AtkinsRéalis

AA Screening

Cork City Council

16/08/2024

0089282DG0002

Modular Housing Mahon – Estuary Way

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1. Introduction

AtkinsRéalis Ireland have been commissioned by Cork City Council to prepare a Screening for Appropriate Assessment report for the proposed project at Estuary Way (St. Michael's Drive) in the southeast suburbs of Cork city in Mahon. Cork City Council aim to provide temporary modular housing at Estuary Way, Mahon. The latter shall be referred to as the 'proposed project' for the purposes of this report.

1.1 Project Context & Description

The temporary modular housing project will be situated at St. Michael's Drive in Mahon, Co. Cork. The site measures approximately 1 hectare and is surrounded by industrial and commercial buildings such as Mahon Point shopping centre and office buildings and is well served by various bus routes. The site varies in elevation with the highest point in the northwest corner (11.5m above Ordnance datum) and slopes down in a south-easterly direction. The slope pattern suggests that water will naturally drain to the southeast. The site is currently being used as a site compound/carpark.

Figure 1.1 – Estuary Way site location at St. Michael's Drive.

1.2 Proposed Development

The proposed development will consist of the construction of 38 no. temporary accommodation modular units each with a private garden and all associated site development works, services provision, road infrastructure, landscaping/public realm works and on street car parking spaces. A typical modular unit can accommodate up to 4 no. people in a 2-bed configuration, depending on the unit. Each unit is designed to be transported by road unescorted and placed in pairs on site. Each unit has a "soft spot" (see Figure 1.2) in the circulation area party walls to allow two units to be connected. This would be used to accommodate for larger family units. The units are designed to be mobile and can be used as temporary accommodation or repurposed as permanent housing. The site will also have a public open space at St. Michael's Drive.

It is estimated that the site preparation, and civil and structural construction works will last between 12-18 months. It is also estimated that at its peak, there may be up to 50 personnel working at the site on a given day. Locations of construction compounds and off-site staff and visitor parking during construction will be agreed with Cork City Council but will be located on site.

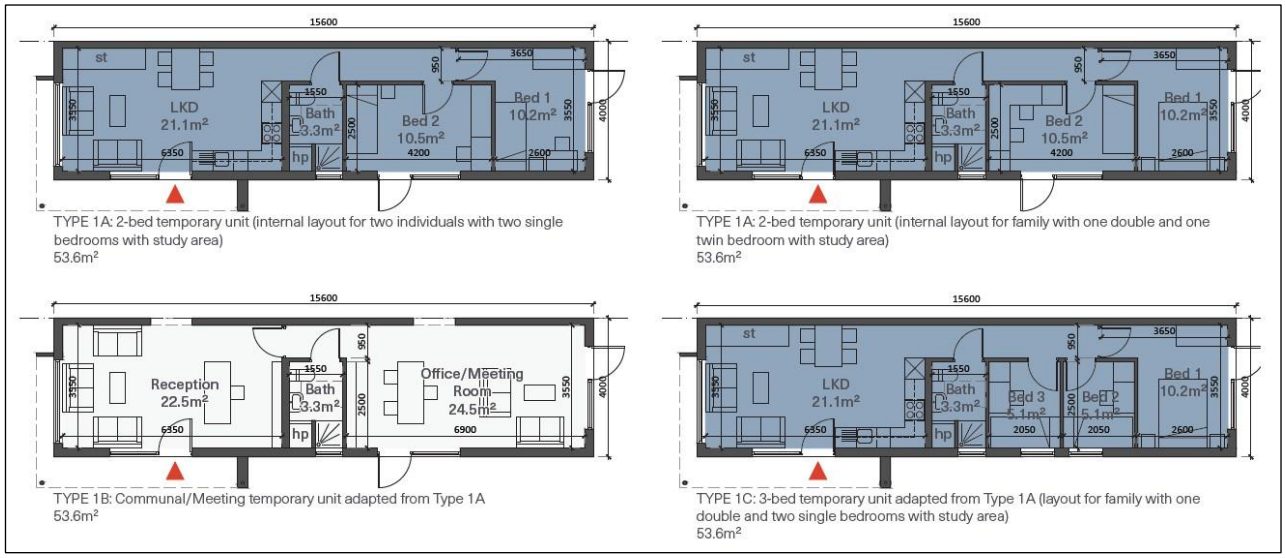

Figure 1.2 - Modular unit plans (Source: O'Mahony Pike Design Statement, 2024) (1/2).

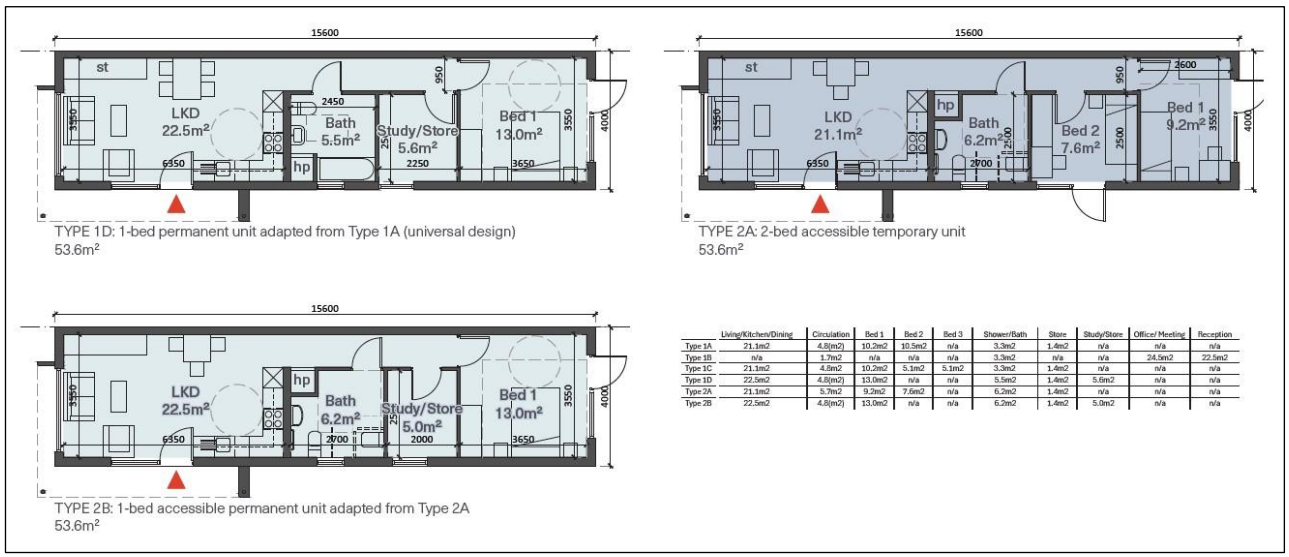

Figure 1.3 - Modular unit plans (Source: O'Mahony Pike Design Statement, 2024) (2/2).

As taken from O'Mahony Pike Design Statement in Figures 1.2 and 1.3 above; there will be a total of 38 no. units put on site with the total footprint covered by buildings 2371m². There will be 12 no. standard car parking spaces

and 2 no. accessible spaces. The total number of bedspaces will be within the following breakdown: - 34 no. type 1A 2-bed units (including the provision for optional layouts Type 1B, 1C and 1D) and 2 no. Type 2A 2-bed accessible units (including provision for optional layout Type 2B). There will also be 2 no. Type 1B communal/office space (including the provision for optional layouts Type 1A, 1C and 1D) units located within the site. There will be 2 no. set-down space and communal open space (c. 780sqm). Relocation of existing bus stop to allow for site entrance and construction of 1 no. ESB unit substation will occur. The units will be comprised of metal (or similar) cladding, double glazed windows and doors, a flat roof with membrane and parapet, and will be built in complete and weatherproof upon arrival to site. Units will be mostly identical with variations in elevation and location of bedroom windows to suit internal configuration. An external wall shall be built to accommodate services such as the electricity meter box, and this will separate the house entrance to the back garden. It is proposed to use simple timber and steel porches painted in a select few colours, along with matching unit numbered signs and painted garden gates, to provide some differentiation between the units.

Figure 1.4 - Aerial view of the proposed project from the southwest (Source: O'Mahony Pike Design Statement, 2024).

Figure 1.5 - Aerial view of the proposed project from the northeast (Source: O'Mahony Pike Design Statement, 2024).

Figure 1.6 - View of the proposed project from St. Michael's drive looking east (Source: O'Mahony Pike Design Statement, 2024).

Figure 1.7 - View of access road looking north (Source: O'Mahony Pike Design Statement, 2024).

Figure 1.8 - View of central open space (Source: O'Mahony Pike Design Statement, 2024).

1.2.1 Lighting

[*Extracted from Varming Consulting Engineers, 2024; Full Lighting Report can be found with submitted documents for the proposed project*].

The public lighting design concept for the proposed development is to provide adequate illuminance for vehicular and pedestrian access merging from the main road. The lighting levels shall be compliant with all the relevant standards and guidelines while complementing the Architecture of the development. The design of the public lighting includes low energy LED lighting throughout. Energy efficient light fittings are a key element in reducing the developments energy consumption. High quality optics selected around the ecologically sensitivity areas of the development have also been a key part of the concept design.

The lighting design for the proposed project will use 5 no. luminaires mounted on 6m columns within the site all equipped with a wide street optical distribution beam. The luminaires will be turned on and off by a mounted photocell.

1.2.2 Stormwater Drainage Design

[Extracted from Punch Consulting Engineers, 2024; Full Engineering Planning Report can be found with submitted documents for the proposed project]

1.2.2.1 Existing Stormwater Drainage

An underground utility survey conducted by Murphy Geospatial in January 2024 revealed details about the stormwater drainage infrastructure in the vicinity the site. Notably, a 900mm diameter concrete stormwater sewer runs along St. Michael's Drive, flowing in an easterly direction.

1.2.2.2 Existing Site Hydrogeology

Rainfall data derived from Met Eireann records indicate the following rainfall parameters are relevant to the site:

- M5-60 = 17.3
- M5-2D = 78.8
- Ratio “R” = 0.22

Ground investigations will be conducted prior to construction. As a basis for the outline design an infiltration rate of 5.1855x10-5 m/s has been assumed for the purpose of sizing the soakaway, based on an adjacent site’s Ground Investigation Report, which included infiltration testing. Guidance from Table 25.1 of the CIRIA SuDS Manual[1] has also been considered, with typical infiltration rates of 1x10-5 m/s to 5x10-5 m/s expected for subsoils of a gravelly/sandy/clayey nature. Nonetheless, site-specific soakaway testing will be performed before commencement to provide a more accurate estimation of the available infiltration rate.

