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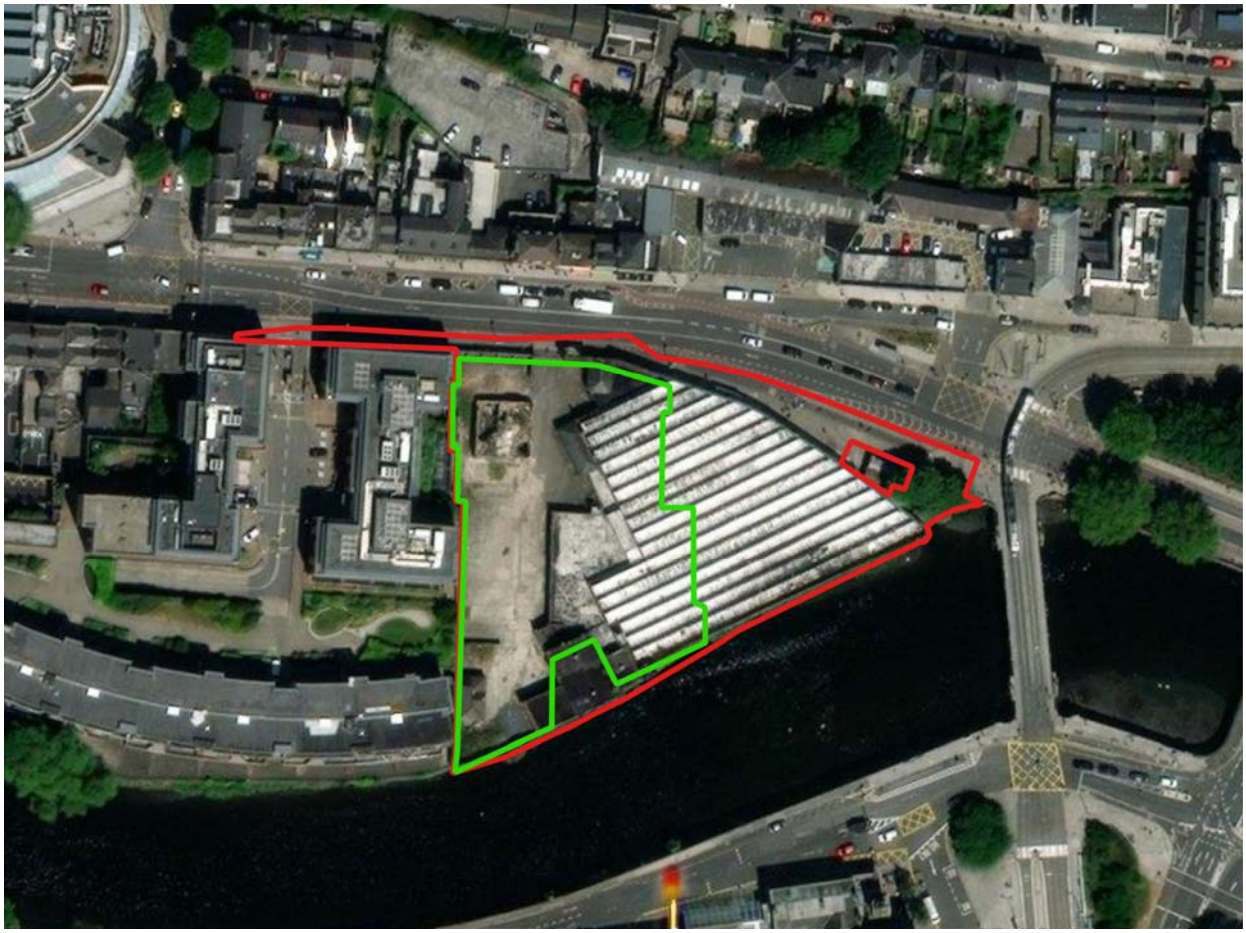
Ecological Impact Assessment (EcIA) for a Proposed Large-Scale Residential Development (Block B1 & C) at No. 42A Parkgate Street, Dublin 8, Co. Dublin.



6th December 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Ruirside Developments Limited.

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Document Control Sheet			
Project	Ecological Impact Assessment (EcIA) for a proposed large-scale residential development (Block B1 & C) at No. 42 A Parkgate Street, Dublin 8, Co. Dublin.		
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Contents

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 Ruirside Developments Limited. This project relates to a proposed large-scale residential development (Block B1 & C) at No. 42 A Parkgate Street, Dublin 8, 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 EIARs (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).

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 30 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).

Project Description

Proposed Large-scale Residential Development comprising mixed use residential, community and commercial redevelopment, accommodated in 2no. blocks (Block B1 and Block C) ranging in height from 8 to 13 storeys with basement and undercroft, and including: 315no. apartments (176no. 1-bed units and 139no. 2-bed units) with private balconies/terraces; co-working/community/cultural space available for public hire; ground level retail. And all associated and ancillary demolition, conservation, landscaping and site development works including bicycle parking; car parking; public open space; communal open space; 2no. new pedestrian site entrances at Parkgate Street, connecting to proposed public plaza and the proposed riverside amenity walkway; 1no. new vehicular access via Parkgate Street to surface areas at western edge of the site. All at No. 42A Parkgate Street, Dublin 8 (Protected Structures on site).

The site outline, site location, site layout plan and architectural elevations are shown in Figures 1-4.

Additional Context

Planning permission was granted in 2020 (ABP Ref. 306569-20) at the site for 321 no. Build-to-Rent (BTR) residential units, ancillary residents' amenity facilities, commercial office space, retail space and café/restaurant accommodated in 5no. blocks ranging from 8 to 13 storeys over ancillary basement area, and all associated and ancillary conservation, landscaping and site development works (with amendments to car parking, basement and undercroft approved by the Board under s.146B (ABP 311507-21 refers), this permission is due to wither in 2025. In the eastern apex of the site, permission was also ultimately granted for a 30-storey Block A tower in 2021 under ABP Ref. 310567-21 which comprises 198 residential units resulting in an overall number of 519 units accommodated on site. A further application for the change of use for Block B2 from commercial office space to 40 number residential units was granted permission in 2023 under DCC Reg. Ref. LRD6042/23.

The planning application, for which this Ecological Impact Assessment forms part of, seeks a new permission for Block B1 and Block C ranging in height from 8 to 13 storeys with basement and under croft, and including: 316no. apartments (176no. 1-bed units and 140no. 2-bed units). These blocks remain largely as per the previously consented development, with amendments made to comply with Dublin City Council Development Pan 2022-2028.

The proposed development, for the purposes of this report, is considered in the context of the application site in its entirety, comprising the proposed development (i.e. revised Blocks B1 & C) and the same associated demolition, conservation, site works, landscape and boundary works, and development previously permitted under 306569-20 (as amended). It is further considered in the context of ABP Ref. 310567-21 as amended by DCC Reg. Ref. LRD6042/23 (Block A and B2). This will collectively be referred to as "the development"/ "the proposed development".

Summary of Ecological Importance

Site flora and fauna assessments were carried out and included a survey of the buildings on site for bat presence and bat emergent surveys were carried out. In summary, no terrestrial mammals or signs of terrestrial mammals of conservation importance were noted on site. No flora of conservation importance were noted on site. No bats were noted onsite. No evidence of bats utilising the structure on site was noted. No invasive species were noted on site. Of particular relevance to the possible impact of the proposed development on Natura 2000 sites is the proximity of the proposed development to the River Liffey and the presence of hazardous material noted on site.

Construction Environmental Management Plan

ARUP has prepared a CEMP for the purposes of this development. The construction strategy is as follows:

'Demolition of the existing structures

A detailed demolition plan will be developed in due course by the appointed specialist demolition contractor which will take account of any particular requirements of the planning permission. Detailed proposals will depend on the expertise and plant available to the demolition specialists selected to undertake the demolition and will be set out in the Demolition Specification during the project delivery phase. It is envisaged that existing structures will be demolished in the reverse order from how they were constructed. Following a soft strip of the building comprising removal of finishes, electrical fittings, wiring, mechanical plant, fixtures, fittings, etc., the structural frame will be demolished. All substructures and foundations will be grubbed up to an approximate depth of 1.8m below existing ground level. Underground tanks and other buried structures shall be removed in advance of piling mat construction.

Phase 2- Piling and Groundworks

Piling Mat

The piling mat will be formed at existing site levels and will comprise of a combination of imported granular material and site-won crushed concrete and rock material. The piling specialist shall clearly delineate the areas of pile mat constructed in the different sourced materials to enable appropriate removal in future. Prior to construction of the pile mat, the formation shall be prepared, and a separation geotextile membrane installed. The pile mat material shall be appropriately compacted in layers in accordance with the Piling Specialist requirements.

Piling

The foundations are envisaged to be continuous flight auger (CFA) piles to Buildings B and C, and bored rock socketed piles to Building A. The piles shall support reinforced concrete pile caps and piled rafts under the stability cores. It is anticipated that the respective piling rig shall install piles from a pile mat datum close to existing ground level. Arisings from the pile installation shall be appropriately disposed off-site to a licensed facility. A temporary retention structure is required in the vicinity of the existing Protected Arch to facilitate the bulk excavation of the basement. This will comprise of either sheet piles or king-post construction and will be monitored for movement throughout the substructure works. The retention structure shall be removed upon achievement of the appropriate concrete strength in the ground floor slab construction. Subsequent to the bulk excavation of the basement, the constructed piles in this area will be broken down to proposed foundation datum level using an excavator with hydraulic breaker attachment.

Groundworks

The outline Construction Waste Management Plan (CWMP) contains more detailed information regarding the minimising of stockpiling of excavated material on site. Excavated material generated by the construction works shall be appropriately assessed for possible re-use on site, where possible, through various accommodation works. Surplus material will be immediately removed from site. The groundworks external to the buildings will comprise installation of precast retaining walls along the existing River Liffey boundary to facilitate build-up of ground to proposed finished levels.

Dewatering

Dewatering may be required for local excavations, such as pile cap or lift pit locations. Any local dewatering is to be discharged to the River Liffey by agreement with the Local Authority and will include necessary treatment as required, such as silt traps and settlement tanks. Alternatively, dewatering may be reinjected to the subsurface through a number of wells or injection points across the site. Similar treatment measures will be adopted prior to reinjection. Local dewatering is likely to be necessary for only a portion of the construction programme, approximately 20 weeks.

Surface Water Run-Off

Existing surface water drainage on the site discharges to the River Liffey. It is envisaged that one of the existing surface water discharge points shall be maintained for the duration of the works, subject to Local Authority agreement. All other existing surface water discharge points to the River Liffey shall be decommissioned. Appropriate settlement tanks and silt traps shall be incorporated to capture any excess silt in the run-off. Refer to ***Section 10.1.9*** *for further detail on surface water management measures. The Contractor shall employ measures to ensure surface water run-off from Parkgate Street does not enter the site.*

Phase 3- Main Construction Works

3.2.1 Substructure

The substructure generally consists of a reinforced concrete slab supported on reinforced concrete pile-caps. The stability core walls are supported on reinforced concrete piled raft foundations. The pile-caps and piled rafts for works at grade will be shuttered with formwork and the concrete cast. Upon removal of the formwork, the areas between the foundations will be built-up with site-won material. In the basement area, the bulk dig datum will be the formation level of the foundations. This will mean the method of constructing the pile-caps and piled rafts in the basement will be similar to that at grade. There will be an open dig to the basement area, with localised retention works at existing structures. The rising perimeter walls will be constructed with two-sided shutters, propped in position, and supported off the basement slab.

