The background is a vibrant yellow. It is decorated with several abstract geometric shapes in shades of blue, teal, and white. These include circles, semi-circles, and rounded rectangular shapes, some of which are layered or overlapping. The shapes are scattered across the page, creating a modern and dynamic visual effect.

Appendix A13.1
Water Framework
Directive (WFD)
Compliance Assessment

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Appendix A13.1: WFD Assessment

A13.1. Introduction

A13.1.1. The Water Framework Directive

Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy is known as the Water Framework Directive (WFD).

The WFD established a framework for the protection of both surface and groundwaters. The WFD provides a vehicle for establishing a system to improve and / or maintain the quality of water bodies across the European Union (EU). The WFD requires all water bodies (rivers, lakes, groundwater, transitional, coastal) to attain 'Good Water Status' (qualitative and quantitative) by 2027.

There are a number of WFD objectives in respect of which the quality of water is protected. The key objectives at EU level are the general protection of aquatic ecology, specific protection of unique and valuable habitats, the protection of drinking water resources, and the protection of bathing water (see Table 1). The objective is to achieve this through a system of river basin management planning and extensive monitoring. 'Good Status' means both 'Good Ecological Status' (GES) and 'Good Chemical Status' (GCS).

Table 1: WFD Environmental Objectives

Objectives
Member States shall implement the necessary measures to prevent deterioration of the status of all bodies of surface water.
Member States shall protect, enhance and restore all bodies of surface water, subject to the application of subparagraph (iii) for artificial and heavily modified bodies of water, with the aim of achieving good surface water status by 2015.
Member States shall protect and enhance all artificial and heavily modified bodies of water, with the aim of achieving good ecological potential and good surface water chemical status by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027.
Progressively reduce pollution from priority substances and cease or phase out emissions, discharges and losses of priority hazardous substances.
Prevent Deterioration in Status and prevent or limit input of pollutants to groundwater.

A13.1.2. Article 4.7 of the WFD

Member states must meet the conditions of the WFD unless they meet the criteria laid out in Article 4.7 of the WFD. Article 4.7 states:

'Member states will not be in breach of this Directive when:

- *failure to achieve good groundwater status, good ecological status or, where relevant, good ecological potential or to prevent deterioration in the status of a body of surface water or groundwater is the result of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or*
- *failure to prevent deterioration from high status to good status of a body of surface water is the result of new sustainable human development activities*

and all the following conditions are met:

- (a) *all practicable steps are taken to mitigate the adverse impact on the status of the body of water;*
- (b) *the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years;*
- (c) *the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and*

(d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option'.

A13.1.3. The WFD Assessment

The Water Policy Regulations require the assessment of permanent impacts of a scheme / project on WFD water bodies (rivers, lakes, estuaries, coastal waters and groundwater). Typically, the permanent impacts include all operational impacts, but can also include impacts from construction depending on the length and / or nature of the works, etc. of a scheme, as some potential construction impacts could be considered permanent in the absence of mitigation. An assessment of the compliance of the Ballymun / Finglas to City Centre Core Bus Corridor Scheme (hereafter referred to as Proposed Scheme) with WFD requirements is provided in this Appendix to Chapter 13 (Water) in Volume 2 of this Environmental Impact Assessment Report (EIAR). This WFD Assessment Report has been prepared for the Construction and Operational Phases of the Proposed Scheme and is Appendix A13.1 of Chapter 13 (Water) in Volume 2 of this EIAR.

The generic environmental objectives set out below (based on Article 4.1 of the WFD) are used for the assessment of the Proposed Scheme:

- No changes affecting high status sites;
- No changes that will cause failure to meet surface water GES or GEP or result in a deterioration of surface water ecological status or potential;
- No changes which will permanently prevent or compromise the Environmental Objectives being met in other water bodies; and
- No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.

A13.2. Outline of the Proposed Scheme

The Proposed Scheme will be 11km in length and will be comprised of two main alignments in terms of the route it will follow, from Ballymun to the City Centre (the Ballymun Section) and from Finglas to Phibsborough (the Finglas Section).

The Ballymun Section of the Proposed Scheme will commence on R108 Ballymun Road at its junction with St. Margaret's Road, just south of M50 Motorway Junction 4, and will be routed along the R108 on Ballymun Road, St. Mobhi Road, Botanic Road, Prospect Road, Phibsborough Road, Constitution Hill and R132 Church Street as far as R148 Arran Quay at the River Liffey on the western edge of Dublin City Centre. Priority for buses will be provided along the entire route, consisting primarily of dedicated bus lanes in both directions, where feasible, with alternative measures proposed at particularly constrained locations such as at R108 St. Mobhi Road. A complementary cycle route along quiet streets is proposed along Royal Canal Bank in Phibsborough, which will extend southwards from the Royal Canal to Western Way, parallel a short distance to the east of R108 Phibsborough Road, and also through the Markets Area at the southern end of the Proposed Scheme.

