



# Appropriate Assessment Screening Report

Cork City Council

02/05/2025

## Mary Street, Douglas Street and White Street Public Realm Enhancement Scheme

# Notice

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## Client signoff

**Client** Cork City Council

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**Client  
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# Contents

<b>1.</b>	<b>Introduction.....</b>	<b>5</b>
1.1	Background .....	5
1.2	Proposed Works.....	5
1.2.1	Location and Context .....	5
1.2.2	Detailed Description .....	8
1.3	Legislative Context.....	10
1.3.1	Natura 2000 .....	10
1.3.2	Appropriate Assessment.....	10
1.3.3	Competent Authority .....	11
<b>2.</b>	<b>Scope of Study .....</b>	<b>12</b>
2.1	Appropriate Assessment Process .....	12
<b>3.</b>	<b>Methodology .....</b>	<b>14</b>
3.1	Sources of Guidance.....	14
3.2	Desk Study.....	15
3.3	Site Visit .....	15
3.4	Statement of Authority.....	15
<b>4.</b>	<b>Receiving Environment .....</b>	<b>17</b>
4.1	Habitats, Species and Ecological Corridors.....	17
<b>5.</b>	<b>Natura 2000 Sites.....</b>	<b>26</b>
5.1	Zone of Influence .....	26
5.2	Site Descriptions .....	29
5.2.1	Great Island Channel SAC.....	29
5.2.2	Cork Harbour SPA .....	31
5.3	Identification of Potential Impacts .....	34
5.3.1	Habitat Loss and Fragmentation.....	34
5.3.2	Disturbance to Birds and Other Fauna .....	34
5.3.3	Hydrological Impacts.....	34
5.3.4	Invasive Alien Species .....	35
5.3.5	Summary .....	35
<b>6.</b>	<b>Likely Significant Effects .....</b>	<b>36</b>
6.1	Identification of Likely Significant Effects .....	36
6.1.1	Great Island Channel SAC.....	36
6.1.2	Cork Harbour SPA .....	37
6.2	Summary .....	37
<b>7.</b>	<b>Potential In-combination Effects .....</b>	<b>38</b>
7.1	Requirement for Assessment.....	38
7.2	Approach and Methodology .....	38
7.2.1	Geographical Scope.....	38



7.2.2	Timescale .....	38
7.2.3	Sources of Information .....	38
7.3	Assessment .....	39
7.3.1	Plans .....	39
7.3.2	Projects .....	39
7.3.3	Licensed Activities .....	40
7.3.4	Other Activities .....	42
7.4	Conclusion .....	43
<b>8.</b>	<b>Conclusion .....</b>	<b>44</b>
<b>9.</b>	<b>References .....</b>	<b>45</b>

## Tables

Table 5-1 - Threats, pressures and activities with negative impacts on the Great Island Channel SAC .....	30
Table 5-2 - Threats, pressures and activities with negative impacts on the Cork Harbour SPA .....	33
Table 6-1 - Identification of impacts and evaluation of effects on the Great Island Channel SAC (LSE = likely significant effect) .....	36
Table 6-2 - Identification of impacts and evaluation of effects on the Cork Harbour SPA (LSE = likely significant effect) .....	37
Table 7-1 - WFD Status and Risk for transitional waterbodies covering the Great Island Channel SAC and inner sectors of the Cork Harbour SPA and to which the Carrigtwohill, Midleton and Cork City WwTPs are connected. ....	41

## Figures

Figure 1-1 - General location of the proposed works (in purple) within Ireland (left) and Cork City (right) .....	6
Figure 1-1 – Site boundary of the proposed works (in pink) within Cork City. [Basemap: ESRI] .....	7
Figure 2-1 - Stages of the Appropriate Assessment process (EC, 2021a) .....	13
Figure 5-1 - Zones of Impact from the proposed works in relation to the boundaries of Natura 2000 sites. [Basemap: ESRI] .....	28



# 1. Introduction

## 1.1 Background

AtkinsRéalis was appointed by Cork City Council to prepare, on its behalf, an Appropriate Assessment (AA) Screening Report in respect of the proposed Mary St. Douglas St. White St. Public Realm Enhancement Scheme. The proposed works involve the widening of existing footpaths, rejuvenation of the existing road surface, the planting of amenity vegetation and the installation of benches and lighting. The primary aim of the proposed works is to increase the adoption of and capacity for sustainable modes of transport within the area, and to improve the quality of life for residents through the public realm. The proposed works are not directly connected with or necessary to the management of any designated site for nature conservation.

This report comprises the AA Screening Report in respect of the proposed works and is intended to assist Cork City Council, in its capacity as the competent authority in this case, by providing it with sufficient evidence to make a properly informed determination as to whether Appropriate Assessment under article 6(3) of the Habitats Directive (02/43/EEC) is required in respect of the proposed works.

## 1.2 Proposed Works

### 1.2.1 Location and Context

The proposed development will consist of the following: -

- Upgrading & widening of footpaths including the introduction of controlled and uncontrolled pedestrian crossing points throughout the scheme.
- Re-alignment of the junction between Friar St. & Evergreen St. to provide traffic calming measures and provide controlled and uncontrolled pedestrian crossing points.
- Re-alignment of the junction between Evergreen St. & Abbey St. to provide traffic calming measures and provide controlled and uncontrolled pedestrian crossing points.
- Conversion of Abbey St. into a shared surface two-way cul-de-sac Street, incorporating removable barriers at the junction between Abbey St. and Mary St. allowing emergency vehicle access through to Douglas St. from Abbey St.
- Introduction of a landscaping area that maintains pedestrian stairway access between Abbey St. and the Southern End of Travers St.
- Creating a Cul de sac street on the Northern section of Travers St.
- Creation of a shared active travel facility on Douglas St. between the junctions with Mary St. and Dunbar St. with emergency vehicle access only.
- Conversion of Douglas St. into a one-way east bound street between the junctions of Dunbar St. and Rutland St.
- Introduction of a small city park on the eastern end of Douglas St and removing vehicle access to and from Douglas St. from the junction with Langford Row.
- Converting the existing signalised junction between Langford Row and Douglas St. into a Protected Junction with protected cycle facilities.



- Conversion of Douglas St. into a shared surface two-way Cul de sac street, between the junction with Rutland St. and the new city park.
- Conversion of Meade St. into a one-way south bound street.
- Conversion of Drinan St. into a one-way north bound street.
- Conversion of Cove St. into a one-way east bound street between the junctions with Meade St. and Drinan St.
- Conversion of Cove St. into a one-way west bound street between the junctions with Mary St. and Goulds Sq.
- Upgrade of Red Abbey Sq. including traffic calming along Red Abbey St, the removal of railings around Red Abbey Tower and introduction of enhanced landscaping and lighting measures.
- Conversion of White St. to a one-way south bound street.
- Provision of contraflow cycle facilities to allow two-way cycle access along one-way streets for portions of Cove St, Mary St, Red Abbey St, Dunbar St and Douglas St.
- Introduction of raised tables and crossing points at street junctions through-out the scheme
- Introduction of landscaping measures including trees, planter beds and Sustainable Urban Drainage Systems (SuDS) measures through-out the scheme.
- Introduction of seating elements through-out the scheme.
- Introduction of bike parking through-out the scheme
- Introduction of TFI shared bike scheme on Abbey Street
- Introduction of community shared bin storage on Abbey St. & Dunbar St.
- Undergrounding of all overhead cables throughout the scheme.
- Introduction of enhanced lighting through-out the scheme.

The surrounding landscape at this location is almost entirely dominated by buildings and other artificial structures (BL3).

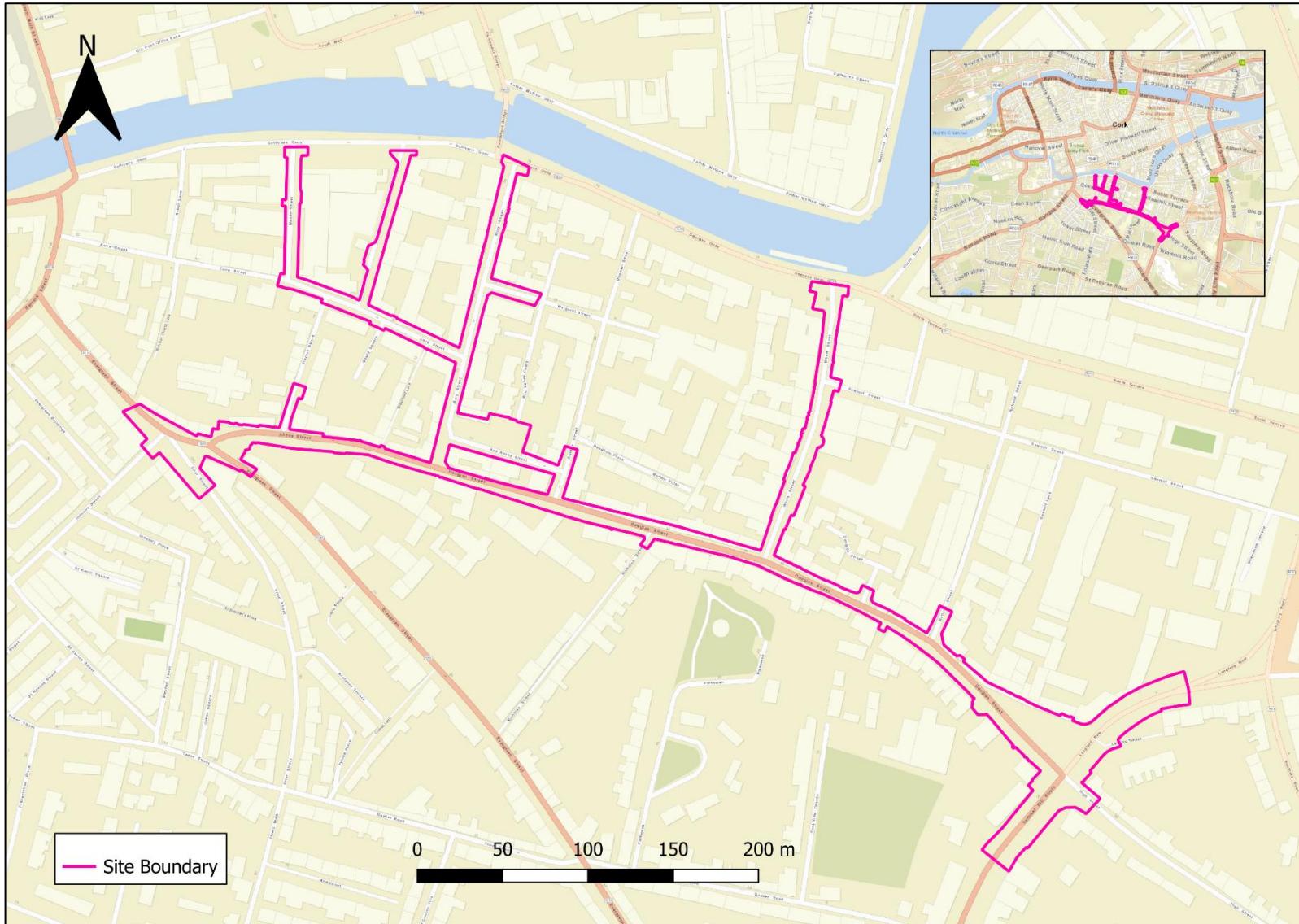


Figure 1-1 – Site boundary of the proposed works (in pink) within Cork City. [Basemap: ESRI].