Superstructure

The superstructure of Building A is cast in-situ concrete. The stability core walls will be constructed by jump-formwork technique. Columns and slabs will be conventional reinforced concrete flat slab construction. The proposed external envelope comprises either prefabricated or precast panels, hence most of the fabrication will occur off-site at supplier premises.

The superstructures of Buildings B and C are in-situ concrete up to and including Level 1. Thereafter, the superstructure is precast concrete. The proposed façade comprises lightweight cold form steel sections to the inner leaf façade, with the external leaf constructed in masonry and supported from relieving angles and lintels. Scaffolding around the building exterior shall be necessary for construction of the masonry outer leaf and will remain in place until completion of the façade. Prefabricated balcony structures shall be lifted into position and fixed into cast-in connection points. The precast elements are large components and require substantial vehicle movement on site for deliveries. Vehicles will be standard multi-axle flat back trucks delivering less than 40 tonnes each trip and typical for a building of this scale. There will be in-situ concrete work requiring regular deliveries of premixed concrete and formwork materials. The construction works will require the use of tower cranes on site. The cranes will be required for the moving of building materials on site, such as formwork for concrete, reinforcement, precast concrete, steelwork, façade, plant, and general building materials. The use of mobile cranes may be adopted to assist in the installation of the façade and plant.

Duration and Sequencing

It is envisaged that construction of the proposed development will take approximately 34 months. Phase 1 and phase 2 will run concurrently and are expected to take approximately 4 months. Phase 3 as the main construction works will take approximately 30 months. All construction works will be carried out during day time hours (Refer to ***Section 6.6****). The Main Contractor(s), once appointed, will ultimately be responsible for the sequencing and implementation of the works in a safe and secure manner, and in accordance with all statutory requirements and the mitigation measures proposed in the EIAR.*

The main stages of construction will proceed in a general sequence as follows:

- *Phase 1: Enabling Works and Demolition*
- *Phase 2: Piling and Groundworks*
- *Phase 3: Main Construction Works'*

Summary of the Works

As can be seen from the information provided above, the works involve the demolition of existing structures on site, excavation of basement levels and the construction of a new development on site. Based on the information outlined in the Construction and Environmental Management Plan and the supporting information in the accompanying Drainage Report, the nature of construction including demolition and deep excavation works proximate to the River Liffey which is a direct pathway to Natura 2000 sites at Dublin Bay, a robust approach to Appropriate Assessment is required. The proposed project will require a robust series of mitigation measures to prevent impacts on the River Liffey and significant effects on downstream Natura 2000 sites.

The proposed site outline, site location and site architectural plans are demonstrated in Figures 1-4.

Landscape

The landscape strategy for the proposed development has been prepared by Mitchell & Associates. The landscape masterplan is shown in Figure 5.

Lighting

The lighting strategy for the proposed development has been prepared by IN2 Engineering. The external lighting layout is shown in Figure 6.

Arborist

An Arboricultural Impact Assessment Report has been prepared by CMK Hort and Arb Ltd. for the proposed development. This report outlines the following in relation to Arboricultural impacts:

'Site Description

The site is a former industrial complex to the north of the river Liffey. The only existing trees are located within a small enclosed space to the east of the buildings adjacent to the R109.

Abroricultural Impact:

The proposed development of Blocks B1 & C do not necessitate the removal of theexisting trees however permission has been granted for their removal for the developmentof Block A. The impact on trees of the proposed development as shown on drawing TPAR002 102Arboricultural Impact will be locally significant in terms of the treescape in this location.However it is considered that given the nature of the planting and the trees proximity tothe existing buildings which limit their long term potential the overall significance of theirloss is reduced.Mitigation measures for the loss of these trees are to be found within the LandscapeMasterplan which accompanies this submission. '

The arboricultural impacts drawing is shown in Figure 7.

