

## Attachment 4.5

### Consistency of the proposed Maritime Usage with the objectives of the Water Framework Directive (WFD)

#### Introduction

MARA is required to have regard to the Directive 2000/60/EC, the EU Water Framework Directive, and the associated implementing national legislation, the European Communities (Water Policy) Regulations 2003 and further implemented by the European Communities Environmental Objectives (Surface Water) Regulations, 2009. The Water Framework Directive requires all member states to protect and improve water quality in inland surface waters, transitional waters, coastal waters and groundwater so that good ecological status is achieved by 2027. Water bodies in moderate, poor, or bad ecological status require mitigation and restoration to achieve the good status objective. Additional measures apply to protected areas under the Directive. Protected areas which may be relevant to the proposed Maritime Usage, include:

- Areas designated for the protection of economically significant aquatic species under the Habitats Directive.
- Bodies of water designated as recreational waters, including areas designated as bathing waters under the revised Bathing Water Directive (2206/7/EC).
- Nutrient-sensitive areas, including areas designated as vulnerable zones under Directive 91/676/EEC and areas designated as sensitive areas under Directive 91/271/EEC.
- Areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant Natura 2000 sites designated under the Habitats Directive or Birds Directive.

#### Zone of Influence and WFD status

Management under the WFD is organised by River Basin Districts, with objectives and measures set out in Ireland's River Basin Management Plans (RBMPs). The principles underpinning the Directive are wide-ranging. Waters are to be managed according to natural hydrological boundaries, namely river basin districts, rather than administrative or political borders. Water bodies status is assessed using biological, physico-chemical, and hydromorphological quality elements. Ecological status reflects biological communities such as fish, benthic invertebrates, and aquatic plants, along with hydromorphological conditions and physico-chemical parameters. Chemical status is assessed by reference to pollutants, priority substances, and compliance with Environmental Quality Standards.

Liscannor Bay is located within the Shannon River Basin District. Within this district, the bay lies in the Mal Bay catchment, which includes the area drained between George’s Head and Black Head, Co. Clare, draining a total area of 848 km<sup>2</sup>. The Mal Bay catchment is divided into seven sub-catchments with 37 river water bodies, four lake water bodies, four transitional water bodies, four coastal water bodies, and eight groundwater bodies. Lahinch is the largest urban centre in the catchment.

The proposed site investigation surveys will take place in Liscannor Bay coastal water body (IE\_SH\_100\_0000). As a precautionary measure, the Shannon Plume (HAs 27;28) coastal water body (IE\_SH\_070\_0000) and the transitional water body Inagh Estuary (IE\_SH\_100\_0100) are also included in this WFD consideration. The status of the water bodies identified above are provided in Table 4.5.1 for the 2016-2021 monitoring periods.

According to the 2016-2021 River Basin Management Plan (cycle 2), Liscannor Bay coastal water body achieved ‘Good’ ecological status over this cycle. This represents a decline from the interim assessment period (2013-2018) when this waterbody achieved ‘High’ ecological status. In terms of not meeting its’ environmental objectives, Liscannor Bay water body is assessed as under review.

Shannon Plume (HAs 27;28) coastal water body achieved ‘High’ ecological status over the 2016-2021 assessment period; across supporting chemistry conditions, general conditions, and nutrient conditions the water body was of ‘High’ status. In terms of not meeting its’ environmental objectives, Shannon Plume (HAs 27;28) water body is assessed as not at risk.

Inagh Estuary transitional water body achieved ‘Moderate’ ecological status over the same period. In terms of not meeting its’ environmental objectives, the Inagh Estuary waterbody is assessed as under review.

**Table 4.5.1 Status of relevant waterbodies as reported under the WFD.**

Status	Assessment Technique	Status Confidence	Value
Liscannor Bay (IE_SH_100_0000)			
Ecological Status or Potential	Grouping	Medium confidence	Good
Shannon Plume (HAs 27;28) (IE_SH_070_0000)			
Ecological Status or Potential	Monitoring	Medium confidence	High
Supporting Chemistry Conditions			High

General Conditions			High
Nutrient Conditions			High
Inagh Estuary (IE_SH_100_0100)			
Ecological Status or Potential	Grouping	Medium confidence	Moderate

### Site Investigation Surveys

Effects to water quality include localised disturbance to the seabed and may cause very minor, localised redistribution of sediment. Sediment classification of Liscannor Bay was not available at the time of writing the report, highlighting the need and benefit of the proposed site investigative surveys to inform this. The proposed survey methods are short term and local in scale. They may create negligible, localised disturbance to the benthos with no long-term impacts to the seabed or water quality.

