

IMPROVEMENTS TO PUBLIC REALM TO BRIDGE STREET AND LANDS TO THE REAR AND SIDE OF THE GRAIN STORE, JOHN STREET, NEW ROSS, CO. WEXFORD

Water Framework Directive Compliance Assessment

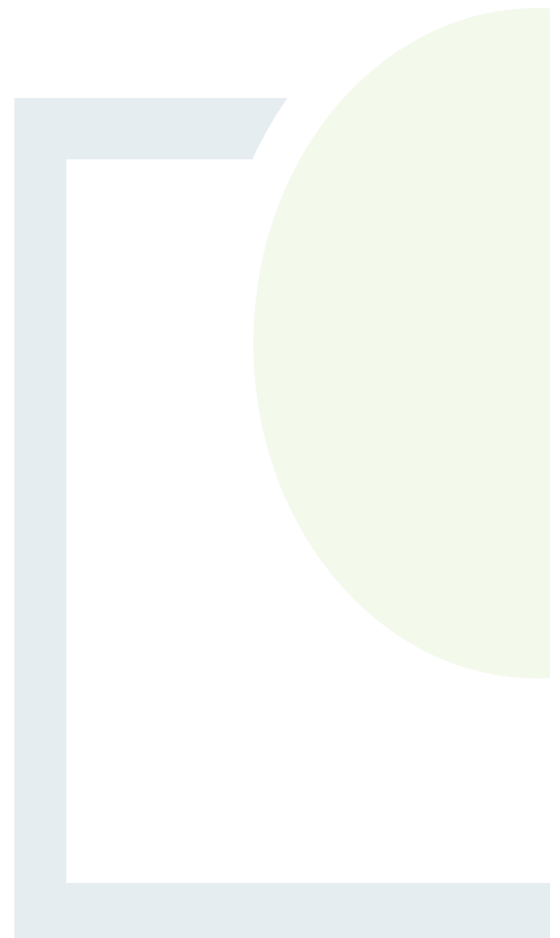
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Water Framework Directive Compliance Assessment

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Abstract: Fehily Timoney and Company is pleased to submit this Water Framework Directive Compliance Assessment Report to Wexford County Council for Improvements to Public Realm to Bridge Street and lands to the rear and side of The Grain Store, John Street, New Ross, County Wexford.

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1. INTRODUCTION

1.1 Introduction

This report presents a Water Framework Directive (WFD) Compliance Assessment in support of the Improvements to Public Realm at Bridge Street and lands to the rear and side of the Grain Store, John Street, New Ross, Co. Wexford (herein referred to as the “proposed development”).

The purpose of this WFD Compliance Assessment is to determine whether the proposed development has the potential to:

- result in deterioration in the status of any surface water or groundwater body; and/or
- prevent the achievement of the environmental objectives established under the Water Framework Directive.

This compliance assessment has been undertaken having regard to the requirements of the Water Framework Directive (Directive 2000/60/EC) and relevant guidance and considers potential impacts on surface water and groundwater bodies in the context of WFD compliance.

1.2 Statement of Authority

This document was prepared by André Goncalves reviewed by Serhii Bevez, Fehily Timoney and Company (FT).

André is an Environmental Engineer with FT. André holds a Bachelor's degree in Environmental Engineering from the University Presidente Antonio Carlos - Brazil and a M.Sc. in Applied Environmental Geoscience from University College Cork, UCC. André has over 6 years consultancy experience. André has experience preparing Environmental Impact Assessment Reports (EIARs) water chapters for waste, infrastructure and renewable energy projects along with completing Water Framework Directive Assessment.

Serhii Bevez holds a Master's degree in Environmental Science and has over 20 years' experience in environmental assessment, including the preparation of Environmental Impact Assessment Reports (EIAR) and specialist assessments relating to surface water, groundwater and the Water Framework Directive.



2. METHODOLOGY

2.1 Legislation

Directive 2000/60/EC of the European Parliament and of the Council, establishing a framework for Community action in the field of water policy (the Water Framework Directive, WFD), is the principal legislative instrument governing the protection and management of surface waters and groundwater within the European Union.

The Directive establishes a comprehensive framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater, with the objective of preventing further deterioration and protecting, enhancing and restoring the status of all water bodies.

Under the WFD, water bodies are classified according to defined status indicators. For surface waters, overall status is determined by ecological status and chemical status, with ecological status assessed through biological, hydromorphological and physicochemical quality elements. For groundwater, status is defined by quantitative status and chemical status.

Article 4 of the Directive sets out the environmental objectives which are legally binding on Member States. These include:

- the requirement to prevent deterioration in the status of all surface water and groundwater bodies;
- the requirement to protect, enhance and restore all water bodies with the aim of achieving at least good ecological and chemical status for surface waters and good quantitative and chemical status for groundwater;
- the requirement to protect and enhance groundwater, including the prevention or limitation of the input of pollutants and the maintenance of a balance between abstraction and recharge; and
- the requirement to progressively reduce pollution from priority substances and cease or phase out emissions of priority hazardous substances.

The classification system applied under the Directive follows the “one-out, all-out” principle, whereby the overall status of a water body is determined by the lowest status assigned to any individual quality element.

The Directive also requires the identification and protection of water dependent protected areas, including areas designated for the abstraction of water intended for human consumption, habitats and species protected under European legislation and other areas requiring specific protection under Community law.

Article 4(7) of the Directive provides for limited exemptions to the environmental objectives in cases where new modifications or sustainable development activities may lead to deterioration in status or prevent the achievement of good status. Such exemptions are subject to strict conditions, including the demonstration that all practicable mitigation measures have been implemented, that the reasons for the modification are of overriding public interest or that the benefits outweigh the environmental objectives, and that no significantly better environmental options are available.

The Water Framework Directive (2000/60/EC) has been transposed into Irish law through a series of statutory instruments which establish the legal framework for the protection, classification and management of surface waters and groundwater.

The principal legislative instruments relevant to the implementation of the WFD in Ireland are as follows:



- European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003), as amended.
These Regulations provide the initial transposition of the Water Framework Directive into Irish law. They establish the framework for river basin management planning, including the characterisation of water bodies, identification of pressures and the development of monitoring programmes.
- European Union (Water Policy) Regulations 2014 (S.I. No. 350 of 2014), as amended.
These Regulations provide additional legal and institutional arrangements for the implementation of the Water Framework Directive in Ireland, including the establishment of governance structures to support River Basin Management Planning.
- European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272 of 2009), as amended.
These Regulations set out the environmental objectives for surface waters, including the classification of ecological and chemical status and the environmental quality standards applicable to surface water bodies. They also establish the legal requirement to prevent deterioration in status and to achieve good status objectives.
- European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010), as amended.
These Regulations implement the requirements of the Groundwater Directive (2006/118/EC) and establish environmental objectives for groundwater, including the assessment of chemical and quantitative status, the setting of threshold values, and the requirement to prevent or limit the input of pollutants into groundwater.
- European Communities (Technical Specifications for Chemical Analysis and Monitoring of Water Status) Regulations 2011 (S.I. No. 489 of 2011).
These Regulations specify the technical standards and quality assurance requirements for the monitoring and analysis of water status under the WFD.
- European Union (Good Agricultural Practice for Protection of Waters) Regulations 2025 (S.I. No. 588 of 2025), as amended by the European Union (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2026 (S.I. No. 119 of 2026).
These Regulations (commonly referred to as the Nitrates Regulations) establish measures to protect waters from pollution arising from agricultural sources, including controls on nutrient application, storage and management.
- European Union (Drinking Water) Regulations 2023 (S.I. No. 99 of 2023).
These Regulations transpose Directive (EU) 2020/2184 on the quality of water intended for human consumption. They establish parametric standards and monitoring requirements to ensure the protection of drinking water supplies. In the context of the Water Framework Directive, these Regulations are relevant to safeguard water bodies used for abstraction.

2.2 Policy

The assessment of compliance with the WFD has been informed by relevant national, regional and local policy frameworks relating to the protection and management of water resources.

At a national level, water management policy in Ireland is guided by River Basin Management Plans (RBMPs). The current Third Cycle River Basin Management Plan 2022-2027, also referred to as the Water Action Plan 2024, provides the primary policy mechanism for the implementation of the WFD in Ireland and establishes environmental objectives and a Programme of Measures for all water bodies.



The RBMP adopts a catchment-based approach, identifying water bodies that are 'At Risk' of failing to meet their environmental objectives and prioritising targeted actions within defined Areas for Action. These include Areas for Restoration (AFA), where coordinated measures are required to improve water quality, and Areas for Protection, where existing good or high status is to be maintained.

The RBMP sets out measures to:

- prevent deterioration in the status of surface water and groundwater bodies;
- restore water bodies currently at less than good status;
- protect water bodies that are already achieving good or high status; and
- address significant pressures, including agricultural runoff, wastewater discharges and hydromorphological alterations.

At a regional level, the Eastern and Midland Regional Spatial and Economic Strategy (RSES) 2019-2031 provides strategic guidance for sustainable development within the region, including the protection of water resources and the integration of catchment-based water management.

At a local level, the Wexford County Development Plan (CDP) 2022-2028 sets out policies and objectives to protect, enhance and restore water quality throughout the County. The CDP includes provisions to:

- Prevent deterioration in the status of surface water and groundwater bodies and support the achievement and maintenance of at least 'Good' status in accordance with the Water Framework Directive (WFD).
- Protect and improve high status and good status water bodies, including water dependent protected areas and Blue Dot Catchments.
- Apply a catchment-based approach to the assessment of development proposals and ensure that development does not result in a reduction in the water quality status of any receiving waterbody.
- Support the implementation of the River Basin Management Plan and associated Areas for Action, and ensure that development does not hinder the achievement of WFD environmental objectives.
- Protect groundwater resources and have regard to groundwater protection schemes, aquifer vulnerability and drinking water source protection areas.
- Ensure that development does not adversely affect surface waters, groundwater, river corridors, wetlands, estuarine waters, coastal waters or transitional waters.
- Promote the use of Sustainable Drainage Systems (suds) and sustainable water management practices to protect water quality and manage surface water runoff.

2.3 Guidelines

This compliance assessment has been undertaken with reference to relevant national and international guidance relating to Environmental Impact Assessment (EIA) and the assessment of potential effects on the water environment.

The preparation of this compliance assessment has had regard to the Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, 2022), which provide overarching guidance on assessment scope, methodology and the evaluation of significant environmental effects, including those relating to surface water and groundwater.



In the absence of specific national guidance for WFD compliance assessment in Ireland, this compliance assessment has been informed by established best practice guidance, including:

- UK Environment Agency, Water Framework Directive Assessment: Estuarine and Coastal Waters (UK Environment Agency, 2016).
- UK Planning Inspectorate, Nationally significant infrastructure projects: advice on the Water Framework Directive (UK Planning Inspectorate, 2026).

These documents provide a structured framework for the assessment of potential impacts on WFD quality elements, including the identification of receptors, assessment of impact pathways, and evaluation of potential effects on water body status and environmental objectives.

The guidance has been applied in a manner appropriate to the Irish regulatory context, having regard to the requirements of the WFD and its transposition into Irish legislation.

2.4 Desktop Study

A desk-based review of available information was undertaken to inform this Water Framework Directive Compliance Assessment. This included the review of published datasets, mapping and relevant online sources relating to surface water and groundwater, WFD water body status, and hydrological features.

The key data sources used in this compliance assessment are summarised in Table 2-1, together with a brief description and the date of access.

Table 2-1: Key Data Sources Used for the Desk Based Assessment

Data sources	Description	Date accessed
EPA Catchments.ie	Catchment and sub-catchment boundaries, waterbody delineation, WFD status, risk, objectives and significant pressures.	September 2026
EPA Water Framework Directive datasets	Ecological and chemical status, supporting quality elements, environmental objectives and pressure information for relevant surface water and groundwater bodies.	September 2026
EPA Surface Water Monitoring Data	Available biological and physicochemical monitoring information for relevant surface waterbodies.	September 2026
EPA Protected Areas datasets	Drinking Water Protected Areas, Shellfish Waters and Bathing Waters relevant to the receiving water environment.	September 2026
Geological Survey Ireland (GSI)	Groundwater body information, bedrock aquifer classification and groundwater vulnerability mapping.	September 2026
GSI Source Protection Area datasets	Public Water Supply and Group Water Scheme Source Protection Areas.	September 2026
OPW Flood Maps	Historical flood-event information; National Coastal Flood Hazard Mapping (NCFHM); and tidal flood levels from the Irish Coastal Wave and Water Level Modelling Study (ICWWS), including present-day and future climate scenarios.	September 2026



Data sources	Description	Date accessed
National Parks and Wildlife Service (NPWS)	European and national designated sites, including SACs, SPAs, NHAs and pNHAs.	September 2026

2.5 Site Investigation

The WFD Compliance Assessment has been informed by site specific ecological surveys undertaken in support of the proposed development. These surveys provide information on the habitats and species occurring within and adjacent to the proposed development site and have been used, where relevant, to inform the characterisation of the receiving environment and identification of receptors relevant to the WFD.

The ecological surveys undertaken on 16 December 2024 comprised:

- a habitat survey, with habitats assessed and classified in accordance with Fossitt (2000), including consideration of their affinity with Annex I habitats; and
- a dedicated otter survey covering the proposed development footprint and approximately 200 m upstream and downstream, including searches for holts, couches and other signs of otter activity.

2.6 Methodology

The WFD Compliance Assessment has been undertaken using a structured, stepwise approach consistent with current best practice guidance. The methodology is designed to identify potential interactions between the proposed development and the water environment, and to assess whether the proposed development could result in deterioration in water body status or prevent the achievement of WFD environmental objectives.

2.6.1 Step 1 - Screening

Screening is undertaken to identify whether the proposed development has the potential to interact with any surface water or groundwater bodies and whether further assessment under the WFD is required.

The screening stage involves a high-level review of the proposed development and the receiving environment to determine the potential for source-pathway-receptor linkages. This includes:

- identification of potential impact sources associated with construction and operational phases;
- identification of potential pathways, including surface runoff, drainage networks, infiltration and groundwater flow;
- identification of the zone or zones of influence, taking into account the nature of the proposed activities, site drainage characteristics and hydrological connectivity;
- identification of surface water and groundwater bodies within the identified zone of influence;
- identification of receptors, including surface water bodies, groundwater bodies and any associated protected areas; and
- identification of activities or characteristics of the proposed development that can be screened out of further assessment where no plausible linkage exists.



Where no plausible Source-Pathway-Receptor linkage is identified, the potential for impact on the water environment is excluded from further assessment. Where such linkages are identified, the relevant water bodies and receptors are carried forward to the scoping stage for further consideration.

2.6.2 Step 2 - Scoping

Scoping is undertaken to identify the surface water and groundwater bodies and associated receptors that may be affected by the proposed development and therefore require detailed assessment under the WFD.

This stage builds on the screening process and involves a more detailed consideration of potential source-pathway-receptor linkages, taking into account the nature of the proposed development, its location and the characteristics of the receiving environment.

Scoping includes identification of relevant WFD water bodies within the zone of influence of the proposed development and an initial assessment of potential impacts on WFD receptors. For the purposes of this assessment, receptors are defined with reference to WFD quality elements and include:

- hydromorphology
- biology (habitats)
- biology (fish)
- water quality
- water dependent protected areas
- invasive non-native species (INNS), where relevant

Each potential impact is considered in terms of its nature, duration and the likelihood of interaction with identified receptors. Where a pathway has been identified but the potential for impact on a receptor is considered negligible, based on the nature, scale and duration of the proposed activities, the receptor is scoped out of further assessment.

Where potential impacts on WFD receptors cannot be excluded, the relevant water bodies and receptors are scoped into the assessment and carried forward to the impact assessment stage.

2.6.3 Step 3 - Impact Assessment

The impact assessment stage comprises a detailed evaluation of the potential effects of the proposed development on the surface water and groundwater bodies and receptors identified through the screening and scoping stages.

The assessment is undertaken in the context of the relevant River Basin Management Plan and is based on the baseline characteristics of the identified water bodies, including their current WFD status, risk classification and identified pressures.

The assessment considers the aspects of the proposed development with the potential to affect the water environment, including construction and operational activities, and evaluates their interaction with identified receptors through established source-pathway-receptor linkages.



Impacts are assessed in terms of their nature, scale, duration and geographical extent, including the magnitude of any potential change within affected water bodies. The assessment considers the potential for effects on WFD receptors, including hydromorphology, biological quality elements, water quality, groundwater quality and quantity, and water dependent protected areas.