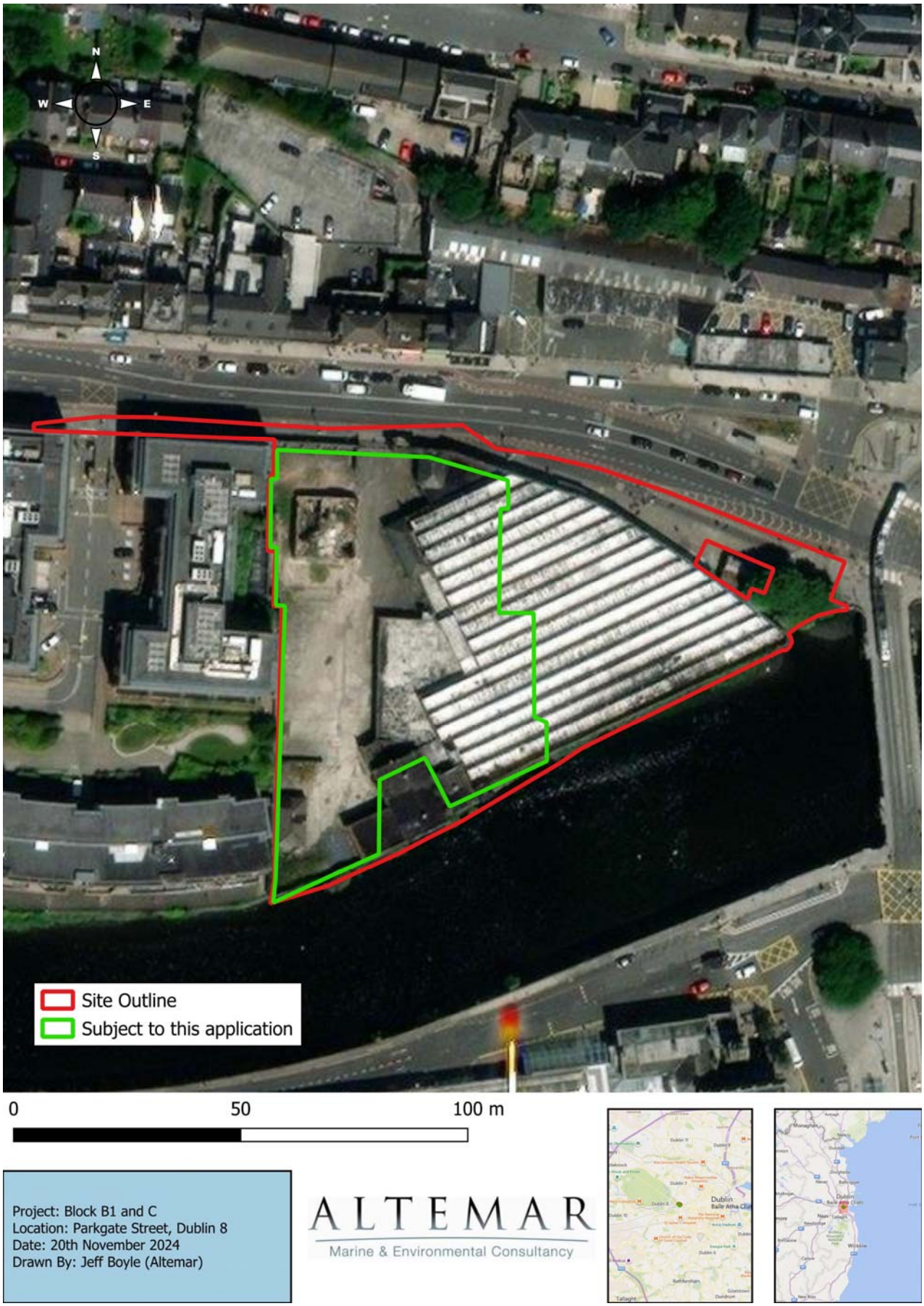

Figure 1. *Site outline*

Figure 2. *Site location*

Figure 3. *Site layout plan*

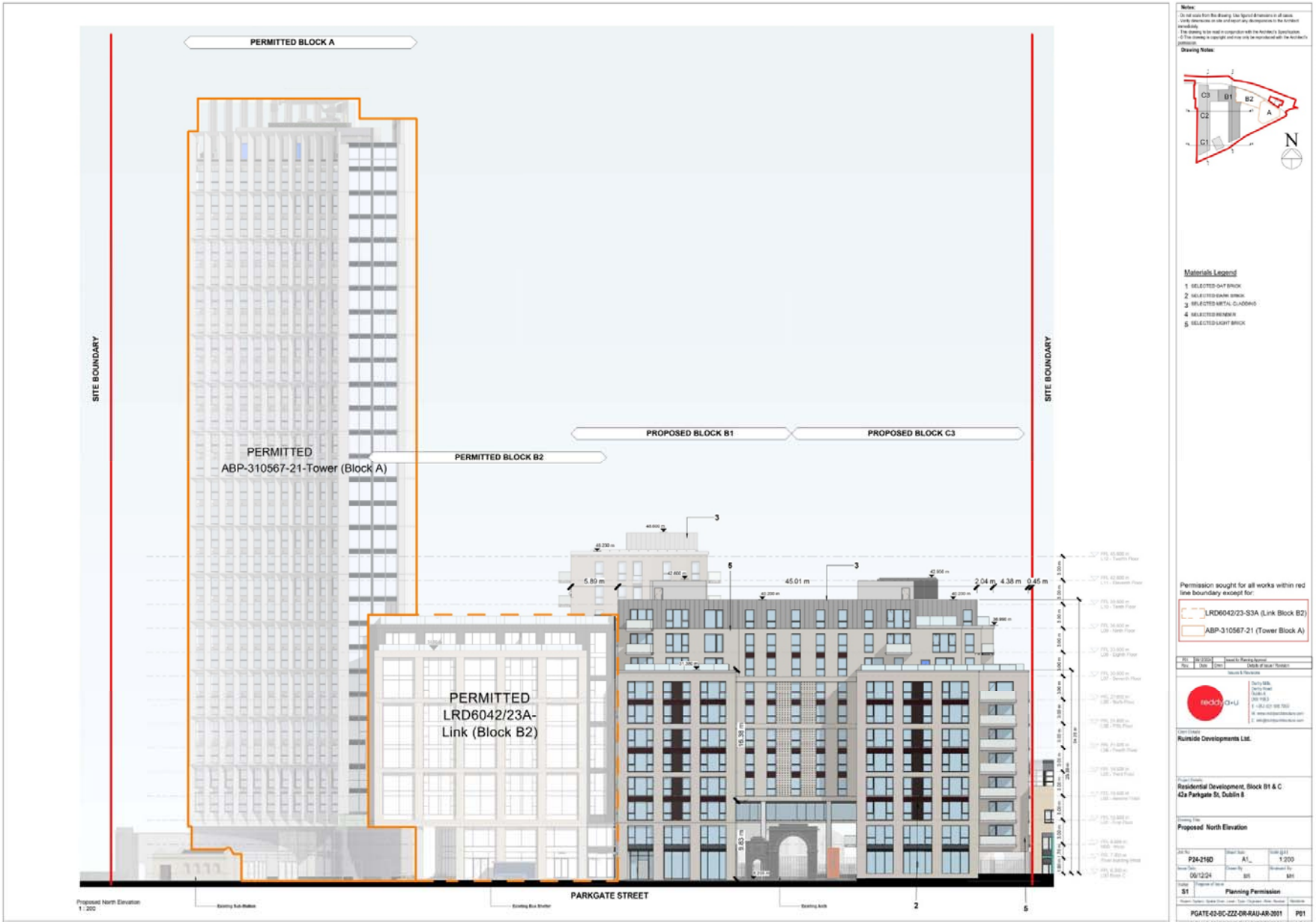

Figure 4. *Proposed north elevations*

Figure 5. *Proposed landscape plan*

Figure 6. *Proposed lighting layout*

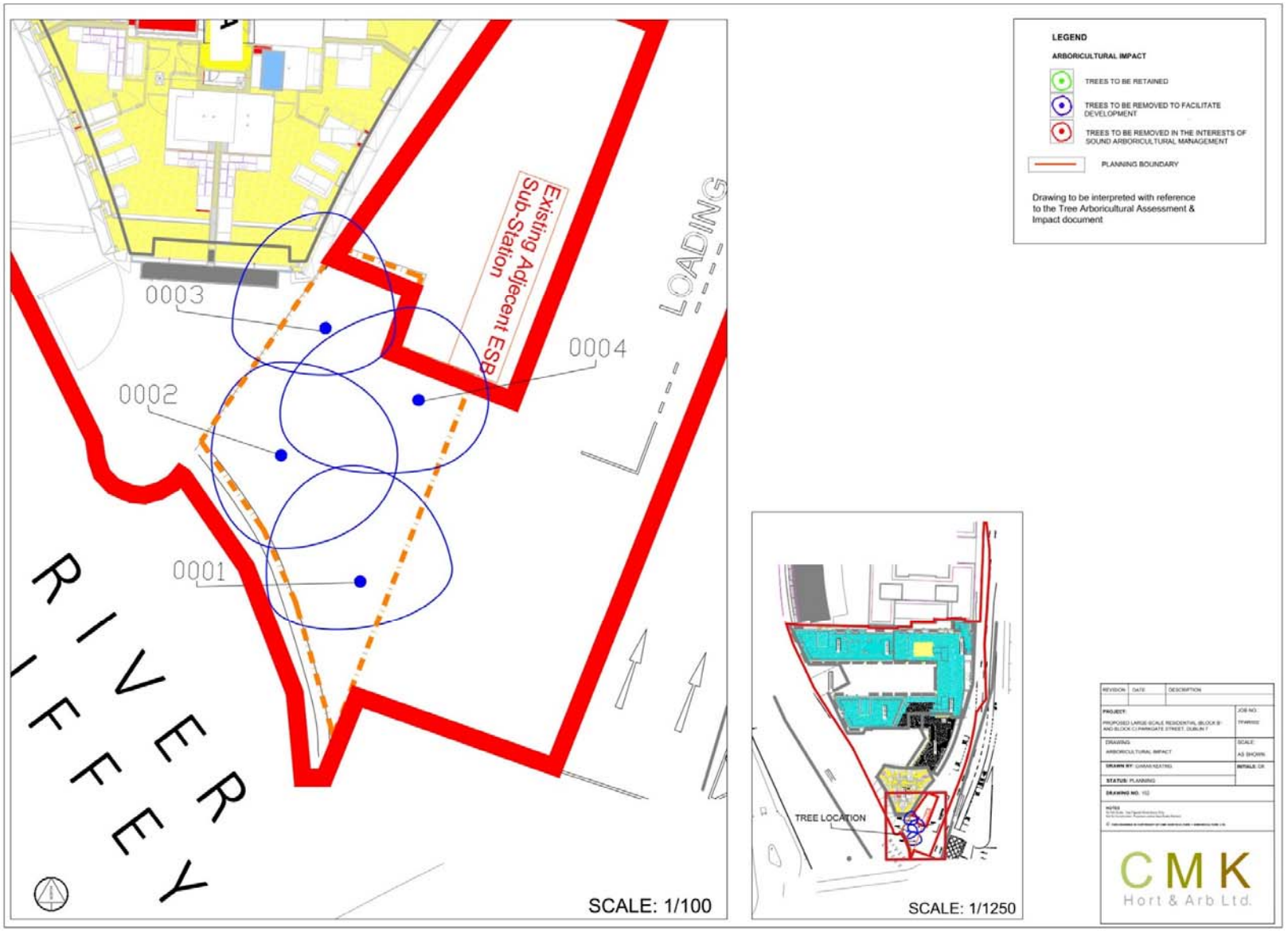

Figure 7. *Arboricultual impacts of the proposed development*

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 (QGIS)

A provisional desk-based assessment of the potential species and habitats of conservation importance was carried out in September 2024 and updated in November 2024. Altemar assessed the project, the proposed construction methodology and the operation of the proposed development.

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 potential ZOI of the construction phase of the project in the absence of mitigation was deemed to be within the site outline, nearby sensitive receptors including the River Liffey and designated sites downstream of the proposed works. Given the extend of the demolition and site clearance works, and the proximity of the River Liffey to the subject site (directly adjacent), in the absence of mitigation there is the potential for dust and surface water runoff to enter the River Liffey. As a result, out of an abundance of caution, the ZOI of the proposed works site is extended to the River Liffey and downstream designated conservation sites located within Dublin Bay.

Field Survey

A field survey of the proposed development site was carried out on the 10th of October 2024. The purpose of the field survey was to identify habitat types according to the Fossitt (2000) habitat classification and map their extent. In addition, more detailed information on the species composition and structure of habitats, conservation value and other data were gathered.

Survey Limitations

The survey covered the site and lands beyond the site outline in the vicinity proposed works. The survey was within the optimal survey period for flora but outside the optimal survey season for mammals. In relation to mammals all areas of the site were accessible, and no constraint is foreseen in relation to the surveys. No limitations are foreseen in relation to the surveys carried out 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 on the ecology by the construction and operation of the proposed development.

Table 1A: Impact description terminology (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.

Table 1B: Criteria for Establishing Receptor Sensitivity/Importance

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.
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

Table 1C: Quality of effects

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).

Table 1D: Significance of Effects

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.

Table 1E: Duration and frequency of effects

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

Table 1F: Describing probability of effects

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

The location of Natura 2000 sites (SAC's and SPA's) within 15km of the proposed development are seen in Figures 8 & 9. National designated conservation sites within 15km (pNHA) of the proposed development are seen in Figure 10. There are no NHAs within 15km. Ramsar sites located within 15km are demonstrated in Figure 11. Watercourses and designated conservation sites within 5km are demonstrated in Figures 12 - 16. The closest Natura 2000 site is South Dublin Bay and River Tolka Estuary SPA, located 4.4 km from the subject site. The closest pNHA is Grand Canal pNHA (1.4 km), whilst the closest RAMSAR Site is Sandymount Strand/Tolka Estuary, located 5.6 km from the site. Due to the immediate proximity of the River Liffey to the proposed development site, it is considered that there is a direct hydrological pathway to designated conservation sites located within Dublin Bay via the River Liffey. Conservation sites with a direct hydrological pathway include South Dublin Bay (SAC & pNHA), North Dublin Bay (SAC & pNHA), South Dublin Bay and River Tolka Estuary SPA, North Bull Island (SPA, pNHA & Ramsar) and Sandymount Strand / Tolka Estuary Ramsar site.

A separate Appropriate Assessment Screening and Natura Impact Statement has also been carried out for Natura 2000 sites. Following the implementation of mitigation measures, it was demonstrated, '*On the basis of the content of this report, the competent authority is enabled to conduct an Appropriate Assessment and consider whether, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European site*.'

Details of national & international conservation sites within 15km of the proposed development are seen in Table 2 & 3. All conservation sites beyond 15km do not have a direct hydrological pathway to the subject site. Several conservation sites beyond 15 km are located beside or within the marine environment. Due to the distance and dilution and mixing in the marine environment, no significant effects would be seen on designated conservation sites beyond 15km.

Table 2. Natura 2000 sites within 15km of the subject site and beyond 15km with potential of a hydrological connection

Site Code	NATURA 2000 Site	Distance
Special Areas of Conservation		
IE000210	South Dublin Bay SAC	5.5 km
IE000206	North Dublin Bay SAC	7.5 km
IE001209	Glenasmole Valley SAC	11 km
IE000199	Baldoyle Bay SAC	12 km
IE002122	Wicklow Mountains SAC	12.1 km
IE001398	Rye Water Valley/Carton SAC	13.1 km
IE000202	Howth Head SAC	13.3 km
IE003000	Rockabill to Dalkey Island SAC	13.5 km
IE000205	Malahide Estuary SAC	14.1 km
Special Protection Areas		
IE004024	South Dublin Bay and River Tolka Estuary SPA	4.4 km
IE004006	North Bull Island SPA	7.5 km
IE004236	North-West Irish Sea SPA	9.5 km
IE004040	Wicklow Mountains SPA	12.1 km
IE004016	Baldoyle Bay SPA	12.4 km
IE000205	Malahide Estuary SPA	14.1 km

Table 3. pNHAs and Ramsar sites within 15km of the subject site

pNHA	
Grand Canal pNHA	1.4 km
Royal Canal pNHA	2.1 km
Liffey Valley	3.9 km
North Dublin Bay pNHA	4.1 km
South Dublin Bay pNHA	5.5 km
Santry Demense	6.4 km
Dolphins, Dublin Docks pNHA	6.8 km
Booterstown Marsh pNHA	7.3 km
Dodder Valley pNHA	6.9 km
Fitzsimon's Wood pNHA	9.5 km
Glenasmole Valley pNHA	11 km
Lugmore Glen	11.3 km
Feltrim Hill	11.7 km
Baldoyle Bay pNHA	12 km
Sluice River Marsh	12.5 km
Dalkey Coastal Zone And Killiney Hill pNHA	12.5 km
Rye Water Valley/Carton SAC	13.1 km
Howth Head pNHA	13.2 km
Slade of Saggart and Crooksling Glen	13.7 km
Dingle Glen pNHA	13.9 km
Malahide Estuary pNHA	14.1 km
Ballybetagh Bog pNHA	14.7 km
Ramsar	
Sandymount Strand/Tolka Estuary	5.6 km
North Bull Island	7.7 km
Baldoyle Bay	12.4 km
Broadmeadow Estuary	14.3 km

