

Screening for Appropriate Assessment

St Catherine's Cemetery Extension

Kilcully

Co. Cork

Report prepared for Cork City Council

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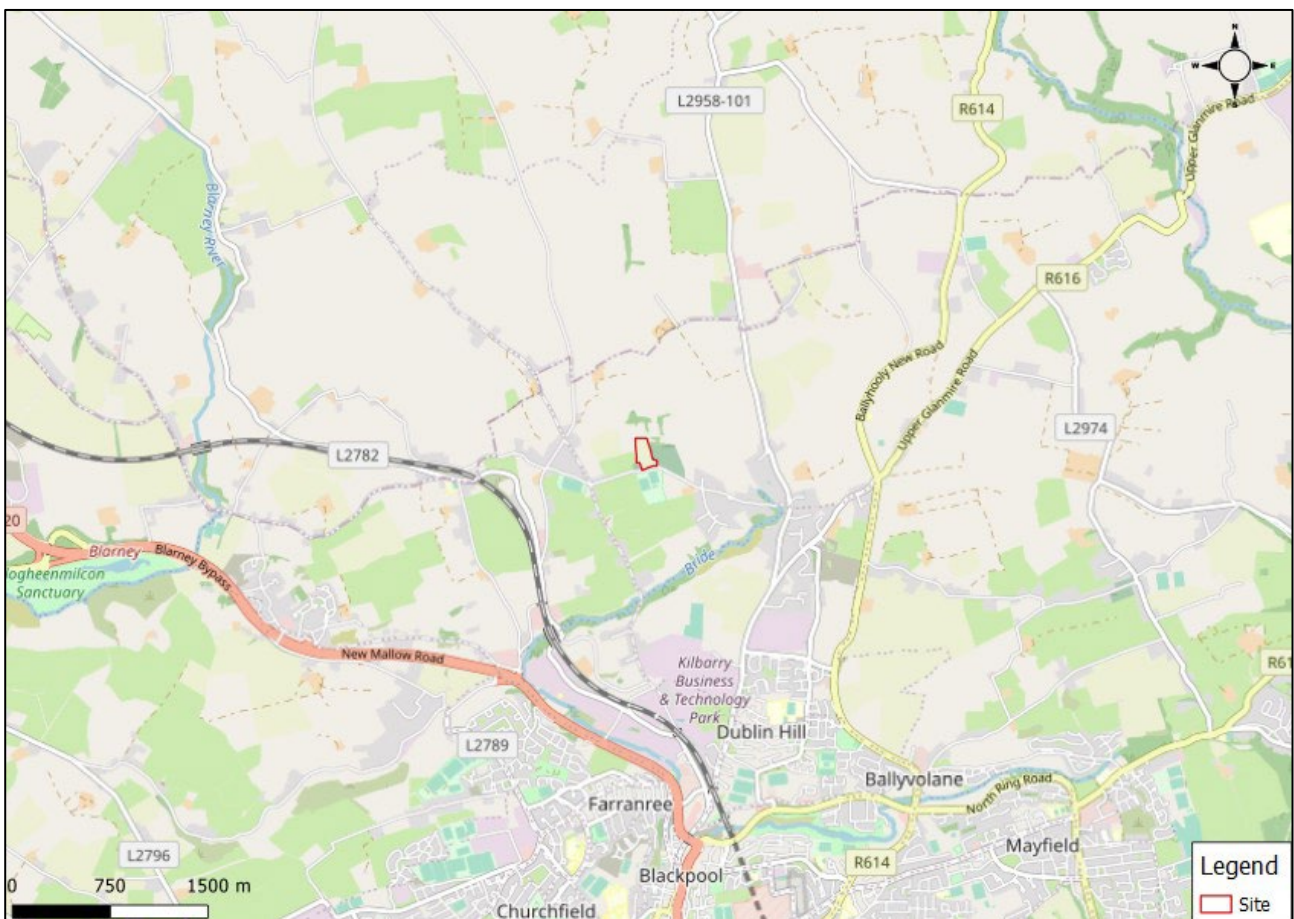
1 Introduction

This report has been prepared by Greenleaf Ecology on behalf of Cork City Council. The purpose of this report is to inform screening for Appropriate Assessment for the proposed extension to St. Catherine's Cemetery, Kilcully, Co. Cork (hereinafter referred to as 'the proposed development').

This report comprises information in support of screening for AA to be undertaken by the competent authority in line with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora; the Planning and Development Act (as amended), and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) as amended.

The proposed site is located at Kilcully, as illustrated in Figure 1-1.

Figure 1-1: Location of the proposed cemetery extension



1.1 Statement of Authority

This AA Screening was carried out by Karen Banks, MCIEEM. Karen is an ecologist with Greenleaf Ecology and has 16 years' experience in the field of ecological assessment. Karen has extensive experience in the production of reports to inform AAs and Natura Impact Statements including those for transport infrastructure, small to large scale housing and mixed-use developments, flood alleviation schemes, solar farms and wind farms.

1.2 Legislative Context for Appropriate Assessment

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European

importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000.

The Habitats Directive has been transposed into Irish law by Part XAB of the Planning and Development Act (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) as amended. In the context of the proposed development, the governing legislation is the Birds and Habitats Regulations. Cork City Council is the Competent Authority responsible for undertaking the Screening for AA for the proposed development.

Articles 6(3) of the Habitats Directive set out the decision-making tests for plans and projects likely to adversely affect the integrity of European sites (Annex 1.1). Article 6(3) establishes the requirement for AA:

Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In 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.

Natura 2000 sites are defined under the Habitats Directive (Article 3) as a coherent European ecological network of special areas of conservation, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. In Ireland, these sites are designated as European sites and include Special Protection Areas (SPAs), established under the EU Birds Directive (79/409/EEC, as codified by 2009/147/EC) for birds and Special Areas of Conservation (SACs), established under the Habitats Directive 92/43/EEC for habitats and species.

The competent authority is obliged to consider, in view of best scientific knowledge, whether the proposed development is likely to have a significant effect either individually or in combination with other plans and projects. If screening determines that there is likely to be significant effects on a European site, then AA must be carried out for the proposed development at Kilcully, including the compilation of a Natura Impact Statement (NIS) to inform the decision making.