The assessment specifically evaluates the potential for the proposed development to result in:

- deterioration in the status of a surface water or groundwater body, including deterioration of individual WFD quality elements; and
- prevention of the achievement of the environmental objectives established for the water body under the Water Framework Directive.

In accordance with established WFD principles, deterioration is considered to occur where the status of any individual quality element falls by one class, even if this does not result in a change in the overall status of the water body.

The assessment is supported by the available evidence base, including baseline monitoring data, published datasets and professional judgement, and identifies any potential risks to WFD compliance prior to the implementation of mitigation measures.

2.6.4 Step 4 - Cumulative Effects Assessment

The cumulative effects assessment considers the pressures associated with the proposed development in the context of the existing pressure environment of the relevant surface water and groundwater bodies. The assessment is undertaken on a waterbody-specific basis, having regard to the current WFD status, risk classification, environmental objectives and significant pressures and issues.

The pressures identified through the impact assessment are considered in combination with the existing pressures affecting each waterbody. The assessment examines whether the proposed development could increase or otherwise interact with these pressures and whether the resulting combined effects could cause deterioration of the relevant WFD quality elements or compromise achievement of the applicable environmental objectives.

2.6.5 Step 5 - Mitigation Measures

Mitigation measures are identified where required to avoid, prevent or reduce potential adverse effects on surface water and groundwater bodies and WFD receptors identified during the impact assessment stage.

Mitigation measures are developed in accordance with established best practice and are informed by the findings of the EIA Screening Report and documents submitted for the proposed development. These measures address potential impacts arising from construction and operational activities.

Mitigation is incorporated through a combination of design measures, standard construction controls and operational management practices. The effectiveness of mitigation measures is considered in terms of their ability to prevent deterioration in WFD quality elements and to ensure compliance with the environmental objectives of the WFD.

The implementation of mitigation measures is secured through project design, construction management plans and operational procedures, as set out in the EIAR and supporting documentation.



2.6.6 Step 6 - WFD Compliance Assessment

The assessment of WFD compliance is undertaken following the implementation of the mitigation measures identified in Step 5.

This stage evaluates the extent to which mitigation measures reduce or eliminate potential impacts on surface water and groundwater bodies and WFD receptors, taking into account their effectiveness.

The assessment specifically considers whether, following mitigation, the proposed development:

- will result in deterioration in the status of any surface water or groundwater body, including deterioration of individual WFD quality elements; or
- will prevent the achievement of the environmental objectives established for the relevant water bodies under the Water Framework Directive.

Where residual effects remain, these are identified and assessed in the context of compliance with the WFD.

2.6.7 Step 7 - Derogation, Article 4(7)

Where the assessment identifies that the proposed development may result in deterioration in the status of a surface water or groundwater body, or may prevent the achievement of WFD environmental objectives, the provisions of Article 4(7) of the Water Framework Directive are considered.

Article 4(7) provides for limited exemptions to the environmental objectives of the Water Framework Directive in cases where new modifications or sustainable development activities may lead to deterioration in status or prevent the achievement of good status.

Where applicable, the assessment will consider whether the conditions of Article 4(7) can be met, including:

- demonstration that all practicable mitigation measures have been implemented to minimise adverse effects;
- demonstration that the reasons for the proposed development are of overriding public interest, or that the benefits of the development outweigh the environmental objectives;
- demonstration that the beneficial objectives served by the proposed development cannot reasonably be achieved by alternative means that represent a significantly better environmental option; and
- confirmation that the objectives of the Water Framework Directive are not permanently compromised.

Where a derogation is required, the justification for the application of Article 4(7) will be clearly set out, supported by the relevant evidence.

2.7 **Limitations and Assumptions**

The WFD Compliance Assessment has been undertaken using the most recent available datasets published by the Environmental Protection Agency (EPA), National Parks and Wildlife Service (NPWS) and other relevant sources. WFD classification data is reported at water body level and reflects conditions across the reporting cycle (2019-2024), as such, it may not capture localised or short-term variations in water quality.



The WFD Compliance Assessment has been prepared on the basis that the approved Grain Store development (planning ref.: LAC2401) will be completed and operational prior to commencement of the proposed development. Accordingly, the drainage infrastructure delivered as part of Grain Store development has been treated as forming part of the future baseline condition against which the proposed development has been assessed.

Hydromorphological quality elements are not classified for all the surface water bodies considered, and therefore their influence on ecological status cannot be determined from the available data. In addition, classification data for certain biological elements, including invertebrates, is not available for all water bodies.

The identified limitations and assumptions have been taken into account in undertaking the WFD Compliance Assessment.



3. RECEIVING ENVIRONMENT

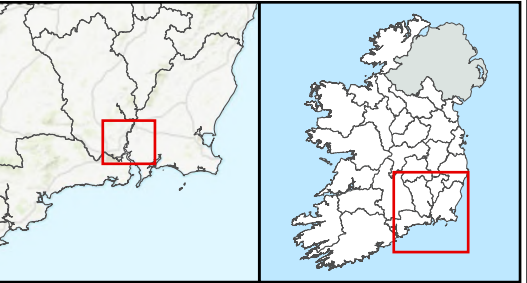
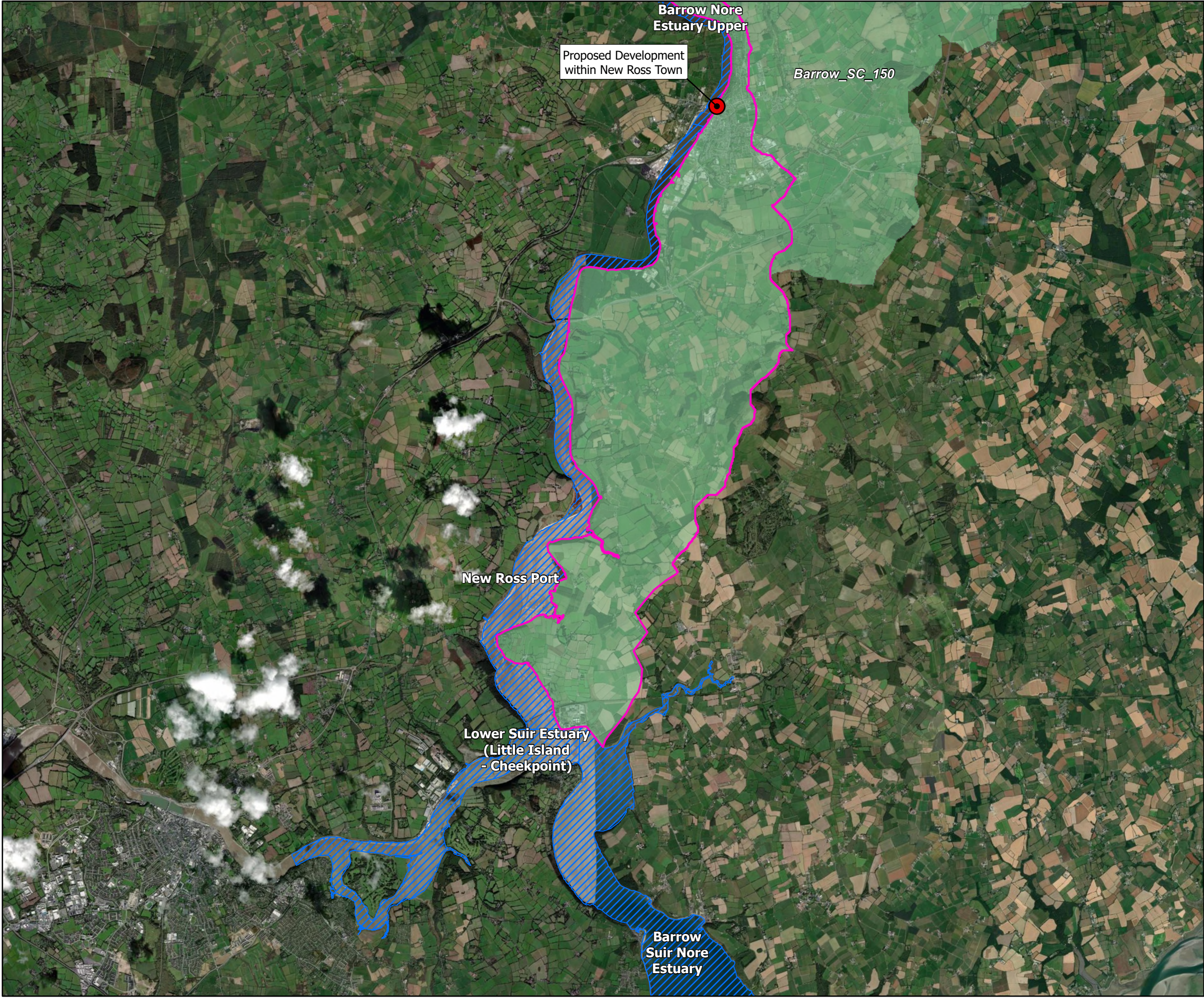
3.1 Hydrological Setting

3.1.1 Surface Water

Regionally, the proposed development site is located within the Barrow Catchment (Catchment ID 14).

At a local scale, the site is situated within the Barrow_SC_150 sub-catchment (Sub-catchment ID 14_19) which forms part of the wider River Barrow surface water catchment. The site lies within the Hill Camlin_010 Sub Basin, associated with the Barrow Nore Estuary Upper (IE_SE_100_0250) and New Ross Port (IE_SE_100_0200) transitional water bodies.

The proposed development is hydrologically connected to the River Barrow estuarine system. The primary receiving waterbody is the Barrow Nore Estuary Upper transitional waterbody (IE_SE_100_0250). This waterbody is connected downstream to the New Ross Port transitional waterbody (IE_SE_100_0200), which commences immediately downstream of O'Hanrahan Bridge approximately 520 m from the proposed development. Further downstream connectivity exists with the Lower Suir Estuary (Little Island - Cheekpoint) transitional waterbody (IE_SE_100_0500) and subsequently the Barrow Suir Nore Estuary (IE_SE_100_0100) transitional waterbody. These hydrologically connected downstream transitional waterbodies have therefore been included within the study area and assessment of potential effects. Refer to Figure 3-1.



- Legend**
-  Proposed Development Location
 -  Transitional Waterbodies
 -  Hill Camlin_010 Sub-Basin
 -  Barrow_SC_150

TITLE:		Site Location	
PROJECT:		John Street Grainstore, New Ross	
FIGURE NO:		3.1	
CLIENT:		Wexford County Council	
SCALE:	1:80,000	REVISION:	0
DATE:	24/09/2026	PAGE SIZE:	A3





3.1.2 Groundwater

The proposed development is located within the New Ross Groundwater Body (IE_SE_G_152), which is underlain by a Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones (PI). Most of the site is located within an area of High groundwater vulnerability and a small section is located within an Extreme groundwater vulnerability area.

3.1.3 Surface and Groundwater Quality

The surface water and groundwater bodies identified form the basis for the WFD Compliance Assessment. The current WFD status, risk classification and environmental objectives of these water bodies are summarised in Table 3-1.

Table 3-1: WFD Status, Risk Classification and Environmental Objectives of Water Bodies

Waterbody		Overall WFD Status				WFD Risk	EO
		2010-2015	2013-2018	2016-2021	2019-2024		
Barrow IE_SE_100_0250	T	Good	Moderate	Moderate	Moderate	At risk	Good
New Ross IE_SE_100_0200	T	Moderate	Moderate	Moderate	Moderate	At risk	Good
Lower Suir Estuary (Little Island - Cheekpoint) IE_SE_100_0500	T	Moderate	Good	Moderate	Moderate	At risk	Good
Barrow Suir Nore Estuary IE_SE_100_0100	T	Good	Moderate	Moderate	Moderate	At risk	Good
New Ross IE_SE_G_152	GW	Good	Good	Good	Good	Not At risk	Good

T - Transitional waterbody
 GW - groundwater
 EO - Environmental Objective

The most recent WFD classification period (2019-2024) indicates that the Barrow Nore Estuary Upper transitional water body (IE_SE_100_0250) is currently at 'Moderate' status and classified as 'At Risk' of failing to meet its environmental objective. This waterbody has maintained its current status since the previous assessment cycles, following a decline from 'Good' status during the 2010-2015 period.

The New Ross Port transitional water body (IE_SE_100_0200) is currently at 'Moderate' status and classified as 'At Risk' of failing to meet its environmental objective. This waterbody has maintained its current status since the previous assessment cycles.



The Lower Suir Estuary (Little Island - Cheekpoint) transitional water body (IE_SE_100_0500) is currently at 'Moderate' status and classified as 'At Risk' of failing to meet its environmental objective. This waterbody has maintained its current status since the 2016-2021 assessment cycle following a decline from 'Good' status during the 2013-2018 period.

The Barrow Suir Nore Estuary transitional water body (IE_SE_100_0100) is currently at 'Moderate' status and classified as 'At Risk' of failing to meet its environmental objective. This waterbody has maintained its current status since the previous assessment cycles, following a decline from 'Good' status during the 2010-2015 period.

All water bodies have an environmental objective of achieving at least 'Good' status.

A breakdown of the ecological status and supporting quality elements for the relevant surface water bodies is presented in Table 3-2.

Table 3-2: WFD Element Status Breakdown (2019-2024)

WFD Element	Barrow Nore Estuary Upper IE_SE_100_0250	New Ross Port IE_SE_100_0200	Lower Suir Estuary (Little Island - Cheekpoint) IE_SE_100_0500	Barrow Suir Nore Estuary IE_SE_100_0100
Biological Status	Moderate	Moderate	Moderate	Moderate
- Invertebrates	-	-	Moderate	High
- Fish	Moderate	Moderate	Moderate	Moderate
Supporting Physicochemical Conditions	Good	Good	Good	Good
- Nutrient Conditions	Moderate	Moderate	Moderate	Good
Hydromorphological	-	Good	Good	-

The breakdown of WFD elements indicates that the Barrow Nore Estuary Upper (IE_SE_100_0250) transitional water body is classified as 'Moderate' ecological status, with biological elements, specifically fish, also classified as 'Moderate'. Supporting Physicochemical Conditions are classified as 'Good', including oxygenation. Nutrient conditions are classified as 'Moderate'. Hydromorphological conditions are not classified for this water body.

The New Ross Port (IE_SE_100_0200) transitional water body is classified as 'Moderate' ecological status, with biological elements, specifically fish, also classified as 'Moderate'. Supporting Physicochemical Conditions are classified as 'Good', including oxygenation. Nutrient conditions are classified as 'Moderate'. Hydromorphological conditions are classified as 'Good'.

The Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500) transitional water body is classified as 'Moderate' ecological status, with biological elements, specifically fish and invertebrates, also classified as 'Moderate'. Supporting Physicochemical Conditions are classified as 'Good', including oxygenation. Nutrient conditions are also classified as 'Good'. Hydromorphological conditions are classified as 'Good'.



The Barrow Suir Nore Estuary (IE_SE_100_0100) transitional water body is classified as 'Moderate' ecological status, with biological elements, specifically fish classified as 'Moderate' and Invertebrates classified as 'High'. Supporting Physicochemical Conditions are classified as 'Good', including oxygenation. Nutrient conditions are classified as 'Moderate'. Hydromorphological conditions are not classified for the water bodies considered.

The Barrow Nore Estuary Upper transitional water body (IE_SE_100_0250) is identified as being subject to significant pressures from urban run-off and agriculture, with nutrients identified as the significant issue. New Ross Port (IE_SE_100_0200) and Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) are identified as being subject to a significant pressure from agriculture, with nutrients and organic pollution identified as significant issues. Barrow Suir Nore Estuary (IE_SE_100_0100) is also identified as being subject to a significant pressure from agriculture, with nutrients identified as the significant issue. The Barrow Suir Nore Estuary is also identified under the River Basin Management Plan as being within the Waterford Harbour Area for Action (AFA_ID AFA0633), designated as an Area for Restoration.

For the New Ross Groundwater Body (IE_SE_G_152), both quantitative and chemical status are classified as 'Good', with no significant pressures identified.

The site has a history of flooding, with recorded flood events affecting the site in October 2004, February 2014 and September 2022. The principal source of flood risk is tidal flooding from the River Barrow, with parts of the site located within Flood Zones A and B. No historic or predictive groundwater flooding has been identified at or in the immediate vicinity of the site.

The National Coastal Flood Hazard Mapping (NCFHM), based on still-water sea levels derived from the Irish Coastal Wave and Water Level Modelling Study (ICWWS), identifies parts of the site as being at risk of tidal flooding. At ICWWS Node W4, the nearest model node to the site, the present-day 0.5% and 0.1% Annual Exceedance Probability (AEP) tidal flood levels are 2.91 mOD and 3.12 mOD, respectively. The corresponding 0.5% AEP flood levels under the Mid-Range Future Scenario (MRFS) and High-End Future Scenario (HEFS) are 3.41 mOD and 3.91 mOD, respectively.