The Finglas Section of the Proposed Scheme will commence on the R135 Finglas Road at the junction with R104 St. Margaret's Road and will be routed along the R135 Finglas Road as far as Hart's Corner in Phibsborough, where it will join the Ballymun Section of the Proposed Scheme. Priority for buses will be provided along the entire route, consisting of dedicated bus lanes in both directions. Continuous segregated cycle tracks will be provided from the Church Street Junction in Finglas to Hart's Corner. No cycle tracks are proposed along the Finglas Bypass at the northern end of the Proposed Scheme, where more suitable routes are available along local streets.

For the purposes of describing the Proposed Scheme, it has been split into the following seven sections (Section 1 to Section 4 comprise the Ballymun Section of the Proposed Scheme and Section 5 to Section 7 comprise the Finglas Section of the Proposed Scheme):

- Section 1 – Ballymun Road from St. Margaret's Road to Griffith Avenue;
- Section 2 – St. Mobhi Road and Botanic Road from Griffith Avenue to Hart's Corner;
- Section 3 – Prospect Road, Phibsborough Road from Hart's Corner to Western Way;
- Section 4 - Constitution Hill and Church Street to Arran Quay;

- Section 5 – Finglas Road from St. Margaret's Road to Wellmount Road;
- Section 6 – Finglas Road from Wellmount Road to Ballyboggan Road; and
- Section 7 – Finglas Road from Ballyboggan Road to Hart's Corner.

Further details are provided in Chapter 4 (Proposed Scheme Description) in Volume 2 of this EIAR.

A13.2.1. Overview of the Proposed Scheme and Scope of this Assessment

Key infrastructure elements for the Proposed Scheme are described in detail within Chapter 4 (Proposed Scheme Description). Chapter 5 (Construction) describes the Construction Phase for the works related to these key infrastructure elements.

There are a number of specific locations where proposed infrastructure is of relevance to this assessment of the Proposed Scheme:

- Proposed cycle / pedestrian bridge across the Royal Canal; and
- A ramp alongside the Royal Canal up to the new bridge.

The following activities are considered as potential sources of impact, and as such, are scoped into this assessment:

- Construction Phase of the Proposed Scheme;
 - Construction Compounds;
 - Road refreshments, resurfacing or reconstruction and kerb and footpath improvements;
 - Cycle track construction;
 - Bridge construction;
 - Site clearance and limited earth works;
 - Road widening; and
 - Property boundary reinstatement.
- Operational Phase of the Proposed Scheme:
 - Impermeable areas; and
 - Changes in pollutant loads.

A13.3. Methodology

A13.3.1. Study Area / WFD Screening

This WFD assessment covers only those components of the Proposed Scheme that could affect water body features. These were primarily identified as sections of the Proposed Scheme which are within 500m of surface and groundwater water bodies (refer to Section 13.2.1 of Chapter 13 (Water) in Volume 2 of this EIAR). The assessment looks at the impacts of new modifications to the water bodies and any changes to existing modifications.

A13.3.2. Relevant Guidelines, Policy and Legislation

A13.3.2.1. River Basin Management Plans

RBMPs provide the mechanism for implementing and ensuring an integrated approach to the protection, improvement and sustainable management of the water environment and are published every six years.

The second cycle, River Basin Management Plan for Ireland 2018 – 2021 (hereafter referred to as the RBMP 2018 - 2021) was published by the Department of Housing, Planning and Local Government (DHPLG) in April 2018 and covers Ireland as a whole (DHPLG 2018). For the second cycle, the Eastern, South-Eastern, South-Western, Western and Shannon River Basin Districts have been merged to form one national River Basin District (RBD). For 'At Risk' water bodies, the RBMP 2018 - 2021 identified the frequency of significant pressures impacting these receptors as follows: agriculture (53%), hydromorphology (24%), urban wastewater (20%),

forestry (16%), domestic wastewater (11%), urban runoff (9%), peat (8%), extractive industry (7%) and mines and quarries (6%).

In September 2021, the Minister for Housing, Local Government and Heritage (DHLGH), published the draft River Basin Management Plan for Ireland 2022 - 2027 (hereafter referred to as the draft RBMP) for public consultation (DHLGH 2021). The consultation period closed on 31 March 2022. The draft RBMP sets out at the outset that it is published in the context of a rapidly changing policy landscape at European and International levels and against a backdrop of *'widespread, rapid and intensifying climate change'*. In addition, Ireland is now experiencing a sustained decline in water quality following many years of improvements, therefore stronger measures are now required to achieve sustainable water management in order to address and adapt to the impacts of climate change and achieve the desired outcomes for biodiversity.

Image A0.1 presents the ecological status of water bodies in Ireland over the past two cycles of the RBMP and illustrates the reduction in water quality, particularly in relation to the reduced percentage of water bodies achieving high status and increased percentage achieving bad status. The reductions in water quality are especially notable for rivers, and for other water bodies, the changes are more mixed with some reductions and some improvements. The draft RBMP cites a 4.4% net decline in the status of water bodies, and notes that this is mostly driven by a decline in the status of river water bodies.