1.2.2.3 Proposed Stormwater Drainage

The surface water drainage strategy for the proposed park development will adhere to the principles of Sustainable Drainage Systems (SuDS), as detailed in Sections 2.4 and 2.5 of Punch Consulting Engineers Engineering Planning Report. The overall strategy involves collecting runoff from impermeable surfaces using buried pipework, which will direct the water to two soakaway systems located beneath grassed public open spaces, as such the site is split in two sub-catchments, Sub-Catchment 1 (North) and Sub-Catchment 2 (South), as shown below in Figure 1.9.

[1] https://www.ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS

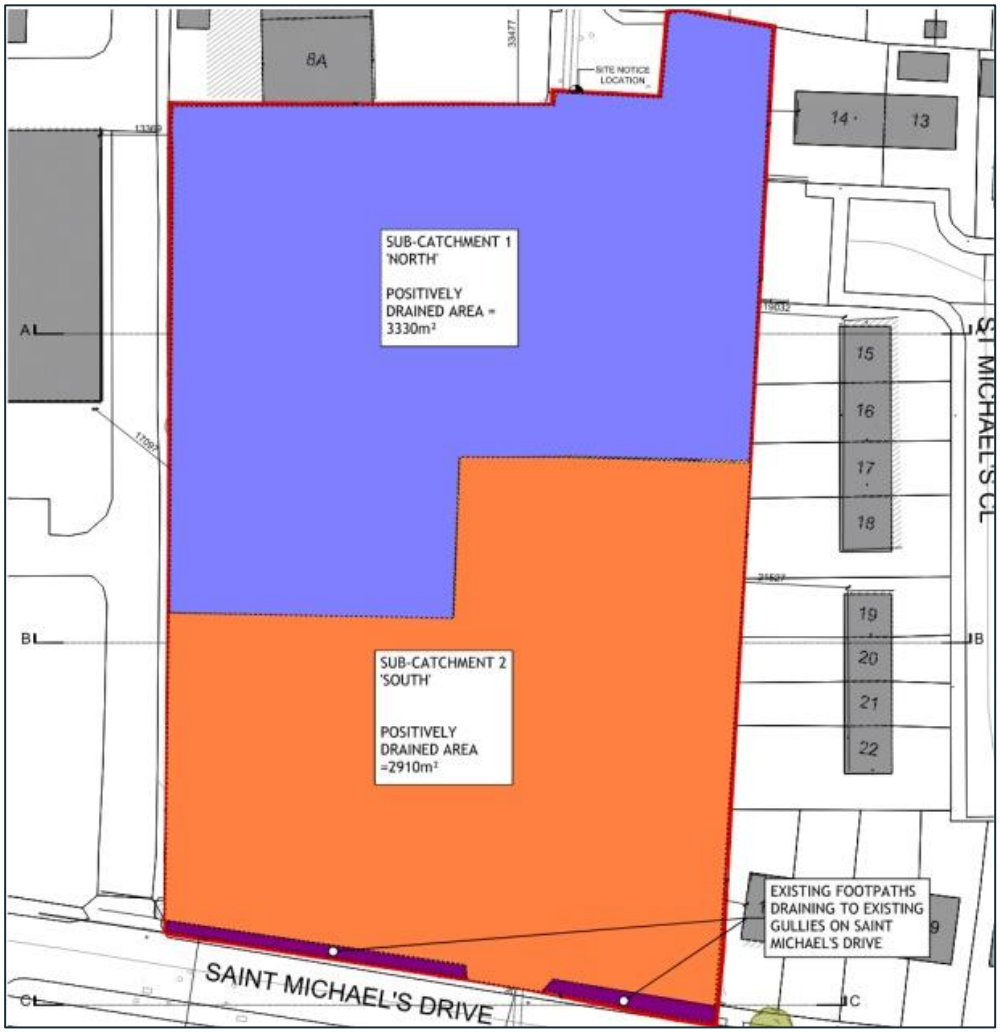

Figure 1.9 - Drainage Sub-Catchment Strategy

Due to the southern sub-catchment of the site having provision for car parking spaces, a by-pass petrol interceptor will be installed as a pre-treatment measure before discharging to the southern soakaway. Additionally, each of the two inlet manholes to the soakaway systems will include a 0.5m sump.

All surface water runoff from the proposed development will be managed within the site boundary, infiltrating naturally into the ground without discharging into any existing surface water drainage networks. This approach ensures a sustainable and self-sufficient means of surface water management, replicating pre-development conditions by returning water to the ground at its source. The existing footpaths on St. Michael's Drive will remain draining to existing gullies on the public carriageway.

The proposed surface water drainage system has been designed using Causeway Flow software, in accordance with the Department of Environment and Local Government's guidance document "Recommendations for Site Development Works for Housing Areas"[2]. Further design parameters and guidance were adopted from the following documents:

- Greater Dublin Strategic Drainage Study, 2005
- Greater Dublin Regional Code of Practice for Drainage Works, 2005
- CIRIA Report C753 – The SuDS Manual v6, 2015
- CIRIA Report C768 – Guidance on the construction of SuDS, 2017

[2] https://www.gov.ie/en/publication/857d0-recommendation-for-site-development-work-for-housing-areas-1998/

- BRE Digest 365 – Soakaway design, 2016
- Flood Studies Report, 1975
- Cork City Development Plan, 2022-2028

A new surface water sewer network, entirely separate from the foul water sewer network, will be provided for the development.

1.2.2.4 Compliance with GDSDS and SuDS Principles

The proposed development is designed in full accordance with the principles of Sustainable Drainage Systems (SuDS) as recommended by the Greater Dublin Strategic Drainage Study (GDSDS)[3]. The GDSDS promotes sustainability by requiring designs to comply with specific drainage criteria that aim to minimize the impact of urbanization by replicating the runoff characteristics of the greenfield site. These criteria ensure a consistent approach to managing the increase in both the rate and volume of runoff, as well as protecting the environment from pollution caused by roads and buildings.

To satisfy SuDS requirements, developments typically incorporate:

- Interception storage
- Treatment storage (unnecessary if interception storage is adequate)
- Attenuation storage
- Long-term storage (unnecessary if QBAR growth factors are not applied in attenuation storage design)

In the case of the proposed project, surface water discharge will be managed entirely through infiltration via 2 no. soakaways, which are equipped to handle attenuation storage needs for storm events up to the 1% AEP event. This approach negates the need for off-site surface water discharge, ensuring full interception storage and eliminating the requirement for treatment or long-term storage.

1.2.2.5 SuDS Proposals

The proposed development has been assessed in relation to SuDS. A variety of SuDS measures may be adopted to comply with Council recommendations. All SuDS measures are to be implemented with reference to the UK Suds Manual and Cork City Council drainage requirements.

The SuDS processes decrease the impact of the development on the receiving environment by providing amenity and biodiversity in many cases. Regular maintenance of the SuDS proposals is required to ensure they are operating to their optimal level throughout their design life. The specific measures adopted for the proposed development have been agreed in principle with Cork City Council and comprise the following:

1.2.2.5.1 Rainwater Butts

Runoff from the roof is considered 'clean' and is often reused for facilities such as toilet flushing, landscape irrigation etc. For this development roof runoff from the residential units is being directed to a rainwater butt. The rainwater butt will be equipped with a high-level overspill pipe to connect to the proposed stormwater drainage system.

1.2.2.5.2 Soakaways

The soakaways will provide the required level of attenuation storage within the voids in the proprietary cellular storage system. The base and sides of the soakaways will be lined. The proposed soakaways will accommodate the 1% AEP (annual exceedance probability) rainfall event with an allowance for 20% climate change, using an assumed infiltration rate of 5.885 x 10-5 m/s. Site-specific soakaway testing will be carried out prior to commencement to establish a more accurate estimation of the available infiltration rate. The proposed

[3] https://www.water.ie/projects/local-projects/greater-dublin/publications/

soakaways will be proprietary cellular storage crate soakaway systems with the following measurements (see Figure 1.9):

- Soakaway North volume 185m³ - 13.5m long by 8m wide by 1.8m deep
- Soakaway South volume 152m3 – 10m long by 8m wide by 2m deep
- Total volume = 337m³

Both soakaways will have a voids ratio of approximately 95%. Additionally, both soakaways will have a 0.5m sump located upstream of the soakaway inlet.

1.2.2.5.3 Petrol Interceptor

It is proposed that all surface water run-off from car park areas will outfall via a Class 1 Bypass Separator located upstream of the proposed southern soakaway. This device will remove hydrocarbons and fine sediment particles from the site runoff and lower the risk of downstream contamination following an oil spillage on site.

Bypass separators fully treat all flows generated by rainfall rates of up to 6.5mm/hr. This covers over 99% of all rainfall events. Flows above this rate are allowed to bypass the separator. These separators are used when it is considered an acceptable risk not to provide full treatment for high flows, for example where the risk of a large spillage and heavy rainfall occurring at the same time is small.

Class 1 devices are designed to achieve a concentration of less than 5mg/l of oil under standard test conditions.

The by-pass separator for the proposed development has been sized in accordance with IS EN 858-2:2003.

1.2.3 Foul Water Drainage Design

1.2.3.1 Existing Foul Water Drainage

Uisce Éireann's online records indicate a 300mm diameter foul sewer running along St. Michael's Drive. However, a utility survey conducted by Murphy Geospatial in January 2024 suggests it is a 225mm diameter uPVC pipe. A slit trench will be dug prior to construction to confirm the exact size of the existing foul sewer. For this report, it is assumed Uisce Éireann's records are accurate, and a 300mm diameter foul sewer will be referenced throughout. An extract from the Uisce Éireann online records is shown in Figure 1.10 below.

Figure 1.10 - Existing foul drainage surrounding the site (from Punch Consulting Engineers, 2024 (Extract from Uisce Éireann online records)).

It should be noted that investigations, including tracing and CCTV, are underway to confirm whether the 225mm diameter foul water sewer to the north of the site crosses the site. According to the Uisce Éireann Confirmation of Feasibility letter, if the sewer does traverse the site, it will be diverted during the detailed design works.