3.2 Protected Areas

3.2.1 Ecological Environment

The Barrow Nore Estuary Upper (IE_SE_100_0250), New Ross Port (IE_SE_100_0200), Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500) and the Barrow Suir Nore Estuary (IE_SE_100_0100) transitional waterbodies are located within the River Barrow and River Nore SAC (Site Code 002162). The Lower Suir Estuary (Little Island-Cheekpoint) transitional waterbody (IE_SE_100_0500) is also located within the Lower River Suir SAC (Site Code 002137). Both SACs support aquatic and water dependent qualifying interests associated with the riverine and estuarine environment.

The Barrow Nore Estuary Upper (IE_SE_100_0250), New Ross Port (IE_SE_100_0200), Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500) and the Barrow Suir Nore Estuary (IE_SE_100_0100) are within the Barrow River Estuary pNHA (Site Code 000698). Within the Barrow Suir Nore Estuary (IE_SE_100_0100) also lies the Waterford Harbour pNHA (Site Code 000787), Ballyhack pNHA (Site Code 000695) and the Duncannon Sandhills pNHA (Site Code 001738).

There are no Special Protection Areas (SPA), Natural Heritage Areas (NHA) within 2 km of the Proposed Development. The nearest SPA is the River Nore SPA (Site Code 004233), located approximately 9.6 km upstream to the northwest.



The proposed development site comprises predominantly Buildings and Artificial Surfaces (BL3) and Scrub (WS1), with no Annex I habitats occurring within the site. The adjacent River Barrow is classified as a Tidal River (CW2) and is associated with the Estuary habitat (Annex I Habitat 1130).

Otter records occur throughout the River Barrow catchment, including numerous records in the vicinity of the proposed development. The nearest identified record comprises a live sighting approximately 100 m from the site. No otter holts, couches, breeding sites or other field signs of otter activity have been identified within the proposed development site.

The River Barrow and its estuarine system support a number of fish species of conservation importance, including Atlantic Salmon, Sea Lamprey, River Lamprey, Brook Lamprey and Twaite Shad.

3.2.2 Groundwater Dependent Terrestrial Ecosystems

No groundwater dependent terrestrial ecosystems (GWDTEs) are located within or immediately adjacent to the proposed development site.

3.2.3 Shellfish Protected Areas

The New Ross Port (IE_SE_100_0200), Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500) and Barrow Suir Nore Estuary (IE_SE_100_0100) transitional waterbodies are designated Shellfish Protected Areas.

3.2.4 Drinking Water Protected Areas

No surface water bodies considered in this assessment are identified as Drinking Water Protected Areas. The New Ross Groundwater Body is identified as a Drinking Water Protected Area for groundwater abstraction. The GSI Public Water Supply Source and Group Water Scheme Source Protection Area databases indicate that there are no public water supply or group water scheme source protection areas within the proposed development site. One public water supply source protection area, associated with the Glenmore public water supply, is located approximately 6.93 km southwest of the site.

3.2.5 Bathing Waters

The Duncannon Bathing Water Area (IESEBWT100_0100_0100) is located within the Barrow Suir Nore Estuary transitional waterbody (IE_SE_100_0100), approximately 19.6 km downstream of the proposed development.



4. SCREENING

Screening has been undertaken to identify whether the proposed development has the potential to interact with surface water and groundwater bodies and to determine whether further assessment under the WFD is required.

The screening process is based on the identification of potential Source-Pathway-Receptor linkages, taking into account the nature of the proposed development, the characteristics of the receiving environment and the hydrological and hydrogeological setting of the site.

Potential sources of impact associated with the construction and operational phases of the proposed development have been identified and screened to determine whether a Source-Pathway-Receptor linkage to a WFD water body is present.

No defined operational lifetime or end-of-life decommissioning phase is identified for the proposed development. Accordingly, decommissioning impacts have not been assessed as part of this WFD Compliance Assessment.

The identified Source-Pathway-Receptor linkages are summarised in Table 4-1.



Table 4-1: Screening of Source-Pathway-Receptor Linkages

Potential Source	Potential Pathway	Potential Receptor	Screening Outcome
Construction			
Demolition, excavation, earthworks and ground disturbance	Mobilisation from disturbed / exposed areas by rainfall and surface runoff to the surface water drainage system and / or directly towards the River Barrow. Potential infiltration through exposed ground.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) New Ross GWB (IE_SE_G_152)	Scoped In
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Release to ground with potential infiltration to groundwater, or mobilisation by rainfall / runoff to the surface water drainage system and River Barrow, with potential downstream transport through the connected estuarine system.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Barrow Suir Nore Estuary (IE_SE_100_0100) New Ross GWB (IE_SE_G_152)	Scoped In
Construction plant, machinery and vehicle movements	Release to ground with potential infiltration to groundwater, or mobilisation by surface runoff to the drainage system and River Barrow, with potential downstream transport through the connected estuarine system.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Barrow Suir Nore Estuary (IE_SE_100_0100) New Ross GWB (IE_SE_G_152)	Scoped In
Construction works involving concrete and cementitious materials	Runoff or accidental release conveyed by surface runoff and / or the drainage system to the River Barrow, with potential downstream transport through the connected estuarine system. Potential infiltration where releases occur over exposed ground.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Barrow Suir Nore Estuary (IE_SE_100_0100) New Ross GWB (IE_SE_G_152)	Scoped In
Construction of surface water drainage infrastructure and temporary construction phase drainage management	Direct interaction with the drainage network, including drainage trench water and temporary collection, pumping, treatment and discharge through the live drainage system to the existing River Barrow outfall. Potential leakage / infiltration from excavations or temporary drainage arrangements.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Barrow Suir Nore Estuary (IE_SE_100_0100) New Ross GWB (IE_SE_G_152)	Scoped In



Potential Source	Potential Pathway	Potential Receptor	Screening Outcome
Establishment of soft landscaped areas	Surface runoff from newly established / exposed landscaped areas towards the drainage system and / or River Barrow. Infiltration through permeable soils / growing media to underlying ground.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) New Ross GWB (IE_SE_G_152)	Scoped In
Operational			
Surface water drainage system	Collection and conveyance of surface water through the drainage network and discharge through the existing outfall to the River Barrow, followed by potential downstream transport through the connected estuarine system. Potential leakage from buried drainage infrastructure to surrounding ground.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) New Ross GWB (IE_SE_G_152)	Scoped In
Bridge Street surface water drainage inlet / linear slot drain	Overland runoff from Bridge Street enters the proposed drainage system at the road low point and is conveyed through the drainage system and existing outfall to the River Barrow, with potential downstream transport through the connected estuarine system.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Barrow Suir Nore Estuary (IE_SE_100_0100) New Ross GWB (IE_SE_G_152)	Scoped In
Permeable soft landscaped areas	Infiltration through landscaped soils / growing media to underlying ground; surface runoff and / or subsurface drainage may provide a pathway to the River Barrow and connected downstream transitional water bodies.	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200) Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Barrow Suir Nore Estuary (IE_SE_100_0100) New Ross GWB (IE_SE_G_152)	Scoped In
Modified masonry wall	Direct interaction with tidal / flood waters and potential modification of hydraulic connectivity and floodwater pathways between the site and the adjacent River Barrow.	Barrow Nore Estuary Upper (IE_SE_100_0250)	Scoped In
Maintenance works associated with the	Releases or mobilisation of materials during maintenance may enter the drainage system or surface runoff and be conveyed to the River Barrow. Infiltration	Barrow Nore Estuary Upper (IE_SE_100_0250) New Ross Port (IE_SE_100_0200)	Scoped In

CLIENT: Wexford County Council
PROJECT NAME: Improvements to Public Realm to Bridge Street & Lands to the Rear and Side of the Grain Store, John Street,
New Ross, Co. Wexford
SECTION: Water Framework Directive Compliance Assessment



Potential Source	Potential Pathway	Potential Receptor	Screening Outcome
public realm and drainage infrastructure	may occur where works take place over permeable / exposed ground.	New Ross GWB (IE_SE_G_152)	



The screening assessment demonstrates that potential linkages exist between the proposed development and the water environment. These linkages arise primarily through surface water runoff, the existing and proposed drainage network, accidental releases of contaminants during construction, temporary construction phase drainage management, infiltration through exposed or permeable ground, and the discharge of stormwater to the River Barrow via the existing surface water outfall.

The identified pathways reflect the nature of the proposed development, including demolition, excavation, and ground disturbance, the use of construction plant and construction materials; temporary construction compounds and associated storage and welfare facilities; construction and operation of the surface water drainage system; establishment of soft landscaped areas; and maintenance activities. During operation, pathways are also associated with runoff entering the proposed drainage system from Bridge Street and infiltration through permeable landscaped areas.

On this basis, interactions with both surface water and groundwater bodies cannot be excluded.

The spatial extent of these potential interactions is defined through the identification of the zone of influence. The zone of influence represents the area within which the proposed development could interact with surface water and groundwater bodies during the construction and operational phases.

For surface water, the primary receptor is the Barrow Nore Estuary Upper transitional waterbody (IE_SE_100_0250), which receives surface water runoff from the proposed development via the existing drainage network and outfall infrastructure.

Downstream transitional waterbodies, including New Ross Port (IE_SE_100_0200), Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500) and the Barrow Suir Nore Estuary (IE_SE_100_0100), are included within the wider zone of influence due to hydrological connectivity through the River Barrow estuarine system, where the identified source and pathway could result in the downstream transport of water, sediment or contaminants.

For groundwater, the zone of influence comprises the New Ross Groundwater Body (IE_SE_G_152). Potential interactions relate primarily to releases or runoff that could infiltrate through exposed or permeable ground during construction, and to potential operational pathways associated with the surface water drainage system and permeable landscaped areas.

On this basis, the following receptors are included within the zone of influence and are carried forward to the scoping stage:

- Barrow Nore Estuary Upper (IE_SE_100_0250)
- New Ross Port (IE_SE_100_0200)
- Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500)
- Barrow Suir Nore Estuary (IE_SE_100_0100)
- New Ross Groundwater Body (IE_SE_G_152)



5. SCOPING

5.1 Introduction

Scoping has been undertaken to identify the WFD receptors that may be affected by the proposed development and therefore require detailed assessment. This stage builds on the screening process and considers the potential for interaction between the proposed development and the water environment, taking into account the nature of the identified linkages and the characteristics of the receiving environment.

The scoping assessment has been carried out by testing the potential for each identified activity to affect relevant WFD receptors, including surface water and groundwater quality elements and protected areas. This approach enables the identification of receptors that may be subject to impact and distinguishes those that can be excluded from further assessment.

The scoping assessment is presented in the following sections, which assess each activity against the relevant WFD receptors and identify whether these receptors are scoped in or out of the subsequent impact assessment.

5.2 Hydromorphology

For transitional water bodies, hydromorphological quality elements supporting the biological quality elements comprise morphological conditions, including depth variation, the quantity, structure and substrate of the bed and the structure of the intertidal zone, together with the tidal regime, including freshwater flow and wave exposure.

The potential for the proposed development to affect these hydromorphological quality elements has been assessed by considering the potential sources and associated pathways identified during screening, with particular regard to activities that could result in physical modification of the receiving waterbody or alteration of its tidal or hydraulic regime. The results of this assessment are presented in Table 5-1.



Table 5-1: WFD Scoping Assessment - Hydromorphological Quality Elements

Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction			
Demolition, excavation, earthworks and ground disturbance	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Earthworks and ground disturbance may result in sediment mobilisation and transport to the receiving water environment. However, the works are land-based and do not involve physical modification of the bed or intertidal zone of the transitional waterbodies. Any potential sediment mobilisation would be associated with temporary runoff from the terrestrial works and does not provide a credible mechanism for alteration of morphological conditions or the tidal regime at waterbody scale.	Scoped Out
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	The identified pathway relates principally to the potential release of contaminants and mobilisation of materials. Particulate material entering the receiving water environment could potentially be transported and deposited within the adjacent or downstream transitional waterbodies. However, the activity does not involve physical works within the receiving waterbodies and does not provide a credible mechanism for sediment deposition at a scale capable of altering bed characteristics, intertidal morphology or the tidal regime.	Scoped Out
Construction plant, machinery and vehicle movements	Barrow Nore Estuary Upper (IE_SE_100_0250)	Plant, machinery and vehicle movements will occur within the terrestrial development area and do not involve physical works within the transitional waterbodies. Potential effects are associated with sediment or contaminant mobilisation rather than alteration of morphological conditions or the tidal regime.	Scoped Out
Construction works involving concrete and cementitious materials	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	The identified pathway relates to potential water-quality effects associated with concrete and cementitious materials. The works do not provide a plausible mechanism for physical modification of the bed or intertidal zone or alteration of the tidal regime of the receiving transitional waterbodies.	Scoped Out
Construction of surface water drainage infrastructure and temporary construction phase drainage management	Barrow Nore Estuary Upper (IE_SE_100_0250)	Construction and temporary management of the drainage system may affect the quantity and quality of water conveyed through the existing outfall. However, no new outfall or physical works within the receiving transitional waterbody are proposed. Temporary construction-phase drainage does not provide a plausible mechanism for modification of the bed or intertidal zone or alteration of the tidal regime at waterbody scale.	Scoped Out



Potential Source	Receptor	Scoping Justification	Scoped In / Out
Establishment of soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Establishment of soft landscaped areas may result in temporary mobilisation of soil or growing media, which could be conveyed to the receiving water environment and potentially transported downstream. However, the limited nature of the source does not provide a credible mechanism for sediment deposition at a scale capable of altering bed characteristics, intertidal morphology or the tidal regime.	Scoped Out
Operational			
Surface water drainage system	Barrow Nore Estuary Upper (IE_SE_100_0250)	Operational surface water will discharge through the existing outfall to the River Barrow. The proposed development does not introduce a new outfall or physical modification of the receiving waterbody. The drainage arrangement does not provide a plausible mechanism for modification of the bed or intertidal zone or alteration of the tidal regime of the receiving transitional waterbodies.	Scoped Out
Bridge Street surface water drainage inlet / linear slot drain	Barrow Nore Estuary Upper (IE_SE_100_0250)	The inlet provides a pathway for collection and conveyance of existing road runoff rather than a direct physical interaction with the receiving waterbody. No mechanism has been identified by which the inlet could modify the bed or intertidal zone or alter the tidal regime of the receiving transitional waterbodies.	Scoped Out
Permeable soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250)	Permeable landscaped areas are located within the terrestrial development area. Surface runoff or drainage from these areas may reach the River Barrow; however, this does not provide a plausible mechanism for physical modification of the receiving waterbody or alteration of its tidal regime.	Scoped Out
Modified masonry wall	Barrow Nore Estuary Upper (IE_SE_100_0250)	The identified potential for modification of hydraulic connectivity and floodwater pathways provides a plausible mechanism by which the hydromorphological characteristics of the receiving transitional waterbody could be affected. This pathway therefore requires further assessment to determine whether the proposed works could alter relevant morphological conditions or the tidal regime.	Scoped In
Maintenance works associated with the public realm and drainage infrastructure	Barrow Nore Estuary Upper (IE_SE_100_0250)	Maintenance activities may result in temporary sediment or contaminant mobilisation; however, routine maintenance of the public realm and drainage infrastructure does not involve physical modification of the receiving transitional waterbodies. The identified pathway therefore relates principally to water quality rather than hydromorphological change.	Scoped Out



The majority of the identified potential sources do not provide a credible mechanism for alteration of the morphological conditions or tidal regime of the receiving transitional waterbodies and are therefore scoped out from further hydromorphological assessment. However, the modified masonry wall has the potential to interact directly with tidal and flood waters and to modify hydraulic connectivity and floodwater pathways between the site and the adjacent River Barrow. This source is therefore scoped in and is carried forward for further assessment of potential effects on the hydromorphological quality elements of Barrow Nore Estuary Upper.

5.3 Biology (Habitats)

The Biology (Habitats) receptor relates to the potential for the proposed development to affect aquatic and intertidal habitats within the receiving transitional waterbodies. In accordance with 'Clearing the Waters for All' (Environment Agency UK, 2016, updated 2023), potential effects on habitats may arise from the physical footprint of an activity or from an associated footprint, such as a sediment plume.

The potential for the proposed development to affect the Biology (Habitats) receptor has been assessed by considering the potential sources and associated pathways identified during screening, including sediment mobilisation and deposition, accidental releases, changes in water quality and potential changes to the physical conditions supporting aquatic and intertidal habitats. The results of this assessment are presented in Table 5-2.