2 Methodology

2.1 Stages of Appropriate Assessment

The Department of the Environment, Heritage and Local Government guidelines (DELHG, 2009, rev. 2010) outlines the European Commission's methodological guidance (EC, 2002) promoting a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages are summarised diagrammatically in Figure 2-1. Stages 1-2 deal with the main requirements for assessment under Article 6(3) and Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended. Stage 3 may be part of the Article 6(3) Assessment or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

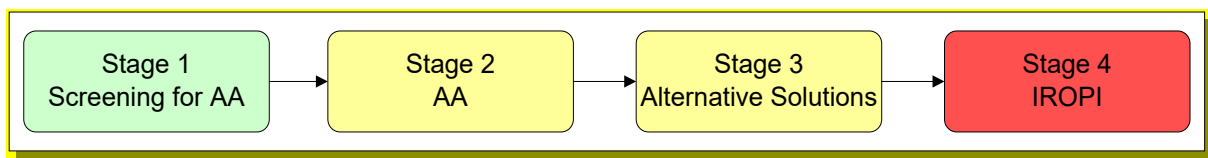


Figure 2-1: Stages of Appropriate Assessment - Taken from *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010)*

Stage 1 - Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

- i. whether a plan or project (in this instance the proposed project) is directly connected to or necessary for the management of the European sites, and
- ii. whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on the European sites in view of their conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). This report fulfils the information necessary to enable the competent authority to screen the proposal for the requirement to prepare an AA.

This report forms Stage 1 of the AA process and sets out the following information:

- Description of the proposed works;
- Characteristics of the proximal European sites; and
- Assessment of significance of the proposed works on the European sites in question.

The methodology followed in relation to this assessment has had regard to the following guidance and legislation:

- European Union Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 92/43/EEC;
- Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities (DOEHLG 2009, rev 2010);
- The Planning and Development Act (as amended);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC, 2018);
- European Commission Notice Brussels C (2021) 6913 final 'Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (EC, 2021);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission 2013;
- The European Union (Environmental Impact Assessment and Habitats) Regulations 2011; and

- The European Communities (Birds and Natural Habitats) Regulations, S.I. No. 477 of 2011 (as amended).

2.2 Information consulted for this report

The Screening assessment had regard to the following sources of data and information:

- Information on the location, nature and design of the proposed project;
- Department of Housing, Planning, and Local Government – online land use mapping www.myplan.ie/en/index.html;
- Department of Housing, Planning, and Local Government- EIA Portal <https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal>
- Environmental Protection Agency (EPA) – Water Quality www.epa.ie, <http://gis.epa.ie/Envision>;
- Geological Survey of Ireland – Geology, soils and Hydrogeology www.gsi.ie;
- [Water Framework Directive website – www.catchments.ie](http://www.catchments.ie);
- National Parks and Wildlife Service – online European site network information, including site conservation objectives www.npws.ie;
- National Parks and Wildlife Service – Information on the status of EU protected habitats in Ireland (NPWS 2019a, 2019b);
- National Biodiversity Data Centre – www.biodiversityireland.ie;
- Ordnance Survey of Ireland – Mapping and Aerial photography www.osi.ie; and
- Site walkover survey, undertaken on 13th September 2022 by Ms K. Banks (see Section 3.3).

2.3 Screening Protocol

The sequence of events when completing the AA Screening process is provided below:

- Ascertain whether the plan or project is necessary for the management of the European site;
- Description of the plan or project;
- Definition of the likely zone of influence for the proposed development;
- Identification of the European sites that are situated (in their entirety or partially or downstream) within the zone of influence of the proposed works;
- Identification of the most up-to-date QIs and SCIs for each European site within the zone of influence;
- Identification of the environmental conditions that maintain the QIs/SCIs at the desired target of Favourable Conservation Status;
- Identification of the threats/impacts – actual or potential that could negatively impact the environmental conditions of the QIs/SCIs within the European sites;
- Highlighting the activities of the proposed works that could give rise to significant negative impacts; and
- Identification of other plans or projects, for which in-combination impacts would likely have significant effects.

2.3.1 Screening Determination

In accordance with Regulation 42(7) of the Birds and Natural Habitats Regulations 2011 (S.I. No. 477/2011) as amended, the competent authority (Cork City Council), shall:

“determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with or necessary to the management of the site as a European site and if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site”.

Further, under Regulation 42(8) (a):

Where, in relation to a plan or project for which an application for consent has been received, a public authority makes a determination that an Appropriate Assessment is required, the public authority shall give notice of the determination, including reasons for the determination of the public authority, to the following—

the applicant,

if appropriate, any person who made submissions or observations in relation to the application to the public authority, or

if appropriate, any party to an appeal or referral.

(b) Where a public authority has determined that an Appropriate Assessment is required in respect of a proposed development it may direct in the notice issued under subparagraph (a) that a Natura Impact Statement is required.

2.3.2 Zone of Influence

In accordance with EC (2021) *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, identification of the European sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any European sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives.

In particular, it should identify:

- Any European sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;
- Any European sites within the likely zone of influence of the plan or project. Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;
- European sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);
- European sites whose connectivity or ecological continuity can be affected by the plan or project.
- The range of European sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur.

3 Project Description

The proposed project involves extending the existing St Catherine's cemetery burial ground located in the townland of Kilcully, north of Cork City. The proposed extension area is situated to the west of the existing cemetery in an agricultural grassland field and would connect the existing St Catherine's cemetery with the Old Kilcully church and its small surrounding burial grounds. It is proposed to develop the extension area to establish circa. 2199 new grave spaces, 880 burial ash plots and a natural burial ground area with associated works, while retaining much of the western natural field and old cemetery boundaries. The existing St Catherine cemetery car park is proposed to be extended to the west along the adjacent L-2962 local road, while retaining much of the natural road field boundary. This would result in an additional 47 cemetery car parking spaces, 6 disabled car parking spaces, a new pedestrian access to the Old Kilcully church grounds and the closing-up accesses to the L-2962 local road from both an existing car park entrance and a field gate entrance. The proposed extension area comprises of 2.5 Hectares.

The site layout drawing is enclosed in Appendix A.

