Compliance with Objectives of the Water Framework Directive

Introduction

This note on WFD compliance, describes and assesses the potential impacts and effects of the proposed works on water aspects (water quality and hydrology) of the receiving environment. The objectives of this assessment are:

- Produce a baseline desk study of the existing water environment in the area of the proposed works;
- Identify any likely significant effects of the proposed works;
- Identify any mitigation measures to avoid, remediate or reduce likely significant negative effects; and
- Assess whether there are any likely significant residual or cumulative effects of the proposed works and other local projects.

Water Framework Directive

Directive 2000/60/EC establishing a framework for community action in the field of water policy (the Water Framework Directive), and transposing regulations, establishes a legal framework for the protection, improvement and sustainable management of rivers, lakes, transitional waters (estuaries), coastal waters (to a distance of one nautical mile) and groundwater.

The fundamental objectives of the WFD are to maintain “high status” of surface waters where it exists, prevent deterioration in the existing status of waters, and achieve at least “good status” in relation to all waters by 2027 unless subject to extended deadlines. A water body must achieve both good ‘ecological status’ and good ‘chemical status’ before it can be considered to be at good overall status. An assessment of the risks to the achievement of these objectives for water bodies has been undertaken by the EPA through the extensive characterisation of water bodies and the key pressures acting upon them. This facilitates the development of a programme of measures to allow the achievement of the WFD objectives.

The Programme of Measures (POM) outlines the steps that will be taken to meet WFD objectives as applicable to each water body. This POM is contained within an overarching River Basin Management Plan (RBMP). These measures will require implementation at strategic level but also at regional and local level through the establishment of Regional Integrated Catchment Management Programmes. Whilst none of the water bodies within the proposed Marine SI area have been included amongst those areas prioritised for action in the most recent River Basin Management Plan for Ireland 2022 - 2027 (DHLGH, 2024), it is noted that measures required to

ensure compliance with existing legislation will be implemented during this river basin management cycle.

Environmental Quality Standards (EQSs) for classifying surface water status are established in the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (SI No. 272 of 2009), as amended. These regulations set standards for biological quality elements, physio-chemical conditions supporting biological elements (including general conditions and specific pollutants), priority substances and priority hazardous substances.

As shown in Figure 1: Elements of the Water Framework Directive Status, the 'ecological status' of a water body is established according to compliance with the EQSs for biological quality elements, physio-chemical conditions supporting biological elements, relevant pollutants and hydromorphological quality elements. The 'chemical status' of a water body is established according to compliance with the EQSs for priority substances and priority hazardous substances.

In addition to achieving good ecological and chemical status, a water body must achieve compliance with standards and objectives specified for protected areas, which include areas designated by the Bathing Water Directive; the Urban Waste Water Treatment Directive; the Shellfish Waters Directive; the Habitats Directive and the Birds Directive. Waters bodies that are compliant with WFD standards, but that contain protected areas that are non-compliant with protected area standards are downgraded to 'less than good' status.