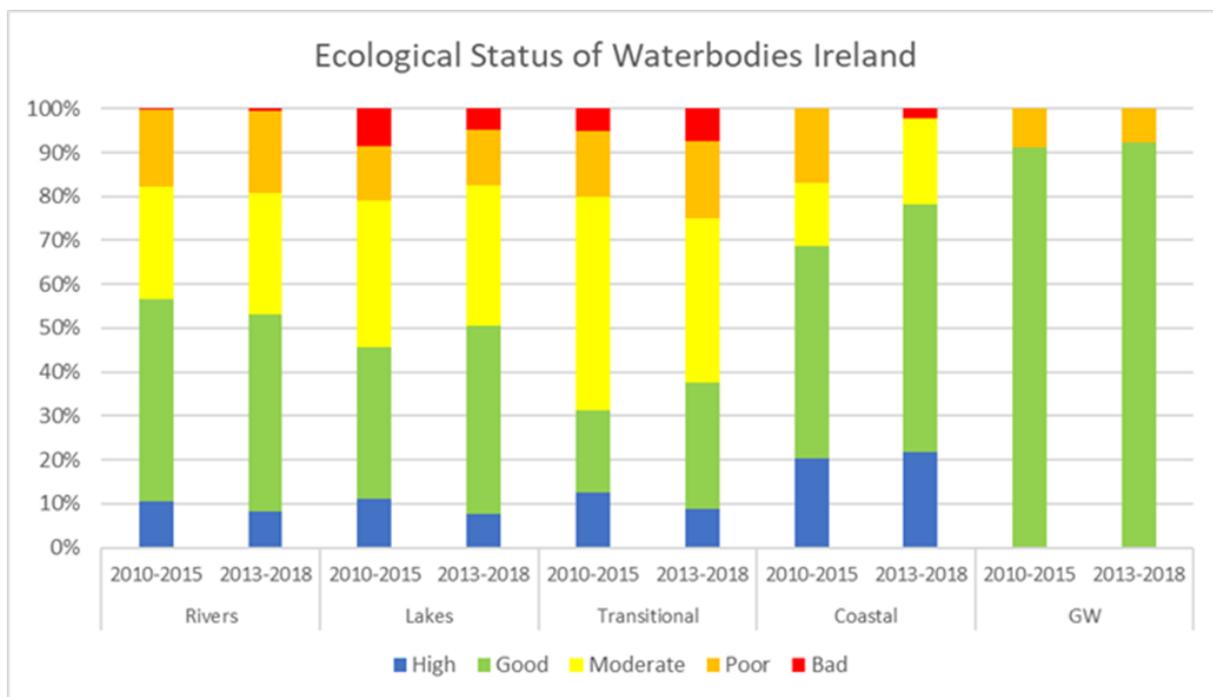


Image A0.1 Ecological Status of Water Bodies in Ireland

The characterisation and risk assessments carried out for the third cycle show that 33% of water bodies are 'At Risk' of not meeting their environmental objective of good or high status. Of these, 46% are impacted by a single significant pressure. Agriculture remains the most common pressure, followed by hydromorphology, forestry and urban wastewater. There has been an increase in water bodies impacted by agriculture since the second cycle RBMP.

The draft RBMP sets out a Programme of Measures (PoMs) necessary to deliver the objectives of the WFD in full and to contribute to other environmental priorities.

Until the draft RBMP has been consulted upon and finalised, the existing RBMP has been used as a reference point for this assessment with respect to proposed measures as these have yet to be agreed. However, where a water bodies' 'At Risk' status has already been updated by the EPA online for the third cycle RBMP, this has been used in the assessment.

A13.3.3. Data Collection and Collation

The EPA's Data Explorer (EPA 2021) was used to assess water bodies present within the Proposed Scheme's study area, and includes their WFD ID numbers, designation and classification details. The WFD compliance mapping for groundwater risk and status assessment was also reviewed along with any other supporting data.

A13.3.4. Appraisal Method

In the absence of WFD assessment guidance specific to Ireland, the assessment has been carried out using the United Kingdom (UK) Environment Agency's Water Framework Directive assessment: estuarine and coastal waters (updated 2017) (Environment Agency 2016). No specific guidance exists for freshwater water bodies. However, this guidance was used as the basis of the UK Planning Inspectorate (PINS) Advisory Note Eighteen: The Water Framework Directive (PINS 2017) in which it sets out the stages of an assessment. On this basis, it is considered appropriate to use for the assessment of the Proposed Scheme. In line with this guidance a 2km buffer zone was applied for assessing protected areas. For clarity and brevity purposes, the 2km buffer and the full list of identified protected sites (including those which are considered coastal water specific) are maintained for all assessments.

There follows a baseline assessment of the main water bodies, and a scoping assessment of the principal receptors potentially affected by the Proposed Scheme. This is followed by the impact assessment, which considers the potential impacts of an activity, identifies ways to avoid or minimise impacts, and indicates if an activity may cause deterioration or jeopardise the water body achieving GEP / GES.

There are several stages to this assessment:

- A scoping assessment of the main receptors including protected areas for nature conservation, bathing water etc. (Section A13.4);
- An assessment against quality elements including hydromorphology, biology, water quality, protected areas and invasive species (Section A13.5);
- An assessment of the Proposed Scheme against mitigation measures and a cumulative assessment against other proposed schemes (Section A13.6 and Section A13.7); and
- An assessment against other EU Directives (Section A13.8).

