Facility Centre for Water Based Activities at Killiney Beach.

Screening for Appropriate Assessment (Final)

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Contract

This report describes work commissioned by Anne Murray of Dún Laoghaire Rathdown County Council, by an email dated 7th of March 2022. Mark Desmond and Michael Coyle of JBA Consulting carried out this work.

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Purpose

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Abbreviations

AA	Appropriate Assessment
AVDL	Annual Vegetation of Drift Lines
CFRAM	Catchment Flood Risk Assessment and Management
CIEEM	Chartered Institute of Ecology and Environmental Management
DLRCC	Dún Laoghaire Rathdown County Council
DoEHLG	Department of the Environment, Heritage and Local Government
EC	European Community
EPA	Environmental Protection Agency
EU	European Union
GSI	Geological Survey of Ireland
IAQM	Institute of Air Quality Management
INNS	Invasive Non Native Species
IROPI	Imperative Reasons of Over-riding Public Interest
LSE	Likely Significant Effect
NBDC	National Biodiversity Data Centre
NPWS	National Parks and Wildlife Services
OPW	Office of Public Works
OPR	Office of the Planning Regulator
RBMP	River Basin Management Plan
PVSB	Perennial vegetation on stony banks
QI	Qualifying Interest
SAC	Special Area of Conservation, protected under the EU Habitats Directive
SPA	Special Protection Area for birds, protected under the EU Habitats Directive
TTS	Temporary Threshold Shift
WFD	Water Framework Directive
WWTP	Waste Water Treatment Plan
ZoI	Zone of Influence

1 Introduction

1.1 Background

JBA Consulting Engineers and Scientists Ltd (hereafter JBA) has been commissioned by Dún Laoghaire Rathdown County Council (DLRCC) to undertake a Screening for Appropriate Assessment in relation to a proposed water-sports facility on the coastline of Killiney Beach.

Screening for Appropriate Assessment is intended to be an initial examination which must be carried out by the Planning Authority or An Bord Pleanála as the competent authority. However, this screening is completed on behalf of the project proposer to show that likely significant effects have been considered in the project development and design, and where necessary progress with further assessment.

1.2 Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 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 sites. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79 / 409 / EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"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."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and / or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The requirements of Articles 6(3) and 6(4) of the Habitats Directive have been transposed into Irish legislation by means of inter alia the European Communities (Birds and Natural Habitats) Regulations 2011-2015 (S.I. No. 477 / 2011) as amended.

1.3 Appropriate Assessment Process

Guidance on the Appropriate Assessment (AA) process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DEHLG) (2009, rev 2010). Office of the Planning

Regulator (OPR) produced a Practice Note in 2021, PN01 - Appropriate Assessment Screening for Development Management (OPR, 2021). These guidance documents identify a staged approach to conducting an AA, as shown Figure 1-1.

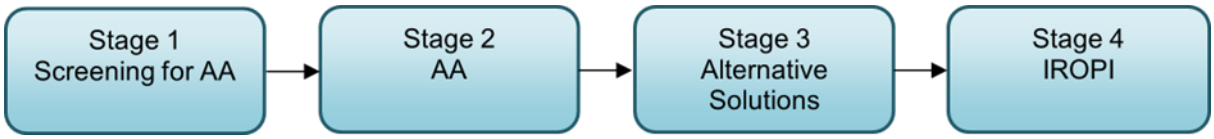


Figure 1-1 The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009)

1.3.1 Stage 1 – Screening for AA

The initial, screening stage of the Appropriate Assessment is to determine:

- whether the proposed plan or project is directly connected with or necessary for the management of the European designated site for nature conservation
- if it is likely to have a significant adverse effect on the European designated site, either individually or in combination with other plans or projects.

For those sites where, potential adverse effects are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse effect on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

1.3.2 Stage 2 – AA

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect effects of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

1.3.3 Stage 3 – Alternative Solutions

Where adverse effects on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse effects need to be considered. If none can be found, the process proceeds to Stage 4.

1.3.4 Stage 4 – IROPI

Where adverse effects of a plan or project on the integrity of Natura 2000 sites are identified and no alternative solutions exist, the plan will only be allowed to progress if imperative reasons of overriding public interest can be demonstrated. In this case compensatory measures will be required.

The process only proceeds through each of the four stages for certain plans or projects. For example, for a plan or project, not connected with management of a site, but where no likely significant effects are identified, the process stops at stage 1. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse effects on a site.

This report is in support of a Stage 1 Screening for Appropriate Assessment.

1.3.5 Recent judgements of the Court of Justice of the European Union (CJEU) and how they are used in this assessment.

The CJEU issued a ruling on the consideration of avoidance and reduction measures as a result of the case known as People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17). This judgement stated that measures intended to reduce or avoid effects on a Natura 2000 site should only be considered within the framework of an Appropriate Assessment, and it is not permissible to take into account such measures at the screening stage. In practice, this means that any activities that are not

integral to the project (i.e., the project could conceivably take place without them) and have the effect of avoiding or reducing an effect on a Natura 2000 site, cannot be considered at the screening stage.

The CJEU ruling in the case of Grace & Sweetman [2018] (C-164/17) clarified the difference between avoidance and reduction (mitigation) measures and compensation. Measures intended to compensate for the negative effects of a project cannot be taken into account in the assessment of the implications of a project, and instead are considered under Article 6(4). This means that any project where an effect on the integrity of a Natura 2000 site remains and can only be offset by compensation, would need to proceed under Article 6(4), demonstrating "imperative reasons of overriding public interest".

The judgements referred to as the Dutch Nitrogen cases [2018] (C-293/17 and C-294/17) have important implications for projects that could potentially affect sites that are exceeding critical thresholds for input of damaging ammonia (but could also reasonably apply where other nutrients are effecting Natura 2000 sites). The judgements state that the use of thresholds to exclude project effects is acceptable in principle, and that strategic plans can be used as mitigation but only with consideration of the certainty (or otherwise) of the outcomes of those strategic plans. It clarifies that where the status of a habitat type is already unfavourable the possibility of authorising activities which increase the problem is necessarily limited.

The CJEU ruling in the case of Holohan v An Bord Pleanala (C-462/17) also clarified the importance in Appropriate Assessment of taking into account habitat types and species outside the boundary of the Natura 2000 site where implications of the effects on those habitats and species may affect the conservation objectives of the Natura 2000 site. In this assessment functionally linked and supporting habitat for species outside of Natura 2000 sites are assessed where they could potentially affect the conservation objectives of any screened-in Natura 2000 sites.

The CJEU ruling in response to questions referred by the Irish High Court in the Eco Advocacy case (C-721/21) indicated that an applicant for permission in its AA screening report/ and a decision maker in undertaking its AA screening can take into account "standard features", i.e. all the constituent elements of that project inherent in it/ elements that are incorporated into a projects design not with the aim of reducing its negative effects (even where these have the effect of reducing harmful effects on a European site).

1.4 Methodology

The Screening for Appropriate Assessment has been prepared having regard to the Birds and Habitats Directives, the European Communities (Birds and Natural Habitats) Regulations 2011-15 as amended and relevant jurisprudence of the EU and Irish courts. The following documents have also been used to provide guidance for the assessment:

- DEHLG (2009 rev 2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DEHLG, 2010), and DEHLG /NPWS Circular letters.
- EC (2019) Managing Natura 2000 sites — The provisions of Article 6 of the Habitats Directive 92/43/EEC' (2019) Official Journal of the European Union 33, 1-62. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019XC0125(07)
- EC (2021) Commission notice Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC 2021/C 437/01' (2021) Official Journal of the European Union 437, 1-107. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC1028(02)
- Office of the Planning Regulator (2021) OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management (OPR, 2021).

1.4.1 Desktop Study

A desktop study was conducted of available published and unpublished information, along with a review of data available on the National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) web-based databases, to identify key habitats and species, including legally protected and species of conservation concern, that may be present within ecologically relevant distances from the project as explained below. A baseline habitat assessment was performed using satellite imagery of the site. The data sources below were consulted for the desktop study:

- Aerial photography available from www.osi.ie and Esri World Imagery.
- NPWS website (www.npws.ie) where Natura 2000 site synopses, data forms and conservation objectives were obtained along with Annex 1 habitat distribution data and status reports.
- River Basin Management Plans
- NBDC Biodiversity Maps (maps.biodiversityireland.ie)
- Catchments (www.catchments.ie)
- Environmental Protection Agency Maps (https://gis.epa.ie/EPAMaps)
- Geological Survey Ireland (GSI) (www.gsi.ie)
- GSI - Groundwater data viewer (https://dcenr.maps.arcgis.com)
- Planning Applications (myplan.ie)

1.4.2 Ecological Surveys

Ecological site surveys were performed by JBA Ecologist Mark Desmond and Principal Ecologist Patricia Byrne on the 14th of June 2023 with a follow up survey conducted on the 3rd of May 2024 by Ecologist Michael Coyle.

The ecological walkover survey recorded habitats and protected species, following the methods outlined in the documents below:

- Heritage Council (2011). *Best Practice Guidance for Habitat Survey and Mapping* (Smith et al. 2011).
- Fossitt, J. (2000). *A Guide to Habitats in Ireland*. The Heritage Council, Kilkenny (Fossitt 2000).
- *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* (NRA, 2009).

Aerial photographs and site maps assisted the survey. Habitats have been named and described following Fossitt (2000). Nomenclature for higher plants principally follows that given in *The New Flora of the British Isles 4th Edition* (Clive Stace 2019). Identification of Irish plants generally follows that given in Webb's *An Irish Flora* (Parnell and Curtis, 2012).

1.5 Screening Method

This screening assessment uses the source-pathway-receptor model as outlined in guidance (OPR 2021). Using the source-pathway-receptor model allows for the potential significant effects to be eliminated if no viable source, pathway, or receptor is present.

An examination of the construction methods or project description allows sources of effect to be determined. This also allows a Zone of Influence (ZoI) for the project to be generated based on the size, scale and nature of the works involved. The pathways for effect are also analysed to see if a functional pathway for effect is present. This report analyses three pathways: surface water, groundwater and land. Using information gathered from desk sources (e.g. mapped qualifying interests from the Conservation Objectives for the site) and from field surveys, receptors within the ZoI are identified. In some cases, sensitive receptors may also play a role in determining the ZoI. If any of the three parts to the model are not present (source-pathway-receptor) the potential for a likely significant effect from the project on the Natura 2000 network can be discounted.

1.5.1 Zone of Influence (ZoI)

The ZoI for the project is based on a professional judgement of the likely extent of the ecological impacts. This will vary for different ecological features, depending on their sensitivities to environmental change.

This means the final 'Zone of Influence' can be a complex shape not easily defined by a simple distance figure, but in this way the assessment includes all relevant sites whilst avoiding the unnecessary inclusion of other sites.

1.5.2 Likely Significant Effect Test

The test for AA screening is whether the project could have a 'Likely Significant Effect' (LSE) on any Natura 2000 site. A likely significant effect is defined as any effect that could undermine the conservation objectives of a Natura 2000 site, either alone or in combination with other plans or projects. There must be a causal connection between the project and the qualifying interest of the site which could result in possible significant effects on the site. The LSE test is a lower threshold for the screening assessment than 'adverse effect on site integrity' considered at Appropriate Assessment stage (Stage 2) as screening is intended to be a preliminary examination for potential effects.

The Zone of Influence was used to identify Natura 2000 sites that could be affected by the project. For each of these sites, the Qualifying Interest features were identified, and the possibility of LSE was determined by a combination of location, ecological and hydrological connectivity, sensitivity of receptor and magnitude of the source of effect.

1.5.3 In-Combination Screening

The possibility of in-combination effects are considered only at a high level. Where there is no effect at all via a pathway, there is no possibility of in-combination effects. Where an LSE is identified, the in-combination assessment is carried forwards to a Stage 2 Appropriate Assessment.

1.6 Limitations and Constraints

The screening assessment necessarily relies on some assumptions, and it was inevitably subject to some limitations. These would not affect the conclusion, but the following points are recorded to ensure the basis of the assessment is clear:

- This assessment is based on a desktop study, with adequate information available for the assessment.
- Adverse weather can cause delays to the schedule and alter the timing of works. This has been accounted for using a worst-case scenario where possible.
- This assessment is based on the methodology for proposed works as described in this report. Where changes to the methodology occur, an ecologist will need to be consulted to determine if the changes are likely to alter the ecological effects and would therefore need reassessment.
- Data from biological record centres or online databases is historical information, and datasets may be incomplete, inaccurate, or missing. The absence of records for an area may be due to the under recording in the area and not necessarily imply the absence of species. These records are therefore to be treated as the minimum information available for the area.
- Dedicated surveys for Tern species were not carried out for this project. This was due the known large expanse of tern foraging areas. It would require considerable expense to complete surveying from appropriate vantage points, including at sea, in order to gain a full knowledge of foraging areas used by the tern colony of Dalkey Islands SPA. This was considered not proportionate to the development scale of the project. As such, desk-based findings and online databases are the sources of information relied upon for these species/ groups.
- The completion of marine surveys for Common Porpoise within Killiney Bay was not carried out for this project. This was due to the considerable effort and expense required to complete such surveying at sea. This was considered not proportionate to the development scale of the project. However, desktop information was consulted under the precautionary principle that Harbour Porpoise frequent the bay.

2 Project Description

2.1 The 'Project'

The proposed development is not directly connected with or necessary to the management of any Natura 2000 site and may have potential adverse impacts upon the Natura 2000 sites identified in Section 4. Therefore, the proposed project is subject to the requirements of the AA process.

2.2 Site Location

The site is located on Killiney Beach next to the beach carpark adjacent to Strathmore Road (Figure 2-1. The site is a grassed area that sits on made ground, above the beach and is protected from the sea by gabion baskets.

The site has public transport links with the adjacent Killiney DART station. To the south of the site, there is pedestrian access via an existing footpath that extends northwards from the DART station. There is a surface pay-and-display car park and bathroom facility, operated by Dún Laoghaire-Rathdown County Council, at the DART station on Station Road. Pedestrian access from the northern end of the Killiney DART station carpark is under an arched bridge.

Within the site, there is an on-beach carpark, with access off Strathmore Road. This is free-to-use and will remain in operation during the works however is anticipated to experience a reduced capacity due to the presence of the contractor's compound during the construction phase. Vehicular, cyclist, and pedestrian access via Strathmore Road is under an existing overhead train line, via a height-restricted underpass. Just outside site boundary to the south, there is single open shower.

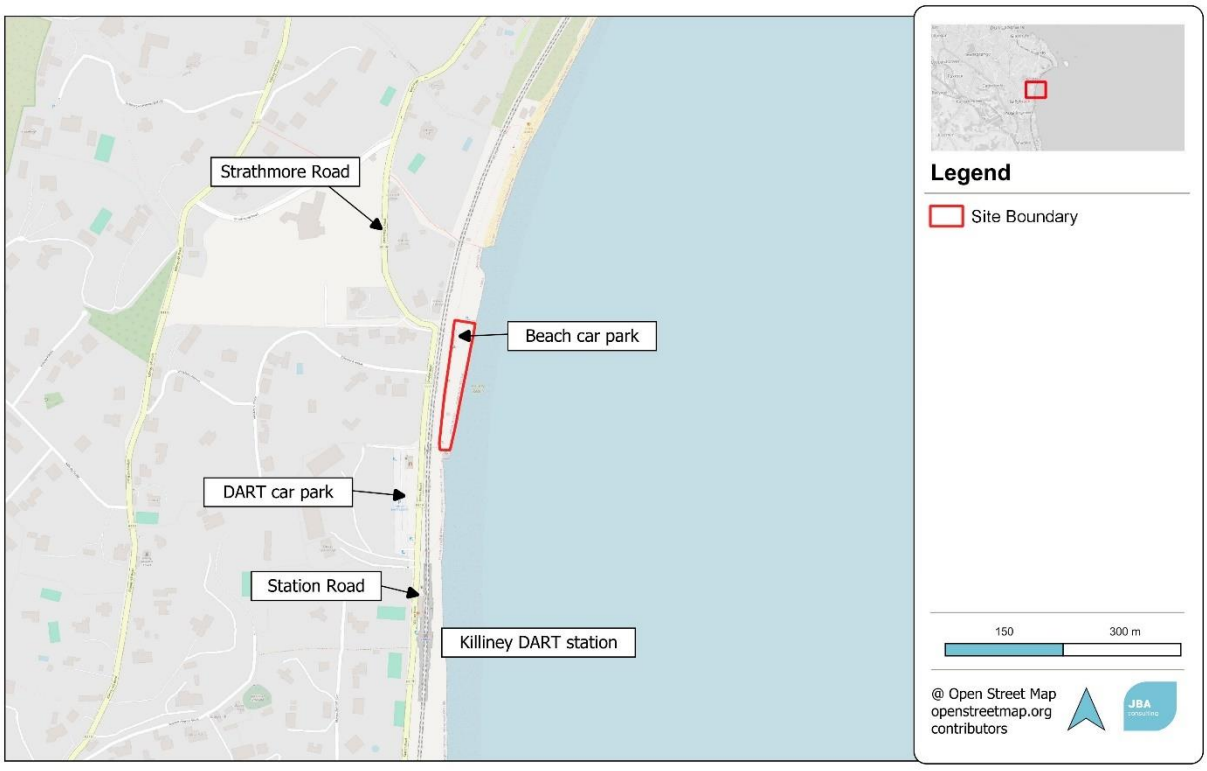


Figure 2-1: Site Location

2.3 Proposed Development

The proposed development consists of a single-storey, flat roofed building with associated site works and utility connections. The Facility Centre for Water Based Activities includes 1 no. Accessible Changing Places shower room with WC; 1 no. wheelchair Accessible WC with shower; 3 no. WCs; 5 no. shower/changing cubicles; 4 no. external showers; sheltered demonstration space; storage space; seating, lockers and a drinking fountain. Also included are associated plant / mechanical and electrical

spaces, solar panels, bicycle parking (with bicycle repair stand) and external paved terrace areas. All refuelling for machinery will occur outside of the site area, with all fuel also stored away from the site.

The lower sloping ground around the proposed development site is expected to allow the overtopping water to drain back to the sea.

A site strip will be implemented to create a working platform, while imported hardcore material will be utilised as a base for the works. The facility's foundations will extend below the frost zone and be approximately 0.5m - 0.75m below ground level, while drainage pipe trenches will range from 1.2m- 2m below ground level with variation depending on pipe falls and gradients.

Foundations will consist of the following:

- The proposed pile foundations will consist of a grid of driven steel cased mini-piles;
- These piles will be filled with in situ concrete;
- An in situ reinforced concrete raft foundation will be cast on top of the pile grid and span between individual support piles.

The proposed site ground floor plan is found in Figure 2-2, while a full site layout plan can be viewed in Appendix A.