The works will include:

- Demolition of existing derelict dwelling house and boundary walls
- Removal of a small number of trees for access
- Re-grading to level the site
- Construction, to make three new accesses through the cemetery boundary wall to connect the existing and proposed burial ground areas
- Construction of new kerbing, tarmacadam surface works and line marking for additional car park area, access roads and pathways into the new cemetery extension
- Construction of toilets, storage area, storm, foul and land drainage along with any other services i.e. electrical, septic tank, etc.
- Construction of grave plot areas
- Construction of cremation/ash plot areas
- Construction of approximately 1.2m to 1.5m high new vertical rail fence with three access gates along the west boundary of the existing extension area
- Construction of black vertical bar railing fence approximately 1.8m high with an access gate for a Cork City Council compound area
- Laying out of a natural burial ground area with access routes, planting of trees, wild-flowers and grasses
- Other landscaping works and tree planting.

Burial space and Cremation burial plots

Where burial space and depth allows, each single burial plot generally can cater for up to 3 standard sized coffin burials plus several burials of ashes could also be accommodated. There is rarely more than 10 burials of coffins and ashes in a single plot.

It is anticipated that the smaller cremation/ashes burial plots will cater for 4 burials, one in each of the four quadrants of the plot, but requests for up to 8 burials of ashes could be considered on a case by case basis for these smaller plots.

3.1 Surface Water

Surface water will be attenuated either in oversized storm pipes or in a swale before out falling to the drainage ditch located to the north-east of the proposed site.

Surface water runoff from the car park will pass through a bypass separator.

3.2 Foul Water Network

The existing septic tank located adjacent to the dwelling will be replaced by a new tank for the use of Cork City Council compound staff and as a public toilet.

3.3 Existing Environment

A site walkover was undertaken on 13th September 2022 by ecologist Ms. Karen Banks.

The proposed site comprises improved agricultural grassland (GA1) bound by a hedgerow (WL1) to the west and a wall and treeline (WL2) to the east and south. A disused house (BL3) and garden (GA2) is present at the south-east of the site.

There are no watercourses located within the proposed site, however a drainage ditch is present on the north-east corner of the proposed site. This ditch was dry at the time of survey in September 2022 but may support flowing water in the winter months.

3.3.1 Surface Water

3.3.1.1 Water Bodies

The proposed site is located within the Glennamought Tributary Bride_010 River Sub-basin. The River Bride (EPA name Glennamought Trib Bride) is located c.0.5km east of the proposed site at its closest point (straight line distance). In the vicinity of the site, the River Bride is a 2nd order watercourse which confluences with the Bride (Cork City) watercourse c.3.5km downstream, before flowing into the River Lee, which is a large 6th order river, a further c.3.5km downstream. The River Lee is part of the Lee Estuary transitional waterbody, which flows into Cork Harbour.

The proposed project overlies the Ballinhassig East Ground Waterbody (GWB). The Devonian ORS and Dinantian Mudstones & Sandstones of this GWB have no intergranular permeability; groundwater flow occurs in fractures and faults; in-filling of fractures is to be expected. The permeability of individual fractures and the degree of interconnection will be generally low. In these rocks groundwater flow paths are expected to be relatively short, typically from 30-300 m, with groundwater discharging to small springs, or to the streams that traverse the aquifer. Flow directions are expected to approximately follow the local surface water catchments. Owing to the poor productivity of the aquifers in this body it is unlikely that any major groundwater- surface water interactions occur. Baseflow to rivers and streams is likely to be relatively low¹.

EPA codes for these water bodies are shown below in Table 3-1.

Table 3-1: EPA water body codes

| EPA water body name | Water body type | EPA Code | EPA water body code |
|--------------------------|-----------------|----------|---------------------|
| Glennamought Trib Bride | River | 19G88 | IE_SW_19G880990 |
| Bride (Cork City) | River | 19B14 | IE_SW_19B140300 |
| Lee (Cork) Estuary Lower | Transitional | n/a | IE_SW_060_0900 |
| Ballinhassig East | Groundwater | n/a | IE_SW_G_004 |

3.3.1.2 Surface Water Quality and Risk Characterisation

No ‘Q-values’ are available for these watercourses. The watercourses within the Glennamought Trib Bride Sub-basin are of Moderate status under the WFD 2013-2018 round and the waterbody risk is under review.

¹ https://secure.dccae.gov.ie/GSI_DOWNLOAD/Groundwater/Reports/GWB/BallinhassigGWB.pdf

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The transitional water quality of the Lee (Cork) Estuary Lower (IE_SW_060_0900), into which the site ultimately drains, is classified as 'moderate' and has been assigned as 'at risk' under the WFD.

A summary of the WFD and Risk status² is shown below in Table 3-2.