A13.4. Baseline Scoping

A13.4.1. Water Body Scoping

Table 2 lists the WFD water bodies within the study area (see Section 13.3 of Chapter 13 (Water) in Volume 2 of this EIAR for more detail of these WFD surface water bodies). These are scoped into the assessment due to the location of the Proposed Scheme works within or adjacent to them.

Table 2: Water Body Status (EPA 2021; EPA 2022)

Water Body ID	Name of Water Body in RBMP	Hydro-Morphological Designation	Current Status / Potential (2013-2018)	Objective Status / Potential
Transitional				
IE_EA_090_0400	Liffey Estuary Upper	-	Good	At Risk
Groundwater				
IE_EA_G_008	Dublin Groundwater	-	Good	Not At Risk
Surface Water				
IE_EA_09S010300	Santry_010 (River Santry)	-	Poor	At Risk
IE_EA_09T011100	Tolka_050 (River Tolka)	-	Poor	At Risk
IE_EA_09T011150	Tolka_060 (River Tolka)	-	Moderate	At Risk
IE_09_AWB_RCMLE	Royal Canal Main Line (Liffey and Dublin Bay)	AWB	GEP	Review

A13.4.2. Assessment Scoping

A13.4.2.1. Protected Areas

The WFD requires that activities are also in compliance with other relevant legislation, as considered below. The following are looked at as part of the assessment (as mentioned above, in line with guidance a 2km buffer zone was applied in this assessment):

- Nature conservation designations;
- Bathing waters;
- Nutrient Sensitive Areas; and
- Shellfish waters.

A13.4.2.1.1. Nature Conservation Designations

These are areas previously designated for the protection of habitats or species where maintaining or improving the status of water is important for their protection. They comprise the aquatic part of Natura 2000 sites, Special Protection Areas (SPAs) designated under Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (as amended) (hereafter referred to as the Birds Directive) and Special Areas of Conservation (SACs) designated under Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (hereafter referred to as the Habitats Directive).

Ramsar sites are wetlands of International Importance designated under the Ramsar Convention (adopted in 1971 and came into force in 1975), providing a framework for the conservation and wise use of wetlands and their resources.

The EPA data (EPA 2021) was used to find out the nature conservation designations within 2km of the Proposed Scheme.

There are no Ramsar sites, SPAs or SACs within 2km of the Proposed Scheme.

A13.4.2.1.2. Bathing Waters

Bathing waters are those designated under Council Directive of 8 December 1975 concerning the Quality of Bathing Water (76/160/EEC) (hereafter referred to as the BWD) or the later Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC (hereafter referred to as the revised BWD). S.I. No. 79/2008 - Bathing Water Quality Regulations 2008 were adopted in March 2008 (following a public consultation) transposing the revised BWD of 2006 into Irish law.

There are no bathing water sites within 2km of the Proposed Scheme.

A13.4.2.1.3. Nutrient Sensitive Areas

Nutrient Sensitive Areas comprise Nitrate Vulnerable Zones and polluted waters designated under Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC) (hereafter referred to as the Nitrates Directive) and areas designated as sensitive areas under Council Directive 91/271/EEC concerning urban waste water treatment (hereafter referred to as the UWWTD). The UWWTD aims to protect the environment from the adverse effects of the collection, treatment and discharge of urban waste water. Sensitive areas under the UWWTD are water bodies affected by eutrophication associated with elevated nitrate concentrations and act as an indication that action is required to prevent further pollution caused by nutrients.

The Tolka Estuary and the Liffey Estuary are both designated Nutrient Sensitive Areas. The Proposed Scheme will be approximately 1.4km from the Tolka Estuary at its closest point and will terminate in the City Centre at R148 Arran Quay alongside the Liffey Estuary Upper. There are no other Nutrient Sensitive Areas within 2km of the Proposed Scheme.

A13.4.2.1.4. Shellfish Waters

Directive 2006/113/EC of the European Parliament and of the Council of 12 December 2006 on the quality required of shellfish waters (hereafter referred to as the Shellfish Waters Directive) aims to protect or improve shellfish waters in order to support shellfish life and growth. It is designed to protect the aquatic habitat of bivalve and gastropod molluscs, which include oysters, mussels, cockles, scallops and clams. The Shellfish Waters Directive requires Member States to designate waters that need protection in order to support shellfish life and growth. It is implemented in Ireland by S.I. No. 268 of 2006 - European Communities (Quality of Shellfish Waters) Regulations 2006. The Shellfish Waters Directive also provides for the establishment of pollution reduction programmes for the designated waters.

There are no shellfish waters within 2km of the Proposed Scheme.

A13.5. Water Body Assessment Against Quality Elements

This Section details a site-specific assessment of the Proposed Scheme against quality elements for biology, physico-chemical and hydromorphological elements for the transitional water bodies .

A13.5.1. Hydromorphology

This Section provides a summary of the known existing hydromorphology risk issues for the water bodies (Table 3).

