ALTEMAR
Marine & Environmental Consultancy

Ecological Impact Assessment (EcIA) for a proposed mixed-use development at Stradbrook Road, Mountashton, Blackrock, Co. Dublin.

8th July 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Tetrarch Residential Ltd.

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Introduction

Background

Ecological Impact Assessment (EcIA) has been defined as '*the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components*' (Treweek, 1999). "*The purpose of EcIA is to provide decision-makers with clear and concise information about the likely ecological effects associated with a project and their significance both directly and in a wider context. Protecting and enhancing biodiversity and landscapes and maintaining natural processes depends upon input from ecologists and other specialists at all stages in the decision-making and planning process; from the early design of a project through implementation to its decommissioning*" (IEEM, 2010).

The following EcIA has been prepared by Altemar Ltd. at the request of Tetrarch Residential Ltd. The project relates to a proposed mixed-use development at Stradbrook Road, Mountashton, Blackrock, Co. Dublin.

Study Objectives

The objectives of this EcIA are to:

1. Outline the project and any alternatives assessed;
2. Undertake a baseline ecological feature, resource and function assessment of the site and zone of influence;
3. Assess and define significance of the direct, indirect and cumulative ecological impacts of the project during its construction, lifetime and decommissioning stages;
4. Refine, where necessary, the project and propose mitigation measures to remove or reduce impacts through sustainable design and ecological planning; and
5. Suggest monitoring measures to follow up the implementation and success of mitigation measures and ecological outcomes.

The following guidelines have been used in preparation of this EcIA:

- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002);
- Guidelines on the information to be contained in EIAR (EPA, 2022);
- Guidelines for Ecological Impact Assessment (EcIA) (IEEM, 2019);
- Advice Notes on current practice in the preparation of EIS's (EPA, 2003);
- Institute of Ecology and Environmental Management Guidelines for EIA (IEEM, 2005).

A separate Appropriate Assessment Screening and Natura Impact Statement, in accordance with the requirements of Article 6(3) of the EU Habitats Directive, has been produced by Altemar to identify potential impacts of the development on Natura 2000 sites, Annex species or Annex habitats. In summary, it can be objectively concluded that the proposed development, individually or in-combination with other plans or projects, will not adversely affect the integrity of any European site.

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include: residential; infrastructural; renewable; oil & gas; private industry; Local Authorities; EC projects; and, State/semi-State Departments. Bryan Deegan, the managing director of Altemar, is an Environmental Scientist and Marine Biologist with 27 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries Ireland as the sole "External Expert" to environmentally assess internal and external projects. He is also chair of an internal IFI working group on environmental assessment. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Ecological Impact Assessment (EcIA).

Project Description

The proposed mixed-use development at a site of some 0.4813 ha on Stradbrook Road, Mountashton, Blackrock, Co. Dublin will comprise: the demolition of existing buildings and surface car park, and the construction of: 108 No. Build-to-Rent serviced residential senior living apartments (83 No. 1-bed apartments and 25 No. 2-bed apartments), with balconies / winter gardens at all elevations, across 2 No. blocks ranging between 3 to 7-storeys with set back at sixth-floor level and additional basement . The proposal also includes for 148 No. secure bicycle parking spaces, 55 No. underground car parking spaces, a two-way vehicular entrance ramp and bin storage, circulation areas and associated plant at basement level; a self-contained office unit, a residential staff management suite, resident's facilities, residents' communal amenity rooms, and residents' communal open space, as well as 13 No. surface car parking spaces (incl. 1 No. accessible commercial car parking space and 12 No. car parking spaces for use by the adjoining creche (incl. 1 No. accessible)), 24 No. secure cycle spaces within separate bike store, separate bin store for office use, 30 No. short-term bicycle parking spaces, and 3 No. ESB substations at ground floor level; additional communal amenity rooms at first, second, third, fourth and fifth-floor levels; roof gardens / terraces at third, fourth and sixth-floor levels; PV panels on third, fourth and sixth-floor roof-level; and associated site landscaping, lighting and servicing, and all associated works above and below ground.

Landscape

The proposed landscape masterplan has been prepared by Murray & Associates to accompany this planning application. This landscape masterplan is demonstrated in Figure 6.

Arborist

An Arboricultural Report has been prepared by Murray & Associates to accompany this planning application. The tree survey plan, tree removals plan, and tree protection plan are demonstrated in Figures 7 – 9.

Drainage

An Engineering Services Report has been prepared by Cronin & Sutton Consulting Engineers (CS Consulting) to accompany this planning application. This report outlines the following foul and surface water drainage strategy for the proposed development:

Foul Drainage

Existing Foul Arrangements

'*Irish Water drainage records indicate an existing 225mm diameter PVC pipe on Stradbrook Road approximately 85m to the north of the subject site flowing from south to north towards Rowan's Park Road (R827).*

Proposed Outfall Works to Stradbrook Road

The proposed development shall require a new 225mm foul sewer to traverse Stradbrook Road from the subject site to the existing Irish Water manhole further north. In discussions with Irish Water, they confirmed that they shall carry out the entirety of these external works with the respective costings agreed in the future connection agreement made between Irish Water and the Developer post the grant of planning.

Proposed Effluent Generation

Based on Irish Water guidelines, the proposed development shall generate the following foul effluent:

For the residential units:

- *446l/ residential unit (based on 2.7 persons per residential unit x 150l/person/day, + a 10% increase factor).*
- *446l/day/residential unit x 108 units = 48,168 l/day = 48.2 m^3/day;*
- *0.56 l/sec Average flow (1 DWF);*
- *3.36 l/sec Peak Flow (6 x DWF).*