## 1.2.2 Detailed Description

### 1.2.2.1 Scope

The scope of works to be completed are described in detail below: -

- Develop an environment that will promote a modal shift to more sustainable forms of transport.
- Enhance the quality of life of residents in the area by creating improved public spaces.
- Create a better sense of neighbourhood for the residents and businesses of the area through public realm improvements.
- Increase connectivity for cyclists and pedestrians.
- Revive the street and improve linkages to Cork City Centre.
- Complement the historic nature of the area and support further tourism and economic development within Cork City centre.
- Enhance the area incorporating Nano Nagle Place and Red Abbey.
- Create a public space on the northwest corner of Douglas Street at the Summerhill South junction.

### 1.2.2.2 Methods

#### 1.2.2.2.1 Sequence of Works

The construction activities within the proposed development area will encompass the following: -

- Excavation and Removal: This includes the excavation of street surfacing and sub-base, and the removal of existing surface materials.
- Installation of New and Relocated Utilities: New and relocated utilities will be installed as part of the development. This will include the installation of sustainable urban drainage systems (SuDS), primarily in the form of rain gardens, and underground ducting and diversions.
- Street Build-Up and Repaving: The street will be built up and repaved, incorporating high-quality public realm features.
- Landscaping: Trees and other decorative plants will be planted.
- Street Furniture and Lighting: New street furniture and street lighting will be installed.

Apart from removal of some minor retaining walls, no demolition works are required for this development. The maximum excavation depth is anticipated to be 1 metre below the existing surface level, with most excavations around 500mm deep. The precise locations for trees and structural supports, such as street lighting, will be determined during the detailed design phase to avoid impacting existing services or underground structures. Existing trees will not be removed as part of the proposed works; it is not proposed to relocate any trees to alternative locations within the site.

#### 1.2.2.2.2 Safety Measures and Phasing

Barriers and hoardings will be installed to restrict access and ensure safety for workers and the public.



Excavation works will be phased to minimize disruption to street activities. Detailed phasing will be outlined in the Construction & Environmental Management Plan (CEMP) and Traffic Management Plan (TMP), which will be adhered to throughout the construction phase.

#### **1.2.2.2.3 Access and Traffic Management**

Access to the affected properties will be maintained at all times., Final surfacing and utility installations near property entrances may potentially require night works. Specific scheduling details will be included in the CEMP and TMP.

During construction lane closures will be enacted on Douglas Street. Proposed pedestrianisation measures should result in reduced traffic volumes throughout the project site.

Implementation of a one-way system will allow more opportunities to maintain traffic adjacent to some construction activities, but the constrained street widths will necessitate full-width closures in multiple areas. Detour routes will be provided in these situations.

On-street parking will be temporarily reduced within construction locations.

#### **1.2.2.2.4 Construction Staffing and Logistics**

The number of construction staff on-site will vary, with multiple crews potentially working in different areas simultaneously. Typical crews will consist of 4-5 members plus an excavator operator. Asphalt resurfacing crews will have 10-15 members plus associated equipment and delivery trucks. On a typical day, no more than 20-25 staff will be on-site.

The Contractor's Traffic Management Plan will include the location of construction site offices and staff parking arrangements, subject to agreement with CCC. Construction vehicles will require short-term parking for loading and unloading materials.

#### **1.2.2.2.5 Regulatory Compliance and Environmental Impact**

The Contractor will ensure compliance with the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013).

The probability of accidents or pollution spillages is low due to the standard nature of the works, which are minor and frequently carried out in Cork city and other cities in Ireland.

Localised dust and noise emissions may occur but are expected to be minimal due to the short duration of works activities likely to give rise to these emissions, the low intensity of construction activity, and the narrow construction footprint. No significant impact on noise-sensitive receptors, such as residential buildings and schools, is anticipated.

#### **1.2.2.3 Biosecurity**

While no invasive plant species have been recorded within the site of the proposed works, in order to prevent the spread of terrestrial invasive alien species, e.g. Japanese Knotweed (*Reynoutria japonica*, syn. *Fallopia japonica*) or Himalayan Balsam (*Impatiens glandulifera*), vehicles, plant, equipment, and PPE will be thoroughly checked for any signs of invasive alien species of their propagules, e.g. seeds or fragments of rhizomes, before being allowed on site, paying particular attention to wheels and tracks. All vehicles, plant, equipment, and PPE will also be thoroughly checked and cleaned before being allowed on site or when moving to another site.



#### 1.2.2.4 Programme

The proposed works are scheduled to commence in Q1 2026 and are expected to occur over a maximum period of 12 months, progressing in stages and ending no later than March 2027 in any case.

### 1.3 Legislative Context

#### 1.3.1 Natura 2000

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") is a legislative instrument of the European Union (EU) which provides legal protection for habitats and species of Community interest. Article 2 of the Directive requires the maintenance or restoration of such habitats and species at a favourable conservation status, while Articles 3 to 9, inclusive, provide for the establishment and conservation of an EU-wide network of special areas of conservation (SACs), known as Natura 2000, which also includes special protection areas (SPAs) designated under Article 4 of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds ("the Birds Directive"). Both SACs and SPAs are commonly referred to as "European sites" or "Natura 2000 sites".

SACs are selected for natural habitat types listed on Annex I to the Habitats Directive and the habitats of species listed on Annex II to the Habitats Directive. SPAs are selected for species listed on Annex I to the Birds Directive, other regularly occurring migratory species and other species of special conservation interest. The habitats and species for which a Natura 2000 site is selected are referred to as the "*qualifying interests*" of that site and each is assigned a "*conservation objective*" aimed at maintaining or restoring its "*favourable conservation condition*" at the site, which contributes to the maintenance or restoration of its "*favourable conservation status*" at national and European levels.

#### 1.3.2 Appropriate Assessment

Article 6 of the Habitats Directive deals with the management and protection of Natura 2000 sites. Articles 6(3) and (4) set out the decision-making process, known as "*Appropriate Assessment*" (AA), for plans or projects in relation to Natura 2000 sites. Article 6(3) states: -

*"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

The first sentence of Article 6(3) provides a basis for determining which plans and projects require AA, i.e., those "*not directly connected with or necessary to the management of [one or more Natura 2000 sites] but likely to have a significant effect thereon, either individually or in combination with other plans or projects*".

In *Waddenzee* (C-127/02), the Court of Justice of the European Union (CJEU) ruled that significant effects must be considered "*likely*" if "*it cannot be excluded, on the basis of objective information*", that they would occur. This clearly sets a low threshold, such that AA is required wherever there is a reasonable possibility of significant effects on a Natura 2000 site. In the same judgment, the CJEU established that the test of significance relates specifically to the conservation objectives of the site concerned, i.e., "*significant effects*" are those which, "*in the light, inter alia, of the characteristics and specific environmental conditions of the site*", could undermine the site's conservation objectives.

In addition to the effects of the plan or project on its own, the combined effects arising from the plan or project under consideration and other plans and projects must also be assessed (see Section 7.1 for more details).

The last part of the first sentence of Article 6(3) defines AA as an assessment of the “*implications [of the plan or project] for the site in view of the site's conservation objectives*”. In the second sentence, Article 6(3) requires that, prior to agreeing to a plan or project, the competent authority must “*ascertain*” that “*it will not adversely affect the integrity of the site concerned*”. In *Sweetman v. An Bord Pleanála* (C-258/11), the CJEU ruled that a plan or project “*will adversely affect the integrity of that site if it is liable to prevent the lasting preservation of the constitutive characteristics of the site that are connected to the presence of a priority natural habitat whose conservation was the objective justifying the designation of the site in the list of sites*”. On that basis, EC (2018) described the “*integrity of the site*” as “*the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated*”. As such, the “*integrity*” of a specific site is defined by its conservation objectives and is “*adversely affected*” when those objectives are undermined. In *WaddenZee*, the CJEU ruled that the absence of adverse effects can only be ascertained “*where no reasonable scientific doubt remains*”.

The “*precautionary principle*” applies to all of the legal tests in AA, i.e., in the absence of objective information to demonstrate otherwise, the worst-case scenario is assumed. Where the tests established by Article 6(3) cannot be satisfied, Article 6(4) applies (see explanation in Section 2.1 below).

### 1.3.3 Competent Authority

The requirements of Articles 6(3) and (4) are transposed into Irish law by, *inter alia*, Part 5 of the European Communities (Birds and Natura Habitats) Regulations, 2011 (as amended) (“the Habitats Regulations”) and Part XAB of the Planning and Development Act, 2000 (as amended) (“the Planning and Development Acts”). As per the second sentence of Article 6(3), it is the “*competent national authorities*” who are responsible for carrying out AA and, by extension, for determining which plans and projects require AA. The competent authority in each case is the entity responsible for authorising a plan or project, e.g., local authorities, An Bord Pleanála, the Environmental Protection Agency (EPA) or a government minister. In all cases, it is the competent authority who is ultimately responsible for determining whether a plan or project requires AA and for carrying out the AA, where required.



## 2. Scope of Study

### 2.1 Appropriate Assessment Process

The AA process can be described as made up of three distinct stages, as described below, the need to progress to each stage being determined by the outcome of the preceding stage.

Stage 1: Screening – This stage involves a determination by the competent authority as to whether or not a given plan or project required AA. As explained in Section 2.1, AA is required in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site, but for which the possibility of likely significant effects on one or more Natura 2000 sites cannot be excluded. The CJEU's Judgment on Eco Advocacy v. An Bord Pleanála (C-721/21) and the Opinion of Advocate General Kokott in the same case set out the principles for identifying any aspects of a plan or project which may constitute what the CJEU termed in People Over Wind (C-323/17) "measures intended to avoid or minimise harmful effects on a Natura 2000 site" and, as such, cannot be taken into account in making an AA Screening determination. Consideration of the potential for in-combination effects is also required at this stage.

Stage 2: Appropriate Assessment – This stage involves a detailed assessment of the implications of the plan or project, individually and in combination with other plans and projects, for the integrity of the Natura 2000 site(s) concerned. This stage also involves the development of appropriate mitigation to address any adverse effects and an assessment of the significance of any residual impacts following the inclusion of mitigation. In Kelly v. An Bord Pleanála (IEHC 400), the High Court ruled that a lawful AA must contain complete, precise, and definitive findings based on examination and analysis, and conclusions and a final determination based on an evaluation of the findings. In the same judgment, the High Court stressed that, in order for the findings to be complete, precise, and definitive, the AA must be carried out in light of best scientific knowledge in the field and cannot have gaps or lacunae. In Holohan v. An Bord Pleanála (C-461/17), the CJEU clarified that AA must "catalogue the entirety of habitat types and species for which a site is protected" (i.e. the qualifying interests of the site) and assess the implications of the plan or project for the qualifying interests, both within and outside the site boundaries, and other, non-qualifying interest habitats and species, whether inside or outside the site boundaries, "provided that those implications are liable to affect the conservation objectives of the site". The proposer of a plan or project requiring AA is furnishes the competent authority with the scientific evidence upon which to base its AA by way of a Natura Impact Statement (NIS) or Natura Impact Report (NIR). If it is not possible to ascertain that the plan or project will not adversely affect one or more Natura 2000 sites, authorisation can only be granted subject to Article 6(4).