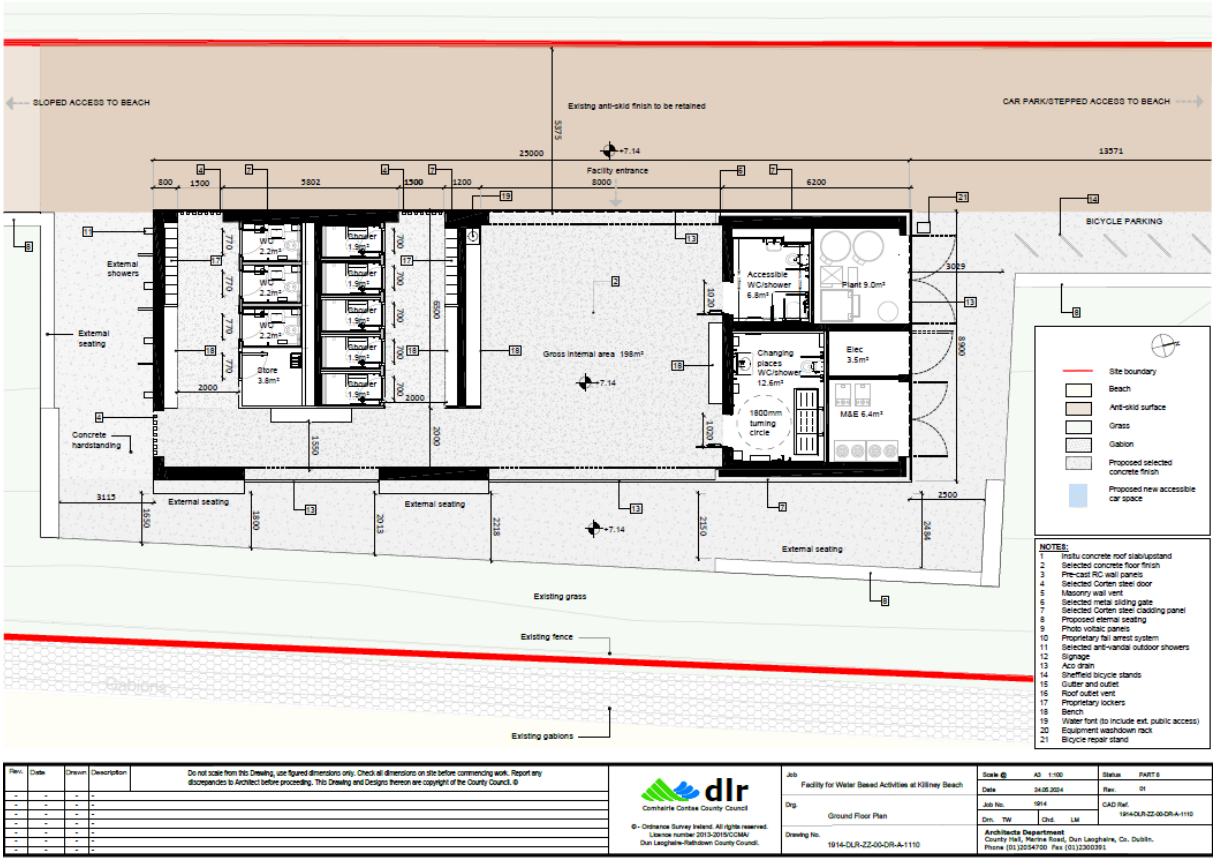


Figure 2-2: Ground floor layout plan (provided by client)

2.3.1 Construction Phase

2.3.1.1 Site Drainage

During the construction phase of the project, the facility will be connected to the existing drainage network as approved by DLR Drainage Department utilising the pumping station on the beach to the south of the site boundary and from there all wastewaters will be pumped to a treatment plant in Shankill.

A pre-connection enquiry was submitted to Uisce Éireann by GK Consulting Engineers on behalf of DLR. Uisce Éireann have advised as follows:

- A Water Connection for the development is feasible subject to upgrades. In order to connect the proposed Development, the Uisce Éireann network has to be extended for approximately 25m from the 160mm HPPE via the train underpass.
- A Wastewater connection for the development is Feasible without infrastructure upgrade by Uisce Éireann.

A non-return valve will be installed at the last manhole before the connection to the public network. In the event of a failure or blockage, this will prevent any surcharging from the public sewer from returning to the facility. This has also been approved by DLR Drainage Dept.

Site Drainage Plan is seen in Appendix B.

2.3.2 Traffic Management Plan

A detailed Traffic Management Plan will be developed in advance of any works taking place. Environmental impacts will be a key consideration of the Traffic Management Plan. Temporary Traffic Management Plans for the construction phase and associated method statements will be submitted to Roads Control as part of a road opening licence application and must comply with the requirements of Chapter 8 of the Traffic Signs Manual.

In assessing the licence application, Roads Control will consult with the DLR Beaches Department to ensure appropriate access arrangements are in place for beach goers during construction. Such details will be fully ascertained in conjunction with the appointed contractor.

The detailed design for the facility will involve consultation with the Beaches, Roads Control and Traffic teams to incorporate the permanent traffic management plan and ensure appropriateness of access and signage, and consistency with existing traffic management and signage arrangements within the area. It is not envisaged that the new facility will have significant implications or alterations to existing traffic management arrangements. All existing pedestrian, cyclist and vehicular access routes will remain unchanged whilst there will be some limited alterations to the beach carpark layout as part of this project.

The Traffic Management Plan will include details of temporary hoarding, compounds and signage to guide visitors through the site during construction. This will be addressed under a road opening licence application and assessed by the Roads Control, Traffic and Beaches section to ensure its appropriateness to the location.

2.3.3 Site Compounds

There will be two site compounds in use during the construction of the project. A primary compound which will be located within the car park for the DART approximately 50m west from the south-west tip of the site boundary, and a secondary compound located in the northern part of the site, in the existing car parking area.

The site will be accessed through either Strathmore Road or from the DART car park, both access routes going underneath the DART line.

Site compound locations for construction phase can be seen in Appendix C.

2.3.4 Duration of the Works

The envisaged timeframe of the project's construction is approximately 25 weeks.

2.3.5 Operation Phase

2.3.5.1 Site Drainage

During the operation phase of the project, the facility will continue to be connected to the existing drainage network and follow the guidelines outlined in the Greater Dublin Regional Code of Practice for Drainage Works, including the pumping station on the beach to the south of the site boundary, and from there all wastewaters will be pumped to a treatment plant in Shankill.

A pre-connection enquiry was submitted to Uisce Éireann by GK Consulting Engineers on behalf of DLR. Uisce Éireann have advised as follows:

- A water connection for the development is feasible subject to upgrades. In order to connect the proposed development, Uisce Éireann network has to be extended for approximately 25m from the 160mm HPPE via the train underpass.
- A wastewater connection for the development is feasible without an infrastructure upgrade by Uisce Éireann.

This confirms that there is adequate capacity in the existing pumping station to service the new development during the operational phase.

The non-return valve that will be installed during the construction phase will continue to be used during the operational phase such that, during operation, any surcharging from the public sewer from returning to the facility will be prevented by these valves.

The external showers will drain into the closed system via drainage outlets in the shower area. The base of the shower area will be set at a lower level with graded falls towards the outlets to ensure the grey water from the showers is directed into the closed system. The surface water run-off will be separated from the shower with the surface levels outside the shower area falling away from the showers.

As Corten Steel cladding tends to weather in maritime environments, a filter to intercept any particulate matter from external runoff with be included in the drainage system.

Additionally, facility management will discourage the use of soap/ shampoo at external showers by providing signage to that effect as has been provided in other external showers in the area.

2.3.6 Site Landscape Plan

The building has been designed to sit within the existing landscape and make use of the existing path. A new concrete external terrace will be provided around three sides of the building with a series of concrete bench seats providing a sense of enclosure. No new landscape planting is proposed as part of the development.

When constructed, the proposed development will be low in landscape and visual impact for surrounding visual receptors. The building is low with only one storey, and the proposed finishes will be in keeping with the rock and exposed materials along the cliffs in the area. A pebble roof finish to relate to the beach surface is proposed which will reduce visual impact of the roof, which will be visible from the railway line. A green roof will also be considered to further minimise visual impact of the roof.

These can also be seen in the Site Layout Plan which can be viewed in Appendix A

2.3.7 Traffic Management Plan

A small quantity of information and wayfinding signage will be provided when the facility is operational. The Beaches and Traffic Departments will be consulted to ensure consistency with existing signage and compliance with the relevant standards.

2.3.8 Visitation Rates during Operation Phase

A Pedestrian Survey undertaken by IDASO in 2021 shows the average number of weekly visitors to Killiney Beach in the summer months is 11,972. Visitor numbers are heavily weather dependent and on a peak week, the survey showed that visitor numbers increase to 32,305.

The overall objective of this scheme is the provision of permanent facilities to support the delivery of water sports activities which are all based on the internationally recognised VICE Model (Visitor, Industry, Community and Environment) for Sustainable Tourism Development (DoTCAGSM, 2019) and have full consideration for the UN Sustainable Development Goals.

The objective is not about greatly increasing visitor numbers, it is more focused on extending the tourism season into ‘off-peak’ times, supporting existing activity operators by providing enhanced facilities, improving the quality and accessibility of existing locations, making activity tourism more attractive and improving the overall visitor experience.

The proposed water sports facility has a specific sport function, taking small groups out on the water. In addition to providing an improved experience for existing visitors, it is anticipated that the facility will also attract some additional visitors for water sports activities. However, in the context of existing visitor numbers, it is not anticipated that the new facility will result in a significant overall uplift in visitors to Killiney beach.

There is zoning in place within the bathing area at Killiney Beach, prohibiting boats from entering these waters. As boats are not permitted to land at Killiney Beach, the new facilities will have no impact on the number of boats in Killiney Bay.

2.3.9 Future Proofing of the site with climate Change

The site is already located within an elevated area adjacent to the beach and fronted by gabion basket protection. As part of the most recent walkover surveys conducted under the Coastal Defence Strategy study review, the gabion baskets are noted as being in good condition. Given the high amenity value of the area within which the facility is to be located, the council will continue to monitor the area, with a view to ongoing and further protection as and when deemed necessary.

Within this in mind, given the good condition of the previously installed gabion baskets, there is nothing to suggest the area is immediately under threat and no climate change measures are anticipated.

2.3.10 Site lighting

No additional public lighting will be provided along the public path.

Low level lighting (in the order of 1 – 2 lux / 4 – 5 Watts; lighting design to be developed at the detailed design stage) will be provided inside the building. Light fittings will be recessed downlights to minimise light spill to surrounding areas.

Lighting design will be in line with environmental best practice whilst meeting legal obligations around Health and Safety.

2.4 Marine Protection

As outlined within Objective GLB7 of the DLR Development Plan (DLRCC, 2022a), Dun Laoghaire Council supports the policies and objectives appropriate and relevant to the National Marine Planning Framework respective of the conservation, management and protection for a sustainable future for the marine area. This in turn is related to the quality of the waters of Killiney Bay in regard to the varied importance and diversity of habitats along the coast. In specific regard to ecology and upholding the fdrain it sets out to maintain biological diversity in line with the quality and occurrence of habitats and distribution of species.

Killiney Bay is also a Blue Flag bathing area. Under the Bathing Water regulations 2008, the Water Framework Directive, and the Marine Strategy Framework Directive, the bay will be protected from any contaminants and pollutants that will reduce the overall environmental and ecological status of the water.

As part of the council's development plan National Marine Planning Framework, and the Directives and Regulations relevant to the protection of coastal waters, the project will inherently be constructed and operated in a way that will prevent the deterioration of the waters of Killiney Bay.

This will include the location of the compounds, the management of machinery to prevent accidental pollutant spillage, the storage of both equipment and materials, the integration of the project with local drainage systems, and the prevention of runoff during rainfall or waver overtopping from entering the local waters.

2.5 Site Selection

In response to a call from Fáilte Ireland, Dún Laoghaire-Rathdown County Council submitted an Expression of Interest in the Fáilte Ireland Platforms for Growth 2 scheme.

In September 2020, an Ecological Opportunities / Constraints Assessment was completed by CAAS Ltd on behalf of Fáilte Ireland. Sites in both Dún Laoghaire Harbour and Killiney Beach were assessed using the Phase 1 – Site Selection Matrix. Both locations were screened as having no obvious ecological constraints.

Of the two sites, the site at Killiney Beach was deemed more favourable, following a desktop assessment and a series of site walks. The objective was to pinpoint a beachside location that was in a place with good public footfall to provide passive surveillance for the Facility Centre. Killiney Beach is exceptionally well-served by public electrical sustainable transport with Killiney DART station nearby. There are also two public surface car parks at Killiney Beach.

Between the DART line and the beach, lies an elevated area of made ground above the beach and protected from the sea by gabion baskets. This is the primary arrival point for visitors to the beach from the car parks and the location of the Lifeguard's Hut. This location was identified as having potential as it would involve building on existing made ground and not directly onto the beach.

Option 1 – Area to the North of Killiney Beach Parking off Strathmore Road

This site was found to be in relatively close proximity to an EU Annex I Habitat to the north increasing the risk of environmental impacts. It lacked services infrastructure and universal accessibility and therefore substantial services upgrades and associated interventions on the site would be required. It was also challenging to accommodate the required facilities in an appropriate manner and a small quantity of trees and shrubs would likely have to be cleared to facilitate construction. Due to the distance from the existing ramped access to the beach a new ramp to the beach would likely have been required increasing the level of intervention in the area.

Option 2 – Area to the South of Killiney Beach Parking off Strathmore Road

The central area of the made ground between the two car parks and Adjacent to the Lifeguards Hut is well served by the existing pedestrian path and ramped access to the beach negating the need for a new ramp to be constructed. The site is more remote from the EU Annex I Habitat to the north so would reduce any potential environmental impacts here. The site is protected by gabion baskets and can connect to the existing drainage network without the need to install an additional pump. The facilities can be accommodated in a sympathetic rectilinear structure between the existing path and the beach.

Conclusion

Site Option 2 makes better use of the existing visitor activity, site features, services on the site and is further removed from sensitive EU Annex I Habitats.

2.6 Project Zone of Influence (ZoI)

The ZoI for the project is based on a judgement of the likely extent of the ecological impacts. This will vary for different ecological features, depending on their sensitivities to environmental change. The Zone of Influence for this project has been assessed based on the Source-Pathway-Receptor model following the most recent OPR practice note (OPR, 2021);

- OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management

As the scale of proposed works are considered of 'Project' status, Natura 2000 sites within a 5km range of the proposed scheme were examined in relation to surface water and groundwater/ ground-to-surface water pathways (i.e., local surface water sub-catchments and groundwater bodies/ aquifers), with an extended 15km range for those with a downstream hydrological connection and 10km for groundwater connections.

In respect to ZoI for air pollution (emissions and dust), Natura 2000 sites within a 250m buffer zone of the scheme were considered as per the Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction (IAQM, 2024), including ex-situ foraging habitats utilised by Qualifying Interest (QI) species associated with local Natura 2000 sites. Furthermore, a 300m disturbance buffer from boundaries of the proposed scheme has been incorporated into the ZoI in order to account for QI species potentially foraging within *ex-situ* habitats.

3 Existing Environment

3.1 Baseline conditions

Ecological surveys of the study area were conducted by JBA Ecologist Mark Desmond and Patricia Byrne on the 14th of June 2023, with a follow-up survey conducted on the 3rd of May 2024.

3.2 Habitats

The habitats recorded on site are listed in Table 3-1 and shown in Figure 3-1 and Appendix C along with Invasive Non-Native Species (INNS) recorded during the ecological walkover survey.

Table 3-1: List of habitats recorded on site.

Habitat	Fossitt Code	Corresponding Annex I habitat
Buildings and artificial surfaces	BL3	-
Shingle and gravel banks	CB1	*Perennial vegetation on stony banks* [1220] (PVSB)
Amenity grassland (improved)	GA2	-
Shingle and gravel shores	LS1	*Annual vegetation of drift lines* [1210] (AVDL)
Treelines	WL2	-
Scrub	WS1	*Perennial vegetation on stony banks* [1220]
Sea inlets and bays	MW2	

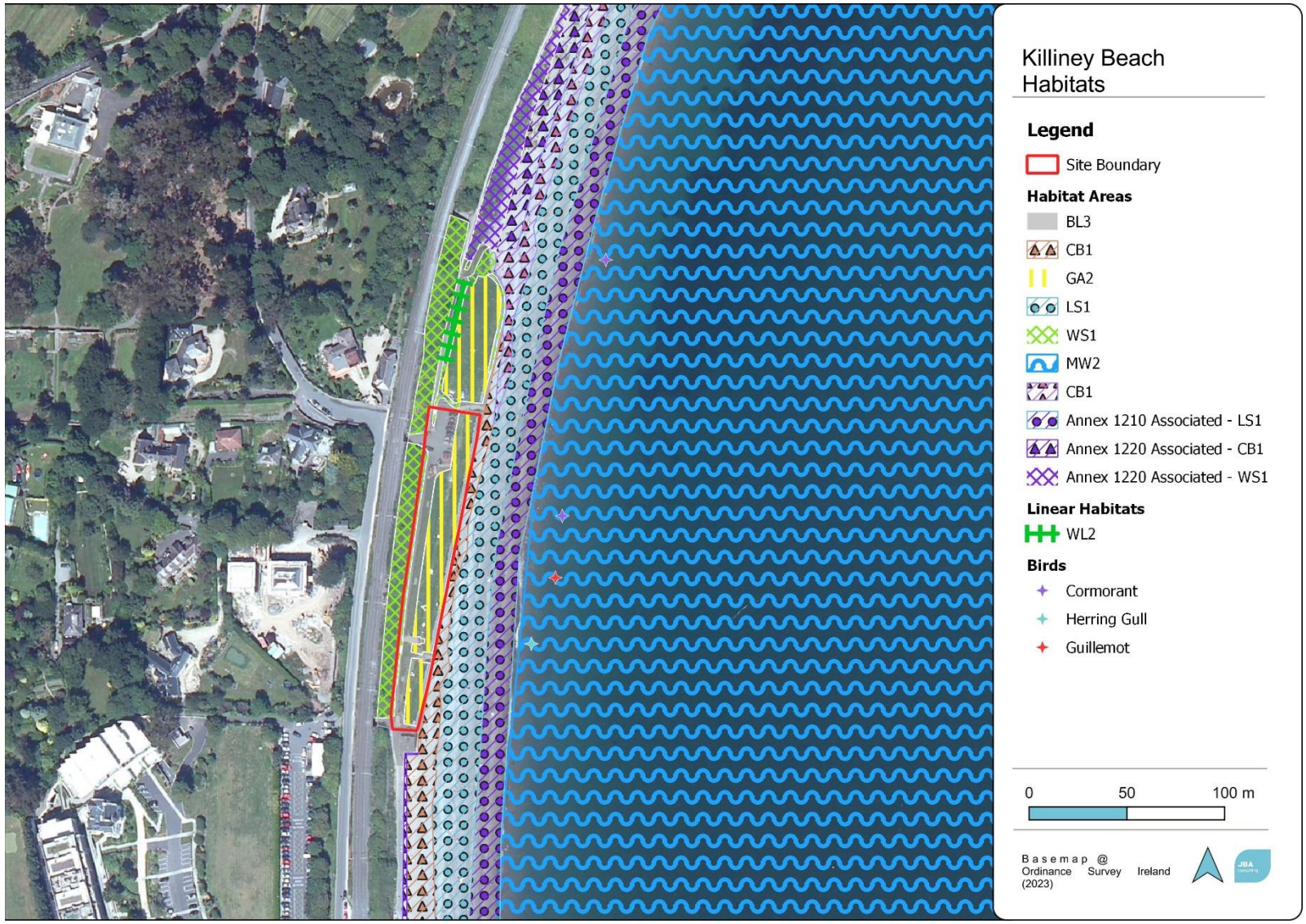


Figure 3-1: Habitat map of site area

3.2.1 Buildings and artificial surfaces - BL3

Buildings and artificial surfaces include the small buildings, paths, roads and gabion wall present within and adjacent to the site. There were no species recorded within these sections.