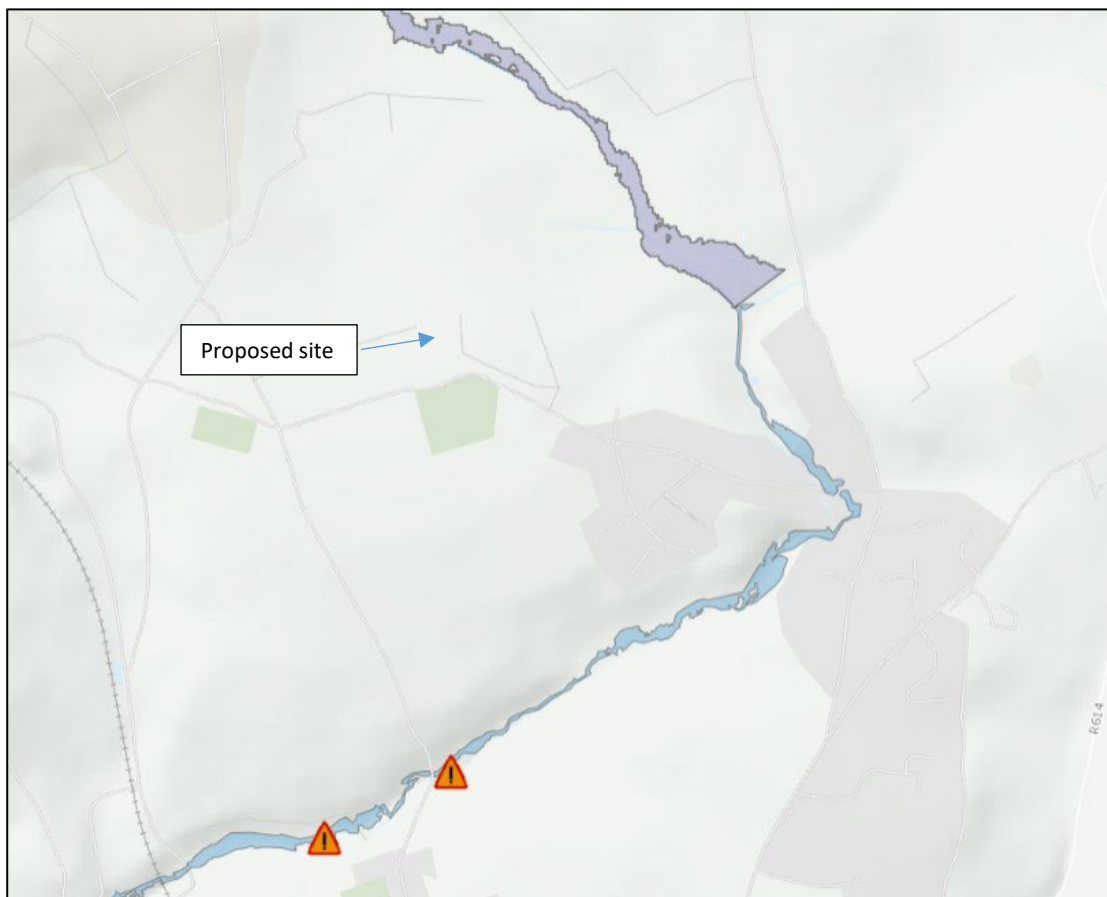
Table 3-2: Summary of WFD status for Bride (Cork City) water bodies

| EPA Waterbody Name | Code | Risk | WFD Status 2013-2018 |
|--------------------------|-----------------|---------|----------------------|
| Glennamought Trib Bride | IE_SW_19G880990 | Review | Moderate |
| Bride (Cork City) | IE_SW_19B140300 | At Risk | Moderate |
| Lee (Cork) Estuary Lower | IE_SW_060_0900 | At Risk | Moderate |

3.3.2 Flooding

The Office of Public Works (OPW) flood mapping (<http://www.floodinfo.ie/map/floodmaps/>) indicates the flood extents for the River Bride. As indicated in Figure 3-1 the flood extents do not reach the proposed site boundary. No flood events have been recorded at the proposed site and its environs.

Figure 3-1: OPW flood risk mapping of the proposed site and surrounding area



² <https://www.catchments.ie/maps/>

3.3.3 Soil, Geology and Hydrogeology

The Geological Survey of Ireland (GSI) online database (www.gsi.ie) was consulted for available edaphic, geological and hydrological information of the site and its environs. The site is overlaid by AminDW, deep, well drained mineral (mainly acidic) soils. In terms of bedrock geology, the Ballytrasna Formation, composed of purple mudstone and sandstone underlies the site.

The bedrock units which underlie the site are mapped by the GSI as part of the same Locally Important Aquifer. Groundwater vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease at which groundwater may be contaminated. The study area is of 'High' groundwater vulnerability. There are no karst features located in the vicinity of the proposed works.

3.3.4 Invasive Species

A site survey for Invasive Alien Plant Species (IAPS) was conducted on 13th September 2022. No invasive plant species were recorded at the proposed site and its immediate environs.

3.4 Description of European Sites

This stage of the screening for AA process describes European sites within the likely zone of influence of the works. The methodology for establishing the likely zone of influence is described in Section 2.3.2.

Connectivity between the proposed development and European sites has been reviewed. Connectivity is identified via the potential source-pathway-receptor model which identifies the potential impact pathways such as land, air, hydrological, hydrogeological pathways etc. which may support direct or indirect connectivity of the proposed development to European sites and/or their qualifying features.

In view of the location of the proposed development in relation to European sites (see Figure 3-2), the characteristics of the proposed development (see Section 3) and the source, pathway and receptors of potential impacts, a 15km radius is considered an appropriate zone of influence to screen all likely significant effects that might impact upon the European sites. The establishment of the likely zone of influence is in line with EC (2021) *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC*.

The European sites located within 15km of the proposed works are outlined in Table 3-3 and Figure 3-2. There are 3 European sites located within 15km of the proposed works:

1. Blackwater River (Cork/ Waterford) SAC (002170);
2. Great Island Channel SAC (Site Code: 001058); and
3. Cork Harbour SPA (Site Code: 004030).

Source – pathway – receptor dynamics were assessed for Blackwater River (Cork/Waterford) SAC, and it was determined that there is no connectivity (via surface water, groundwater, air or other environmental vectors) between the proposed works and this site. As a result, this site will not be considered further as part of this screening for AA.

Cork Harbour SPA and Great Island Channel SAC support remote and indirect hydrogeological and hydrological connectivity to the proposed site. Therefore, these sites will be considered further in the below impact assessment.

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Figure 3-2: European Sites Located within 15km of the Proposed Works