Table 5-2: WFD Scoping Assessment - Biological Quality Elements (Habitats)

Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction			
Demolition, excavation, earthworks and ground disturbance	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Earthworks and ground disturbance may result in mobilisation of suspended sediment to the receiving water environment. Sediment entering the River Barrow could be transported and deposited within adjacent or downstream transitional waterbody habitats, with potential effects on habitat condition and substrate characteristics. A potential pathway to the Biology (Habitats) receptor is therefore identified.	Scoped In
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Accidental releases and mobilisation of stored materials could enter the receiving water environment and affect habitat condition through contamination, increased suspended solids and/or deposition of particulate material. A potential pathway to the Biology (Habitats) receptor is therefore identified.	Scoped In
Construction plant, machinery and vehicle movements	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Plant and vehicle movements may generate sediment-laden runoff or accidental releases of hydrocarbons and other contaminants. Where these enter the receiving water environment, there is potential for effects on habitat condition and supporting substrate. A potential pathway to the Biology (Habitats) receptor is therefore identified.	Scoped In
Construction works involving concrete and cementitious materials	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Concrete and cementitious materials entering the receiving water environment could alter local water chemistry and result in deposition of particulate material, with potential effects on aquatic and intertidal habitat condition. A potential pathway to the Biology (Habitats) receptor is therefore identified.	Scoped In
Construction of surface water drainage infrastructure and temporary construction phase drainage management	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Temporary drainage management may result in discharge of sediment-laden or otherwise contaminated water through the existing outfall to the River Barrow. This provides a potential pathway for effects on adjacent and downstream habitat condition through suspended sediment, deposition and/or changes in water quality.	Scoped In



Potential Source	Receptor	Scoping Justification	Scoped In / Out
Establishment of soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Establishment of soft landscaped areas may result in temporary mobilisation of soil or growing media to the receiving water environment. However, given the limited nature of the source, it is not considered capable of generating a sediment footprint of sufficient extent or magnitude to affect habitat condition within the receiving transitional waterbodies.	Scoped Out
Operational			
Surface water drainage system	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Operational runoff will be discharged to the receiving water environment through the surface water drainage system. This provides an ongoing pathway by which suspended solids and other materials mobilised from the public realm could reach aquatic and intertidal habitats. A potential pathway to the Biology (Habitats) receptor is therefore identified.	Scoped In
Bridge Street surface water drainage inlet / linear slot drain	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	The proposed inlet will provide a pathway by which road runoff from Bridge Street enters the surface water drainage system and is discharged to the River Barrow. Road runoff may contain suspended solids and pollutants capable of affecting receiving habitat condition. A potential pathway to the Biology (Habitats) receptor is therefore identified.	Scoped In
Permeable soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Operational runoff from permeable landscaped areas may reach the receiving water environment; however, the nature and limited extent of this source do not provide a credible mechanism for effects on habitat condition within the receiving transitional waterbodies.	Scoped Out
Modified masonry wall	Barrow Nore Estuary Upper (IE_SE_100_0250)	Potential modification of hydraulic connectivity and floodwater pathways could alter the physical conditions supporting adjacent aquatic or intertidal habitat. This pathway to the Biology (Habitats) receptor cannot be excluded at the scoping stage.	Scoped In
Maintenance works associated with the public realm and drainage infrastructure	Barrow Nore Estuary Upper (IE_SE_100_0250)	Maintenance activities may result in temporary mobilisation of sediment or contaminants to the receiving water environment. However, routine maintenance activities would be limited and intermittent and are not considered capable of generating a footprint of sufficient extent or magnitude to affect habitat condition.	Scoped Out



The scoping assessment identified potential pathways to the Biology (Habitats) receptor during both the construction and operational phases. Potential sources for which a credible pathway to habitat condition has been identified are scoped in and carried forward for further assessment. Sources that are not considered capable of generating an effect of sufficient extent or magnitude to affect habitat condition are scoped out from further assessment.

5.4 Biology (Fish)

Biological quality elements (fish) relate to the ecological condition of surface water bodies, including fish populations, their distribution and the conditions required to support them.

The potential for the proposed development to affect fish has been assessed by considering the identified project activities and associated pathways, including those that may influence water quality, sediment dynamics and habitat conditions. The results of this assessment are presented in Table 5-3.



Table 5-3: WFD Scoping Assessment - Biological Quality Elements (Fish)

Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction			
Demolition, excavation, earthworks and ground disturbance	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Earthworks and ground disturbance may result in sediment mobilisation to the receiving water environment. Increased suspended sediment and turbidity could potentially affect fish using the receiving transitional waterbodies, including through temporary disturbance of fish movement or behaviour. A potential pathway to the Biology (Fish) receptor is therefore identified.	Scoped In
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Accidental releases or mobilisation of contaminants and materials could enter the receiving water environment and result in changes in water quality capable of affecting fish. A potential pathway to the Biology (Fish) receptor is therefore identified.	Scoped In
Construction plant, machinery and vehicle movements	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Plant, machinery and vehicle movements may result in sediment-laden runoff or accidental releases of hydrocarbons or other contaminants. Where these enter the receiving water environment, changes in suspended sediment or water quality could potentially affect fish.	Scoped In
Construction works involving concrete and cementitious materials	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Concrete and cementitious materials entering the receiving water environment could result in changes in water chemistry, including elevated pH, capable of affecting fish. A potential pathway to the Biology (Fish) receptor is therefore identified.	Scoped In



Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction of surface water drainage infrastructure and temporary construction phase drainage management	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Temporary drainage management may result in the discharge of sediment-laden or otherwise contaminated water through the existing outfall to the River Barrow. This provides a potential pathway for changes in suspended sediment or water quality capable of affecting fish within the receiving transitional waterbodies.	Scoped In
Establishment of soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Establishment of soft landscaped areas may result in temporary mobilisation of soil or growing media to the receiving water environment. However, given the limited nature of the source, it is not considered capable of generating changes in suspended sediment of sufficient extent, magnitude or duration to affect fish movement, behaviour or supporting conditions.	Scoped Out
Operational			
Surface water drainage system	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Operational runoff will be discharged to the receiving water environment through the surface water drainage system. This provides an ongoing pathway by which suspended solids and other materials mobilised from the public realm could reach waters used by fish. A potential pathway to the Biology (Fish) receptor is therefore identified.	Scoped In
Bridge Street surface water drainage inlet / linear slot drain	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	The proposed inlet provides a pathway by which road runoff from Bridge Street could enter the surface water drainage system and be discharged to the River Barrow. Suspended solids and contaminants associated with road runoff could potentially affect fish through changes in water quality.	Scoped In
Permeable soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Runoff or drainage from permeable landscaped areas may reach the receiving water environment; however, the nature and limited extent of this source do not provide a credible mechanism for effects on fish movement, behaviour or supporting water conditions.	Scoped Out
Modified masonry wall	Barrow Nore Estuary Upper (IE_SE_100_0250)	The works do not introduce a physical barrier within the receiving transitional waterbody or obstruct a fish migration route. While potential changes in hydraulic connectivity and floodwater	Scoped Out



Potential Source	Receptor	Scoping Justification	Scoped In / Out
		pathways are considered under hydromorphology, no credible mechanism has been identified by which the proposed works could result in a significant change in water depth or flow capable of affecting fish movement, migration or behaviour.	
Maintenance works associated with the public realm and drainage infrastructure	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Maintenance activities may result in temporary mobilisation of sediment or contaminants to the receiving water environment. However, routine maintenance activities would be limited and intermittent and are not considered capable of causing changes in water quality or suspended sediment of sufficient extent, magnitude or duration to affect fish.	Scoped Out



The scoping assessment identified potential pathways to the Biology (Fish) receptor during both the construction and operational phases. Potential sources for which a credible pathway to effects on fish has been identified are scoped in and carried forward for further assessment. Sources that are not considered capable of generating changes of sufficient extent, magnitude or duration to affect fish movement, migration, behaviour or supporting water conditions are scoped out from further assessment.

5.5 Water Quality

The Water Quality receptor relates to the potential for the proposed development to affect the physicochemical and chemical conditions of the receiving surface waterbodies and the chemical and quantitative status of the New Ross Groundwater Body.

The potential for the proposed development to affect the Water Quality receptor has been assessed by considering the potential sources and associated pathways identified during screening, including sediment mobilisation, accidental releases, surface water runoff and drainage discharges, and infiltration to groundwater. The results of this assessment are presented in Table 5-4.



Table 5-4: WFD Scoping Assessment - Water Quality (Surface Water) and Groundwater Status

Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction			
Demolition, excavation, earthworks and ground disturbance	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Earthworks and ground disturbance may result in sediment mobilisation to the receiving surface water environment, with potential changes in suspended solids, turbidity and associated physicochemical conditions. Although infiltration through exposed ground may occur, no specific contaminant source associated with this pathway has been identified that would be capable of affecting groundwater chemical status. A credible surface-water-quality pathway is therefore identified.	Scoped In
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100); New Ross GWB (IE_SE_G_152)	Accidental releases of fuels, chemicals, wastes or contaminated runoff could result in changes in surface-water chemistry and, where infiltration occurs, groundwater chemistry. Credible pathways to both surface water and groundwater are therefore identified.	Scoped In
Construction plant, machinery and vehicle movements	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100); New Ross GWB (IE_SE_G_152)	Plant, machinery and vehicle movements may generate sediment-laden runoff and provide a source of accidental hydrocarbon or other contaminant releases. These could affect surface-water physicochemical or chemical conditions and, where releases occur to ground, groundwater chemical status.	Scoped In
Construction works involving concrete and cementitious materials	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100); New Ross GWB (IE_SE_G_152)	Concrete and cementitious materials entering surface water could alter water chemistry, particularly pH. Releases to exposed ground could also infiltrate and potentially affect groundwater chemistry. Credible pathways to surface water and groundwater are therefore identified.	Scoped In



Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction of surface water drainage infrastructure and temporary construction phase drainage management	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100); New Ross GWB (IE_SE_G_152)	Temporary drainage management may result in sediment-laden or otherwise contaminated water entering the drainage system and being discharged to the River Barrow. Leakage or infiltration during drainage construction provides a potential pathway to groundwater. Credible pathways to surface-water quality and groundwater chemical status are therefore identified.	Scoped In
Establishment of soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); New Ross GWB (IE_SE_G_152)	Establishment of soft landscaped areas may result in limited temporary mobilisation of soil or growing media. However, the limited nature of the source is not considered capable of generating changes in surface-water quality of sufficient extent or magnitude to affect WFD status. Infiltration through landscaped areas does not in itself constitute an adverse effect on groundwater and no material contaminant source has been identified.	Scoped Out
Operational			
Surface water drainage system	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); New Ross GWB (IE_SE_G_152)	The drainage system provides an ongoing pathway for surface runoff from the public realm to the River Barrow. Suspended solids and other materials mobilised from the public realm could therefore reach the receiving surface waters. While possible leakage from buried drainage infrastructure was identified during screening, no specific mechanism has been identified by which the proposed drainage system would materially affect groundwater chemical or quantitative status. A credible surface-water-quality pathway remains.	Scoped In
Bridge Street surface water drainage inlet / linear slot drain	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100); New Ross GWB (IE_SE_G_152)	The proposed inlet provides a direct pathway by which road runoff from Bridge Street could enter the drainage system and be discharged to the River Barrow. Road runoff may contain suspended solids and other contaminants capable of affecting surface-water physicochemical or chemical conditions. As runoff entering the inlet is subsequently conveyed through buried drainage infrastructure, leakage could also provide a potential pathway to groundwater.	Scoped In
Permeable soft landscaped areas	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); New Ross GWB (IE_SE_G_152)	Runoff or drainage from permeable landscaped areas may reach the receiving surface waters; however, the nature and limited extent of the source are not considered capable of generating a material change in surface-water quality. Infiltration is an intended function of the landscaped	Scoped Out



Potential Source	Receptor	Scoping Justification	Scoped In / Out
		areas and, in the absence of an identified contaminant source, does not provide a credible mechanism for deterioration of groundwater chemical status.	
Modified masonry wall	Barrow Nore Estuary Upper (IE_SE_100_0250)	The wall does not itself provide a source of pollutants or other substances capable of affecting surface-water or groundwater quality.	Scoped Out
Maintenance works associated with the public realm and drainage infrastructure	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); New Ross GWB (IE_SE_G_152)	Maintenance activities may result in temporary mobilisation of sediment or contaminants. However, routine maintenance would be limited and intermittent and is not considered capable of generating changes in surface-water or groundwater quality of sufficient extent, magnitude or duration to affect WFD status.	Scoped Out



The scoping assessment identified potential pathways to the Water Quality receptor during both the construction and operational phases. Potential sources for which a credible pathway to changes in surface-water quality and / or groundwater status has been identified are scoped in and carried forward for further assessment. Sources that are not considered capable of generating changes of sufficient extent, magnitude or duration to affect surface-water quality or groundwater status are scoped out from further assessment.

5.6 Protected Areas

The Protected Areas receptor relates to water-dependent areas and uses requiring specific protection under the Water Framework Directive, including European sites, drinking water protected areas, shellfish waters and bathing waters.

The potential for the proposed development to affect Protected Areas has been assessed by considering the potential sources and associated pathways identified during screening, including surface water runoff, drainage discharges, accidental releases, infiltration to groundwater and hydrological connectivity with downstream protected areas. The results of this assessment are presented in Table 5-5.



Table 5-5: WFD Scoping Assessment - Protected Areas

Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction			
Demolition, excavation, earthworks and ground disturbance	River Barrow and River Nore SAC; Lower River Suir SAC; relevant downstream Shellfish Protected Areas; Nutrient Sensitive Area	Sediment-laden runoff could enter the River Barrow and be transported through the receiving estuarine system. A hydrological pathway therefore exists to water-dependent protected areas associated with the receiving and downstream surface waterbodies.	Scoped In
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	River Barrow and River Nore SAC; Lower River Suir SAC; relevant downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	Accidental releases could enter the receiving surface waters and be transported downstream, or infiltrate to groundwater. Credible pathways are therefore identified to surface-water-dependent protected areas and New Ross GWB as a Drinking Water Protected Area.	Scoped In
Construction plant, machinery and vehicle movements	River Barrow and River Nore SAC; Lower River Suir SAC; relevant downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	Sediment or accidental contaminant releases could enter the receiving surface waters or infiltrate to groundwater, providing credible pathways to the identified surface-water-dependent protected areas and New Ross GWB as a Drinking Water Protected Area.	Scoped In
Construction works involving concrete and cementitious materials	River Barrow and River Nore SAC; Lower River Suir SAC; relevant downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	Releases of concrete or cementitious materials could alter water chemistry within the receiving surface waters and potentially be transported downstream. Infiltration over exposed ground also provides a potential pathway to New Ross GWB as a Drinking Water Protected Area.	Scoped In



Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction of surface water drainage infrastructure and temporary construction phase drainage management	River Barrow and River Nore SAC; Lower River Suir SAC; relevant downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	Temporary drainage management provides a direct pathway by which sediment-laden or otherwise contaminated water could enter the River Barrow and downstream protected areas. Leakage or infiltration during construction also provides a potential pathway to New Ross GWB as a Drinking Water Protected Area.	Scoped In
Establishment of soft landscaped areas	River Barrow and River Nore SAC; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	Limited mobilisation of soil or growing media may occur; however, the nature and scale of the source are not considered capable of generating an effect of sufficient extent or magnitude to affect the objectives or standards of the identified protected areas. Infiltration through landscaped areas does not in itself constitute an adverse effect on New Ross GWB as a Drinking Water Protected Area, and no material contaminant source has been identified.	Scoped Out
Operational			
Surface water drainage system	River Barrow and River Nore SAC; Nutrient Sensitive Area	The drainage system provides an ongoing pathway between runoff from the public realm and the River Barrow. Suspended solids and other materials mobilised from the public realm could therefore reach water-dependent protected areas within the receiving and downstream estuarine system.	Scoped In
Bridge Street surface water drainage inlet / linear slot drain	River Barrow and River Nore SAC; Lower River Suir SAC; relevant downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	The proposed inlet provides a pathway by which road runoff from Bridge Street could enter the River Barrow and downstream protected areas. As this runoff is conveyed through buried drainage infrastructure, leakage also provides a potential pathway to New Ross GWB as a Drinking Water Protected Area.	Scoped In



Potential Source	Receptor	Scoping Justification	Scoped In / Out
Permeable soft landscaped areas	River Barrow and River Nore SAC; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	The limited nature and extent of runoff or drainage from landscaped areas are not considered capable of generating an effect of sufficient extent or magnitude to affect the objectives or standards of the identified protected areas. Infiltration is an intended function of the landscaped areas and, in the absence of an identified contaminant source, does not provide a credible mechanism for effects on New Ross GWB as a Drinking Water Protected Area.	Scoped Out
Modified masonry wall	River Barrow and River Nore SAC	The River Barrow and River Nore SAC is immediately adjacent to the proposed development and includes water-dependent habitats and species. As the works have the potential to modify hydraulic connectivity and floodwater pathways at the interface with the River Barrow, a potential pathway to the protected area cannot be excluded at the scoping stage.	Scoped In
Maintenance works associated with the public realm and drainage infrastructure	River Barrow and River Nore SAC; New Ross GWB (IE_SE_G_152) - Drinking Water Protected Area	Routine maintenance activities may result in temporary mobilisation of sediment or contaminants. However, these activities would be limited and intermittent and are not considered capable of generating effects of sufficient extent, magnitude or duration to affect the objectives or standards of the identified protected areas, including New Ross GWB as a Drinking Water Protected Area.	Scoped Out



The scoping assessment identified potential pathways to Protected Areas during both the construction and operational phases. Potential sources for which a credible pathway to effects on the objectives or standards of a Protected Area has been identified are scoped in and carried forward for further assessment. Sources that are not considered capable of generating effects of sufficient extent, magnitude or duration to affect the objectives or standards of the identified Protected Areas are scoped out from further assessment.