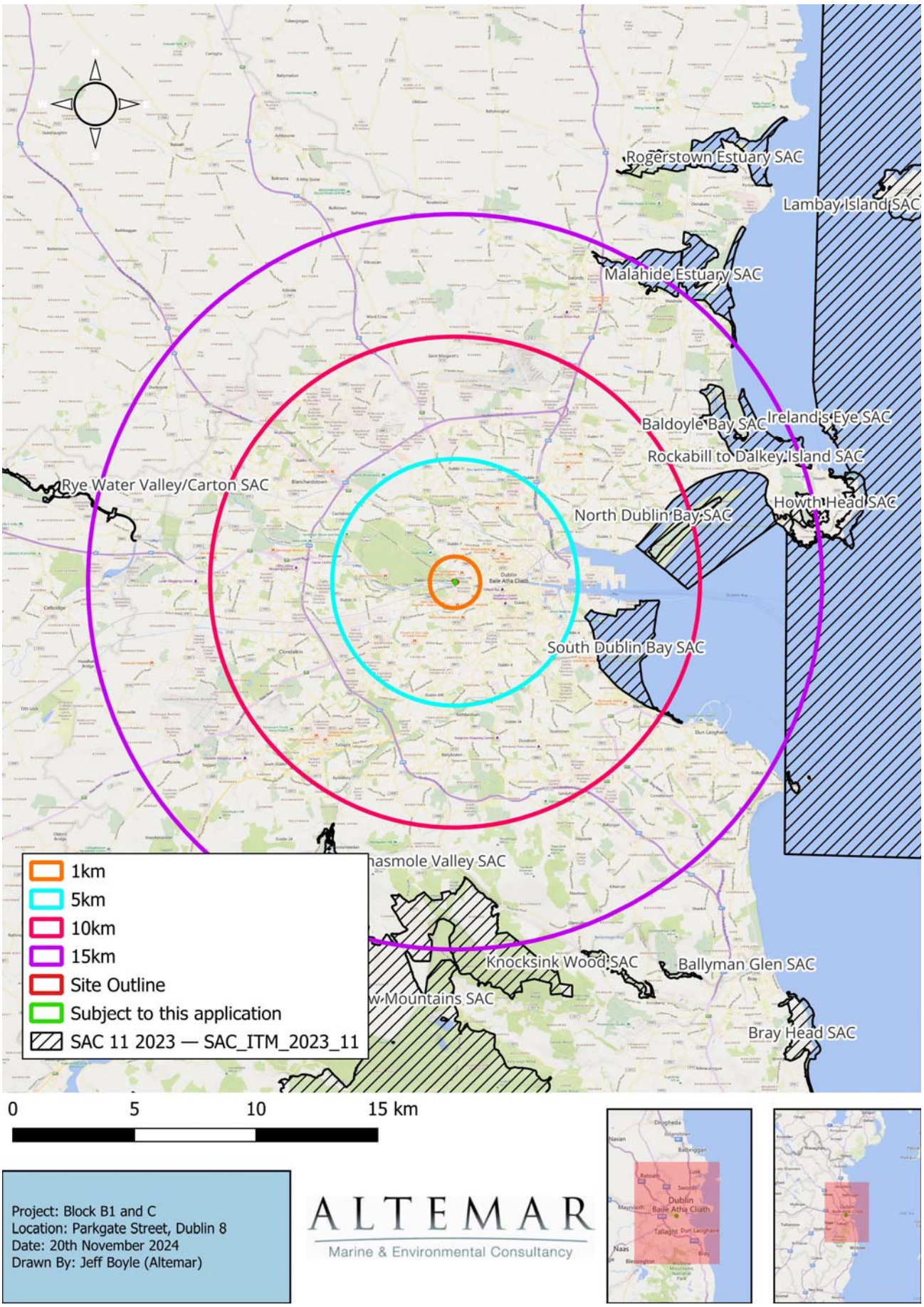

Figure 8. *SACs within 15km of the subject site*

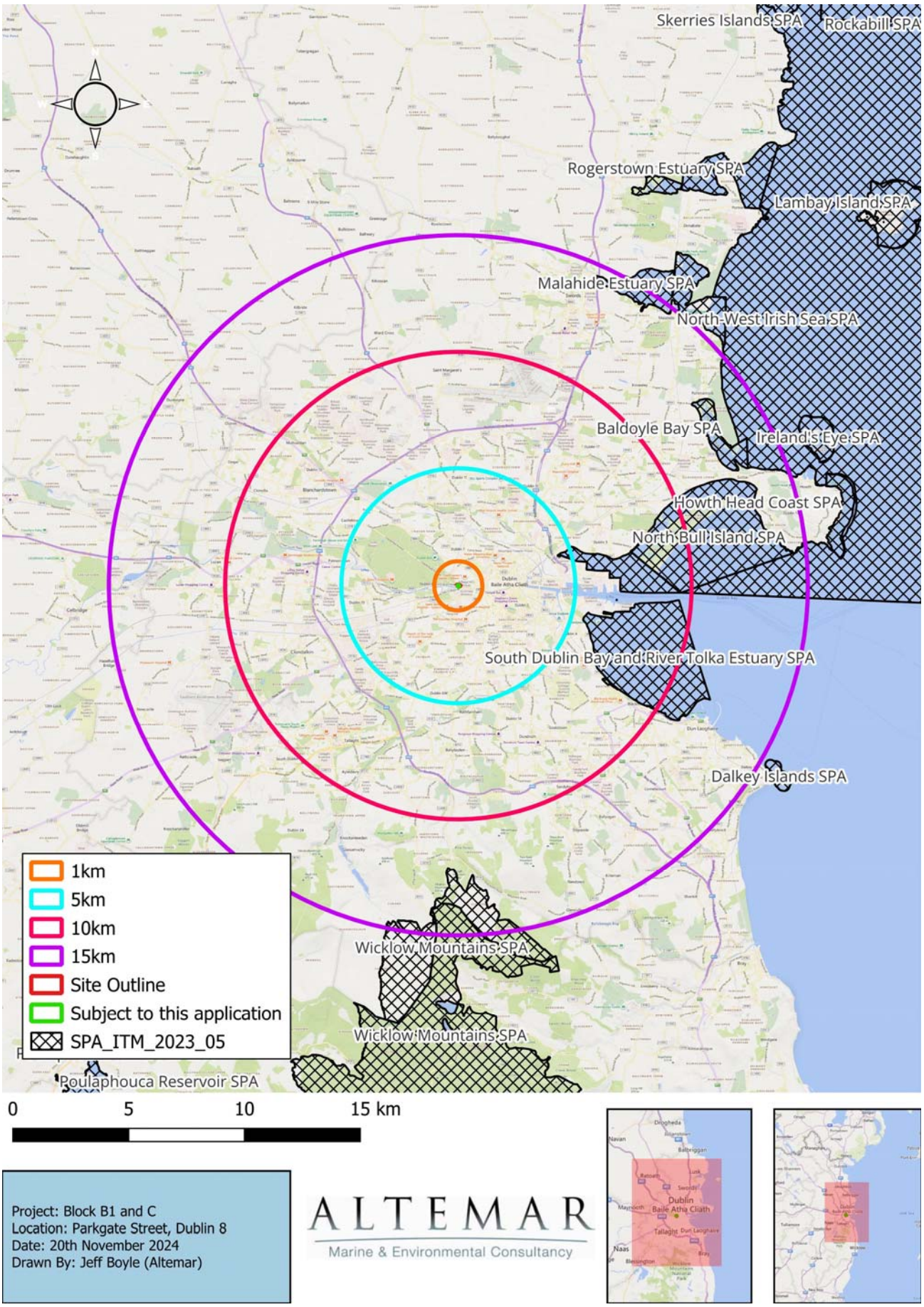

Figure 9. *SPAs within 15km of the subject site*

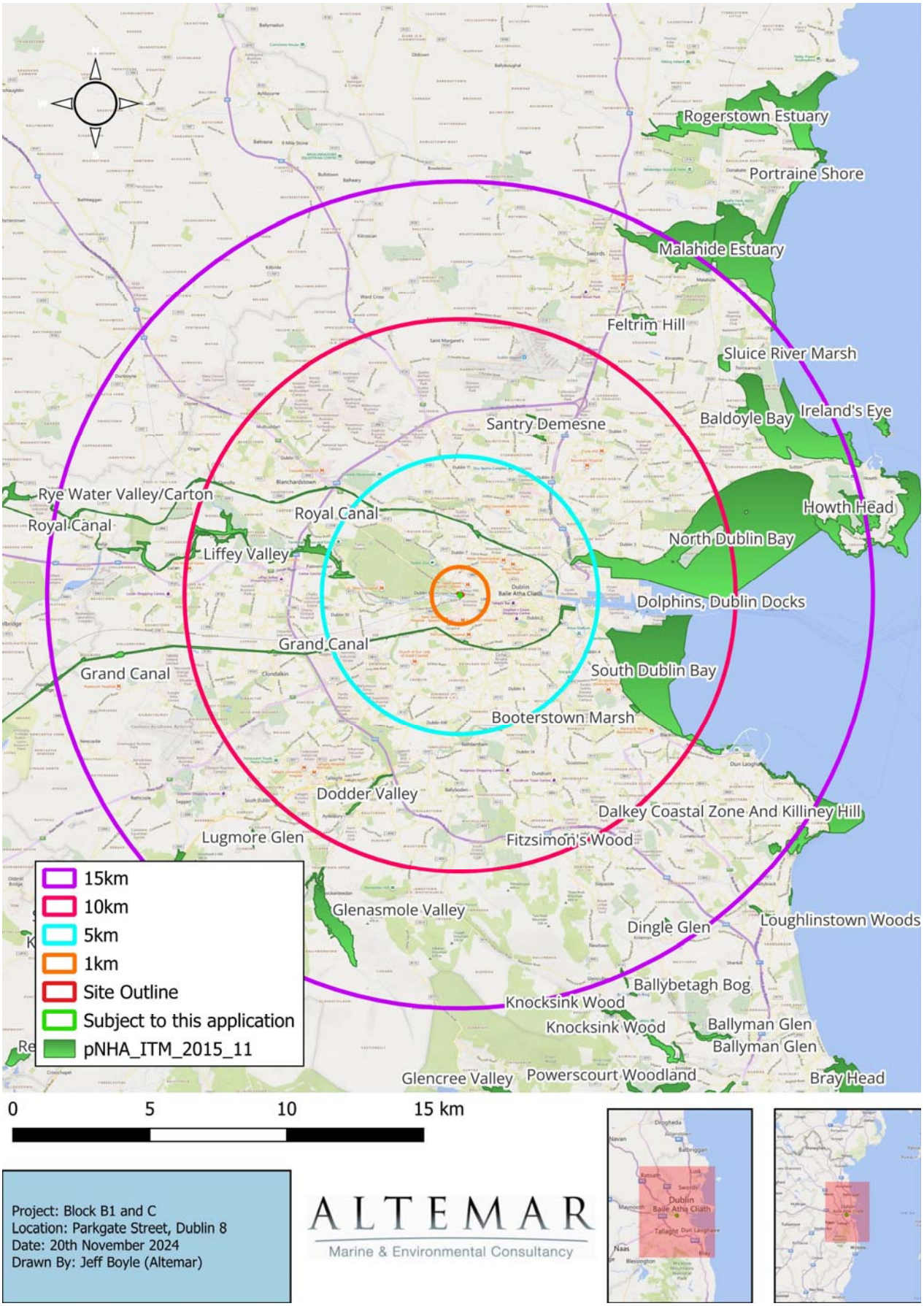

***Figure 10**. pNHAs within 15km of the subject site*

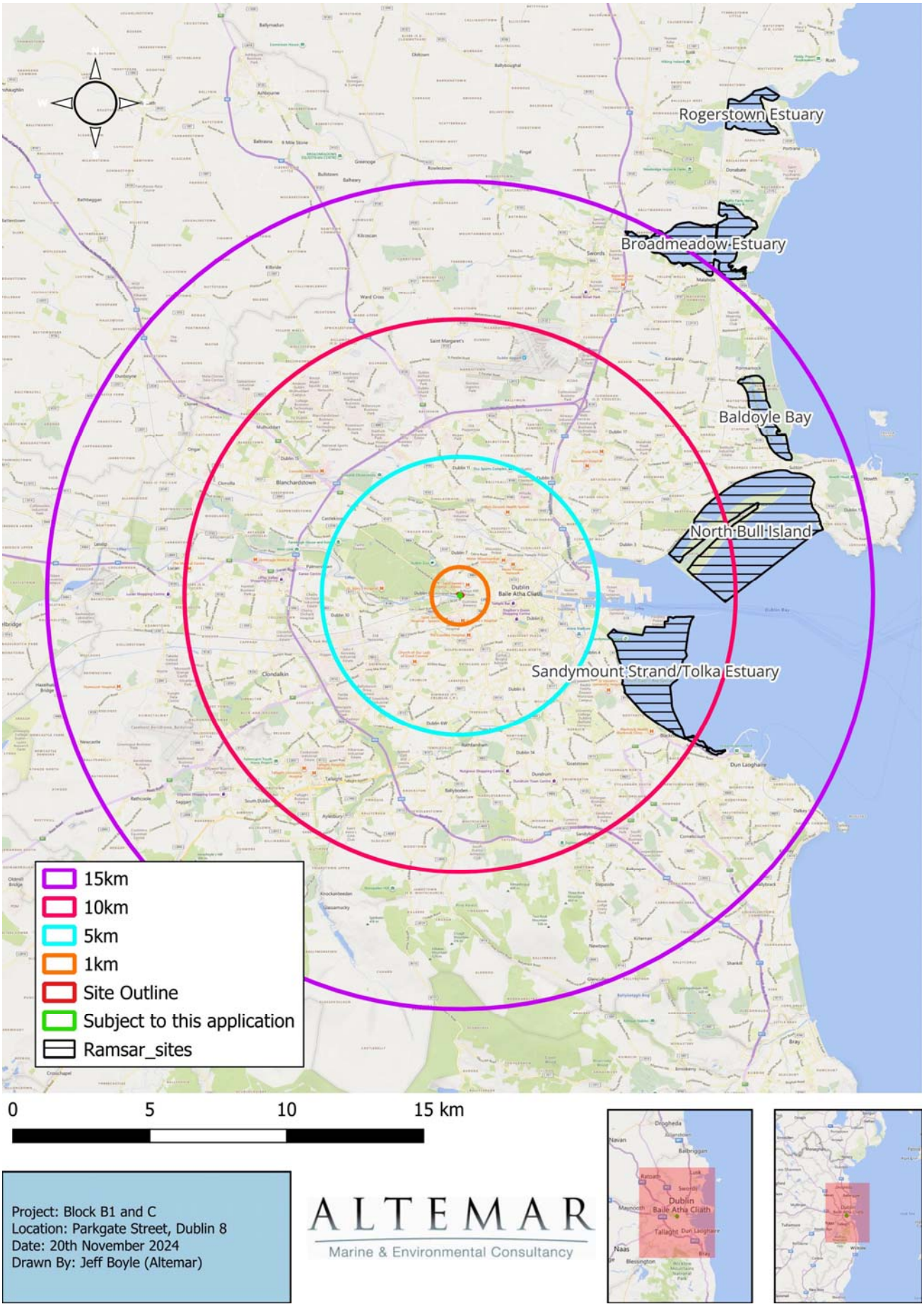

Figure 11. *Ramsar sites within 15km of the subject site*

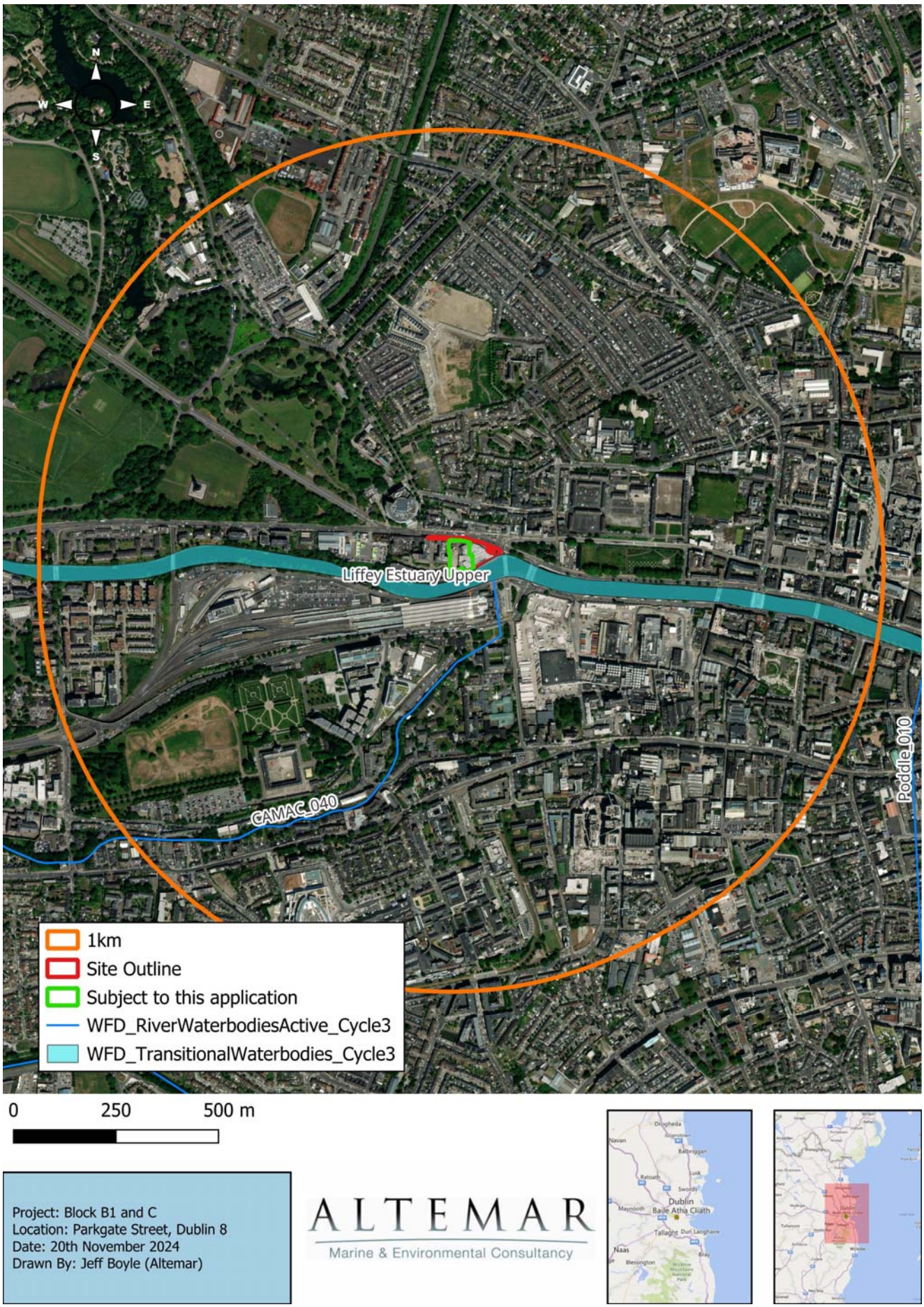