Stage 3: Article 6(4) – If a plan or project does not pass the legal test at Stage 2, alternative solutions to achieve its aims must be considered and themselves subject to Article 6(3). If no feasible alternatives exist, authorisation can only be granted where it can be demonstrated that there are imperative reasons of overriding public interest (IROPI) justifying its implementation. Where this is the case, all compensatory measures must be taken to protect the overall coherence of Natura 2000.

The three stages described above are illustrated in Figure 2-1 below.



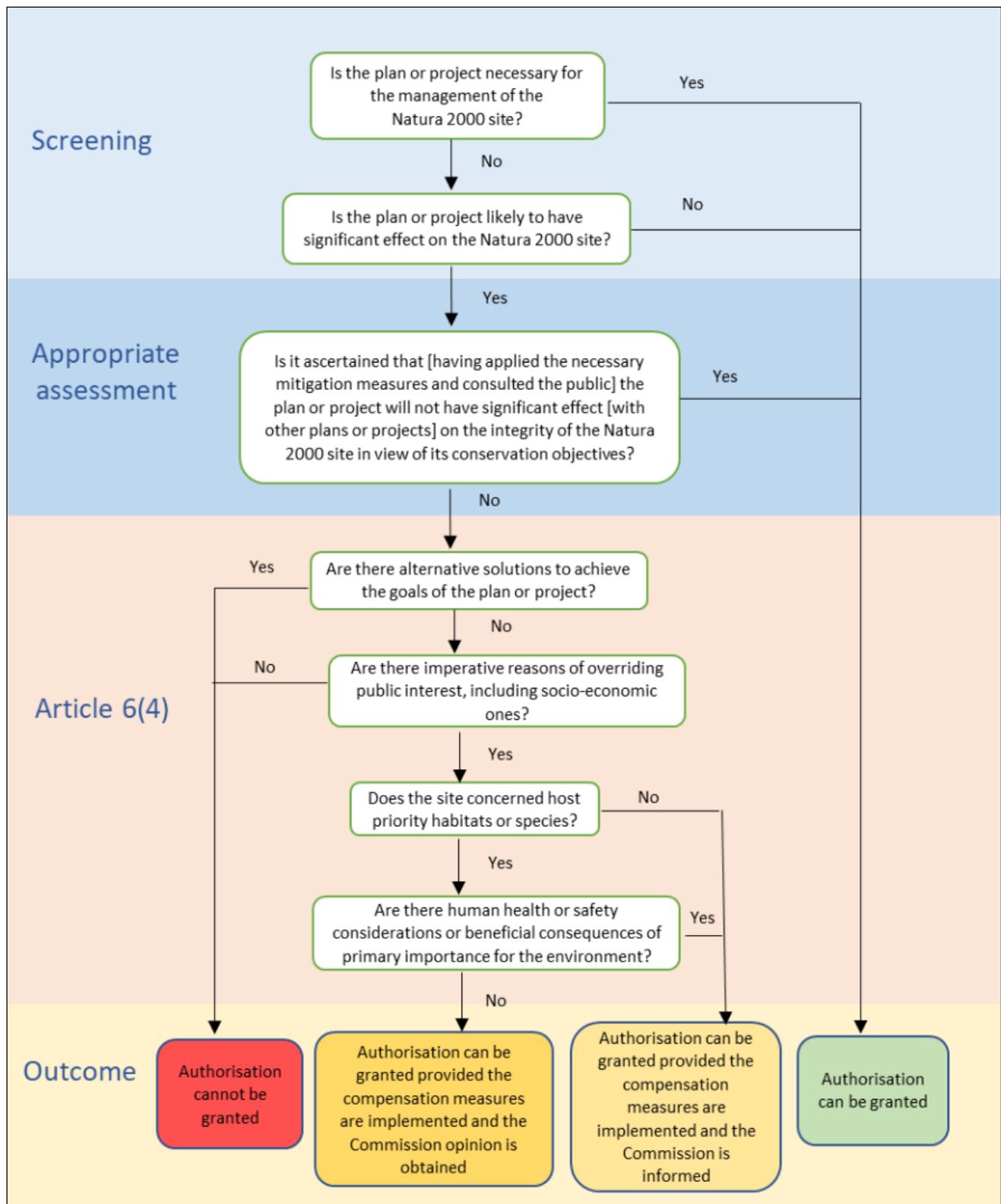


Figure 2-1 - Stages of the Appropriate Assessment process (EC, 2021a).

### 3. Methodology

### 3.1 Sources of Guidance

This report was prepared with due regard to the relevant European and Irish legislation, case law and guidance, including but not limited to: -

*Pleanála (C-461/17), Eoin Kelly v. An Bord Pleanála (IEHC 84), Heather Hill (IEHC 450) and Eco Advocacy v. An Bord Pleanála (C-721/21).*

- Sundseth, K. and Roth, P. (2014). Article 6 of the Habitats Directive – Rulings of the European Court of Justice. Ecosystems LTD (N2K Group), Brussels.

## 3.2 Desk Study

Baseline data regarding the receiving environment, including Natura 2000 sites, was gathered through a thorough desk study.

The boundaries of Natura 2000 sites were downloaded from *NPWS: Maps and Data* (<https://www.npws.ie/maps-and-data>). Information on sites, including their overall structures and functions, qualifying interests, conservation objectives and threats/pressures and activities therein, was found in the Site Synopsis, Natura 2000 Standard Data Form, Conservation Objectives and supporting documents for each site. Spatial data for site-specific conservation objectives of Natura 2000 sites, and boundary data for other designated sites, such as Natural Heritage Areas, was also retrieved from *NPWS: Maps and Data*. Reporting under Article 17 of the Habitats Directive (NPWS, 2019a-c; *Article 17 web tool*) and Article 12 of the Birds Directive (NPWS, 2024c; *Article 12 web tool*) provided further information on the habitats and species concerned at the national level.

Information relating to recent and historical records of species was obtained from the National Biodiversity Data Centre (NBDC) *Biodiversity Maps* (<https://maps.biodiversityireland.ie/Map>), while data for other features of the natural environment, e.g. known occurrences of non-qualifying interest Annex I habitats and the Department of Agriculture Food and the Marine's forest inventory, were viewed on *NPWS: Maps and Data*.

The Environmental Protection Agency (EPA) map viewer *EPA Maps: Water* (<https://gis.epa.ie/EPAMaps/Water>) and spatial data for river, lake, canal, transitional and coastal waterbodies downloaded from the *EPA Geoportal* (<https://gis.epa.ie/GetData/Download>) was used to identify any hydrological connection between the proposed works and Natura 2000 sites or connected features. Satellite and aerial imagery from Google Earth and Tailte Éireann were reviewed to identify hedgerows, treelines and other potential ecological features.

In order to inform the assessment of any potential effects that could arise from the proposed works in-combination with other works, planning applications from the surrounding area were reviewed using the *National Planning Application Database* (<https://housinggov.ie.maps.arcgis.com/home/index.html>), An Bord Pleanála's *Map Search* (<https://www.leanala.ie/en-ie/map-search>) and the *EIA Portal* (<https://www.gov.ie/en/publication/9f9e7-eia-portal/>).

## 3.3 Site Visit

The proposed works are located within a highly urbanised part of Cork City which is dominated by buildings, roads and hard landscaping. The Appropriate Assessment process was informed by the ecology team's local knowledge and by site photographs taken by the project engineers. The site was also visited on the 2<sup>nd</sup> May 2025 to undertake a preliminary ecological appraisal of the study area and inform the AA Screening. The entirety of the site was walked, and representative photographs of the vegetation, habitats and structures within the site were taken. Ecologically-important features within the immediate vicinity of the site boundary, such as the outflow locations along the River Lee were also surveyed and photographed.

## 3.4 Statement of Authority

This report was prepared by Alec Schmidt and reviewed by Owen O'Keefe.

**Alec Schmidt** is a Graduate Ecologist at AtkinsRéalis, holding a BSc (Hons) in Zoology from University College Cork (2023) and a MSc in Biodiversity and Conservation from Trinity College Dublin (2024). The main focus of Alec's work at AtkinsRéalis has been contributing to the surveying and reporting requirements necessitated by the Appropriate



Assessment process. Alec conducted the site survey which informed the AA Screening and contributed to the writing of the report.

**Owen O'Keefe** is a Senior Ecologist at AtkinsRéalis. Owen holds a BSc (Hons) in Ecology from University College Cork (2015) and is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). He has 9 years' professional experience in ecological consultancy, specialising in river ecosystems and Appropriate Assessment. Owen provided peer-review of this report.

**Paul O'Donoghue** is an Associate Director at Atkins. Paul holds a BSc (Zoology), MSc (Behavioural Ecology) and a PhD (Avian Ecology and Genetics). Paul is a Chartered member of the Society for the Environment (CEnv) and a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Paul has over 26 years' experience in ecology; including extensive experience in the preparation of Habitat Directive Assessments / Natura Impact Statements (i.e., Appropriate Assessment under Article 6(3) of the EU Habitats Directive).



# 4. Receiving Environment

This section provides an overall description of the natural environment in the vicinity of the proposed works and is not limited to Natura 2000 sites.

## 4.1 Habitats, Species and Ecological Corridors

The habitats within the site boundary almost exclusively consist of roads, pathways and other artificial or built surfaces (BL3). The site contains numerous dwellings that may potentially support bat species and bird species which nest under roof tiles. This part of the Cork City has a bat suitability index of 35.44 for all bat species (moderate to high value). There is also a section of vegetation within a public square at the junction of Mary Street and Red Abbey Street that may support further habitat for bats and birds. Drainage gullies which run along the existing road network are also present within the site.

The defining ecological feature of the receiving natural environment for the proposed works is the River Lee, which is situated approximately 10m from the site of the proposed works at its closest point. The river corresponds to the Fossitt (2000) habitat 'Tidal Rivers' (CW2) at this location, as the influence of brackish conditions is present and there are regular fluctuations in salinity, turbidity, flow rate and direction. The latest transitional water quality value (2018-2020) for the upper estuary of the River Lee is listed as 'Intermediate'. Latest Q-values for stations in the vicinity of the proposed works are listed as Q3-4 'Moderate (source: *EPA Maps: Water*).

At the site of the proposed works, the closest point of the River Lee is not designated as part of any Natura 2000 site. The closest Natura 2000 sites are the Cork Harbour SPA (site code: 004030) and the Great Island Channel SAC (site code: 001058) which lie approximately 5.34km and 10.33km, respectively, downstream from the nearest point of the river to the site of the proposed works. From the Iniscarra Dam (E 554465, N 572217 – Coordinates in ITM) to the point where the north and south channel diverge, the river is also designated as a salmonid water under the European Communities (Quality of Salmonid Waters) Regulations, 1988.