3.2.2 Shingle and gravel banks - CB1

Higher sections of the shingle shore have developed into shingle and gravel banks, as found along the base of the gabion wall (Figure 3-2).

Sections of this habitat to the north of the development area have developed a vegetative community containing Lyme Grass *Leymus arenarius*; Sea Beet *Beta vulgaris* ssp*. Maritima*; Wild Radish *Raphanus raphanistrum;* Sea Sandwort *Honckenya peploides*; Babington's Orache *Atriplex glabriuscula;* Ribwort Plantain *Plantago lanceolata;* Dandelion *Taraxacum* spp. as well as White Mustard *Sinapis alba*. This vegetated area is potentially linked with the Annex I habitat *Perennial vegetation of stony banks* [1220].

While this habitat is associated with the Annex I habitat [1220], this is an association and not a confirmed classification. Annex I habitat [1220] is also not associated with any of the Natura 2000 sites within the ZoI of the project. For these reasons, it will not be considered further within this report, however it will be expanded upon in the accompanied Ecological Impact Assessment for this project.

Figure 3-2: Shingle banks (CB1) developing above the high tide line along the base of the gabion baskets

Figure 3-3: Vegetative CB1 community developing along the shingle bank above the high tide line

3.2.3 Shingle and gravel shore - LS1

The shingle and gravel banks grade into this shingle shore habitat which goes down to the coastal waters. Sea Sandwort is found on the upper limits of the shore, however the majority of the beach in this section is made up of shingle (Figure 3-4).

This habitat is potentially linked with the Annex I habitat *Annual vegetation of drift lines* [1210].

While this habitat is associated with the Annex I habitat [1210], this is an association and not a confirmed classification. While the Annex I habitat [1210] is a QI of the South Dublin Bay SAC Natura 2000 site, this site exists a considerable distance from the SAC's boundary (approximately 4.9km) to be contributing to the Natura 2000 site's scope. For these reasons, it will not be considered further within this report, however, given its ecological importance, it will be expanded upon in the accompanied Ecological Impact Assessment for this project.

Figure 3-4: Shingle and gravel shore (LS1) found below (east of) the site

3.2.4 Shallow inlets and bays (MW2)

Killiney Bay stretches between Sorrento Point to the north to Bray Head to the south. The bay is approximately 5k wide. The bay is generally sheltered from south west winds.

3.2.5 Amenity grassland (improved) (GA2)

The majority of the site area is made up of amenity grassland (Figure 3-5), with all proposed structural work being built on this habitat. Species recorded include Perennial Ryegrass *Lolium perenne*; White Clover *Trifolium repens*; Creeping Buttercup *Ranunculus repens*; Dandelion *Taraxacum* sp.; Daisy *Bellis perennis* and Yarrow *Achillea millefolium.*

Figure 3-5: Amenity grassland (GA2) and proposed location for water sports facility next to path (BL3)

3.2.6 Treeline (WL2)

A low-quality treeline comprised of Sycamore *Acer pseudoplatanus* is found along the boundary of the path and amenity grassland (GA2) to the north of the site boundary (Figure 3-6). The trees have a light growth of Common Ivy *Hedera helix* growth which does not offer any roosting potential for bats. Bramble *Rubus fructicosus* agg. was present within the area. None of the trees supported bird nests. The understory of the trees contained species such as Common Hogweed *Heracleum sphondylium*; Cleavers *Galium aparine*; Broadleaf Dock *Rumex obtusifolius*; Nettle *Urtica dioica*; Yarrow and Charlock *Sinapis arvensis*. The Invasive Non-native Species (INNS) Three Cornered Garlic *Allium triquetrum* was prevalent within and adjacent to the treeline.

Figure 3-6: Treeline (WL2) present on site

3.2.7 Scrub (WS1)

Scrub of varying quality is found at different locations in and adjacent to the site area. The railway embankment which runs parallel to the site boundary is dominated with scrub and has a high occurrence of Bramble (Figure 3-7). Where Bramble did not dominate, other species including Sycamore and Ash *Fraxinus excelsior* saplings; Hedge Bindweed *Calystegia sepium*; Lady's Bedstraw *Galium verum*; Red Valerian *Centranthus ruber* (often white in colour in this section); Horsetails *Equisetum* spp.; Creeping Thistle *Cirsium arvense*; Knapweed *Centaurea nigra*; Ribwort Plantain and Mallow *Malva sylvestris*.

A mounded section of scrub can be found north of the site area (Figure 3-8), and extending further north (3-9) where the INNS Three Cornered Garlic and Butterfly Bush *Buddleja davidii* can be found along with Charlock; dense Bramble, White Ramping-fumitory *Fumaria capreolata* subsp. *Babingtonii;* Creeping Thistle; Ox-eye Daisy; Yarrow; Wild Radish; Sea Beet and Dock spp. This section of the scrub is associated with the Annex 1 Habitat *Perennial vegetation of stony banks* [1220].

Charlock and Bramble is also found along the gabion wall.

Figure 3-7: Scrub (WS1) habitat. Left - scrub on railway embankment adjacent to the site.

Figure 3-8: Scrub on mound North of site area

Figure 3-9: Scrub extending along the shingle bank extending north from the site

3.3 Invasive Non-native Species

Two invasive non-native species were recorded within the site area, these species include Three Cornered Garlic and Butterfly Bush. Three cornered Garlic is listed on the Third Schedule of the EC (Birds and Natural Habitats) Regulations 2011 S.I. No. 477/201 and is a High Impact species. Butterfly Bush is considered Medium Impact species.

3.4 Desktop

3.4.1 Offshore Reefs

Reefs [1170] are a protected Annex I habitat and Qualifying Interest (QI) of the nearby Rockabill to Dalkey Island SAC (Figure 3-10 below). A comprehensive survey of the reefs within the vicinity of Killiney Bay was completed by MERC consultants in 2022 (MERC, 2022) on behalf of DLRCC. These reefs included littoral (intertidal) reef habitats and sublittoral (subtidal) reef habitats.

Littoral reef habitats include all areas of geogenic rock (bedrock, boulders and cobbles) which occur in the intertidal zone (the area of the shore between high and low tides) as well as the marine communities, and their associated species, that colonise this area are adapted to withstand a range of physical processes, not least the diurnal flooding and ebbing tides.

The sublittoral reef habitat is generally divided into two categories, infralittoral and circalittoral. The infralittoral reef habitat is the area in the shallow subtidal zone and typically supports seaweed communities. As depth increases, and light levels drop further the circalittoral zone commences. This zone is characterised by animal dominated communities, as opposed to the algae dominated communities of the infralittoral zone.

Littoral and sublittoral reefs within Killiney Bay are mapped below in relation to the proposed site location. A sublittoral reef is present approximately 300m off the coast of the proposed sports facility. Littoral (intertidal) and sublittoral reef communities are also present approximately 900m north-east of the site (Figure 3-10) at Dalkey Island. The sublittoral reef is mainly made up of two biotopes, 1) Sediment-affected or disturbed kelp and seaweed communities and 2) Echinoderms and crustose communities (MERC Consultants, 2022).

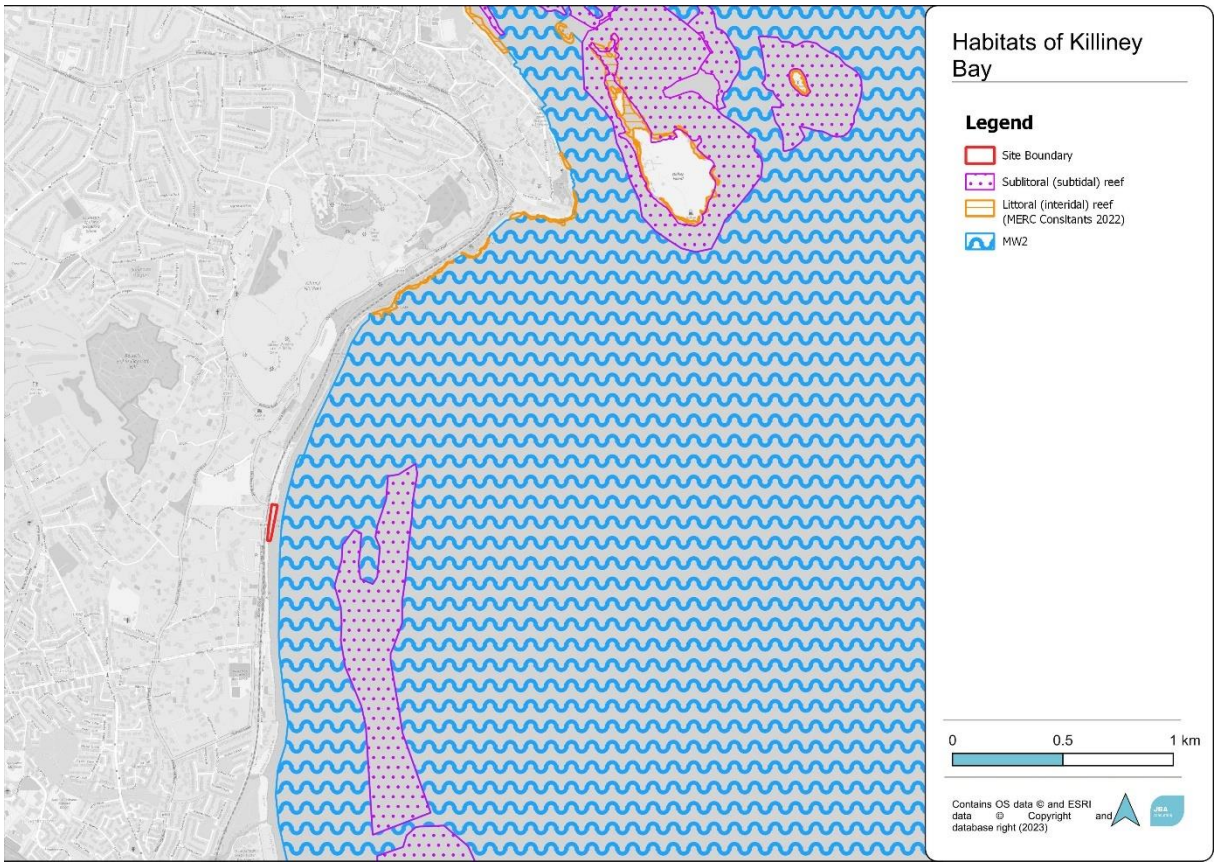


Figure 3-10: Map of reef habitat in Killiney Bay in relation to proposed site area (MERC Consultants, 2022)

3.4.2 QI species Common Porpoise

The completion of marine surveys for Common Porpoise within Killiney Bay was not carried out for this project. This was due to the considerable effort and expense required to complete such surveying at sea. This was considered not proportionate to the development scale of the project. However, desktop information was consulted under the precautionary principle that Harbour Porpoise frequent the bay.

Berrow et al. (2021) conducted a series of surveys to estimate the local density and abundance of Harbour Porpoise to map their distribution throughout the Rockabll to Dalkey Island SAC.

While this species was not recorded during the JBA site visits, it is presumed that Harbour Porpoise is present within Killiney Bay. While the Berrow et al. (202) reporting of Harbour Porpoise stops south of Dalkey Islands, it is presumed that this is due to surveying restrictions (Figure 3-11).

Figure 3-11: Recorded Porpoise sightings during surveying in 2021 (Berrow et al., 2021)

3.4.3 QI Tern Species of Dalkey Islands SPA (Arctic Tern Sterna paradisaea, Common Tern Sterna hirundo and Roseate Tern Sterna dougallii)

Dedicated surveys for Tern species foraging within Killiney Bay were not carried out for this project. This was due to the considerable man power required to complete surveying from the appropriate vantage points in order to gain a full knowledge of foraging areas used by the Terns of Dalkey Islands, which was considered to be outside the scope of requirements for the project given its overall low size and low potential impact on the status of these species. However, desktop information was consulted for this project under the precautionary principle that tern species frequent Killiney Bay.

Research on Irish tern populations has indicated the following foraging ranges:

- Common Tern: can forage up to 30km (NPWS, 2023); mean 8.8km (Birdlife International, 2014
- Arctic Tern can forage up to 46km, with a mean of 6km, and mean of maximum distances at 26km (NPWS, 2023)
- Roseate Tern; at Rockabill, Ireland, during chick rearing, birds were recoded as feeding within 10 km of the colony in offshore, in relatively deep water (20 - 30 m), but during incubation and post-fledging they appeared to be travelling tens of kilometres to feed over sandbanks to the south (Newton and Crowe 2000).

Nesting terns (QI: Arctic Tern, Common Tern and Roseate Tern) have been identified within the Dalkey Islands SPA, with 45 Arctic Tern nests recorded within the 2023 update of the Dalkey Tern Project (Birdwatch Ireland, 2023). Arctic Terns are the most common tern on the island. Nesting terns on the islands have been under pressure from predation by Brown Rat and gulls over the years. In 2023 there were 45 breed pairs of Arctic Tern but no chicks due to rat predation. This is being addressed and monitored by a joint project by DLRCC and Birdwatch Ireland. A rodenticide treatment programme was managed DLRCC over the winter of 2023-24. Storms and rising sea levels are another risk to the ground nesting birds.

The extent of tern foraging that nest in Dublin Port also unknown, though those terns are thought to forage in the wider area of Dublin Bay, but also extend out to feed in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008.). In particular they are attracted to the high numbers of clupeids in their breeding grounds to the north of Dublin Bay and to a lesser extent sandeels (Ammodytidae)

which, even though the larvae are carried by the prevailing currents, also correlates with areas with the highest populations of these species (Green, 2017). Clupeids, including Sprat *Sprattus sprattus*, have a higher calorific value per gram than Sandeels and they are found in shallow waters, typically 10 to 150m deep and, as with Sandeels, are pelagic breeders, allowing their larvae to be spread by the currents. In the Irish Sea the abundance of these animals is reflected in the high component they are in the diet of seabirds, including terns; their tendency to migrate diurnally within the water column being nearer the surface at crepuscular times means they are most accessible to feeding seabirds at sunrise and sunset(Green, 2017). It is reported that Sprat are a larger component of the diet of Terns than Herring *Clupea harengus,* however, this is complicated by the fact that the juveniles of both species are very similar in appearance an often occur in mixed shoals (ICES, 2013). Herring are also pelagic breeders and, as with Sprat and Sandeels, the highest populations of this species occur in their breeding grounds (Green, 2017),

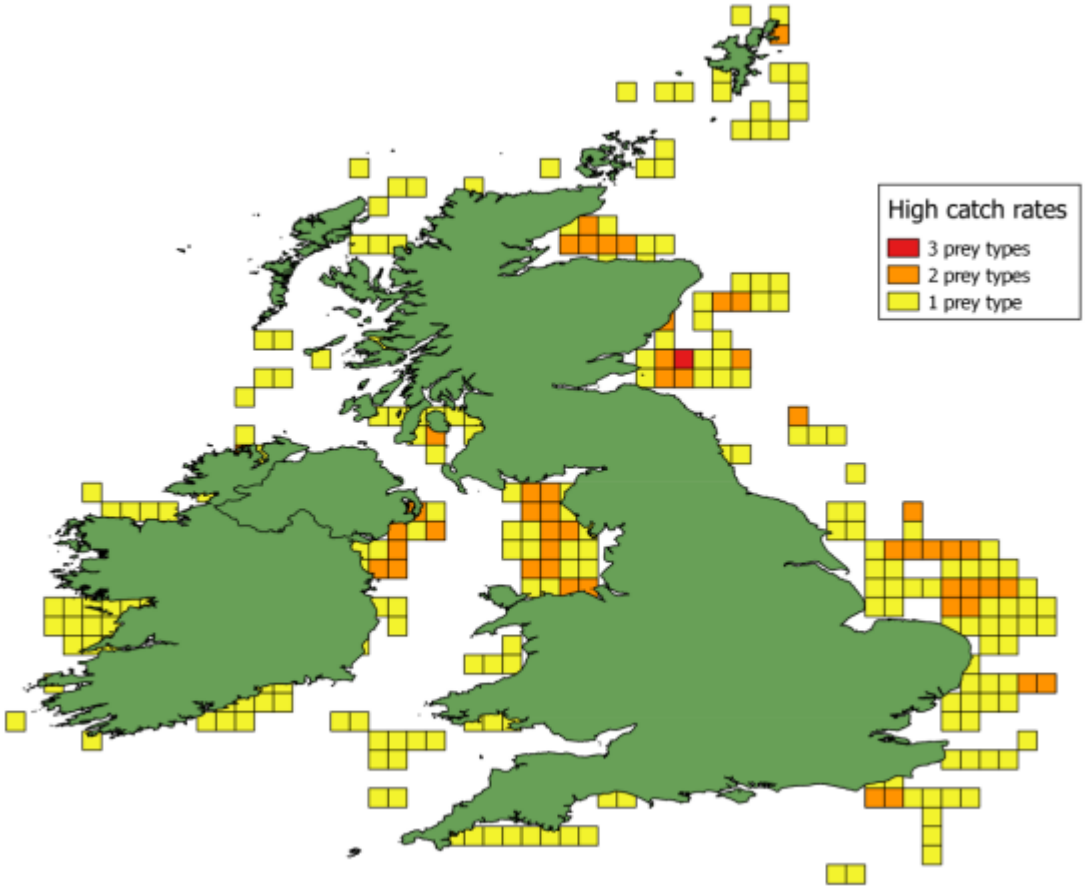


Figure 3-12 . Prey hotspots map showing approximate areas with high catch rates of three major prey types for terns (sandeels, sprat and juvenile herring). Red = high catches of 3 prey types; orange = high catches of 2 prey types; yellow = high catches of 1 prey type (Green, 2017)

Figure 3-12 shows that the area North of Dublin Bay is a prey hotspot for two of the major prey types for terns, which are the feeding grounds for terns, including those from the colonies at Dalkey Island. Further circumstantial evidence for this can be gleaned from Tierney et. al. (2016) who looked at the roosting behaviour of post-breeding terns in the South Dublin Bay area where it was thought that terns from Dalkey Island, along with others, roosted at Sandymount Bay. This survey showed that there was a large throughput of terns at this site, including birds form the UK, Norway and the Netherlands, as well as local birds, and that these foreign breeders were more numerous towards the end of the breeding season. As many of these birds only spent a night on the strand, before moving on, it can be assumed that many of these were on migration and had been feeding en-route before roosting for the night. Further evidence for this is that the peak numbers of birds were observed just before it became too dark and there was no reason to suppose that number tailed-off after this and that the numbers that

were recorded should be considered a minima for the survey (Tierney et. al., 2016). This strongly suggests that the terns were feeding on Sprat before they returned to the depths after sunset after which the terns went to roost at Sandymount Strand.