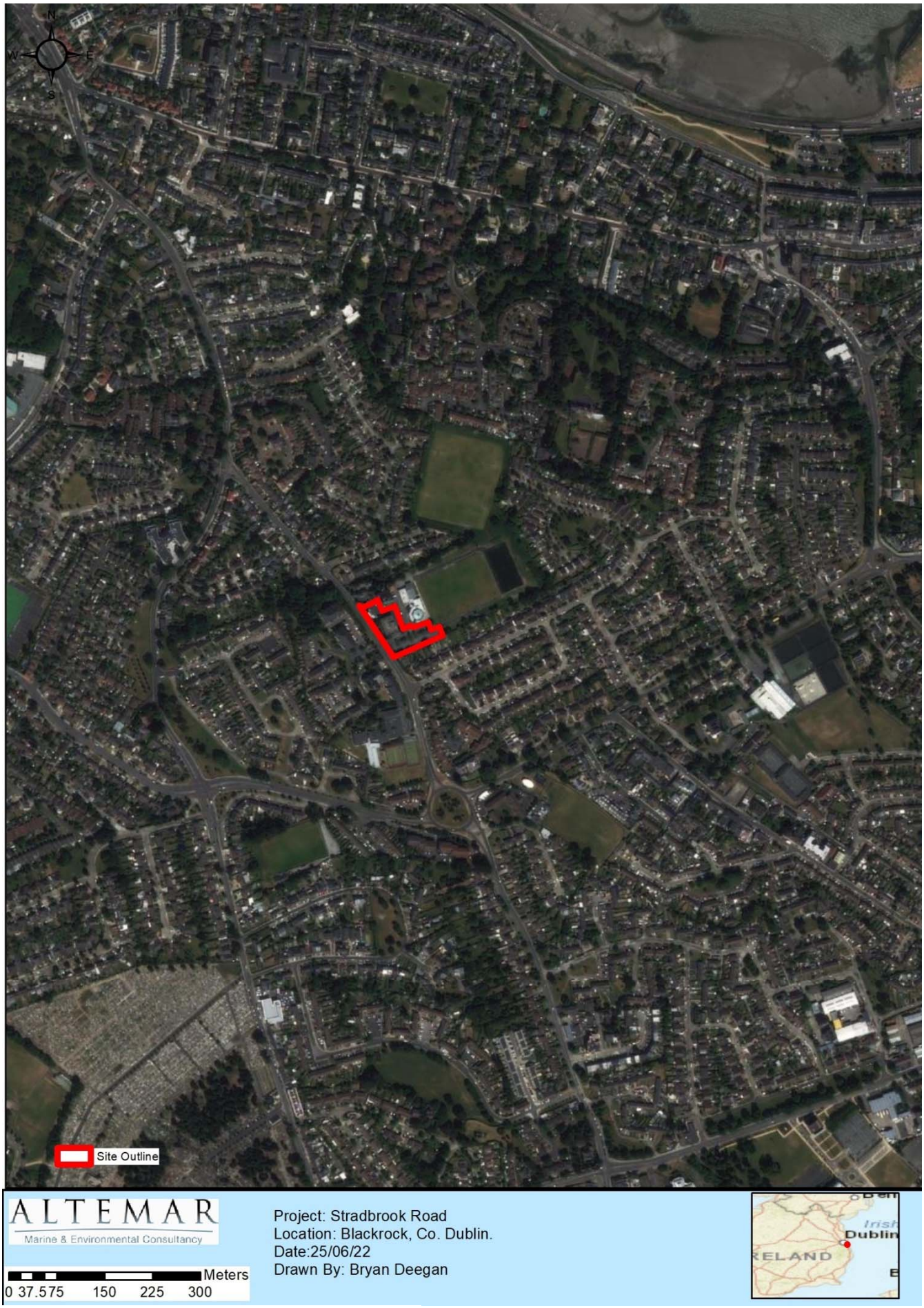

Figure 1. *Proposed site outline and location*

Figure 2. *Proposed site outline*

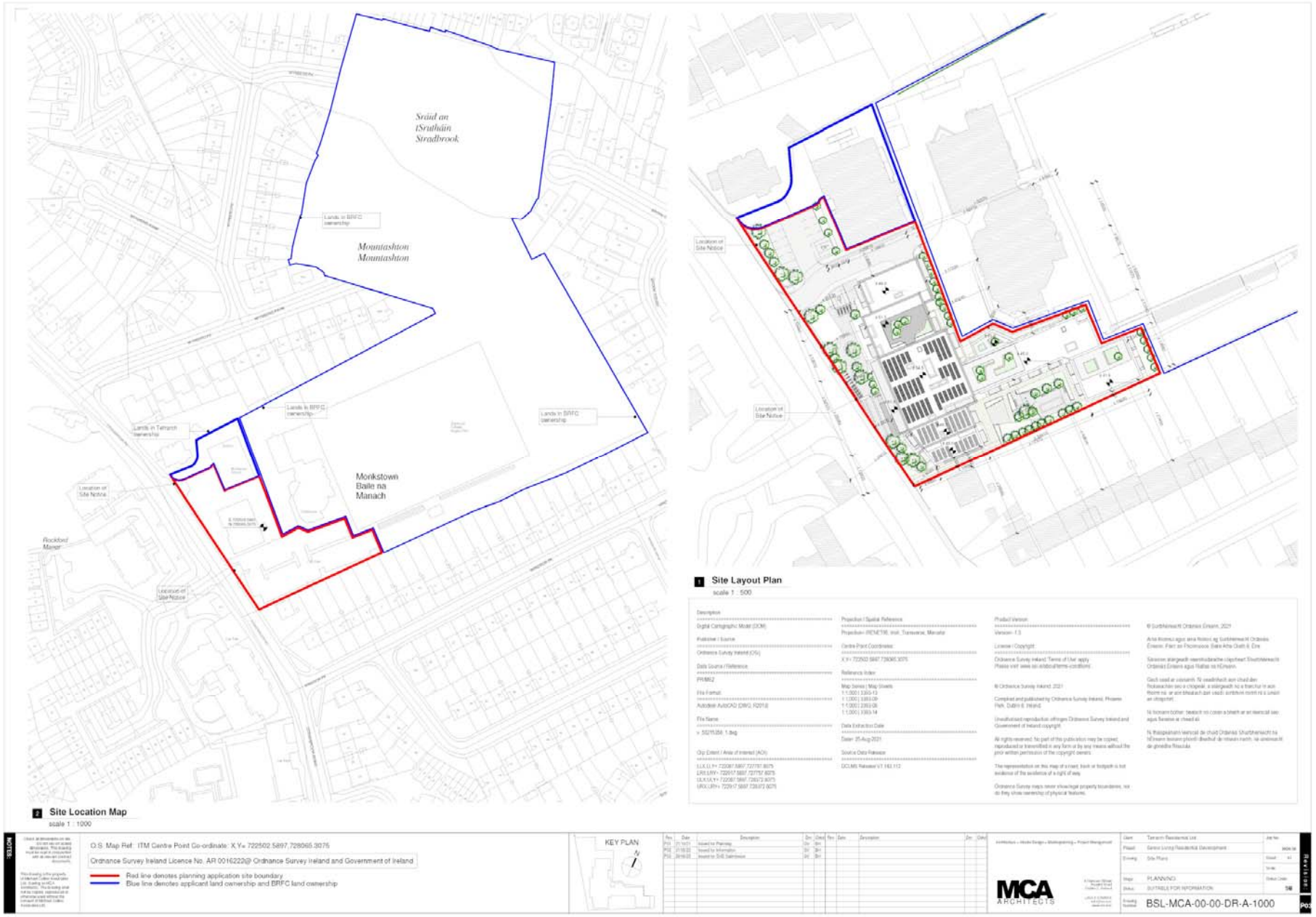

Figure 3. *Proposed site outline*

Figure 4. *Proposed groundfloor plan*

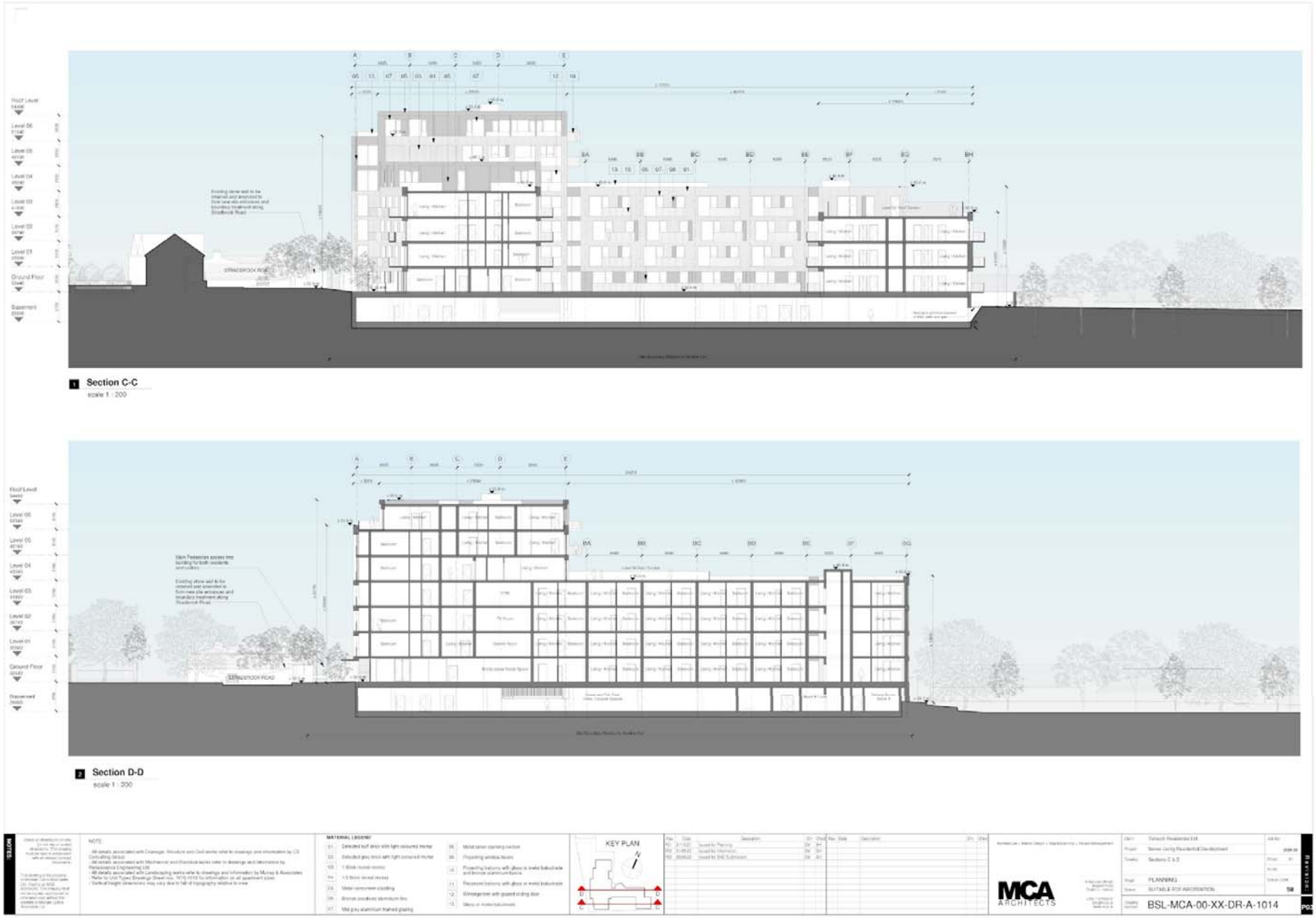

Figure 5. *Sections C & D*

Figure 6. *Proposed landscape masterplan*

Figure 7. *Tree Inventory Plan*

Figure 8. *Tree Impact Plan*

Proposed Foul Drainage Arrangements

The drainage network for the development shall be in accordance with Part H of the Building Regulations and to the requirements and specifications of Irish Water.

A Pre-Connection Enquiry has been submitted to Irish Water and we received a favourable response in regard to a foul water connection.'

In discussion with CS Consulting the foul water ultimately discharges to Ringsend WwTP.

Stormwater Drainage

Existing Storm Water Arrangements

'Following a review of Irish Water drainage records, there is an existing 225mm diameter stormwater drain flowing north on Stradbrook Road towards Rowan's Park Road (R827). The storm line increases in size to a 300mm and 450mm diameter pipe as it flows north.'

Proposed Storm Water Arrangements

'The proposed development shall require the demolition of the existing commercial building and car park facilities on site and the removal of the existing storm water system serving these elements of the development site. The proposed new storm water drainage arrangements shall be designed and carried out in accordance with:

i) The Greater Dublin Strategic Drainage Study Volume 2,

ii) The Greater Dublin Regional Code of Practice for Drainage Works,

iii) BS EN – 752:2008, Drains & Sewer Systems Outside Buildings,

iv) Part H, Building Drainage of The Building Regulation.'

Proposed Attenuation Arrangements

In accordance with the requirements of the local authority all new developments are to limit their storm water discharge to 2 l/s/Ha or to Q-Bar whichever is the greater. The sites area of 0.48 ha confirms a limited discharge of 2.0 l/s from the applicant lands.

As the storm water shall connect to the re-routed stormwater sewer and 2.0 l/s is used as the restriction value for the development site. The attenuation volume to be retained on site for a 1–in–100-year extreme storm event, increased by 20% for the predicated effects of climate change indicates that a volume of 240m3 shall be required to be provided. Therefore, all storm water events shall restrict flow from the development to 2.0 l/s by way of using a flow control device. The attenuation volume shall be provided in an attenuation tank sized to retain storm volumes predicated.'

In discussion with CS Consulting the surface water ultimately discharges to Brewery Stream which enters the marine environment at Monkstown, Co. Dublin. The proposed drainage layout and basement plan are demonstrated in Figures 7 & 8.

Lighting

A Public Lighting Report has been prepared by Fallon Design M & E Engineering to accompany this planning application. The proposed lighting plan is demonstrated in Figure 12.

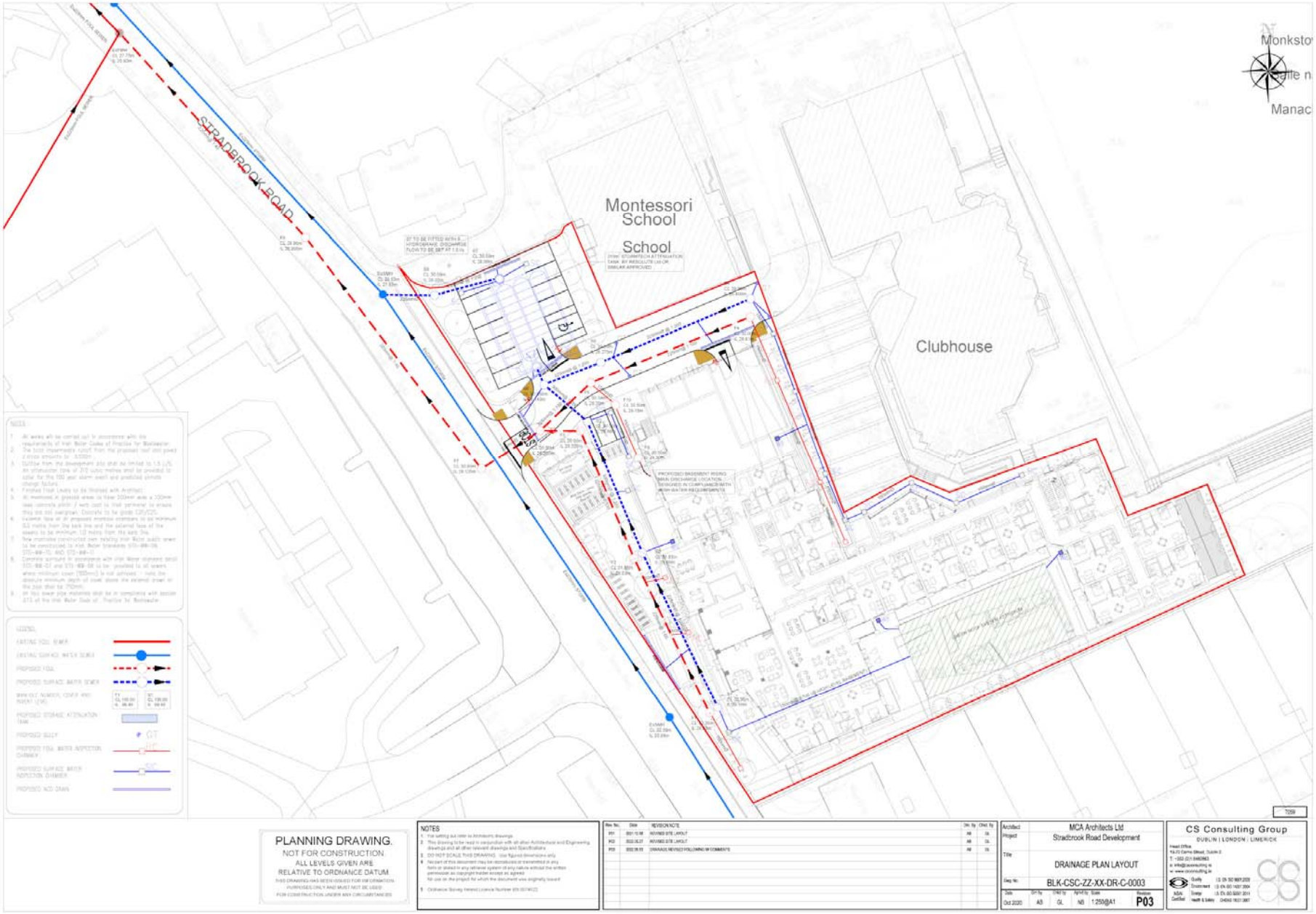

Figure 9. *Ground floor – foul and surface water drainage layout*

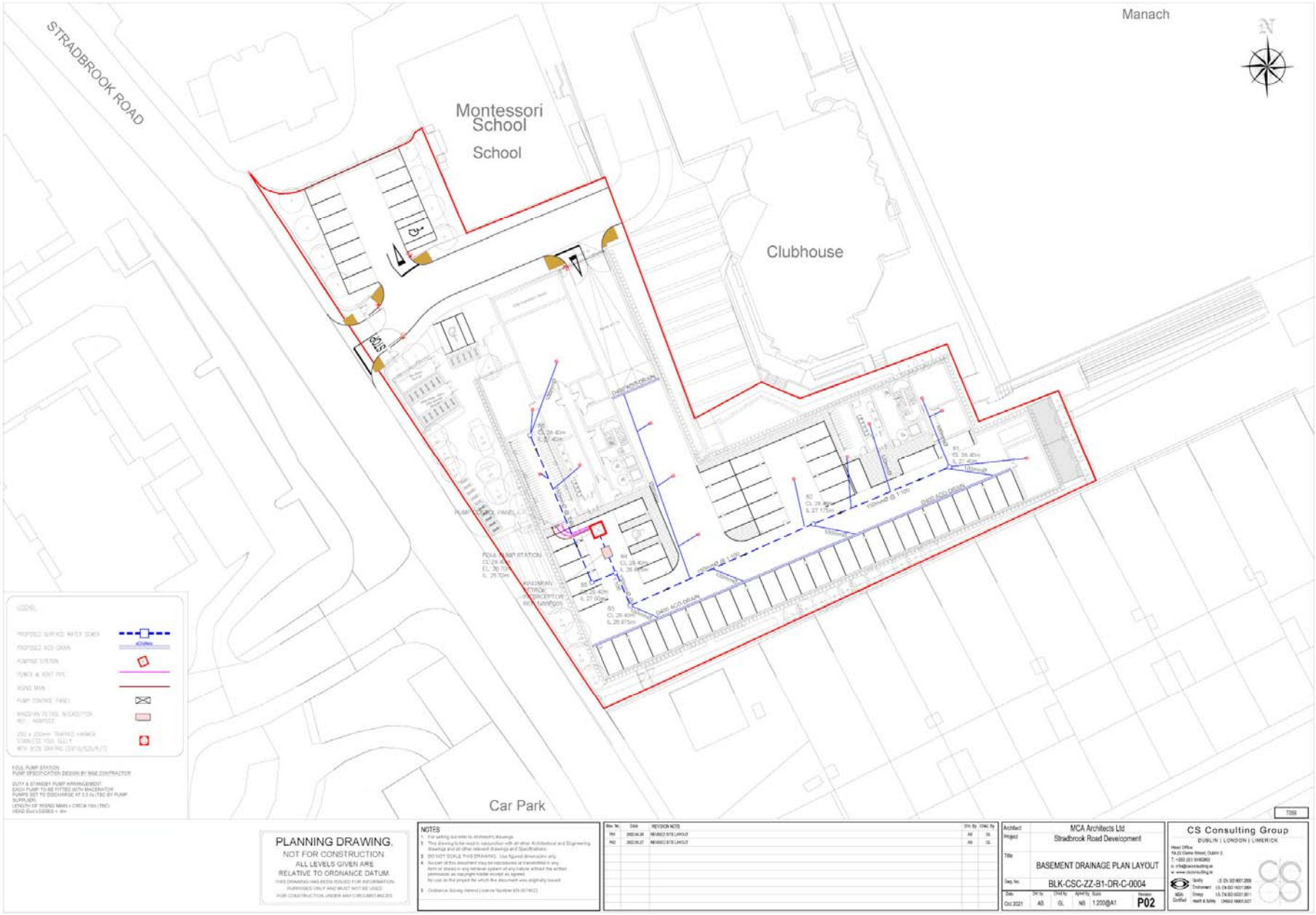

Figure 10. *Basement drainage plan*

Figure 12. *Site lighting installation – paths & ducting*

Ecological Assessment Methodology

Desk Study

A desk study was undertaken to gather and assess ecological data prior to undertaking fieldwork elements. Sources of datasets and information included:

- The National Parks and Wildlife Service
- National Biological Data Centre
- Satellite, aerial and 6" map imagery
- ESRI (Arcmap)

A provisional desk-based assessment of the potential species and habitats of conservation importance was carried out in 2021. Altemar assessed the project, the proposed construction methodology and the operation of the proposed development. It was determined that the proposed development had the potential to impact beyond the site outline and into the surrounding environment through dust and surface water emissions, in the absence of mitigation measures. As the surface water network within the Stradbrook Road outfalls to the Brewery/Stradbrook Stream and ultimately discharges to the marine environment, there is potential for downstream impacts including impacts on designated sites within the immediate vicinity of Monkstown. As a result, the potential Zone of Influence (ZoI) would be seen to be restricted to the site outline with potential for minor localised noise and light impacts during construction and for downstream impacts via the Stradbrook Road drainage. Drainage from site, into both foul and surface water public networks, in addition to surface runoff entering the stream during construction and operation would be seen as the main pathways for impacts beyond the site outline.

Spatial Scope and Zone of Influence

As outlined in CIEEM (2018) '*The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries.*' In line with best practice guidance an initial zone of influence be set at a radius of 2km for non-linear projects (IEA, 1995).

The proposed development site is located on a brownfield site within a densely populated area of Dublin. Given the nature of the proposed works (demolition, excavation site clearance, and construction), it is considered that there is potential for impact on the Brewery/Stradbrook Stream. Further, there is a direct inhydrological pathway to this watercourse via the proposed surface water drainage strategy. After attenuation on-site, surface water will be directed to the Stradbrook Road network, which leads to the Brewery Stradbrook Stream, which in turn outfalls to the marine environment at Dublin Bay. In the absence of mitigation measures, there is the potential for impacts on designated conservation sites located within South Dublin Bay via dust and contaminated surface water runoff during construction and operational phases of development.

