# MUL Application Supporting Attachment – 4.5 Compliance with Objectives of the Water Framework Directive

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# 1 WATER FRAMEWORK DIRECTIVE ASSESSMENT

The Water Framework Directive (WFD; Directive 2000/60/EC) establishes a comprehensive framework for protecting and enhancing the status of all groundwater and surface waters across the EU, including rivers, lakes, transitional waters, and coastal waters out to one nautical mile. The overarching objectives of the WFD are to:

- prevent deterioration of waterbody ecological and chemical status;
- protect, enhance and restore waterbodies to achieve at least **Good Status**;
- promote sustainable use of water resources; and
- support the protection of water-dependent ecosystems and designated Protected Areas.

This attachment evaluates whether the proposed Maritime Usage is consistent with WFD objectives and Ireland's statutory Water Framework Directive River Basin Management Plan (RBMP) 2022–2027.

## 1.1 RELEVANCE OF THE WFD TO THE PROPOSED MARITIME USAGE

The proposed SI consist of short-term, small-scale activities within a defined Cork Harbour (IE_SW_060_0000) WFD waterbody. These activities are spatially limited, and temporary. No discharges, dredging, reclamation or structures are proposed, and water quality will not be altered.

Under the WFD, any plan or project must demonstrate that it will:

- not cause deterioration of ecological or chemical status;
- not compromise River Basin Management Plan (RBMP) measures to restore or protect the waterbody;
- not negatively affect hydromorphology; and
- not impact water-dependent protected sites.

The SI activities do not involve discharges, dredging, reclamation, or construction, and therefore present a very low potential for interaction with WFD objectives.

## 1.2 RECEIVING ENVIRONMENT (WFD WATERBODY CONTEXT)

The proposed Maritime Usage is located within the **Cork Harbour** coastal waterbody, designated under the Water Framework Directive as:

- Waterbody Name: *Cork Harbour*
- WFD Code: *IE_SW_060_0000*
- Waterbody Type: *Coastal Water*
- Current Ecological Status: *Moderate*
- WFD Risk Classification: *At Risk* of not achieving Good Status by 2027

- Chemical / Physico-Chemical Issues: Decline from Good to Moderate due to failure of the dissolved oxygen standard in 2018
- Protected Area Register (PAR): Overlaps with

  Great Island Channel SAC, designated for sand/mudflats and salt meadows

  Cork Harbour SPA, designated for internationally important wintering bird populations

Cork Harbour is a large, semi-enclosed estuarine and coastal system that supports internationally important biodiversity, extensive aquaculture activity, and major port operations. The harbour experiences naturally variable hydrodynamic conditions, including fluctuating turbidity, strong tidal exchange and regular sediment disturbance from commercial shipping.

Under the WFD and the River Basin Management Plan (RBMP) 2022–2027, Cork Harbour is required to prevent further deterioration and progress towards achieving Good Ecological Status. Its current classification of Moderate reflects a decline from Good during the 2010–2015 reporting cycle, primarily due to dissolved oxygen non-compliance recorded in 2018. Ongoing monitoring of nutrients (DIN, Ortho-P), chlorophyll and oxygen dynamics continues to inform restoration measures.

The harbour is additionally influenced by established shipping, aquaculture (notably oyster farming), and industrial discharges, all of which are subject to existing regulatory controls. The proposed SI activities occur entirely within this active and already periodically disturbed marine environment.

Given the short duration, limited spatial footprint, of the SI activities, no components of WFD status - biological quality elements, physico-chemical conditions, hydromorphology, or chemical parameters - will be adversely affected. The works will not interact with the pressures that have contributed to Cork Harbour's Moderate status, nor will they hinder ongoing WFD recovery measures or RBMP objectives.

## 1.3 ASSESSMENT OF WFD-RELEVANT PRESSURES

The WFD requires assessment of pressures that may influence biological, physico-chemical, and hydromorphological quality elements. Table 4-1 summarises potential pressures associated with the SI activities.