5.7 Invasive Non-Native Species (INNS)

Invasive Non-Native Species (INNS) have the potential to affect the ecological status of surface waterbodies where activities facilitate their introduction or spread.

The potential for the proposed development to introduce or spread INNS has been assessed by considering the potential sources and associated pathways identified during screening. The results of this assessment are presented in Table 5-6.



Table 5-6: WFD Scoping Assessment - Invasive Non-Native Species

Potential Source	Receptor	Scoping Justification	Scoped In / Out
Construction			
Demolition, excavation, earthworks and ground disturbance	Surface waterbodies	The works are land-based and do not involve disturbance or transfer of material from within the receiving waterbodies. No credible pathway for the introduction or spread of aquatic INNS through demolition, excavation or earthworks has been identified.	Scoped Out
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Surface waterbodies	The establishment and operation of the construction compound does not in itself provide a credible mechanism for the introduction or spread of aquatic INNS to the receiving waterbodies.	Scoped Out
Construction plant, machinery and vehicle movements	Surface waterbodies	Plant and machinery could provide a potential vector for INNS where equipment has previously been used within or in contact with other waterbodies. However, the proposed works are land-based and do not require plant or machinery to enter or operate within the receiving waterbodies. No credible pathway for the transfer of aquatic INNS to the receiving waterbodies is therefore identified.	Scoped Out
Construction works involving concrete and cementitious materials	Surface waterbodies	Concrete and cementitious materials do not provide a mechanism for the introduction or spread of INNS.	Scoped Out
Construction of surface water drainage infrastructure and temporary construction phase drainage management	Surface waterbodies	Temporary drainage management involves the movement of water within the site and existing drainage system but does not involve transfer of water, sediment or equipment between different waterbodies. No credible pathway for the introduction or spread of INNS has been identified.	Scoped Out
Establishment of soft landscaped areas	Surface waterbodies	Landscaping materials could theoretically provide a vector for terrestrial INNS; however, the identified pathway to the WFD receptor concerns introduction or spread of INNS to surface waterbodies. The landscaped areas are land-based and no credible pathway for introduction or spread of aquatic INNS to the receiving waterbodies has been identified.	Scoped Out



Operational			
Surface water drainage system	Surface waterbodies	The drainage system conveys runoff generated within the development but does not introduce water or material originating from another waterbody. It therefore does not provide a credible mechanism for the introduction or spread of INNS between waterbodies.	Scoped Out
Bridge Street surface water drainage inlet / linear slot drain	Surface waterbodies	The inlet conveys local road runoff and does not involve transfer of water, sediment or aquatic organisms from another waterbody. No credible pathway for the introduction or spread of INNS has been identified.	Scoped Out
Permeable soft landscaped areas	Surface waterbodies	The operational landscaped areas do not provide a credible mechanism for the introduction or spread of aquatic INNS to the receiving waterbodies.	Scoped Out
Modified masonry wall	Surface waterbodies	The works do not create a new connection between previously unconnected waterbodies or provide a mechanism for the transfer of organisms or contaminated material between waterbodies. No credible pathway for the introduction or spread of INNS is identified.	Scoped Out
Maintenance works associated with the public realm and drainage infrastructure	Surface waterbodies	Routine maintenance does not require transfer of water, sediment or equipment between waterbodies and is not considered to provide a credible pathway for the introduction or spread of INNS.	Scoped Out



The scoping assessment did not identify a credible pathway by which the proposed development could introduce or spread INNS to the receiving surface waterbodies. INNS are therefore scoped out from further assessment.



6. IMPACT ASSESSMENT

The impact assessment has been undertaken to evaluate the potential effects of the proposed development on the identified WFD receptors and to determine compliance with the objectives of the WFD.

This assessment builds on the scoping stage and considers the receptors carried forward for detailed assessment, namely surface water quality and groundwater quality and quantity. The assessment focuses on the potential for the proposed development to cause deterioration in the status of any water body and to compromise the achievement of WFD environmental objectives.

The assessment has been carried out by considering the nature of the proposed development, the identified pathways for interaction with the water environment and the characteristics of the receiving water bodies. Both the construction and operational phases have been considered.

The assessment is undertaken with reference to the key WFD compliance tests, including the requirement to prevent deterioration in water body status and to ensure that the proposed development does not jeopardise the achievement of good status or potential.

6.1 Hydromorphology

The scoping assessment identified a potential pathway by which the modified masonry wall (boundary wall) could affect the hydromorphological conditions of the Barrow Nore Estuary Upper (IE_SE_100_0250). The potential effect is associated with direct interaction with tidal and flood waters and potential modification of hydraulic connectivity and floodwater pathways between the site and the adjacent River Barrow.

The proposed works are located along the existing developed river frontage and do not extend into the River Barrow or involve works to the bed of the transitional waterbody. The potential hydromorphological effect therefore relates principally to whether modification of the masonry wall could materially alter hydraulic connectivity or the movement of tidal and flood waters adjacent to the site.

The potential effect of the scoped-in source on hydromorphological conditions is assessed in Table 6-1.

Table 6-1: Potential Impacts on Hydromorphology (Pre-Mitigation)

Potential Source	Receptor	Potential Impact	Extent	Duration	Magnitude
Operational					
Modified masonry wall	Barrow Nore Estuary Upper (IE_SE_100_0250)	Modification of the masonry wall could alter hydraulic connectivity and local floodwater pathways between the site and the adjacent River Barrow during elevated tidal or flood conditions. Any such changes would be localised to the developed river frontage and would occur intermittently during elevated water levels.	Local	Long-term / intermittent	Small



The potential impact identified has been assessed against the environmental objectives of the WFD to determine whether it could result in deterioration of the hydromorphological quality elements of the Barrow Nore Estuary Upper or compromise the achievement of its environmental objectives. The results of the hydromorphological deterioration assessment are presented in Table 6-2.

Table 6-2: WFD Deterioration Assessment - Hydromorphology (Pre-Mitigation)

Receptor	Relevant Potential Source	Pre-Mitigation WFD Assessment
Operational		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Modified masonry wall	Modification of the masonry wall could result in localised changes in hydraulic connectivity and floodwater pathways during elevated tidal or flood conditions. The Site-Specific Flood Risk Assessment included project-specific hydraulic modelling of combined fluvial and coastal flood conditions, including the effects of climate change. The proposed lowering of the masonry wall will maintain a minimum crest level of 3.90 mOD, as established by the Site-Specific Flood Risk Assessment based on the conservative combined fluvial/coastal scenario, comprising the modelled 0.1% AEP design flood level of 3.60 mOD plus 300 mm freeboard. The works are confined to the existing developed river frontage and will not extend into the River Barrow or involve modification of the bed or intertidal area. The proposed modification therefore does not introduce an in-channel structure or direct physical alteration of the transitional waterbody. Any potential interaction with tidal or flood waters would be localised to the site frontage and intermittent during elevated water levels. Accordingly, the proposed works are not considered capable of causing deterioration of the hydromorphological quality elements of the Barrow Nore Estuary Upper or compromising achievement of its environmental objectives.

The assessment indicates that modification of the masonry wall could result in localised changes in hydraulic connectivity and floodwater pathways during elevated tidal or flood conditions. However, having regard to the nature and limited spatial extent of the works, the FRA-derived minimum crest level and the absence of works within the bed or intertidal zone of the River Barrow, no deterioration of the hydromorphological quality elements of the Barrow Nore Estuary Upper is predicted, and the proposed development is not expected to compromise the achievement of its environmental objectives.

Potential localised effects on hydraulic connectivity and floodwater pathways remain possible during elevated tidal or flood conditions. Accordingly, embedded design controls have been identified to ensure that the proposed lowering of the masonry wall maintains its flood protection function while avoiding direct physical alteration of the transitional waterbody.

6.2 Biology (Habitats)

The scoping assessment identified potential pathways by which construction and operational activities could affect the Biology (Habitats) receptor within the receiving surface water environment. Potential effects are principally associated with sediment mobilisation, accidental releases of contaminants and changes in water quality that could affect the condition of aquatic and estuarine habitats, together with potential physical changes associated with the modified masonry wall.



During construction, potential effects on habitats are associated with sediment mobilisation from demolition, excavation and ground disturbance; accidental releases associated with the temporary construction compound, storage of fuels, materials and wastes, welfare facilities, plant and machinery; concrete and cementitious materials; and the construction and temporary management of surface water drainage infrastructure. These activities could result in increased suspended solids, sediment deposition and/or changes in water conditions within the receiving surface water environment.

During operation, potential effects are associated with runoff conveyed through the surface water drainage system, road runoff from Bridge Street entering the drainage system through the proposed inlet / linear slot drain, and potential localised changes in hydraulic connectivity and floodwater pathways associated with the modified masonry wall.

The potential effects of the scoped-in construction and operational sources on the Biology (Habitats) receptor are assessed in Table 6-3.



Table 6-3: Potential Impacts on Biology (Habitats) (Pre-Mitigation)

Potential Source	Receptor	Potential Impact	Extent	Duration	Magnitude
Construction					
Demolition, excavation, earthworks and ground disturbance	Aquatic and estuarine habitats within Barrow Nore Estuary Upper and New Ross Port	Increased suspended solids and turbidity could result in localised sediment deposition and temporary changes in the condition of aquatic and estuarine habitats.	Local to downstream	Short-term	Moderate
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Aquatic and estuarine habitats within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Accidental releases of fuels, oils, chemicals, wastes or wastewater could alter water and sediment conditions and adversely affect the condition of aquatic and estuarine habitats.	Local to downstream	Short-term / event-based	Moderate
Construction plant, machinery and vehicle movements	Aquatic and estuarine habitats within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Sediment-laden runoff and accidental releases of fuels, oils, hydraulic fluids or other contaminants could temporarily alter water and sediment conditions and affect aquatic and estuarine habitats.	Local to downstream	Short-term / event-based	Moderate
Construction works involving concrete and cementitious materials	Aquatic and estuarine habitats within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Releases of concrete or cementitious materials could increase suspended solids and alter pH, with potential effects on the condition of aquatic and estuarine habitats.	Local to downstream	Short-term / event-based	Moderate
Construction of surface water drainage infrastructure and temporary construction-phase drainage management	Aquatic and estuarine habitats within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Sediment-laden or otherwise contaminated construction water conveyed to the River Barrow could temporarily alter water and sediment conditions and affect aquatic and estuarine habitats.	Local to downstream	Short-term	Moderate



Potential Source	Receptor	Potential Impact	Extent	Duration	Magnitude
Operational					
Surface water drainage system	Aquatic and estuarine habitats within Barrow Nore Estuary Upper, New Ross Port and Lower Suir Estuary	Suspended solids and other materials mobilised from the public realm and discharged through the drainage system could result in intermittent changes in water and sediment conditions, with potential localised effects on aquatic and estuarine habitats.	Local to downstream	Long-term / intermittent	Small
Bridge Street surface water drainage inlet / linear slot drain	Aquatic and estuarine habitats within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Suspended solids, hydrocarbons and other road-derived contaminants conveyed through the drainage system could result in intermittent changes in water and sediment conditions and potentially affect aquatic and estuarine habitats.	Local to downstream	Long-term / intermittent	Moderate
Modified masonry wall	Aquatic and estuarine habitats within Barrow Nore Estuary Upper	Localised modification of hydraulic connectivity and floodwater pathways during elevated tidal or flood conditions could alter the hydrological conditions supporting adjacent aquatic and estuarine habitats.	Local	Long-term / intermittent	Small

The potential impacts identified have been assessed against the environmental objectives of the WFD to determine whether they could result in deterioration of the Biology (Habitats) quality element of the receiving surface waterbodies or compromise the achievement of their environmental objectives. The results of the Biology (Habitats) deterioration assessment are presented in Table 6-4.



Table 6-4: WFD Deterioration Assessment - Biology (Habitats) (Pre-Mitigation)

Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Construction		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	The identified construction sources could result in temporary and localised changes in water and sediment conditions through increased suspended solids and sediment deposition, accidental releases of contaminants, changes in pH and the discharge of sediment-laden or otherwise contaminated construction water. These changes could adversely affect the condition of aquatic and estuarine habitats within the immediate receiving environment. A local adverse effect on habitat condition cannot be excluded pre-mitigation; however, given the temporary nature, limited spatial extent and event-based nature of the potential effects, they are not considered capable of causing deterioration of the Biology (Habitats) receptor at waterbody scale or compromising achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200)	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	Construction-related sediment or contaminants reaching New Ross Port could result in temporary changes in water and sediment conditions and potentially affect habitat condition. However, potential effects would be reduced through dilution, dispersion and, where relevant, sediment deposition during downstream transport. Given the temporary nature and limited spatial extent of the potential effects, they are not considered capable of causing deterioration of the Biology (Habitats) receptor at waterbody scale or compromising achievement of the environmental objectives of New Ross Port.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	Construction-related contaminants reaching the Lower Suir Estuary could result in temporary changes in water and sediment conditions relevant to habitat condition. Given the downstream distance and intervening estuarine system, potential effects would be substantially reduced through dilution and dispersion. They are not considered capable of causing deterioration of the Biology (Habitats) receptor at waterbody scale or compromising achievement of the environmental objectives of the Lower Suir Estuary.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Barrow Suir Nore Estuary (IE_SE_100_0100)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	Construction-related contaminants reaching the Barrow Suir Nore Estuary could result in temporary changes in water and sediment conditions relevant to habitat condition. Given the downstream distance and intervening estuarine system, potential effects would be substantially reduced through dilution and dispersion and are not considered capable of causing deterioration of the Biology (Habitats) receptor at waterbody scale or compromising achievement of the environmental objectives of the Barrow Suir Nore Estuary.
Operational		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain; and modified masonry wall.	Operational runoff could result in intermittent changes in water and sediment conditions through the discharge of suspended solids and other materials mobilised from the public realm and suspended solids, hydrocarbons and other road-derived contaminants from Bridge Street. In addition, the modified masonry wall could result in localised changes in hydraulic connectivity and floodwater pathways affecting the hydrological conditions supporting adjacent habitats. A local adverse effect on habitat condition cannot be excluded pre-mitigation; however, given the scale, limited spatial extent and intermittent nature of the potential effects, they are not considered capable of causing deterioration of the Biology (Habitats) receptor at waterbody scale or compromising achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain.	Operational runoff could result in intermittent downstream transport of suspended solids and other materials from the public realm, including road-derived contaminants from Bridge Street, with potential effects on water and sediment conditions relevant to habitat condition. Given the scale of the contributing sources and reduction of potential effects through downstream dilution and dispersion, deterioration of the Biology (Habitats) receptor at waterbody scale or compromise of the environmental objectives of New Ross Port is not predicted.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Bridge Street surface water drainage inlet / linear slot drain.	Road-derived runoff from Bridge Street could result in intermittent downstream transport of suspended solids, hydrocarbons and other contaminants, with potential effects on water and sediment conditions relevant to habitat condition. Given the scale of the contributing source, downstream distance and intervening estuarine system, deterioration of the Biology (Habitats) receptor at waterbody scale or compromise of the environmental objectives of the Lower Suir Estuary is not predicted.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Barrow Suir Nore Estuary (IE_SE_100_0100)	Bridge Street surface water drainage inlet / linear slot drain.	Road-derived runoff from Bridge Street could result in intermittent downstream transport of suspended solids, hydrocarbons and other contaminants. Given the scale of the contributing source, downstream distance and intervening estuarine system, deterioration of the Biology (Habitats) receptor at waterbody scale or compromise of the environmental objectives of the Barrow Suir Nore Estuary is not predicted.