There is an indirect hydrological pathway to marine-based conservation sites via the proposed foul wastewater drainage strategy. Foul wastewater will be directed to an existing public combined network, which in turn discharges to Ringsend Wastewater Treatment Plant (WwTP) for treatment. Any silt or pollutants will be treated along this network.

Due to the limited temporal and geographical scale of the project, within an urban environment, it is considered that, in the absence of mitigation, the impacts of the proposed development has the potential to extend beyond the site outline via surface water runoff in addition to mammal and avian activity where the proposed site may form part of a larger territorial range. The project would also involve demolition, site clearance, excavation and construction works, which may impact beyond the site through disturbance and light impacts, albeit within an urban environment.

Field Survey

Field surveys of the proposed development site were carried out by Altemar Ltd. on the 23rd & 24th June 2022.

Survey Limitations

The surveys covered appropriate seasons for flora, bat and habitat assessments. However, the mammal assessment was outside the optimal survey season for mammal surveys. However, the survey area consists primarily of built land with small areas of scrub and treelines. All areas of the site including scrub areas are within a managed site and were easily accessible. No limitations are seen in relation to the surveys carried out in relation to the ecological assessment on site.

Consultation

The National Parks and Wildlife Service (NPWS) were consulted in relation to species and sites of conservation interest. Data of rare and threatened species were acquired from NPWS. The National Biological Data Centre records were consulted for species of conservation significance.

Impact Assessment Significance Criteria

This section of the EcIA examines the potential causes of impact that could result in likely significant effects to the species and habitats that occur within the ZOI of the proposed development. These impacts could arise during either the construction or operational phases of the proposed development. The following terms are derived from EPA EIAR Guidance (2022) and are used in the assessment to describe the predicted and potential residual impacts by the construction and operation of the proposed development.

Table 1a. Magnitude of impact and typical descriptions (EPA 2022)

Magnitude of effect (change)		Typical description
High	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Medium	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial effect on attribute or a reduced risk of negative effect occurring
Negligible	Adverse	Very minor loss or alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.

Importance	Ecological Valuation
International	Sites, habitats or species protected under international legislation e.g. Habitats and Species Directive. These include, amongst others: SACs, SPAs, Ramsar sites, Biosphere Reserves, including sites proposed for designation, plus undesignated sites that support populations of internationally important species.
National	Sites, habitats or species protected under national legislation e.g. Wildlife Act 1976 and amendments. Sites include designated and proposed NHAs, Statutory Nature Reserves, National Parks, plus areas supporting resident or regularly occurring populations of species of national importance (e.g. 1% national population) protected under the Wildlife Acts, and rare (Red Data List) species.
Regional	Sites, habitats or species which may have regional importance, but which are not protected under legislation (although Local Plans may specifically identify them) e.g. viable areas or populations of Regional Biodiversity Action Plan habitats or species.

Importance	Ecological Valuation
Local/County	Areas supporting resident or regularly occurring populations of protected and red data listed-species of county importance (e.g. 1% of county population), Areas containing Annex I habitats not of international/national importance, County important populations of species or habitats identified in county plans, Areas of special amenity or subject to tree protection constraints.
Local	Areas supporting resident or regularly occurring populations of protected and red data listed-species of local importance (e.g. 1% of local population), Undesignated sites or features which enhance or enrich the local area, sites containing viable area or populations of local Biodiversity Plan habitats or species, local Red Data List species etc.
Site	Very low importance and rarity. Ecological feature of no significant value beyond the site boundary

Quality of Effects	Effect Description
Negative /Adverse Effect	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
Neutral Effect	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Positive Effect	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).

Significance of Effect	Description of Potential Effect
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable2 changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.

Duration and Frequency of Effect	Description
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year
Short-term	Effects lasting one to seven years.
Medium-term	Effects lasting seven to fifteen years.
Long-term	Effects lasting fifteen to sixty years.
Permanent	Effects lasting over sixty years
Reversible	Effects that can be undone, for example through remediation or restoration

Describing the Probability of Effects	Description
Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Results

Proximity to Designated Conservation Sites

Designated conservation sites (National and international) within 15km of the proposed development are seen in Figures (13-16) and Table 4. It should be noted that the proposed development site is not within a designated conservation area. The closest SAC is South Dublin Bay SAC, which is 0.2 km from the proposed development (Figure 13). The nearest SPA to the proposed development site is the South Dublin Bay and River Tolka Estuary SPA which is located 0.2 km from the subject site (Figure 14). There are no designated Natural Heritage Areas (NHA) within a 15km radius. However, the nearest Proposed NHA (South Dublin Bay) is 0.2km from the site (Figure 15). The closest RAMSAR Site is Sandymount Strand/Tolka Estuary at 0.2km (Figure 16). Watercourses and designated conservation sites located proximate to the proposed development are demonstrated in Figures 17 – 21. It should be noted that this stream is also called the Brewery Stream (WFD data Figures 17-21).

Table 21. Natura 2000 sites within 15km of the proposed site

Site Code	NATURA 2000 Site	Distance
Special Areas of Conservation		
IE000210	South Dublin Bay SAC	0.9 km
IE003000	Rockabill to Dalkey Island SAC	4.7 km
IE000206	North Dublin Bay SAC	6.3 km
IE000713	Ballyman Glen SAC	8.7 km
IE001209	Knocksink Wood SAC	8.9 km
IE002122	Wicklow Mountains SAC	9.6 km
IE000202	Howth Head SAC	9.9 km
IE000714	Bray Head SAC	11.3 km
IE000199	Baldoyle Bay SAC	11.9 km
IE002193	Ireland's Eye SAC	14.2 km
IE001209	Glenasmole Valley SAC	14.3 km
Special Protection Area		
IE004024	South Dublin Bay and River Tolka Estuary SPA	0.9 km
IE004172	Dalkey Islands SPA	4.6 km
IE004006	North Bull Island SPA	6.3 km
IE004113	Howth Head Coast SPA	10.8 km
IE004040	Wicklow Mountains SPA	9.9 km
IE004016	Baldoyle Bay SPA	11.9 km
IE004117	Ireland's Eye SPA	13.7 km

Table 32. National and international conservation sites within 15km of the proposed development

Status	Site Name	Distance
Ramsar	Sandymount Strand/Tolka Estuary	0.9 km
Ramsar	North Bull Island	6.3 km
Ramsar	Baldoyle Bay	11.9 km
Proposed NHA	South Dublin Bay	0.9 km
Proposed NHA	Dalkey Coastal Zone and Killiney Hill	2.2 km
Proposed NHA	Booterstown Marsh	3.3 km
Proposed NHA	Loughlinstown Woods	5.0 km
Proposed NHA	Fitzsimon's Wood	5.1 km
Proposed NHA	North Dublin Bay	6.3 km
Proposed NHA	Dolphins, Dublin Docks	6.4km
Proposed NHA	Ballybetagh Bog	7.4 km
Proposed NHA	Grand Canal	8.0 km
Proposed NHA	Royal Canal	8.4 km
Proposed NHA	Ballyman Glen	8.7 km
Proposed NHA	Knocksink Wood	8.9 km
Proposed NHA	Howth Head	9.9 km
Proposed NHA	Powerscourt Woodland	10.7 km

Status	Site Name	Distance
Proposed NHA	Baldoyle Bay	11.9 km
Proposed NHA	Bray Head	11.3 km
Proposed NHA	Dodder Valley	11.2 km
Proposed NHA	Dargle River Valley	11.2 km
Proposed NHA	Great Sugar Loaf	12.3 km
Proposed NHA	Santry Demense	13.4 km
Proposed NHA	Glencree Valley	13.5 km
Proposed NHA	Kilmacanoge Marsh	13.6 km
Proposed NHA	Glenasmole Valley	13.9km
Proposed NHA	Ireland's Eye	14.2 km
Proposed NHA	Liffey Valley	14.6 km
Proposed NHA	Sluice River Marsh	14.8 km

Habitats and Species

Site assessments were carried out on the 23rd & 24th June 2022. Habitats within the proposed site were classified according to Fossitt (2000) (Figure 22). Bat surveys were carried out on the on the 23rd & 24th June 2022 (Appendix I).