1.2.3.2 Proposed Foul Water Drainage

The proposed foul water sewers have been designed using Causeway Flow software in accordance with the DOE's "*Recommendations for Site Development Works for Housing Areas*"[4]. The foul loading has been calculated in accordance with "*Code of Practice for Wastewater Infrastructure*" (particularly clause 36, Appendix C and Appendix D)[5] published by Uisce Éireann.

It is proposed that the foul sewer will discharge by gravity to the existing 300mm diameter public foul sewer on St. Michael's Drive.

A Pre-Connection Enquiry Form has been issued to Uisce Éireann in relation to the proposed development. Uisce Éireann has provided a response, advising that the wastewater connections is feasible without any infrastructure upgrade.

[4] https://www.gov.ie/pdf/?file=https://assets.gov.ie/130190/a57a21d6-9194-48ad-888c-8b7f2aab8a8b.pdf#page=null

[5] https://www.water.ie/docs/connections/faqs/Wastewater-Code-of-Practice.pdf

1.2.4 Watermain Design

1.2.4.1 Existing Watermain

Uisce Éireann record drawings indicate that a 250mm ductile iron watermain runs parallel to the southern boundary of the site, along Saint Michael's Drive. This was subsequently confirmed by a utility survey conducted by Murphy Geospatial in January 2024. An extract from Uisce Éireann online records is shown in Figure 1.11 below.

Figure 1.11 - Existing watermain connections surrounding the site (from Punch Consulting Engineers, 2024 (Extract from Uisce Éireann online records)).

1.2.4.2 Proposed Watermain

It is generally accepted that the design loading for foul drainage can be used to evaluate an approximation of the water demand on the site. With reference to Uisce Éireann's Code of Practice for Water Infrastructure, the average daily flow is calculated as the number of persons multiplied by the flow rate per person. The average day peak week flow is taken to be 1.25 x the average flow, and the peak demand is taken to be the average day peak week flow multiplied by a peaking factor of 5.

On the basis of calculations within the Engineering Planning Report, the development will have an increase in average water demand of 0.2257l/s and a peak water demand of 1.1284l/s.

It is proposed to construct a 100mm diameter watermain to serve the proposed development based on the above calculated demand. The proposed watermain will connect to the existing 250mm diameter ductile iron watermain on St. Michael's Drive.

This feed will provide potable and firefighting water to the proposed development. A bulk water meter shall be provided at the site boundary at the location of the proposed connection to the existing watermain. The watermain layout has been designed in accordance with “Uisce Éireann Code of Practice for Water Infrastructure”. All watermains are to be constructed in accordance with Uisce Éireann Code of Practice and the Local Authority’s requirements. Fire coverage is to be reviewed and certified by the fire consultant.

To reduce the water demand on Local Authority water supplies and to reduce the foul discharge from the development, water conservation measures will be incorporated in the sanitary facilities throughout the development, e.g., dual flush toilets, monobloc low volume push taps and waterless urinals.

Rainwater harvesting via rainwater butts is also proposed as part of the SuDS design, to service non-potable water supply. This will also serve to improve water reduction.

A Pre-Connection Enquiry Form has been issued to Uisce Éireann in relation to the proposed development. Uisce Éireann has provided a response, advising that water servicing is feasible without any infrastructure upgrade.

1.2.5 Flooding

Planning guidelines on flood risk and development have been published by the OPW and Department of Environment, Heritage, and Local Government (DoEHLG).

1.2.5.1 Fluvial Flood Risk

Fluvial flooding occurs when a river exceeds its capacity and overflows onto the adjacent floodplain. The proposed development is not located near any rivers, so there is no fluvial flood risk to the site.

1.2.5.2 Pluvial Flood Risk

Pluvial flooding results from overland flows of rainfall-generated runoff before it can enter any watercourse or sewer, typically associated with high-intensity rainfall. The Preliminary Flood Risk Assessment (PFRA) mapping does not identify pluvial flood risk for this site. Additionally, the proposed drainage network is designed to accommodate a 100-year return period plus a 20% climate change allowance, mitigating pluvial flooding concerns.

1.2.5.3 Groundwater Flooding

According to the Geological Survey of Ireland (GSI) groundwater flooding probability maps[6], there is no groundwater flooding risk in this area.

1.2.5.4 OPW Flood Maps

The OPW Past Flood Event Local Area Summary Report has identified flood events within 2.5 km of the study area, however none of these events directly affect the site area.

1.2.5.5 Flood Risk Assessment Conclusion

The site has been assessed in accordance with the “The Planning System and Flood Risk Management” Guidelines. As part of the sequential test, the OPW flood hazard maps[7] have been consulted, as have the Catchment Flood Risk Assessment Maps produced by the OPW.

In all cases the site is deemed appropriate for the proposed residential development.

[6] https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=848f83c85799436b808652f9c735b1cc

[7] https://www.floodinfo.ie/map/floodmaps/

1.2.6 Road and Access

1.2.6.1 Proposed Roads & Access

Access to the site will be via a new entrance on St. Michael's Drive. The proposed road layout has been designed following the principles outlined in the Design Manual for Urban Roads and Streets (DMURS)[8] and the Recommendations for Site Development Works. DMURS aims to facilitate the creation of safer, more attractive, and vibrant streets that promote and sustain communities and neighbourhoods. This includes accommodating cars, other vehicles, pedestrians, cyclists, and public transport users.

Research indicates that narrow carriageways are highly effective for traffic calming. This principle has been integrated into the development's design, resulting in a proposed internal carriageway with a shared surface width of 4.8 meters, compliant with Section 4.4.1 of DMURS.

Auto track assessments were performed on the proposed road network to ensure that emergency vehicles, such as fire tenders, can safely navigate the internal road network and turning heads.

1.2.7 Parking

The development will include 12 standard car parking spaces and 2 disabled parking spaces, totalling 14 car parking spaces. This is below the maximum permitted number of 36 spaces under the Cork City Development Plan (CCDP) 2022-2028 (Table 11.13 of the CCDP)[9].

The provision of 2 disabled parking spaces exceeds the 5% requirement under the CCDP 2022-2028. Additionally, 2 set-down spaces will be provided in front of the pedestrian/vehicular gates to the development. Three of the 14 car parking spaces (1 per 5 parking spaces) will be equipped with Electric Vehicle (EV) charging points. The remaining spaces will have the infrastructure for future installation of EV charging points. Bicycle parking is planned to be within the private gardens of the residences; therefore, no designated bicycle parking spaces are proposed.

1.2.8 Landscape Design

[Extracted from Doyle & O'Troithigh Landscape Architecture, 2024; Full Landscape Design Report for Estuary Way can be found with submitted documents for the proposed project]

All areas of the proposed development will receive a landscape treatment of a high standard in terms of materials and specification; both for hard and soft landscape elements. The landscape design relates to the following key areas:

1.2.8.1 Open Space – Central Courtyard

An overlooked courtyard space is proposed within the centre of the scheme. This space shall be edged by the units immediately to the north and south of the space, new walling to the west to aid privacy and set-down and turning area/shared surface to the east with further units edging the zone. A series of pathways surrounding the space offer multiple opportunities and connections for engagement. The following key elements are proposed within the central open space: -

- Pathways which link to surrounding pedestrian routes

[8] https://www.gov.ie/en/publication/3360b1-design-manual-for-urban-roads-and-streets/

[9] https://www.corkcity.ie/en/cork-city-development-plan/

- Structural tree planting
- A naturalised zone with native hedge planting, a wildflower mix meadow feature insect houses. Seating in the form of rounded informal boulders are also proposed within this zone to offer opportunity for engagement with nature and contemplation as well as social interaction.
- Callisthenic unit to offer opportunity for active exercise/HIIT training (set on a tiger mulch base)
- Bench seating
- Tree planting coordinated with a soakaway and associated services.
- Shrub planting and naturalised bulb planting.

1.2.8.2 Southern Open Space

This open space is located south of the boundary railings proposed as part of the scheme. The space seeks to engage with the wider community as well as future residents of the scheme. The proposed entrance road and pedestrian links 'divide' the space to the south; with the proposed boundary railings featuring a native hedge to provide a quality backdrop and improve local biodiversity. Whilst 2no. trees require removal to the east of the entrance way to facilitate the installation of a soakaway unit and associated services, further tree planting is proposed with similar species. A series of east-west pathways offer opportunity for walkers, along with spaces for resting and engagement. The space shall also receive shrub planting, a wildflower meadow mix and naturalised bulb planting which will complement and enhance the local landscape.

1.2.8.3 Front Gardens/Internal Access Roads

It is proposed that the internal access roads will receive specimen trees, suited to a streetscape development. Size, seasonal interest, colour and variation have all been considered in choosing specific trees for these locations. Supporting shrub planting will be included along these routes to ensure an overall unified approach is adopted. Planting within the front gardens of the modular units shall comprise of a mix of shrub herbaceous plant material with hedging at select location to aid privacy as necessary. The shrub planting shall be structural in nature. Herbaceous planting is envisaged which will provide seasonal interest and colour.

1.2.8.4 Boundary Edge

Along the southern edge of the site, the active site shall receive a 2.0m high flat bar railing which shall be edged by a native hedge. This consistent treatment along the public road edge with the complimenting linear green space will offer a strong and rich character to the scheme and will enhance and offer an aesthetically pleasing edge.

Walling in the form of a 2m high rendered finish (to all public sides) with concrete capping is proposed to the western boundary of the scheme. To the north and east of the scheme the existing walling shall be retained and repaired/reinstated /increased to provide an overall height of 2m where there is evidence of damaged or missing sections.

1.2.8.5 Planting Programme

Planting on site will commence with the completion of the works and as a result the programme is closely tied to construction operations. Ground preparation will precede planting and will include weed clearance and soil amelioration where necessary.

Planting will largely be carried out during the dormant period from November – March, with grass seeding carried out from April – September. Landscape maintenance for each area will be carried out for a period of 12 months from the practical completion date. A 12 month defects liability period will be set in place for all plant material with plant failures being replaced in the following planting season.

Seeding mix for the general grass amenity area will include a mixture of 40% perennial ryegrass (*Lolium perenne*), 40% creeping red fescue (*Festuca rubra*) and 20% chewings fescue (*Festuca rubra commutata*).