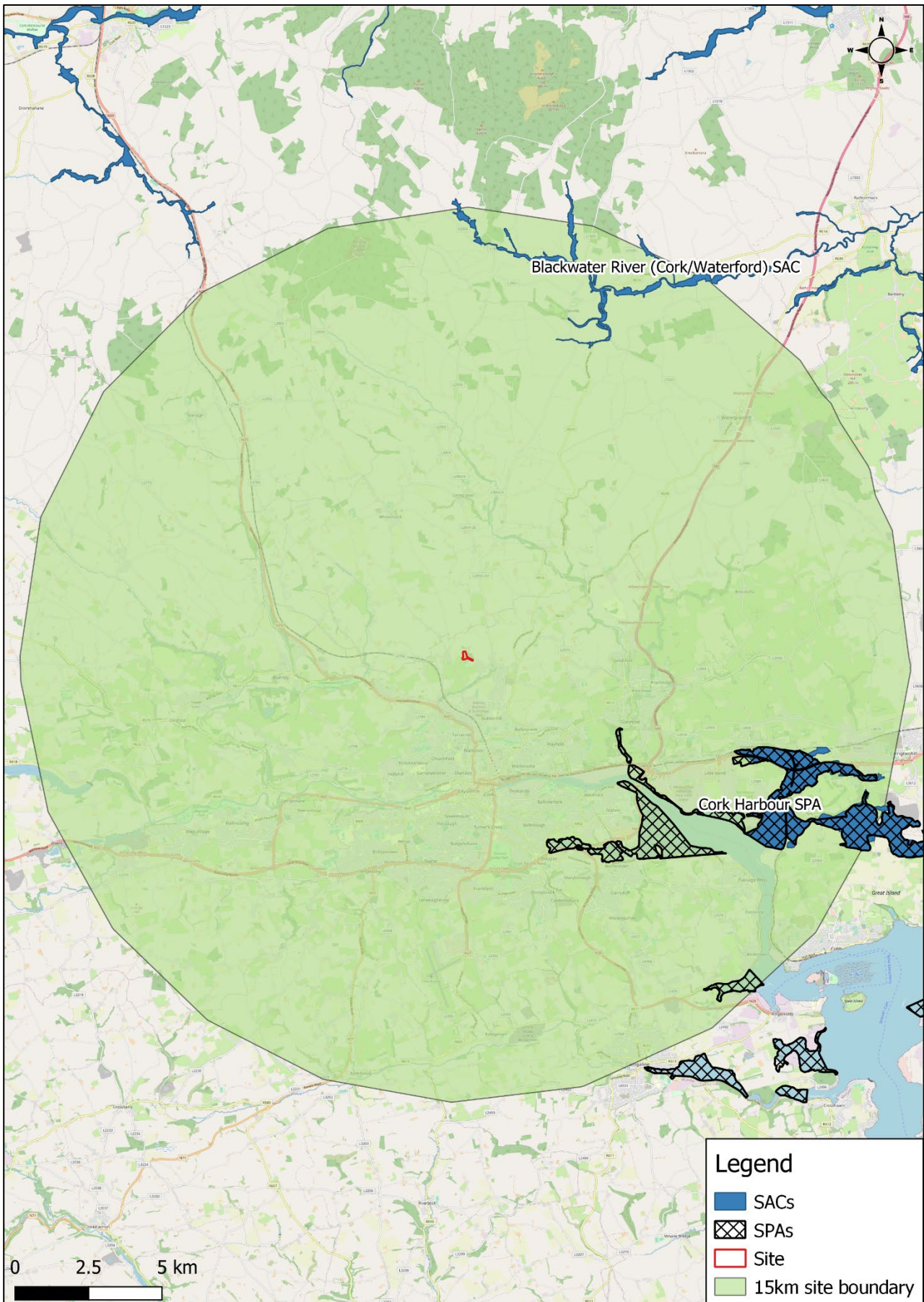


Table 3-3: European Sites within 15km of the Proposed Works

| Site Name and Code | Qualifying Interests | Distance from Proposed Site (km) ³ | Connectivity |
|--|---|---|---|
| Great Island Channel SAC (001058) ⁴ | <p>Annex I Habitats</p> <p>Mudflats and sandflats not covered by seawater at low tide (1140)</p> <p>Atlantic salt meadows (Glaucopuccinellietalia maritimae) (1330)</p> | 9.4km | There is potential remote and tenuous indirect connectivity via overland and groundwater flow to a drainage ditch located to the north of the site, which would drain into the River Bride, which ultimately flows into the open waters of Cork Harbour and, potentially, this SAC c.18km downstream. |
| Blackwater River (Cork/Waterford) SAC (002170) ⁵ | <p>Annex I Habitats</p> <p>Estuaries [1130]</p> <p>Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p>Perennial vegetation of stony banks [1220]</p> <p>Salicornia and other annuals colonising mud and sand [1310]</p> <p>Atlantic salt meadows (Glaucopuccinellietalia maritimae) [1330]</p> <p>Mediterranean salt meadows (Juncetalia maritimi) [1410]</p> <p>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]</p> <p>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</p> <p>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0]</p> <p><i>Taxus baccata</i> woods of the British Isles [91J0]</p> <p>Annex II Species</p> <p><i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092]</p> <p><i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p><i>Lampetra planeri</i> (Brook Lamprey) [1096]</p> <p><i>Lampetra fluviatilis</i> (River Lamprey) [1099]</p> | 11.1km | None |

³ Distance measured “as the crow flies”

⁴ NPWS (2014) Conservation Objectives: Great Island Channel SAC 001058. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

⁵ NPWS (2012) Conservation Objectives: Blackwater River (Cork/Waterford) SAC 002170. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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|---|---|-------|--|
| | <p><i>Alosa fallax fallax</i> (Twaité Shad) [1103] <i>Salmo salar</i> (Salmon) [1106] <i>Lutra lutra</i> (Otter) [1355] <i>Trichomanes speciosum</i> (Killarney Fern) [1421]</p> | | |
| <p>Cork Harbour SPA (004030)⁶</p> | <p>Bird Species: Little grebe (<i>Tachybaptus ruficollis</i>) [wintering] Great crested Grebe (<i>Podiceps cristatus</i>) [wintering] Cormorant (<i>Phalacrocorax carbo</i>) [wintering] Grey heron (<i>Ardea cinerea</i>) [wintering] Shelduck (<i>Tadorna tadorna</i>) [wintering] Wigeon (<i>Anas penelope</i>) [wintering] Teal (<i>Anas crecca</i>) [wintering] Pintail (<i>Anas acuta</i>) [wintering] Shoveler (<i>Anas clypeata</i>) [wintering] Red-breasted Merganser (<i>Mergus serrator</i>) [wintering] Oystercatcher (<i>Haematopus ostralegus</i>) [wintering] Golden Plover (<i>Pluvialis apricaria</i>) [wintering] Grey Plover (<i>Pluvialis squatarola</i>) [wintering] Lapwing (<i>Vanellus vanellus</i>) [wintering] Dunlin (<i>Calidris alpina</i>) [wintering] Black-tailed Godwit (<i>Limosa limosa</i>) [wintering] Bar-tailed Godwit (<i>Limosa lapponica</i>) [wintering] Curlew (<i>Numenius arquata</i>) [wintering] Redshank (<i>Tringa totanus</i>) [wintering] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [wintering] Common Gull (<i>Larus canus</i>) [wintering] Lesser Black-backed Gull (<i>Larus fuscus</i>) [wintering] Common Tern (<i>Sterna hirundo</i>) [breeding] Wetlands</p> | 5.4km | <p>There is potential remote and tenuous indirect connectivity via overland and groundwater flow to a drainage ditch located to the north of the site, which would drain into the River Bride, which ultimately flows into the open waters of Cork Harbour and, potentially, this SPA c.12.3km downstream.</p> |