Figure 12. *Watercourses within 1km of the subject site*

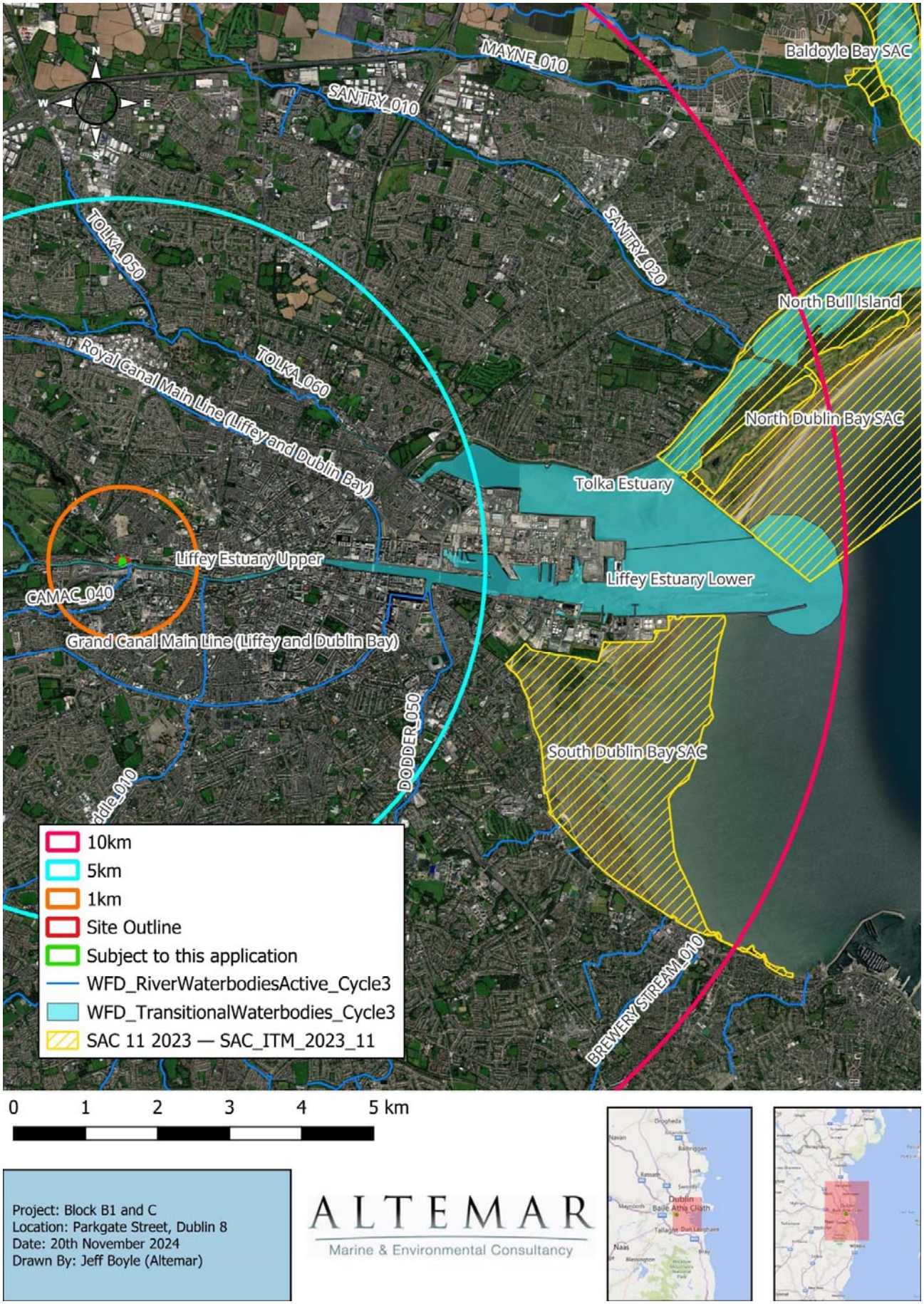

Figure 13. *Watercourses and SACs near the subject site*

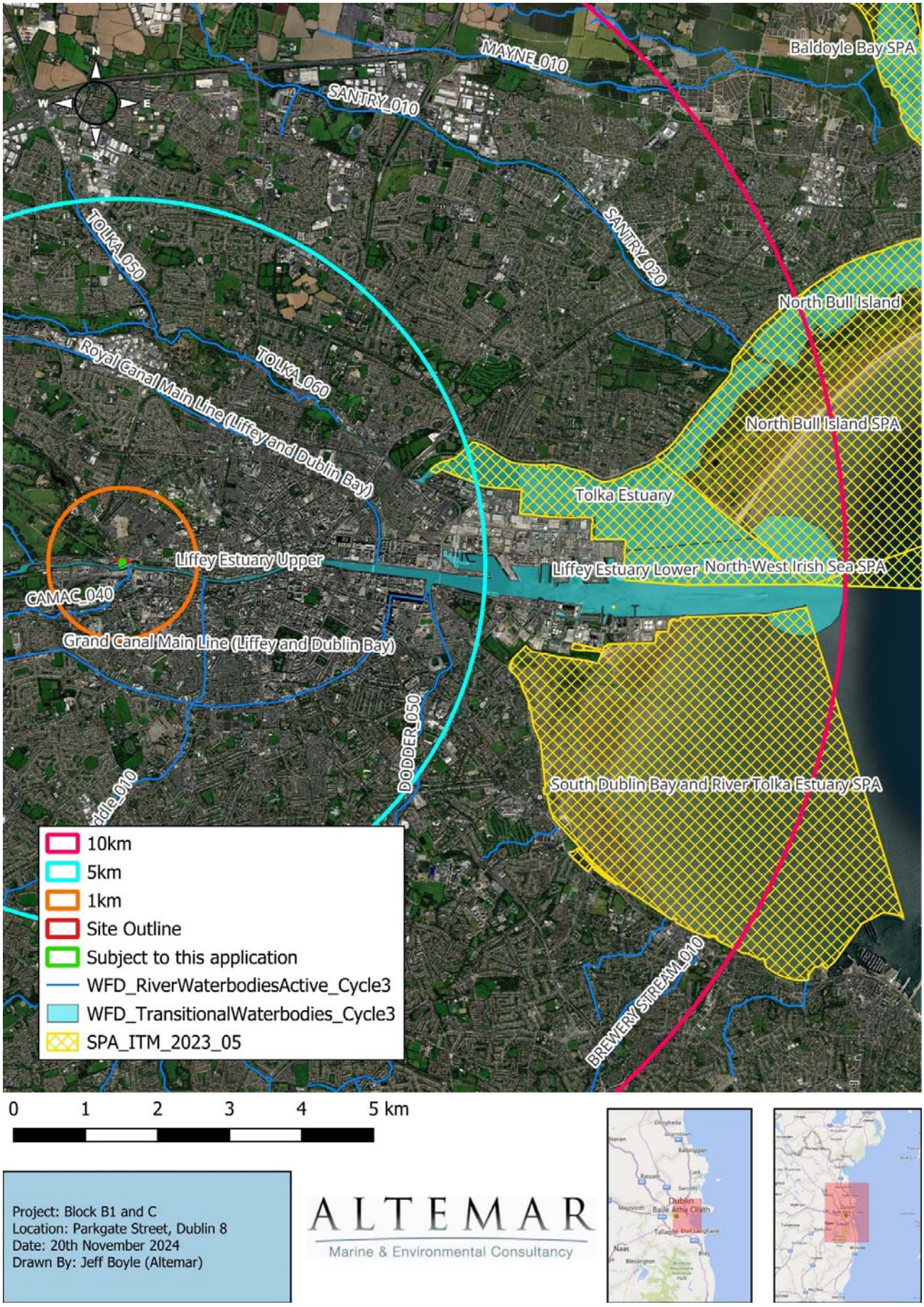

***Figure 14**. Watercourses and SPAs near the subject site*

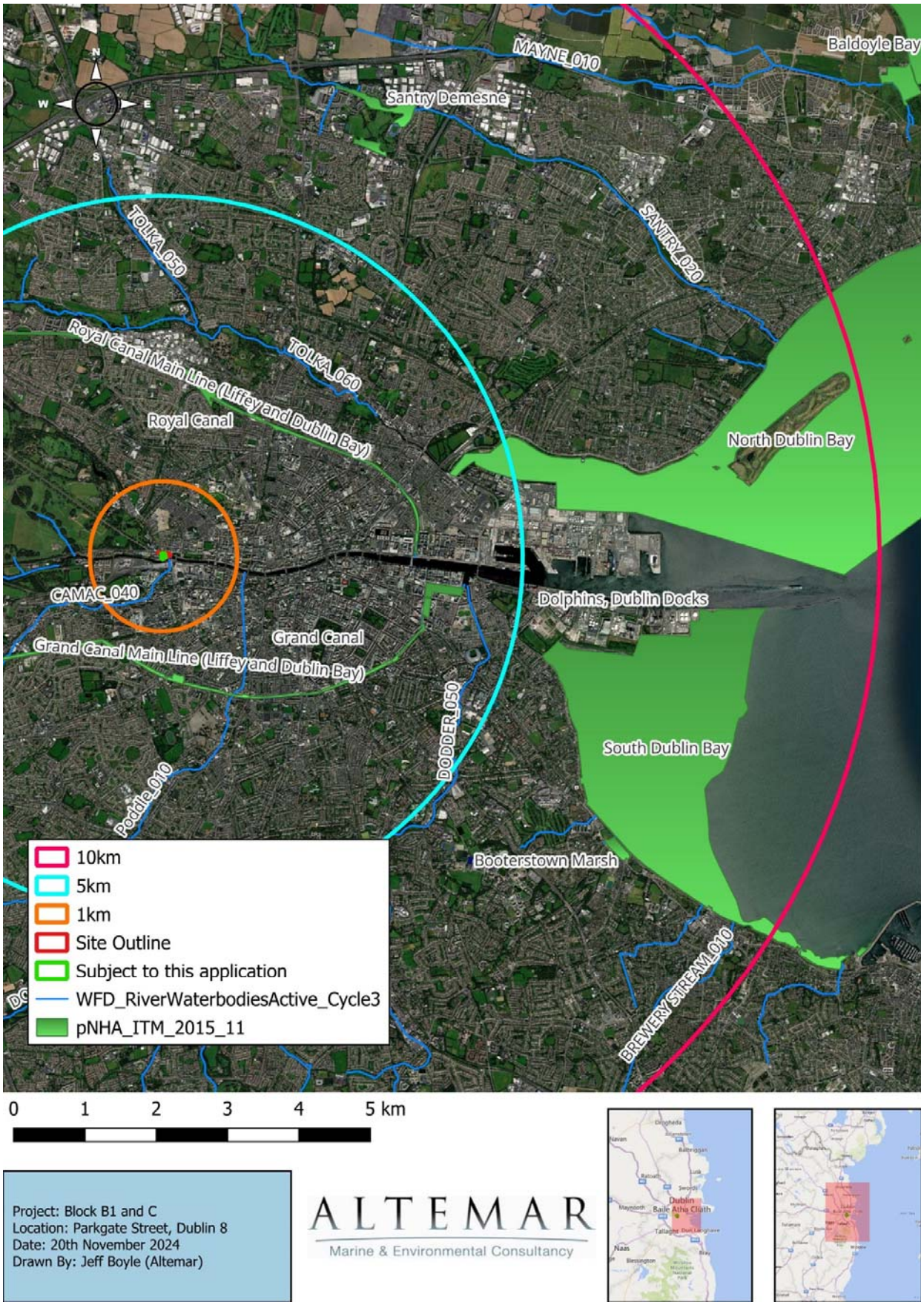

Figure 15. *Watercourses and pNHAs near the subject site*

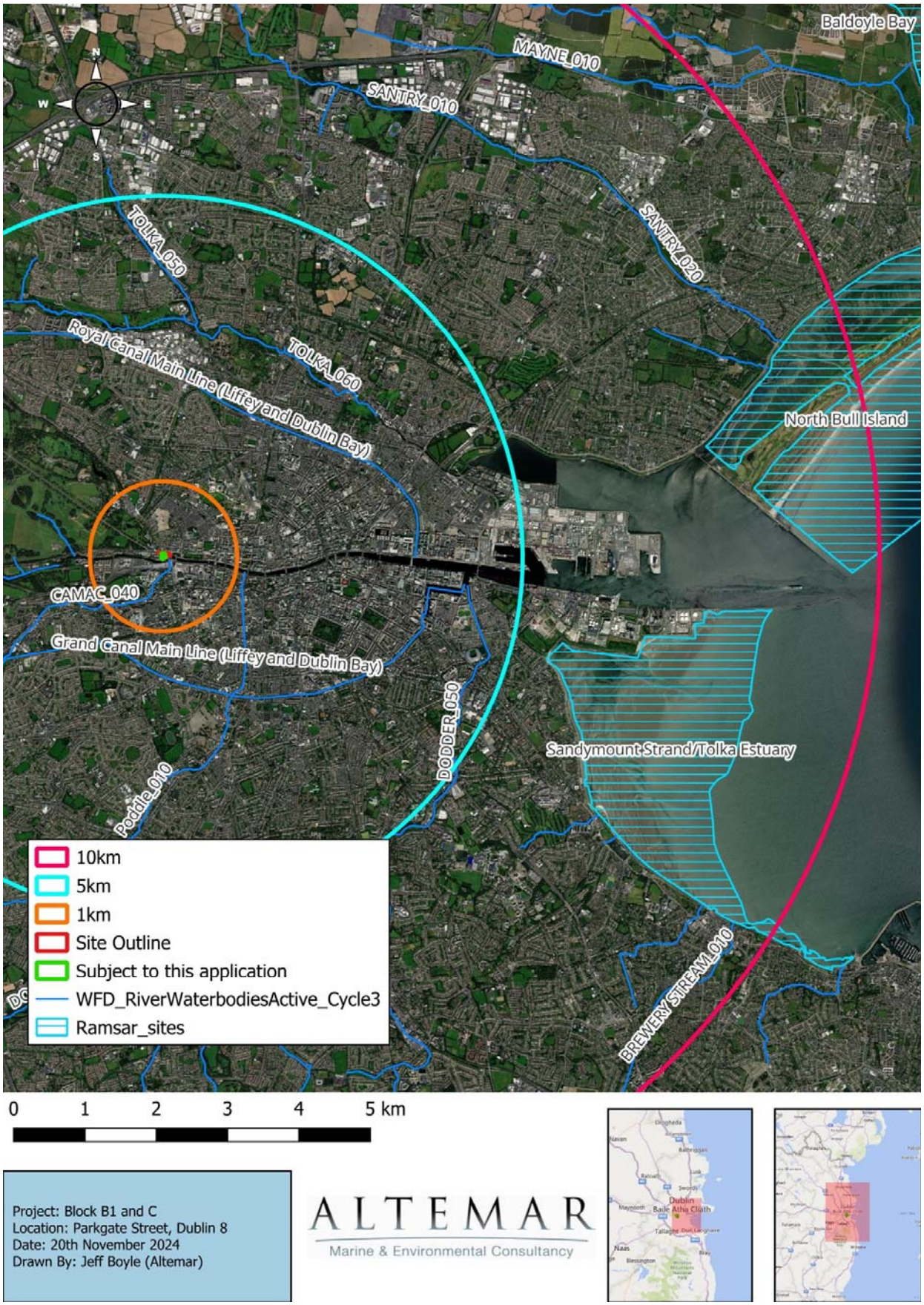

Figure 16. *Watercourses and Ramsar sites within 15km of the subject site*

Habitats and Species

Habitats within the proposed development site were classified according to Fossitt (2000) (Figure 17) and the species noted within each habitat are described. In general, there are few natural habitats remaining in the proposed development area and the vast majority of the site consists of built land.