1.3 Outline CEMP

[Extracted from Punch Consulting Engineers, 2024; Full Outline Construction Environmental Management Plan (oCEMP) can be found with submitted documents for the proposed project]

The principal objective of the oCEMP is to avoid, minimise and control adverse environmental impacts associated with the construction of the proposed residential development. It is intended that this oCEMP will be used to communicate key environmental obligations that apply to all contractor organisations, their sub-contractors and employees while carrying out any form of construction activity on the site.

The oCEMP will then form part of the main construction works contract. The contractor will be required to take account of the contents, methods and requirements contained within the various sections of this oCEMP as part of their contractual responsibilities and will also be required to update the document from an 'Outline' CEMP to a CEMP taking account of all project-specific information. The oCEMP is considered a 'live' document and as such will be reviewed on a regular basis. Updates to the plan may be necessary due to changes in environmental management practices and/or contractors. The procedures outlined in the oCEMP will however be audited regularly throughout the construction phase to ensure compliance with the key objectives of the plan.

1.3.1 Key Guidance

The Environmental Protection Agency (EPA) has produced Pollution Prevention Guidelines. Some of these are of particular note with regard to the drafting of this OCEMP which include:

- IPC Guidance Note - Guidance Note on Storage and Transfer of Materials for Scheduled Activities
- National Hazardous Waste Management Plan 2008-2012 (EPA 2008)

Key Guidance pertinent to this OCEMP from other bodies include:

- Best Practice Guide BPGCS005 - Oil Storage Guidelines
- Construction and Demolition Waste Management - A handbook for Contractors & Site Managers
- Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects 2021 – Environmental Protection Agency (EPA)
- Guidelines on the Protection of Fisheries During Construction Works in and Adjacent to Waters, Inland Fisheries Ireland
- Use Chemicals Safely, Health and Safety Authority (HSA)
- Risk Assessment of Chemical Hazards (HSA)

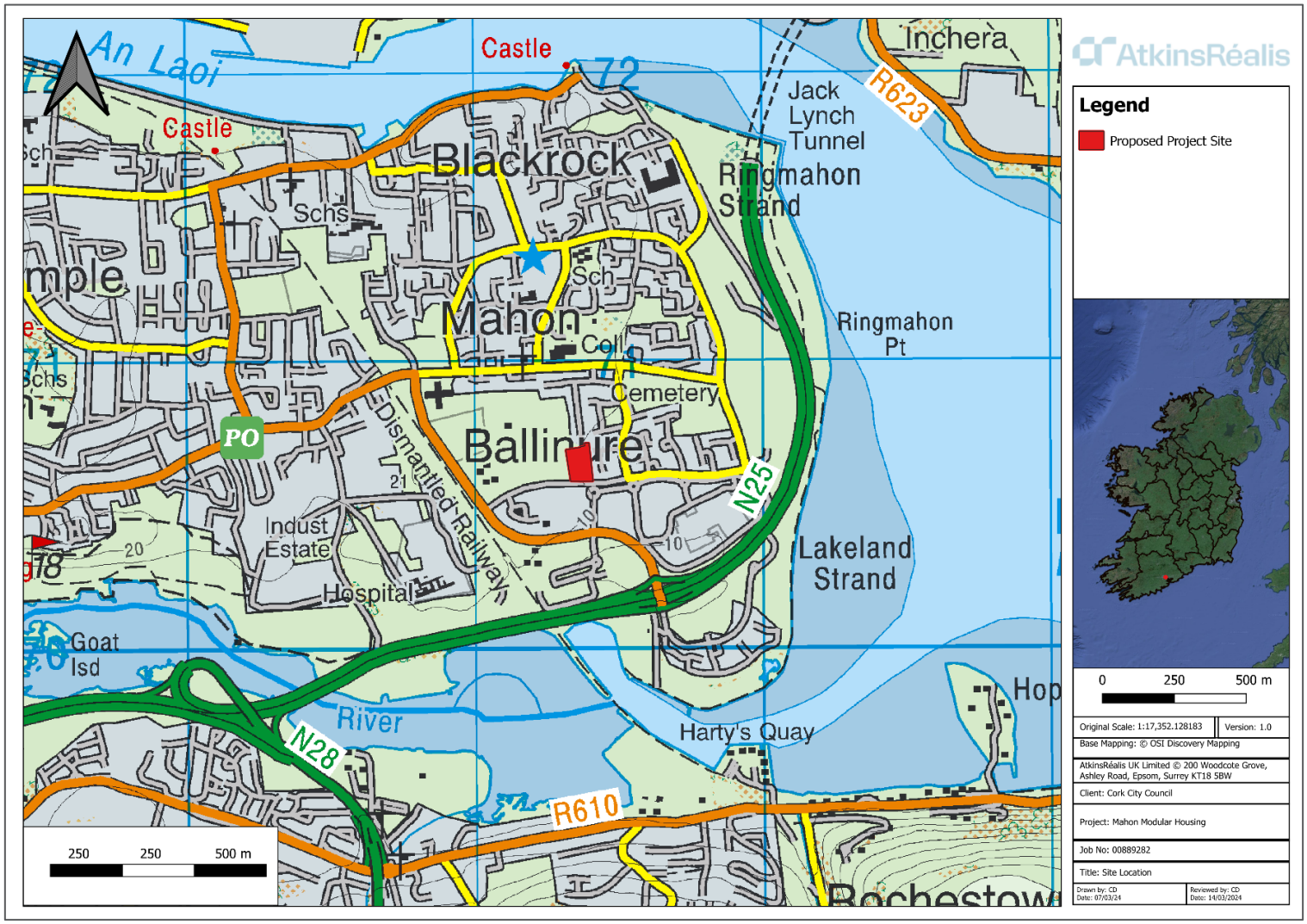

Figure 1.12 - Site Location at St. Michael's Drive Mahon.

2. Scope of Study

2.1 Legislative Context

2.1.1 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.

2.1.2 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 5.4 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 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 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 2.2, below).

2.1.3 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 authority responsible for consenting to or licensing a plan or project, e.g., local authorities, An Bord Pleanála, Transport Infrastructure Ireland (TII) 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.

2.2 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 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. In *People Over Wind* (C-323/17), the CJEU ruled that measures intended to avoid or minimise harmful effects on a Natura 2000 site cannot be considered in making this 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 of an AA are illustrated below in Figure 2.1.

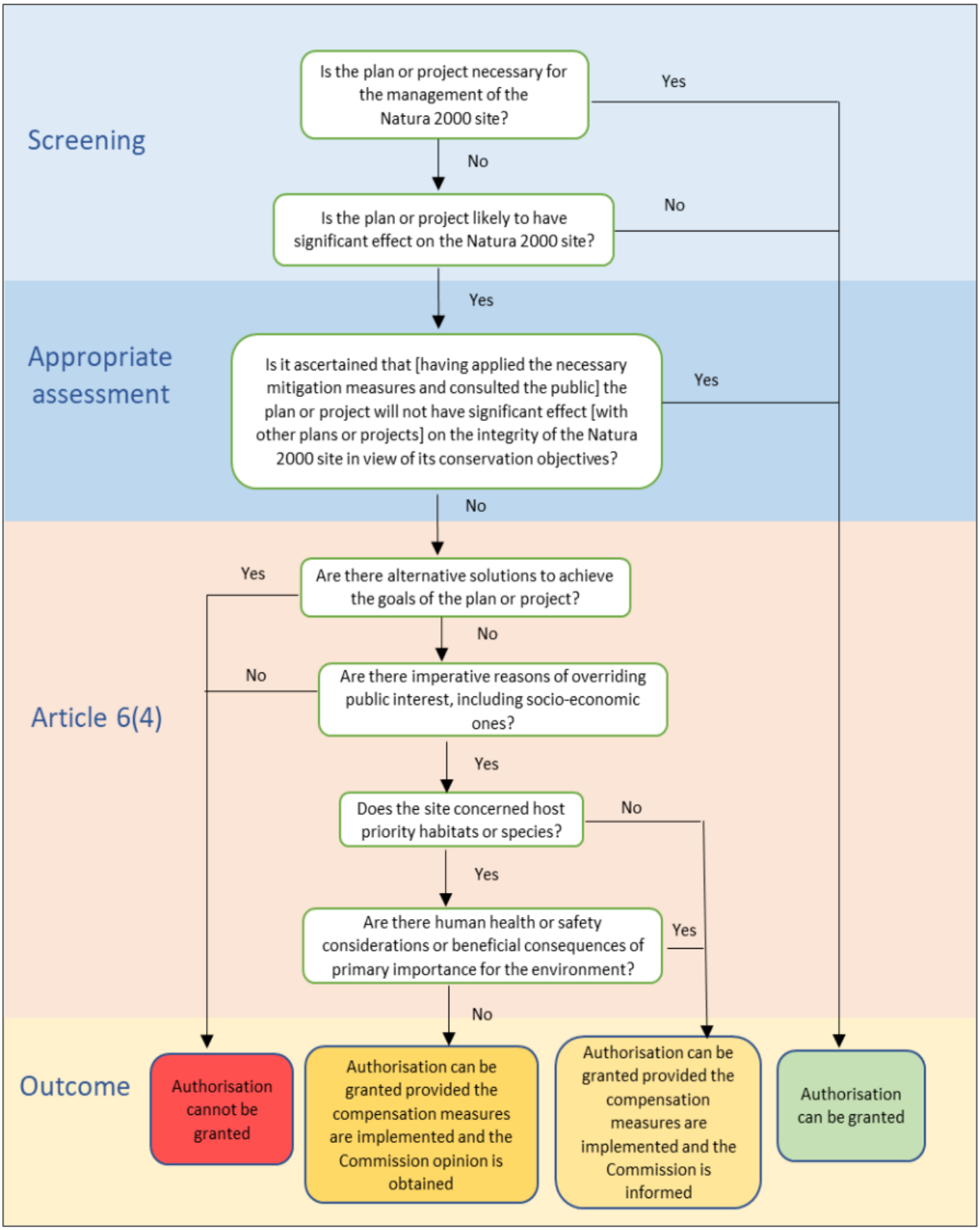

Figure 2.1 - Appropriate Assessment process (EC, 2021).

