Project:	Balbriggan Harbour Dredging						
Client	Fingal County Council						
Subject	MARA Marine Usage Licence Application – Water Framework Directive						
Orig. by	CM	**Appr. by**	AA	**Date**	13/02/2026	**Doc. Ref:**	C0203-AYE-ZZ-XX-TN-MA-0405

Water Framework Directive (WFD)

The Water Framework Directive (WFD) (Directive 2000/60/EC) was established to create a comprehensive framework for the protection of waterbodies in the European Union. The key objective is the general protection of aquatic ecology, specific protection of unique and valuable habitats, the protection of drinking water resources, and the protection of bathing water through a system of river basin management planning and extensive monitoring. The idea is to maintain or achieve 'Good Status', which means both 'Good Ecological Status' (GES) and 'Good Chemical Status' (GCS).

The proposed maintenance dredging in Balbriggan Harbour will be occurring within the coastal waterbody IE_EA_020_000 (Northwestern Irish Sea HA08). It has maintained a 'good' and 'high' status for all monitoring periods (2007-2024) but would be considered 'at risk'. The inputting surface waters (of which there are eight), are all afforded 'poor' status, except for one. The waterbody, is associated to several Natura 2000 Sites, including Rockabill to Dalkey Island SAC, Skerries Islands SPA, Lambay Island SAC & SPA, Rogerstown Estuary SAC & SPA, Malahide Estuary SAC & SPA, North-West Irish Sea SPA, Boyne Coast and Estuary SAC, River Nanny Estuary and Shore SPA and Boyne Estuary SPA.

Table 1: WFD Supporting Elements for Coastal Waters

Biological Quality Elements	Hydromorphological Quality Elements	Physico-chemical and Chemical Quality Elements
Phytoplankton status	Depth variation	Transparency
Invertebrate status	Structure and substrate of the coastal bed	Thermal conditions
	Structure of the intertidal zone	Oxygenation conditions
	Direction of dominant currents	Salinity
	Wave exposure	Nutrient condition
		Specific Pollutants
		Priority Substances and Hazardous Priority Substances

WFD Biological Quality Elements:

- Phytoplankton: Although there would be localised increases in suspended sediment levels, they would be temporary and would not be expected to have any notable effect on phytoplankton assemblages present. Phytoplankton are transported with tidal currents and would only be expected to be subject to elevated levels of suspended sediments for relatively short periods. Any effects of the maintenance dredging on phytoplankton are anticipated to be negligible/minor and would not affect WFD status.

- Invertebrates: The risk of sedimentation is relatively minor with the proposed works, as part of the embedded method statement is to undertake dredging during lower tides when the harbour basin has naturally dried out. However, the disturbance of the seafloor will naturally cause some sedimentation effects when the tide rises. Overall, the surrounding biota will experience some degree of stress and temporary and localised community disruption associated with elevated turbidity levels, however the programme and mitigation measures will ensure that the dredging will not result in significant and prolonged suspended solids and therefore will not impact significantly on the biological elements or prevent the achievement of good ecological status/potential of the biological elements in the waterbody.

- Fish: Does not require consideration as the works are in a coastal water body (no WFD status available for fish for the waterbody).

WFD Hydromorphological Quality Elements:

- Depth Variation: The maintenance dredging would have localised effects on depth but would not affect depth at the scale of the WFD waterbody.

- Structure and Substrate of the Coastal Bed: The maintenance dredging would have localised effects on benthic substrates but would not affect depth at the scale of the WFD waterbody.

- Structure of the Intertidal Zone: The structure of the intertidal zone's structure will be unaffected by the maintenance dredging.

- Direction of Dominant Currents: Current flow patterns and the direction of dominant currents will not be affected by the maintenance dredging.

- Wave Exposure: The maintenance dredging will not change the characteristic wave exposure of the area.

WFD Physico-chemical and Chemical Quality Elements:

- Transparency: The maintenance dredging would have localised and temporary effects on transparency, but it would not affect transparency at the scale of the WFD waterbody.

- Thermal Conditions: The maintenance dredging would not have any effects on thermal conditions.

- Oxygenation Conditions: The maintenance dredging could have localised and temporary effects on oxygen levels in the water column, but it would not affect oxygen levels at the scale of the WFD waterbody.

- Salinity: The proposed maintenance dredging will not cause fluctuations in the salinity levels of the water.

- Nutrient Condition: The maintenance dredging could have localised and temporary effects on nutrient levels in the water column, but it would not affect nutrient levels at the scale of the WFD water body.

- Specific Pollutants (ecological status): The maintenance dredging could have localised and temporary effects on concentrations of specific pollutants in the water column. Some pockets of sediments to be dredged are contaminated with heavy metals, some of which will be release to the water column. However, given that dredging is proposed to largely take place in the dry, the impact is lessened, and the quantity of polluted sediments to enter the water column will be significantly lessened than if the dredging was to occur in high tide. Any pollutants released from sediments will be rapidly diluted in the water column. Material with high concentrations of pollutants will be disposed of on land (no sea disposal is proposed). Overall, the maintenance dredging is not anticipated to affect concentrations of specific pollutants at the scale of the WFD water body.

- Priority substances and Priority hazardous substances (chemical status): A above.

Environmental mitigation has been incorporated into the design stage, which follow generic best practice to mitigate the impacts of the proposed works on the ecological environment. Namely, adherence to CIRIA (2015) Environmental Good Practice on Site (Charles and Edwards 2015), adherence to a Construction Environmental Management Plan (CEMP) and appropriate placement of site compounds. The Natura Impact Statement (NIS) prepared for these proposed works, sets out specific mitigation for the protection of surface water. Assuming the mitigation measures are employed during construction activities, the potential ecological impact to receiving water environment will be reduced to negligible thus reducing the significance of environmental effect to imperceptible.

Given the scale and nature of the proposed maintenance dredging and taking account of all available information, there are not expected to be any non-temporary effects on any WFD quality elements of the Northwestern Irish Sea coastal waterbody, and the proposed maintenance dredging would not prevent these water bodies from meeting their WFD objectives