There is minimal risk of introduction of pollutants to the environment or significant seabed disturbance that may impact flora or fauna (*e.g.*, sediment accumulation/transport), and as such no deterioration in ecological or chemical status is anticipated as a result of the proposed site investigation surveys. In terms of spillages/oil leaks and other pollutants, the vessels will adhere to relevance requirements under the MARPOL convention for storage and treatment of onboard pollutants.

In summary, the method and scale of works are consistent with the WFD's objective to maintain (or aim to achieve) good ecological and chemical status in the Liscannor Bay, Shannon Plume, and Inagh Estuary water bodies. See Table 4.5.2 for potential interactions related to the site investigation surveys. The surveys are not expected to compromise the integrity of relevant Natura 2000 sites (please see attachment 4.3).

**Table 4.5.2 Assessment of interaction with WFD objectives.**

WFD Quality Element / Objective	Potential Interaction	Assessment Outcome
Ecological Status (biological elements: benthic invertebrates, fish, phytoplankton)	Temporary, highly localised disturbance of benthic habitats due to benthic investigation surveys (CPT, vibrocore, borehole, sediment sampling).	Short-term and localised; no long-term status change anticipated
Chemical Status (priority substances under EQSD)	No chemical inputs from project.	No deterioration

<b>WFD Quality Element / Objective</b>	<b>Potential Interaction</b>	<b>Assessment Outcome</b>
Hydromorphology (tidal regime, morphology, sediment dynamics)	No change to hydromorphology.	No alteration beyond natural variability
Supporting Physico-chemical Conditions (nutrients, dissolved oxygen, salinity)	No change to nutrients, dissolved oxygen, etc.	No alteration beyond natural variability
Achievement of Future Status Objectives	Project scale and method compatible with achieving targets. No permanent effects.	No constraint on future improvements

### Designated Waters

There are no designated shellfish waters in Liscannor Bay. There is one designated bathing water monitored for bathing water quality in Liscannor Bay, at Lahinch (IESHBWC100\_0000\_0100). Under the Bathing Water Quality Regulations 2008 (S.I. No. 79 of 2008), which transpose the EU Bathing Water Directive (2006/7/EC) into Irish law, the EPA is the national authority responsible for monitoring, classification, and reporting on bathing water quality. As of 2024, the site was classified by the EPA as being of Excellent quality, the highest of the four classification categories (Excellent, Good, Sufficient, Poor). In line with the objectives of both the Bathing Water Directive and the Water Framework Directive, these designations aim to protect public health and safeguard water quality in designated recreational areas. Given the WFD assessment above, and considering the nature of the site investigation surveys, the quality of bathing water at Lahinch is considered unlikely to be adversely affected by the proposed Maritime Usage.

### Other Considerations

The core principles of the WFD are to prevent the deterioration of water body status, to protect and enhance existing water bodies, and to promote the long-term sustainable use of water. The Directive also seeks to protect, enhance, and restore aquatic ecosystems through progressive reductions in discharges, emissions, and losses of priority substances, while working towards the cessation or phasing-out of priority hazardous substances. It requires the progressive reduction of groundwater pollution and prevention of further contamination and contributes to the mitigation of floods and droughts. In addition, the WFD addresses hydromorphological pressures such as river continuity, requires the implementation of River Basin Management Plans, and sets out the overarching goal of achieving “good” ecological and chemical status for all waters.

In Ireland, the Directive is implemented through the European Communities (Water Policy) Regulations 2003 (as amended). The current cycle, the Third River Basin Management Plan (2022–2027), establishes national goals including improving the status of water bodies, tackling pressures from urban wastewater, reducing agricultural pollution, and protecting high-status waters. The 2024 River Basin Management Plan identifies Lahinch Wastewater Treatment Plant (WWTP) on the RC3 project list, providing for continued investment in wastewater infrastructure, as detailed in Appendix 9 of that plan.