3. Methods

3.1 Legislation & Guidance Documents

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

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild flora and fauna. *Official Journal of the European Communities* L 206/7-50.
- Directive 2009/147/EC of the European Parliament and of the Council 30 November 2009 on the conservation of wild birds. *Official Journal of the European Union* L 20/7-25.
- European Communities (Birds and Natural Habitats) Regulations, 2011. *S.I. No. 77/2011* (as amended) ("the Habitats Regulations).
- Planning and Development Act, 2000. *No. 30 of 2000* (as amended) ("the Planning and Development Acts").
- Planning and Development Regulations; 2001. *S.I. No. 600/2001* (as amended) ("the Planning Regulations").
- EC (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.* European Commission, Brussels.
- EC (2021a) *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. C (2021) 6913.* European Union, Brussels.
- EC (2021b) *Guidance Document on the Strict Protection of Animal Species of Community Interest Under the Habitats Directive. C (2021) 7301.* European Commission, Brussels.
- DEHLG (2010a) *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Revised 11/02/2010.* Department of the Environment, Heritage and Local Government, Dublin.
- DEHLG (2010b) *Circular NPW 1/10 & PSSP 2/10. Dated 11/03/2010.* Department of the Environment, Heritage and Local Government, Dublin.
- NPWS (2012a) *Marine Natura Impact Statements in Irish Special Areas of Conservation. A Working Document. April 2012.* National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.
- NPWS (2021) Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland. *National Parks & Wildlife Service Guidance Series* 1, Department of Housing, Local Government and Heritage, Dublin.
- Mullen, E., Marnell, F. and Nelson, B. (2021) Strict Protection of Animal Species – Guidance for Public authorities on the Application of Articles 12 and 16 of the EU Habitats Directive to development/works undertaken by or on behalf of a public authority. *National Parks & Wildlife Service Guidance Series* 2, Department of Housing, Local Government and Heritage, Dublin.
- OPR (2021) *Appropriate Assessment Screening for Development Management. OPR Practise Note PN01.* Office of the Planning Regulator, Dublin.

- Applications for Approval for Local Authority Developments made to An Bord Pleanála under 177AE of the Planning and Development Act, 2000, as amended (Appropriate Assessment) – Guidelines for Local Authorities <https://www.pleanala.ie/getmedia/0f385f48-7e84-43e3-b405-1201e490740a/Applications-for-approval-for-LA-Developments-S177AE-EN.pdf>. An Bord Pleanála, Dublin.

- Case law, including Waddenzee (C-127/02), Sweetman v. An Bord Pleanála (C-258/11), Kelly v. An Bord Pleanála (IEHC 400), Commission v. Germany (C-142/16), People Over Wind (C-323/17), Holohan v. An Bord Pleanála (C-461/17), Eoin Kelly v. An Bord Pleanála (IEHC 84) and Heather Hill (IEHC 450).

- 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

A desk study was carried out to collate information available on European sites in the vicinity of the proposed project. These areas were viewed using Google Earth, Google maps[10] and Bing maps[11] (last accessed on (22/02/24).

The National Parks and Wildlife Service (NPWS) online databases were reviewed concerning European sites and their features of interest in the vicinity of the proposed project. The Environmental Protection Agency (EPA) mapping[12] system was used to identify any hydrological connection between the proposed project and European sites, this information was supported by site walkover surveys.

Locations and boundaries of all European sites within the potential zone of influence of the proposed project were identified and reviewed using the NPWS online map viewer. Boundary shapefiles were also downloaded from this site to facilitate the preparation of project graphics. The National Biodiversity Data Centre (NBDC)[13] online database was consulted for information on species trends and records and IAPS. The Botanical Society of Britain and Ireland (BSBI)[14] was also consulted for records of invasive plant species.

Desktop information on relevant European sites was reviewed on the NPWS website, including the site synopsis for each SAC/SPA, the conservation objectives, the site boundaries as shown on the NPWS online map viewer, the standard European Data Form for the SAC/SPA which details conditions and threats of the sites, and published information and unpublished reports on the relevant European sites. The Natura 2000 map viewer[15] was used in conjunction with NPWS online resources for desktop information on relevant European sites.

The Geological Survey Ireland (GSI)[16] was consulted for information of bedrock and aquifers in the vicinity of the proposed project.

Relevant planning information for the surrounding area was reviewed using the planning enquiry systems of Cork City Council. Search criteria were implemented to determine whether such projects or plans would be relevant to this study and this information was used to determine potential cumulative impacts from other plans / projects with the proposed project.

[10] https://www.google.ie/maps

[11] http://www.bing.com/maps/

[12] https://gis.epa.ie/EPAMaps/

[13] https://biodiversityireland.ie/

[14] https://bsbi.org/maps

[15] https://natura2000.eea.europa.eu/

[16] https://www.gsi.ie/en-ie/Pages/default.aspx

3.3 Site Visit

Given the location of the proposed project site and lack of direct hydrological connectivity to any European site, use of aerial imaging and Google Street View, and a comprehensive set of photos provided in the original project brief; a site visit was not undertaken as listed resources were sufficient in informing this AA Screening.

3.4 Statement of Authority

The Screening for Appropriate Assessment report was prepared by Sally O'Meara and Caroline Downey. Peer review was undertaken by Paul O'Donoghue.

Sally O'Meara is a Graduate Ecologist at Atkins with a BSc (Hons) in Applied Freshwater and Marine Biology from Atlantic Technological University. Sally has worked as a consultant in the environmental sector since 2018, primarily as an ornithologist, and as an ecologist since 2023. She has experience in writing survey summaries, AA screening reports, and Preliminary Ecological Appraisals.

Caroline Downey is an Ecologist at Atkins holding a BSc (Hons) in Ecology and Environmental Biology from University College Cork. Caroline has worked in ecological consultancy since 2023, with a broad knowledge of Appropriate Assessment, Natura Impact Statements, Ecological Impact Statements and ecological theory and legislation, resultant of her BSc. A focus of Caroline's work to date has been assisting Appropriate Assessment Screenings and supporting the preparation of AA Screening Reports and NIS.

Paul O'Donoghue has a BSc (Zoology), MSc (Behavioural Ecology) and a PhD in avian ecology and genetics. His 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 20 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. Existing Environment

4.1 Desktop review

The proposed project is situated in the suburbs of Cork City, located on St. Michael's Drive in Mahon. Lands immediately adjacent to and bordering the proposed project include open green spaces, residential housing estates, and the urban corridor of the St. Michael's Drive road. Currently the use of the area within which the proposed project is situated is as a site compound/car park.

All surface hydrological features within the vicinity of the proposed development follow topography and flow in an easterly direction towards the coast. The proposed project is located within the Lee, Cork Harbour and Youghal Bay catchment area and the Glasheen[Corkcity]_SC_010 sub catchment area. (EPA Maps, 2024).

The proposed development is underlain by a regionally important aquifer – Karstified. Groundwater vulnerability beneath the development has been classified as 'high' (GSI, 2024).

The bedrock beneath the proposed development is underlain by a Massive and crinoidal fine limestone by the little island formation (GSI, 2024).

There is no evidence of any karst features being present within the vicinity of the proposed development. The closest karst landform is a cave (GSI Reference: 1707SWK0100) located 2.2km north-west (GSI, 2024).

There are no Geological Heritage Areas within the proposed site. The closest Geological Heritage Areas is Beaumont Quarry (IGH 1) which is located ca. 2.1km north-west and described as '*A partially revegetated quarry of historical importance in the city, with accessible cave systems'*. There is no hydrogeological connection between Diamond Quarry Geological Heritage Area and the proposed site (GSI, 2024). There are no structures subject to any archaeological protection (NPWS Historic Environment View, 2024) within or in the vicinity of the site.

To the south of the proposed project lies the estuary of the Douglas River. The Douglas estuary discharges into Cork Harbour in the vicinity of Rochestown and Jacob's Island. Douglas estuary and Cork Harbour are categorised by the EPA as Lough Mahon transitional waterbody. Lough Mahon has been assigned 'Moderate' status under the Water Framework Directive and is 'At Risk' of not attaining 'Good' status. Douglas estuary is designated as a Special Protection Area; Cork Harbour SPA (004030) (EPA Maps, 2024) for a range of bird species.

Using the NBDC database, no species results were yielded for the W723706 100m grid square within which the proposed project is located. Within the W7270 1km grid square records for species protected under the Wildlife Acts include badger (*Meles meles*) and red squirrel (*Sciurus vulgaris*). Habitat within the current site is not suitable for breeding or foraging for either of these species, or for any mammal species that could potentially occur in the area.

As no watercourse occurs onsite or adjacent to the site, there is no potential for impact to protected aquatic/riparian species including otter (*Lutra lutra*), kingfisher (*Alcedo atthis*) and white-clawed crayfish (*Austropotamobius papilles*).

Bat species in Ireland, and their roosts, are protected under the Wildlife Act, 1976 (as amended) and are also afforded strict protection under article 12 of the Habitats Directive (as they are listed on Annex IV). Landscape association models have been constructed to provide a landscape conservation guide for Irish bats (Lundy et al., 2011). Landscape suitability at the proposed project site is 35.56%, however any potential roosting features (trees/buildings) or foraging corridors (trees/hedgerows/watercourses) do not occur within the proposed project site.

The current site provides little to no opportunity for breeding or foraging birds with some cover provided by scrub-like vegetation (species including Butterfly bush (*Buddleja davidii*), bramble (*Rubus fruticosus*), Salix sp. and ivy (*Hedera helix*) established along the edges of the site on the metal fencing.

Butterfly bush is present along the existing fence line of the proposed site boundary which was identified on Google Street View (image from 2022). NBDC records within 1km grid square include legally restricted Third Schedule invasives Rhododendron (*Rhododendron ponticum*) and Japanese Knotweed (*Fallopia japonica*), as well as Medium Impact invasives Traveller's Joy (*Clematis vitalba*) and Sycamore (*Acer pseudoplatanus*). Winter heliotrope (*Petasites fragrans*) was also recorded within W7270. Within the wider 2km grid square species records include Himalayan honeysuckle (*Leycesteria formosa*) and Evergreen oak (*Quercus ilex*). On the BSBI map viewer, further records of Japanese knotweed and Traveller's joy exist in the W77F grid square.

Photos below (Plate 4.1 – 4.7) from the brief show the site at St. Michael's Drive, photos were taken on 14th of March 2024.

Plate 4.1 - Debris within site being used as site compound/carpark.

Plate 4.2 - View from entrance gate into proposed project site.