Nonetheless, given the evidence that the tern populations from Dalkey Island feed to the north of Dublin Bay, this is the possibility that some do feed to the south of the island in the Killiney Bay area. Therefore, invoking the precautionary principle we assume that tern species do frequent Killiney Bay.

Dalkey Island, as well as providing nesting sites, is also used by the three tern species as a major post-breeding/pre-migration autumn roost area. The site, as stated above, is also linked to the important roost and post-breeding/pre-migration autumn tern area in Dublin Bay. Birds are present from about late-July to September (NPWS, 2015a).

The NBDC list of birds found within an initial 2km of the proposed site showed no records for any of the three species of tern, while Arctic Tern and Common Tern are present within an extended 5km radius (NBDC, 2023).

Irish Birding records (Irish Birding, 2024) for Common Tern and Arctic Tern species within the area of Dalkey Islands for the last 10yrs frequently vary between sightings in the 50-100 range, while Roseate Tern sightings have been much lower, usually present below 10 counts, however there is no record within the Irish Birding site of these Tern species as being located within Killiney Bay. However, both NBDC and Irish Birding sightings may demonstrate underreporting.

The South Dublin Coastline site within the I-Webs survey locations, of which Killiney Bay is included, does not have any Arctic Tern, Common Tern or Roseate Tern listed within its recordings of 2011 - 2021 (I-Webs, 2024a). However I-WeBS surveys generally monitor wintering waterbird populations (September to March), with September being the earliest month surveys were carried out.

Larger numbers of both Common Tern and Arctic Tern also breed in Dublin Docks, on a man-made mooring structure known as the E.S.B. dolphin – this is included within the South Dublin Bay and River Tolka Estuary SPA. South Dublin Bay is also an important staging/passage site for a number of tern species in the autumn (mostly late July to September). The origin of many of the birds is likely to be the Dublin breeding sites (Rockabill and the Dublin Docks) though numbers suggest that the site is also used by birds from other sites, perhaps outside the state. This site is selected for designation for its autumn tern populations (NPWS, 2015b).

Autumn sightings of Arctic Tern, Common Tern and Roseate Tern have been recorded within the Dublin Bay winter I-Webs survey area (I-Webs, 2024b), with variable survey numbers for Common Tern between 102 and two between the survey years of 2018 and 2021, with peak month in September. During those years, there were no Arctic Tern recorded, and in the past 12yrs of the site's accessible data, there is only one Arctic Tern recorded within Dublin Bay, in October 2011. However specific monitoring of post-breeding autumn tern aggregations in Ireland show that Dublin Bay is a very significant staging post for tern in autumn (Burke et al, 2020).

These findings confirm that tern species nest and roost on Dalkey Islands, as well in Dublin port and south Dublin Bay area to the north. Although the records are poor for tern using Killiney Bay, this does not exclude the potential for their foraging within the bay area. As such, these species will be considered further within the AA Screening.

3.5 Waterbodies within the Vicinity of the Proposed Site

The proposed site lies within the Water Framework Directive (WFD) Avoca-Vartry catchment, and within the Dargle_SC_010 sub-catchment (EPA, 2022). The site is within the Deansgrange (Kill of the Grange Stream_010) subbasin, and both the Shanganagh River (Shanganagh_010) and Carrickmines Stream (Carrickmines_Stream_010) are both in close proximity to the Deansgrange Stream, however the surface water within the site area is unlikely to drain towards any of these waterbodies and is likely drains into the local surface water drainage system, directly to ground water and/or onto the beach where it enters Killiney Bay (Figure 3-13). The coastal water body of Killiney Bay is referred to as the 'Southwestern Irish Sea - Killiney Bay (HA10)' waterbody which borders the Irish Sea Dublin (HA 09) waterbody approximately 1.2km north of the site.

Table 3-2: The WFD waterbodies within the ZoI of the development

WFD Waterbody	WFD Status	WDF Risk
Deansgrange Stream (Kill of the Grange Stream_010)	Poor	At Risk
Carrickmines Stream (Carrickmines_Stream_010)	Good	Not At Risk
Shanganagh River (Shanganagh_010)	Good	Not At Risk
Southwestern Irish Sea - Killiney Bay (HA10)	High	n/a
Irish Sea Dublin (HA 09)	Good	n/a

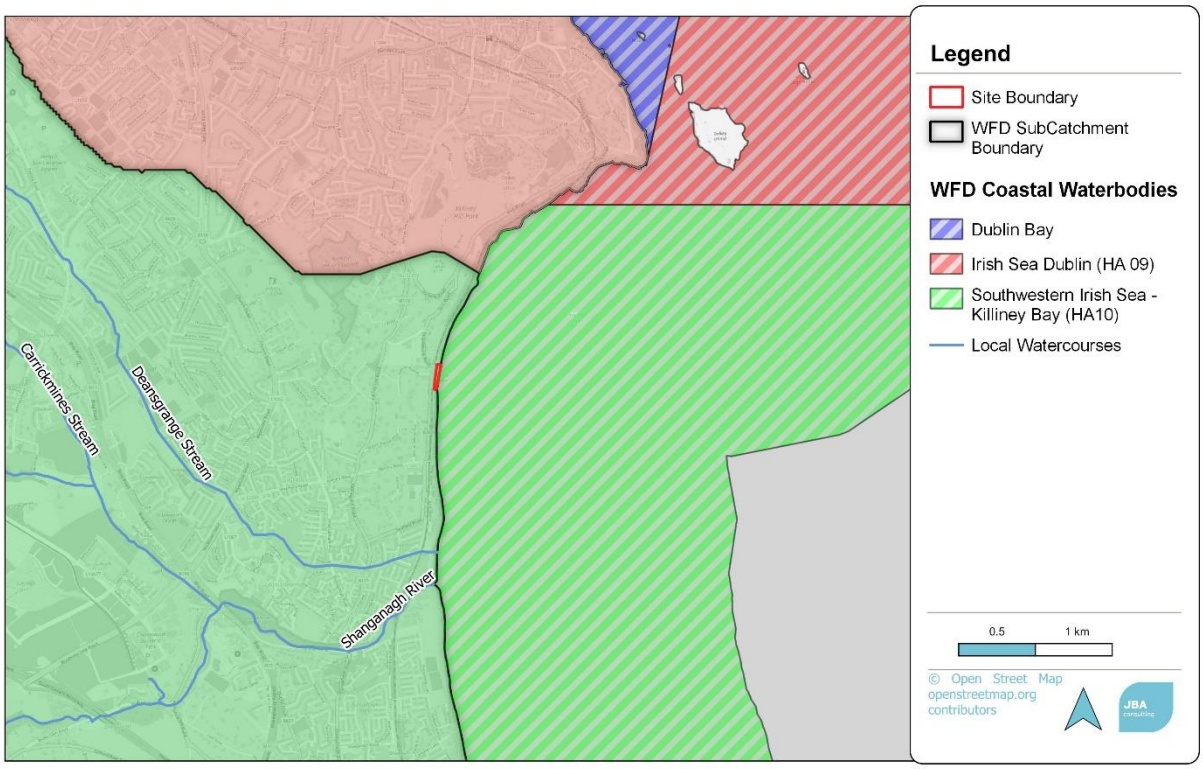


Figure 3-13: Waterbodies within the vicinity of the proposed site (OSM, 2023)

Blue Flag Beach

Killiney Beach was awarded Blue Flag Status for 2024. To qualify, beaches must adhere to the following criteria.

1. Water Quality: Excellent water quality, with regular testing for pollutants and contaminants.
2. Environmental Education: Information about the local ecosystem, environmental initiatives, and awareness programs.
3. Environmental Management: Cleanliness, waste management facilities, and responsible land use to preserve the natural habitat.
4. Safety and Services: Availability of lifeguards, first aid, appropriate facilities, and safety measures to ensure visitor well-being.

3.6 Groundwater

The site is found within the Kilcullen (IE_EA_G_003) groundwater body, however the site is also in close proximity to the Wicklow (IE_EA_G_076) groundwater body (Figure 3-14). WFD status and current risk of these groundwater bodies are listed in Table 3-3 (EPA 2023).

Table 3-3: WFD Groundwater bodies Risks and Status in the vicinity of the site

WFD Ground waterbody	WFD Status	WDF Risk
Kilcullen	Good	At Risk
Wicklow	Good	Under Review

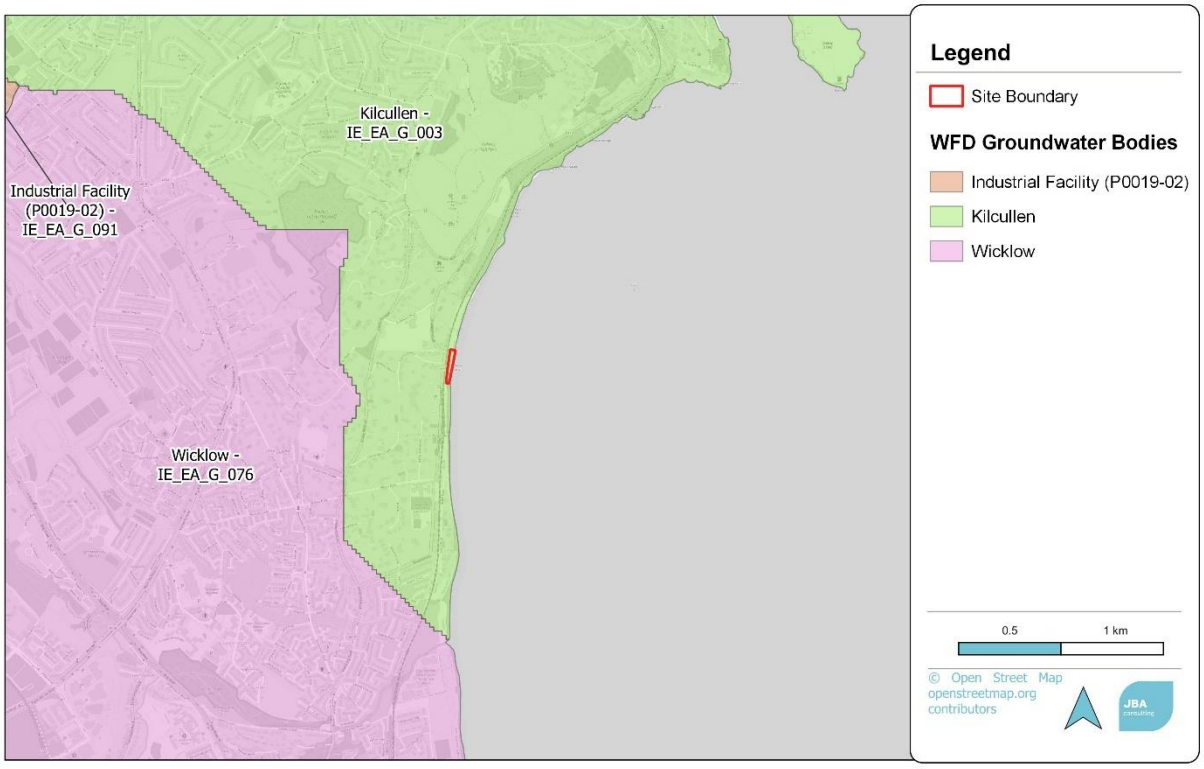


Figure 3-14: Groundwater bodies within the vicinity of the site

The subsoil in this area consists mainly of beach sands and gravels which are derived from granite, overlayed with a mixture of made ground and well-draining soils. The underlying aquifer is considered Locally Important (LI) with a granite bedrock that is moderately productive only in local zones. This aquifer has poor connections, low permeability, with discharge restricted to a few hundreds of metres and general restricted groundwater discharge to streams, and /or local waterbodies (GSI, 2023).

The highly permeable nature of the subsoil sands in the area have resulted in a groundwater vulnerability classification of High/ Extreme across the site (Figure 3-15). It is likely that the groundwater within the immediate area is directly linked with Killiney Bay. The underlying aquifer is considered locally important with Locally Important (LI) with bedrock that is moderately productive only in local zones (GSI, 2023).

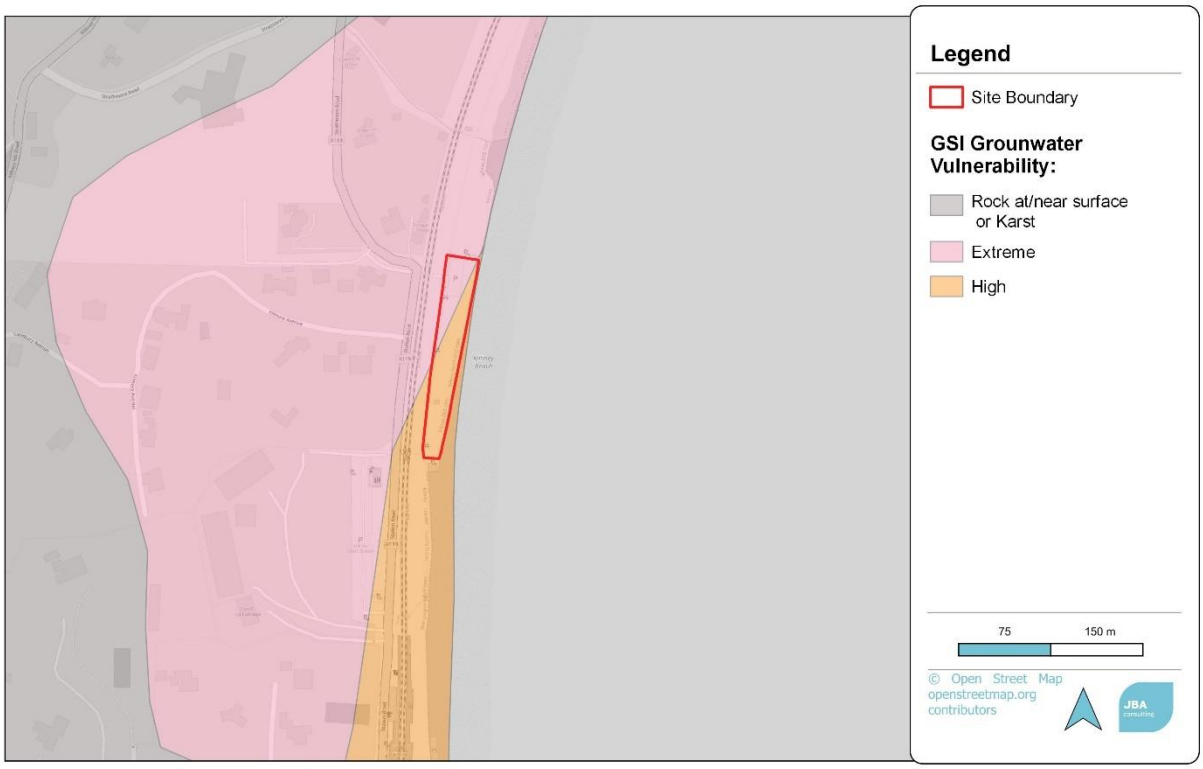


Figure 3-15: Aquifer vulnerability of the site (GSI, 2023)

4 Natura 2000 Sites

The DEHLG (2009) guidance identifies that Screening for Appropriate Assessment of a plan or project should consider the following Natura 2000 sites:

- Any Natura 2000 sites within or adjacent to the plan or project area.
- Any Natura 2000 sites within the likely zone of effect of the plan or project. This is dependent on the nature and scale of the plan, with 15km generally recommended for plans, but potentially much less for projects.
- Any Natura 2000 sites that are more than 15km from the plan or project area, but may potentially be affected upon, for example, through a hydrological connection.

Furthermore, the OPR guidance is to use a Source-Pathway-Receptors model, therefore only directly connected sites will be retained (OPR, 2021).

The Natura 2000 sites within the range are listed in Table 4-1 below and their location are shown in Figure 4-1 (overleaf). There are four Natura 2000 sites within the 5km range of the site, and there are no additional Natura 2000 sites within the extended 15km hydrological range. Site descriptions, Qualifying Interests (QIs) and threats/pressures for the below Natura 2000 sites are provided in Table 4-2 (overleaf).

Table 4-1: Natura 2000 sites located within the 5km ZoI of the proposed development.