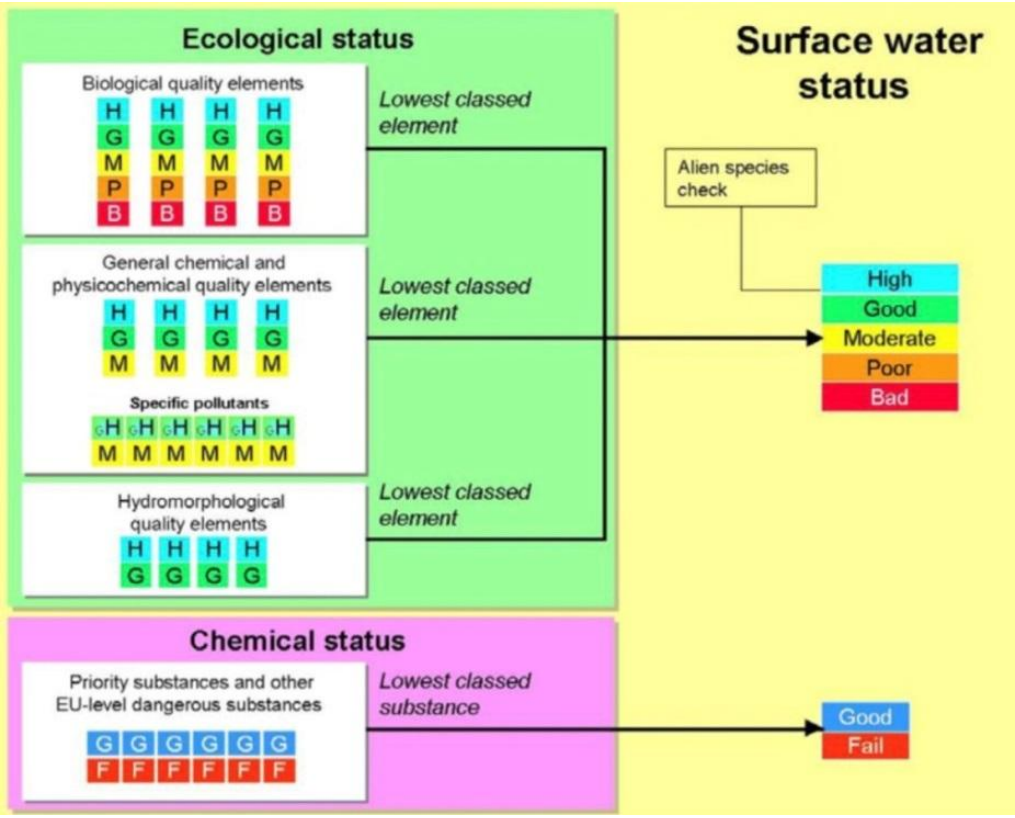

Figure 1: Elements of the Water Framework Directive Status

Receiving Environment

Water Quality

Foynes Island lies within the Lower Shannon Estuary Transitional waterbody (IE_SH_060_0300) and Foynes Harbour Transitional waterbody (IE_SH_060_0350). Table 1 shows a list of key waterbodies in the area as well as their codes, type and distance from the proposed works.

Table 1: Waterbodies in close proximity to the proposed works

Waterbody Name	Waterbody Code	Waterbody Type	Distance from Proposed Works
Lower Shannon Estuary	IE_SH_060_0300	Transitional	Works within waterbody
Foynes Harbour	IE_SH_060_0350	Transitional	Works within waterbody
Upper Shannon Estuary	IE_SH_060_0800	Transitional	18km north-east
Deel Estuary	IE_SH_060_0600	Transitional	9km east
Fergus Estuary	IE_SH_060_1100	Transitional	6km north-east
Mouth of the Shannon	IE_SH_060_0000	Coastal	40km west

All the waterbodies listed in the above table are within or hydrologically linked to SAC and SPA designated sites (i.e. River Shannon and River Fergus Estuaries SPA and Lower River Shannon SAC).

There are no nearby bathing waters that may be impacted by SI. The closest bathing water area is Cappagh Pier, Kilrush, is located approximately 25km west of the foreshore licence area, on the northern shore of the Shannon Estuary. Cappagh Pier currently has excellent water quality. While this site is hydrologically linked with the marine SI site, the distance from the site means that any impacts are extremely unlikely.

Table 2 shows the overall WFD status of the relevant waterbodies from 2010-2024.

Table 2: WFD Status of Waterbodies in close proximity to the proposed works

Waterbody	Overall WFD Status			
	2010-2015	2013-2018	2016-2021	2019-2024
Lower Shannon Estuary	Moderate	Good	Good	Good
Foynes Harbour	Unassigned	Good	High	HIgh
Upper Shannon Estuary	Poor	Poor	Poor	Poor
Deel Estuary	Moderate	Moderate	Moderate	Moderate
Fergus Estuary	Moderate	Moderate	Moderate	Moderate
Mouth of the Shannon	Moderate	Good	Good	Good

Potential Impacts

It is possible that a negative impact on water quality and therefore the ecological and/or chemical status of the water bodies within the Lower Shannon Estuary and Foynes Harbour transitional water bodies may arise due to the marine SI works. The drilling of boreholes and removal of sediment from

the seabed may introduce small amounts of sediment into the water column. The geographical extent of this impact would likely be limited mainly to the Marine Usage Licence Area. However, currents and tides would ensure that the sediment is quickly dissipated and unlikely to represent a significant elevation above sediment levels normally associated with the ebb and flood tides. It is expected that the significance of impact will be short-term, and negligible in nature in the context of water quality and WFD Status and conditions will likely return to baseline after works are completed. The Marine SI works will not increase the risk of deterioration in the overall WFD Status of the Lower Shannon Estuary and Foynes Harbour transitional water bodies which are currently at high and good status (Table 2).

It is possible that accidental spills from plan equipment (e.g. jack up barge, tug and work vessels) may cause a negative impact on water quality and WFD Status. This impact would be unlikely if all mitigation measures were correctly implemented and would likely be of short-term duration and conditions would likely return to baseline following completion of the works.

Overall, it has been determined that the sensitivity of the receptor is **High**, and the magnitude of the impact is considered to be **Medium**. Therefore, there is expected to be **Moderate** impacts.

However, it is expected that, with implementation of mitigation measures (described below), the overall impact will be **Minor** and will not result in a deterioration in the ecological or chemical status of the hydrologically connected water bodies or compromise the achievement of the environmental objectives of these water bodies.

Mitigation Measures

- Prior to entering the site all plant shall be cleaned and checked twice daily for leaks or drips.
- No plant is to be filled more than ¾ fill with fuel.
- Refuelling will take place, where possible, remote from the site and within suitable oil receptors.
- Any refuelling on site will take place at the Contractor's site compound.
- All oil / fuel at the compound will be adequately stored to ensure that any potential spill is contained and treated on site and that none can reach any drainage system or the River Shannon.
- A spill response kit will be available onsite and accessible to all to control pollution incidents. These spill kits will contain absorbent pads, absorbent granules and methods of disposal of materials and used kit. These kits will be located at appropriate points around the Site which are considered to be at a higher risk of pollution (e.g. refuelling area and next to fuel tanks). Further spill kits and supplies will be located in the stores within the Site, where replacements for used kits will be found.
- Spill kits will need be regularly inspected and immediately replaced if used.

- Toolbox talks will be communicated to Site staff and contractors so that they are fully informed of refuelling procedures.