⁶ NPWS (2014) Conservation Objectives: Cork Harbour SPA 004030. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

3.4.1 Site Description

3.4.1.1 Great Island Channel SAC

According to the Standard Data Form for Great Island Channel SAC (available at [N2K IE0001058 dataforms \(europa.eu\)](https://n2k.ie0001058.dataforms.europa.eu)), this site comprises the north-eastern part of Cork Harbour. It includes all of the Great Island Channel, the intertidal areas between Fota Island and Little Island, and also the estuary of the Dungourney and Owennacurra Rivers as far as Midleton. The North Channel is on average 1 km wide but extends for about 9 km from east to west. The area is well sheltered and the intertidal sediments are predominantly fine muds. In addition to the estuarine habitats, the site includes some wet grassland areas which are used by roosting birds, as well as some broad-leaved woodland at Fota Island. Compared to the rest of Cork Harbour, the Great Island Channel is relatively undisturbed, with aquaculture the main activity. The site 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. Site has high ornithological importance, supporting regularly c.50% of the wintering waterfowl of Cork Harbour. Significant proportions of the internationally important populations of *Limosa limosa* and *Tringa totanus* which winter in Cork Harbour utilise the site and it supports nationally important populations of a further 12 species, including *Pluvialis apricaria* and *Limosa lapponica*, both listed on Annex I of the EU Birds Directive.

Qualifying Interests

The qualifying interests for Great Island Channel SAC are listed in Table 3-3. Threats and impacts for European Sites are presented in the Standard Data Form for each site. Threats and impacts to Annex I habitats and Annex II species protected under the EU Habitats Directive are also outlined in the Article 17 Habitats and Species Conservation Assessment (NPWS, 2019) available at: [Article 17 Reports 2019 | National Parks & Wildlife Service \(npws.ie\)](https://www.npws.ie/Article-17-Reports-2019).

Table 3-4 presents the main threats, pressures and negative impact activities for Great Island Channel SAC, as quoted on the Standard Data Form for this European Site.

Table 3-4: Threats, Pressures and Impact Activities to Great Island Channel SAC

| European Site | Threat Code ⁷ | Threat Type | Rank ⁸ | i (inside) / o (outside)/ b (both) ⁹ |
|--------------------------|--------------------------|--|-------------------|---|
| Great Island Channel SAC | E01 | Urbanised areas, human habitation | H | o |
| | D01.02 | Roads, motorways | H | i |
| | F01 | Marine and freshwater aquaculture | H | i |
| | A08 | Fertilisation | M | o |
| | A04 | Grazing | M | i |
| | K02.03 | Eutrophication (natural) | M | i |
| | J02.01.02 | Reclamation of land from sea, estuary or marsh | H | i |

⁷ Threat code follows reference list provided on threats, pressures and activities for European sites

⁸ Threat, pressure and impact ranking H – High, M – Medium, L - Low

⁹ Inside (i),outside (o) or both (b) of European site

| | | | | |
|--|-----|-----------------------------|---|---|
| | I01 | Invasive non-native species | M | i |
|--|-----|-----------------------------|---|---|

3.4.1.2 Cork Harbour SPA

Site Description

According to the Standard Data Form for Cork Harbour SPA (available at [N2K IE0004030 dataforms \(europa.eu\)](https://n2k.ie0004030.dataforms.europa.eu)), 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 the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas Estuary, inner Lough Mahon, Monkstown Creek, Lough Beg, the Owenboy Estuary, Whitegate Bay and the Rostellan inlet. 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 *Tringa totanus*. A further 15 species have populations of national importance, with particularly notable numbers of *Tadorna tadorna* (9.6% of national total), *Anas clypeata* (4.5% of total), *Anas acuta* (4.2% of total) and *Phalacrocorax carbo* (4.1% of total) occurring. It has regionally important populations of *Pluvialis apricaria* and *Limosa lapponica*. Passage waders are regular, including *Philomachus pugnax* and *Tringa erythropus*. It is an important site for gulls in winter and autumn, especially *Larus canus* and *Larus fuscus*. The site 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 *Sterna hirundo* which is of national importance. The colony is monitored annually and the chicks ringed.

Qualifying Interests

The SCI found within the Cork Harbour SPA are listed in Table 3-3. The main threats, pressures and negative impact activities for Cork Harbour SPA are outlined in Table 3-5 below.

Table 3-5: Threats, Pressures and Impact Activities to Cork Harbour SPA

| European Site | Threat Code ¹⁰ | Threat Type | Rank ¹¹ | i (inside) / o (outside) / (both) ¹² |
|------------------|---------------------------|---|--------------------|---|
| Cork Harbour SPA | E01.03 | Dispersed habitation | L | o |
| | D01.02 | Roads, motorways | H | o |
| | G01.02 | Walking, horseriding and non-motorised vehicles | M | i |
| | F02.03 | Leisure fishing | M | i |
| | D03.01 | Port areas | H | o |
| | A08 | Fertilisation | M | o |

¹⁰ Threat code follows reference list provided on threats, pressures and activities for European sites

¹¹ Threat, pressure and impact ranking H – High, M – Medium, L - Low

¹² Inside (i)outside (o) or both (b) of European site

| | | | | |
|--|--------|-----------------------------------|---|---|
| | F01 | Marine and Freshwater Aquaculture | H | i |
| | G01.01 | Nautical sports | M | i |
| | E01 | Urbanised areas, human habitation | H | o |
| | E02 | Industrial or commercial areas | H | o |
| | D03.02 | Shipping lanes | M | i |

3.4.2 Conservation Objectives of European Sites

The integrity of a European site (referred to in Article 6.3 of the EU Habitats Directive) involves its ecological functions. The decision as to whether it is adversely affected therefore focuses on, and is limited to, conservation objectives set for a particular site (EC, 2018).