Table 3: Hydromorphology Scoping Summary

WFD Assessment Questions	Liffey Estuary Upper	Dublin Groundwater IE_EA_G_008	Santry_010	Tolka_050	Tolka_060	Royal Canal Main Line
Consider if your activity could impact on the hydromorphology (for example morphology or water flow) of a water body at high status	No. Not High status.	N/A	No. Not High status.			
Consider if your activity could significantly impact the hydromorphology of any water body?	No. Surface water drainage flow and volume will not significantly change.	No, it is not considered that any element of the Scheme will result in a possible exposure route to groundwater.	No. Surface water drainage flow and volume will not significantly change. No new structures or modifications to water bodies proposed.			No. A new cycleway bridge and ramp on the banks of the Royal Canal but its length is not sufficient to cause significant impacts (see Chapter 13 (Water) in Volume 2 of the EIAR for assessment).
Consider if your activity is in a water body that is heavily modified for the same use as your activity?	No. Not a HMWB.	N/A	No. Not a HMWB.	No. Not a HMWB.	No. Not a HMWB.	No. Water body is an AWB for use in navigation; proposed modifications are not for this purpose.

None of the water bodies are of high status. Surface water drainage flow and volume will not significantly change. There is a proposed change to the Royal Canal but this is not considered to be significant. It is not considered that any element of the Proposed Scheme will result in a possible exposure route to groundwater. This element is scoped out of this assessment.

A13.5.2. Biology

A13.5.2.1. Habitats

Table 4 presents a summary of biology (habitat) considerations and associated risk issues for the works for the transitional water bodies.

Table 4: Biology Scoping Summary

WFD Assessment Questions	Liffey Estuary Upper	Dublin Groundwater	Santry_010	Tolka_050	Tolka_060	Royal Canal Main Line
Is the footprint of the activity 0.5 km ² or larger?	No. The footprint of the Proposed Scheme within the redline boundary is 0.38 km ² . Further, the Proposed Scheme has much more limited direct impact on habitats as the only location where biological habitat of a water body will be lost is at the Royal Canal, which is approximately 60m ² only.					
Is the footprint of the activity 1% or more of the water body's area?	No	No	No. The Proposed Scheme does not cross this water body.	No. The Proposed Scheme only crosses this water body and so the footprint at this location is <1% of the water body area	No. The Proposed Scheme only crosses this water body and so the footprint at this location is <1% of the water body area	No. The Proposed Scheme only crosses this water body and so the footprint at this location is <1% of the water body area
Is the footprint of the activity within 500 m of any higher sensitivity habitat?	Yes. The Proposed Scheme includes works to the Royal Canal which is a pNHA.					
Is the footprint of the activity 1% or more of any lower sensitivity habitat?	No. The pNHA extends the entire length of the Royal Canal which is 145km long. The canal is 30m wide, which gives an area of 435ha (hectares). This does not include the wider areas of the pNHA alongside the canal. The proposed cycle ramp is 0.006ha.					

Risks to the receptor under the WFD include loss of habitat, loss of protected species and prey species. The potential for these impacts is not considered to be significant. WFD assessment primarily considers the operation of the Proposed Scheme. However, for biological elements potential construction impacts are also considered as they have the potential for long-term change if a potential impact is considered to be significant. Therefore, it is important to also note here that a Construction Environmental Management Plan (CEMP) (Appendix A5.1 in Volume 4 of this EIAR) and the Surface Water Management Plan (SWMP) contained within the CEMP will be implemented for sediment and other water quality control measures. This element can be scoped out for further assessment.

A13.5.2.2. Fish

Activities occurring within an estuary or inshore environment could impact on normal fish behaviour such as movement, migration or spawning. Table 5 presents a summary of biology (fish) considerations and associated risk issues for the works. As at least one biology (fish) consideration indicates that a risk could be associated with the works, this receptor has been scoped into the impact assessment for the transitional water bodies.

Table 5: Biology (Fish) Scoping Summary

WFD Assessment Questions	Liffey Estuary Upper	Santry_010	Tolka_050	Tolka_060	Royal Canal Main Line
Consider if your activity is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary?	No. No instream works.	No. Not an estuary.			
Consider if your activity could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)?	No. No instream works, current background noise levels, surface water drainage volume and flow will not be increased.				Potential impacts on fish in the water body. SWMP will be implemented and additional measures in Chapter 9 (Noise & Vibration) and Chapter 12 (Biodiversity) in Volume 2 of the EIAR, to ensure no significant impacts.
Consider if your activity could cause entrainment or impingement of fish?	No.				

The risks to the receptor are due to noise from construction and operation; potential release of suspended sediment concentrations, and the creation of plumes as a result; and contaminated surface water runoff. Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR has determined that, with the incorporation of the various mitigation measures outlined in that Chapter, there are no significant residual noise or vibration impacts during construction or operation. As above, a CEMP and SWMP will be implemented, to reduce any risk of suspended solid release. In the unlikely event of an accidental spillage, the emergency response plan will be activated, and on-site spill kits utilised. Furthermore, no instream works are proposed as part of the Proposed Scheme. The Proposed Scheme does not propose to increase the current flow or volume of surface water runoff. This element has been scoped out of this assessment.