Natura 2000 site	Site Code	Approximate direct distance from site	Approximate hydrological distance from site
Rockabill to Dalkey Island SAC	003000	1.4km	1.4km
Dalkey Islands SPA	004172	1.9km	1.9km
South Dublin Bay and River Tolka Estuary SPA	004024	4.7km	6.7km
South Dublin Bay SAC	000210	4.8km	6.8km

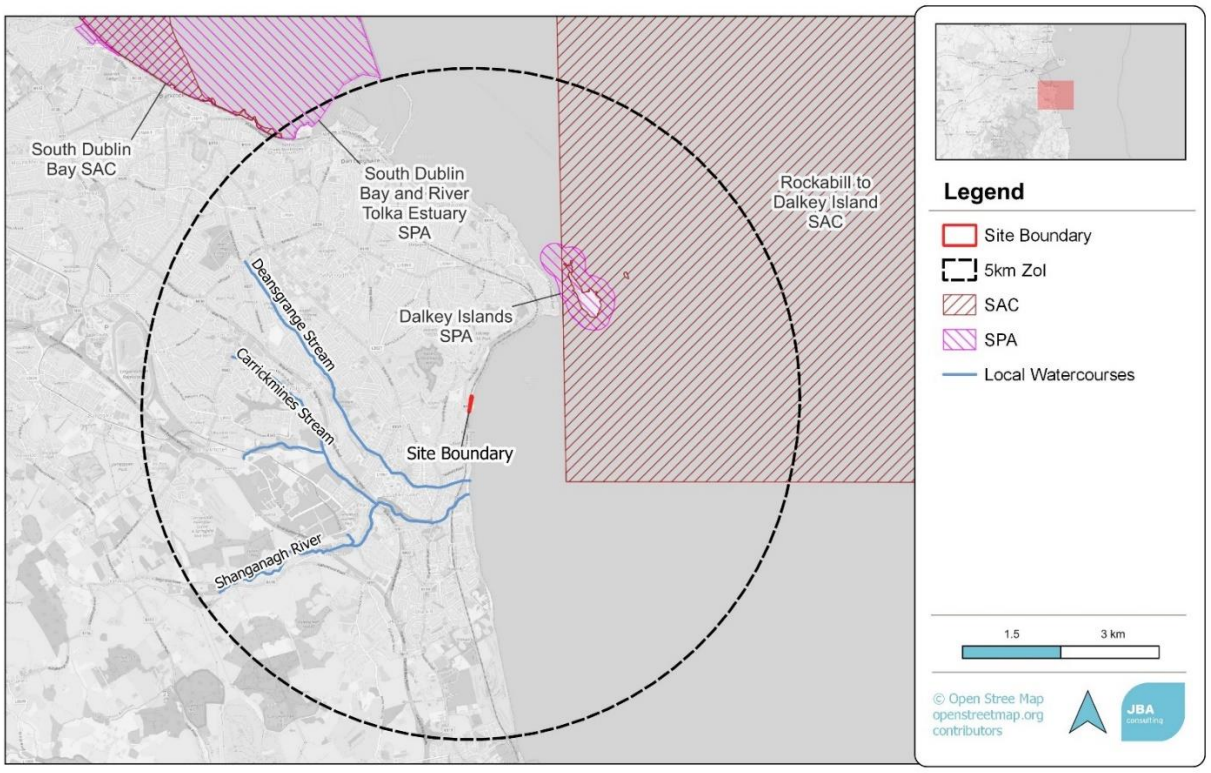


Figure 4-1: Natura 2000 sites and site location (OSM, 2023).

All other Natura 2000 sites are not anticipated to be impacted due to either distance or absence of pathway (i.e. no hydrological connection) between the development site and the receiving environment. The descriptions of the Natura 2000 sites within the ZoI are given in Table 4-2 (overleaf).

Table 4-2: Site briefs; Qualifying Interests; and project-relevant threats /pressures and their impacts and sources in relation to the Natura 2000 sites within the 5km ZoI (plus hydrological connectivity extension).

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
Rockabill to Dalkey Island SAC (003000)	The selected site forms a strip of dynamic inshore and coastal waters in the western Irish Sea, extending approximately 40 km in length and encompassing a range of comparatively shallow marine habitats, including diverse seabed structures, reefs, islets and islands. The area selected for designation represents a key habitat for the Annex II species - harbour porpoise, within the Irish Sea. The species occurs year-round within the site and comparatively high group sizes have been recorded. Porpoises with young (i.e. calves) are observed at favourable, typical reference values for the species. The selected site contains a wide array of habitats believed to be important for harbour porpoise including inshore shallow sand and mud-banks and rocky reefs scoured by strong current flow. The site also contains two Annex II seal species – Harbour seal *Phoca vitulina vitulina*, Grey seal *Halichoerus grypus* for which terrestrial haul-out sites occur in immediate proximity to the site. Bottlenose dolphin *Tursiops truncatus* has also occasionally been recorded in the area. Along the eastern seaboard the habitat type Reef is uncommon due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. These Reefs are subject to strong tidal currents with an abundant supply of suspended matter resulting in good representation of filter feeding fauna such as sponges, anemones and echinoderms. (NPWS, 2014)	- Reefs [1170] - Harbour Porpoise *Phocoena phocoena* [1351]	Discharges: High Impact (outside) Siltation rate changes, dumping, depositing of dredged deposits: Low Impact (outside) (Full list of threats / pressures - EEA, 2019b)
Dalkey Islands SPA (004172)	The site comprises Dalkey Island, Lamb Island, Maiden Rock, the intervening rocks and reefs between Dalkey Island, Lamb Island and Clare Rock, and the sea area around Maiden Rock to a distance of 100 m. The site is of importance for both breeding and staging *Sterna* terns. There is a well-established colony of Sterna hirundo and smaller numbers of *Sterna paradisaea. Sterna dougallii* bred in 2003 and 2004, one of only three known sites in the country - this came about after several years of conservation management aimed at attracting the species. The site along with other parts of south Dublin Bay is used by the three Sterna tern species as a major post-breeding/pre-migration autumn roost area. (NPWS, 2015a)	- Roseate Tern *Sterna dougallii* [A192] - Common Tern *Sterna hirundo* [A193] - Arctic Tern *Sterna paradisaea* [A194]	No project relevant threats or pressures present. (Full list of threats / pressures - EEA, 2020a)

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
South Dublin Bay and River Tolka Estuary SPA (004024)	This designated site comprises a substantial part of Dublin Bay. It includes virtually all of the intertidal area in the south bay, as well as much of the Tolka Estuary to the north of the River Liffey. The site possesses extensive intertidal flats which support wintering waterfowl which are part of the overall Dublin Bay population. It regularly has an internationally important population of Brent Geese, which feeds on Dwarf Eelgrass in the autumn. It has nationally important numbers of a further 6 species including: Oystercatcher *aematopus ostralegus*, Ringed Plover *Charadrius hiaticula*, Red Knot *Calidris canutus*, Sanderling *Calidris alba*, Dunlin *Calidris alpina* and Bar-tailed Godwit *Limosa lapponica*. It is an important site for wintering gulls, especially Black-headed Gull *Chroicocephalus ridibundus* and Common Gull *Larus canus*. South Dublin Bay is the premier site in Ireland for Mediterranean Gull *Larus melanocephalus*, with up to 20 birds present at times. Is a regular autumn roosting ground for significant numbers of terns, including Roseate Terns *Sterna dougallii*, Common Tern *Sterna hirundo* and Arctic Tern *Sterna paradisaea* (NPWS, 2015b).	- Light-bellied Brent Goose Branta *bernicla hrota* [A046] - Oystercatcher *Haematopus ostralegus* [A130] - Ringed Plover *Charadrius hiaticula* [A137] - Grey Plover *Pluvialis squatarola* [A141] - Red Knot *Calidris canutus* [A143] - Sanderling *Calidris alba* [A144] - Dunlin *Calidris alpina* [A149] - Bar-tailed Godwit *Limosa lapponica* [A157] - Redshank *Tringa totanus* [A162] - Black-headed Gull *Chroicocephalus ridibundus* [A179] - Roseate Tern *Sterna dougallii* [A192] - Common Tern *Sterna hirundo* [A193] - Arctic Tern *Sterna paradisaea* [A194] - Wetland and Waterbirds [A999] (NPWS, 2015b)	Discharges: High Impact (inside) (Full list of threats / pressures - EEA, 2021))

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
South Dublin Bay SAC (000210)	This intertidal site extends from the South Wall at Dublin Port to the West Pier at Dun Laoghaire, a distance of c. 5km. The seaward boundary is marked by the low tide mark, while the landward boundary is now almost entirely artificially embanked. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The designated site possesses a fine and fairly extensive example of intertidal flats. Sediment type is predominantly sand, with muddy sands in the more sheltered areas. A typical macro-invertebrate faunal assemblage exists within the SAC. The SAC has the largest stand of Dwarf Eelgrass *Zostera nolti* on the east coast. It also supports part of the important wintering waterfowl populations of Dublin Bay (NPWS, 2015c)	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - Salicornia and other annuals colonising mud and sand [1310] - Embryonic shifting dunes [2110] (NPWS, 2013b)	Discharges: Moderate Impact (both) Accumulation of organic material: High Impact (inside) (Full list of threats / pressures - EEA, 2020b))

5 Other Relevant Plans and Projects

5.1 Cumulative Effects

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region that may induce cumulative impacts must also be considered at this stage. The following projects or plans were identified as potential sources of cumulative effects:

5.2 Plans

- Dun Laoghaire Rathdown County Development Plan 2022-2028
- Dun Laoghaire Rathdown Coastal Defence Strategy
- Greater Dublin Drainage Strategy
- Third Cycle River Basin Management Plan for Ireland 2022-2027
- Planning Applications (retrieved from https://planning.agileapplications.ie/dunlaoghaire, available May 2024)

5.2.1 Dún Laoghaire Rathdown County Development Plan 2022-2028

The County Development Plan (DLRCC, 2022a) has a vision and policy statement that aims to continue to facilitate appropriate levels of sustainable development predicated on the delivery of high quality community, employment and recreational environments - allied to the promotion of sustainable transportation and travel patterns - all the while protecting Dún Laoghaire–Rathdown's unique landscape, natural heritage and physical fabric, to ensure the needs of those living and working in the County can thrive in a socially, economically, environmentally sustainable and equitable manner.

An Appropriate Assessment Screening and an Appropriate Assessment Natura Impact Statement (NIS) was carried out on the plan. This concluded that there are no likely significant direct, indirect or secondary impacts of the project on any Natura 2000 sites (DLRCC, 2022b).

Overall, the Dún Laoghaire Rathdown Council Development Plan 2022-2028 is not considered to adversely impact any Natura 2000 site, nor is it expected to contribute to any cumulative or in-combination effects.

5.2.2 Dun Laoghaire Rathdown Coastal Defence Strategy

The DLRCC coastal defence strategy is a management plan designed to provide a framework for policy decision making and action related to both the provision and the management of sustainable coastal defence policies (Malachy Walsh and Partners, 2010a). The plan summarises its key points as:

- The identification of coastal defences, habitats, natural features, landscape and amenity issues.
- The identification of risk to people, property and natural environment from coastal erosion, cliff instability, wave action and tidal flooding.
- The determination of appropriate options and policies for each discrete length of coastline which are technically, environmentally and economically sound.
- The recommendation of the extent and type of future coastal defences.
- The provision of a prioritised programme of works.

While dealing with the key coastal processes of

- Water levels, including normal tide levels, extreme water levels and the potential impact of sea level rise.
- Waves, including normal and extreme offshore waves and normal and extreme nearshore waves,and the joint occurrence of extreme waves and extreme water levels.

- Wave modelling was used to estimate nearshore extreme waves and nearshore wave climate for use in outline design and in an assessment of sediment transport due to wave action.
- Tidal current modelling was used to assess potential sediment transport along the study coastline due to tidal currents and to assess the tidal currents for use in the assessment of wave driven sediment transport.
- Sediment transport. An assessment of sediment transport was undertaken in order to provide an understanding of the coastal process context in which the coastal defence strategy is developed.
- The assessment includes wave and tidal current driven transport and the likely sediment budget relating to the study shoreline.
- The type and condition of existing coastal defences was also assessed during the study and input into the risk assessment, and the evaluation of options.

The principal potential impacts of the coastal defence measures to reinforce the cliffsides along the Bray - Shanganagh coastline. It has been assessed that in this area, by reinforcing the cliffside along Bray-Shanganagh area would reduce the overall sedimentation flow reaching the coast along the beach levels of the Killiney area. This reduction of sediment input, which would range from being significant if large lengths of the coastline are protected from further erosion, which have been suggested to be delayed until the point that they are actually necessary.

The coastal defence strategy has identified these impacts, and provided suggestions that would not interfere in a major way with alongshore sediment transfer, allowing for the continuous movement of materials through longshore drift inhibited by coastal defences. Specific impacts regarding the area around Killiney Beach include:

Coastal Defence at Killiney Station

The area around Killiney Station has been identified as being at risk of cliff instability. Currently there is a low wall fronted by a footpath as a means of preventing erosion. A selection of options for this cliff instability has been provided to stabilise the cliff, with the preferred option being to utilise soil nailing and shotcreting (the spraying of concrete) over the full height of the cliff face which have been assessed result in impacts limited to the area of the works.

Coastal Defence North of Killiney Station

The area north of Killiney station has a well-vegetated cliff with the appearance of stability, however this stability is uncertain. Localised repairs are required in this area, including the monitoring of the cliff slopes.

Conclusion

An SEA (Malachy Walsh and Partners, 2010b) and NIS (Malachy Walsh and Partners, 2010c) have been completed for the Dun Laoghaire Rathdown Coastal Defence Strategy. Mitigation measures have been put in place in regard to concrete, fuel, oil, and timing of works. Including these preventative measures, each project as part of the coastal defence strategy will be subject to future AA Screenings and EcIAs. In regard to the impacts of the coastal protection plan has been assessed to have an insignificant impact on Annex I habitats, designated sites, seabed habitats, coastal processes and seabirds.

Following the initial assessment of the coastal defence strategy, a review of the plan was conducted in 2023 to identify the number of the recommendations have been undertaken; further erosion and damage to the Dun Laoghaire coastline has been observed. At the time of this review in 2023, the coastal defences north and around Killiney Station had not been carried out, however, surveys had shown that the areas had not significantly deteriorated since the initial assessment.

This review includes specific mentioningof the offshore reef habitats that were discovered in the interim of the reports and assessed that works south of White Rock (in the area of Killiney Beach) would pose no threat to these habitats.

Overall, the Dun Laoghaire Rathdown Coastal Defence Strategy is not considered to adversely impact any Natura 2000 sites, or features of otherwise ecological importance, nor it is it expected to contribute to any cumulative or in-combination effect.

5.2.3 Greater Dublin Drainage Strategy

The Greater Dublin Drainage Strategy sets out the strategic planning for the development of waste water treatment in the Greater Dublin area in relation to the Ringsend WWTP Upgrade, Greater Dublin Drainage Project and associated wastewater network drainage projects (Irish Water, 2018). The Ringsend WWTP Upgrade includes plans to expand the WWTP to its ultimate capacity, together with associated network upgrades required. The Greater Dublin Drainage Project is planned to relieve both the Ringsend WWTP and network loading by construction of a new WWTP at Clonshaugh, an orbital sewer and provision of an outfall pipe discharging 1km north-east of Ireland's Eye. The Ringsend WWTP upgrade is in progress and carried out in stages, with an increased capacity of 400,000 PE by Q1 2020 and the ultimate capacity of 2.4 million PE to be in operation by 2024 (Irish Water, 2018).The Greater Dublin Drainage Project is strategically important to the Dublin Region in that it will provide capacity for residential and commercial growth (Irish Water, 2018).

Overall, the Greater Dublin Drainage Strategy is not considered to adversely impact any Natura 2000 site, nor is it expected to contribute to any cumulative or in-combination effects.

5.2.4 River Basin Management Plan for Ireland 2018-2021 / 2022-2027

The 2nd cycle River Basin Management Plan (RBMP) for Ireland 2018-2021 sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2021 (DoHPLG, 2018a). Changes from previous River Basin Management Plans is that all River Basin Districts are merged as one national River Basin District. The Plan provides a more coordinated framework for improving the quality of our waters — to protect public health, the environment, water amenities and to sustain water-intensive industries, including agri-food and tourism, particularly in rural Ireland.

The first cycle of River Basin Management Plans included the Eastern River Basin District - River Basin Management Plan 2009 – 2015 (WFD, 2010). The plans summarised the waterbodies that may not meet the environmental objectives of the WFD by 2015 and identified which pressures are contributing to the environmental objectives not being achieved. The plans described the classification results and identified measures that can be introduced in order to safeguard waters and meet the environmental objectives of the WFD;

- Prevent deterioration of water body status.
- Restore good status to water bodies.
- Achieve protected areas objectives.
- Reduce chemical pollution of water bodies

The River Basin Management Plan for Ireland (2018-2021) outlines the new approach that Ireland will take to protect our waters over the period to 2021. It builds on lessons learned from the first planning cycle in a number of areas:

- stronger and more effective delivery structures have been put in place to build the foundations and momentum for long-term improvements to water quality
- a new governance structure, which brings the policy, technical and implementation actors together with public and representative organisations. This will ensure the effective and coordinated delivery of measures.

Ireland's third River Basin Management Plan 2022-2027 (EPA 2021) was out for public consultation until March 31st 2022. The Consultation report was published in July 2022. Following review of the submissions, the DHLGH will commence a review and where necessary update the draft RBMP with a view to finalisation and publication in Q3/Q4 of 2022.

The 3rd cycle draft Catchment Reports were published in August 2021. The draft Catchment Reports provides a summary of the water quality assessment outcomes for respective catchments, including status and risk categories, significant threats and pressures, details on protected areas and a comparison between cycle 2 and cycle 3.

The third cycle draft Catchment Report for Ovoca-Vartry Bay Catchment (EPA, 2021) identified that between Cycles 2 and 3 there has been an overall slight improvement in the catchment's status. The overall change in quality between Cycles 2 and 3 include an increase in three waterbodies achieving a High Status, however there was also one waterbody decreased in quality resulting in a Bad status. The number of waterbodies which are achieving Good and Poor statuses remains unchanged between Cycles, while there is a reduction of waterbodies achieving a Moderate status by three. There remain eighteen waterbodies that are unassigned.

The Third Cycle River Basin Management Plan for Ireland 2022-2027 is not anticipated to contribute to cumulative or in-combination effects.

5.3 Projects

5.3.1 Deansgrange Flood Relief Scheme

In 2023 a planning application for the Deansgrange Stream Flood Relief Scheme (FRS) was submitted in accordance with Part 8 of the Planning and Development Regulations, 2001.

Summary of Deansgrange Stream FRS.

The works associated with the Deansgrange Flood Relief Scheme (FRS) extend through several locations across the Deansgrange Stream catchment, all at or in close proximity to the stream, between Johnstown Rd/ Granville Rd and the environs of the Dublin-Wexford Rail line. Works are expected to take approximately 18 months in total but will be completed in phases following environmental constraints such as breeding birds and seasonal restrictions to instream works and are expected to last until July 2026.

The proposed scheme consists of the installation of a 1200mm diameter tunnelled overflow culvert underneath the railway, the provision of additional storage in Glenavon Park, a series of flood containment walls upstream of the Killiney Hill Road Bridge, including upgrading the parapet of the existing bridge, upgrade works in the existing culvert at Granville Road, the upgrade of the existing screen at the entry of the Seafield culvert, installation of additional coarse screens and the provision for future adaptation of all the measures listed to the impact of climate change on the modelled flood levels.

An Appropriate Assessment Screening was carried out on the Deansgrange FRS. This concluded that there are no likely significant direct, indirect or secondary impacts of the project on any Natura 2000 sites.