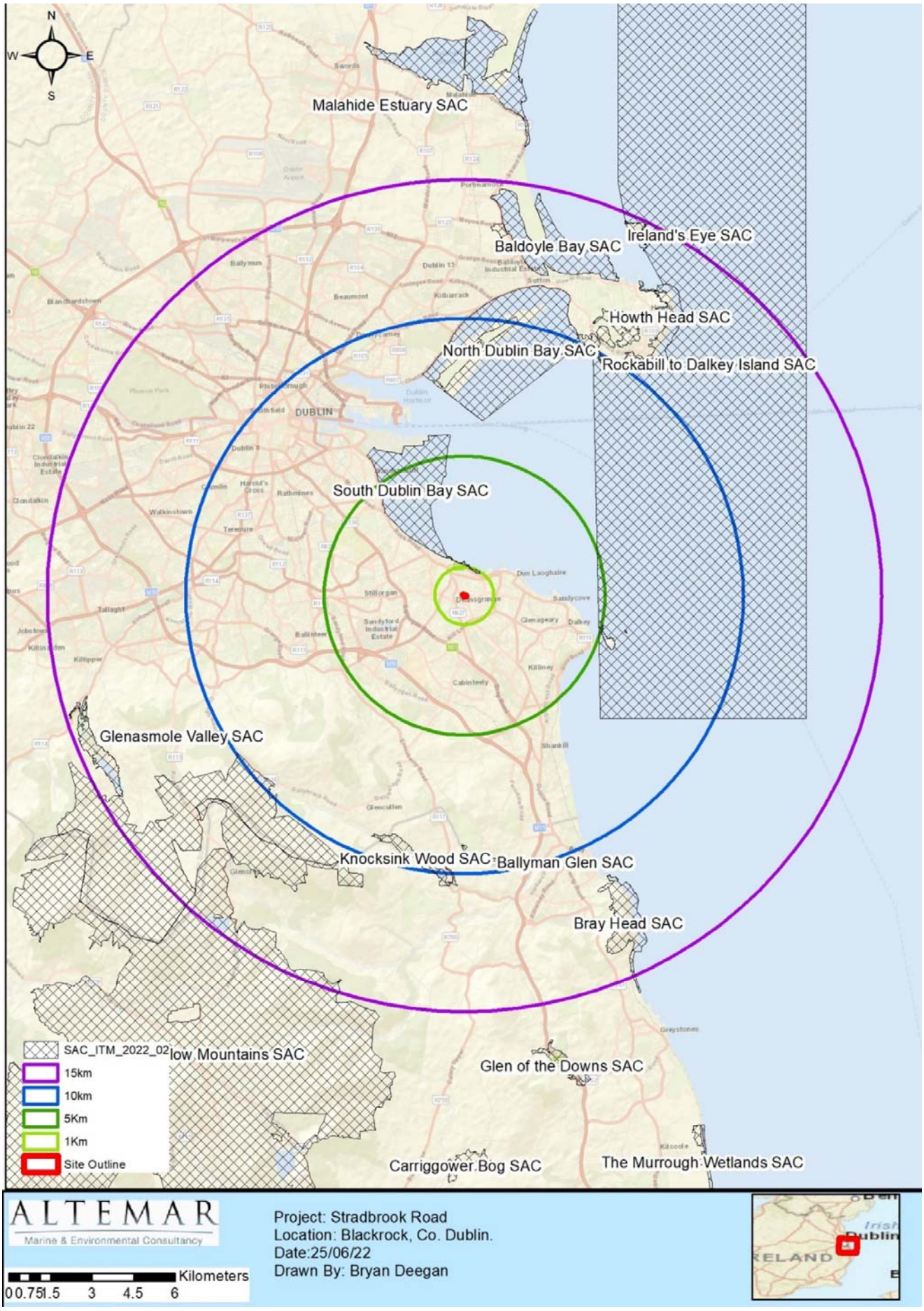

Figure 13. *Special Areas of Conservation (SAC) within 15km of the subject site*

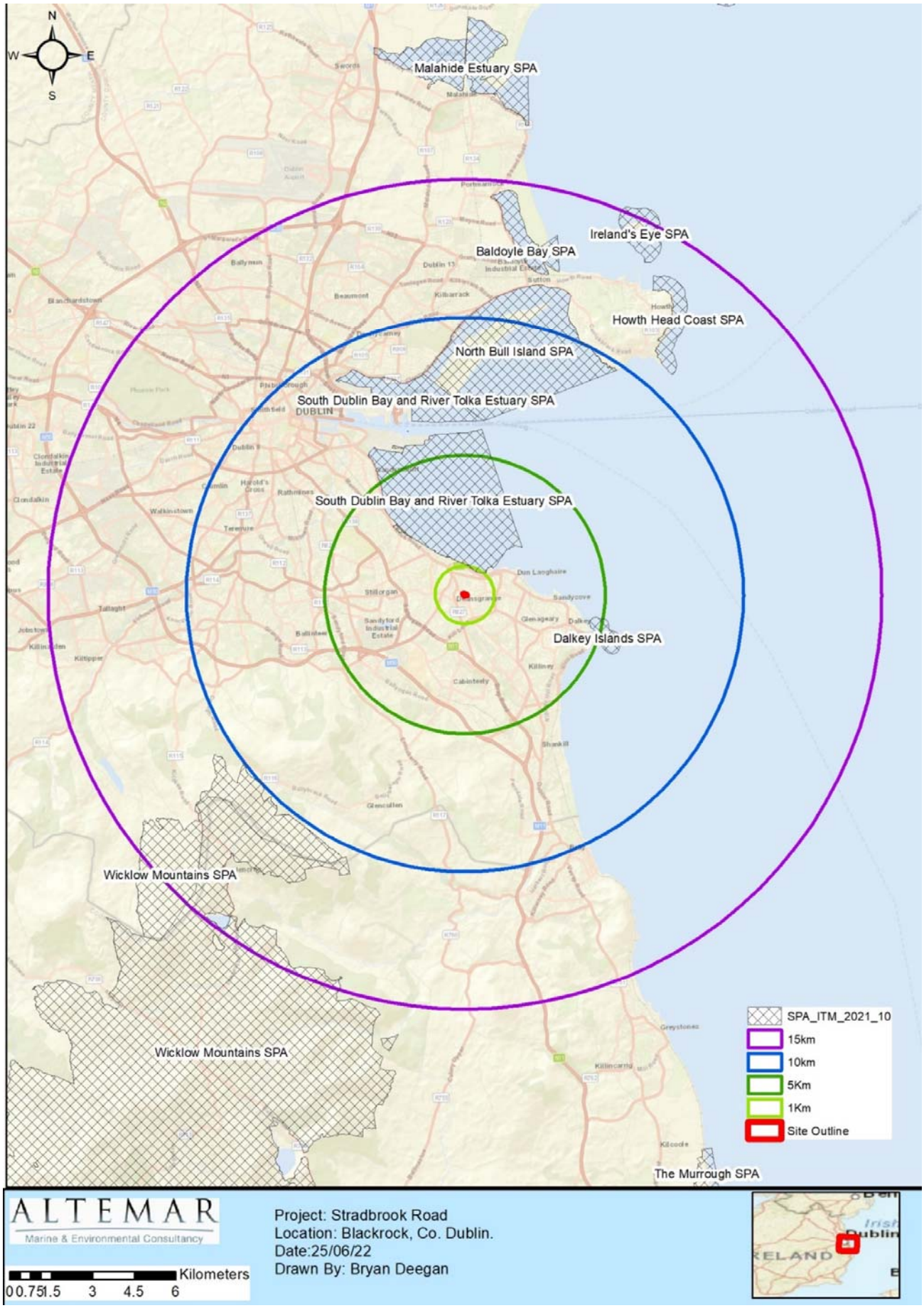

Figure 14. *Special Protection Areas (SPA) within 15km of the subject site*

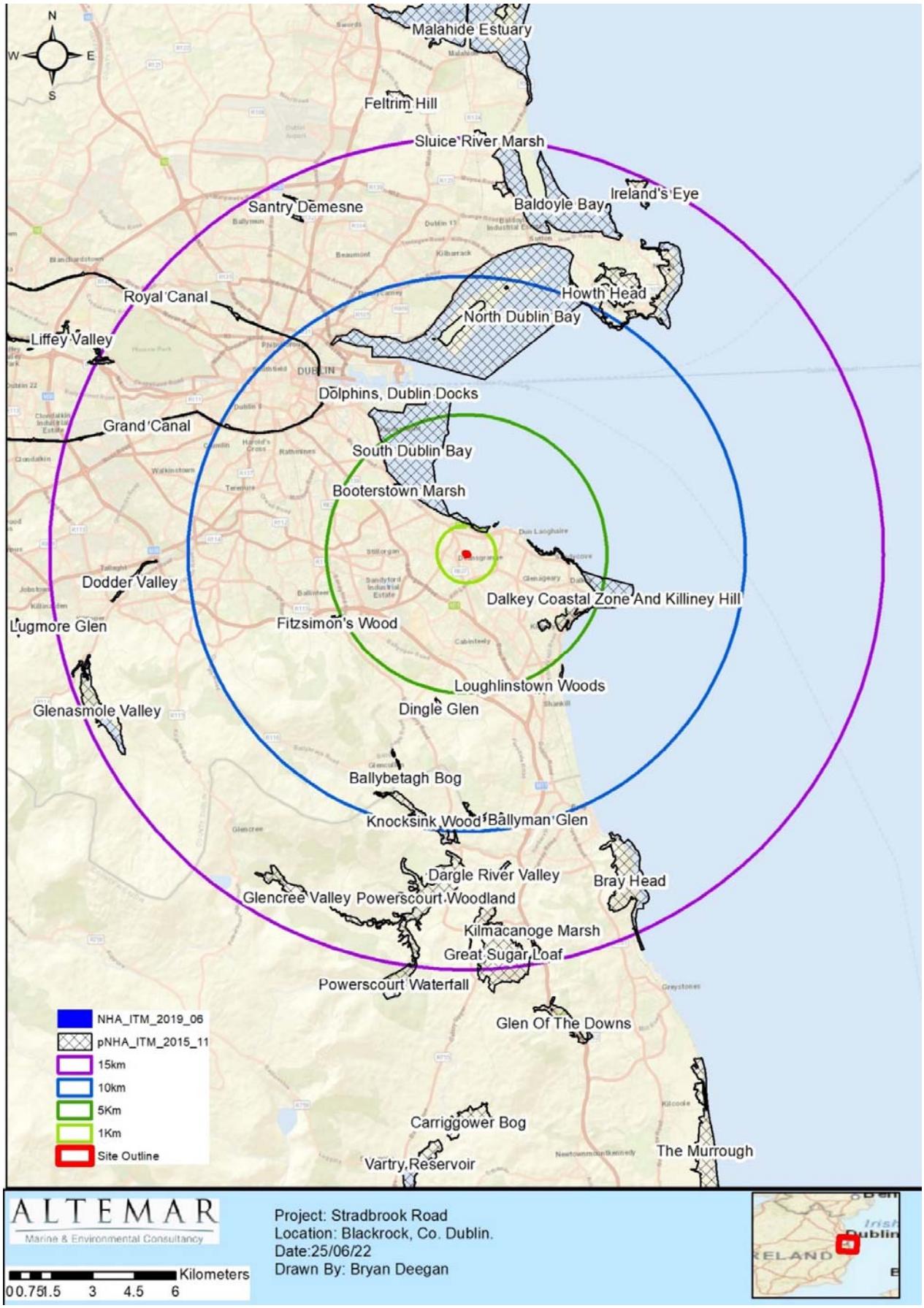

Figure 15. *Natural Heritage Areas (NHA) and proposed Natural Heritage Areas (pNHA) within 15km of the subject*