A13.5.3. Water Quality

Consideration is given as to whether phytoplankton status and harmful algae could be affected by the works, as well as identifying the potential risks of using, releasing or disturbing chemicals. Table 6 presents a summary of water quality considerations and associated risk issues of the works for the transitional water bodies.

Table 6: Water Quality Considerations and Associated Risk Issues of the Works for the Transitional Water Bodies

WFD Assessment Questions	Liffey Estuary Upper	Dublin Groundwater	Santry_010	Tolka_050	Tolka_060	Royal Canal Main Line
Consider if your activity could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)?	No. Chapter 13 Water concludes that following the implementation of design and mitigation measures, there are no significant impacts during construction or operation	N/A	No. Not tidal.			
Consider if your activity is in a water body with a phytoplankton status of moderate, poor or bad?	No. Phytoplankton status or potential is good.	N/A				
Consider if your activity is in a water body with a history of harmful algae?	ND (Not determined)					
If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if the chemicals are on the Environmental Quality Standards Directive (EQSD) list?	No. There are no direct discharges to Liffey Estuary Upper. Surface water in the vicinity drains to Ringsend Wastewater Treatment Plant (WwTP).	No. No discharge to Groundwater.	Yes. During construction there is potential for accidental release of chemicals which are on the EQSD list (hydrocarbons e.g.); however, with the implementation of control and mitigation measures outlined in the SWMP there will be no significant impacts. No substances on the EQSD list will be released during operation.			
If your activity has a mixing zone (like a discharge pipeline or outfall) consider if the chemicals released are on the Environmental Quality Standards Directive (EQSD) list?	No. There are no direct discharges to Liffey Estuary Upper. Surface water in the vicinity drains to Ringsend WwTP.	No. No discharge to groundwater.	No. The discharge of surface water during operation from the Proposed Scheme will not include any EQSD list substances.			
Consider if ancillary sources of discharge contribute to water quality status (e.g. UWWTP Storm Water Overflow (SWO), Combined Sewer Overflow (CSO) etc.)	Yes. The study area is known to contain sources of known pressures including UWWTP SWOs and a number of Industrial Licensed Emissions. See EIAR Chapter 13 (Water) in Volume 2 of the EIAR for further information. However, the Proposed Scheme does not include any new discharge points and will not impact the flow or volume of current surface water drainage.					

This element has been scoped out of the impact assessment. A CEMP and SWMP will also be implemented to mitigate potential impacts in relation to surface water contamination. It is important to note that the Proposed Scheme does not propose any changes to the current flow or volume of surface water runoff.

A13.5.4. Protected Areas

Table 7 presents a summary of protected area considerations and associated risk issues of the works. As the protected area considerations indicate that a risk could be associated with the works, this receptor has been scoped into the impact assessment.

Table 7: Protected Areas

WFD Assessment Questions	Nature Conservation Designations	Bathing Waters	Nutrient Sensitive Areas	Shellfish Waters
Consider if your activity is within 2km of any WFD protected area?	There are no designated sites within 2km of the Scheme.	There are no bathing water sites within 2km of the Scheme.	The Scheme is approximately 1.4km from the Tolka Estuary and <50m from the Liffey Estuary Upper. There are no other nutrient sensitive sites within 2km of the Scheme. The Proposed Scheme will not discharge any nutrients which could contribute to the eutrophication of these water bodies.	There are no shellfish waters within 2km of the Scheme.

The only WFD protected areas within 2km of the Proposed Scheme are the Nutrient Sensitive Areas of the Tolka Estuary and Liffey Estuary Upper. The Proposed Scheme will not discharge any nutrients which could contribute to the eutrophication of these water bodies, either during construction or operation. This element has therefore been scoped out of the assessment.

A13.5.5. Invasive Species (IS)

Consideration is given as to whether there is a risk that the activity could introduce or spread IS. Risks of introducing or spreading IS include materials or equipment that have come from, had use in or travelled through other water bodies, as well as activities that help spread existing IS, either within the immediate water body or other water bodies. Table 8 presents a summary of IS considerations and associated risk issues of the works.

Table 8: IS Considerations

WFD Assessment Questions	Liffey Estuary Upper	Dublin Groundwater	Santry_010	Tolka_050	Tolka_060	Royal Canal Main Line
Introduction or spread of INNS	No. An Invasive Species Management Plan (ISMP) has been prepared and included Appendix A5.1 CEMP in Volume 4 of the EIAR. It will be implemented for the Proposed Scheme.					

The Invasive Species Management Plan (ISMP) (see Appendix A5.1 CEMP in Volume 4 of this EIAR) will be implemented for the Proposed Scheme which will contain site-specific recommendations and identifications for IS. Therefore, this element has been scoped out of the assessment.

A13.5.6. Assessment Summary

The site-specific impacts of the Proposed Scheme on the biological, physico-chemical and hydromorphological quality elements of the water bodies are shown in the assessment above and summarised in Table 9.