5.3.2 Dublin Offshore Windfarm Array

The Dublin Array expects to consist of between 39 and 50 turbines, with individual heights being approximately 270 and 310 meters. The turbines will be distributed between Kish and Bray banks approximately 10km east off the coastline of Sorrento Point in Dalkey, with two cables that will be brought to a preferred landfall location in the green area at Shanganagh Cliffs approximately 2km south of the proposed Killiney water-sports facility. This will be facilitated by the construction of two onshore transitional joint bays that will connect the wo offshore electricity cables to the onshore cables, integration of cables to spread power throughout the country. It is expected that construction of the wind array is to begin in 2026.

The Dublin Offshore Windfarm Array project is not anticipated to contribute to cumulative or in-combination effects during the development of the Killiney water-sports facility, as the Array is anticipated to begin construction approximately two years after the water-sports facility is complete. The Windfarm Array is not anticipated to contribute to cumulative or in-combination effects during the operational phase as the construction of the Array's landfall is at a far enough distance where they are not anticipated to contribute to the impact of the sport's facility, and the operational natures of the developments being distinctly different.

The plan will follow the legislative requirements of the Maritime Area Planning Act 2021, where it has undergone ecological and environmental surveying since 2001 and will be subject to an accompanying Environmental Impact Assessment Report and Natura Impact Statement.

Overall, the Dublin Offshore Windfarm Array is not considered to adversely impact any Natura 2000 sites, or features of otherwise ecological importance, nor it is it expected to contribute to any cumulative or in-combination effect.

5.3.3 Irish Rail East Coast Railway Infrastructure Protection Project (ECRIPP)

The Irish Rail ECRIPP aims to address the ongoing issues coastal erosion, wave overtopping and flooding along the railway infrastructure that have arisen due to the increase in frequency of storms as a result of climate change. These issues will be addressed through the implementation of a series of measures at five Coastal Cell Areas along the Dublin and Wicklow train route which include:

- CCA 1 - Merrion to Dún Laoghaire
- CCA 2-3 - Dalkey Tunnel to Killiney station and Killiney South
- CCA 5 - Bray Head to Greystones North Beach
- CCA 6.1 - Greystones to Newcastle
- CCA 6.2 - Newcastle to Wicklow Harbour

The objectives of this project include:

- Support the continued safe operation of rail services;
- Increase railway infrastructure future resilience to climate change;
- Provide improved and sustainable coastal protection works against predicted climate change effects such as sea level rise, coastal erosion, storm surges on the east coast railway corridor;
- Secure the railway line for future generations;
- Allow for the long term efficient management and maintenance of the railway corridor;
- Support sustainable low carbon local, regional and international connectivity fostering a low carbon and climate resilient society;

Currently, the Irish Rail ECRIPP remains at a conceptual stage. Initial consultation with DLR internal stakeholders have been carried out, and the project is currently in Phase 2 Project Concept, Feasibility and Option Selection. Over the coming months (scheduled for August 2024) the project is to go into its first phase of public consultation. At present, however, there has yet to be an options report or subsequent buildability reports produced.

While the location for the CCA 2-3 protective measures is located in close proximity to the location of the water sports facility, and the protective measures are forecast to be ongoing for ten years, the construction phase of the ECRIPP is not anticipated to contribute to cumulative or in-combination effects during the development of the Killiney Water facility. This is due to the construction of the ECRIPP not anticipated to begin until 2028, approximately three-to-four years after the completion of the Water facility.

While the location for the CCA 2-3 protective measures is located in close proximity to the location of the water sports, the ECRIPP measures are intended to prevent any deterioration of the coast along a section of the railway line, while the Killiney Water facility is the addition of some localised washroom facilities. These operational natures of the developments are distinctly different and there is not anticipated to contribute to cumulative or in-combination effects during the operational phase.

The plan will follow the legislative requirements of the EU Habitats Directive where it will be subject to an accompanying Environmental Impact Assessment Report and Natura Impact Statement.

Overall, the Irish Rail ECRIPP is not considered to adversely impact any Natura 2000 sites, or features of otherwise ecological importance, nor it is it expected to contribute to any cumulative or in-combination effect.

5.3.4 Other Projects

An assessment into local projects in the vicinity of the new sports facility and the potential for cumulative impacts was also conducted. These projects are listed in (Table 5-1) below, none of which were assessed to result in potential in-combination or cumulative impacts given their scope of works, and proximity to local Natura 2000 sites.

Table 5-1: Projects granted planning permission since September 2019 in vicinity of proposed site.

Planning Reference	Address	Application Status	Decision date	Summary of development
D22A/0451 / ABP Ref. 314620	Cromlech Cottage, Killiney Hill Road, Killiney, Co. Dublin	REFUSE PERMISSION (Finalised)	18-Aug-2022, Appeal decision 17-Oct-2023	The development will consist of the demolition of existing structures on site, including a habitable dwelling; The construction of 3-storey terrace of units consisting of 7 No. 3-bed houses with car garage, bike storage at the ground floor and habitable spaces to the first and second floor with access to the development from Killiney Hill Road; All with associated site works, surface carparking, bin storage, signage, open spaces, landscaping, and boundary treatments.
D19A/0797	Lands at Loughlinstown Drive (0.5685ha), Loughlinstown, Co. Dublin comprising Loughlinstown Industrial Estate and part of HSE Health Centre	GRANT PERMISSION	28/07/2020	Permission for development. The development will consist of the demolition of all existing buildings (1985sq.m) on site and the construction of a 4 storey Primary Care Centre and General Practitioner (GP) Surgery with a gross floor area of 4,267sq.m. The accommodation will consist of treatment rooms, consultation rooms, meeting rooms, staff facilities, ancillary offices and ancillary accommodation over 4 floors, with a maximum height of 16.955m. The building also includes an own door pharmacy (101sq.m) at ground floor. Permission is also sought for an ESB substation and switch room (35sq.m), bin store (19sq.m), a vehicular drop off area the main building entrance, 61 no. surface carparking spaces, 4 no. Motorcycle parking spaces, landscaping, lighting, external signage and all associated site and development works. Vehicular access/egress to the proposed development is via two points off Loughlinstown drive (one existing access to be retained and one proposed access point).
DZ19A/0863	Site is generally bounded by Lehaunstown Lane to the west, Carrickmines Stream (partly) to the south and, Cabinteely Stream (partly) to the east and is located within the townland of, Brennanstown, Dublin 18	GRANT PERMISSION	14/01/2020	Permission for a residential development at a site measuring approximately 8.24 ha in area. The development will consist of the construction of 342 new residential dwellings, comprising 189 no. apartments arranged in 4 blocks (all 4-storeys in height and comprising 15 x 1 bed units and 174 x 2 bed units); 28 No. duplex units (comprising 14 x 2 bed units and 14 x 3 bed units); 60 No. triplex units (comprising 40 x 2 bed units and 20 x 3 bed units) and 65 No. 4 bedroom houses (comprising a mix of detached, semi-detached and terraced house types) together with a Childcare Facility at ground floor level within Block C with a floor space of 249sq.m. (GFA), and ancillary open space. The proposed development includes for all associated infrastructural works to include the part delivery of the Cherrywood SDZ Planning Scheme's Druid's Glen Distributor Road (also known as Q to P3), measuring approximately 390 m in length to include the construction / completion of the part approved 3-span bridge (Option 1) over the Cabinteely Stream under Planning Ref. DZ16A/0587 (ABP Ref. PL06D.247915). It is noted that a portion of Road Q to P3 was also granted under Planning Ref. D15A/0385 (as amended by DZ19A/0622) and the road may be constructed under that permission. Permission is sought for the inclusion and utilisation of a temporary haul road (to be constructed by the Dún Laoghaire-Rathdown County Council Contractor as part of the Druid's Glen Road Q - P3 east of the Cabinteely Stream (up to a point CH 100m as defined on ATKINS Drawing No. 0101A). This temporary haul route would connect directly to the N11 via the proposed Junction Q and includes for a culvert, or temporary bridge crossing at the Cabinteely Stream. The proposed temporary haul route comprises a 4m wide unbound haul road approximately 160m long, and will be constructed from approximately CH 560m on Druid's Glen Road to a proposed site compound area to the west thereof measuring approximately 30m wide and up to 45m long in plan area and will be situated at,

Planning Reference	Address	Application Status	Decision date	Summary of development
				or above the 30m site contour. This site compound will be made available to the Dún Laoghaire-Rathdown County Council Contractor building the Druid's Glen Road from N11 to point P3. Following the sectional completion of Druid's Glen Road, the proposed temporary haul road will be available to accommodate construction traffic associated with the appointed contractor(s) responsible for the development of the subject lands (as per any planning permission granted). It is proposed that this temporary haul route would remain available until the permanent bridge crossing the Cabinteely Steam becomes operational. The development will also include the construction of: ancillary waste storage facilities; ancillary waste recycling collection area; associated car parking (total of 565 no. car parking spaces, comprising 257 spaces at basement level and 308 surface level spaces (including 9 no. ancillary car parking spaces in connection with the childcare facility); bicycle parking spaces (total of 492 no. cycle parking spaces, comprising 156 basement level spaces and 336 surface level spaces); a number of ancillary public open spaces; provision of boundary treatments; lighting; associated hard and soft landscaping (including changes in site levels and playground provision); associated infrastructural and site development works above and below ground (including 2 No. permanent water attenuation ponds and 1 no. temporary attenuation pond). The application site is located within the Cherrywood Strategic Development Zone.
D19A/0773	Side of 96 Beech Grove Cottages, Loughlinstown, Co Dublin	GRANT PERMISSION	24/01/2019	Permission for 3 bedroom detached bungalow and all associated site works.
D23A/0602	Sorrento Cottage, Vico Road, Killiney, Dublin, A96WN90	GRANT PERMISSION	19/09/2023	Demolition of the single-storey extensions (75sqm), 2 no. south-facing bay windows (11.2sqm), greenhouse (62.5sqm), detached garage (27sqm) and external stores (11.4sqm). The construction of a side and rear extension (including garage) over 3 no. levels (787.3sqm). The construction of 1 no. replacement south facing bay window/extension (8.4sqm) internal renovations and reconfigurations and elevational changes. The development will also comprise the construction of a security hut (13.2sqm).

Since May 2019, there are no other projects listed within the local area which are not retention applications, home extensions and/or internal alterations, that have been granted planning permission in the locality of the proposed site.

The Deansgrange Stream FRS, Dublin Offshore Windfarm Array, Irish Rail East Coast Railway Infrastructure Protection Project (ECRIPP) nor the surrounding projects are not anticipated to contribute to cumulative or in-combination effects.

5.4 Summary

The County and Local Development Plan; Coastal Defence Strategy, Greater Dublin Drainage Strategy, RBMP and projects within the locality of the proposed project are not considered in combination with the currently proposed project in the Impact Assessment section below.

6 Screening Assessment

6.1 Introduction

This screening exercise will focus on assessing the likely adverse effects of the project on the Natura 2000 sites identified in Section 4 above.

This section identifies the potential impacts which may arise as result of the proposed project. It then goes on to identify how these impacts could potentially impact on Natura 2000 sites listed in Table 4-1. The significance of potential impacts is also assessed, with any potential in-combination effects also identified. The Natura 2000 sites to be assessed are listed below in Table 6-1.

Table 6-1: Natura 2000 sites to be assessed, with approximate direct distances and distances via hydrological connection

Natura 2000 site	Site Code	Approximate direct distance from site	Approximate hydrological distance from site
Rockabill to Dalkey Island SAC	003000	1.4km	1.4km
Dalkey Islands SPA	004172	1.9km	1.9km
South Dublin Bay and River Tolka Estuary SPA	004024	4.7km	6.7km
South Dublin Bay SAC	000210	4.8km	6.8km

6.2 Assessment Criteria

6.2.1 Description of the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.

Potential adverse impacts that could cause a significant effect on the qualifying interests of the Natura 2000 sites, during the construction and operational phases of the project, will impact on the sites via surface water pathways, groundwater pathways and land and air pathways. Surface water pathways can impact on surface water quality and surface water dependent habitat quality. Groundwater pathways can impact on groundwater quality and quality of groundwater dependent habitats. Land and air pathways can impact by release or discharges of sediment or chemicals to surface or groundwater.

The proposed project is not anticipated to impact on the qualifying interests of any of the identified SACs or SPAs. The rationale for excluding impacts via the main pathways is given in more detail in the following section.

6.2.2 Surface Water Pathways

The proposed site lies within the WFD sub-catchment Dargle_SC_010, however, any surface water on-site is likely to filter into the groundwater or discharge directly to sea via local surface water pathways.

The QIs of Dalkey Islands SPA are Roseate Tern, Common Tern and Arctic Tern each of which forage in shallow coastal waters within 10km of their breeding/staging sites. Each of these species are presumed to forage within Killiney Bay and any potential impact on their prey species could indirectly impact on the success of their populations.

Harbour Porpoise *Phocoena phocoena* are a QI of the Rockabill to Dalkey Island SAC and prey on pelagic shoaling fish and inshore benthopelagic species which converge on inlets and shallows such as those between headlands and islands (IWDG 2015). They are dependent on the success of these populations as a food source and any impact on these species via potential surface water pathway may have a negative impact on this QI.

Reefs are a QI of the Rockabill to Dalkey Island SAC. Degradation of the water quality of Killiney bay via a surface water pathway may impact negatively on this species community.

Construction Phase

There is low potential for a relatively small volume of hydrocarbons to be spilled via machinery on-site during the construction phase, and for this to reach the marine environment. This likelihood is considered low as the number of machines will be small, and all refuelling for machinery will occur within the site compound that is located outside of the site area, with all fuel also stored in this compound away from the site.

The excavation of the site and regrading of slope during the construction phase will result in exposure of unvegetated soil. There is potential for sediment runoff to wash into the sea during pluvial or wave overtopping events.

Poured concrete will be used during the construction of the foundations, where piles will be filled with *in situ* concrete. There is therefore potential for uncured concrete and cement dust to enter the marine environment in the rare occurrence of a pluvial or wave overtopping event.

During the construction phase of the project, wastewater is schedule to be connected to a pumping station on the beach to the south of the site boundary and from there all wastewater will be pumped to a treatment plant in Shankill. This will prevent any polluted water reaching the open water of Killiney Bay. These measures will follow best practice guidance and are in line with the Greater Dublin Drainage Regional Code of Practice for Drainage Works (DCC. 2021).

Killiney Bay is an area of bathing waters and Killiney beach has been awarded Blue Flag status. Under DLRCC's commitment to the protection of waters within the development plan, the support of the policies and objectives appropriate and relevant to the National Marine Planning Framework in addition to the Bathing Water regulations 2008, the Water Framework Directive, and the Marine Strategy Framework Directive, DLRCC is committed to the protection of Killiney Bay from any contaminants and pollutants that will reduce the overall environmental and ecological status of the water inherent in their developments. This will include the location of the compounds, the management of machinery to prevent accidental pollutant spillage, the storage of both equipment and materials, the integration of the project with local drainage systems, and the prevention of runoff from entering the local waters.

Waste from excavation and resurfacing will be removed to a licensed waste treatment facility.

With the inclusion of these pledged commitments and regulations to minimising pollution, there remains a very small chance that a low level of hydrocarbons may be spilled during the operation of machinery given the small scale of the project. Any release of pollutions during an accidental spillage would be limited and there would be a significant dilution effect when the water enters Killiney Bay. Killiney Bay is outside the core area of Harbour Porpoise occurrence in the Irish Sea, and Rockabill to Dalkey Island SAC covers a length of approximately 40km of the Irish Sea and any potential impact from the project is not anticipated to be significant on QI Harbour Porpoise.

Though the South Dublin SAC and the South Dublin Bay and River Tolka Estuary SPA Natura 2000 sites are also connected by the Irish Sea and Dublin Bay, due to distance and dilution any impact from the project on these Natura 2000 sites is also not anticipated to be significant.

The QIs of Dalkey Islands SPA (Arctic Tern, Common Tern and Roseate Tern,) nest and roost on the land area of Dalkey Island, and no impact from reduced water quality is anticipated on the nesting habitat due to lack of hydrological connectivity.

Tern species forage in the Irish Sea, especially in the area North of Dublin Bay where there is an abundance of prey (Green, 2017) and any potential impact on their prey species could indirectly impact on the success of their populations. However, given their prey is much more prevalent North of Dublin, and their approximate foraging range of 10km and the wide area of the Dublin Bay, and offshore sandbanks of the Irish Sea available for foraging, as well as the small scale and localised nature of the project, it is not anticipated to have a significant impact on these species.

Therefore, given protections inherent within in Dun Laoghaire-based projects and the distance to the Natura 2000 sites which provides a high level of pollutant dispersal capacity in the event of accidental spills, a significant effect on any of the QIs is not expected for any of the Natura 2000 sites.

As stated above, the reefs that are associated within the mapped boundary of Rockabill to Dalkey Island SAC are not anticipated to be significantly affected by any of the works within the project due to the size of works, distance to the SAC boundary, and the dilution factor present within the bay.

However, additional reef habitat in Killiney Bay, that is not within the SAC boundary, are present closer to the proposed site and have a higher likelihood of being impacted by the pollutants mentioned above. While these reefs are outside the scope of this AA Screening they are recognised for their ecological value, and this will be addressed further in the accompanied EcIA.

Operation Phase

The proposed project is within an amenity grassed area, with foul water drainage to be integrated into pre-established drainage and existing waste water facilities. The construction of the sports facility is not expected to have any significant impact on the surface water runoff for the site area of the project, due to the overall retention of the amenity grass acting as a vegetative buffer between the site and the beach.

The site's drainage includes non-return valves and sealed manholes will prevent a backflow of sewage during rare instances of wave overtopping. Similar to the construction phase, even in the event of accidental release of the above pollutants, given the very large dilution potential of Killiney Bay and the settling out of particles over such a distance, as well as the localised nature of the project, it is not anticipated that the proposed project will have a significant impact on these QI bird species of Dalkey Islands SPA, and marine mammal species and reef community of Rockabill to Dalkey Island SAC.

In summary it is assessed that surface water impacts during construction and operation are not anticipated to have a significant impact on any of the Natura 2000 sites.

6.2.3 Groundwater

Given the nature of project works, there is potential that the proposed works will make a connection with groundwater.

The site is located within the Kilcullen (IE_EA_G_003) groundwater body groundwater body. All of the listed Natura 2000 sites in Table 4-1 share this groundwater body, however, each one is more than 1km away and given the poor connections within the underlying aquifer it is unlikely that any pollutant would travel more than this distance through groundwater pathways. The Dalkey Islands SPA and Rockabill to Dalkey Island SAC are also marine based and are excluded by groundwater body related impacts. In the event that a pollutant was to enter the groundwater table the likelihood of a pollutant reaching a groundwater dependent QI within the ZoI at a deleterious volume is extremely unlikely, given the small-scale of the works (small number of machinery on-site and thus limited volumes of pollutants on-site at any given time); and the distance to the Natura 2000 sites within the ZoI.