The proposed works have hydrological connectivity to the tidal reaches of the River Lee via the River Lee (south channel) and then the River Lee. Some drainage gullies within the site boundary discharge into the River Lee at three locations - on Sullivan's Quay at the end of Drinan Street and on George's Quay at the end of Mary Street and on White Street. These drainage gullies within the site boundary do not currently have attenuation or treatment systems in place to filter any pollutants that might enter the drainage system. These discharge points do not lie within a *Margaritifera*-sensitive area. Furthermore, there are no records of live Freshwater Pearl Mussel (*Margaritifera margaritifera*) occurring in the vicinity of the proposed works. Other drainage gullies within the site boundary are understood to connect to a combined storm / foul sewer system with flows going to treatment.

The banks of the River Lee at its closest extent to the proposed works are generally highly modified by the surrounding urban environment and do not provide suitable nesting habitat for Kingfisher (*Alcedo atthis*) and Sand Martin (*Riparia riparia*). However, historical records show the presence of both species both upstream and downstream of the site of the proposed works. Species such as the Black-headed Gull (*Chroicocephalus ridibundus*), Cormorant (*Phalacrocorax carbo*) and Grey Heron (*Ardea cinerea*) are regularly observed at this stretch of the river. Otter and the invasive American Mink (*Neovison vison*) are known to occur along the south channel of the River Lee.

## 4.2 Site Visit

The most prevalent habitat within the site is that of 'Buildings and artificial surfaces' (BL3). This habitat is characterised by buildings, areas paved with artificial surfaces, and structures built of materials other than natural stone. Another characteristic feature of this habitat type is the low percentage of vegetation cover, which generally does not exceed 50%. Elsewhere within the site, there are small areas of 'Flower beds and borders' (BC4) and 'Stone walls and other stone work' (BL1). The characteristic features of these habitats are represented in Figures 4-1 to 4-22 below.



Figure 4-1 – Buildings and artificial surfaces (BL3) at the junction of Evergreen Street, Abbey Street and Friar Street.



Figure 4-2 – Buildings and artificial surfaces (BL3) with scattered tree planting at the junction of Evergreen Street and Abbey Street.



Figure 4-3 – Stone wall (BL1) with vegetation including maidenhair spleenwort (*Asplenium trichomanes*) and daisy (*Bellis perennis*) on Abbey Street.

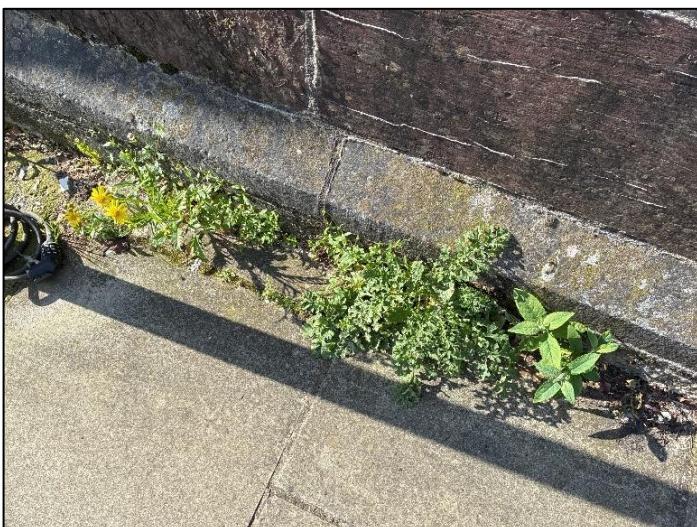
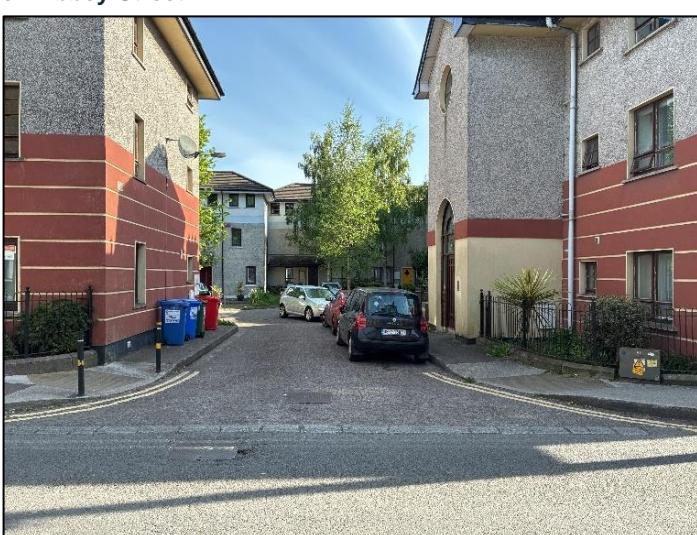


Figure 4-4 – Weed plants including Oxford ragwort (*Senecio squalidus*) growing at a footpath / stone wall interface on Abbey Street.



**Figure 4-5 – Ornamental planting within private garden areas at the junction between Douglas Street and St. John's Mews.**



**Figure 4-6 – Border of dwarf shrubs with scattered trees (BC4) adjacent to a car parking area on Summerhill South.**



**Figure 4-7 – Isolated trees at the junction of Douglas Street, High Street, Langford Row and Summerhill South. These trees provide shade to pedestrians at busy road crossings.**



**Figure 4-8 – Flower bed and pathway at a small public plaza on Langford Row.**





Figure 4-9 – Streetscape on Langford Row consisting of a mixture of modern and older residential buildings.

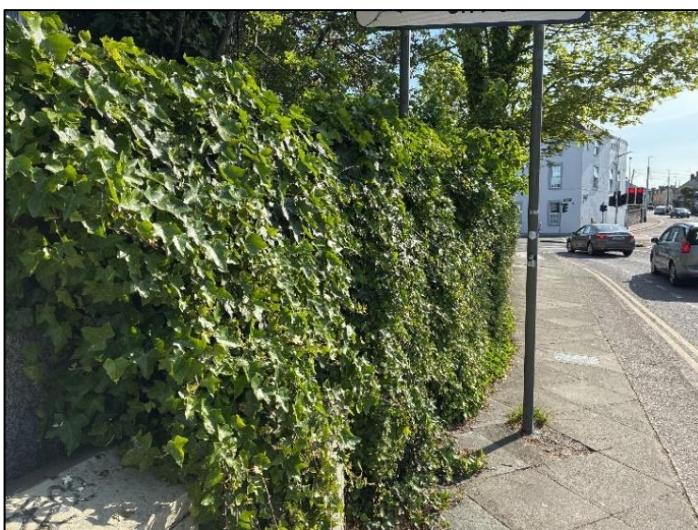


Figure 4-10 – Ivy (*Hedera helix*) growing across a stone wall on Langford Row.



Figure 4-11 – Scattered trees (left - such as surrounding a car parking area on Douglas Street); (right – Douglas Street junction).



Figure 4-12 – Ornamental planting atop a stone wall surrounding a car parking area on Douglas Street.

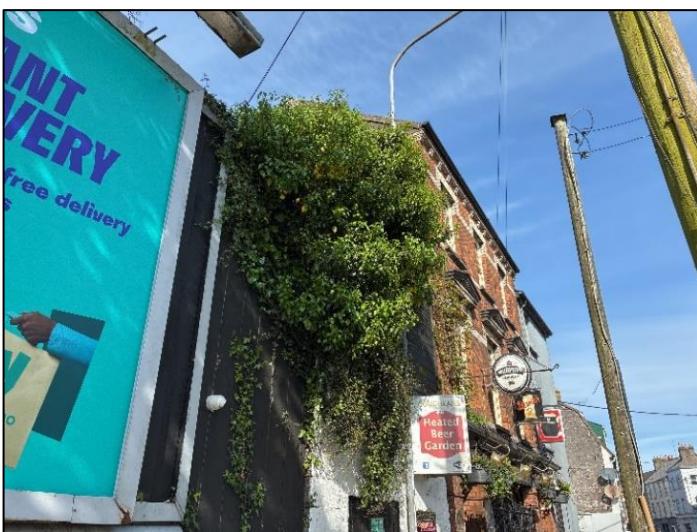


Figure 4-13 – Vegetation growth on a wooden fence bordering a private garden area on Douglas Street.



Figure 4-14 – Streetscape on Douglas Street dominated by buildings and artificial surfaces (BL3). Buildings consist of a mix of older residential and commercial properties.



Figure 4-15 – Tree growth with limited growing space to front of residential building on White Street.

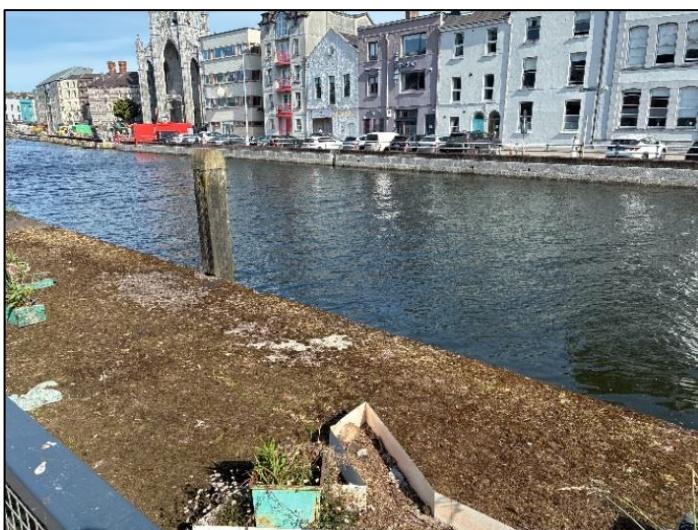


Figure 4-16 – River Lee close to outflow near White Street, which encompasses part of the site's existing drainage system.

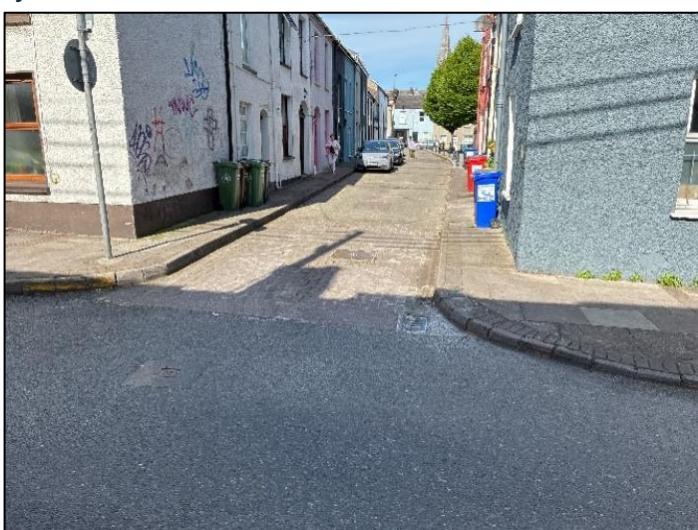


Figure 4-17 – Streetscape at the junction between Dunbar Street and Red Abbey Street, with some graffiti and light vegetation present.





Figure 4-18 – Mature trees at the public plaza on Red Abbey Street.



Figure 4-19 – Mixed-use buildings across from a disused site on Drinan Street. Limited vegetation is present.



Figure 4-20 – Streetscape on Cove Street, with minimal vegetation beyond weeds growing along the pedestrian footpaths.