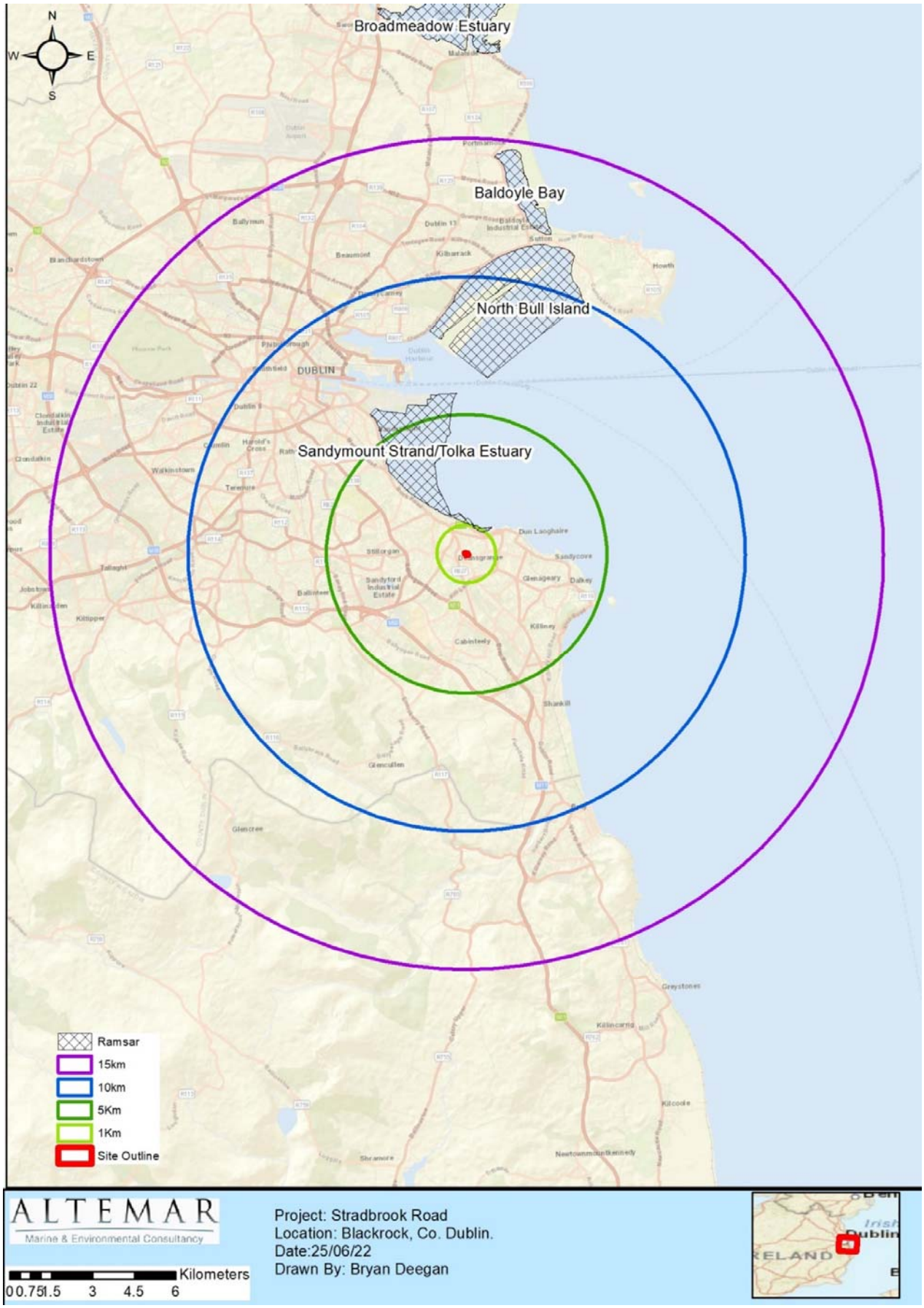

Figure 16. *Ramsar sites within 15km of the subject site*

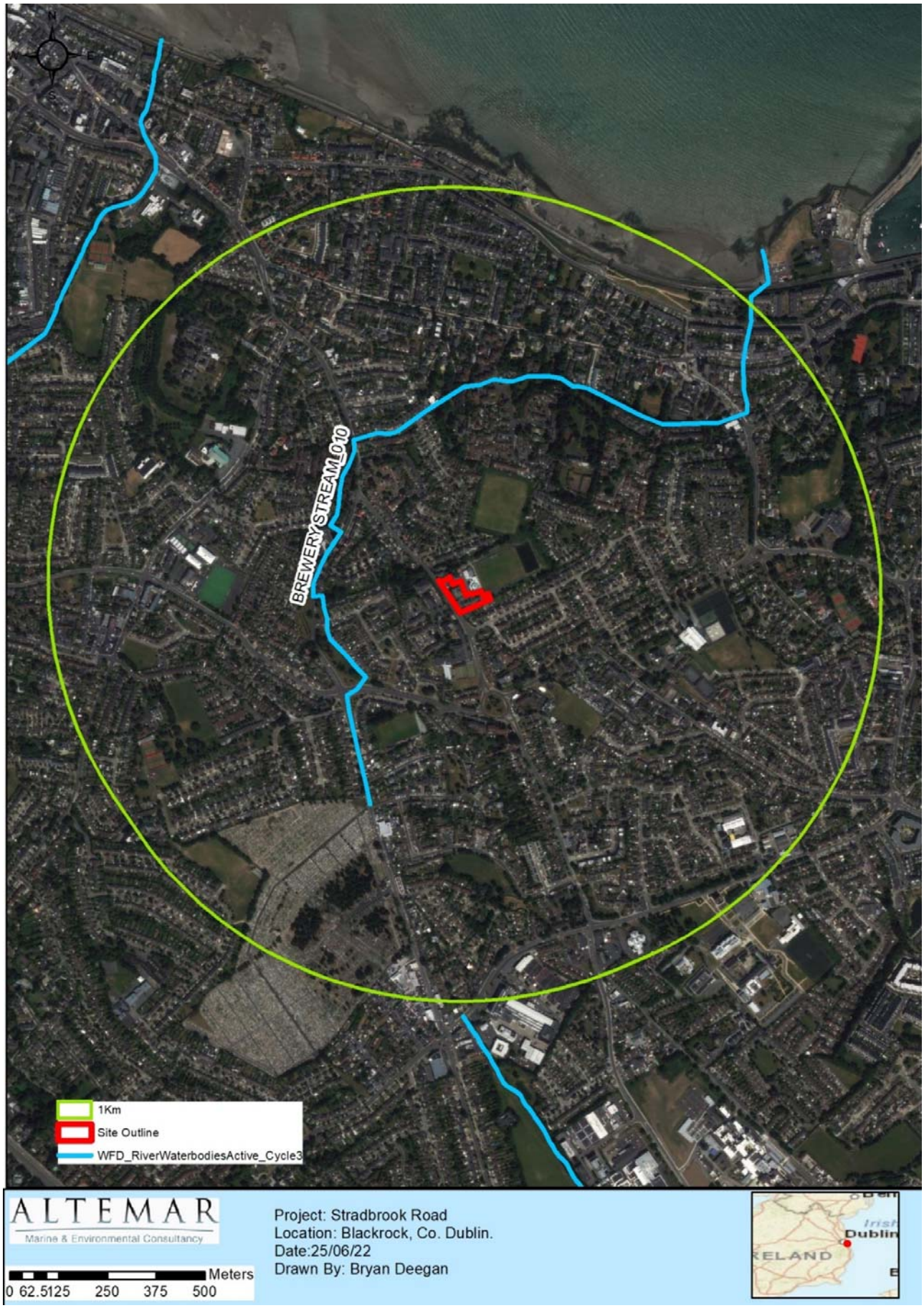

Figure 17. *Watercourses within 1km of the subject site*

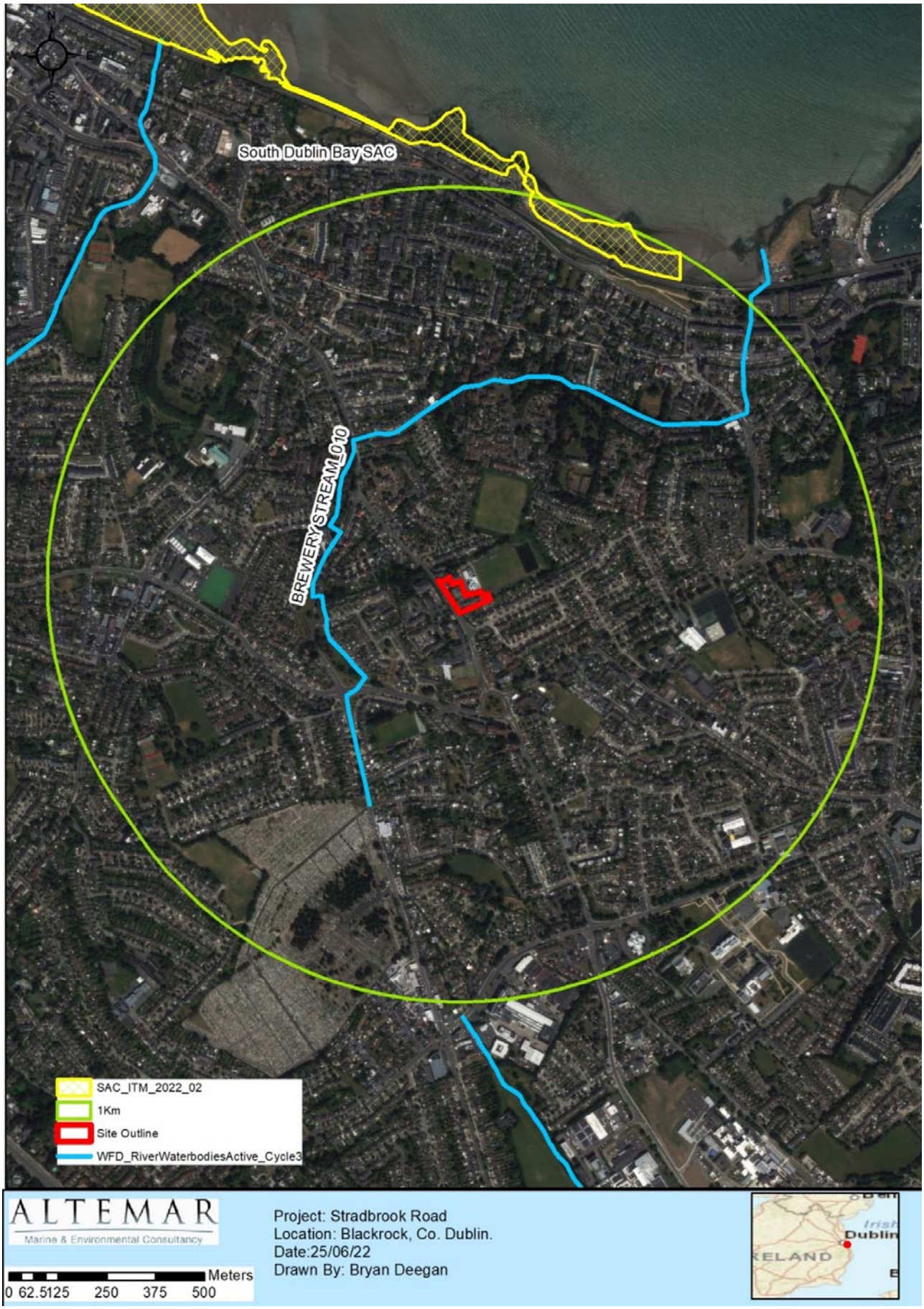

Figure 18. *SACs and watercourses within 1km of the subject site*

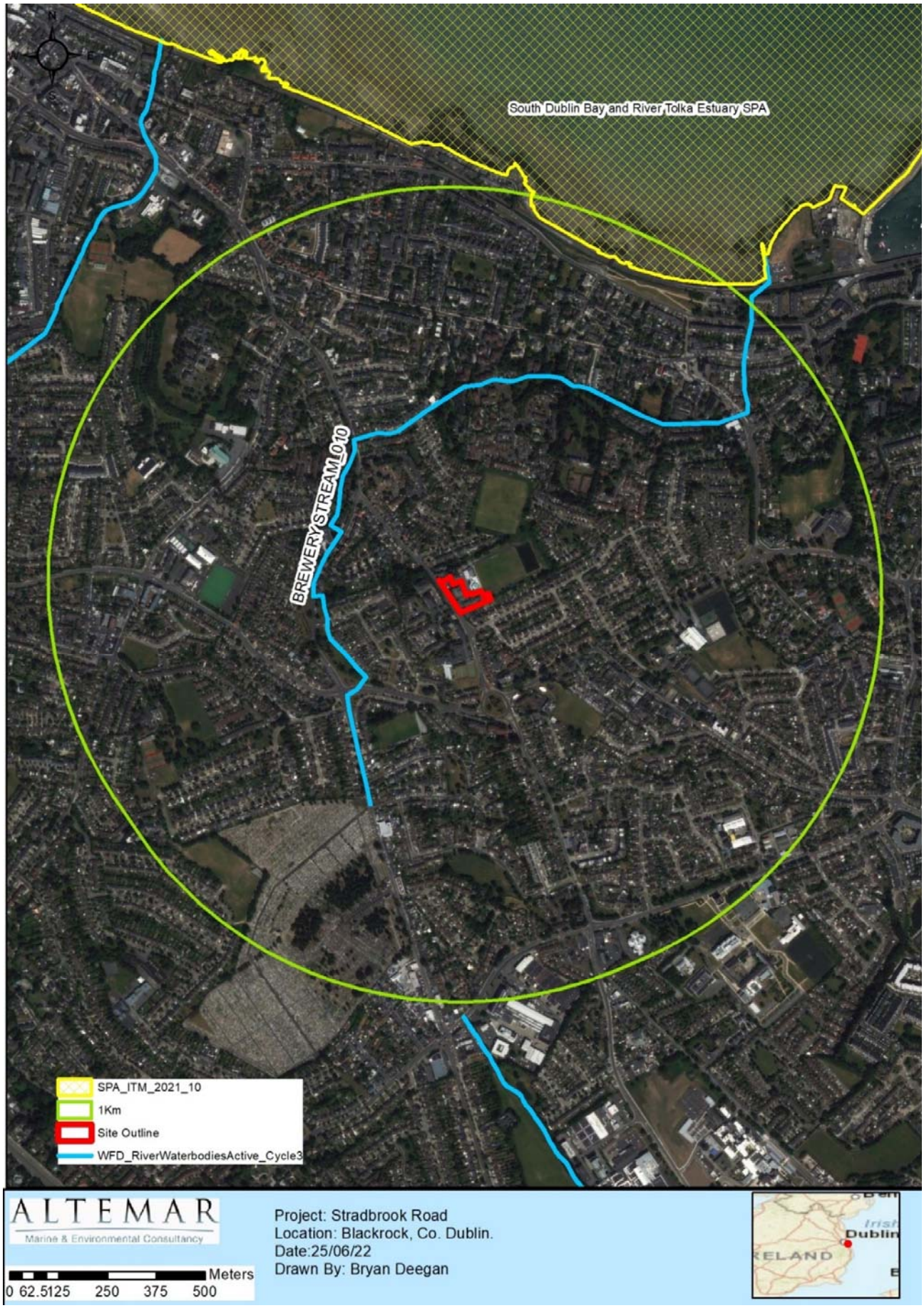

Figure 19. *SPAs and watercourses within 1km of the subject site*

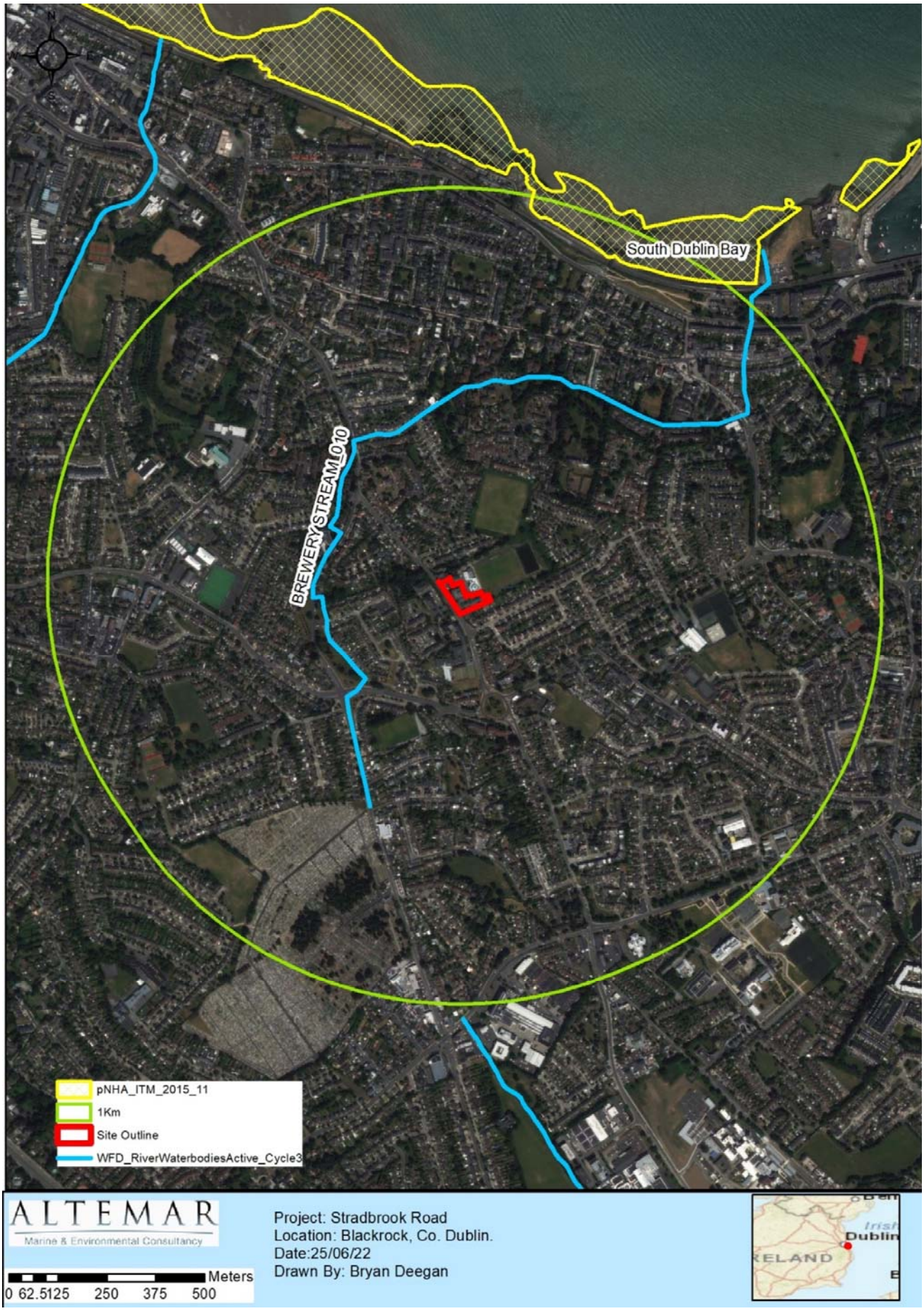

Figure 20. *NHAs, pNHAs, and watercourses within 1km of the subject site*

Figure 21. *Ramsar sites and watercourses within 1km of the subject site*

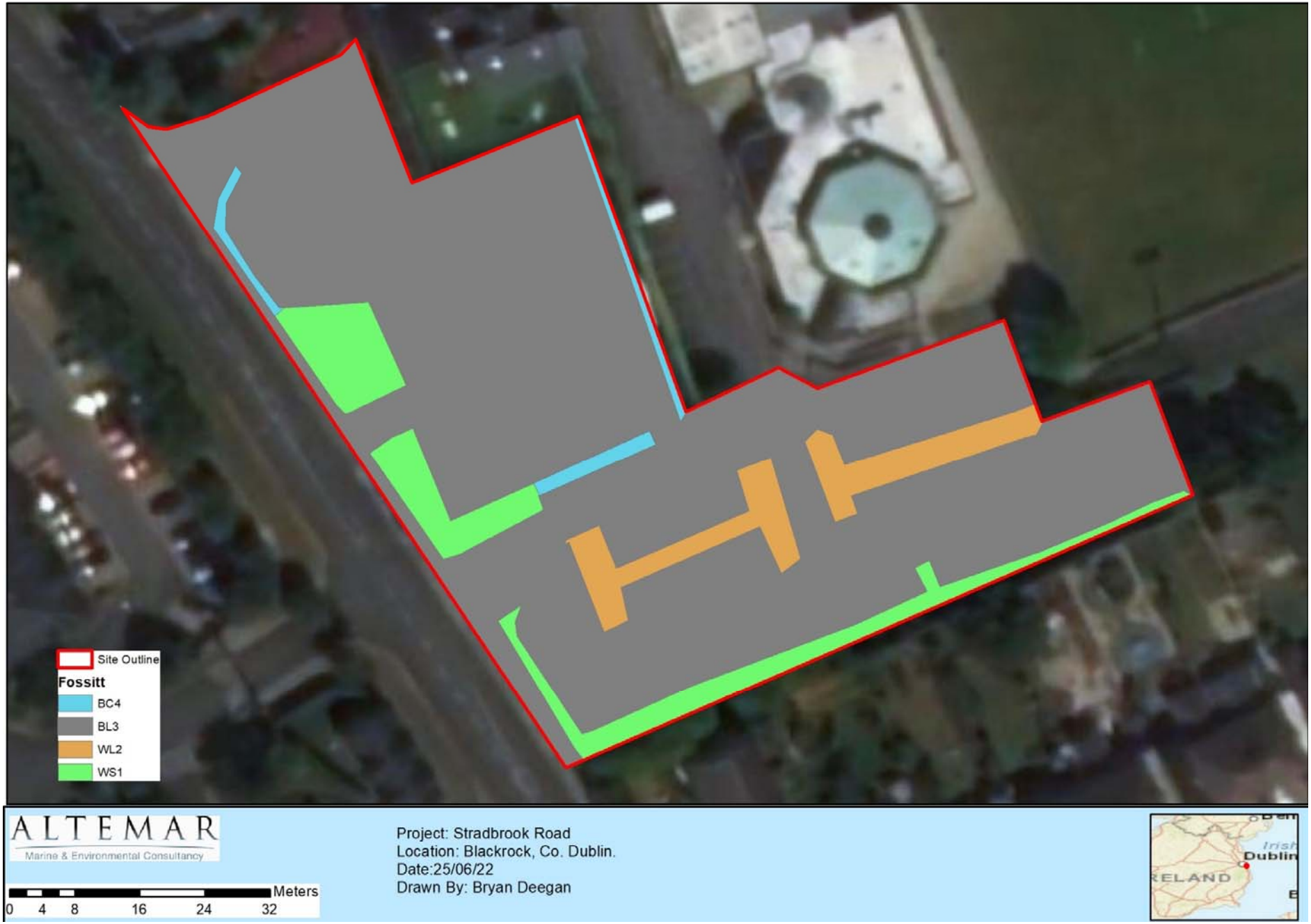

Figure 22. *Habitats based on Fossitt Classification within the proposed development site*

BL3-Buildings and artificial surfaces.

The majority of the proposed development site consists of built land. It consists of a building hand hard standing areas including car parking that are in active use. The building is considered to be of low roosting potential for bats as it is a modern building with a flat roof and brick façade with no facia or soffits.

Two separate bat surveys were carried out (Appendix I). No evidence of bat activity was noted within the building. It should be noted that no potential access points for bats were seen on site. No evidence/ of bats or observations of bats emerging from the building on site was noted.

