks of commercially exploited fish and shellfish in Ireland's marine environment. GES has not been achieved for 46 stocks, and 99 stocks remain in unknown status.	Although the MUL Area is located below the historically mapped high-water mark, the proposed SI works will be confined to the ISPAT area and are wholly on land. During SI works there will also be strict controls around surface water runoff and prevention of sediment entering the harbour waters, boreholes a minimum of 20 m from the shoreline, and monitoring for heavy rain. Further detail is provided in Section 2.6 of **Attachment 3.1** - Proposed Maritime Usage (report ref: IE001330-TT-EN-XX-RP-Z-0005). Therefore, there is no potential for interaction between the proposed SI works and commercial fish and shellfish.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for commercial fish and shellfish.
D4	Food webs	All elements of the marine food webs, to the extent that they are known, occur at normal abundance and	Environmental Status for food webs remains unclear.	These impacts will be limited to the MUL Area, above water and with strict sediment run off prevention measures in place.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed

[2] Invasive Species Biodiversity Maps accessed October 2026

MSFD Descriptor		Objective	Current National Status (DHLGH, 2024)	Controls and Evidence	Assessment of Consistency
		diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.		SI works will also be temporary in nature. Therefore, the balance and diversity in marine food webs will not be impacted as a result of the proposed maritime usage.	activities are consistent with achieving GES for food webs.
D5	Eutrophication	Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.	GES has been achieved for eutrophication within Ireland's marine environment.	The proposed maritime usage does not involve the addition of nutrients to the marine environment.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for eutrophication.
D6	Sea-floor integrity	Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.	GES has been achieved in 74% of Ireland's assessment area, however, 15% remains either not assessed or unknown, while 11% is not in GES.	As the proposed SI works will be confined to the ISPAT area (of which the MUL Area is confined) and is wholly on land, there is no potential for impacts to sea-floor integrity.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for sea-floor integrity.
D7	Hydrographical conditions	Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.	GES has been achieved within Ireland's marine environment.	As the proposed SI works will be confined to the ISPAT area (of which the MUL Area is confined) and is wholly on land, there is no potential for impacts to hydrological conditions. As stated above, strict sediment control measures will be in place during SI works in order to prevent sediment run-off into the Harbour.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for hydrographical conditions.
D8	Contaminants	Concentrations of contaminants are at levels not giving rise to pollution effects.	GES has been largely achieved for concentrations of contaminants in seawater,	The SI works are designed to ensure that there will be no accidental introduction of contaminants the marine environment as a result of SI works.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed

MSFD Descriptor		Objective	Current National Status (DHLGH, 2024)	Controls and Evidence	Assessment of Consistency
			sediments and biota in Irish coastal and marine waters and with few exceptions concentrations are at levels that ensure the protection of the marine environment	However, there is the potential for limited ground disturbance, compaction and erosion from heavy machinery operations during the works. As such, the investigation will be required to employ tight controls around surface water runoff via sheet flow (i.e., overground). The proposed SI works are taking place at a minimum setback distance of 20 m from the sea wall. The investigation methods proposed do not pose a direct risk of introduction of contaminants to the marine environment.	activities are consistent with achieving GES for contaminants.
D9	Contaminants in seafood	Contaminants in fish and other seafood for human consumption do not exceed levels established by Union legislation or other relevant standards.	GES has been achieved for contaminants in seafood.	As evidenced in D8 Contaminants above, strict measures for the prevention of pollution will be adhered to during SI works. Aquaculture and wild seafood stocks will not be impacted by the proposed SI works.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for contaminants in seafood.
D10	Marine litter	Properties and quantities of marine litter do not cause harm to the coastal and marine environment.	GES has not been achieved for beach litter in Ireland's marine environment. The status of macro litter on the seafloor remains unknown, while micro and macro litter floating and micro litter on the seafloor remain unassessed.	The proposed activities will not result in the introduction of marine litter to the marine environment as waste management systems are in place.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for marine litter.
D11	Energy, including underwater noise	Introduction of energy, including underwater noise, is at levels that does not adversely affect the marine environment.	GES has been achieved within Ireland's marine environment.	The proposed SI works will be confined to the ISPAT area (of which the MUL Area is confined) and wholly on land. SI works can occasionally emit significant noise into the marine	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with

MSFD Descriptor	Objective	Current National Status (DHLGH, 2024)	Controls and Evidence	Assessment of Consistency
			environment where they occur on land very near water. The in-water noise levels from the SI activities are below auditory injury and temporary threshold shift (TTS) thresholds for all species groups (even with cumulative exposure over time), and only marginally above the behavioural noise thresholds. Note also that the none of the sound reaching the water will be of impulsive character. See the Underwater and Airborne Noise Assessment (report ref: IE001330-TT-EN-XX-RP-Z-0009) for further details on noise assessment. 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 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. In summary, the noise contribution to the surrounding water will be negligible.	achieving GES for energy, including underwater noise.