Figure 4-21 – Birch trees offering street / pedestrian shading (Douglas Street / Langford Road).



Figure 4-22 – The Red Abbey.

## 5. Natura 2000 Sites

### 5.1 Zone of Influence

The “Zone of Influence” of a plan or project is the area which may experience ecological effects as a result of its implementation, including any ancillary activities. The various impacts of a plan or project will each have their own characteristics, e.g., nature, extent, magnitude, duration etc. Accordingly, the area subject to each impact (“zone of impact”) will vary depending on characteristics of the impact and the presence of pathways for its propagation. Ecological features within or connected to one or more zones of impact could, depending on their sensitivities, be affected by the plan or project under consideration. The area containing such features may be regarded as the Zone of Influence. As such, in establishing the Zone of Influence for a plan or project, regard must be had to the characteristics of its potential impacts, potential pathways for impacts and the sensitivities of ecological features in the receiving environment.

In its guidance on selecting which Natura 2000 sites to include in the AA Screening, *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities* (DEHLG, 2010a) recommends inclusion of sites in the following three categories: -

- Any Natura 2000 sites within or adjacent to the plan or project area.
- Any Natura 2000 sites within the Zone of Influence of the plan or project (generally within 15km for plans, to be established on a case-by-case basis for projects, having regard to the nature, scale and location of the project, the sensitivities of the ecological receptors and the potential for in-combination effects), and
- Following the precautionary principle, any other Natura 2000 sites for which the possibility of significant effects cannot be excluded, e.g., for a project with hydrological impacts, it may be necessary to check the full extent of the catchment for Natura 2000 sites with water-dependent qualifying interests.

In addition, *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC, 2021) recommends consideration of Natura 2000 sites hosting fauna which could move to the plan or project area or its zone(s) of impact, and the potential for the plan or project to sever ecological connectivity within or between Natura 2000 sites. *Appropriate Assessment Screening for Development Management* (OPR, 2021) emphasises the importance of employing the source-pathway-receptor model (rather than arbitrary distances such as 15km) when selecting Natura 2000 sites for inclusion in the AA Screening.

Based on the nature, scale and location of the proposed works and the baseline conditions in the receiving natural environment, the zones of impact of the proposed works were defined as: -

- For direct impacts, all areas within and immediately adjoining the red-line boundary.
- Given the existence of the red-line boundary within a busy urban area the risk of temporary disturbance to birds and other fauna is very low as they are likely habituated to such levels of activity and noise. However, as a precaution, particularly with regard to the spread of invasive species, all areas within a buffer of 200m from the red-line boundary were included.
- For water quality impacts, the Lee (Cork) Estuary Upper and transitional waterbodies (close to the City).
- For indirect impacts, any other areas with potential ecological connectivity to the above zones of impact, e.g. connected wetlands and waterbodies.

The Zone of Influence was defined as sum of the above zones of impact.



Using QGIS, spatial data for waterbodies and catchments from *EPA Geoportal* were viewed in conjunction with aerial imagery from *Google Earth* to identify pathways and zones of impact from the proposed works, and other potential ecological connections to the wider landscape. These were then mapped in relation to designated sites using spatial data from *NPWS: Maps and Data* (see Figure 5-1). In addition, the Zone of Influence was examined to identify any other sites, habitats, species or sensitive ecological features with potential ecological connections to these zones of impact.



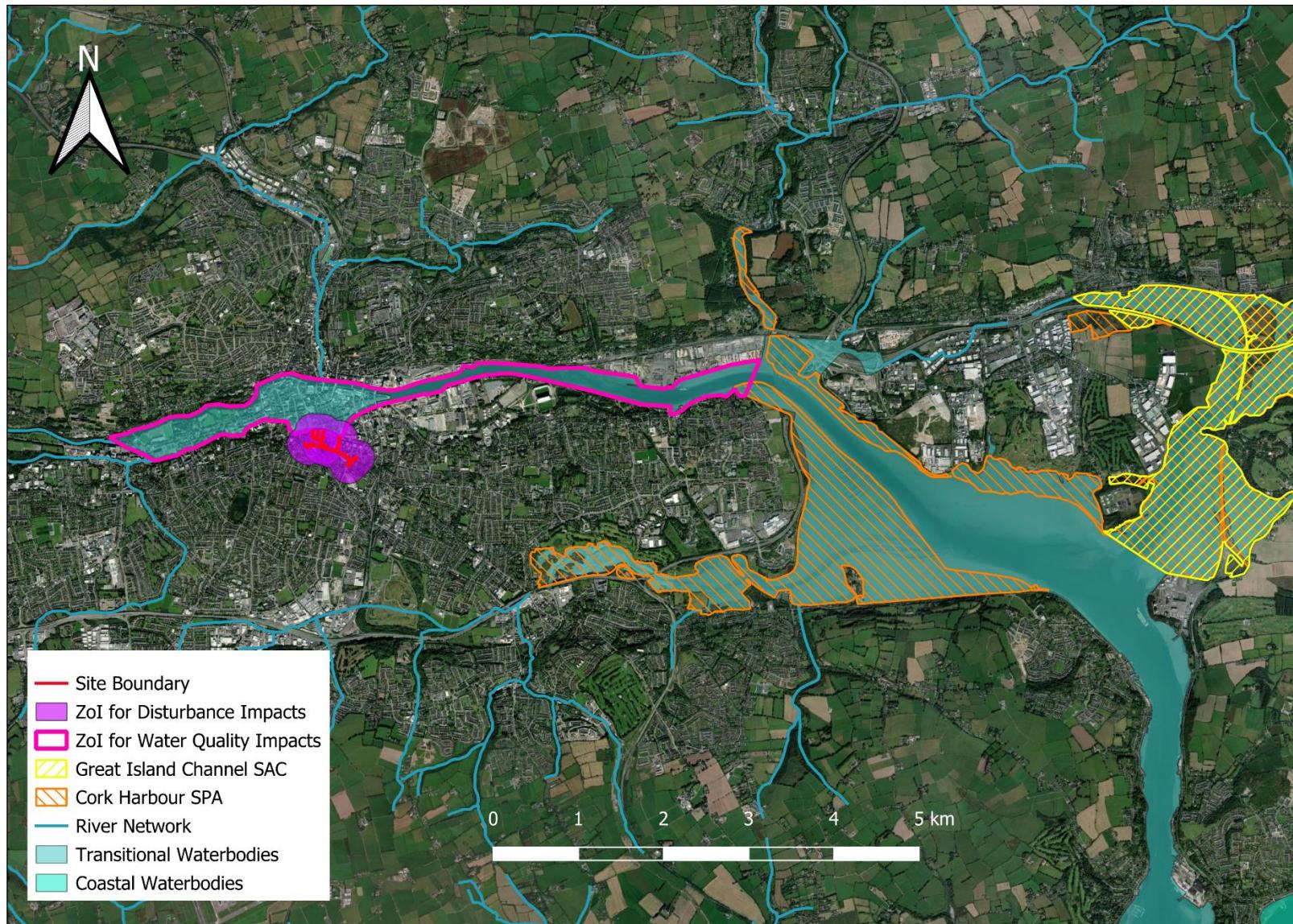


Figure 5-1 - Zones of Impact from the proposed works in relation to the boundaries of Natura 2000 sites. [Basemap: ESRI]



## 5.2 Site Descriptions

The descriptions of Natura 2000 sites presented in this section are based on the Site Synopsis, Conservation Objectives and Natura 2000 Standard Data Form documents for the sites concerned, augmented by information from the supporting documents available on the site-specific pages of the NPWS website.

Annex I habitat types marked with an asterisk (\*) are “priority habitat types”, i.e., natural habitat types in danger of disappearing and for the conservation of which the EU has a particular responsibility given the proportion of their natural ranges falling within the European territory of Member States.

### 5.2.1 Great Island Channel SAC

#### 5.2.1.1 Overview

The following description is taken from the Site Synopsis (NPWS, 2013) and Conservation Objectives Supporting Document (NPWS, 2014b) for Great Island Channel SAC.

The Great Island Channel stretches from Little Island to Midleton, with its southern boundary being formed by Great Island. It is an integral part of Cork Harbour which contains several other sites of conservation interest. Geologically, Cork Harbour consists of two large areas of open water in a limestone basin, separated from each other and the open sea by ridges of Old Red Sandstone. Within this system, Great Island Channel forms the eastern stretch of the river basin and compared to the rest of Cork Harbour, is relatively undisturbed. Within the site is the estuary of the Owennacurra and Dungourney Rivers. These rivers, which flow through Midleton, provide the main source of freshwater to the North Channel.

The Great Island Channel SAC is of ecological importance for its examples of intertidal mud and sand flats and Atlantic salt meadows of the estuarine type. Both habitats are fairly extensive in area and of moderate to good quality. The site has high ornithological importance, regularly supporting c. 50% of the wintering waterfowl of Cork Harbour (NPWS, 2013; 2014b). Significant proportions of the internationally important populations of Black-tailed Godwit and Redshank, which winter in Cork Harbour, utilise the site and it supports nationally important populations of a further 12 species, including Golden Plover and Bar-tailed Godwit, both listed on Annex I to the Birds Directive.

#### 5.2.1.2 Qualifying Interests and Conservation Objectives

The Great Island Channel SAC was selected for the following qualifying interests: -

- Mudflats and sandflats not covered by seawater at low tide (1140)
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) (1330)

The Annex I habitat ‘Estuaries’ (1130) is also present within the site (NPWS, 2019d) but is not listed as a qualifying interest. NPWS (2014b) states that the swards of *Spartina* sp. within the site are not considered to qualify as the Annex I habitat ‘*Spartina* swards (*Spartinion maritimae*)’ (1320).

The conservation objectives of the Great Island Channel SAC are as follows:

- *To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Great Island Channel SAC*
- *To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Great Island Channel SAC*

The Conservation Objectives document for the site (NPWS, 2014a) also states the following: “*Please note that this SAC overlaps with Cork Harbour SPA (004030). [...] The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.*”

### 5.2.1.3 Threats, Pressures and Activities

While the main land use within the Great Island Channel SAC is aquaculture (specifically, oyster farming), the greatest threats to its conservation significance come from road works, infilling, sewage outflows and possible marina developments.

Table 5-1 below lists the threats, pressures, and activities with negative impacts on the site, as per its Natura 2000 Standard Data Form (NPWS, 2019d).

**Table 5-1 - Threats, pressures and activities with negative impacts on the Great Island Channel SAC.**

Rank	Threat, pressure or activity (code)	Threat, pressure or activity (description)	Inside, outside or both
Medium	A04	Grazing	Inside
Medium	A08	Fertilisation	Outside
High	D01.02	Roads, motorways	Inside
High	E01	Urbanised areas, human habitation	Outside
High	F01	Marine and freshwater aquaculture	Inside
Medium	I01	Invasive non-native species	Inside
High	J02.01.02	Reclamation of land from sea, estuary or marsh	Inside
Medium	K02.03	Eutrophication (natural)	Inside

NPWS (2019d) and Eionet (2025).

## 5.2.2 Cork Harbour SPA

### 5.2.2.1 Overview

The following description is taken from the Site Synopsis (NPWS, 2015) and Conservation Objectives Supporting Document (NPWS, 2014c) for Cork Harbour SPA.