Plate 4.3 – View of proposed project site from St. Michael's Drive in Mahon, Co. Cork.

Plate 4.4 - View to western boundary of site, vegetation present includes brambles, butterfly bush, grasses, and young beech trees.

Plate 4.5 - Debris on site includes building supplies and piping.

Plate 4.6 - Rock boulders present along the northern boundary of the proposed project site.

Plate 4.7 - Debris on northern boundary of the site includes building supplies and piping.

5. Appropriate Assessment Screening

5.1 Connectivity to European Sites

The 'zone of influence' (ZoI) for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

A distance of 15km is recommended in the case of plans, as a potential zone of influence and this distance is derived from UK guidance (Scott Wilson *et al*., 2006). However, for projects the distance could be much less, and in some cases less than 100m. National Parks and Wildlife Service and Office of the Planning Regulator guidance[17] advises that this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.

Thus, given the nature, scale and extent of the proposed project, the potential zone of influence will consider European sites with regard to the location of a European site, the QIs of the site and their potential mobility outside that European site, the Cause-Pathway-Effect model and potential environment effects of the proposed project.

There are two European designated sites within the potential zone of influence of the proposed project; Great Island Channel SAC (001058) and Cork Harbour SPA (004030).

Cork Island Channel SAC is situated in the inner area of Cork Harbour, north of Cobh Island and on the eastern side of Cork Harbour, i.e., the opposite side of the Harbour to Douglas estuary and the proposed project. Cork Island Channel is located ca. 4.3km to the east of the proposed project. The SAC is designated for intertidal mudflats and sandflats and Atlantic salt meadows (Table 5.1). It must be assumed that surface water drainage from the environs of the site ultimately reaches the harbour, either by direct outfall or via infiltration to groundwater.

Cork Harbour SPA is comprised of a number of discrete elements distributed throughout the harbour. The nearest element is Douglas Estuary, which is located ca 530m to the south of the proposed project. Mahon Point Retail Park and the N40 lie between the proposed project and the SPA. However, given that the SPA is situated close to 500m of the proposed project, it is deemed to be within the zone of influence of the proposed project and is considered further in this assessment.

[17] DoEHLG (2009*). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, Dublin, Ireland.
OPR (2021) Appropriate Assessment Screening for Development Management. OPR Practice Note PN01. Office of the Planning Regulator. Dublin, Ireland.

Table 5.1 - SACs within the ZoI of the proposed project.

Site Name	Site Code	Approximate distance	Features of Interest	Within ZoI
Great Island Channel SAC[18]	0010058	ca. 4.3km by straight line distance	• Mudflats and sandflats not covered by seawater at low tide [1140] • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]	Yes - There is no overlap or direct connectivity from the proposed project to the SAC. The SAC is situated within the inner area of Cork Harbour at a distance from the proposed development, which is ca. 530m from the shore, and thus, there is at most weak and remote hydrological connectivity between the proposed project and the SAC.

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

Table 5.2 - SPAs within ZoI of the proposed project.

Site Name	Site Code	Approximate distance	Features of Interest	Within ZoI
Cork Harbour SPA[19]	004030	Ca. 530m by land (straight line distance)	• 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*) [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] • Wetland and Waterbirds [A999]	Yes - There is no overlap or direct connectivity from the proposed project to the SPA. The SPA is situated within the inner area of Cork Harbour at a distance from the proposed development, which is ca. 530m from the shore, and thus, there is at most weak and remote hydrological connectivity between the proposed project and the SPA.

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

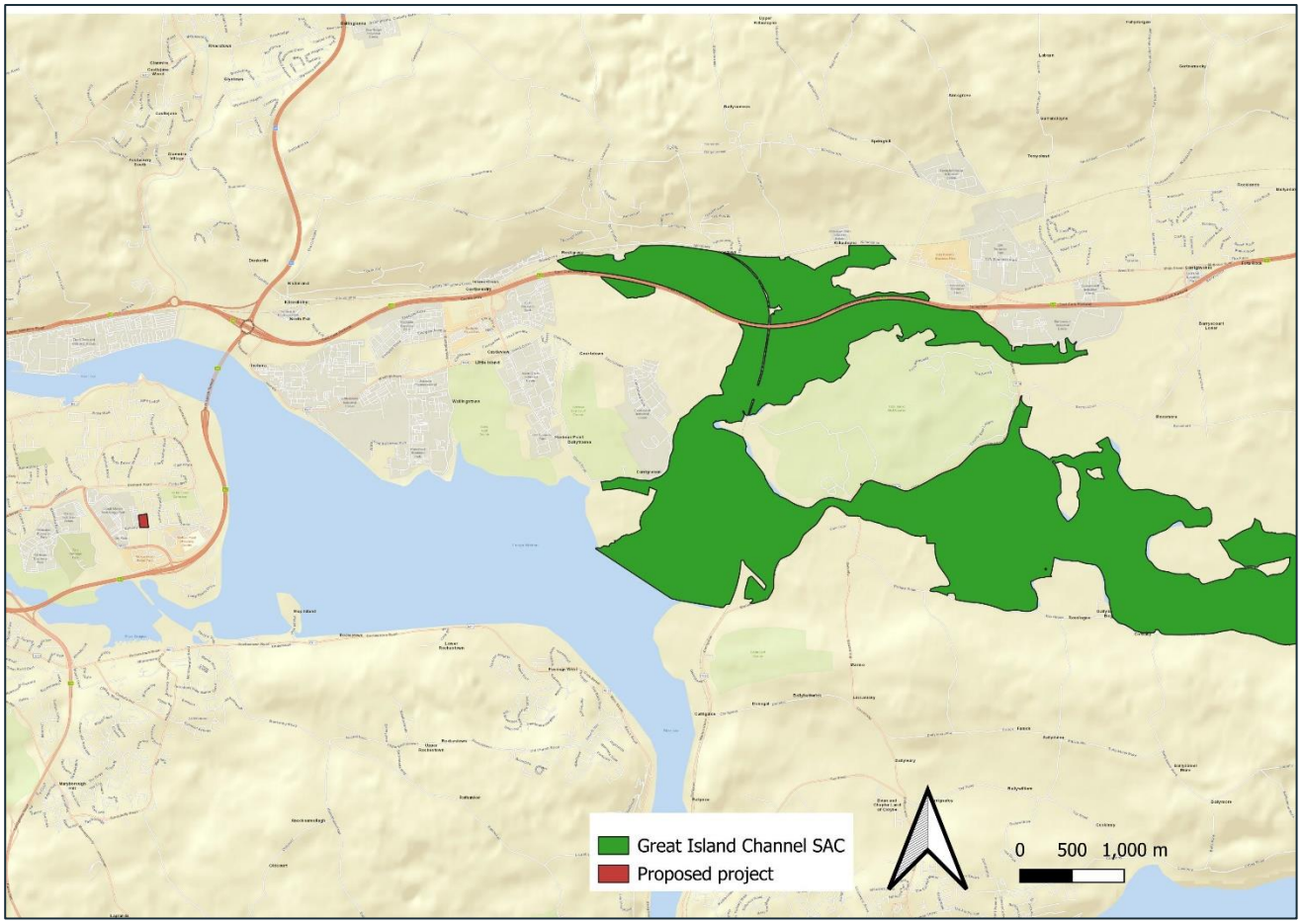

Figure 5.1 - SAC within ZoI of the proposed project.

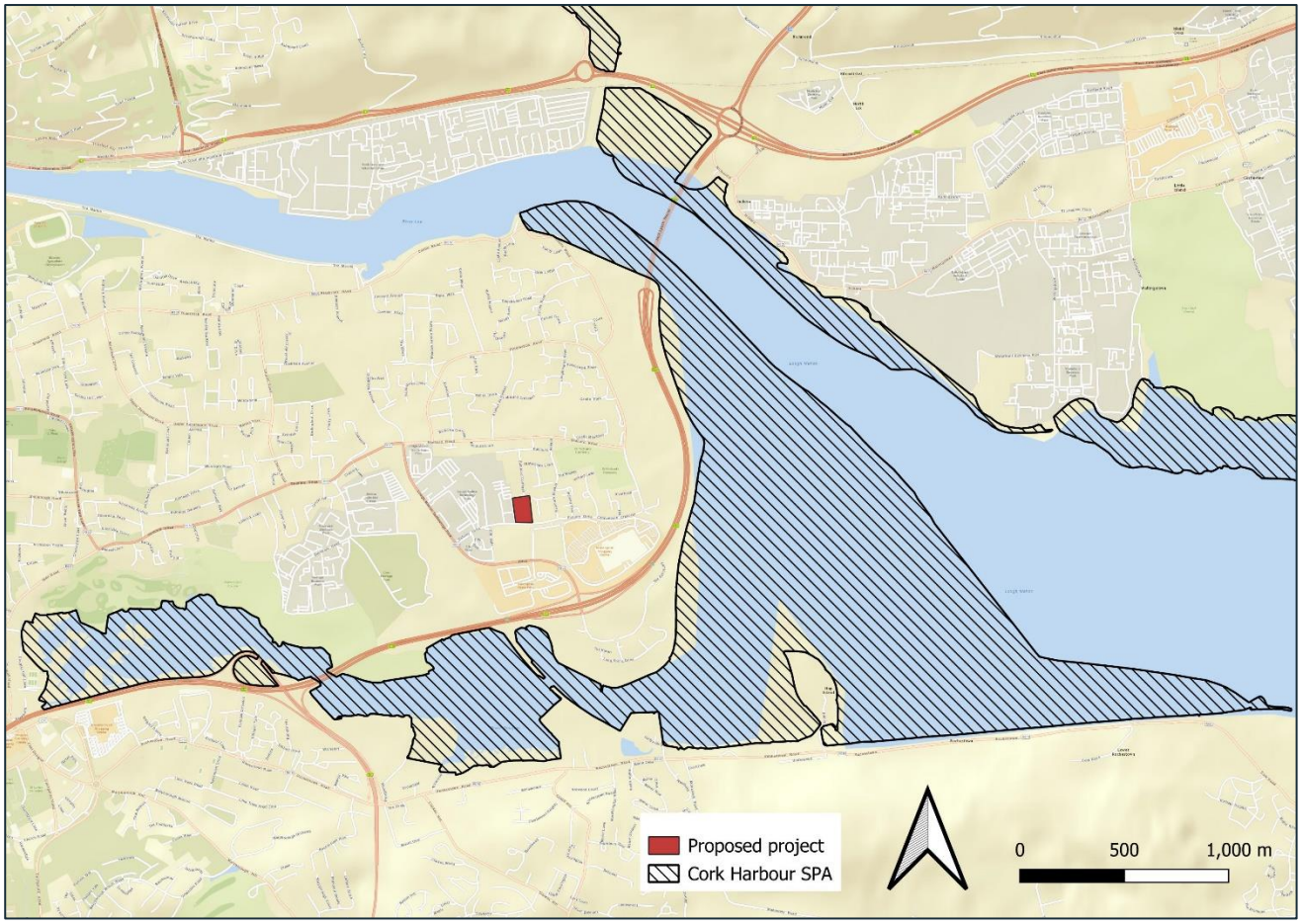

Figure 5.2 - SPA within ZoI of the proposed project.