European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status areas designated as SAC and SPA. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The qualifying features for each site have been obtained through a review of the conservation objectives available from the NPWS: <http://www.npws.ie/protected-sites>. Site specific conservation objectives are available for Great Island Channel SAC and Cork Harbour SPA; these were accessed in September 2022. For brevity, the site specific CO’s are summarised thus:

- To maintain or restore the favourable conservation condition of Annex I habitats for which the SAC has been selected; and
- To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for the SPA.

3.4.3 Potential Pressures and Threats to European Sites

Table 3-6 to Table 3-7 present the most important impacts and activities with high effects quoted on the Natura 2000 Data Form for Great Island Channel SAC and Cork Harbour SPA.

Table 3-6: Threats, Pressures and Impact Activities to Great Island Channel SAC

| Threats and Pressures (Code) ¹³ | Threat Type | Rank ¹⁴ | Inside(i) / Outside (o) / Both (b) |
|--|--|--------------------|------------------------------------|
| E01 | Urbanised areas, human habitation | H | o |
| D01.02 | Roads, motorways | H | i |
| F01 | Marine and freshwater aquaculture | H | i |
| A08 | Fertilisation | M | o |
| A04 | Grazing | M | i |
| K02.03 | Eutrophication (natural) | M | i |
| J02.01.02 | Reclamation of land from sea, estuary or marsh | H | i |
| I01 | Invasive non-native species | M | i |

¹³ Threat code sourced from Natura 2000 data form and follows reference list provided on threats, pressures and activities for European sites

¹⁴ Threat, pressure and impact ranking provided on Natura 2000 data form: H – High, M – Medium, L - Low

Table 3-7: Threats, Pressures and Impact Activities to Cork Harbour SPA

| Threats and Pressures (Code) | Threat Type | Rank | Inside (i) / Outside (o) / Both (b) |
|-------------------------------------|--|-------------|--|
| D01.02 | Roads, motorways | H | o |
| G01.02 | Walking, horse-riding and non-motorised vehicles | M | i |
| F02.03 | Leisure fishing | M | i |
| D03.01 | Port areas | H | o |
| A08 | Fertilisation | M | o |
| F01 | Marine and freshwater aquaculture | H | i |
| G01.01 | Nautical sports | M | i |
| E01 | Urbanised areas, urban habitation | H | o |
| E02 | Industrial or commercial areas | H | o |
| D03.02 | Shipping lanes | M | i |

4 Screening Assessment Criteria

4.1 Management of European Sites

AA Screening is not required where the proposed development is connected with, or necessary to, the management of any European site. In this case, the proposed development is not directly connected with, or necessary to, the management of any European site(s).

4.2 Likely Direct, Indirect or Secondary Impacts of the Project on the European Sites

The proposed project is located outside the boundary of Great Island Channel SAC and Cork Harbour SPA, therefore no direct impacts will occur through land take or fragmentation of habitats.

Cork Harbour SPA is of special conservation interest for wetlands and waterbirds. The proposed site predominantly comprises built land and agriculturally improved grassland; there are no freshwater habitats within the site and its immediate environs. As such, the proposed site would not be favoured by the Qualifying Interests of Cork Harbour SPA. Bird species observed during the site survey conducted in September 2022 comprised species that reflect the habitat assemblages present at the site. No wildfowl or waterbirds were observed at the proposed site and its environs. Further, the proposed site is set back from Cork Harbour SPA by a distance of c.5.4km. In consideration of these factors, it is considered that any disturbance/ displacement or ex-situ impacts to the qualifying interests of Cork Harbour SPA as a result of the proposed development is extremely unlikely. The qualifying interests of Great Island Channel are habitats, not species, therefore ex-situ disturbance impacts are not relevant to this European Site.

High levels of silt in surface water run-off from construction may potentially impact on fish species, in particular salmonids. If of sufficient severity, adult fish may be affected by increased silt levels as gills may become damaged by exposure to elevated suspended solids levels. If of sufficient severity, aquatic invertebrates may be smothered by excessive deposits of silt from suspended solids. In areas of stony substrate, silt deposits may result in a change in the macro-invertebrate species composition, favouring less diverse assemblages and impacting on sensitive species. Aquatic plant communities may also be affected by increased siltation. Submerged plants may be stunted and photosynthesis may be reduced. Such run-off, if severe, may potentially impact on water quality which could also impact on fish stocks, which in turn could impact on waterbirds, including the SCI species for Cork Harbour SPA.

Inadvertent spillages of hydrocarbons (fuels and oils) during construction could introduce toxic chemicals into the aquatic environment via surface water run-off or groundwater contamination and have a toxicological impact on habitats and fauna. The extent of the downstream impact would depend on the amount of substance released and instream concentration.

The River Bride (EPA name Glennamought Trib Bride) is located c.0.5km east of the proposed site at its closest point (straight line distance). The proposed site supports potential remote and tenuous indirect connectivity to Cork Harbour via overland and groundwater flow and surface water discharge during the operational phase to a drainage ditch located on the north-east corner of the site. This drain was dry at the time of survey, however in periods of high rainfall it would drain into the River Bride, which flows into the River Lee before ultimately flowing into the open waters of Cork Harbour and, potentially, Cork Harbour SPA c.12.3km downstream and, in turn, Great Island Channel SAC c.18km downstream.

As noted above, elevated silt levels could theoretically, if of sufficient magnitude, result in changes in the ecology of nearby waters. However, there is a vegetated buffer of c.220m grassland between the location of the proposed car park (the main area requiring excavation during the construction phase) and the drainage ditch, which would allow for settlement of solids before reaching the drainage ditch. As such, deleterious substances would be readily contained to the footprint of the proposed site and the risk of significant levels of pollutants being deposited within the drainage ditch and, in turn, the River Bride is extremely low. Given

the location, scale and nature of the proposed works, no impacts on water quality within the River Bride and, in turn, the Cork Harbour SPA and Great Island Channel SAC are expected. The proposed construction works will not result in a significant effect on the surface water or groundwater quality of any European site.

During the operational phase, run-off from the car park will pass through a bypass interceptor and surface water will be attenuated before discharging to the drainage ditch on the north-east corner of the site.