Cork Harbour is a large, sheltered bay system, with several river estuaries, principally those of the Rivers Lee, Douglas, Owenboy and Owenacurra. The site comprises most of the main intertidal areas of Cork Harbour, including all of the Great Island Channel, the Douglas River Estuary, inner Lough Mahon, Monkstown Creek, Lough Beg, the Owenboy River Estuary, Whitegate Bay, Ringabella Creek and the Rostellan and Poulnabibe inlets.

Owing to the sheltered conditions, the intertidal flats are often muddy in character. Salt marshes are scattered through the site, and these provide high tide roosts for the birds. Otherwise, birds roost on stony shorelines and, in some areas, fields adjacent to the shore. Some shallow bay water is included in the site. Cork Harbour is adjacent to a major urban centre and a major industrial centre.

Cork Harbour is an internationally important wetland site, regularly supporting in excess of 20,000 wintering waterfowl, for which it is amongst the top five sites in the country. It supports an internationally important population of Redshank (*Tringa totanus*). A further 15 species have populations of national importance, with particularly notable numbers of Shelduck (*Tadorna tadorna*) (9.6% of national total), Shoveler (*Anas clypeata*) (4.5% of total), Pintail (*Anas acuta*) (4.2% of total) and Cormorant (*Phalacrocorax carbo*) (4.1% of total) occurring. It has regionally important populations of Golden Plover (*Pluvialis apricaria*) and Bar-tailed Godwit (*Limosa lapponica*). Passage waders are regular, including Ruff (*Philomachus pugnax*) and Spotted Redshank (*Tringa erythropus*). It is an important site for gulls in winter and autumn, especially Common Gull (*Larus canus*) and Lesser Black-backed Gull (*L. fuscus*). The SPA provides both feeding and roosting areas for the waterfowl species. The quality of most of the estuarine habitats is good. The wintering birds have been well-monitored since the 1970s. The site has a breeding colony of Common Tern (*Sterna hirundo*) which is of national importance.

### 5.2.2.2 Qualifying Interests and Conservation Objectives

The Cork Harbour SPA was selected for the following qualifying interests: -

- Little Grebe (*Tachybaptus ruficollis*) (A004)
- Great Crested Grebe (*Podiceps cristatus*) (A005)
- Cormorant (*Phalacrocorax carbo*) (A017)
- Grey Heron (*Ardea cinerea*) (A028)
- Shelduck (*Tadorna tadorna*) (A048)
- Wigeon (*Anas penelope*) (A050)
- Teal (*Anas crecca*) (A052)
- Pintail (*Anas acuta*) (A054)
- Shoveler (*Anas clypeata*) (A056)
- Red-breasted Merganser (*Mergus serrator*) (A069)
- Oystercatcher (*Haematopus ostralegus*) (A130)



- Golden Plover (*Pluvialis apricaria*) (A140)
- Grey Plover (*Pluvialis squatarola*) (A141)
- Lapwing (*Vanellus vanellus*) (A142)
- Dunlin (*Calidris alpina alpina*) (A149)
- Black-tailed Godwit (*Limosa limosa*) (A156)
- Bar-tailed Godwit (*Limosa lapponica*) (A157)
- Curlew (*Numenius arquata*) (A160)
- Redshank (*Tringa totanus*) (A162)
- Black-headed Gull (*Chroicocephalus ridibundus*) (A179)
- Common Gull (*Larus canus*) (A182)
- Lesser Black-backed Gull (*Larus fuscus*) (A183)
- Common Tern (*Sterna hirundo*) (A193)
- Wetlands (A999)

All of the qualifying interests listed above are assigned a conservation objective to “*maintain*” their favourable conservation status in the Cork Harbour SPA.

The Conservation Objectives document for the site (NPWS, 2014d) also states the following: “*Please note that this SPA overlaps with Great Island Channel SAC (001058). [...] The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.*”

### 5.2.2.3 Threats, Pressures and Activities

Table 5-2 below lists the threats, pressures, and activities with negative impacts on the Cork Harbour SPA, as per its Natura 2000 Standard Data Form (NPWS, 2020).

Table 5-2 - Threats, pressures and activities with negative impacts on the Cork Harbour SPA.

Rank	Threat, pressure or activity (code)	Threat, pressure or activity (description)	Inside, outside or both
Medium	A08	Fertilisation	Outside
High	D01.02	Roads, motorways	Outside
High	D03.01	Port areas	Outside
Medium	D03.02	Shipping lanes	Inside
High	E01	Urbanised areas, human habitation	Outside
Low	E01.03	Dispersed habitation	Outside
High	E02	Industrial or commercial areas	Outside
High	F01	Marine and Freshwater Aquaculture	Inside
Medium	F02.03	Leisure fishing	Inside
Medium	G01.01	Nautical sports	Inside
Medium	G01.02	Walking, horse riding and non-motorised vehicles	Inside

NPWS (2020) and Eionet (2025).

## 5.3 Identification of Potential Impacts

Given the nature, small scale and short duration of the proposed works, the potential impacts on the receiving natural environment are considered to be limited to the following:

### 5.3.1 Habitat Loss and Fragmentation

There are no Natura 2000 sites within, intersecting or adjoining the proposed works area. Therefore, there will be no direct impacts from habitat loss or fragmentation associated with the proposed works.

### 5.3.2 Disturbance to Birds and Other Fauna

As above, there are no Natura sites within, intersecting or adjoining the proposed works boundary. The Cork Harbour SPA (site code: 004030) and the Great Island Channel SAC (site code: 002170), which are located c. 5.34km and 10.33km eastwards, respectively, from the proposed works at their closest point and, while the SAC is not selected for any species, the SPA is selected for a number of bird species which are highly mobile and so could potentially use habitats in the vicinity of the proposed works. While gulls, cormorant and grey heron can occasionally occur along the section of the river closest to the site of the proposed works, these species are habituated to human activity in the environs of the river. Furthermore, it would be unlikely for these species to occur closer to the site of the proposed works as this lies further within the urban environment of Cork City and provides little opportunity for ex-situ foraging. There are no areas of habitat suitable for ex-situ foraging of other species such as Oystercatcher or Curlew, which are qualifying interests of Cork Harbour SPA, in the environs of the proposed works.

Given the nature of the habitats in the zone of impact for disturbance and the availability of more suitable habitats closer to the SPA, they are not considered to be of importance for these birds. Therefore, any significant ex-situ effects are unlikely to occur.

Furthermore, there is no potential for direct, indirect or ex-situ impacts of artificial lighting from the proposed works to the Great Island Channel SAC and Cork Harbour SPA.

### 5.3.3 Hydrological Impacts

#### 5.3.3.1 Water Quality

Given that most, though not all, of the drainage gullies within the site of the proposed works discharge into the River Lee, approximately 4.98km upstream of the Cork Harbour SPA and approximately 10.01km upstream of the Great Island Channel SAC, there is hydrological connectivity between the proposed works and those sites.

Due to the nature of the proposed works, they give rise to potential impacts on water quality through the input or resuspension of fine sediment, debris and mortar, and input of hydrocarbons, as follows:

- Sources of suspended sediment include the input of soil, debris or dust either directly or via run-off. Plumes of silt or fine sediment can directly affect aquatic fauna, e.g. by clogging their gills, and can also reduce habitat quality, e.g. by smothering of spawning gravels for salmonid species. Suspended sediment can also interact with other pollutants, magnifying their effects.
- Sources of hydrocarbon input include leaks of substances such as fuel, e.g. petrol or diesel, or lubricating oil from vehicles, plant or equipment. Hydrocarbons can have direct toxic effects on the flora and fauna of contaminated waters and soils.

As such, there is a possibility of contamination of surface water run-off associated with the proposed works and there is a pathway for such impacts between the works area and the Natura 2000 sites concerned. This risk of such impacts leading to likely significant effects is assessed in Section 6 below.

Any waste material that is accrued during the proposed works will be stored within a designated area away from the riverbank and transported off-site for disposal throughout the duration of the works.

At the beginning of each day, and as is standard site practice, all fuel-operated vehicles, plant and equipment will be checked for any leaks or defects. Any leaks or defects will be rectified before the vehicle, plant or equipment in question is allowed on site. Emergency spill kits will be provided, and staff trained in their use. Refuelling of vehicles, plant and equipment will take place off-site.

### **5.3.3.2 Hydrological Regime**

Given the nature of the proposed works, there may be a temporary increase in the rate of flow events from the run-off generated by the drainage gullies which discharge into the River Lee. As the works are being progressed in stages over a period of twelve months, and will not be conducted persistently over that duration, there will not be any long-term changes in the duration or volume of flow events from these drainage gullies. As such, there will be no effect on the hydrological regime (whether fluvial, tidal or otherwise) of the River Lee as a result of the proposed works.

### **5.3.3.3 Hydromorphology**

The scope of the proposed works does not involve any alterations to the river channel and therefore there will be no alteration to the current patterns of erosion and deposition of sediment. Given the nature of the proposed works, there may be slight changes to the patterns of deposition within the River Lee as there may be a temporary increase in the sediment load of the drainage gullies within the site of the proposed works. However, given the gradual progression of the works, any increase in the sediment load of the drainage gullies would be dispersed across the duration of the works. Furthermore, the installation of SuDS will provide improved pollutant and sediment entrapment within the site boundary, as there are currently no attenuation or treatment systems in place within the drainage gullies. As such, negative effects on the hydromorphology of the River Lee as a result of the proposed works are not anticipated.

### **5.3.4 Invasive Alien Species**

No invasive alien species which could negatively impact the qualifying interests of the Great Island Channel SAC / Cork Harbour SPA such as common cordgrass (*Spartina anglica*) or Chinese mitten crab (*Eriocheir sinensis*) were identified from records viewed during the desk study. Routine biosecurity measures that will be followed on site are set out in Section 1.2.2.3 will however be implemented to prevent accidental import of invasive species such as Japanese knotweed (*Reynoutria japonica*) to the works area. Negative impacts to the Great Island Channel SAC or Cork Harbour SPA from the potential spread of invasive alien species are not anticipated as a result of the proposed works

### **5.3.5 Summary**

The proposed works will not give rise to any impacts in relation to habitat fragmentation, disturbance or invasive species which could affect any of the qualifying interests of the Natura 2000 sites concerned. Potential impacts that require further consideration pertain to water quality only and are assessed in the subsequent section in relation to the qualifying interests of the relevant Natura 2000 sites.

# 6. Likely Significant Effects

## 6.1 Identification of Likely Significant Effects

The identification of likely effects in this section follows the “source-pathway-receptor” model. According to this model, for an effect to exist, all three of the following criteria must be met: -

- Some aspect of the plan or project must act as a source of an impact,
- There must be a pathway capable of conveying the impact to a receptor, and
- The receptor must be sensitive to the impact.

Types of impacts likely to arise from the proposed works and their sources are described in Section 5, potential pathways for those impacts are described and illustrated in Sections 5.1 and 5.3, and receptors are described in Section 5.2. The following subsections detail the specific effects on each receptor and evaluate their significance in view of the relevant conservation objectives.

