



ATTACHMENT 4.6 COMPLAINT WITH OBJECTIVES OF THE MARINE STRATEGY FRAMEWORK DIRECTIVE

Oriel Wind Farm Project

Oriel Windfarm Limited



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1.0 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 in 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. Aoife holds an honours degree in Environmental Science from Trinity College Dublin and a Master's in Marine Environmental Protection from Bangor University, Wales. Aoife has delivered the environmental assessments for a wide range of marine and coastal projects, including environmental impact assessment, appropriate assessment and Annex IV species reports.

Rachael Shaw is a Project Scientist in the Environmental Services Business Unit in 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 Institute of Environmental Sciences (IES).

Róisín Murphy is a Scientist in the Environmental Services Business Unit in 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 one years' experience in marine licensing and flood relief projects within Tetra Tech. She is a qualifying member with IES.

2.0 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 sets out the status of the eleven qualitative descriptors that describe the state of the marine environment and the pressures it faces.

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. Table 2-1 sets out the current status of each of the descriptors and an assessment of the Oriel Wind Farm Project SI works against the eleven descriptors of GES.

¹ [Directive - 2008/56 - EN - EUR-Lex](#) accessed July 2026

Table 2-1: 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 undertaken an Appropriate Assessment (AA) screening report, a Natura Impact Statement (NIS) and a Risk Assessment for Annex IV species report in respect to the proposed SI activities. These three reports address potential impacts on biological diversity (including protected habitats and species) while mitigation measures have been included in the NIS.	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 species have not been recorded within the MUL Area. Standard measures will be in place across all vessels to prevent the spread of invasive alien species as part of their standard operating procedures. All vessels used as part of the SI works will take actions to prevent the spread of invasive alien species as part of their standard operating procedures. The activities under this MUL will adhere to the following conventions and acts: • The International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004); • The Sea Pollution (Miscellaneous Provisions) Act (2006); and • The International Convention on Ballast Water Management (2004).	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.
D3	Commercial fish and shellfish	Populations of all commercially exploited fish	GES has been achieved for 29 stocks of commercially	This descriptor is assessed as incidental bycatch and commercial fisheries and	The status of this descriptor will not be impacted by the

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		and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.	exploited fish and shellfish in Ireland’s marine environment. GES has not been achieved for 46 stocks, and 99 stocks remain in unknown status.	shellfish (fish mortality rate, spawning stock biomass and age and size distribution). Following a review of data held on Ireland’s Marine Atlas, it is confirmed that the MUL application area overlaps with known spawning grounds for commercial fish species. Maps to this effect are presented in Attachment 4.1. The MUL Area overlaps partially or fully with known whiting, haddock and cod spawning areas, as well as known whiting, haddock, herring, mackerel, horse mackerel and cod nursery areas. The Marine Atlas records otter trawling and bottom mobile fishing activity, fishing methods associated with shellfish and benthic fishing within the MUL Area (Ireland’s Marine Atlas, 2026). Due to the methods undertaken for the proposed SI works (see Proposed Maritime Usage – Schedule of Works report for more information), it is not expected that the proposed activities will result in either incidental bycatch of commercially exploited fish or shellfish stocks. There are a number of licensed aquaculture sites (for Pacific oysters and blue mussels) within Carlingford Lough, with the closest site is located approx. 5 km from the MUL Area, along with one classified shellfish growing area in Dundalk Bay and two	proposed maritime usage and the proposed activities are consistent with achieving GES for commercial fish and shellfish.

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MSFD Descriptor		Objective	Current National Status (DHLGH, 2024)	Controls and Evidence	Assessment of Consistency
				classified shellfish growing areas in Carlingford Lough². Given the location of the proposed SI works relative to the licenced aquaculture sites and shellfish growing areas, the proposed activities within the MUL Area will not impact on licenced aquaculture sites or shellfish growing areas.	
D4	Food webs	All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.	Environmental Status for food webs remains unclear.	Impacts on habitats and associated prey species have been assessed in the AA Screening report and NIS. These impacts will be limited to the MUL Area and temporary in nature, and therefore, the balance and diversity in marine food webs will not be impacted as a result of the proposed maritime usage.	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed 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	GES has been achieved in 74% of Ireland's assessment area, however, 15% remains either not assessed or	The benthic environment being sampled as part of the proposed SI works will experience temporary disturbance due to some of the methods proposed. However, the area of	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are

² [Shellfish Classified Areas | Sea Fisheries Protection Authority](#) Accessed July 2026

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		safeguarded and benthic ecosystems, in particular, are not adversely affected.	unknown, while 11% is not in GES.	sediment to be removed/disturbed is minimal and expected to recover rapidly. All potential impacts to seafloor integrity will be limited to the proposed survey area. The proposed intrusive sampling techniques are limited to discrete sampling locations and undertaken individually over the course of a survey campaign. Therefore, the SI works will not mobilise large volumes of sediment or plumes.	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.	The proposed SI works will not significantly alter the hydrographical conditions (e.g. changes in wave action, currents, salinity, temperature) within the MUL Area. No dredging or lasting alteration to the surrounding marine environment within the MUL Area is proposed.	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, 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	All vessels used as part of the SI works will adhere to the International Convention for the Prevention of Pollution from Ships (MARPOL). All substances handled and/or used whilst undertaking the works are required to be handled, used, stored, and documented in accordance with assessments and the Chemicals Act 2008 (No. 13 of 2008) and Chemicals (Amendment) Act 2010 (No. 32 of 2010) and associated Regulations. Given the standard legal and regulatory pollution control requirements that apply to all vessels (MARPOL, The Sea Pollution Act, 1991), the nature of 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.

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				their limited scale and duration, and the insignificant increase in vessel activity the GES for contaminants will not be affected by SI works.	
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. Impacts to 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.	Good environmental status 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 and activities will align with MARPOL compliance.	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 impacts of underwater noise introduced as a result of the proposed activities are assessed in the AA Screening Report and Risk Assessment for Annex IV Species. Mitigation measures are proposed in the NIS which comply with DAHG (2014) <i>Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters</i>. Standard risk avoidance and/or risk reduction measures will be implemented during the activities proposed in this MULA, including visual observation during daylight	The status of this descriptor will not be impacted by the proposed maritime usage and the proposed activities are consistent with achieving GES for energy, including underwater noise.

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				hours and the use of soft-start procedures. MMOs will review the source material prior to undertaking mitigation and a Marine Mammal Mitigation Plan (MMMP) will be drawn up prior to survey commencement. For geophysical, seismic and geotechnical surveys a qualified and experienced marine mammal observer (MMO) shall be appointed to monitor for marine mammals and to log all relevant events using standardised data forms. The incorporation of these measures will avoid auditory injury and reduce disturbance to marine mammals.	