5.2 Great Island Channel SAC

5.2.1 Description of Great Island Channel SAC

Great Island Channel SAC is described as follows in the NPWS site synopsis (NPWS, 2013a)

> *"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 Owenacurra and Dungourney Rivers. These rivers, which flow through Midleton, provide the main source of freshwater to the North Channel.*
>
> *The main habitats of conservation interest in Great Island Channel SAC are the sheltered tidal sand and mudflats and the Atlantic salt meadows. Owing to the sheltered conditions, the intertidal flats are composed mainly of soft muds. These muds support a range of macro-invertebrates, notably* Macoma balthica*,* Scrobicularia plana*,* Hydrobia ulvae*,* Nepthys hombergi*,* Nereis diversicolor *and* Corophium volutator*. Green algal species occur on the flats, especially* Ulva lactuca *and* Enteromorpha *spp. Cordgrass (*Spartina *spp.) has colonised the intertidal flats in places, especially at Rossleague and Belvelly. The saltmarshes are scattered through the site and are all of the estuarine type on mud substrate. Species present include Sea Purslane (*Halimione portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Common Saltmarsh-grass (*Puccinellia maritima*), Sea Plantain (*Plantago maritima*), Greater Sea-spurrey (*Spergularia media*), Lax-flowered Sea-lavender (*Limonium humile*), Sea Arrowgrass (*Triglochin maritimum*), Sea Mayweed (*Matricaria maritima*) and Red Fescue (*Festuca rubra*)."*

5.2.2 Conservation Objectives

The Habitats Directive defines when the conservation status of the listed habitats and species is considered as favourable. The definitions it uses for this are specific to the Directive. In summary, they require that the range and areas of the listed habitats, and the range and population of the listed species, should be at least maintained at their status at the time of designation. Site-specific conservation objectives aim to define favourable conservation conditions for a particular habitat or species at that site.

Article (1) of the Habitats Directive (92/43/EEC) describes favourable conservation status for habitats and species as follows.

Favourable conservation status of a habitat is achieved when: -

- Its natural range, and area it covers within that range, are stable or increasing.
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when: -

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.

- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objectives for Great Island Channel SAC, to maintain or restore the favourable conservation condition for each of the qualifying interests of the site, were published by NPWS (2014a) and 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 in Great Island Channel SAC.

When considering the potential for impacts on annexed habitats in Great Island Channel SAC consideration must be given to each of the Attributes for *Habitat 1140* (Table 5.3) and *1330* (Table 5.4) as set out in the Conservation Objective Supporting documentation (NPWS, 2014a).

Table 5.3 - Attributes of 1140 Mudflats and sandflats not covered by seawater at low tide (from NPWS, 2014a).

1140	Mudflats and sandflats not covered by seawater at low tide		
To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Great Island Channel SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See Map 3 of NPWS, 2014a.	Habitat area was estimated using as 723ha using OSi data
Community distribution	Hectares	Conserve the following community type in a natural condition: Mixed sediment to sandy mud with polychaetes and oligochaetes community complex. See Map 4 of NPWS, 2014a.	Based on intertidal and subtidal surveys undertaken in 2006 (Aquafact, 2007) and 2011 (EcoServe, 2012; MERC, 2012). See marine supporting document for further information.

Table 5.4 - Attributes of 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) (from NPWS, 2014a).

1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)		
To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Great Island Channel SAC, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Bawnard - 0.29ha; Carrigtwohill - 1.01ha. See Map 5 of NPWS, 2014a.	Based on data from Saltmarsh Monitoring Project (SMP) (McCorry and Ryle, 2009). Two sub-sites that supported Atlantic salt meadow (ASM) were mapped (1.30ha) and additional areas of potential saltmarsh (17.60ha) were identified from an examination of aerial photographs, giving a total estimated area of 18.90ha. Saltmarsh habitat has also been recorded at two other sub-sites within the SAC (Curtis and Sheehy Skeffington, 1998). NB further un-surveyed areas maybe present within the SAC. See coastal habitats supporting document for further details.
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See Map 5 of NPWS, 2014a.	Based on data from McCorry and Ryle (2009). Within the sites surveyed by the SMP, estuary type saltmarsh over a mud substrate is most common and ASM is the dominant saltmarsh habitat. NB further un-surveyed areas maybe present within the SAC. See coastal habitats supporting document for further details.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). At Bawnard there is a seawall that was constructed in the 18th-19th centuries. At Carrigtwohill the northern and eastern shorelines have been significantly modified by road construction. Part of the saltmarsh has also been infilled. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Based on data from McCorry and Ryle (2009). The ASM at Carrigtwohill is poorly developed, though some of the larger sections contain salt pans. The smaller sections, however, tend to be quite uniform in topography. The saltmarsh topography at Bawnard is poorly developed with few typical saltmarsh features. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from McCorry and Ryle (2009). At Bawnard, the entire bay empties at low tide to expose soft intertidal mudflats. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). Zonation to Salicornia flats and intertidal mudflats occurs at Carrigtwohill. At Bawnard, there is succession from saltmarsh to brackish saltmarsh and wet grassland as well as zonation to intertidal mudflats at the lower saltmarsh boundary. See coastal habitats supporting document for further details

1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)		
To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Great Island Channel SAC, which is defined by the following list of attributes and targets:			
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Carrigtwohill, the sward height is quite tall due to lack of grazing. At Bawnard only part of the site is grazed. See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% area outside creeks vegetated	Based on data from McCorry and Ryle (2009). Some poaching was noted in places at Bawnard. See coastal habitats supporting document for further details
Vegetation composition: typical species and subcommunities	Percentage cover at a representative number of monitoring stops	Maintain range of subcommunities with typical species listed in SMP (McCorry and Ryle, 2009)	See coastal habitats supporting document for further details
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1% where it is known to occur	Based on data from McCorry and Ryle (2009). Spartina occurs at both sub-sites in this SAC. See coastal habitats supporting document for further details

5.2.3 Potential Threats

The site synopsis for the Great Island Channel SAC describes the land use and threats to the SAC as follows; *'While the main land use within the site is aquaculture (oyster farming), the greatest threats to its conservation significance come from road works, infilling, sewage outflows and possible marina developments.'*

The threats, pressures, and activities with impacts on the SAC (NPWS, 2019) are itemised in Table 5.5.

Table 5.5 - Threats, pressures, and activities with impacts on the SAC.

Rank	Threats and pressures [code]	Threats and pressures (type)	inside/outside [i|o|b]
M	I01	invasive non-native species	i
M	A04	grazing	i
H	J02.01.02	reclamation of land from sea, estuary or marsh	i
H	E01	Urbanised areas, human habitation	o
M	A08	Fertilisation	o
H	F01	Marine and Freshwater Aquaculture	i
M	K02.03	eutrophication (natural)	i
H	D01.02	roads, motorways	i

5.3 Brief Description of Cork Harbour SPA

Cork Harbour SPA is described as follows in the NPWS site synopsis[20]:

> *"Cork Harbour is a large, sheltered bay system, with several river estuaries - principally those of the Rivers Lee, Douglas, Owenboy and Owennacurra. The SPA site comprises most of the main intertidal areas of Cork Harbour, including all of the North 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. These muds support a range of macro-invertebrates, notably* Macoma balthica*,* Scrobicularia plana*,* Hydrobia ulvae*,* Nepthys hombergi*,* Nereis diversicolor *and* Corophium volutator*. Green algae species occur on the flats, especially* Ulva *spp. Cordgrass (*Spartina *spp.) has colonised the intertidal flats in places, especially where good shelter exists, such as at Rossleague and Belvelly in the North Channel. Salt marshes are scattered through the site, and these provide high tide roosts for the birds. Some shallow bay water is included in the site. Rostellan Lake is a small brackish lake that is used by swans throughout the winter. The site also includes some marginal wet grassland areas used by feeding and roosting birds.*
>
> *Cork Harbour is of major ornithological significance, being of international importance both for the total numbers of wintering birds (i.e., > 20,000) and also for its populations of Black-tailed Godwit and Redshank. In addition, it supports nationally important wintering populations of 22 species, as well as a nationally important breeding colony of Common Tern. Several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e., Whooper Swan, Little Egret, Golden Plover, Bar-tailed Godwit, Ruff, Mediterranean Gull, and Common Tern. The site provides both feeding and roosting sites for the various bird species that use it. Cork Harbour is also a Ramsar Convention site and part of Cork Harbour SPA is a Wildfowl Sanctuary."*

5.3.1 Conservation Objectives of Cork Harbour SPA

The Conservation Objectives for Cork Harbour SPA are to maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA[21.](last accessed 22/02/2024).

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objective for non-breeding birds Special Conservation Interests of Cork Harbour SPA[22] are summarised in Table 5-6.

[20] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004030.pdf

[21] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004030.pdf

[22] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004030.pdf

Table 5.6 - Conservation Objectives of Cork Harbour SPA.

Objective 1: To maintain the favourable conservation condition of the waterbird Special Conservation Interest species listed for Cork Harbour SPA, which is defined by the following list of attributes and targets:			
Parameter	**Attribute**	**Measure**	**Target**
Population	Population Trend	Percentage change as per population trend assessment using waterbird count data collected through the Irish Wetland Bird Survey and other surveys	The long-term population trend should be stable or increasing
Range	Distribution	Range, timing, or intensity of use of areas used by waterbirds, as determined by regular low tide and other waterbird surveys	There should be no significant decrease in the range, timing, or intensity of use of areas by the waterbird species of Special Conservation Interest other than that occurring from natural patterns of variation.
Area	Wetland habitat	Area (Ha)	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587 Ha, other than that occurring from natural patterns of variation.