Plate 1. Buildings and artificial surfaces.

WS1-Scrub

The vast majority of the southern portion of the site consists of a single linear area of scrub. Species within the scrub habitat included ornamental shrubs in the vicinity of the car park area. Ivy (*Hedera helix*) inter Heliotrope (Petasites pyrenaicus) and red valerian (*Centranthus ruber*) dominated the ground flora in this area in addition to ornamental shrubs. The scrub als consisted of birch (Betula sp.), cherry laurel (*Prunus laurocerasus*), Fuchsia (Fuchsia magellanica), bramble (*Rubus fruticosus agg*.), ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), elder (Sambucus nigra), Griselinia (Griselinia littoralis), docks (Rumex spp.), dandelion (*Taraxacum spp*.), ivy (*Hedera helix*), common nettle (*Urtica dioica*), montbretia (*Crocosmia x crocosmiiflora*), herb-robert, (*Geranium robertianum*), Cleavers (*Galium aparine*), Saint-John's-wort, (*Hypericum*) sp., creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum vulgaria*), hedge mustard (*Sisymbrium officinale*), ribwort plantain (*Plantago lanceolata*), smooth hawk's-beard (*Crepis capillaris*), wood avens (*Geum urbanum*), docks (*Rumex sp*.), smooth sumac (*Rhus glabra*) and red claws (*Escallonia rubra*).

Plate 2. Scrub

WL2-Treeliine

Two treelines are noted within the car parking area. These consist of birch (Betula sp.), white clover (Trifolium repens), lesser trefoil (Trifolium dubium), Daisy (Bellis perennis), Ribwort Plantain (Plantago lanceolata), docks (Rumex sp.),

Plate 2. Birch treeline.

Species within the treeline included Monterey Cypress (*Cupressus macrocarpa*), sycamore (Acer pseudoplatanus) (clad in ivy) , birch (*Betula sp*.), alder (*Alnus glutinosa*), horse chestnut (*Aesculus*

hippocastanum), hawthorn (*Crataegus monogyna*), Traveller's-joy (Clematis vitalba), winter heliotrope (Petasites pyrenaicus), hedge bindweed (*Calystegia sepium*), cleavers (*Galium aparine*), Bramble (*Rubus fruticosus agg*.), creeping buttercup (*Ranunculus repens*), as well as dogwood (Cornus sp.). It should be noted that within this habitat were what appeared to be two surface warer discharges from the development and a single wavin 4" crossing the watercourse.

Evaluation of Habitats

No rare or protected habitats were noted. The site is primarily built land consisting of a building and car parking with areas of scrub and treelines.

Plant Species

The plant species encountered at the various locations on site are detailed above. No protected species were noted. Records of rare and threatened species from NPWS were examined. No rare or threatened plant species were recorded in the vicinity of the proposed site. No invasive species were noted on site.

Mammals

No signs of mammals of conservation importance were noted on site. Hedgehogs have been recorded by NBDC within the 10km square but not within 2km at a finer resolution. No hedgehogs were seen during the site visit. No resting or breeding places for mammals of conservation importance were noted on site.

Amphibians

There are no ponds on site. Frogs have been recorded by the NBDC and NPWS within 1km. However, no amphibians were noted on site.

Bats

A single Leisler bat was noted transiting across the site at height. The site is brightly lit. There was no evidence of bats roosting within the buildings or trees on site. The building on sites is of poor roosting potential as it is a flat roof structure consisting of brick with no attic, facia or soffit. No trees of bat roosting potential are on site. A derogation licence is not required in relation to bats on site.

Birds

No rare birds or bird species of conservation value (red or amber listed) were noted during the field assessment. Species noted are seen in table 6.

Table 6: Bird Species noted in the vicinity of the proposed development.

Common Name	***Scientific Name***
Wren	*Troglodytes troglodytes*
Robin	*Erithacus rubecula*
Blue tit	*Parus caeruleus*
Great tit	*Parus major*
Magpie	*Pica pica*
Blackbird	*Turdus merula*

Historic Records of Biodiversity

The National Biodiversity Data Centre's online viewer was consulted in order to determine the extent of biodiversity and/or species of interest in the area. First, an assessment of the site-specific area was carried out by generating a report based on the site outline, however it recorded no species of interest in the site area.

Following this, a 2 km^2 grid, reference number O22J, based on the Ordnance Survey Ireland (OSI) Irish Grid classification system, was assessed. Table 6 provides a list of all species recorded in the species reports generated for this grid that possess a specific designation, such as Invasive Species or Protected Species.

Table 7. Recorded species, associated designations and grid references

Date of Record	Species Name	Designation
21/02/2006	Common Frog (*Rana temporaria*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
31/12/2011	Bar-tailed Godwit (*Limosa lapponica)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
09/01/2016	Black Guillemot (*Cepphus grylle)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
03/07/2019	Black-headed Gull (*Larus ridibundus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
19/01/2017	Black-legged Kittiwake (*Rissa tridactyla)*	Protected Species: Wildlife Acts || Threatened Species: OSPAR Convention || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
22/03/2012	Black-necked Grebe (*Podiceps nigricollis)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
25/10/2017	Brent Goose (*Branta bernicla*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
16/09/2010	Common Greenshank (*Tringa nebularia)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
09/01/2016	Common Guillemot (*Uria aalge)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
11/07/2019	Common Linnet (*Carduelis cannabina)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
11/02/2012	Common Redshank (*Tringa totanus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
24/07/2012	Common Sandpiper (*Actitis hypoleucos)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
31/12/2011	Common Starling (*Sturnus vulgaris)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
04/06/2012	Common Swift (*Apus apus*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species:

Date of Record	Species Name	Designation
		Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
03/07/2019	Common Tern (*Sterna hirundo)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
31/12/2011	Common Wood Pigeon (*Columba palumbus*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
11/02/2012	Dunlin (*Calidris alpina*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
31/12/2011	Eurasian Curlew (*Numenius arquata)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
04/02/2012	Eurasian Oystercatcher (*Haematopus ostralegus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
17/01/2012	Eurasian Teal (*Anas crecca*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
11/02/2012	European Shag (*Phalacrocorax aristotelis)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
09/01/2016	Great Black-backed Gull (*Larus marinus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
03/07/2019	Great Cormorant (*Phalacrocorax carbo)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
09/01/2016	Great Crested Grebe (*Podiceps cristatus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
26/12/2012	Great Northern Diver (*Gavia immer)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
09/01/2016	Herring Gull (*Larus argentatus*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List

Date of Record	Species Name	Designation
31/12/2011	House Sparrow (*Passer domesticus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
31/12/2011	Little Grebe (*Tachybaptus ruficollis)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
19/01/2017	Little Gull (*Larus minutus*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
26/12/2012	Mediterranean Gull (*Larus melanocephalus)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
11/02/2012	Mew Gull (*Larus canus*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
06/04/2011	Mute Swan (*Cygnus olor*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
24/04/2021	Northern Gannet (*Morus bassanus)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
09/01/2016	Razorbill (*Alca torda*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
09/01/2016	Red-breasted Merganser (*Mergus serrator*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species
09/01/2016	Red-throated Diver (*Gavia stellata)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
07/06/2019	Rock Pigeon (*Columba livia)*	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
08/07/2019	Yellowhammer (*Emberiza citrinella)*	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
28/06/2020	Butterfly-bush (*Buddleja davidii)*	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
01/05/2019	Corncockle (*Agrostemma githago)*	Threatened Species: Regionally Extinct
01/05/2019	Cornflower (*Centaurea cyanus*)	Threatened Species: Regionally Extinct
25/05/2019	Japanese Knotweed (*Fallopia japonica)*	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species ||

Date of Record	Species Name	Designation
		Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
17/03/2021	Three-cornered Garlic (*Allium triquetrum)*	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
19/03/2017	Traveller's-joy (*Clematis vitalba)*	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
31/12/1896	Neat Mining Bee (*Lasioglossum (Evylaeus) nitidiusculum)*	Threatened Species: Vulnerable
08/08/2009	Common Dolphin (*Delphinus delphis)*	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
14/05/2005	Common Porpoise (*Phocoena phocoena)*	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex II || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts || Threatened Species: OSPAR Convention
16/02/2021	Grey Seal (*Halichoerus grypus*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex II || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
27/10/2014	Brown Rat (*Rattus norvegicus*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
27/08/2015	Eastern Grey Squirrel (*Sciurus carolinensis)*	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> EU Regulation No. 1143/2014 || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
30/08/2015	European Otter (*Lutra lutra)*	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex II || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
19/07/2015	House Mouse (*Mus musculus*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species
01/06/2004	Lesser Noctule (*Nyctalus leisleri*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
01/09/2013	West European Hedgehog (*Erinaceus europaeus*)	Protected Species: Wildlife Acts

An assessment of files received from the NPWS (Code No. 2022_120) which contain records of rare and protected species and grid references for sightings of these species was carried out as part of this EcIA for the proposed development. There are no recorded sightings within the site itself, however the following table (Table 8) provides a summary of the species identified, the year of identification/sample, survey name and data ID of sightings locations in the areas surrounding the proposed development.

Table 8. Rare and protected species in the vicinity of the proposed development (NPWS)

Grid Ref.	Species	Survey Name	Sample Year	Location
O225276	Common Frog (*Rana temporaria)*	Frog IPCC data	2011	280m to the S of the site.
O2228	Common Frog (*Rana temporaria)*	Frog IPCC data	2003	Trafalgar Lane / Monkstown
O233272	Common Frog (*Rana temporaria)*	Frog - National Frog Survey 2011 additional records	2011	1km to the SE of the Site
O2327	Common Frog (*Rana temporaria)*	Frog IPCC data	2003	Glenageary Park / Dun Laoghaire
O234273	Common Frog (*Rana temporaria)*	Frog IPCC data National Frog Survey 2011	2011	1km to the SE of the Site

Analysis of the Potential Impacts

The proposed development will involve the removal of the existing terrestrial habitats on site, re-profiling, excavations, and construction works. There are no watercourses on site or direct pathways to designated sites. However, the surface water network on Stradbrook Road drains to the Brewery/Stradbrook Stream, which discharges to the marine environment at Monkstown, proximate to South Dublin Bay SAC/pNHA and South Dublin Bay and River Tolks SPA. Foul and surface water systems for the site will be separate and designed in accordance with the Water Pollution Acts. The surface water will then discharge to an existing public surface water network on Stradbrook Road. Foul wastewater will be directed to an existing public foul network and Ringsent WwTP.

Construction Phase

In the absence of mitigation, the construction of the proposed development would impact on the existing ecology of the site and the surrounding area. These construction impacts would include impacts that may arise during the site clearance, excavations, re-profiling of the site and the building phases of the proposed development. Construction phase mitigation measures are required on site particularly as reprofiling of the site and excavations are proposed which will remove existing terrestrial habitats of poor biodiversity importance and can lead to silt laden and contaminated runoff to the Stradbrook Stream.

Designated Conservation sites within 15km

Given that the surface water leads to the Brewery/Stradbrook Stream which ultimately outfalls to the marine environment at Dublin Bay, in the absence of mitigation measures there is a risk of dust and contaminated surface water runoff entering the Stradbrook Stream with the potential for downstream impacts. As a result, it is considered that there is an indirect hydrological pathway to South Dublin Bay (SAC & pNHA), South Dublin Bay and River Tolka Estuary SPA, and Sandymount Strand/Tolka Estuary Ramsar site.

Impacts: Low Adverse / Negative/ Not significant / Temporary. *Mitigation is required. (NIS has been prepared)*

Biodiversity

The impact of the development during construction phase will be a loss of existing habitats and species on site. It would be expected that the flora and fauna associated with these habitats would also be displaced.

Terrestrial mammalian species

No protected terrestrial mammals were noted on site. Loss of habitat and habitat fragmentation may affect some common mammalian species.

Impacts: Low adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of a pre-construction survey for terrestrial mammals of conservation importance.

Flora

No protected flora was noted on site. Site clearance will remove the flora species on site.

Impacts: Low adverse / site / Negative Impact / Not Significant / Short term

Bat Fauna

No species were noted foraging on site. No bats were noted roosting on site. No bats were noted emerging from trees of buildings on site. However, a single Leisler was noted transiting at altitude across the site. No significant impacts are foreseen. Lighting during construction could impact on transiting activity.

Impacts: Low adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of a pre-construction survey and control of light spill during construction.

Aquatic Biodiversity

Frogs were not observed on site. However given that the Brewery/ Stradbrook Stream is downstream of the subject site, there is potential for downstream impacts on aquatic biodiversity from surface water runoff, pollution and dust.

Impacts: Low adverse / local / Negative Impact / Slight Effects / short term. Mitigation is needed in the form of control of silt, petrochemical and dust during construction. A pre-construction survey should be carried out for frogs.

Bird Fauna

The site primarily consists of built land with several areas of scrub. There is potential for the works to impact on bird nesting within scrub during site clearance.

Impacts: Low adverse / Site/ Negative Impact / Not significant / long term. Mitigation is required to ensure the nesting birds are not impacted by the proposed works.

Operational Phase

Following construction all surface water runoff will comply with SUDS and standsrd petrochemical interception. The biodiversity value of the site would be expected to improve as the landscaping matures. Surface water discharge from site will be developed in accordance with the requirements of the Water Pollution Acts. Following the implementation of standard petrochemical interception mitigation measures, all foul and surface water drainage will be clean and uncontaminated and will not impact on local biodiversity.

Designated Conservation sites within 15km

The drainage on site will be carried out to modern SuDS and water pollution prevention standards. After attenuation, surface water drainage will be directed to the Stradbrook Road drainage network. In the absence of mitigation measures, given the proximity of the subject site to designated conservation sites (minimum 0.9 km), there is the potential for downstream impacts via contaminated surface water runoff.

Impacts: Low Adverse / International / Negative Impact / Not significant / Long-term. *Mitigation is required (NIS is provided)*

Biodiversity

Biodiversity value of the site will improve as landscaping matures.

Terrestrial mammalian species

No protected terrestrial mammals were noted on site. Additional habitat will be created on site.

Impacts: Low adverse / site / Negative Impact / Not significant / short term.

Flora

No protected flora or invasive species were noted on site. Landscaping will increase flora diversity on site.

Impacts: Negligible beneficial / site / Negative Impact / Not significant / long-term

Bat Fauna

The proposed development will change the local environment as new structures are to be erected and some of the existing vegetation will be removed. No bat roosts will be lost due to this development and the species expected to occur onsite should persist.