The assessment indicates that the identified construction and operational activities have the potential to result in localised and temporary or intermittent effects on aquatic and estuarine habitats through changes in water and sediment conditions and, in the case of the modified masonry wall, localised changes in hydraulic connectivity and floodwater pathways. However, having regard to the nature, scale, duration and spatial extent of the potential effects, no deterioration of the Biology (Habitats) quality element of the receiving surface waterbodies is predicted, and the proposed development is not expected to compromise the achievement of their environmental objectives.

Potential localised effects on habitats remain possible, particularly in relation to sediment mobilisation, accidental releases, concrete and cementitious materials, construction-phase drainage, road runoff from Bridge Street and localised interaction with tidal and flood waters. Accordingly, targeted mitigation measures and embedded design controls have been identified to prevent and minimise impacts during the construction and operational phases of the proposed development.

6.3 Biology (Fish)

The scoping assessment identified potential pathways by which construction and operational activities could affect the Biology (Fish) receptor within the receiving surface water environment. Potential effects are principally associated with changes in water conditions arising from sediment mobilisation and accidental releases of contaminants, which could affect fish behaviour, movement and migration and the conditions supporting fish populations.

During construction, potential effects on fish are associated with sediment mobilisation from demolition, excavation and ground disturbance; accidental releases associated with the temporary construction compound, storage of fuels, materials and wastes, welfare facilities, plant and machinery; concrete and cementitious materials; and the construction and temporary management of surface water drainage infrastructure.

During operation, potential effects are associated with runoff conveyed through the surface water drainage system and road runoff from Bridge Street entering the drainage system through the proposed inlet / linear slot drain.

The potential effects of the scoped-in construction and operational sources on the Biology (Fish) receptor are assessed in Table 6-5.



Table 6-5: Potential Impacts on Biology (Fish) (Pre-Mitigation)

Potential Source	Receptor	Potential Impact	Extent	Duration	Magnitude
Construction					
Demolition, excavation, earthworks and ground disturbance	Fish within Barrow Nore Estuary Upper and New Ross Port	Increased suspended solids and turbidity could temporarily affect fish behaviour and movement and, where sediment deposition occurs, the conditions supporting fish habitat.	Local to downstream	Short-term	Moderate
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Fish within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Accidental releases of fuels, oils, chemicals, wastes or wastewater could result in temporary deterioration of water conditions, with potential effects on fish health, behaviour, movement or migration.	Local to downstream	Short-term / event-based	Moderate
Construction plant, machinery and vehicle movements	Fish within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Sediment-laden runoff and accidental releases of fuels, oils, hydraulic fluids or other contaminants could temporarily affect water conditions and consequently fish health, behaviour, movement or migration.	Local to downstream	Short-term / event-based	Moderate
Construction works involving concrete and cementitious materials	Fish within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Releases of concrete or cementitious materials could result in elevated pH and increased suspended solids, potentially affecting fish health, behaviour, movement or migration.	Local to downstream	Short-term / event-based	Moderate
Construction of surface water drainage infrastructure and temporary construction-phase drainage management	Fish within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Sediment-laden or otherwise contaminated construction water conveyed through the drainage system to the River Barrow could temporarily alter water conditions and affect fish health, behaviour, movement or migration.	Local to downstream	Short-term	Moderate



Potential Source	Receptor	Potential Impact	Extent	Duration	Magnitude
Operational					
Surface water drainage system	Fish within Barrow Nore Estuary Upper, New Ross Port and Lower Suir Estuary	Suspended solids and other materials mobilised from the public realm and discharged through the surface water drainage system could result in intermittent changes in water conditions, with potential localised effects on fish.	Local to downstream	Long-term / intermittent	Small
Bridge Street surface water drainage inlet / linear slot drain	Fish within Barrow Nore Estuary Upper, New Ross Port, Lower Suir Estuary and Barrow Suir Nore Estuary	Suspended solids, hydrocarbons and other road-derived contaminants conveyed through the drainage system could result in intermittent changes in water conditions, potentially affecting fish health, behaviour, movement or migration.	Local to downstream	Long-term / intermittent	Moderate



The potential impacts identified have been assessed against the environmental objectives of the WFD to determine whether they could result in deterioration of the Biology (Fish) quality element of the receiving surface waterbodies or compromise the achievement of their environmental objectives. The results of the Biology (Fish) deterioration assessment are presented in Table 6-6.



Table 6-6: WFD Deterioration Assessment - Biology (Fish) (Pre-Mitigation)

Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Construction		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management	The identified construction sources could result in temporary changes in water conditions through increased suspended solids and turbidity, accidental releases of contaminants, changes in pH and the discharge of sediment-laden or otherwise contaminated construction water. These changes could adversely affect fish health, behaviour, movement or migration within the immediate receiving environment. A local adverse effect on fish cannot be excluded pre-mitigation; however, given the temporary nature, limited spatial extent and event-based nature of the potential effects, they are not considered capable of causing deterioration of the relevant biological quality elements at waterbody scale or compromising achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200)	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management	Construction-related sediment or contaminants reaching New Ross Port could result in temporary changes in water conditions and potentially affect fish health, behaviour, movement or migration. However, potential effects would be reduced through dilution and dispersion during downstream transport. Given the temporary nature and limited spatial extent of the potential effects, they are not considered capable of causing deterioration of the relevant biological quality elements at waterbody scale or compromising achievement of the environmental objectives of New Ross Port.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management	Construction-related contaminants reaching the Lower Suir Estuary could result in temporary changes in water conditions with potential effects on fish health, behaviour, movement or migration. Given the downstream distance and intervening estuarine system, potential effects would be substantially reduced through dilution and dispersion and are not considered capable of causing deterioration of the relevant biological quality elements at waterbody scale or compromising achievement of the environmental objectives of the Lower Suir Estuary.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Barrow Suir Nore Estuary (IE_SE_100_0100)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management	Construction-related contaminants reaching the Barrow Suir Nore Estuary could result in temporary changes in water conditions with potential effects on fish health, behaviour, movement or migration. Given the downstream distance and intervening estuarine system, potential effects would be substantially reduced through dilution and dispersion and are not considered capable of causing deterioration of the relevant biological quality elements at waterbody scale or compromising achievement of the environmental objectives of the Barrow Suir Nore Estuary.
Operational		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain	Operational runoff could result in intermittent changes in water conditions through the discharge of suspended solids and other materials mobilised from the public realm and suspended solids, hydrocarbons and other road-derived contaminants from Bridge Street. These changes could potentially affect fish health, behaviour, movement or migration within the immediate receiving environment. A local adverse effect on fish cannot be excluded pre-mitigation; however, given the scale, limited spatial extent and intermittent nature of the potential effects, they are not considered capable of causing deterioration of the relevant biological quality elements at waterbody scale or compromising achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain	Operational runoff could result in intermittent downstream transport of suspended solids and other materials from the public realm, including road-derived contaminants from Bridge Street, with potential effects on fish health, behaviour, movement or migration. Given the scale of the contributing sources and reduction of potential effects through downstream dilution and dispersion, deterioration of the relevant biological quality elements at waterbody scale or compromise of the environmental objectives of New Ross Port is not predicted.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Bridge Street surface water drainage inlet / linear slot drain	Road-derived runoff from Bridge Street could result in intermittent downstream transport of suspended solids, hydrocarbons and other contaminants, with potential effects on fish health, behaviour, movement or migration. Given the scale of the contributing source, downstream distance and intervening estuarine system, deterioration of the relevant biological quality elements at waterbody scale or compromise of the environmental objectives of the Lower Suir Estuary is not predicted.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Barrow Suir Nore Estuary (IE_SE_100_0100)	Bridge Street surface water drainage inlet / linear slot drain	Road-derived runoff from Bridge Street could result in intermittent downstream transport of suspended solids, hydrocarbons and other contaminants, with potential effects on fish health, behaviour, movement or migration. Given the scale of the contributing source, downstream distance and intervening estuarine system, deterioration of the relevant biological quality elements at waterbody scale or compromise of the environmental objectives of the Barrow Suir Nore Estuary is not predicted.

The assessment indicates that the identified construction and operational activities have the potential to result in localised and temporary or intermittent effects on fish through changes in the conditions of the receiving surface water environment. However, having regard to the nature, scale, duration and spatial extent of the potential effects, no deterioration of the Biology (Fish) quality element of the receiving surface water bodies is predicted, and the proposed development is not expected to compromise the achievement of their environmental objectives.

Potential localised effects on fish remain possible, particularly in relation to sediment mobilisation, accidental releases, concrete and cementitious materials, construction-phase drainage and road runoff from Bridge Street. Accordingly, targeted mitigation measures and embedded design controls have been identified to prevent and minimise impacts during the construction and operational phases of the proposed development.

6.4 Water Quality

6.4.1 Surface Water Quality

The scoping assessment identified potential pathways by which construction and operational activities could affect the physicochemical and chemical conditions of the receiving surface waterbodies. The potential effects are principally relevant to the physicochemical conditions supporting ecological status, including changes in suspended solids, turbidity and pH, and, where relevant, to chemical status depending on the nature of any substance released. Potential changes in these supporting conditions may also affect biological quality elements and are considered separately in the Biology (Habitats) and Biology (Fish) assessments.

During construction, potential effects on surface water quality are principally associated with the mobilisation of sediment from demolition, excavation and ground disturbance; accidental releases associated with the temporary construction compound, storage of fuels, materials and wastes, welfare facilities, plant and machinery; concrete and cementitious materials; and the construction and temporary management of surface water drainage infrastructure. These activities have the potential to result in increased suspended solids and turbidity and/or changes in the chemical and physicochemical conditions of the receiving surface water environment where materials are conveyed to the River Barrow through surface runoff or the drainage system.

During operation, potential effects on surface water quality are associated with runoff conveyed through the surface water drainage system and runoff from Bridge Street entering the drainage system through the proposed inlet / linear slot drain. These pathways provide the potential for suspended solids and other materials mobilised from the public realm, together with suspended solids and contaminants associated with road runoff from Bridge Street, to be discharged to the River Barrow through the existing outfall.

The potential effects of the scoped-in construction and operational sources on surface water quality are assessed in Table 6-7.



Table 6-7: Potential Impacts on Surface Water Quality (Pre-Mitigation)

Potential Source	Surface Water Receptor	Potential Impact	Extent	Duration	Magnitude
Construction					
Demolition, excavation, earthworks and ground disturbance	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Mobilisation of sediment from disturbed and exposed areas could increase suspended solids and turbidity within the receiving surface water environment and result in localised sediment deposition.	Local to downstream	Short-term	Moderate
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Accidental releases or mobilisation of fuels, oils, chemicals, wastes, wastewater or contaminated runoff could alter the chemical and physicochemical conditions of the receiving surface waters, with potential downstream transport through the connected estuarine system.	Local to downstream	Short-term / event-based	Moderate
Construction plant, machinery and vehicle movements	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Sediment-laden runoff and accidental releases of fuels, oils, hydraulic fluids or other contaminants could increase suspended solids and turbidity and / or alter the chemical and physicochemical conditions of the receiving surface waters.	Local to downstream	Short-term / event-based	Moderate
Construction works involving concrete and cementitious materials	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Runoff or accidental releases containing concrete or cementitious materials could result in elevated pH and increased suspended solids within the receiving surface waters, with potential downstream transport through the connected estuarine system.	Local to downstream	Short-term / event-based	Moderate
Construction of surface water drainage infrastructure and temporary construction-phase drainage management	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Drainage trench water and temporary collection, pumping or discharge arrangements could mobilise and convey sediment-laden or otherwise contaminated water through the drainage system to the River Barrow, potentially increasing suspended solids, turbidity and / or	Local to downstream	Short-term	Moderate



Potential Source	Surface Water Receptor	Potential Impact	Extent	Duration	Magnitude
		altering chemical and physicochemical conditions within receiving surface waters.			
Operational					
Surface water drainage system	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200)	Surface water runoff from the completed public realm could mobilise suspended solids and other materials and convey them through the drainage system and existing outfall to the River Barrow, with potential effects on the physicochemical conditions of receiving surface waters.	Local to downstream	Long-term / intermittent	Small
Bridge Street surface water drainage inlet / linear slot drain	Barrow Nore Estuary Upper (IE_SE_100_0250); New Ross Port (IE_SE_100_0200); Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500); Barrow Suir Nore Estuary (IE_SE_100_0100)	Road runoff entering the proposed drainage system may contain suspended solids, hydrocarbons and other road-derived contaminants which could be conveyed through the existing outfall to the River Barrow and transported through the downstream estuarine system, potentially affecting chemical and physicochemical conditions.	Local to downstream	Long-term / intermittent	Moderate



The potential impacts identified have been assessed against the environmental objectives of the WFD to determine whether they could result in deterioration of the status of the receiving surface waterbodies or compromise the achievement of their environmental objectives. The results of the surface water deterioration assessment are presented in Table 6-8.



Table 6-8: WFD Deterioration Assessment - Surface Water Bodies (Pre-Mitigation)

Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Construction		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	The identified construction sources could result in temporary changes in surface water quality through increased suspended solids and turbidity, accidental releases of fuels, oils, chemicals, wastes or wastewater, changes in pH associated with concrete and cementitious materials, and the discharge of sediment-laden or otherwise contaminated construction water. A local adverse effect on physicochemical or chemical conditions cannot be excluded pre-mitigation; however, given the temporary nature, limited spatial extent and event-based nature of the potential effects, they are not considered capable of causing deterioration of the relevant WFD quality elements at waterbody scale or compromising achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200)	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	Construction-related sediment or contaminants entering the River Barrow could be transported downstream to New Ross Port and result in temporary changes in physicochemical or chemical conditions. Potential effects would, however, be reduced through dilution, dispersion and, where relevant, sediment deposition during downstream transport. Given the temporary nature and limited spatial extent of the potential effects, they are not considered capable of causing deterioration of the relevant WFD quality elements at waterbody scale or compromising achievement of the environmental objectives of New Ross Port.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	Construction-related contaminants could potentially be transported through the connected estuarine system to the Lower Suir Estuary. Given the downstream distance and intervening estuarine environment, potential effects would be substantially reduced through dilution and dispersion. They are not considered capable of causing deterioration of the relevant WFD quality elements at waterbody scale or compromising achievement of the environmental objectives of the Lower Suir Estuary.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Barrow Suir Nore Estuary (IE_SE_100_0100)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management.	Construction-related contaminants could potentially be transported through the connected estuarine system to the Barrow Suir Nore Estuary. Given the downstream distance and intervening estuarine environment, potential effects would be substantially reduced through dilution and dispersion. They are not considered capable of causing deterioration of the relevant WFD quality elements at waterbody scale or compromising achievement of the environmental objectives of the Barrow Suir Nore Estuary.
Operational		
Barrow Nore Estuary Upper (IE_SE_100_0250)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain.	Operational runoff could result in intermittent changes in surface water quality through the discharge of suspended solids and other materials mobilised from the public realm, together with suspended solids, hydrocarbons and other road-derived contaminants from Bridge Street. A local adverse effect on physicochemical or chemical conditions cannot be excluded pre-mitigation, particularly in relation to road runoff from Bridge Street. However, given the scale of the contributing sources relative to the transitional waterbody and the limited spatial extent of the potential effects, they are not considered capable of causing deterioration of the relevant WFD quality elements at waterbody scale or compromising achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain.	Operational runoff could result in intermittent downstream transport of suspended solids and other materials from the public realm, including road-derived contaminants from Bridge Street. Potential effects would be reduced through dilution and dispersion during downstream transport. Given the nature and scale of the contributing sources, deterioration of the relevant WFD quality elements at waterbody scale or compromise of the environmental objectives of New Ross Port is not predicted.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Bridge Street surface water drainage inlet / linear slot drain.	Road-derived runoff from Bridge Street could result in intermittent downstream transport of suspended solids, hydrocarbons and other contaminants through the connected estuarine system. Given the scale of the contributing source, downstream distance and intervening estuarine environment, deterioration of the relevant WFD quality elements at waterbody scale or compromise of the environmental objectives of the Lower Suir Estuary is not predicted.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Barrow Suir Nore Estuary (IE_SE_100_0100)	Bridge Street surface water drainage inlet / linear slot drain.	Road-derived runoff from Bridge Street could result in intermittent downstream transport of suspended solids, hydrocarbons and other contaminants through the connected estuarine system. Given the scale of the contributing source, downstream distance and intervening estuarine environment, deterioration of the relevant WFD quality elements at waterbody scale or compromise of the environmental objectives of the Barrow Suir Nore Estuary is not predicted.