Table 9: Scoping Summary

Receptor	Potential Risk to Receptor?	Note the Risk Issue(s) for Impact Assessment
Hydromorphology	No	There are no instream works proposed as part of the Proposed Scheme. There is no predicted exposure route to groundwater. One of the WFD water bodies within the study area is an AWB, Royal Canal Main Line. However, the proposed Scheme does not change or add any new modifications to this water body. No other water body is a HMWB. Surface water drainage flow and volume will not significantly change as part of the proposed Scheme.
Biology: habitats	No	Risks to the receptor under WFD include loss of habitat, loss of protected species and prey species, these are not considered to be significant. In addition, a CEMP and SWMP will be put in place for sediment control measures.
Biology: fish	No	Any construction or operation noise generated as part of the Proposed Scheme is not considered to be significant as a result of the current background noise levels along this route, a heavily trafficked main route into Dublin City. The CEMP and SWMP will be adhered to, to reduce any risk of suspended solid or hydrocarbon release. In the unlikely event of an accidental spillage the emergency response plan will be activated, and onsite spill kits utilised. Furthermore, no instream works are proposed as part of this Scheme.
Water quality	No	Current surface water discharge levels will remain the same and some attenuation and/or treatment will be installed as part of the Proposed Scheme. A CEMP and SWMP will also be implemented to mitigate potential impacts in relation to surface water contamination. It is important to note that the Proposed Scheme does not propose any changes to the current flow or volume of surface water runoff.
Protected areas	No	It is considered that the Proposed Scheme will not pose a risk to protected areas. There are no designated nature conservation sites within 2km of the Proposed Scheme. There are no bathing waters within 2km of the Proposed Scheme. The Proposed Scheme is approximately 1.4km from the Tolka Estuary and <50m from the Liffey Estuary nutrient sensitive areas. There are no other nutrient sensitive sites within 2km of the Scheme. No nutrients will be discharged by the Proposed Scheme.
Invasive Species	No	An IS survey and ISMP will be implemented for the Proposed Scheme which will contain site specific recommendations and identifications for IS. Therefore this element has been scoped out of the assessment.

A13.6. Assessment of the Proposed Scheme Against Programme of Measures

Within each RBMP, there is a list of mitigation measures (PoMs), or environmental improvements, which have been identified by the RBMP, which need to be implemented in order to improve the ecology of water bodies by a specified date in order for Ireland to meet the target date set by the WFD. Part of the WFD compliance assessment is to consider mitigation measures and assess whether a scheme can contribute to them or might obstruct any of them from being delivered.

Table 10 provides a list of all mitigation measures set out in Appendix 2 of the draft RBMP 3rd Cycle (EPA 2022) applicable to the water bodies, and an explanation of why the Proposed Scheme might / might not be able to achieve or contribute to mitigation measures.

Table 10: Mitigation Measures and Assessment of Whether the Proposed Scheme will Help to Contribute to these (Management Plan) (RBMP and Sub- Catchment Assessment)

Water Body	Pressure(s)	Applicable Draft Mitigation Measure(s) (3 rd cycle RBMP)	Will the Proposed Scheme Help to Achieve or Contribute to Mitigation Measure?
Liffey Estuary Upper	None identified	N/A	N/A
Santry_010 (River Santry)	Urban Runoff Urban Waste Water	Range of measures including implementation of nature based strategies using SUDs and modelling of rainwater. For Urban Waste Water, there is a range of measures relating to surface water overflows, waste water discharge licenses and the enactment of new legislation.	The Proposed Scheme includes SUDs measures and so will contribute to the achievement of these mitigation measures. The Proposed Scheme does not increase surface water runoff and so will not impede the implementation of these measures.
Tolka_050 (River Tolka)	Urban Runoff Urban Waste Water	Range of measures including implementation of nature based strategies using SUDs and modelling of rainwater. For Urban Waste Water, there is a range of measures relating to surface water overflows, waste water discharge licenses and the enactment of new legislation.	The Proposed Scheme includes SUDs measures and so will contribute to the achievement of these mitigation measures. The Proposed Scheme does not increase surface water runoff and so will not impede the implementation of these measures.
Tolka_060 (River Tolka)	Urban Runoff Urban Waste Water	Range of measures including implementation of nature based strategies using SUDs and modelling of rainwater. For Urban Waste Water, there is a range of measures relating to surface water overflows, waste water discharge licenses and the enactment of new legislation.	The Proposed Scheme includes SUDs measures and so will contribute to the achievement of these mitigation measures. The Proposed Scheme does not increase surface water runoff and so will not impede the implementation of these measures.
Royal Canal Main Line (Liffey and Dublin Bay)	None identified	N/A	N/A

The nature of the works is unlikely to impede achievement of the mitigation measures proposed, nor is it considered to impede any water body reaching good status or potential.

A13.7. Cumulative Assessment

The Proposed Scheme has been assessed for the potential for cumulative impacts with other proposed developments within 500m of the study area (refer to Chapter 21 (Cumulative Impacts & Environmental Interactions) in Volume 2 of the EIAR. This concludes that in combination with other proposed developments, the Proposed Scheme will not compromise the achievement of the objectives of the WFD for any water body.