In view of the factors described above, no adverse effects on the water quality of Cork Harbour SPA and in turn Great Island Channel SAC as a result of mobilisation of contaminants from the proposed site via surface or groundwater during the construction or operational phase of the proposed development are anticipated.

No significant effects on European sites are anticipated as a result of the proposed extension to St. Catherine's Cemetery, Co. Cork.

4.2.1 Cumulative Impacts with Other Plans and Projects in the Area

As part of the screening for an AA, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage and assessed in the context of potential for in-combination effects. These plans and projects are outlined and assessed in Table 4-1 below.

It is concluded that there will be no negative in-combination effects between the proposed works and plans or project in the area.

Table 4-1: Other Projects and Plans that could result in potential cumulative impacts

| Plan / Programme/Policy | Key Objectives/Policies/Proposals | Potential for In-combination Effects and Mitigation |
|--|--|--|
| Draft Cork City Development Plan (2022) | The draft Cork City Development Plan includes Objective 6.23: To protect and enhance designated sites and areas of natural heritage and biodiversity and the habitats, flora and fauna for which it is designated, and to protect, enhance and conserve designated species. | The policies and objectives of the draft Cork City Development Plan 2022 ensure that local planning applications comply with proper planning and sustainability and with the requirements of relevant EU Directives and environmental considerations, there is no potential for adverse in-combination effects on European Sites. |
| River Basin Management Plan 2018-2021 | The project should comply with the environmental objectives of the Irish RBMP which are to be achieved generally by 2021. <ul style="list-style-type: none"> ▪ Ensure full compliance with relevant EU legislation ▪ Prevent deterioration ▪ Meeting the objectives for designated protected areas ▪ Protect high status waters ▪ Implement targeted actions and pilot schemes in focus sub-catchments aimed at: targeting water bodies close to meeting their objective and addressing more complex issues which will build knowledge for the third cycle. | The implementation and compliance with key environmental policies, issues and objectives of this management plan will result in positive in-combination effects to European sites. The implementation of this plan will have a positive impact for the biodiversity. It will not contribute to in-combination or cumulative impacts with the proposed development. |
| WWTP discharges | Killeens and Cork City. | Discharges from municipal WWTPs are required to meet water quality standards. Irish Water Capital Investment Plan 2014-2016 and 2017 |

| | | |
|--|---|---|
| | | – 2021 proposes to upgrade water treatment services countrywide. The long-term cumulative impact is predicted to be negligible. |
| IPPC Programme | Dulux Paints (P0218) and Rothbury Manufacturing Ltd are located in the vicinity of the Bride River, c.2.2km to the south of the proposed site as the crow flies. | Discharges from these facilities are governed by strict limits to ensure compliance with quality standards. The long-term cumulative impact is predicted to be negligible. |
| Residential Applications Under consideration¹⁵ | Local planning applications in proximity and within the Zone of Influence of the proposed development are limited to small scale domestic dwelling construction and retention developments. | Adherence to the policies and objectives of the Cork County Development Plan 2015 – 2020 and draft Cork City Development Plan 2022 ensure that local planning applications and subsequent grant of planning comply with the core strategy of proper planning and sustainability and with the requirements of relevant EU Directives and environmental considerations, there is no potential for significant adverse in combination effects on European Sites. |

4.3 Screening Assessment

Table 4-2 identifies the potential direct, indirect and secondary impacts of the proposed works on European Sites within a 15 km radius.

Table 4-2: Potential Significant Effects on European Sites from the Proposed Development

| Site Name and Code | Direct Impacts | Indirect / Secondary Impacts | Resource Requirements | Emissions (Disposal to land, Water or Air) | Excavation Requirements |
|---|-----------------|------------------------------|-----------------------|--|-------------------------|
| Great Island Channel SAC (001058) | No impact on QI | No impact on QI | No impact on QI | No impact on QI | No impact on QI |
| Cork Harbour SPA (004030) | No impact on QI | No impact on QI | No impact on QI | No impact on QI | No impact on QI |
| Blackwater River (Cork/Waterford) SAC (002170) | No impact on QI | No impact on QI | No impact on QI | No impact on QI | No impact on QI |

4.4 Likely Changes to the European Site(s)

The likely changes that could arise from the proposed St. Catherine’s Cemetery Extension, Kilcully, Co. Cork have been examined in the context of a number of factors that could have a significant effect on the relevant European Sites (Table 4-3)

¹⁵ The Local Planning Applications included in this potential in-combination impacts assessment support the following criteria: planning applications granted within the past five years that may contribute to potential cumulative impacts on European sites of concern.

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Table 4-3: Likely Changes to European Sites

| Site Name and Code | Reduction of Habitat Area | Disturbance to Key Species | Habitat or Species fragmentation | Reduction in Species Density | Changes in Key Indicators of Conservation Value (Water Quality, etc.) | Climate Change |
|--|---------------------------|----------------------------|----------------------------------|------------------------------|---|----------------|
| Great Island Channel SAC (001058) | None | None | None | None | None | None |
| Cork Harbour SPA (004030) | None | None | None | None | None | None |
| Blackwater River (Cork/Waterford) SAC (002170) | None | None | None | None | None | None |

4.4.1 Elements of the Project where the Impacts are Likely to be Significant

No elements of the proposed St. Catherine’s Cemetery Extension, Kilcully, Co. Cork are likely to cause significant effects to the relevant European Sites.

5 Conclusion

This AA screening report has been prepared to assess whether the proposed development, individually or in-combination with other plans or projects, and in view of best scientific knowledge, is likely to have a significant effect on any European site(s).

The screening exercise was completed in compliance with the relevant European Commission guidance, national guidance and case law. The potential impacts of the proposed development have been considered in the context of the European sites potentially affected, their qualifying interests or special conservation interests, and their conservation objectives.

Through an assessment of the source-pathway-receptor model, which considered the Zol of effects from the proposed development and the potential in-combination effects with other plans or projects, the following findings were reported:

- The proposed St. Catherine's Cemetery Extension, Kilcully, Co. Cork, either alone or in-combination with other plans and/or projects, does not have the potential to significantly affect any European Site, in light of their conservation objectives. Therefore, a Stage 2 Appropriate Assessment is deemed not to be required.

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Appendix A: Proposed Layout Drawing