The assessment indicates that the identified construction and operational activities have the potential to result in localised and temporary or intermittent changes in surface water quality. However, having regard to the nature, scale, duration and spatial extent of the potential effects, no deterioration of the status of the receiving surface waterbodies or their relevant WFD quality elements is predicted. The proposed development is therefore not expected to compromise the achievement of the environmental objectives of the receiving surface waterbodies.

Potential localised effects on surface water quality remain possible, particularly in relation to sediment mobilisation, accidental releases, concrete and cementitious materials, construction-phase drainage and road runoff from Bridge Street. Accordingly, targeted mitigation measures and embedded design controls have been identified to prevent and minimise impacts during the construction and operational phases of the proposed development.

6.4.2 Groundwater Quality and Quantity

The scoping assessment identified potential pathways by which construction and operational activities could affect the chemical status of the New Ross Groundwater Body (IE_SE_G_152). Potential effects on groundwater quality are principally associated with the infiltration of contaminants following accidental releases of fuels, oils, chemicals, wastes, wastewater and concrete or cementitious materials, together with potential infiltration associated with construction-phase drainage and leakage from the operational surface water drainage infrastructure.

During construction, potential effects on groundwater quality are associated with accidental releases from the temporary construction compound, storage of fuels, materials and wastes, welfare facilities, plant and machinery; concrete and cementitious materials; and the construction and temporary management of surface water drainage infrastructure. Where released to ground, contaminants could migrate through the underlying soils and subsoils and potentially reach groundwater.

During operation, no direct discharges to groundwater are proposed. Potential effects are limited to leakage from the surface water drainage system, including drainage receiving road runoff from Bridge Street, which could provide a pathway for contaminants to migrate to groundwater.

The proposed development does not include groundwater abstraction or other activities that would directly alter groundwater levels or groundwater resource availability. Potential effects on groundwater quantity are therefore limited.

The potential effects of the scoped-in construction and operational sources on groundwater quality and quantity are assessed in Table 6-9.



Table 6-9: Potential Impacts on Groundwater Quality and Quantity (Pre-Mitigation)

Potential Source	Receptor	Potential Impact	Extent	Duration	Magnitude
Construction					
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	New Ross GWB (IE_SE_G_152)	Accidental releases of fuels, oils, chemicals, wastes or wastewater to ground could infiltrate through the underlying soils and subsoils and result in localised changes in groundwater chemical conditions.	Local	Short-term / event-based	Moderate
Construction plant, machinery and vehicle movements	New Ross GWB (IE_SE_G_152)	Accidental releases of fuels, lubricants, hydraulic fluids or other contaminants to ground could infiltrate through the underlying soils and subsoils and result in localised changes in groundwater chemical conditions.	Local	Short-term / event-based	Moderate
Construction works involving concrete and cementitious materials	New Ross GWB (IE_SE_G_152)	Accidental releases of concrete, cementitious materials or alkaline water to ground could infiltrate through the underlying soils and subsoils and result in localised changes in groundwater chemical conditions, including increased pH.	Local	Short-term / event-based	Moderate
Construction of surface water drainage infrastructure and temporary construction-phase drainage management	New Ross GWB (IE_SE_G_152)	Excavation for drainage infrastructure and temporary drainage arrangements could provide pathways for contaminated construction water or accidental releases to infiltrate to groundwater, resulting in localised changes in groundwater chemical conditions.	Local	Short-term	Small
Operational					
Surface water drainage system	New Ross GWB (IE_SE_G_152)	Leakage or failure of buried drainage infrastructure could result in infiltration of runoff conveyed by the drainage system and localised changes in groundwater chemical conditions.	Local	Long-term / intermittent	Negligible
Bridge Street surface water drainage inlet / linear slot drain	New Ross GWB (IE_SE_G_152)	Leakage or failure of buried drainage infrastructure conveying road runoff from Bridge Street could provide a pathway for suspended solids, hydrocarbons and other road-derived contaminants to infiltrate to groundwater, potentially resulting in localised changes in groundwater chemical conditions.	Local	Long-term / intermittent	Small

The identified potential impacts relate principally to groundwater quality. No groundwater abstraction or other activity capable of materially altering groundwater levels, recharge or groundwater resource availability is proposed. The proposed development is therefore not expected to result in a measurable change in the quantitative status of the New Ross Groundwater Body.

The potential impacts identified have been assessed against the environmental objectives of the WFD to determine whether they could result in deterioration of the chemical or quantitative status of the New Ross Groundwater Body or compromise the achievement of its environmental objectives. The results of the groundwater deterioration assessment are presented in Table 6-10.

Table 6-10: WFD Deterioration Assessment - Groundwater Bodies (Pre-Mitigation)

Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Construction		
New Ross GWB (IE_SE_G_152)	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; construction plant, machinery and vehicle movements; construction works involving concrete and cementitious materials; construction of surface water drainage infrastructure and temporary construction-phase drainage management	The identified construction sources could result in localised changes in groundwater chemical conditions through infiltration following accidental releases of fuels, oils, chemicals, wastes or wastewater; releases of concrete, cementitious materials or alkaline water; and infiltration of contaminated construction water associated with drainage works or temporary drainage arrangements. The magnitude of any effect would depend on the nature, volume and duration of the release. A local adverse effect on groundwater quality cannot be excluded pre-mitigation; however, given the temporary, localised and event-based nature of the potential effects, they are not considered capable of causing deterioration of the chemical status of the New Ross GWB or compromising achievement of its environmental objectives. No groundwater abstraction or other activity capable of materially altering groundwater levels, recharge or groundwater resource availability is proposed and, therefore, deterioration of quantitative status is not predicted.
Operational		
New Ross GWB (IE_SE_G_152)	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain	No direct discharge to groundwater is proposed. Potential groundwater exposure would depend on leakage from buried drainage infrastructure, including drainage conveying road runoff from Bridge Street. General public-realm runoff has limited contaminant potential, while Bridge Street runoff could contain suspended solids, hydrocarbons and other road-derived contaminants. Given the indirect nature of the pathway and the limited spatial extent of any potential effect, deterioration of the chemical status of the New Ross GWB or compromise of its environmental objectives is not predicted. No groundwater abstraction or other activity capable of materially altering groundwater levels, recharge or groundwater resource availability is proposed and, therefore, deterioration of quantitative status is not predicted.

The assessment indicates that the identified construction and operational activities have the potential to result in localised and temporary or intermittent changes in groundwater quality. However, having regard to the nature, scale, duration and spatial extent of the potential effects, no deterioration of the chemical or quantitative status of the New Ross Groundwater Body is predicted, and the proposed development is not expected to compromise the achievement of its environmental objectives.

Potential localised effects on groundwater quality remain possible, particularly in relation to accidental releases during construction and potential leakage from drainage infrastructure. Accordingly, targeted mitigation measures and embedded design controls have been identified to prevent and minimise impacts during the construction and operational phases of the proposed development.

6.5 Protected Areas

The scoping assessment identified potential pathways by which construction and operational activities could affect the objectives or standards of WFD Protected Areas associated with the receiving surface water and groundwater environment. The Protected Areas carried forward for assessment comprise the River Barrow and River Nore SAC, Lower River Suir SAC, downstream Shellfish Protected Areas, the Nutrient Sensitive Area and the New Ross Groundwater Body Drinking Water Protected Area.

During construction, potential effects are principally associated with sediment mobilisation and accidental releases of fuels, oils, chemicals, wastes, wastewater and concrete or cementitious materials, together with the construction and temporary management of surface water drainage infrastructure. These activities could affect surface water, sediment and/or groundwater conditions relevant to the objectives or standards of the identified Protected Areas.

During operation, potential effects are associated with runoff conveyed through the surface water drainage system, road runoff from Bridge Street entering the drainage system through the proposed inlet / linear slot drain, and potential localised changes in hydraulic connectivity and floodwater pathways associated with the modified masonry wall.

The potential effects of the scoped-in construction and operational sources on WFD Protected Areas are assessed in Table 6-11.



Table 6-11: Potential Impacts on Protected Areas (Pre-Mitigation)

Potential Source	Protected Area Receptor	Potential Impact	Extent	Duration	Magnitude
Construction					
Demolition, excavation, earthworks and ground disturbance	River Barrow and River Nore SAC; Lower River Suir SAC; downstream Shellfish Protected Areas; Nutrient Sensitive Area	Sediment mobilisation could increase suspended solids and turbidity and result in localised sediment deposition, with potential effects on water and habitat conditions relevant to the objectives or standards of the Protected Areas.	Local to downstream	Short-term	Moderate
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	River Barrow and River Nore SAC; Lower River Suir SAC; downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB Drinking Water Protected Area	Accidental releases of fuels, oils, chemicals, wastes or wastewater could alter surface water, sediment and / or groundwater conditions relevant to the objectives or standards of the identified Protected Areas.	Local to downstream	Short-term / event-based	Moderate
Construction plant, machinery and vehicle movements	River Barrow and River Nore SAC; Lower River Suir SAC; downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB Drinking Water Protected Area	Sediment-laden runoff and accidental releases of fuels, oils, hydraulic fluids or other contaminants could alter surface water, sediment and / or groundwater conditions relevant to the objectives or standards of the identified Protected Areas.	Local to downstream	Short-term / event-based	Moderate
Construction works involving concrete and cementitious materials	River Barrow and River Nore SAC; Lower River Suir SAC; downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB Drinking Water Protected Area	Releases of concrete or cementitious materials could increase suspended solids and alter pH in surface water or groundwater, with potential effects on conditions relevant to the objectives or standards of the identified Protected Areas.	Local to downstream	Short-term / event-based	Moderate



Potential Source	Protected Area Receptor	Potential Impact	Extent	Duration	Magnitude
Construction of surface water drainage infrastructure and temporary construction-phase drainage management	River Barrow and River Nore SAC; Lower River Suir SAC; downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB Drinking Water Protected Area	Sediment-laden or otherwise contaminated construction water could affect surface water, sediment and / or groundwater conditions relevant to the objectives or standards of the identified Protected Areas.	Local to downstream	Short-term	Moderate
Operational					
Surface water drainage system	River Barrow and River Nore SAC; Nutrient Sensitive Area	Suspended solids and other materials mobilised from the public realm and conveyed through the drainage system could result in intermittent changes in surface water or sediment conditions relevant to the objectives or standards of the Protected Areas.	Local to downstream	Long-term / intermittent	Small
Bridge Street surface water drainage inlet / linear slot drain	River Barrow and River Nore SAC; Lower River Suir SAC; downstream Shellfish Protected Areas; Nutrient Sensitive Area; New Ross GWB Drinking Water Protected Area	Suspended solids, hydrocarbons and other road-derived contaminants conveyed through the drainage system could result in intermittent changes in surface water or sediment conditions and, in the event of leakage from buried drainage infrastructure, localised changes in groundwater conditions relevant to the objectives or standards of the Protected Areas.	Local to downstream	Long-term / intermittent	Moderate
Modified masonry wall	River Barrow and River Nore SAC	Localised modification of hydraulic connectivity and floodwater pathways during elevated tidal or flood conditions could alter the hydrological conditions supporting habitats associated with the Protected Area.	Local	Long-term / intermittent	Small



The potential impacts identified have been assessed to determine whether they could compromise the objectives or standards established for the relevant WFD Protected Areas. The results of the Protected Areas assessment are presented in Table 6-12.



Table 6-12: WFD Deterioration Assessment - Protected Areas (Pre-Mitigation)

Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Construction		
River Barrow and River Nore SAC	Demolition, excavation, earthworks and ground disturbance; temporary construction compound, storage of fuels, materials and wastes, and welfare facilities; plant, machinery and vehicle movements; concrete and cementitious materials; construction of surface water drainage infrastructure and temporary drainage management	The identified construction sources could result in temporary and localised changes in water, sediment and habitat conditions within the SAC through sediment mobilisation, accidental releases and changes in physicochemical conditions. A local adverse effect cannot be excluded pre-mitigation; however, given the temporary nature and limited spatial extent of the potential effects, they are not predicted to compromise the WFD objectives applicable to the Protected Area. Potential effects on the conservation objectives of the SAC are addressed separately through the Appropriate Assessment process.
Lower River Suir SAC	Demolition, excavation, earthworks and ground disturbance; temporary construction compound/ storage/ welfare; plant, machinery and vehicle movements; concrete and cementitious materials; construction drainage	Potential effects would arise through downstream transport of sediment or contaminants within the connected estuarine system. Given the downstream distance and associated dilution, dispersion and, where relevant, sediment deposition, the construction-phase effects are not predicted to compromise the WFD objectives applicable to the Protected Area.
Shellfish Protected Areas	Demolition / earthworks; temporary compound / storage / welfare; plant and machinery; concrete / cementitious materials; construction drainage	Construction activities could result in temporary downstream transport of suspended solids or contaminants towards the Shellfish Protected Areas. Given the downstream distance and intervening estuarine environment, with associated dilution, dispersion and sediment deposition, the potential effects are not predicted to compromise the applicable objectives or standards of the Shellfish Protected Areas.
Nutrient Sensitive Area	Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	An accidental release of wastewater from welfare facilities could provide a temporary nutrient input to the receiving surface water environment. Given the event-based nature and limited scale of the potential input relative to the receiving estuarine system, it is not predicted to result in nutrient loading sufficient to compromise the objectives applicable to the Nutrient Sensitive Area.
New Ross GWB Drinking Water Protected Area	Temporary construction compound / storage/ welfare; plant and machinery; concrete / cementitious materials; construction drainage	Accidental releases or contaminated construction water could infiltrate through soils and subsoils and result in localised changes in groundwater chemical conditions. A local adverse effect cannot be excluded pre-mitigation; however, given the temporary, event-based and spatially limited nature of the potential effects, they are not predicted to compromise the objectives applicable to the Drinking Water Protected Area.



Receptor	Relevant Potential Sources	Pre-Mitigation WFD Assessment
Operational		
River Barrow and River Nore SAC	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain; and modified masonry wall.	Operational runoff could result in intermittent changes in water and sediment conditions, while the modified masonry wall could result in localised changes in hydraulic connectivity and floodwater pathways. Given the scale and limited spatial extent of these effects, they are not predicted to compromise the WFD objectives applicable to the Protected Area. Potential effects on the conservation objectives of the SAC are addressed separately through the Appropriate Assessment process.
Lower River Suir SAC	Bridge Street surface water drainage inlet / linear slot drain	Road runoff from Bridge Street entering the surface water drainage system could result in intermittent downstream transport of suspended solids and road-derived contaminants towards the Lower Suir Estuary. Given the scale of the contributing source, downstream distance and intervening estuarine environment, the potential effect is not predicted to compromise the WFD objectives applicable to the Protected Area.
Shellfish Protected Areas	Bridge Street surface water drainage inlet / linear slot drain	Road runoff from Bridge Street entering the surface water drainage system could result in intermittent downstream transport of suspended solids and road-derived contaminants towards the Shellfish Protected Areas. Given the scale of the contributing source, downstream distance and attenuation through the intervening estuarine environment, the potential effect is not predicted to compromise the applicable objectives or standards of the Shellfish Protected Areas.
New Ross GWB Drinking Water Protected Area	Surface water drainage system; Bridge Street surface water drainage inlet / linear slot drain	Leakage from buried surface water drainage infrastructure could provide an indirect pathway for materials contained in runoff to infiltrate to groundwater, with Bridge Street runoff providing the greater potential contaminant source. Given the indirect nature of the pathway and the limited spatial extent of any potential effect, the operational drainage system is not predicted to compromise the objectives applicable to the Drinking Water Protected Area.



The assessment indicates that the identified construction and operational activities have the potential to result in localised and temporary or intermittent changes in environmental conditions relevant to the identified WFD Protected Areas. However, having regard to the nature, scale, duration and spatial extent of the potential effects, the proposed development is not predicted to compromise the objectives or standards applicable to the identified Protected Areas.

Potential localised effects remain possible, particularly in relation to sediment mobilisation, accidental releases, concrete and cementitious materials, construction-phase drainage, road runoff from Bridge Street and localised interaction with tidal and flood waters. Accordingly, targeted mitigation measures and embedded design controls have been identified to prevent and minimise impacts during the construction and operational phases of the proposed development.



7. CUMULATIVE EFFECTS

The cumulative assessment considers whether the potential pressures associated with the proposed development, in combination with the existing significant pressures affecting the identified WFD waterbodies, could result in deterioration of WFD status or compromise achievement of their environmental objectives.