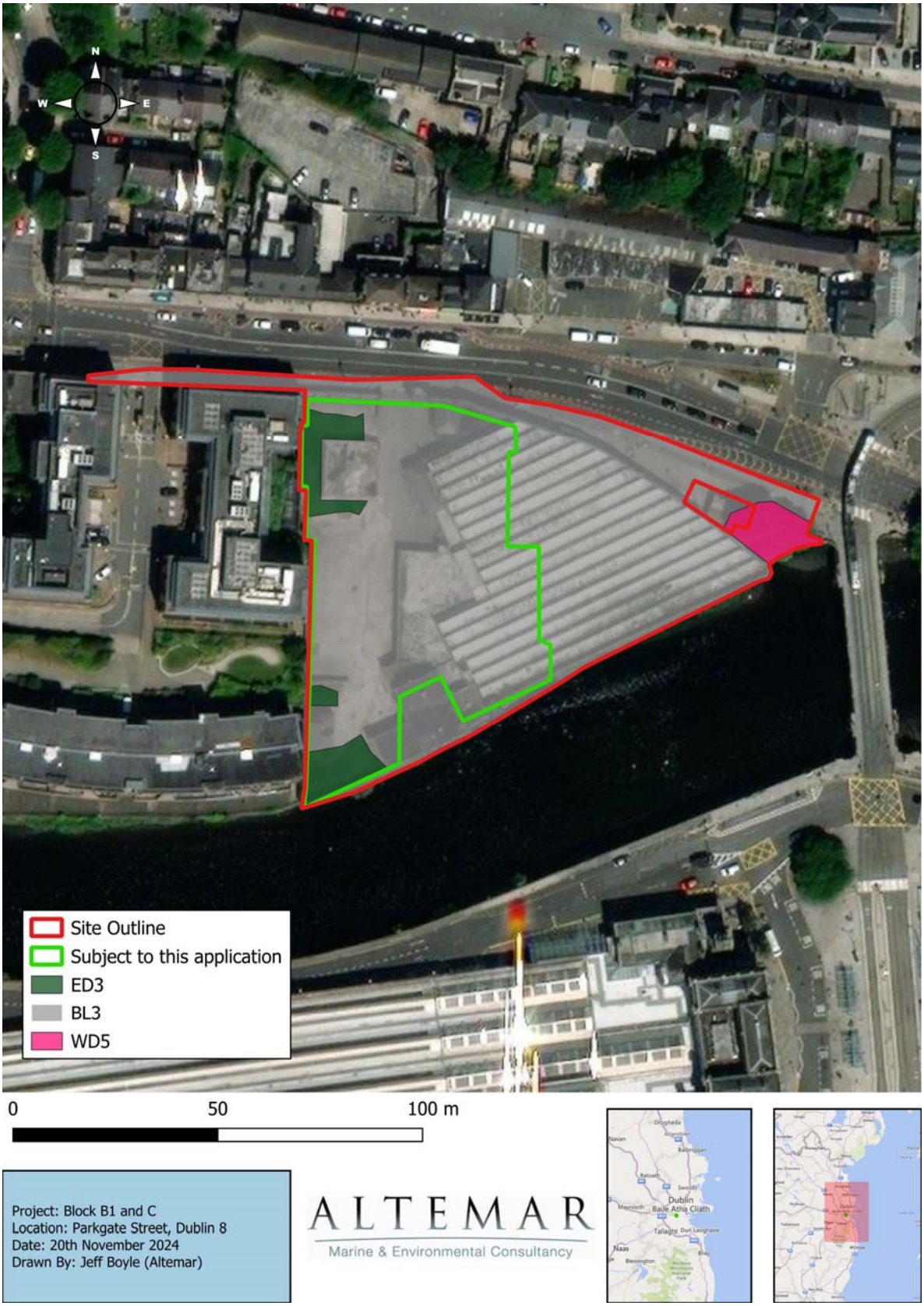

Figure 17. Habitats onsite classified according to Fossitt (2000)

Habitats & Flora

BL3 – Buildings and Artificial Surfaces

The predominant habitat on site is 'Buildings and artificial surfaces' (BL3) which comprise the entrance from Parkgate Street, the existing buildings and hardstanding areas of the site and adjacent Parkgate Street.

Plate 1. BL3 Artificial surfaces 1

Plate 2. BL3 Artificial surfaces 2

ED3 – Recolonising bare ground

Onsite there are two distinct areas of recolonising bare ground. These areas have relatively recently been disturbed and consist primarily of opportunistic flora species such as butterfly bush (*Buddleja davidii*), bramble (*Rubus fruticosus* agg.), rosebay willowherb (*Chamerion angustifolium*), great willowherb (Epilobium hirsutum), sycamore (*Acer pseudoplatanus*), dandelion (*Taraxacum* agg.), docks (*Rumex sp.*), milkweed (*Euphorbia peplus*), germander speedwell (*Veronica chamaedrys*), cleavers (*Galium aparine*), daisy (*Bellis perennis*), plantain (*Plantago lanceolata*), white clover (Trifolium repens), herb robert (*Geranium robertianum*), red clover (*Trifolium pratense*), cuckooflower (*Cardamine pratensis*), shepherds purse (*Capsella bursa-pastoris*), scarlet pimpernel (*Anagallis arvensis*), ragwort (*Senecio jacobaea*), red valerian (*Centranthus ruber*), moss (*Sphagnum sp*), Mexican fleabane (*Erigeron Karvinskianus*) and native ivy (*Hedera helix*).

Plate 3. Recolonising bare ground 1

Plate 4. Recolonising bare ground 2

WD5 – Scattered Trees and Parkland

The eastern corner of the site is bordered by a small, landscaped area at the corner of Parkgate Street and Heuston Bridge; separated from the internal site by the boundary wall and from the urban street by metal railings. It is comprised of a patch of rough grass planted with four cultivar Lime trees (*Tilia cordata*).

Bats
As outlined in Appendix I "There is no evidence of a current bat roost or bat foraging activity on site, therefore no negative impacts on bat roosts are expected to result from the proposed development."

Evaluation of Habitats
The proposed development site is on built land. No habitats of conservation significance were noted within the site outline.

Plant Species
The plant species encountered at the various locations on site are detailed above. No rare or plant species of conservation value were noted during the field assessment. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened plant species were recorded in the vicinity of the proposed site.

Invasive Plant species
No invasive plant species that could hinder removal of soil from the site during groundworks, such as Japanese knotweed, giant rhubarb, Himalayan balsam or giant hogweed were noted on site.

Fauna
Amphibians/Reptiles
The common frog (*Rana temporaria*) was not observed on site. There are features within the site boundary that could be important to frogs. The common lizard (*Zootoca vivipara*) or smooth newt (*Lissotriton vulgaris*) were not recorded on site.

Terrestrial Mammals
The proposed development site is on build land. No badgers or badger activity was noted on site. No hedgehogs were seen during the site visit. No rare or threatened faunal species were recorded within the proposed development site based on NBDC records.

Birds
The site is not seen as an important ex-situ site due it consisting entirely of built land and possess no potential foraging habitat. In addition, netting is in place over the main warehouse building which would deter nesting birds on the roof. However, numerus feral pigeons (Columba livia f. domestica) were noted within the buildings. Flightline assessments were carried out on site (Appendix II – flightlines). As outlined in Appendix II "Species recorded which are considered to be conservation interests in general and specifically for sites in the vicinity of the proposed site were herring gull, black-headed gull and cormorant. Five Mute Swans were observed in the Liffey (amber listed).

Herring gull was the dominant species observed followed by Black headed gulls. 150 observations of approximately 3000 individuals were recorded overall during the two surveys. Flight path height estimates ranged from 20 – 80m. The main pattern observed by flight path mapping was the tendency of birds to utilise the quay-side of the buildings along the banks of the Liffey to navigate. This was reflective of observations during surveys." The following bird species were noted on site:

Table 4: Bird Species noted in the vicinity of the proposed development.

Common Name	***Scientific Name***
Herring gull (amber listed)	*Larus argentatus* (flying not roosting)
Black headed gull (amber listed)	*Larus ridibundus* (flying not roosting)
Cormorant (amber listed)	*Phalacrocorax carbo* (in River Liffey)
Mute swan (amber listed)	*Cygnus olor* (in the River Liffey)

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 O13H, based on the Ordnance Survey Ireland (OSI) Irish Grid classification system, was assessed. Table 5 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 5. Designated species within grid ref. O13H, NBDC

Species group	Species name	Designation
flowering plant	Cherry Laurel (*Prunus laurocerasus*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species
terrestrial mammal	Feral Ferret (*Mustela furo*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species
bird	Ruddy Duck (*Oxyura jamaicensis*)	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)
terrestrial mammal	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)
flowering plant	Canadian Waterweed (*Elodea canadensis*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
flowering plant	Giant Hogweed (*Heracleum mantegazzianum*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
flowering plant	Giant Knotweed (*Fallopia sachalinensis*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
flowering plant	Indian Balsam (*Impatiens glandulifera*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
flowering plant	Japanese Knotweed (*Fallopia japonica*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
flowering plant	Nuttall's Waterweed (*Elodea nuttallii*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
insect - beetle (Coleoptera)	Harlequin Ladybird (*Harmonia axyridis*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
terrestrial mammal	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)
flatworm (Turbellaria)	*Australoplana sanguinea*	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	Butterfly-bush (*Buddleja davidii*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	Canadian Fleabane (*Conyza canadensis*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	Common Broomrape (*Orobanche minor*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	Evergreen Oak (*Quercus ilex*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	False-acacia (*Robinia pseudoacacia*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	Himalayan Honeysuckle (*Leycesteria formosa*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species