**Table 4-1: Assessment of Potential WFD Relevant Pressures**

| Potential Pressure | Interaction with Proposed SI Activities | Assessment |
|---|---|---|
| Sediment Disturbance | Small-scale sampling only; disturbance < a few metres²; well within natural sediment dynamics of Cork Harbour | No measurable increase in turbidity or SSC; no deterioration risk |
| Pollution / Chemical Contamination | No discharges; vessels fully MARPOL-compliant | No pollutant input; no effect on chemical status |
| Hydromorphological Alteration | No dredging, infilling, reclamation, or modification of seabed/shoreline | No impact on morphology, tidal flow, or hydrodynamics |
| Water Quality | No nutrient or organic releases; no effect on dissolved oxygen | No interaction with parameters contributing to Moderate status |

| Potential Pressure | Interaction with Proposed SI Activities | Assessment |
|---|---|---|
| Biological Quality Elements (BQEs) | No permanent habitat change; negligible, short-term footprint | No effect on benthic communities, fish, or phytobenthos |
| Protected Areas | No pathway to impact SAC/SPA water-dependent features | Fully consistent |

## 1.4 CONSISTENCY WITH WFD ENVIRONMENTAL OBJECTIVES

The WFD sets out statutory environmental objectives applicable to all surface waters. The below table evaluates the consistency of the proposed SI activities with these objectives (Table 4-2).

**Table 4-2: Assessment of Consistency with WFD Environmental Objectives**

| WFD Objective | Relevance to Proposed Maritime Usage | Consistency Assessment |
|---|---|---|
| Prevent deterioration of status | SI works cannot influence dissolved oxygen, nutrients, chlorophyll, morphology, or pollutants | Fully consistent |
| Protect, enhance, restore waterbodies | No long-term or cumulative pressures; no change to ecological structure or functions | Fully consistent |
| Achieve Good Ecological Status | Activities do not affect BQEs (fish, benthos, phytoplankton) or supporting conditions | Fully consistent |
| Achieve Good Chemical Status | No contaminant inputs; strict pollution prevention ensures no chemical deterioration | Fully consistent |
| Meet objectives for Protected Areas | SI activities pose no risk to SAC/SPA water-dependent features | Fully consistent |
| Not compromise RBMP measures | The SI works do not interfere with measures addressing oxygen/nutrient dynamics or other pressures | Fully consistent |

## 1.5 ALIGNMENT WITH IRELAND'S RBMP 2022–2027

Cork Harbour is identified as **At Risk** within the RBMP, requiring targeted measures to address nutrient enrichment, dissolved oxygen fluctuations, and impacts from industrial activity.

The SI activities:

- introduce no nutrient inputs,

- do not alter dissolved oxygen dynamics,
- do not contribute to industrial or operational discharges,
- do not alter hydromorphology,
- do not disturb ecological quality elements, and
- do not interfere with ongoing monitoring programmes or catchment-based measures.

The proposed Maritime Usage is therefore compatible with the RBMP's strategic framework and does not impede progress toward achieving Good Status.

## 1.6 CONSISTENCY WITH THE WFD

The proposed Maritime Usage is fully consistent with the Water Framework Directive. In particular:

- No deterioration of status will occur in Cork Harbour (Moderate, At Risk).
- No WFD quality elements—biological, hydromorphological or physico-chemical—will be affected.
- Chemical status will not be influenced, as no pollutants or contaminants are introduced.
- No parameters contributing to the Moderate status (including dissolved oxygen) will be affected.
- No RBMP measures will be compromised, and the project will not add to existing pressures from shipping, aquaculture, or industrial activity.
- All effects will be **temporary, reversible, negligible**, and confined to a heavily used harbour environment.

## 1.7 CONCLUSION

Based on the assessment above, the proposed Maritime Usage is fully compliant with the objectives of the WFD and Ireland's RBMP 2022–2027.

The SI activities:

- will not cause deterioration of the Cork Harbour waterbody;
- do not interact with the pressures responsible for its Moderate status;
- do not hinder efforts to achieve Good Status by 2027; and
- are fully aligned with WFD principles of sustainable, environmentally responsible use of coastal waters.
- The proposed Maritime Usage therefore meets all relevant WFD requirements for MUL licensing.



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www.venterra-group.com
info@venterra-group.com