The Water Action Plan 2024 emphasises that protecting and restoring water quality requires enhanced measures to address nutrient losses from land to water, interventions to re-establish natural river conditions, and continued investment in wastewater treatment infrastructure. These efforts are set against the increasing pressures of population and economic growth, all in the context of climate change.

The WFD also aligns with international frameworks, most notably the United Nations Sustainable Development Goals (SDGs). SDG 6 is to “ensure availability and sustainable management of water and sanitation for all”. Targets for 2030 include achieving universal access to safe and affordable drinking water, ensuring adequate sanitation and hygiene for all, improving water quality by reducing pollution, eliminating dumping and hazardous discharges, and halving the proportion of untreated wastewater.

The WFD Directive reinforces and is linked to other EU environmental legislation, including the Birds and Habitats Directives, and directives addressing specific water uses such as the Drinking Water Directive, Bathing Water Directive, and Urban Wastewater Directive. It is also integrated into Irish planning legislation. Section 1(A) of the Planning and Development Act 2000 (as amended) requires development plans to support the protection and enhancement of water quality, particularly in relation to RBMP objectives.

The proposed Maritime Usage is an essential preparatory step to a future project that would directly support the objectives of the WFD, the RBMP 2022–2027, and the Marine Strategy Framework Directive (MSFD). By informing a robust and resilient design and providing necessary baseline data, the future project will help prevent the deterioration of water body status and contribute to achieving or maintaining good ecological and chemical status, consistent with the WFD’s “no deterioration” principle. The proposed Maritime Usage will also indirectly deliver resilience against flooding and storm events, thereby addressing wastewater and hydromorphological pressures identified in the RBMP. Importantly, the proposed site investigation surveys themselves are temporary, small-scale, and non-polluting (with only limited and localised impacts). They will be carried out in accordance with best practice, ensuring no adverse effects on water quality, morphology, or ecological features during the survey phases.

## Statement of Authority

This report has been prepared by Alanna Mitchell (B.Sc., M.Sc.), the primary author. Alanna is a marine consultant ecologist with two years of experience in marine environmental consultancy. She holds a First-Class Honours degree in Marine Science (B.Sc.) from the National University of Ireland, Galway, where she contributed to intertidal shore studies in Galway. These studies aimed to establish baseline data for future monitoring, focusing on species assemblages, biodiversity, and habitat types (JNCC). Alanna also earned a First-Class Honours Master's degree in Marine Biology (M.Sc.) from University College Cork, where she was involved in a research project supported by the Marine Institute. Alanna's professional background emphasizes environmental impact assessment and management within marine ecosystems, with particular expertise in aquaculture, offshore renewables, and wastewater. Her extensive experience includes working on Environmental Impact Assessments (EIAs), Appropriate Assessments (AAs), Marine Usage Licences, and Sanitary Surveys. She has led and managed complex multidisciplinary projects across sectors, including fisheries and environmental monitoring, leveraging her advanced skills in Geographical Information Systems (GIS). Alanna's solid understanding of EU and Irish environmental policies allows her to provide a comprehensive evaluation of the project's alignment with the goals of the Water Framework Directive.

This report has been reviewed by Dr. A. Long who is a Principal Marine Consultant with over nine years of experience across consultancy, government, and academia, with a PhD in marine ecology from the University of Galway. His career has focused on the assessment and management of environmental impacts in the marine environment, with specialist expertise in Environmental Impact Assessment, Appropriate Assessment, Marine Usage Licences, and Dumping at Sea permits. He has successfully managed and delivered complex multidisciplinary projects for high-profile clients in Ireland, Australia, and Brazil in sectors including fisheries, aquaculture, offshore renewables, ports, and wastewater, authoring over 40 major technical reports. His background includes detailed ecological and environmental quality assessments, monitoring programme design, and statistical analysis, supported by peer-reviewed publications and international research collaborations. Drawing on this expertise and his in-depth knowledge of EU and Irish environmental legislation, Dr. Long is suitably qualified to provide a robust consideration of the project's consistency with the objectives of the Water Framework Directive.