### 6.1.1 Great Island Channel SAC

Likely significant effects on the Great Island Channel SAC are identified, in view of the conservation objectives of the site, in Table 6-1 below.

**Table 6-1 - Identification of impacts and evaluation of effects on the Great Island Channel SAC (LSE = likely significant effect).**

Qualifying interest	Identification of likely significant effects	LSE
Mudflats and sandflats not covered by seawater at low tide	<p>This habitat occurs in the intertidal areas of the SAC, c. 11.95km east (downstream) of the site of the proposed works, although examples of this habitat outside of the SAC exist closer to the site. This habitat depends on water quality to maintain the 'Mixed sediment to sandy mud with polychaetes and oligochaetes community complex' in a natural condition and there is hydrological connectivity between the proposed works and this habitat. However, given the magnitude, extent and duration of potential water quality impacts associated with the proposed works, and the large hydrological distance between the proposed works and extremely large dilution capacity of the receiving waterbodies, there is not considered to be any risk of water quality impacts on this habitat.</p> <p>Therefore, likely significant effects on the conservation objectives for this qualifying interest can be ruled out at this stage.</p>	No
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	<p>These habitats occur in the saltmarshes on the edge of the intertidal mudflats and sandflats of the SAC, c. 11.95km east (downstream) of the site of the proposed works, although examples of this habitat outside of the SAC exist closer to the site. These habitats are subject to periodic inundation (during spring tides), their vegetation structure and composition are sensitive to pollution of the estuarine waters of the SAC. As above, there is hydrological connectivity between the proposed works and this habitat. However, given the magnitude, extent and duration of potential water quality impacts, and the large hydrological distance between the proposed works and extremely large</p>	No

Qualifying interest	Identification of likely significant effects	LSE
	<p>dilution capacity of the receiving waterbodies, there is not considered to be any risk of water quality impacts on this habitat.</p> <p>Therefore, likely significant effects on the conservation objectives for this qualifying interest can be ruled out at this stage.</p>	

## 6.1.2 Cork Harbour SPA

Likely significant effects on the Cork Harbour SPA are identified, in view of the conservation objectives of the site, in Table 6-2 below.

**Table 6-2 - Identification of impacts and evaluation of effects on the Cork Harbour SPA (LSE = likely significant effect).**

Qualifying interest	Identification of likely significant effects	LSE
All bird species of special conservation interest in the SPA	<p>Given the distance between the proposed works and the Cork Harbour SPA, there will be no direct habitat loss or disturbance which could affect birds in the SPA. In addition, given the magnitude, extent and duration of potential water quality impacts associated with the proposed works, and the large hydrological distance between the proposed works and extremely large dilution capacity of the receiving waterbodies, there is not considered to be any risk of water quality impacts on foraging habitat for birds in the SPA. Furthermore, the habitats within and adjacent to the footprint of the proposed works are not considered to be of importance to any of the bird species of special conservation interest in the SPA.</p> <p>Therefore, likely significant effects on the conservation objectives for these qualifying interests can be ruled out at this stage.</p>	No
Wetlands	<p>Wetland habitat for waterbirds does not occur within or within the immediate environs of the proposed works. The nearest occurrence is c. 5.34km east (downstream), within the SPA. Therefore, there will be no direct impacts through habitat loss. Wetland habitat is sensitive to changes in water quality with regard to foraging for waterbirds.</p> <p>However, given the magnitude, extent and duration of potential water quality impacts associated with the proposed works, and the large hydrological distance between the proposed works and extremely large dilution capacity of the receiving waterbodies, there is not considered to be any risk of water quality impacts on wetland habitat in Cork Harbour SPA.</p> <p>Therefore, likely significant effects on the conservation objective for this qualifying interest can be ruled out at this stage.</p>	No

## 6.2 Summary

On the basis of objective information presented in Sections 3, 4, and 5, the evaluation in Section 6.1 has found that there are no impacts, such as water quality impacts and ex-situ disturbance, likely to arise from the proposed works which could give rise to likely significant effects on the Qualifying Interests of Great Island Channel SAC or the Cork Harbour SPA.

# 7. Potential In-combination Effects

## 7.1 Requirement for Assessment

The requirement for AA arising out of Article 6(3) of the Habitats Directive covers plans and projects that, “*either individually or in combination with other plans or projects*”, are likely to have a significant effect on one or more Natura 2000 sites. This means that AA is required for any plan or project that, in combination with other plans or projects, would have a significant effect on one or more Natura 2000 sites, irrespective of the presence or absence of such effects from that plan or project on its own. Therefore, regardless of the significance of the effects of the plan or project individually, the potential for significant effects in combination with other plans and projects must be considered in all cases.

## 7.2 Approach and Methodology

The objective of this requirement is to capture significant effects potentially arising from the cumulation or other interaction of non-significant effects from multiple plans and projects. Consequently, the assessment of potential in-combination effects is not a pair-wise assessment, rather, it considers the totality of the effects arising from all plans and projects affecting the Natura 2000 site(s) in question. In identifying the plans and projects to be included in this assessment, it is important to define an appropriate geographical scope and timescale over which potential in-combination effects are to be considered and the sources of information to be consulted, as described below. It is also important to consider the nature of the interactions between effects, which may be additive, antagonistic, synergistic or complex.

### 7.2.1 Geographical Scope

In defining the geographical scope for identifying potential in-combination effects, it is important to remember that effects are evaluated in view of the conservation objectives of the Natura 2000 site(s) concerned. As such, two or more effects relating to the same conservation objective for a given Natura 2000 site would combine even if their geographical extents did not overlap. For example, the loss of a small area of an Annex I habitat type listed as a qualifying interest of a Natura 2000 site would combine with the loss of an entirely unconnected area of the same habitat type from a remote part of the same site to produce an in-combination effect, the significance of which would need to be evaluated in view of the relevant conservation objective. On that basis, the scope of the assessment of in-combination effects extends to all plans and projects affecting the same conservation objectives as the plan or project under consideration, irrespective of whether those effects are significant or not.

It was established in Section 5 of this report that the proposed works has connectivity to 2 no. Natura 2000 sites, namely the Great Island Channel SAC and Cork Harbour SPA. Thus, the geographical scope of the in-combination assessment covered all areas which influence the conservation condition of the qualifying interests of these sites, which was taken to be the Zol of the proposed works itself, plus transitional and coastal waterbodies of Cork Harbour and the adjoining lands.

### 7.2.2 Timescale

Given the nature and scale of the proposed works, it was considered appropriate to include all existing plans, projects and ongoing activities, projects under construction, approved or awaiting planning decisions, activities awaiting licensing, and any additional future plans or projects for which there is sufficient information available at this stage to allow for meaningful consideration of the potential in-combination effects.

### 7.2.3 Sources of Information

The following sources of information were consulted to gather information on other plans and projects: -

- Cork City Development Plan 2022-2028.
- Cork County Development Plan 2022-2028.
- *Cork City Council Planning Viewer* (<https://corkcityco.maps.arcgis.com/apps/webappviewer/index.html>).
- *Cork County Council Planning Viewer* (<https://corkcocoeur.maps.arcgis.com/apps/webappviewer/index.html>) [accessed 20/01/2025].
- *EIA Portal* (<https://housinggov.ie.maps.arcgis.com/apps/webappviewer/index.html>) [accessed 20/01/2025].
- *EPA Maps: Water* (<https://gis.epa.ie/EPAMaps>).
- *Ireland's Marine Atlas* (<https://atlas.marine.ie/>).
- *An Bord Pleanála Map Search* (<https://www.leanala.ie/en-ie/map-search>) [accessed 20/01/2025].

## 7.3 Assessment

### 7.3.1 Plans

The current Cork City Development Plan sets out the policies and objectives of Cork City Council with regard to the proper planning and sustainable development its functional area. The plan covers the period from 2022 to 2028. The plan was subject to AA, including the preparation of a Natura Impacts Report (NIR). The NIR assessed at a strategic level, the implications of the plan for Natura 2000 sites, including the Great Island Channel SAC and the Cork Harbour SPA. Where potential adverse effects were identified, the plans were amended to mitigate those effects. Following these amendments, the adopted plan now contains specific text in relation to the protection of these and other Natura 2000 sites. This includes restrictions on development within the vicinity of these sites, requirement for assessment under Article 6 of the Habitats Directive for development likely to have a significant effect on these sites, use of sustainable urban drainage systems (SUDS), and commitments to develop green infrastructure to support Natura 2000 sites and biodiversity generally, in line with Article 10 of the Habitats Directive and Article 3 of the Birds Directive.

The policies and objectives in this local authority development plan contribute to mitigating the negative effects of development on the Great Island Channel SAC, Cork Harbour SPA and other Natura 2000 sites and provide for the enhanced resilience of these sites through the development of green infrastructure/ecological networks. Therefore, there will be no significant effects from the proposed works in combination with the development plan and the plan will also mitigate any in-combination effects arising from other projects.

### 7.3.2 Projects

#### 7.3.2.1 Large-scale Projects

A search of the *EIA Portal*, focussing on areas within c. 1km of the Great Island Channel SAC and Cork Harbour SPA and connected waterbodies, identified 57 no. projects which required and provided Environmental Impact Assessment (EIA). These included applications relating to new large-scale residential and mixed-use developments, railway improvement, electricity transmission, chemical and pharmaceutical industry, wastewater infrastructure, bridges, and educational facilities.

Owing to their proximity to the proposed works and the Natura 2000 sites concerned, as well as their nature and scale, the following projects were deemed to be the most relevant in terms of the potential for negative effects in combination with the proposed works: -

- Construction of a mixed-use complex with residential, office, entertainment, food & beverage, cinema, retail and public open space to include historic Odlums Building (RPS ref. PS856) & rehabilitation hospital, all over double basement.
- Construction of an office building 5-12-14-16 storeys over the ground floor, with external terraces at Levels 2, 6, 13, & 15; two levels of basement for parking; a café/deli & restaurant with outdoor seating; the refurbishment of 2 no. Protected Structures; and the demolition of Carey Tool Hire.
- Refurbishment of the Custom House and Bonded Warehouses, construction of a 34-storey tower c.140m over the Revenue Building, a distillery, remedial works to quay walls, and the provision of a new public realm.
- Tri-span bridge on two structural piers of c. 65m in length x 3.5-4.5m in width connecting the existing Tyndall National Institute campus to Tyndall National Institute's New Facility on opposing sides of the north channel of the River Lee.
- Flood Relief Scheme for Glanmire/Sallybrook, Cork involving the construction of direct flood defences and conveyance improvement measures along the Glashaboy River and its tributaries.

In the context of the existing land use and habitats within the footprint of and adjoining these projects and the sensitivities of the Great Island Channel SAC and Cork Harbour SPA, and given the nature and scale of these projects, it is considered that they do not have any potential to give rise to adverse effects on any Natura 2000 sites in combination with the proposed works.

Furthermore, Uisce Éireann's planned upgrades to the wastewater networks and treatment plants discharging to Cork Harbour and connected waterbodies (as discussed in more detail below), ensure that adequate treatment is provided for wastewater from these and other projects before discharge to receiving waterbodies, thereby preventing negative effects on water quality in the Great Island Channel SAC and Cork Harbour SPA.