The poorly connected underlying aquifer, proximity to sea along with the distance needed to travel to Natura 2000 sites, results in no expected significant impact on any of the QIs for any of the Natura 2000 sites identified within the ZoI.

6.2.4 Land and Air

Land (physical on-site and noise disturbance)

There will be no permanent land take resulting from the proposed works. The proposed structure will be constructed on made ground. There is also no requirement for machinery to access the beach or potential for works to alter its sensitive habitats. The site is approximately 1.4km from Rockabill to Dalkey Island SAC, 4.7km from South Dublin Bay and River Tolka Estuary SPA, 4.8km from South Dublin Bay SAC and 1.9km from Dalkey Islands SPA, thus the proposed works will not cause disturbance to any of the QIs of these sites via land take or removal of *ex-situ* habitat.

This area of the beach and Killiney Bay is already used by members of the public and is visited frequently. With the increased facilities in the area of the beach, there is a risk of higher visitation rates from members of the public using Killiney Bay. There is, however, data from DLRCC (Pedestrian Survey undertaken by IDASO in 2021) anticipating that there will be no significant increase in members of the public visiting the beach and the bay during the operational phase of these facilities. As stated earlier, average visitor numbers stand at 11,972 weekly during the summer months, rising to approx. 32, 000

on a peak week. However, even with negligible change in overall numbers, the facility may bring an increase in kayak or paddle board users.

The proposed water sports facility has a specific sport function, focused on supporting existing activity operators taking small groups out on the water. It is likely that the groups will in the main use the extent of marine waters within Killiney Bay, and avoid the open waters and very strong tidal currents around Dalkey Island and Dalkey Sound. Dalkey Sound is well known for its strong tides and funnelling winds. However, if groups are taken to Dalkey Island, the only safe landing at this rocky island is at the pier and inlet, where the ferry boat and other marine craft land. This is near where the Arctic Tern have their main nesting area, and nests may be at risk of disturbance.

However the risk of disturbance to tern species on Dalkey Islands from visitation of boat users, kayakers, and paddle boarders is already present, as the island is readily accessible by users and group operators who launch from Dun Laoghaire Harbour and the nearer Coliemore and Bulloch Harbours, as well as the popular ferry taking day-trippers to Dalkey Island from Coliemore Harbour, the latter running daily during the summer months. Any additional visitations from Killiney Beach Facility via kayak/paddle board are expected to be negligible in comparison to daily ferry and other users. Information supplied by DLRCC indicates that visitor usage is primarily in the summer period between May and September with a peak in July, but is very weather dependent. A peak daily number of 273 visitors in 2019 was estimated to land from the ferry including less than 10 people from private boats on a day of fine weather. It is estimated that up to 40 people per day may land by kayak at peak time (DLRCC, 2019).

A number of measures are already in place to address disturbance to nesting tern on Dalkey Island. DLRCC has a Conservation Plan for the islands in place (DLRCC, 2014). As terns are a ground nesting species, and their eggs are camouflaged, there is a risk of them being accidentally trod on by members of the public visiting Dalkey Island. To prevent this, Birdwatch Ireland erected fencing around the nesting terns, and erected signage which DLRCC had commissioned, informing the public of the presence of ground nesting terns within the fenced off area and advising members of the public to stay away from nest sites on the islands during the breeding season. Lamb Island is closed by DLRCC to the public during the summer months and so disturbance is rarely an issue on this island (Birdwatch Ireland 2023). Birdwatch Ireland have a tern warden in place during the summer months. The Dalkey Tern Project is a partnership between BirdWatch Ireland and Dún Laoghaire-Rathdown County Council.

The protection already in place is sufficient to continue to protect the nesting terns from any potential increase in visitor numbers to the island from the Killiney facility, which are anticipated to be negligible in comparison to those coming from other access points.

As outlined in Section 3.4.3 terns forage within a wide area; Arctic Tern can range up to 46km (mean 26km) from their nest sites during the breeding season (NPWS, 2023). However, tern are likely to feed nearer to their nests during the breeding period. There may be a small increase in the number of kayaks/paddle boarders in Killiney Bay from the marine facility, however the estimated low numbers of water craft and the slow movement of these on the water are not expected to be of disturbance to foraging tern in Killiney Bay.

Mobile Harbour Porpoise, with their wide distribution in the western Irish Sea and core area stretching north of Dalkey Island, are unlikely to be disturbed by a small increase in kayaks/paddle boards in Killiney Bay.

As there is no anticipated significant increase in persons accessing Killiney Bay, or accessing Dalkey Islands from the site via water craft, and with the existing tern protection measures in place within Dalkey Islands, **the operation of the proposed works is not likely to cause significance effect to any of the QIs of any of the Natura 2000 sites identified during the operation phase of the project.**

Noise

The threats of lower importance facing the Common Porpoise within Rockabill to Dalkey Island SAC include noise nuisance and noise pollution (NPWS, 2019). The induction of behavioural changes based on acoustical disturbance is known as the Temporary Threshold Shift (TTS), which suggested by Tousard *et al* (2015) could be reached at SEL of 100-110db in relation to pulses that are derived from pile driving works. A review of the EIAR for the River Poddle Flood Alleviation Scheme (OPW & O'Dwyer Ltd., 2020) and the Arklow Bank Wind Park NIS (RPS, 2021) indicates that sound level data on piling

and ancillary operations in Ireland estimates typical noise levels to reach 89dB at 10m, meanwhile the TTS injury zone for porpoises is estimated to a several hundred metres.

Given that the distribution of the Common Porpoise is "not restricted by artificial barriers to the site" (NPWS 2019) and they are not confined to the limited range of the noise disturbance, the low radius of effect from piling activity (RPS Group, 2021), and the typical noise levels of piling fall under the TTS range for Common Porpoise (Nicholas O'Dwyer Ltd., 2020), **significant likely effects are not anticipated for any of the QIs for any of the Natura 2000 sites identified within the ZoI during the construction or operational phase.**

Air Pollution

Dust release and vehicle emissions can travel considerable distances and could potentially affect the Annex 1 Habitats and the species of the four Natura 2000 sites, even if they are not located within close proximity to the proposed project. The distance and direction of travel is dependent upon wind speed and direction. The proposed site has a west south-west prevailing wind year-round (Windfinder.com, 2024), therefore, any dust generated on-site will most likely be transported towards Rockabill to Dalkey Island SAC and Dalkey Islands SPA. South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC are located northeast of the site and not in the general direction of the wind. Given the small scale of the project and their considerable distance from the site (>1.4km at minimum), **any dust and vehicle emissions are not anticipated to have a significant effect on the QIs of the Natura 2000 sites.**

6.2.5 Cumulative Impact

The Plans listed in Section 5 are not considered to have a cumulative impact together with the proposed project. The County Development Plan and Coastal Defence Strategy have been subject to a separate Appropriate assessment (DLRCC, 2022b, Malachy Walsh and Partners, 2010c) and incorporates mitigations to prevent significant impact to any Natura 2000 sites. Both the Greater Dublin Drainage Strategy and The River Basin Management Plan aim to improve the water quality and are not anticipated to have a negatively cumulative impact on any of the Natura 2000 sites, while the Deansgrange FRS has undergone an AA Screening and has been determined to not have any significant effect on Natura 2000 sites. The Irish rail ECRIPP and the Dublin Offshore Windfarm Array have yet to undergo finalised project design, and once this is completed, they will both be subject to AA Screenings and Ecological Impact Assessments.

6.2.6 Summary

Due to the site location and the nature and scale of the proposed project, impacts via surface water, groundwater and land and air pathways to the listed Natura 2000 sites are not anticipated, either alone or in combination with other projects.

6.2.7 Description of likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites

Project Elements	Comment
Size and scale	The project consists of a single-storey, flat-facility with associated required site works and utilities connections. The amenity provides for 5No. WCs, 1No. accessible Changing Places shower room with WC, 5No. shower/ changing cubicles, 4No. external showers, with sheltered demonstration space, storage areas, seating, lockers and drinking fountain. Also included are associated plant/ mechanical and electrical spaces, solar panels, paved areas. All refuelling for machinery will occur outside of the site area, with all fuel also stored away from the site. The lower sloping ground around the proposed development site is expected to allow the overtopping water to drain back to the sea. A site strip will be implemented to create a working platform, while imported hardcore material will be utilised as a base for the works. The facility's foundations will extend below the frost zone and be approximately 0.5m - 0.75m below ground level, while drainage pipe trenches will range from

Project Elements	Comment	
	1.2m- 2m below ground level with variation depending on pipe falls and gradients.	
Land-take	There will be no direct land take from any of Natura 2000 sites.	
Distance from Natura 2000 site or key features of the site	The Natura 2000 sites and their proximity (plus hydrological distance) to the proposed site:	
	Dalkey Islands SPA`	1.4km
	Rockabill to Dalkey Island SAC	1.9km
	South Dublin Bay and River Tolka Estuary SPA	4.7km
	South Dublin Bay SAC	4.8km
Resource requirements (water abstraction etc.)	None	
Emissions (disposal to land, water or air)	Construction Phase: **Water** Under the Dun Laoghaire Development Plan, National Marine Planning Framework, Bathing Water regulations 2008, the Water Framework Directive, and the Marine Strategy Framework Directive, the bay will be protected from any contaminants and pollutants that will reduce the overall environmental and ecological status of the water. With the inclusion of these pledged commitments and regulations to minimising pollution, there remains a very small chance that a low level of hydrocarbons may be spilled during the operation of machinery. The opportunity for this to occur is considered small due to refuelling occurring outside the site, the fact that there are a limited number of vehicles on site and no storage of fuel is allowed on site, as well as a short timeframe of works. Poured concrete will be used during the construction of the foundations, where piles will be filled with *in situ* concrete. There is therefore potential for uncured concrete and cement dust to enter the marine environment. However, during the construction phase of the project, wastewater will be connected to a pumping station on the beach to the south of the site boundary and from there all wastewater will be pumped to a treatment plant in Shankill. This will prevent any polluted water reaching the open water of Killiney Bay. The excavation of the site and regrading of slope during the construction phase will result in the exposure of unvegetated soil. There is the potential for this to wash into the sea during pluvial or wave overtopping events. Due to the distance from the site to nearest Natura 2000 sitesand the very large volume of water in Killiney Bay and the temporary and localised nature of the project, as well as the, the wide foraging area of terns the proposed works are not anticipated to have a significant impact on any of the QIs of the Natura 2000 sites within the Zone of Influence. **Groundwater** The small scale and temporary nature of the works paired with the underlying geology and insignificant pathways for impact result in no permanent impact expected via a Groundwater Pathway **Air** Excavations on site will be relatively minor, each Natura 2000 site is outside of the Zone of Influence for impactful operational air emissions. Impacts via an air pathway are not anticipated for the proposed development.	

Project Elements	Comment
	Operation Phase: During the operation phase of the project, wastewater will be connected to a pumping station on the beach and from there all wastewater will be pumped to a treatment plant at Shankill. The inclusion of non-return valves and sealed manholes will prevent a backflow of sewage during rare instances of wave overtopping.
Excavation requirements	The facility's foundations will extend below the frost zone, and will be approximately 0.5m - 0.75m below ground level, while drainage pipe trenches will range from 1.2m- 2m below ground level with variation depending on pipe falls and gradients. The slope between the new structure and the fencing at the beach side will be regraded.
Transportation requirements	Temporary Impacts: Levels of traffic to the site during the construction phase will be temporary in nature. All access to the site will be on pre-existing roads and transportation requirements will not affect Natura 2000 sites. Permanent Impacts: There will be no residual impact to traffic resulting from the proposed works.
Duration of construction, operation, decommissioning etc.	Works are expected to take approximately 25 weeks.
Other	Any materials excavated will be removed to a registered waste facility, by a licensed haulier.

6.2.8 Description of likely changes to the Natura 2000 sites

Potential Impact	Comments
Reduction of habitat area	There will be no reduction in habitat area for any of the Natura 2000 sites.
Disturbance to key species	The construction works will temporarily increase the noise level and disturbance along the surrounding coastline. However, no significant impacts are anticipated to key species given scale and temporary nature of the construction phase and distance from the Natura 2000 sites. There will be no permanent impacts.
Habitat or species fragmentation	No habitat or species fragmentation is likely as the project poses no restrictions to the habitats or species of the Natura 2000 sites.
Reduction in species density	There will be no temporary or permanent reduction in species density within any of the Natura 2000 sites, or on any QIs of these sites.
Changes in key indicators of conservation value (water quality etc.)	Potential temporary changes to key elements (i.e. water quality) of Natura 2000 sites are not anticipated.
Interference with the key relationships that define the structure of	There will be no interference with the key relationships that define the structure of the sites.

Potential Impact	Comments
the site	
Interference with key relationships that define the function of the site	There will be no interference with the key relationships that define the function of the sites.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Potential Impact	Indicators
Loss (Estimated percentage of lost area of habitat)	No Natura 2000 sites will experience a direct loss in habitat area.
Fragmentation	Fragmentation of habitat and/or species is not anticipated.
Disruption & disturbance	Disruption and/ or disturbance is not anticipated.
Change to key elements of the site (e.g. water quality etc.)	Potential temporary changes to key elements (i.e. water quality) of the Natura 2000 sites are not anticipated.

6.2.9 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is unknown

Following initial screening and based upon best scientific judgement, it is concluded that there will be no likely significant effects from the project on the any Natura 2000 sites either alone or in combination with any other plans or projects.

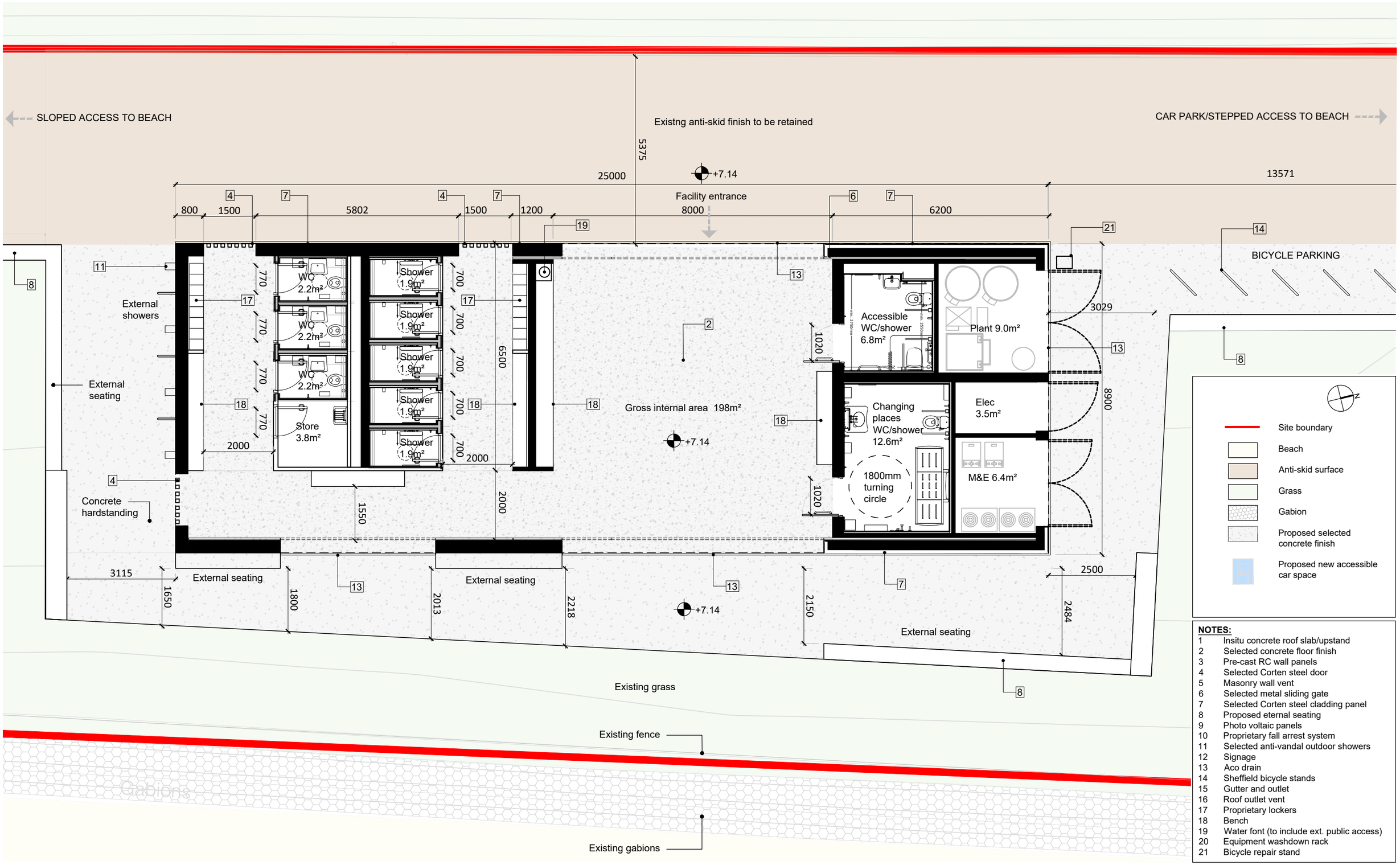
6.3 Concluding Statement

In carrying out this AA screening, mitigation measures have not been taken into account.

On the basis of the screening exercise carried out above, it can be concluded that the possibility of any significant impacts on any European Sites, whether arising from the project itself or in combination with other plans and projects, can be excluded beyond a reasonable scientific doubt on the basis of the best scientific knowledge available.