The assessment considers construction and operational activities separately and examines the potential interaction between project-related pressures and the significant pressures and issues identified by the EPA. Particular consideration is given to the nature, magnitude, duration and spatial extent of potential effects, the relevant hydrological pathways and the sensitivity of the receiving waterbodies.

The pre-mitigation cumulative assessment is presented in Table 7-1.



Table 7-1: WFD Deterioration Assessment - Cumulative Effects (Pre-Mitigation)

Receptor Significant Pressure(s) / Issue(s)	Potential Interaction with Existing Pressure Environment	Cumulative WFD Assessment
Construction		
Barrow Nore Estuary Upper (IE_SE_100_0250) Urban run-off; Agriculture / Nutrients	Construction-related sediment and contaminant inputs could temporarily increase the existing pollutant burden associated with agricultural and urban run-off pressures. These inputs could affect physicochemical and chemical conditions, aquatic habitats and fish.	Construction-related sediment and contaminant inputs could result in temporary and localised adverse effects on water quality, aquatic habitats and fish. However, given the nature, magnitude, duration and limited spatial extent of the potential effects, the combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the environmental objectives of Barrow Nore Estuary Upper.
New Ross Port (IE_SE_100_0200) Agriculture / Nutrients; Organic	Construction-related pollutants could contribute temporarily to the existing pollutant burden through the downstream hydrological connection. Accidental wastewater releases could introduce nutrients or organic material. The magnitude of potential project-related inputs would be reduced through downstream dilution and dispersion.	Construction-related pollutants could result in temporary changes in water and sediment conditions, with associated effects on aquatic habitats and fish. However, given the temporary nature of the potential inputs, the indirect downstream pathway and the anticipated reduction in their magnitude during transport, a material cumulative contribution to the existing nutrient and organic pollution pressures is not predicted. The combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500) Agriculture / Nutrients; Organic	Construction-related pollutants could contribute to the overall pollutant burden if transported into the Lower Suir Estuary. However, the magnitude of potential inputs would be substantially reduced through dilution and dispersion within the intervening estuarine system.	Given the temporary nature of the potential inputs, the indirect downstream pathway and the anticipated reduction in their magnitude during transport, a material cumulative contribution to the existing nutrient and organic pollution pressures is not predicted. The combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives.
Barrow Suir Nore Estuary (IE_SE_100_0100) Agriculture / Nutrients	Construction-related pollutants could temporarily contribute to the overall pollutant burden. However, no continuous nutrient discharge is proposed, and potential project-related inputs would be substantially reduced through downstream dilution and dispersion.	Given the temporary nature of the potential inputs, the indirect downstream pathway and the anticipated reduction in their magnitude during transport, a material cumulative contribution to the existing nutrient pollution pressure is not predicted. The combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives.



Receptor Significant Pressure(s) / Issue(s)	Potential Interaction with Existing Pressure Environment	Cumulative WFD Assessment
New Ross GWB (IE_SE_G_152) None identified / None identified	No existing significant groundwater pressures have been identified. Accidental releases could nevertheless infiltrate through soils and subsoils, resulting in localised changes in groundwater chemical conditions. No groundwater abstraction or other activity capable of materially altering groundwater levels or resource availability is proposed.	Accidental releases could result in localised adverse effects on groundwater quality, depending on the nature, volume and duration of the release. However, given the localised and event-based nature of the potential inputs, deterioration of the chemical status of New Ross GWB or compromise of its environmental objectives is not predicted. No additional pressure capable of causing deterioration of groundwater quantitative status has been identified.
Operational		
Barrow Nore Estuary Upper (IE_SE_100_0250) Urban run-off; Agriculture / Nutrients	Operational runoff could contribute to the existing urban run-off pressure through intermittent inputs of suspended solids, hydrocarbons and other road-derived contaminants. The combined drainage design reduces calculated peak runoff from 27.7 l/s to 21.2 l/s relative to the existing baseline, indicating no increase in peak hydraulic loading through the shared outfall. Changes to the masonry wall could also result in localised changes in floodwater pathways.	Operational runoff could result in intermittent and localised adverse effects on physicochemical and chemical conditions, aquatic habitats and fish. However, given the nature and scale of the contributing sources and the limited spatial extent of the potential effects, the combined pollutant pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives. Separately, the combined drainage design indicates no increase in calculated peak hydraulic discharge, while potential localised changes in floodwater pathways are not predicted to cause deterioration of the relevant hydromorphological quality elements.
New Ross Port (IE_SE_100_0200) Agriculture / Nutrients; Organic	Operational runoff could introduce intermittent pollutant inputs into the connected estuarine system and contribute to the existing pollutant burden. However, no continuous nutrient or organic discharge is proposed, and the magnitude of potential project-related inputs would be reduced through downstream dilution and dispersion.	Operational runoff could result in intermittent changes in water quality, with associated effects on aquatic habitats and fish. However, given the nature and scale of the contributing sources, the indirect downstream pathway and the anticipated reduction in pollutant concentrations during transport, a material cumulative contribution to the existing nutrient and organic pollution pressures is not predicted. The combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives.
Lower Suir Estuary (Little Island-Cheekpoint) (IE_SE_100_0500)	Operational runoff could introduce intermittent pollutant inputs into the connected estuarine system. However, no continuous nutrient or	Given the nature and scale of the contributing sources, the indirect downstream pathway and the anticipated reduction in the magnitude of potential pollutant inputs during transport, a material cumulative contribution to the existing nutrient



Receptor Significant Pressure(s) / Issue(s)	Potential Interaction with Existing Pressure Environment	Cumulative WFD Assessment
Agriculture / Nutrients; Organic	organic discharge is proposed, and potential inputs would be substantially reduced through dilution and dispersion within the intervening estuarine system.	and organic pollution pressures is not predicted. The combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives.
Barrow Suir Nore Estuary (IE_SE_100_0100) Agriculture / Nutrients	Operational runoff could contribute intermittently to the overall pollutant burden. However, no continuous nutrient discharge is proposed, and potential project-related inputs would be substantially reduced through dilution and dispersion during downstream transport.	Given the nature and scale of the contributing sources, the indirect downstream pathway and the anticipated reduction in the magnitude of potential pollutant inputs during transport, a material cumulative contribution to the existing nutrient pollution pressure is not predicted. The combined pressures are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the waterbody's environmental objectives.
New Ross GWB (IE_SE_G_152) None identified / None identified	No existing significant groundwater pressures have been identified. No direct discharge to groundwater is proposed, although leakage from buried drainage infrastructure could provide an indirect infiltration pathway for contaminants. No groundwater abstraction or other activity capable of materially altering groundwater levels or resource availability is proposed.	Leakage from buried drainage infrastructure could result in localised changes in groundwater chemical conditions. However, given the indirect nature of the potential pathway and the limited spatial extent of any resulting effects, deterioration of the chemical status of New Ross GWB or compromise of its environmental objectives is not predicted. No additional pressure capable of causing deterioration of groundwater quantitative status has been identified.



The assessment indicates that construction and operational activities could result in temporary or intermittent localised adverse effects on water quality, aquatic habitats and fish, particularly within Barrow Nore Estuary Upper, which receives runoff from the Proposed Development. However, having regard to the nature, magnitude, duration and spatial extent of the identified effects, the project-related pressures, in combination with the existing significant pressures, are not predicted to cause deterioration of the relevant WFD quality elements or compromise achievement of the environmental objectives of the assessed surface waterbodies.

For New Ross GWB, the potential effects are limited to localised groundwater contamination through accidental releases during construction or leakage from buried drainage infrastructure during operation. No deterioration of groundwater chemical or quantitative status, or compromise of the waterbody's environmental objectives, is predicted.

Overall, the pre-mitigation cumulative assessment concludes that the proposed development, in combination with the existing significant pressures affecting the receiving waterbodies, is not predicted to cause deterioration of WFD status or compromise achievement of the environmental objectives of any of the assessed waterbodies.



8. MITIGATION MEASURES

The pre-mitigation assessment does not identify any predicted deterioration in the status of the relevant WFD waterbodies or individual WFD quality elements, or any compromise of the achievement of their environmental objectives. However, potential pathways have been identified by which construction and operational activities could result in localised adverse effects on the receiving surface water and groundwater environment. These relate principally to sediment mobilisation, accidental releases of fuels, oils and other potentially polluting substances, concrete and cementitious materials, construction-phase drainage management, and operational surface water runoff. Mitigation measures and embedded design controls will therefore be implemented to avoid or minimise these potential effects and to protect the receiving surface water and groundwater environment.

The mitigation measures and embedded design controls applicable to the proposed development are presented in Table 8-1. Construction phase mitigation measures will be incorporated into the Construction Environmental Management Plan (CEMP) and implemented for the duration of the construction works.

Table 8-1: Mitigation Measures and Embedded Controls

Potential Source	Mitigation Measure / Embedded Control
Construction	
Demolition, excavation, earthworks and ground disturbance	- Weather forecasts will be reviewed daily and earthworks will not be undertaken during periods of heavy rainfall. - The extent and duration of exposed ground will be minimised where practicable. - Excavated material and soil stockpiles will be appropriately managed to minimise sediment mobilisation, including compaction of stockpiles and installation of temporary silt fencing where required. - Measures will be implemented to prevent soil and sediment being tracked onto adjacent roads, with road sweeping undertaken where required.
Temporary construction compound, storage of fuels, materials and wastes, and welfare facilities	- Fuels, oils, chemicals, cementitious materials and other potentially polluting substances will be stored in appropriately bunded and designated storage areas. - Bunded storage will provide a minimum capacity of 110% of the volume of the materials stored. - Construction wastes will be segregated and stored in appropriate containers prior to removal by appropriately authorised waste contractors. - Portable and/or containerised welfare facilities will be provided, with sanitary waste removed from site by an appropriately authorised contractor.
Construction plant, machinery and vehicle movements	- Refuelling of construction plant and machinery will be undertaken off site. - Plant and machinery will be maintained in good working order and routinely inspected for leaks. - Spill kits will be maintained within the construction area and in construction plant to facilitate immediate response to accidental releases. - Any accidental release of fuels, oils or hydraulic fluids will be immediately contained, with contaminated material removed and appropriately managed.
Construction works involving concrete and cementitious materials	- Concrete, cementitious materials and associated washwater will be managed to prevent uncontrolled discharge to the surface water drainage system, surface waters or ground. - Concrete and cementitious materials stored on site will be appropriately contained. - Construction water potentially affected by cementitious materials will be contained and, where necessary, treated to control suspended solids and pH prior to controlled discharge.



Potential Source	Mitigation Measure / Embedded Control
Construction of surface water drainage infrastructure and temporary construction phase drainage management	- The main surface water drainage system will remain operational to accommodate drainage from the operational Grain Store development. - Construction runoff from the plaza works will be isolated from the live drainage network by localised mechanical inflatable pipe stoppers installed at the relevant tributary connections. - Silt-laden water collected within the isolated construction area or drainage excavations will be pumped to an on-site silt-filtration and pH-neutralisation system prior to controlled discharge of treated water to the live surface water drainage system. - Uncontrolled discharge of construction runoff to the River Barrow will not be permitted.
Establishment of soft landscaped areas	- Areas of exposed soil associated with establishment of landscaping will be kept to the minimum practicable extent and stabilised as soon as practicable following completion. - Soil and landscaping materials will be managed to minimise mobilisation of sediment to the surface water drainage system or infiltration of contaminants to ground.
Operational	
Surface water drainage system	- Surface water runoff from the proposed development will be collected and conveyed through the proposed drainage system to the existing outfall to the River Barrow. - A Class 1 Bypass Hydrocarbon Separator will be installed on the main surface water drainage system upstream of the outfall, providing treatment of runoff prior to discharge to the River Barrow. - The hydrocarbon separator will incorporate 2,000 litres of silt storage capacity to facilitate retention of sediment conveyed through the drainage system. - The drainage design incorporates permeable soft landscaped areas, reducing the extent of impermeable surfacing and the rate and volume of surface water runoff relative to the existing baseline condition.
Bridge Street surface water drainage inlet / linear slot drain	- Overland runoff from Bridge Street will be collected by the proposed linear slot drain and associated drainage inlet and conveyed through the surface water drainage network. - Runoff collected from Bridge Street will pass through the Class 1 Bypass Hydrocarbon Separator prior to discharge to the River Barrow, providing treatment of road-derived hydrocarbons and suspended solids.
Permeable soft landscaped areas	- Permeable soft landscaped areas will form part of the drainage and SuDS strategy. - These areas will reduce the extent of impermeable surfacing, promote infiltration and provide attenuation of surface water runoff. - The volume and rate of runoff entering the surface water drainage system will consequently be reduced
Modified masonry wall	- The modified masonry wall and flood protection infrastructure will remain within the existing developed river frontage and will not extend into the River Barrow or involve works to the bed or intertidal area. - Where the existing masonry wall is lowered, a minimum crest level of 3.90 mOD will be maintained, in accordance with the Site-Specific Flood Risk Assessment. - The modified wall will maintain its flood protection function without introducing an in-channel structure or obstruction to the transitional waterbody.
Maintenance works associated with the public realm and	Surface water drainage infrastructure, including drainage inlets, linear drainage channels, manholes and the hydrocarbon separator, will be inspected and maintained as required to retain their intended hydraulic and water-quality treatment functions.



Potential Source	Mitigation Measure / Embedded Control
drainage infrastructure	Materials, sediment and wastes arising from maintenance activities will be contained and appropriately removed to prevent their mobilisation to the drainage system, River Barrow or surrounding ground.

Implementation of the mitigation measures and embedded design controls identified will control the Source-Pathway-Receptor linkages identified in the WFD assessment. In particular, construction-phase controls will minimise the potential for sediment, hydrocarbons, cementitious materials and other contaminants to reach surface water or groundwater, while the operational drainage design will control runoff quantity and quality prior to discharge to the River Barrow. Following implementation of these measures and controls, the identified pathways for adverse effects will be substantially controlled and the potential for localised effects on the receiving surface water and groundwater environment will be further reduced.



9. WFD COMPLIANCE ASSESSMENT

The WFD compliance assessment has been undertaken to determine whether the proposed development, following implementation of the identified mitigation measures and embedded design controls, would comply with the objectives of the Water Framework Directive during the construction and operational phases.

The assessment has considered the identified impact pathways, the sensitivity and current status of the receiving water environment, the nature and duration of potential effects and the mitigation measures incorporated into the proposed development.

The pre-mitigation assessment identified potential effects on the relevant surface water and groundwater bodies associated with the construction and operational phases of the proposed development. These effects were assessed as localised and/or limited in extent and were not predicted to result in deterioration of the status of any relevant waterbody or individual WFD quality element, or to compromise the achievement of WFD environmental objectives. The cumulative effects assessment similarly concluded that the proposed development, in combination with the existing pressures affecting the relevant waterbodies, would not result in deterioration or compromise the achievement of the applicable environmental objectives.

The mitigation measures and embedded design controls identified will further reduce the potential effects identified through the assessment. Taking account of these measures and controls, no deterioration of surface waterbody status or individual surface water quality elements is predicted. Similarly, no deterioration of the chemical or quantitative status of the New Ross Groundwater Body (IE_SE_G_152) is predicted.

On the basis of the assessment undertaken, and subject to implementation of the identified mitigation measures and embedded design controls, the proposed development is not expected to:

- result in deterioration of the status of the Barrow Nore Estuary Upper transitional waterbody (IE_SE_100_0250);
- result in deterioration of the status of the downstream hydrologically connected transitional waterbodies, namely New Ross Port (IE_SE_100_0200), Lower Suir Estuary (Little Island - Cheekpoint) (IE_SE_100_0500) and the Barrow Suir Nore Estuary (IE_SE_100_0100);
- result in deterioration of the chemical or quantitative status of the New Ross Groundwater Body (IE_SE_G_152);
- cause deterioration of any individual WFD quality element;
- prevent the achievement of WFD environmental objectives; or
- conflict with the objectives of the River Basin Management Plan 2022-2027.

Accordingly, the proposed development is considered to be compliant with the objectives of the Water Framework Directive during the construction and operational phases.



10. DEROGATION, ARTICLE 4 (7)

Article 4(7) of the Water Framework Directive provides a mechanism whereby certain developments that may otherwise result in deterioration of water body status or prevent the achievement of WFD environmental objectives may proceed, subject to satisfaction of specific derogation tests and conditions.

Based on the findings of the WFD compliance assessment, the proposed development is not expected to result in deterioration of any surface water body or groundwater body status or prevent the achievement of WFD environmental objectives.

Accordingly, a derogation assessment under Article 4(7) of the Water Framework Directive is not required for the proposed development.



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