### 7.3.2.2 Small-scale Projects

Searches of the Cork County Council Planning Viewer and Cork City Council Planning Viewer found that, since 1<sup>st</sup> January 2017, there have been c. 10,000 No. planning applications to these two local authorities for projects within c. 1km of the Great Island Channel SAC and Cork Harbour SPA and connected waterbodies.

The nature and scale of these projects vary considerably, but they are generally of less concern in terms of their potential environmental effects than those identified through the EIA Portal (though there is some overlap). They include a large number of domestic projects such as retention of existing dwelling houses and associated structures, or modifications to same, or the construction of new domestic dwellings or extensions to dwellings, including new connections to the public wastewater network, or associated septic tanks or other on-site treatment.

Regarding potential impacts to water quality, such projects must comply with the EPA's *Code of Practice: Domestic Wastewater Treatment Systems (Population Equivalent ≤10)* (EPA, 2021). Furthermore, Uisce Éireann's planned upgrades to the wastewater networks and treatment plants discharging to Cork Harbour and connected waterbodies (as discussed in more detail below), ensure that adequate treatment is provided for wastewater from such projects (where they are within urban wastewater agglomerations) prior to discharge to the receiving waterbodies, thereby preventing negative effects on water quality in the Great Island Channel SAC and Cork Harbour SPA. Therefore, such projects are not likely to have any significant effects in combination with the proposed works.

### 7.3.3 Licensed Activities

A review of licensed activities through EPA Maps found that there are 46 No. activities licences by the EPA in the vicinity of the Great Island Channel SAC and Cork Harbour SPA and connected waterbodies. These include licenses relating to the production of pharmaceuticals, materials manufacturing, oil refining and the production of food and drink. Some of these licences are currently pending approval, while others may no longer be in use. Based on the

nature and scale of these activities, a risk of significant in-combination effects on Natura 2000 sites via water quality impacts must be considered. However, given the conditions attached to the IPC and IE licences and enforcement of the same by the EPA, and the very low risk of any significant water quality impacts in Cork Harbour from the proposed works, there is not likely to be any significant effects from these licensed activities in combination with the proposed works.

### 7.3.3.1 Wastewater Treatment Plants and Networks

#### Upper Cork Harbour

The existing Carrigtwohill Wastewater Treatment Plant (WwTP) discharges treated effluent to the Lough Mahon (Harper's Island) transitional waterbody, within the Great Island Channel SAC and a short distance upstream of the Cork Harbour SPA. The Carrigtwohill WwTP can provide tertiary treatment (including nitrogen and phosphorus removal) for a population equivalent (p.e.) of up to 30,000. The current load is 10,010 p.e. (as of 2021) and the WwTP passed its Water Framework Directive (WFD) compliance test in 2021. Uisce Éireann will progress any WwTP and network upgrades as required and in advance of treatment headroom being exhausted.

The Midleton WwTP can provide tertiary treatment (including nitrogen removal) for 15,000 p.e. but is currently overloaded, with an agglomeration p.e. of 16,376 (as of 2021). Nevertheless, it passed its WFD compliance test in 2021. This plant discharges to the Owenacurra Estuary transitional waterbody, which is connected to the North Channel Great Island transitional waterbody. In addition, on 13<sup>th</sup> February 2023, Cork County Council granted planning permission for the Midleton North Wastewater Pumping Station and Network (Planning Ref. 22/05032), which will provide for the diversion of loads of c. 4,100 p.e. from the Midleton wastewater network to Carrigtwohill, which, as demonstrated above, currently has treatment headroom of almost 20,000 p.e. This will bring the effective loading to the Midleton WwTP within its design capacity without significantly reducing the capacity of the Carrigtwohill WwTP.

The Cork City WwTP provides tertiary phosphorus removal for 231,000 p.e., the plant capacity is 413,200 p.e. and it passed its WFD compliance test in 2021. This WwTP is located at Carrigrenan, Little Island and discharges to the Lough Mahon transitional waterbody, which overlaps with the Great Island Channel SAC and Cork Harbour SPA and is connected to the Glashaboy Estuary and Lee (Cork) Estuary Lower.

The current WFD ecological status or potential and risk of not achieving WFD objectives by 2027 for each of the transitional waterbodies to which the three WwTPs concerned discharge are provided in Table 8-2 below. While these are identified as being at risk in many cases, Uisce Éireann's planned upgrades to the wastewater networks and treatment plants discharging to Cork Harbour and connected waterbodies should significantly assist in the aim to achieve good water quality status in these waterbodies.

**Table 7-1 - WFD Status and Risk for transitional waterbodies covering the Great Island Channel SAC and inner sectors of the Cork Harbour SPA and to which the Carrigtwohill, Midleton and Cork City WwTPs are connected.**

Transitional Waterbody	WFD Status 2016-2021	Risk (re 2027)
Slatty Bridge, Fota Island	Unassigned	Review
Lough Mahon (Harper's Island)	Moderate	At risk
Lough Mahon	Moderate	At risk
Glashaboy Estuary	Bad	At risk
Lee (Cork) Estuary Lower	Moderate	At risk
Owenacurra Estuary	Moderate	At risk
North Channel Great Island	Moderate	At risk

Given the existing capacity at the three WwTPs and Uisce Éireann's planned WwTP and network upgrades, the proposed works will not facilitate future loading to the WwTPs, which could lead to overloading of the WwTP and consequent negative impacts on water quality in the Great Island Channel SAC and Cork Harbour SPA. As such, significant effects on these sites in combination with the proposed works can be ruled out.

### **Lower Cork Harbour**

Large WwTPs discharging to the outer sectors of the Cork Harbour SPA and connected waterbodies include Ringaskiddy, Cobh North and Cloyne. The Ringaskiddy WwTP at Shanbally provides secondary treatment for 45,602 p.e. from Ringaskiddy Village, Ringaskiddy-Crosshaven-Carrigaline, Passage-Monkstown and Cobh town, the plant capacity is 65,000 p.e. but it failed its WFD compliance test in 2021 due to discharges of industrial effluent downstream of the WwTP. The Cobh North provides secondary treatment for 1,135 p.e. and the plant capacity is 2,000 p.e. The Cloyne WwTP provides secondary treatment for 1,400 p.e., the plant capacity is 2,040 p.e. but it passed its WFD compliance test in 2021. There is no treatment provided for wastewater from Whitegate-Aghada (2,328 p.e.). As noted, the WFD status of transitional and coastal waterbodies to which these networks discharge and are connected are all 'Moderate' and 'At risk'.

Overall, the discharge from these wastewater networks is not considered to be significantly affecting the Cork Harbour SPA and, given the absence of effects from the proposed works individually or in combination with the Carrigtwohill, Midleton and Cork City WwTPs, it can be concluded that there will be no such effects in combination with these other wastewater networks.

#### **7.3.3.2 Aquaculture**

EPA Maps shows 4 No. areas designated under the Shellfish Waters Directive (2006/113/EC), as transposed into Irish law by European Communities (Quality of Shellfish Waters) Regulations, 2006 (as amended), in Cork Harbour. The largest of these is "Cork Great Island North Channel", which occupies approximately the middle third of the Great Island Channel and so overlaps with both the Great Island Channel SAC and Cork Harbour SPA. In addition, the "Rostellan North", "Rostellan South" and "Rostellan West" shellfish areas overlap the north-eastern sector the Cork Harbour SPA in the Lower Harbour. Under the Shellfish Waters Directive, the quality of these waters must be protected from pollution and meet specific targets for physical, chemical, and microbiological parameters in order to support bivalve and gastropod molluscs.

A review of Ireland's Marine Atlas found 3 No. licensed aquaculture sites in Cork Harbour. These include a small area to the west of Brick Island, where Fota Oyster Farm Ltd is licensed to produce Pacific Oyster and Brown Seaweeds, a larger area to the east of Brick Island, where Atlantic Shellfish Ltd is licensed to produce Pacific Oyster, and a large area covering the north-eastern part of the Lower Harbour, where Atlantic Shellfish Ltd is licensed to produce Blue Mussel. The two sites near Brick Island are both within the Great Island Channel SAC and Cork Harbour SPA, while the large Blue Mussel site overlaps the Cork Harbour SPA only.

In its AA of aquaculture activities in Cork Harbour (October 2022), the Department of Agriculture, Food and the Marine found that, given the types of aquaculture practised, as well as the scale and location of activities, such activities do not pose a threat to the Great Island Channel SAC or Cork Harbour SPA. On the basis of that assessment and given the nature, scale, and location of the proposed Carrigtwohill to Midleton IUCR Phase 2, no significant effects will arise from the proposed works in combination with aquaculture.

#### **7.3.4 Other Activities**

Farmers and landowners may also undertake general agricultural operations in areas adjacent to the proposed works and along watercourses, which could potentially give rise to impacts of a similar nature to those arising from the proposed works. This could potentially result in additional an increased risk to water quality. Many agricultural operations are periodic, not continuous in nature, and qualify as Activities Requiring Consent (ARCs) that require consultation with the NPWS in advance of the works, e.g., reclamation, infilling or land drainage within 30m of a river, removal of trees or any aquatic vegetation within 30m of a river, and harvesting or burning of reed or willow (NPWS,

2022a). Agricultural operations must also comply with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations, 2011 (as amended) in relation to:

- Restructuring of rural land holdings,
- Commencing use of uncultivated land or semi-natural areas for intensive, and
- Land drainage works on lands used for agriculture.

Stage 2 AA is required under Regulation 9 if it is likely to have a significant effect on a Natura 2000 site. The drainage or reclamation of wetlands is controlled under the Planning and Development (Amendment) (No. 2) Regulations, 2011 and the European Communities (Amendment to Planning and Development) Regulations, 2011. Therefore, any in-combination effects from agricultural operations and the proposed works are not likely to be significant.

The harbour, as well as the catchments of watercourses which enter the harbour, are also subject to a diverse range of other impacts arising from forestry, sports and recreation, shipping, military uses etc.

## 7.4 Conclusion

As detailed in the preceding sections, it can be concluded that, based on both the location and scale of the proposed works, it will not give rise to significant effects on any of the Natura 2000 sites within the Zone of Influence, in combination with other plans or projects.

## 8. Conclusion

This AA Screening Report has examined the details of the proposed Mary St. Douglas St. White St Public Realm Enhancement Scheme and the Natura 2000 sites in their Zone of Influence. It has analysed the potential impacts of the proposed works on the receiving natural environment and evaluated their effects, both individually and in combination with other plans and projects, in view of the conservation objectives of the relevant Natura 2000 sites. This report has been prepared in line with the Habitats Directive, as transposed into Irish law by the Habitats Regulations, relevant case law and guidance from the European Commission, the relevant Government Departments, and the Office of the Planning Regulator, on the basis of objective information and adhering to the precautionary principle.

Following the assessment detailed in this report, it is concluded that the proposed works will not, either individually or in combination with other plans or projects, give rise to impacts which would constitute significant effects on the Great Island Channel SAC, Cork Harbour SPA or any other Natura 2000 site, in view of their conservation objectives. Therefore, it is recommended that Cork City Council, as the competent authority, may determine that Appropriate Assessment is not required in respect of the proposed works. Should any aspect of the proposed works be materially changed, a new AA Screening Report would be required.

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