A Site Layout Plan

A.1



NOTES:

1 Insitu concrete roof slab/upstand
2 Selected concrete floor finish
3 Pre-cast RC wall panels
4 Selected Corten steel door
5 Masonry wall vent
6 Selected metal sliding gate
7 Selected Corten steel cladding panel
8 Proposed eternal seating
9 Photo voltaic panels
10 Proprietary fall arrest system
11 Selected anti-vandal outdoor showers
12 Signage
13 Aco drain
14 Sheffield bicycle stands
15 Gutter and outlet
16 Roof outlet vent
17 Proprietary lockers
18 Bench
19 Water font (to include ext. public access)
20 Equipment washdown rack
21 Bicycle repair stand

Rev.	Date	Drawn	Description
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

dlr
Comhairle Contae County Council

Job: Facility for Water Based Activities at Killiney Beach
Drg.: Ground Floor Plan
Drawing No.: 1914-DLR-ZZ-00-DR-A-1110

Scale @ A3 1:100
Date 24.05.2024
Job No. 1914
Drn. TW Chd. LM
Status PART 8
Rev. 01
CAD Ref. 1914-DLR-ZZ-00-DR-A-1110

Architects Department
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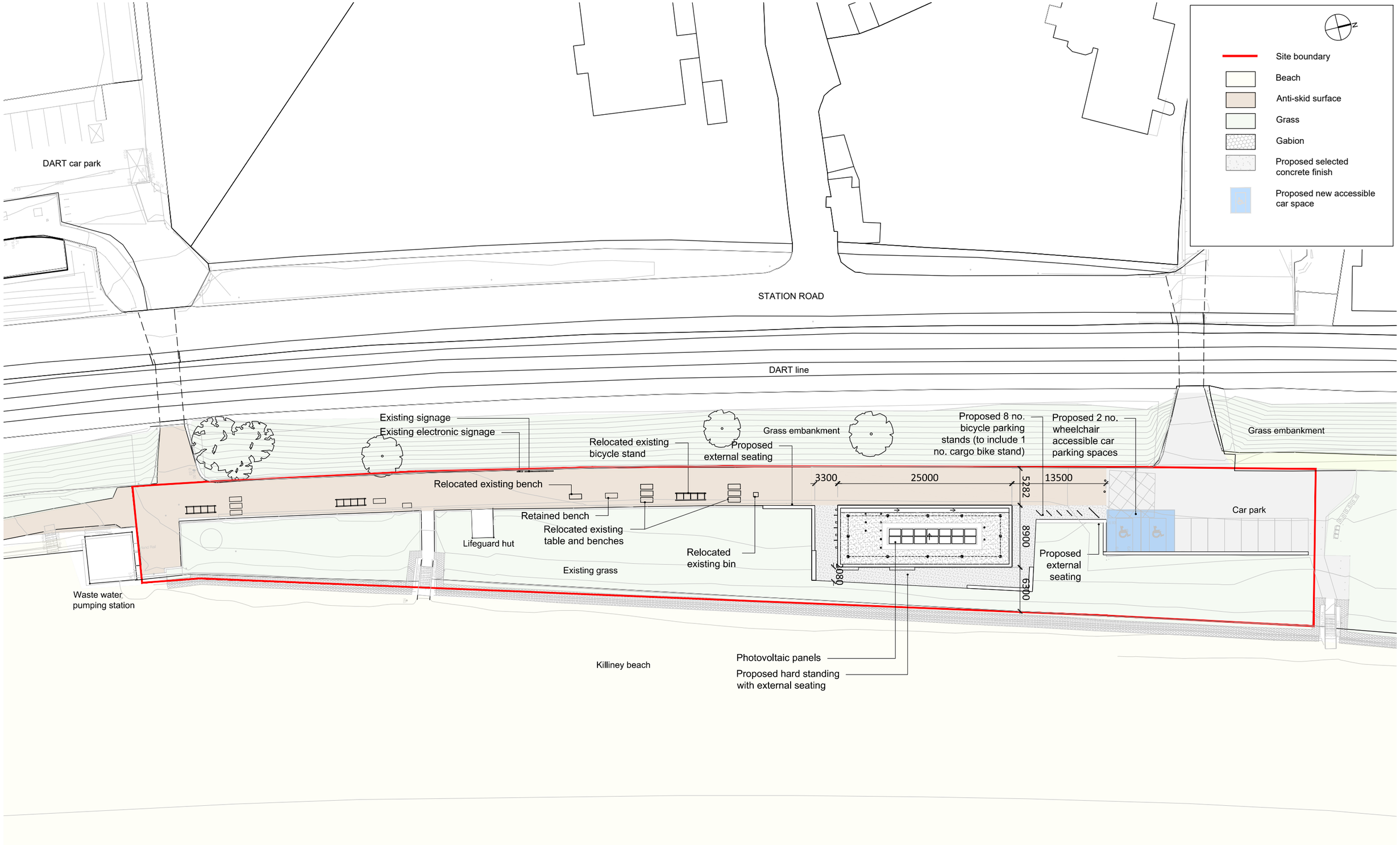
Phone (01)2054700 Fax (01)2300391



Rev.	Date	Drawn	Description
-	-	-	-
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-	-	-	-
-	-	-	-

dlr
Comhairle Contae County Council

Job
Facility for Water Based Activities at Killiney Beach

Drg.
Proposed Site Plan

Drawing No.
1914-DLR-ZZ-ZZ-DR-A-1102

Scale @ A3 1:500
Date 24.05.2024
Job No. 1914
Drn. TW Chd. LM

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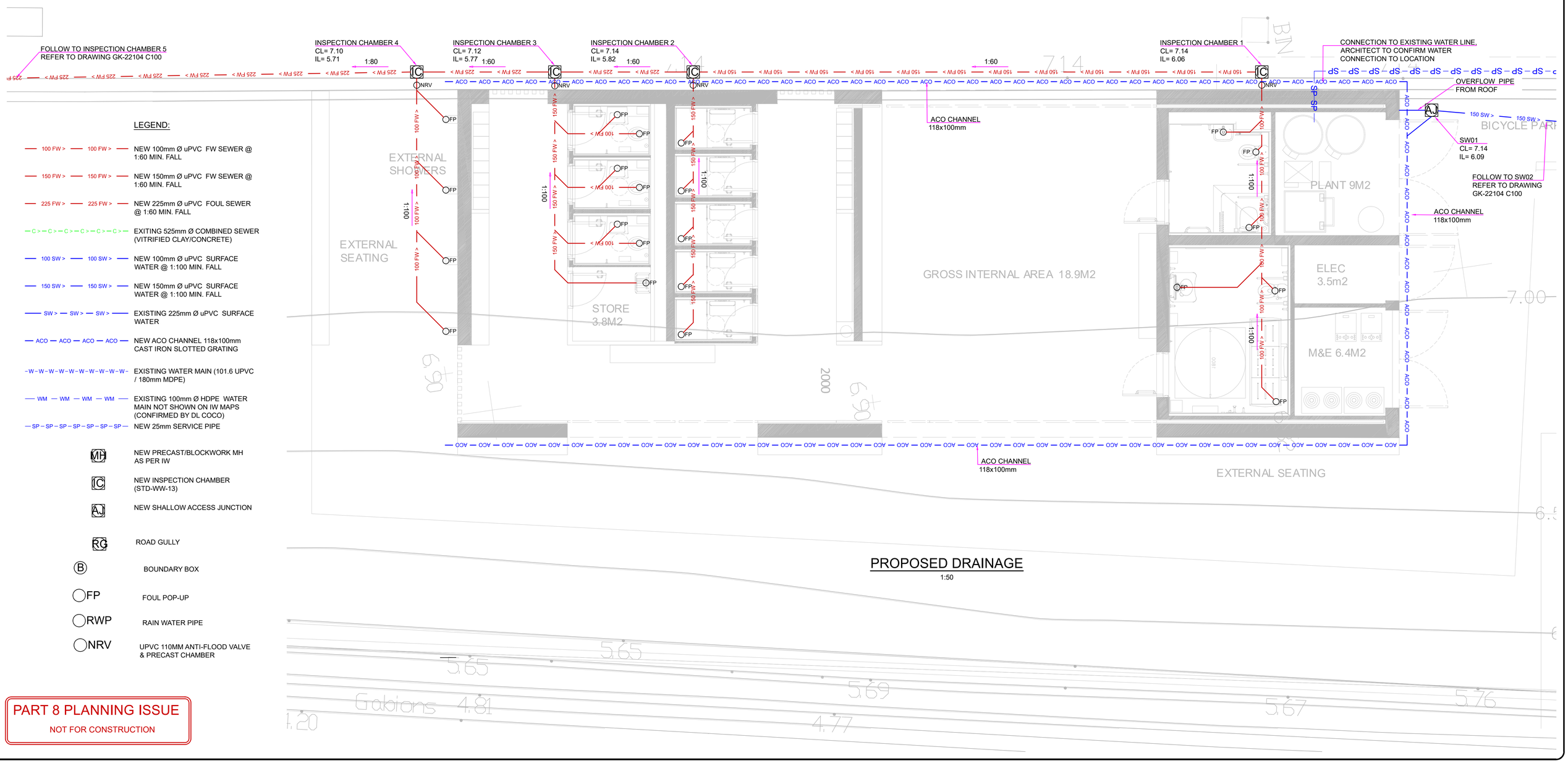
B Drainage layout

B.1 General area



PROPOSED DRAINAGE

1:50

LEGEND:

100 FW > 100 FW >	NEW 100mm Ø uPVC FW SEWER @ 1:60 MIN. FALL
150 FW > 150 FW >	NEW 150mm Ø uPVC FW SEWER @ 1:60 MIN. FALL
225 FW > 225 FW >	NEW 225mm Ø uPVC FOUL SEWER @ 1:60 MIN. FALL
C > C > C > C > C > C >	EXITING 525mm Ø COMBINED SEWER (VITRIFIED CLAY/CONCRETE)
100 SW > 100 SW >	NEW 100mm Ø uPVC SURFACE WATER @ 1:100 MIN. FALL
150 SW > 150 SW >	NEW 150mm Ø uPVC SURFACE WATER @ 1:100 MIN. FALL
SW > SW > SW >	EXISTING 225mm Ø uPVC SURFACE WATER
ACO ACO ACO ACO	NEW ACO CHANNEL 118x100mm CAST IRON SLOTTED GRATING
-W-W-W-W-W-W-W-W-W-W-	EXISTING WATER MAIN (101.6 UPVC / 180mm MDPE)
WM WM WM WM	EXISTING 100mm Ø HDPE WATER MAIN NOT SHOWN ON IW MAPS (CONFIRMED BY DL COCO)
SP SP SP SP SP SP SP SP	NEW 25mm SERVICE PIPE
MH	NEW PRECAST/BLOCKWORK MH AS PER IW
IC	NEW INSPECTION CHAMBER (STD-WW-13)
AJ	NEW SHALLOW ACCESS JUNCTION
RG	ROAD GULLY
B	BOUNDARY BOX
FP	FOUL POP-UP
RWP	RAIN WATER PIPE
NRV	UPVC 110MM ANTI-FLOOD VALVE & PRECAST CHAMBER

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P2	DMV	31.07.2023	NEW LAYOUT PROPOSAL
P3	DMV	15.08.2023	NEW LAYOUT APPROVED
P4	DMV	07.12.2023	NEW LAYOUT
P5	DMV	19.03.2024	NON-RETURN VALVE ADDED
PL1	DMV		ISSUE FOR PART 8 PLANNING

Scales AS SHOWN | A1 | Date DECEMBER 2023 | Drawn DMV | Checked

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FOR WATER SPORTS
KILLINEY BEACH

DRG. TITLE
PROPOSED BUILDING DRAINAGE CONNECTIONS

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ph 01 8749 322
email info@gkce.ie
www.gkce.ie

DRAWING NUMBER	GK22104-C101	REV. PL1

B.2 Internal drainage layout

LEGEND:

100 FW > 100 FW >	NEW 100mm Ø uPVC FW SEWER @ 1:60 MIN. FALL
150 FW > 150 FW >	NEW 150mm Ø uPVC FW SEWER @ 1:60 MIN. FALL
225 FW > 225 FW >	NEW 225mm Ø uPVC FOUL SEWER @ 1:60 MIN. FALL
C > C > C > C > C > C >	EXITING 525mm Ø COMBINED SEWER (VITRIFIED CLAY/CONCRETE)
100 SW > 100 SW >	NEW 100mm Ø uPVC SURFACE WATER @ 1:100 MIN. FALL
150 SW > 150 SW >	NEW 150mm Ø uPVC SURFACE WATER @ 1:100 MIN. FALL
SW > SW > SW >	EXISTING 225mm Ø uPVC SURFACE WATER
ACO ACO ACO ACO	NEW ACO CHANNEL 118x100mm CAST IRON SLOTTED GRATING
-W-W-W-W-W-W-W-W-W-W-	EXISTING WATER MAIN (101.6 UPVC / 180mm MDPE)
WM WM WM WM	EXISTING 100mm Ø HDPE WATER MAIN NOT SHOWN ON IW MAPS (CONFIRMED BY DL COCO)
SP SP SP SP SP SP SP	NEW 25mm SERVICE PIPE
MH	NEW PRECAST/BLOCKWORK MH AS PER IW
IC	NEW INSPECTION CHAMBER (STD-WW-13)
AJ	NEW SHALLOW ACCESS JUNCTION
RG	ROAD GULLY
B	BOUNDARY BOX
S	SILT TRAP
FP	FOUL POP-UP
RWP	RAIN WATER PIPE
NRV	UPVC 110MM ANTI-FLOOD VALVE & PRECAST CHAMBER

EXISTING MH
CL= 6.68
IL= 4.50

1:60

INSPECTION CHAMBER 5
CL= 6.72
IL= 4.61

1:80

INSPECTION CHAMBER 4
CL= 7.10
IL= 5.71

INSPECTION CHAMBER 3
CL= 7.12
IL= 5.77

INSPECTION CHAMBER 2
CL= 7.14
IL= 5.82

1:60

INSPECTION CHAMBER 1
CL= 7.14
IL= 6.06

SEE DRAWING GK22104-C101 FOR DETAILED DRAINAGE LAYOUT AT THE FACILITY

COME FROM THE BUILDING
REFER TO DRAWING
GK-22104 C101

CONNECTION TO EXISTING WATER LINE, ARCHITECT TO CONFIRM WATER CONNECTION TO LOCATION

150 SW >
1:60

CONNECTED TO EXISTING PUBLIC SW MANHOLE

SW01
CL= 7.14
IL= 6.09

SW02
CL= 6.79
IL= 6.75

SITE BOUNDARY

EXISTING SW MANHOLE

EXISTING SW MANHOLE

EXISTING SW MANHOLE

EXISTING SW MANHOLE

EXISTING WATER MAIN

EXISTING SW SEWER

PROPOSED BICYCLE PARKING

Access to carpark from Strathmore Road underpass

Existing tarmac finish

Access to beach via steps

Existing bicycle parking

Footpath

Kerb Bottom

Fence

Building

Land Drain

Centreline 10.14

Slope Bottom

Pipe Top

Bench

Sign

PROPOSED DRAINAGE LAYOUT

1:50

IRISH GRID CO-ORDINATES
EASTINGS X: 326008
NORTHINGS Y:224774

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Rev	By	Date	Description
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P2	DMV	31.07.2023	NEW LOCATION PROPOSAL AND DRAINAGE
P3	DMV	15.08.2023	NEW LOCATION APPROVED
P4	DMV	07.12.2023	NEW LAYOUT
PL1	DMV	02.04.2024	ISSUE FOR PART 8 PLANNING

Scales AS SHOWN | A1 | Date DECEMBER 2023 | Drawn DMV | Checked

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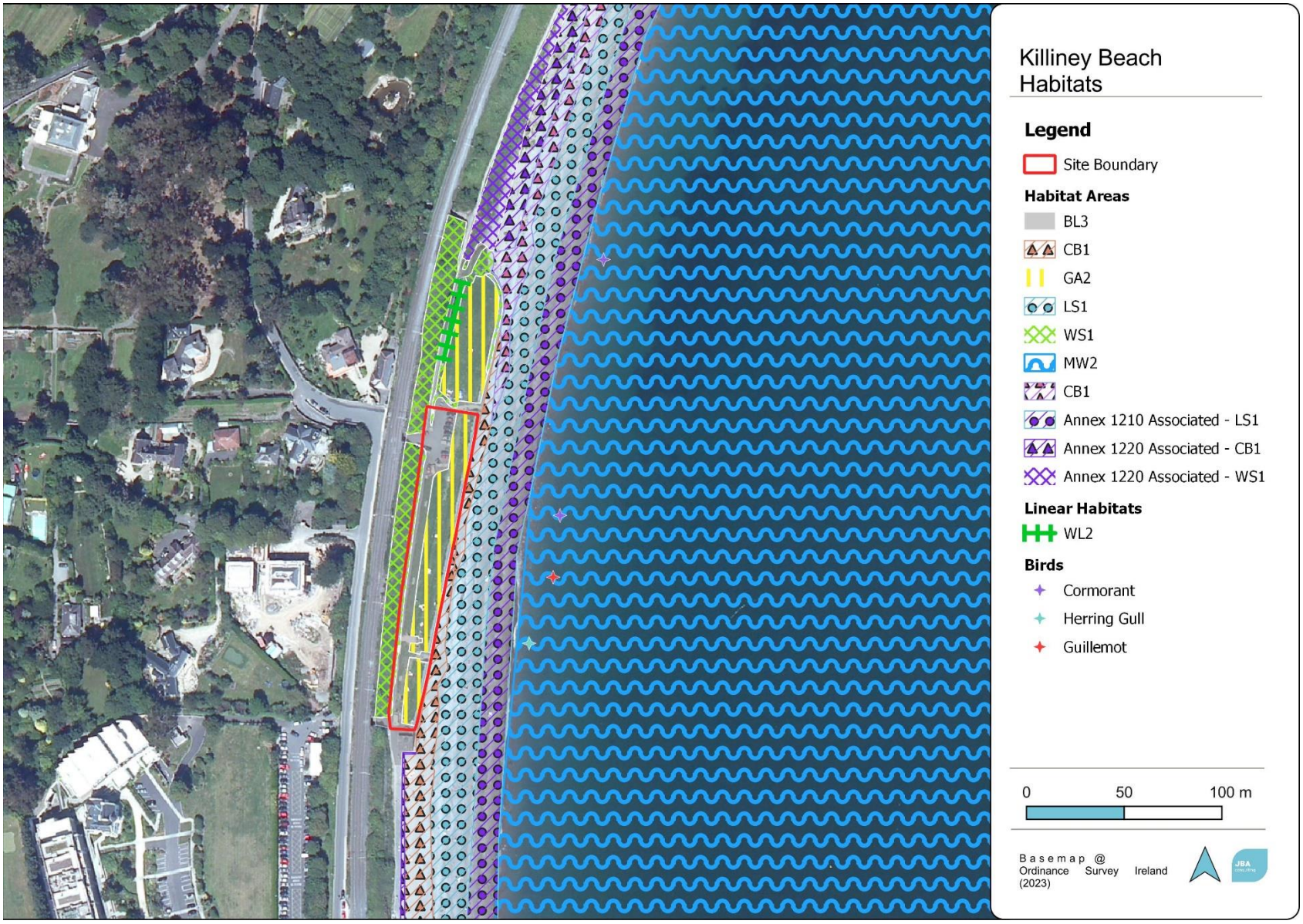
www.gkce.ie

DRAWING NUMBER GK22104-C100 | REV. PL1

C Habitat Map


Killiney Beach
Habitats
Legend
Site Boundary
Habitat Areas
BL3
CB1
GA2
LS1
WS1
MW2
CB1
Annex 1210 Associated - LS1
Annex 1220 Associated - CB1
Annex 1220 Associated - WS1
Linear Habitats
WL2
Birds
Cormorant
Herring Gull
Guillemot
0
50
100 m
Basemap @ Ordinance Survey Ireland (2023)

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