5.3.2 Potential Threats

The threats, pressures, and activities[23] with impact on Cork Harbour SPA are itemised in Table 5.7.

Table 5.7 Threats, pressures, and activities with impacts on the SPA.

Rank	Threats and pressures [code]	Threats and pressures (type)	inside/outside [i|o|b]
M	G01.02	walking, horse riding and non-motorised vehicles	i
H	E02	Industrial or commercial areas	o
L	E01.03	dispersed habitation	o
M	A08	Fertilisation	o
M	G01.01	nautical sports	i
H	D03.01	port areas	o
M	F02.03	Leisure fishing	i
H	F01	Marine and Freshwater Aquaculture	i
H	E01	Urbanised areas, human habitation	o
M	D03.02	Shipping lanes	i
H	D01.02	roads, motorways	o
M	G01.06	skiing, off-piste	i

[23] https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004030.pdf

6. Likely Significant Effects

6.1.1 Identification of Likely Significant Effects

The available information on European sites was reviewed to establish whether or not the proposed project is likely to have a significant effect on the conservation objectives of the designated sites. The likelihood of impacts on the qualifying interests of the European sites identified in this report is based on information collated from the desk study, site visit, site plans, design information and reports and other available existing information.

The likelihood of impacts occurring are established in light of the type and scale of the proposed works, the location of the proposed works with respect to European sites and the features of interest and conservation objectives of the European sites.

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 development and their sources are described in Section 5, potential pathways for those impacts are described and illustrated in Section 5.1, and receptors are described in Section 6. The following subsections detail the specific effects on each receptor and evaluate their significance in view of the relevant conservation objectives.

6.1.2 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	This habitat occurs in the intertidal areas of the SAC, at least c. 4.3km to the east of the proposed development over land and via weak surface water pathways which ultimately discharge into Cork Harbour. This habitat depends on water quality to maintain the 'Mixed sediment to sandy mud with polychaetes and oligochaetes community complex' in a natural condition. There is no direct hydrological connectivity between the proposed development and this habitat. Given the magnitude, extent and duration of any potential water quality impacts associated with the proposed development, and the length and complexity of the hydrological (surface water only) pathways concerned, there is not considered to be any risk of water quality impacts on this habitat. Therefore, likely significant effects on the conservation objectives for this qualifying interests can be ruled out at this stage.	No
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	These habitats occur in the saltmarshes on the edge of the intertidal mudflats and sandflats. 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 no direct hydrological connectivity between the proposed development and this habitat. Given the magnitude, extent and duration of any potential water quality impacts associated with the proposed development, and the length and complexity of the hydrological (surface water only) pathways concerned, there is not considered to be any risk of water quality impacts on this habitat. Therefore, likely significant effects on the conservation objectives for this qualifying interests can be ruled out at this stage.	No

6.1.3 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
• **Little Grebe** • **Great Crested Grebe** • **Cormorant** • **Grey Heron** • **Shelduck** • **Wigeon** • **Teal** • **Pintail** • **Shoveler** • **Red-breasted Merganser** • **Oystercatcher** • **Golden Plover**	Given the distance between the proposed development and the Cork Harbour SPA (ca. 500m), 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 development, and the length and complexity of the hydrological (surface water) pathways concerned, 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 development are not considered to be of importance to any of the bird species of special conservation interest in the SPA. Therefore, likely significant effects on the conservation objectives for these qualifying interests can be ruled out at this stage.	No

Qualifying interest	Identification of likely significant effects	LSE
• **Grey Plover** • **Lapwing** • **Dunlin** • **Black-tailed Godwit** • **Bar-tailed Godwit** • **Curlew** • **Redshank** • **Black-headed Gull** • **Common Gull** • **Lesser Black-backed Gull** • **Common Tern**		
Wetlands	Wetland habitat for waterbirds does not occur within or within the immediate environs of the proposed development. 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. However, given the magnitude, extent and duration of potential water quality impacts associated with the proposed development, and the length and complexity of the hydrological pathways concerned, there is not considered to be any risk of water quality impacts on wetland habitat in Cork Harbour SPA. Therefore, likely significant effects on the conservation objective for this qualifying interest can be ruled out at this stage.	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 development which could give ruse to likely significant effects on the Qualifying Interests of Cork Harbour SPA or the Great Island Channel SAC.

6.3 In-Combination Impacts

In-combination impacts with the following plans and projects were considered during the preparation of this report. The search of Cork City Council's planning database was map-based.

The Cork City Development Plan 2022 - 2028[24] categorises the area of the proposed project as 'Business and Technology', with adjacent areas of 'Residential, Local Services and Institutional Uses'.

Cork City Council has started the preparation of a new Cork City Development Plan 2022-2028. This is a 2-year process, which evolves through various stages in line with Planning and Development Legislation. It can be viewed at: - https://www.corkcity.ie/en/proposed-cork-city-development-plan-2022-2028/.

A draft Natura Impact Report was prepared in support of the Appropriate Assessment of the draft Development Plan; this assessed the Plan and its potential to adversely affect the integrity of European sites. The findings of the NIS were integrated into the Plan, ensuring that potential impacts were avoided, reduced, or offset. Thus, an AA determination was made by the Council that the Plan will not adversely affect the integrity of European sites due to the incorporation of mitigation measures into the Plan as a result of the AA process.

A search of Cork City Council Planning Applications has been undertaken for applications submitted within the last 5 years in the vicinity of the proposed development (last reviewed 29/05/2024). Some of the granted applications have already been completed and of those which are not completed, most are generally of small scale in nature (i.e., residential extension works, or property improvement works). Completed or granted applications of such small scale (such as residential improvements) have not been considered further in terms of potential for cumulative impacts.

2 no. projects are committed developments, which have not yet been built or are currently under construction. These developments have been further evaluated for the potential of cumulative impacts and are presented in Table 5.7. It is considered unlikely that the granted projects occurring within any sites surrounding the airport lands will act in combination with the proposed project to give rise to significant cumulative impacts on the receiving environment.

Given the nature, extent, and scale of the proposed project, it is not anticipated that it will act in-combination with the plans or projects outlined above, or other plans or projects, to give rise to cumulative impacts on European sites, including Great Island Channel SAC and / or Cork Harbour SPA.

[24] https://www.corkcity.ie/en/proposed-cork-city-development-plan-2022-2028/. Please note the 2022-2028 is currently at public consultation phase.

Table 6.3 - Committed Development in the vicinity of the proposed residential development.

Planning Ref	Decision Date	App. Name	Location	Description	Assessment
2140402	29/11/2021	Dalcassian construction Ltd. C/o William Bradley and co.	8&8A Ballinure Cottages, Mahon, Cork	Permission for (A) the part demolition, renovation, and extension of 1 No. existing single storey semi-detached dwelling, demolition of 2 No. existing commercial shed units & 1 No. external temporary storage unit with associated concrete base. (B) the construction of 13 new dwelling units made up of one 3 storey apartment block comprising 4 no 1 Bedroom Ground Floor Apartments & 4 no 2 bedroom Duplex units over first & second floors, each with their own private balcony/terrace, a terraced block of 3 x 2 bed two storey houses and a block of 2 x semi-detached 3 bed two-storey houses (C) Construction of revised existing vehicular entrance off Ballinure Cottages with on-site circulation roadway & associated Car Parking Areas, pedestrian footpaths, hard and soft landscaping and communal open space areas (D) Construction of a secure Bike store with roof and railing enclosure Bin Storage shed unit, proposed boundary walls and railings to main entrance with masonry walls to remaining boundaries, and all associated site works, drainage , attenuation and sit services.	This development is located north of the proposed site, <50m away. Works at this development are isolated from the proposed works site with no hydrological link between each site. Egress and access to the site is from Ballinure Cottages off Ballinure Avenue which will have no impact on works at St. Michael's Drive. Based on the location, scale and nature of this project, cumulative impacts associated with the proposed modular housing development on the receiving environment are unlikely.
2140052	18/12/2021	Lyonshall Limited	Villa Maria, and adjacent lands, Skehard Road, Cork	Permission for the demolition of an existing dwelling and associated shed and the construction of a mixed-use convenience retail, residential and café development and all ancillary site development works at "Villa Maria" and adjacent lands, Skehard Road, Cork. The proposed development will be provided in 2 no. 3 storey buildings and Block 1 will accommodate a discount food store which will include the sale of alcohol for consumption off the premises, ancillary staff welfare, warehouse area and 151m2 café at ground floor level, with 20 no. residential apartments at first and second floor levels. Block 2 consists of 8 no. apartments. Ancillary site development works will include surface car parking, ESB substation, external plant, bicycle parking, bin stores, signage, trolley bay, rooftop solar PV panels, site landscaping and shared amenity space. Access to the proposed development will be via a new vehicular entrance to Skehard Road.	This development is located >500m west of the proposed site. Based on the location, scale and nature of this project, cumulative impacts associated with the proposed residential development on the receiving environment are unlikely.

6.4 Likelihood of Significant Effects on Natura 2000 Sites

Due to the location, scale, and nature of the proposed project, it is considered that the proposed project, either alone or in combination with other plans or projects, will not result in likely significantly effects on Great Island Channel SAC or Cork Harbour SPA, or any other European site, in view of their conservation objectives.

6.5 Consideration of Findings

This Screening for Appropriate Assessment report is based on the best available scientific information. It is concluded by the authors of this report that, on the basis of objective information, the proposed project, individually or in-combination with other plants and projects, will not have likely significant effects on Great Island Channel SAC or Cork Harbour SPA in view of their conservation objectives. Thus, it is concluded that the proposed project does not need to proceed to Appropriate Assessment.

Should the scope, nature or extent of the proposed project change, a new Screening for Appropriate Assessment report shall be required.

7. Conclusions

This AA Screening Report has examined the details of the proposed Estuary Way Modular Housing at St. Michael's Drive, Mahon, Co. Cork, and the Natura 2000 sites in its Zone of Influence. It has analysed the potential impacts of the proposed development 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 development 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 recommended that Cork City Council, as the competent authority, may determine that Appropriate Assessment is not required in respect of the proposed development. Should any aspect of the design or construction methodology for the proposed development be materially changed, a new AA Screening Report would be required.

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