A13.8. Assessment of the Proposed Scheme Against WFD Objectives and Other EU Directives

Taking into consideration the anticipated impacts of the Proposed Scheme on the biological, physico-chemical and hydromorphological quality elements, following the implementation of design and mitigation measures, it is concluded that it will not compromise progress towards achieving GES or cause a deterioration of the overall GEP of any of the water bodies that are in scope (Table 11).

Table 11: Compliance of the Proposed Scheme with the Environmental Objectives of the WFD

Environmental Objective	Proposed Scheme	Compliance with the WFD
No changes affecting high status sites	No water bodies identified as high status	Yes
No changes that will cause failure to meet surface water GES or GEP or result in a deterioration of surface water GES or GEP	After consideration as part of the detailed compliance assessment, the Proposed Scheme will not cause deterioration in the status of the water bodies during construction following the implementation of mitigation measures; during operation, no significant impacts are predicted.	Yes
No changes which will permanently prevent or compromise the Environmental Objectives being met in other water bodies	The Proposed Scheme will not cause a permanent exclusion or compromise achieving the WFD objectives in any other bodies of water within the River Basin District.	Yes
No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.	The Proposed Scheme will not cause deterioration in the status of the of the groundwater bodies.	Yes

The WFD also requires consideration of how a new scheme might impact on other water bodies and other EU legislation. This is covered in Articles 4.8 and 4.9 of the WFD.

Article 4.8 states:

'a Member State shall ensure that the application does not permanently exclude or compromise the achievement of the objectives of this Directive in other bodies of water within the same river basin district and is consistent with the implementation of other Community environmental legislation'.

All water bodies within the study area have been assessed for direct and indirect impacts. The Proposed Scheme will not compromise the achievement of the objectives of the WFD for any water body. In addition, the Proposed Scheme has been assessed for the potential for cumulative impacts with other proposed developments within 500m of the study area. This concludes that in combination with other proposed developments, the Proposed Scheme will not compromise the achievement of the objectives of the WFD for any water body. Therefore, the Proposed Scheme complies with Article 4.8.

Article 4.9 of the WFD requires that *'Member States shall ensure that the application of the new provisions guarantees at least the same level of protection as the existing Community legislation'.*

The Habitats Directive promotes the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European Importance. There are European designated sites in the vicinity of the Proposed Scheme which have been assessed and are presented in the Natura Impact Statement (NIS). The NIS is a standalone document included in the planning application for the Proposed Scheme. It concludes that the Proposed Scheme will not lead to a deterioration in the features of any designated site. The Proposed Scheme is not considered to be a risk to designated habitats and therefore is compliant with the Habitats Directive.

The Nitrates Directive aims to protect water quality by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices. The Proposed Scheme will not influence or moderate agricultural land use or land management.

The revised BWD was adopted in 2006, updating the microbiological and physico-chemical standards set by the original BWD. The revised BWD focuses on fewer microbiological indicators, whilst setting higher standards, compared to those of the BWD. Bathing waters under the revised BWD are classified as excellent, good, sufficient or poor according to the levels of certain types of bacteria (intestinal enterococci and Escherichia coli) in samples obtained during the bathing season (May to September). The Proposed Scheme will not impact any designated bathing waters as there are none <2km from the Proposed Scheme. The Proposed Scheme is therefore compliant with the revised BWD.

A13.9. Conclusion

Considering all requirements for compliance with the WFD, the Proposed Scheme will not cause a deterioration in the status in any water body, or will not prevent it from achieving GES or GEP. There are no cumulative impacts with other proposed developments and it complies with other environmental legislation.

It can be concluded that the Proposed Scheme complies with all requirements of the WFD.

Taking into consideration the impacts of the Proposed Scheme on the biological, physico-chemical and hydromorphological quality elements, it is concluded that following the implementation of design and mitigation measures, that it will not compromise progress towards achieving GES or GEP or cause a deterioration of the overall status of the water bodies that are in scope. It will not compromise the qualifying features of protected areas and is compliant with other relevant Directives. It can therefore be concluded that the Proposed Scheme is fully compliant with the WFD and therefore does not require assessment under Article 4.7 of the WFD (see Section A13.1.2).

A13.10. References

DHLGH (2021). Draft River Basin Management Plan for Ireland 2022 - 2027

DHPLG (2018). River Basin Management Plan for Ireland 2018 – 2021

Environment Agency (2016). Water Framework Directive assessment: Estuarine and Coastal waters (updated 2017)

EPA (2021). Data Explorer. [Online] Available from <https://gis.epa.ie/EPAMaps/>

EPA (2022). Catchments.ie. [Online] Available from <https://www.catchments.ie>

PINS (2017). Advisory Note Eighteen: The Water Framework Directive

Directives and Legislation

Council Directive of 8 December 1975 concerning the Quality of Bathing Water (76/160/EEC)

Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC)

Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (as amended)

Council Directive 91/271/EEC concerning urban waste water treatment

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy

Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC

Directive 2006/113/EC of the European Parliament and of the Council of 12 December 2006 on the quality required of shellfish waters

S.I. No. 268/2006 - European Communities (Quality of Shellfish Waters) Regulations 2006

S.I. No. 722/2003 – European Communities (Water Policy) Regulations 2003