Impacts: Low adverse / International / Negative Impact / Not significant / long term.

Aquatic Biodiversity

There is the potential for downstream impacts on biodiversity from silt or petrochemicals in the absence of standard controls die to the surface water network on Stradbrook Road discharging to the Brewers/Stradbrook Stream. Standard controls will be in place.

Impacts: Low adverse / local / Negative Impact / Not significant / long term

Bird Fauna

The proposed development will change the local environment as new structures are to be erected. The buildings are comprised of solid materials consisting of a solid material on the exterior which includes sections of concrete and glass. These buildings would be clearly visible to bird species and would not pose a significant collision risk. The existing site is an active area of human disturbance and the structural integrity of the habitats on site will be retained.

Impacts: Low adverse / site / Negative Impact / Not significant / long term.

Table 9. Mitigation measures		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
Stradbrook Stream South Dublin Bay SAC South Dublin Bay and River Tolka Estuary SPA South Dublin Bay pNHA Sandymount Strand/Tolka Estuary Ramsar Site	• Habitat degradation • Dust deposition • Pollution • Downstream impacts • Silt ingress from site runoff • Negative impacts on aquatic species and bird fauna	As outlined in the Stage 1 Construction Management Plan the following mitigation will be used: '***4.2 Air Quality & Dust Monitoring*** *Dust prevention measures shall be included for control of any site airborne particulate pollution. Prior to commencement the contractor shall draw up an Air Quality Mitigation Plan for demolition, excavation and construction works which shall be constantly monitored during the lifetime of the works. If air quality targets set out in the plan are constantly exceeded the contractor shall cease that activity causing the dust and implement alternative working methods.* *The Contractor shall provide dust sampling points. The plan layout of the monitoring stations shall be submitted to DLR Co Co for agreement by the contractor. Monitoring data shall be complied into monthly technical reports by the contractor and maintained on site.* *The Contractor shall monitor dust levels in the vicinity of the site using a Bergerhoff gauge instrument or in accordance with DLR Co Co Planning conditions. Records shall be kept of such monitoring for review by the Planning Authority. The minimum criteria to be maintained shall be the limit for Environmental Protection Agency (EPA) specification for licensed facilities in Ireland, which is 350mg/m2/day.* *The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project. It is proposed to use a "Dust Boss" spray cannon machine in order to contain dust on site. The cannon is capable of spraying a water mist up to 45m and has been used in Dublin during the demolition of buildings up to 8 storeys in height. This dust suppression method is very successful in containing dust on-site. The machine has a range of controls and adjustability to accurately target sources of dust generated from works.* ***4.3 Migrating Dust & Dirt Pollution*** *The Contractor shall ensure that all construction vehicles that exit the site onto the public roads shall not transport dust and dirt to pollute the external roadways. This shall be achieved through a combination of the following measures:* *• Ensuring construction vehicles have a clean surface to travel on within the site (i.e. haul road)* *• Ensuring all construction vehicles are inspected by the gateman for cleanliness prior to exiting the site* *• Providing a "Full-Body Self Contained" wheel wash shall be constructed and located within the site confines* *• Ensuring an appropriate wheel or road washing facility is provided as and when required throughout the various stages of construction on site. If conditions require it then a manned power washer shall be put in place to assist the wheel wash system*

		• A dedicated road sweeper shall be retained for the duration of the haulage works; and Water supplies shall be recycled for use in the wheel wash. All waters shall be drained through appropriate filter material prior to discharge from the site *• The contractor shall ensure proper maintenance of all operating plant to ensure dust and fuel emissions are in compliance with site plans. All operating plant not in use shall be turned off.* *• Stockpiles of materials shall be located and /or designed to mitigate exposure to wind and ensure dust emissions are kept low.* *The use of appropriate water-based dust suppression systems shall greatly reduce the amount of dust and windborne particulates as a result of the construction process. This system shall be closely monitored by site management personnel particularly during extended dry periods and in accordance with site management methods.* ***4.4 Harmful Materials*** *Harmful material shall be stored on site for use in connection with the construction works only. These materials shall be stored in a controlled manner. Where on-site facilities are used there shall be a bunded filling area using double bunded steel tank at a minimum. These materials shall be inspected on a daily basis and logged in a daily inspection sheet*.' '***8.0 CONSTRUCTION SURFACE WATER MANAGEMENT PLAN*** *The below information sets out how to demonstrate how pollution of watercourses during and after construction period shall be prevented and/or mitigated in line with best practices.* ***8.1 Surface Water Impacts*** *Surface water run-off from surface construction activities has the potential to become contaminated. The main contaminants arising from construction activities include:* *- Suspended solids: arising from ground disturbance and excavation;* *- Hydrocarbons: accidental spillage from construction plant and storage depots;* *- Faecal Coliforms: contamination from coliforms can arise if there is inadequate containment and treatment of onsite toilet and washing facilities; and* *- Concrete /cementitious products: arising from construction materials.* *These pollutants pose a temporary risk to surface water quality for the duration of the project if not properly contained and managed.* ***8.2 Proposed Construction Works.*** *Site Preparation;* *- Erection of security fencing/perimeter fencing;* *- Setting up a secure site compound including wash down area;*

		- Site clearance including topsoil stripping; *- Construction of infrastructure including roads, drainage, and services;* *- Provision of road up grades and pedestrian links;* *- Construction of residential building.* ***8.3 Mitigation Measures*** *The following Mitigation Measures are to address potential impacts to water quality and are required to protect the Brewery/Stradbrook Stream. All works shall be undertaken with reference to the following guidelines:* *- CIRIA C532: Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (Masters-Shalliams et al.,2010)* *- CIRIA C692: Environmental Good Practice on Site, (Audus et al., 2010)* *- BPGCS005: Oil Storage Guidelines;* *- CIRIA C648: Control of Water Pollution from Linear Construction Projects: Technical Guidance (Murnane et al.,2006a)* *- CIRIA C648: Control of Water Pollution from Linear Construction Projects : Site Guide (Murnane et al., 2006a)* *- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI 2016)* *- Guidelines for Planning and Authorities – Architectural Heritage Protection* *- Guidance on Part IV of the Planning and Development Act 2000. (Part 2, Chapter 7) and ICOMOS Principles.* *The schedule of mitigation presented below summarises measures that shall be undertaken in order to reduce impacts on ecological receptors within the zone of influence of the proposed development.* *Item 1: Hydrocarbons from carparking area entering the watercourse.* *Possible Impact: Water quality impacts, Reduction in habitat quality.* *Mitigation: Designated parking at least 50m from any watercourse.* *Result of Mitigation: Ensures no soil disturbance or hydrocarbons leak near aquatic zone.* *Item 2: Pollutants from site compound areas entering the watercourse.* *Possible Impact: Water quality impacts. Reduction in habitat quality.* *Mitigation: The site compound shall be located at least 100m from any watercourse.* *Result of Mitigation: Prevents pollution of the aquatic zone from toxic pollutants.* *Item 3: Pollutants from material storage areas entering the watercourse.* *Possible Impact: Water quality impacts. Reduction in habitat quality.* *Mitigation: Fuels, oils, greases, and other potentially polluting chemicals shall be stored in bunded compounds or at a location at least 50m from any body of water. Bunds are to be provided with 110% capacity of storage container. Spill kits shall be kept on site at all times and all staff trained in their appropriate use.* *Result of Mitigation: Prevents pollution of the aquatic zone from toxic pollutants.*

		Item 4: Concrete/cementitious materials entering the watercourse from washdown and pours. *Possible Impact: Water quality impacts. Reduction in habitat quality.* *Mitigation: A designated wash down area within the Contractor's compound shall be used for cleaning of any equipment or plant, with the safe disposal of any contaminated water. Pouring of cementitious materials shall be carried out in the dry.* *Result of Mitigation: Prevents pollution of the aquatic zone from toxic pollutants, ensures invasive species material is transported off site.* ***8.4 Management of Environmental Impacts*** *Construction is envisaged to commence once final planning permission has been obtained. It is anticipated that the development shall be constructed over a period of 12-18 months.* *The proposed potential pollution mitigation measures outlined below shall be implemented in accordance with @CIRIA C532 – Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors'-CIRIA-2001.'* ***'8.7 Construction Plan*** ***Vehicle Washdown*** *Where possible the permanent connection to the public foul sewer shall be used temporarily for construction phase. Vehicle wash down water shall discharge directly, via suitable pollution control and attenuation, to the foul sewer system.* ***Surface Water Run-off*** *On-site treatment measures shall be installed to treat surface water run-off from the site prior to discharge to the receiving surface water sewer. This treatment shall be achieved by the construction of cut off trenches along the lowest parts of the site. Cut off trenches shall incorporate straw bales to reduce sediment loading, settlement tanks, the instillation of proprietary surface water treatment systems including class 1 full retention petrol interceptors and spill protection control measures. Settlement tanks shall be sized to deal with surface run-off and any groundwater encountered. All measures shall be approved prior to commencement with the pollution Section of DLRCC.* *A sampling chamber with shut down valve shall be installed downstream of the settlement tank and water quality monitoring shall be carried out prior to discharge to the surface water sewer and subsequently to the nearby watercourse.* ***Surface Water Monitoring Parameters.*** *In addition to daily visual inspections, a surface water monitoring programme must be followed during construction in order to ensure maintenance of water quality protection. This is in line with Transport Infrastructure Ireland (TII)'s 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan'. It is considered*

		that the parameter limit values (Guide/Mandatory) defined in the Fresh Water Quality Regulations (EU Directive 2006/44EEC) should act as a trigger value for the monitoring of Surface Water. ***8.8 Monitoring*** *To ensure that CSWMP actions are achieving the required objective, supervision and monitoring is required. As part of their role, the PE shall agree a schedule of monitoring and reporting with the local authority. The schedule of monitoring shall depend on the programme of works, which in turn shall depend on the programme of the construction contractor. It is considered appropriate that visual checks of the tie-in to the external drainage network take place on a daily basis during the installation of the outfall.'* ***Additional Mitigation*** In addition to the measures outlined in the Stage 1 Construction Management Plan the following mitigation will be implemented: • A project ecologist will be appointed and consulted in relation to all onsite drainage during works. • All demolition and site clearance works methodologies will have prior approval of a project ecologist. • Staging of project will be carried out to reduce risks or onsite drainage and the Brewery/ Stradbrook Stream. • Gullies and drainage networks will be protected from dust, silt and surface water throughout the works. • Local silt traps established throughout site. • All onsite drainage network connections will be blanked off and sealed at the first phase of the demolition works. • Upon the lifting of the hard standing on site additional inspections and hazardous material testing will be carried and appropriate decontamination of the site carried out in consultation with the project ecologist. • No entry of solids or petrochemicals to the drainage network during the works • Full compliance with the water Pollution Acts will be carried out on site. • The site compound will include a dedicated bund for the storage of dangerous substances including fuels, oils etc. Refuelling of vehicles/machinery will only be carried out within the bunded area. • Dewatering of excavations may be necessary. Appropriate monitoring of groundwater levels during site works will be undertaken. Standard construction phase filtering of surface water for suspended solids will be carried out. Unfiltered surface water discharges or runoff are not permitted from the site to surface water networks. • Spill containment equipment shall be available for use in the event of an emergency. The spill containment equipment shall be replenished if used and shall be checked on a scheduled basis. • Environmental risks due to demolition and post demolition of the proposed development do potentially exist, particularly in relation runoff, drains that could lead to the surface water network and the Brewery/Stradbrook Stream will be monitored daily.

		• During Operation the proposed development will comply with Water Pollution Acts in relation to discharges from the proposed development. Petrochemical interception and SuDs measures will be in place as outlined in the Engineering Services Report. • Environmental risks due to demolition and post demolition of the proposed development do potentially exist, particularly in relation runoff, drains that could lead to the Stradbrook Stream.
Birds (National Protection)	• Removal nesting habitat. • Removal foraging habitat. • Destruction and/or disturbance to nests (injury/death). • Predation.	• "Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) Should this not be possible, a pre-works check by a qualified ecologist should be undertaken to ensure nesting birds are absent. This would include nesting gulls on buildings if present. • 10 Nest boxes will be placed on site to compensate for resource loss.
Bats (international Protection)	• Removal roosting/foraging habitat. • Lighting Impacts	• Pre Construction survey for bats • Ecologist notified if bats found during demolition • Lighting at all construction stages should be done sensitively on site with no direct lighting of hedgerows and treelines.

There are several development proposals located in the areas surrounding the subject site that have been granted permission. The following is a list of planning application(s) as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal:

Table 3. *Planning applications located proximate to the subject site.*

Ref. No.	Address	Proposal
D19A/0590	4 Wynberg Park, Blackrock, Co. Dublin A94 P2D1	Permission for development. The proposed development consists of 1. Demolition of the existing first floor side chimney, front porch, rear kitchen, storage unit, side carport and boiler house structures to allow for the new extension works, 2. Proposed single storey flat roofed side extension to the existing dwelling, amendments to all elevations including window/door revisions, proposed external glass covered terrace/passage way areas located to the side and rear, 3. Proposed widening of existing vehicular entrance and all associated side works.
D18B/0438	Lismoyle, 62 Stradbrook Road, Blackrock, Co Dublin	Permission for an entrance porch and first floor extension (to the rear of the property) forming a bedroom, with associated internal alterations at first floor.
D19B/0176	Ravensdale, 29 Rowan Park Avenue, Blackrock, Co Dublin	Permission for the construction of a ground floor extension to the rear of the existing house.
D22B/0095	14 Windsor Park, Monkstown, Blackrock, Co. Dublin, A94 A6N9	Permission for an attic conversion/extension and dormer window to the rear of the property.
D20B/0176	12 Windsor Park, Monkstown, Co. Dublin	Permission for development. The development will consist of: 1. The construction of a new first floor, hipped roof extension, to the front and side of the existing two storey, semi-detached house. 2. Four new roof lights, three to the rear and one to the front. 3. Ancillary site works.
D21B/0177	27 Windsor Park, Monkstown, Co. Dublin	Permission is sought for a 4.5sqm ground floor extension to front of house and a 29.2 sqm first floor extension to front, side and rear of house over existing ground floor accommodation. Also an attic conversion with rooflights to the front and side and a dormer to the rear.

Having assessed the developments outlined above including, supporting documentation, the scale of the project, proximity to the proposed development and the potential to impact on biodiversity and pathways to designated sites, it is considered that cumulative effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. No significant cumulative effects are foreseen. It is concluded that no significant effects on designated conservation sites will be seen as a result of cumulative impacts.

No significant effects are likely from in combination effects.

Residual Impacts and Conclusion

The proposed site is located in a suburban environment 0.9 km from the nearest Natura 2000 site. There is an indirect hydrological pathway to designated conservation sites in Dublin Bay via surface water. There is an indirect pathway to designated sites in Dublin Bay via foul water and Ringsend WWTP. Uncontrolled and unmitigated surface runoff, dust and silt generated during construction and unmitigated surface water during operation entering the Stradbrook Road surface water network are seen as the main potential pathway for impacts on the biodiversity outside the site.

Having taken into consideration the proposed works, the development, the extensive mitigation measures, effluent discharge from the proposed development, the distance between the proposed development site to designated conservation sites, it is concluded that following the implementation of mitigation measures outlined the development would not give rise to any significant effects. The construction and operation of the proposed development will not significantly impact on, the conservation objectives of qualifying interests of Natura 2000 sites, aquatic biodiversity and bats on site.

Based on the successful implementation of standard mitigation measures in relation to biodiversity no significant ecological impacts would be likely outside the immediate vicinity of the proposed development. Impacts within the site would be considerable due to the removal of the majority existing interior habitats. Mitigation is required in relation to watercourses, dust, surface, runoff pollution, lighting, loss of bird nesting habitat and to carry out pre construction surveys for bats.

No significant environmental impacts are likely in relation to the construction or operation of the proposed development.

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ALTEMAR
Marine & Environmental Consultancy

Appendix I. Bat fauna impact assessmentfor a proposed mixed-use development at Stradbrook Road, Mountashton, Blackrock, Co. Dublin.

7th July 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Tetrarch Residential Ltd.

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Document Control Sheet			
Client	Tetrarch Residential Ltd.		
Project	Bat fauna impact assessment for a proposed mixed-use development at Stradbrook Road, Mountashton, Blackrock, Co. Dublin.		
Report	Bat Fauna Assessment		
Date	7th July 2022		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Jack Doyle	7th July 2022

SUMMARY

Structure:	Existing occupied buildings
Location:	Stradbrook Road, Mountashton, Blackrock, Co. Dublin.
Bat species present:	None Roosting of foraging. A single Lesser Noctule (*Nyctalus leisleri*), was observed at high altitude transiting across the site.
Proposed work:	Redevelopment of site**.** Demolition works and construction of a mixes use development.
Impact on bats:	Negligible long-term.
Survey by:	Bryan Deegan MCIEEM
Survey date:	23rd & 24th June 2022 (emergent and detector surveys) and 23rd June 2022 (interior inspection).

Receiving Environment

Background

Tetrarch Residential Ltd. intend to apply for permission for mixed-use development at a site of some 0.4813 ha on Stradbrook Road, Mountashton, Blackrock, Co. Dublin will comprise: the demolition of existing buildings and surface car park, and the construction of: 108 No. Build-to-Rent serviced residential senior living apartments (83 No. 1-bed apartments and 25 No. 2-bed apartments), with balconies / winter gardens at all elevations, across 2 No. blocks ranging between 3 to 7-storeys with set back at sixth-floor level and additional basement . The proposal also includes for 148 No. secure bicycle parking spaces, 55 No. underground car parking spaces, a two-way vehicular entrance ramp and bin storage, circulation areas and associated plant at basement level; a self-contained office unit, a residential staff management suite, resident's facilities, residents' communal amenity rooms, and residents' communal open space, as well as 13 No. surface car parking spaces (incl. 1 No. accessible commercial car parking space and 12 No. car parking spaces for use by the adjoining creche (incl. 1 No. accessible)), 24 No. secure cycle spaces within separate bike store, separate bin store for office use, 30 No. short-term bicycle parking spaces, and 3 No. ESB substations at ground floor level; additional communal amenity rooms at first, second, third, fourth and fifth-floor levels; roof gardens / terraces at third, fourth and sixth-floor levels; PV panels on third, fourth and sixth-floor roof-level; and associated site landscaping, lighting and servicing, and all associated works above and below ground. The proposed site outline, location, layout and roof plan are demonstrated in Figures 1 & 2.

Landscape

The proposed landscape masterplan has been prepared by Murray & Associates to accompany this planning application. This landscape masterplan is demonstrated in Figure 3.

Arboricultural Impacts

An Arboricultural Report has been prepared by Murray & Associates to accompany this planning application. The tree survey plan, tree removals plan, and tree protection plan are demonstrated in Figures 4 – 5.

Lighting

A Public Lighting Report has been prepared by Renaissance Engineering to accompany this planning application. This report outlines the following lighting plan for the proposed development (Figure 6).

Figure 1. *Proposed site outline and location*

Figure 2. *Proposed site layout plan and roof plan*

Figure 3. *Proposed landscape masterplan*

Figure 4. *Tree Removals Plan*

Figure 5. *Site lighting installation – paths & ducting (Red isoline is the 1 lux contour)*

Bat Survey

This report presents the results of site visits by Bryan Deegan (MCIEEM) on the 23rd & 24th June 2022 (emergent and detector surveys) and 23rd June 2022 (interior inspection) during which all of the onsite trees and the building were inspected for signs of bat use or presence. Bat surveys were also carried out.

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 27 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2007)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Marnell, Kelleher and Mullen (2022), Bat Mitigation Guidelines for Ireland V2 (which update and replace the Bat Mitigation Guidelines for Ireland published in 2006).

Survey methodology

As outlined in Marnell et al. 2022 '*The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, most roosts are less obvious. A visit during the summer or autumn has the advantage that bats may be seen or heard. Buildings (which for this definition exclude cellars and other underground structures) are rarely used for hibernation alone, so droppings deposited by active bats provide the best clues. Roosts of species which habitually enter roof voids are probably the easiest to detect as the droppings will normally be readily visible. Roosts of crevice-dwelling species may require careful searching and, in some situations, the opening up of otherwise inaccessible areas. If this is not possible, best judgement might have to be used and a precautionary approach adopted. Roosts used by a small number of bats, as opposed to large maternity sites, can be particularly difficult to detect and may require extensive searching backed up by bat detector surveys (including static detectors) or emergence counts.'* In relation to the factors influencing survey results the guidelines outlines the following *'During the winter, bats will move around to find sites that present the optimum environmental conditions for their age, sex and bodyweight and some species will only be found in underground sites when the weather is particularly cold. During the summer, bats may be reluctant to leave their roost during heavy rain or when the temperature is unseasonably low, so exit counts should record the conditions under which they were made. Similarly, there may be times when females with young do not emerge at all or emerge only briefly and return while other bats are still emerging thus confusing the count. Within roosts, bats will move around according to the temperature and may or may not be visible on any particular visit. Bats also react to disturbance, so a survey the day after a disturbance event, may give a misleading picture of roost usage.'*

The survey involved the methodologies outlined in Collins (2016) which included the roost inspection methodologies i.e. external methodology outlined in section 5.2.4.1 and the internal survey outlines in section 5.2.4.2 of the guidelines. In addition, the methodologies for Presence absence surveys (Section 7) was carried out for dust emergent surveys.'

As outlined in Collins (2016) 'The bat active period is generally considered to be between April and October inclusive (although the season is likely to be shorter in northern latitudes). However, because bats wake up during mild conditions, bat activity can also be recorded during winter months.'

Survey constraints

The emergent and detector surveys were undertaken during the active bat season in June. Weather conditions were good with mild temperatures of greater than 10°C after sunset. Winds were light and there was no rainfall.

Bat assessment findings

Review of local bat records

The review of existing bat records (sourced from *Bat Conservation Ireland's* National Bat Records Database) within 2 km^2 of the study area (O22J) reveals that one of the nine known Irish species have been observed locally, with no recent observations (Table 1). The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 8 & 9. The following species were noted in the wider area: Brown Long-eared Bat (*Plecotus auritus*), Lesser Noctule (*Nyctalus leisleri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), and Pipistrelle (*Pipistrellus pipstrellus sensu lato*) (Figures 8 & 9). No records of Lesser Horseshoe Bat (*Rhinolophus hipposideros*), Natterer's Bat (*Myotis nattereri*), Daubenton's Bat *(Myotis daubentonii*) or Common Pipistrelle (*Pipistrellus pipistrellus sensu stricto*) have been noted proximate to the proposed development site based on NBDC recorded.

Table 1: *Status of bat species within a 2km^2 grid which incorporates the study location*

Common name	**Scientific name**	**Date**	**Source**
Lesser Noctule	*Nyctalus leisleri*	01/06/2004	National Bat Database of Ireland

Figure 8. Brown Long-eared Bat (*Plecotus auritus*) (yellow) and Lesser Noctule (*Nyctalus leisleri*) (purple) (Source NBDC) (Site – red circle)

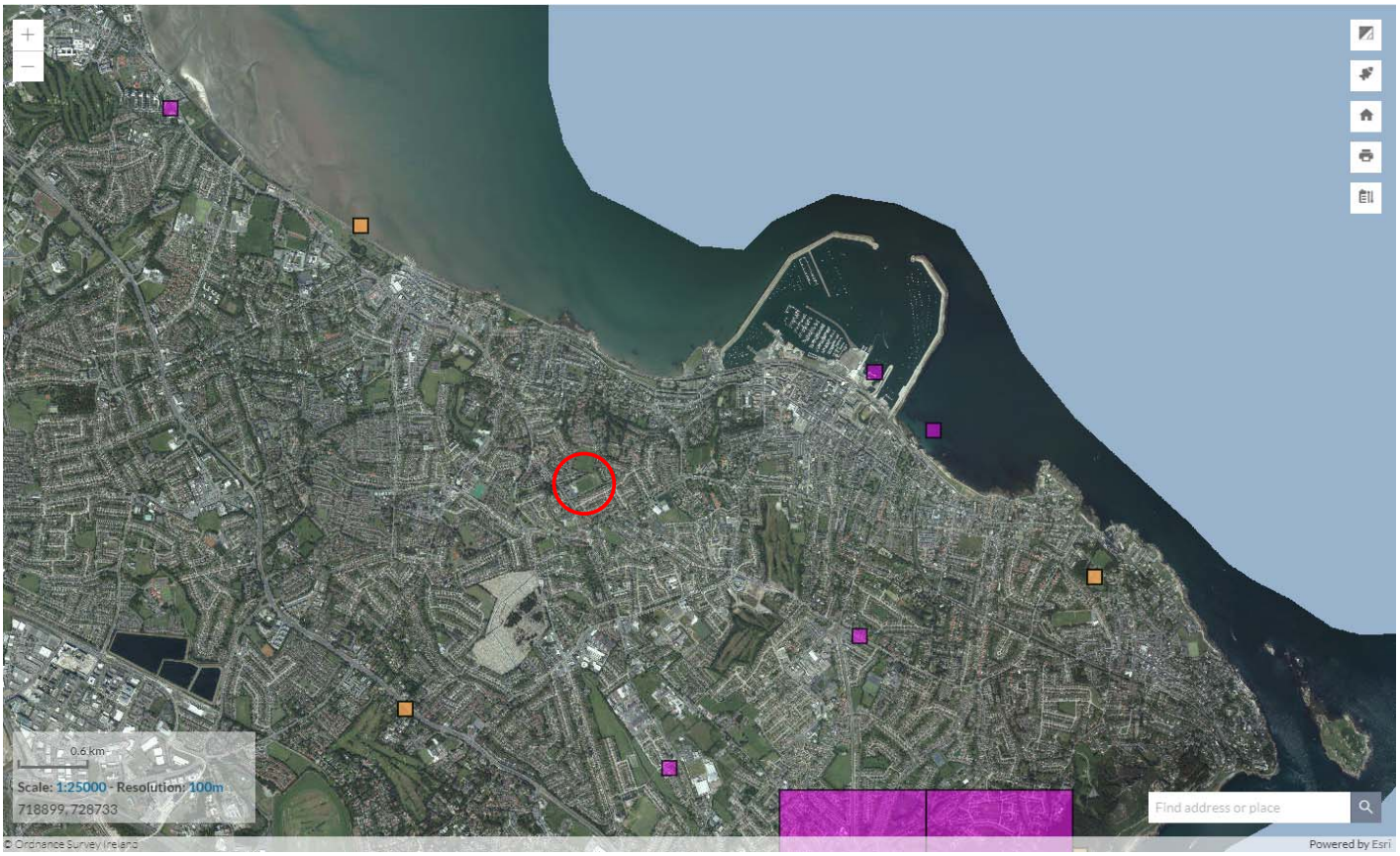

Figure 9. Pipistrelle (*Pipistrellus pipistrellus sensu lato*) (purple) (Species aggregate), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow), and both Pipistrelle and Soprano Pipistrelle (orange) (Source NBDC) (Site – red circle)

Specifically, NBDC records show sightings of bat species in locations that are in close proximity to the subject site:

1. Lesser Noctule (*Nyctalus leisleri*) in grid reference O235278. Recorded on 07/07/2009 and approximately 700m East of the subject site.
2. Lesser Noctule (*Nyctalus leisleri*) in grid reference O237290. Recorded on 01/06/2004 and approximately 1km North-East of the subject site.

Detector survey

No foraging activity was noted on site. A single lesser Noctule (*Nyctalus leisleri*) was noted transiting at high altitude just after sunset on the 23.06.22. No bats were noted emerging from the buildings or trees on site. No trees on site were deemed to be of bat roosting potential.

Building Survey

The interior and exterior of the building was inspected for signs of bats or bat activity. The building on site is modern with a brick structure. There is no attic, facia or soffit spaces or voids. The roof is a flat roof surrounded by a brick parapet and there are no areas visible where bats could potentially roost.

Potential impacts of proposed redevelopment on bats

No roosts or bats emerging from the onsite trees or buildings were observed. The trees on site have no features that would act as potential roosting areas. The removal of the trees would not result in the loss of trees of bat roosting potential.

Mitigation measures

As no evidence of a bat roost was noted in any of the onsite structures, no mitigation measures in regard to these animals are needed during the proposed works. There is also no requirement for a *National Parks and Wildlife Service* derogation licence application to allow the planned works. However, as a precautionary measure a preconstruction assessment of the building will be carried out.

Predicted and residual impact of the proposal

There is no evidence of a current or past bat roost and no foraging on site therefore no negative impacts on roosts these animals are expected to result from the proposed redevelopment. The proposed development is within a built-up area with existing lighting. The likelihood bat collision is not significant as the materials proposed for the development are generally solid and would have good acoustic properties to reflect echolocation signals. As a result the buildings would be clearly visible to bat species. The impact of the proposed development on bats will be minor negative/site/not significant in the long term based on the successful implementation of the lighting design and landscape strategy.

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