Species group	Species name	Designation
flowering plant	Sycamore (*Acer pseudoplatanus*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
flowering plant	Turkey Oak (*Quercus cerris*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
terrestrial mammal	European Rabbit (*Oryctolagus cuniculus*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
bony fish (Actinopterygii)	Roach (*Rutilus rutilus*)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
terrestrial mammal	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
marine mammal	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
terrestrial mammal	Brown Long-eared Bat (*Plecotus auritus*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
terrestrial mammal	Daubenton's Bat (*Myotis daubentonii*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
terrestrial mammal	Lesser Noctule (*Nyctalus leisleri*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
terrestrial mammal	Nathusius's Pipistrelle (*Pipistrellus nathusii*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
terrestrial mammal	Pipistrelle (*Pipistrellus pipistrellus sensu lato*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
terrestrial mammal	Soprano Pipistrelle (*Pipistrellus pygmaeus*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
terrestrial mammal	Whiskered Bat (*Myotis mystacinus*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
amphibian	Common Frog (*Rana temporaria*)	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
terrestrial mammal	Eurasian Badger (*Meles meles*)	Protected Species: Wildlife Acts
terrestrial mammal	West European Hedgehog (*Erinaceus europaeus*)	Protected Species: Wildlife Acts
bird	Little Egret (*Egretta garzetta*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
bird	Peregrine Falcon (*Falco peregrinus*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
bird	Common Kingfisher (*Alcedo atthis*)	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
bird	Rock Pigeon (*Columba livia*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
bird	Common Pheasant (*Phasianus colchicus*)	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
bird	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

Species group	Species name	Designation
bird	Mallard (*Anas platyrhynchos*)	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
bird	Common Coot (*Fulica atra*)	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
bird	Common Pochard (*Aythya ferina*)	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
bird	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
bird	Eurasian Wigeon (*Anas penelope*)	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
bird	Tufted Duck (*Aythya fuligula*)	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
bird	Eurasian Woodcock (*Scolopax rusticola*)	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 III Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	Northern Shoveler (*Anas clypeata*)	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 III Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
bird	Greater Scaup (*Aythya marila*)	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Protected Species: EU Birds Directive >> Annex III, Section III Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	Barn Swallow (*Hirundo rustica*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	Brent Goose (*Branta bernicla*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of

Species group	Species name	Designation
		Conservation Concern >> Birds of Conservation Concern - Amber List
bird	Common Kestrel (*Falco tinnunculus*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	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
bird	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
bird	Common Swift (*Apus apus*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	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
bird	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
bird	House Martin (*Delichon urbicum*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	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
bird	Lesser Black-backed Gull (*Larus fuscus*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	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
bird	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
bird	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
bird	Sand Martin (*Riparia riparia*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	Sky Lark (*Alauda arvensis*)	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
bird	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
bird	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

Species group	Species name	Designation
bird	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
insect - beetle (Coleoptera)	*Hydrovatus clypealis*	Threatened Species: Data deficient
insect - hymenopteran	*Bombus (Bombus) cryptarum*	Threatened Species: Data deficient
insect - hymenopteran	Gooden's Nomad Bee (*Nomada goodeniana*)	Threatened Species: Endangered
insect - hymenopteran	Hylaeus (*Prosopis*) brevicornis	Threatened Species: Endangered
moss	Anomalous Bristle-moss (*Orthotrichum anomalum*)	Threatened Species: Least concern
moss	Grey-cushioned Grimmia (*Grimmia pulvinata)*	Threatened Species: Least concern
moss	Intermediate Screw-moss (*Syntrichia intermedia)*	Threatened Species: Least concern
moss	Silky Wall Feather-moss (*Homalothecium sericeum*)	Threatened Species: Least concern
moss	Silver-moss (*Bryum argenteum*)	Threatened Species: Least concern
flowering plant	Slender Thistle (*Carduus tenuiflorus*)	Threatened Species: Near threatened
flowering plant	Upright Brome (*Bromopsis erecta)*	Threatened Species: Near threatened
insect - hymenopteran	Large Red Tailed Bumble Bee *(Bombus (Melanobombus) lapidarius)*	Threatened Species: Near threatened
insect - hymenopteran	Megachile (Megachile) *centuncularis*	Threatened Species: Near threatened
insect - hymenopteran	Moss Carder-bee (*Bombus (Thoracombus) muscorum)*	Threatened Species: Near threatened
insect - hymenopteran	*Andrena (Melandrena) nigroaenea*	Threatened Species: Vulnerable

An assessment of files received from the NPWS (Code No. 2020_185) 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 at Parkgate St. There are no recordings of any species of interest within the proposed site boundary.

Analysis of the Potential Impacts

The proposed development will involve the removal of the existing terrestrial habitats on site, re-profiling and excavations. It should be noted that a Construction Environmental Management Plan (CEMP) by ARUP, and an AA Screening/NIS accompany this EcIA.

Construction Phase

In the absence of mitigation the overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora within the site. Direct negative effects will be manifested in terms of the removal of the site's internal habitats. The removal of these habitats will result in a loss of species of low biodiversity importance. It should be noted that this submission is being made on a site that has been granted permission for additional development and that the current application will be developed in tandem with the granted application. The area is not deemed to be an important foraging area for terrestrial mammals or birds. The potential impacts of the proposed construction of the development in the absence of mitigation are outline below:

Designated Conservation sites within 15km

The proposed development is not within a designated conservation site. It should be noted that the proposed development site is located directly adjacent to the River Liffey and the nearest Natura 2000 site is South Dublin Bay and Tolka Estuary SPA, located 4.4 km downstream of the proposed demolition and clearance site. The nearest pNHA is Grand Canal pNHA (located 1.4 km from the subject site) and the nearest Ramsar site is Sandymount Strand/Tolka Estuary (located 5.6 km downstream).

Given the nature of the demolition works and the subject site's proximity to the River Liffey, out of an abundance of caution it is considered that there is a direct hydrological pathway to designated conservation sites located within Dublin Bay, downstream of the River Liffey. Namely, South Dublin Bay (SAC & pNHA), South Dublin Bay and River Tolka Estuary SPA, Sandymount Strand/Tolka Estuary Ramsar site, North Dublin Bay (SAC & pNHA), North Bull Island SPA and North-West Irish Sea SPA.

In the absence of mitigation measures surface water runoff and dust during site demolition and clearance works could potentially impact on the River Liffey and downstream conservation sites, with water quality or downstream/upstream impacts, due to the tidal nature of the River Liffey proximate to the site. Ensuring water quality and compliance with Inland Fisheries Ireland "*Guidelines on the Protection of Fisheries during construction works in and adjacent to waters*"[1] and the Water Pollution Acts would be seen as the primary method of ensuring no significant impact on designated conservation sites. There will be no discharge to the River Liffey or drainage networks that lead to the Liffey as all drainage on site will utilise SUDS measures such as swales. Standard construction phase and operational mitigation in relation to onsite, works, will be in place and no impact is foreseen in relation to designated conservation sites.

Impacts: Low adverse / International / Negative Impact / Not significant / short term. Mitigation is needed to limit the potential impact from contaminated surface water and dust on designated sites.

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.

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 bats were noted roosting on site. No bats were noted emerging from buildings on site. No significant impacts on bats are foreseen.

[1] https://www.fisheriesireland.ie/sites/default/files/migrated/docman/2016/Guidelines%20Report%202016.pdf

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

Aquatic Biodiversity

Due to the proximity of the estuarine element of the River Liffey and the hydrological pathway to designate sites, there is potential for downstream/upstream impacts on biodiversity from silt, dust and petrochemicals.
Impacts: Moderate adverse / international / Negative Impact / Slight Effects / short term. Mitigation is needed in the form of control of silt and petrochemical and dust during construction.

Bird Fauna

No birds of conservation importance were nesting on site. Herring gull were not nesting on site.
Impacts: Low adverse / National / Negative Impact / Not significant / short term. Mitigation is needed in the form of a pre construction survey in relation to nesting birds.

Operational Phase

Once cleared, the site would be seen as a stable ecological environment. However, appropriate measures should be taken to prevent surface water run-off into adjacent habitats and in particular the River Liffey need to be protected from impact due to the potential downstream impact effect on the watercourse and on Natura 2000 sites.

Designated Conservation sites within 15km

The proposed development includes site clearance and the placement of inert soil on site. There is potential for silt laden surface water to exit the side and enter surface water networks and the River Liffey.
Impacts: Minor / International / Neutral Impact / Not significant / Long-term. Mitigation is needed in the form of a post construction inspection of the petrochemical interceptor on site.

Biodiversity

Terrestrial mammalian species

No protected terrestrial mammals were noted on site. The site will be cleared during the construction phase.
Impacts: Neutral / site / Negative Impact / Not significant / short term.

Flora

No protected flora was noted on site. The site will be cleared during the construction phase.
Impacts: Negligible / 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. As the site will have been cleared no potential roosting habitats will be on site. Mitigation is needed in the form of protection of the River Liffey from light spill.
Impacts: Negligible / site / Negative Impact / Not significant / long-term

Aquatic Biodiversity

Due to the proximity to the estuarine element of the River Liffey and the hydrological pathway to a designated sites, there is potential for downstream impacts on biodiversity from silt.
Impacts: Low adverse / local / Negative Impact / Not significant / long term Mitigation is needed to comply with water pollution acts.

Bird Fauna

There will be new structures onsite. It is envisaged that the buildings will be clearly visible and will not impact upon flightlines of birds.
Impacts: Low adverse / site / Negative Impact / Not significant / long term.

Avoidance and Remedial Measures

Mitigation by Avoidance

Direct negative impacts upon the existing buildings, vegetation within the site are not regarded as being significant due to the absence of species of conservation importance and as a result do not require mitigation. However, mitigation measures should be put in place to ensure the there is no contamination of adjacent watercourses with downstream or upstream impacts during construction/demolition and operation of the proposed works and that bats or birds are not impacted during the demolition phase. The following mitigation measures will be implemented:

Table 4. Mitigation measures

Sensitive Receptors	Potential Impacts	Mitigation Measures
South Dublin Bay SAC North Dublin Bay SAC South Dublin Bay and River Tolka Estuary SPA North Bull Island SPA North-West Irish Sea SPA River Liffey Biodiversity in the vicinty of the site	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Downstream impacts • Negative impacts on the aquatic environment, aquatic species and qualifying interests.	As outlined in the Construction Environment Management Plan by Arup, the following measures will be in place: ***'Mitigation Measures*** ***Traffic & Transport*** *A Construction Traffic Management Plan has been included as Section 7 of this CEMP. The contractor will develop this CEMP and Construction Traffic Management Plan (CTMP) in order to implement the requirements of the CEMP prepared as part of this application. This will be developed by the appointed contractor in advance of the works and will be agreed with Dublin City Council and An Garda Síochána.* *Air Quality* *The assessment of likely significant effects during construction includes for the implementation of 'standard mitigation', as stated in the TII guidance6. The measures which are appropriate to the proposed development and which will be implemented include:* *• Spraying of exposed earthwork activities and site haul roads during dry weather;* *• Provision of wheel washes at exit points;* *• Covering of stockpiles;* *• Control of vehicle speeds, speed restrictions and vehicle access; and* *• Sweeping of hard surface roads.* *In addition, the following measures will be implemented for during the construction phase of the proposed development:* *• Facades of buildings will be covered and sprayed with water while being demolished;* *• A c. 1.8m hoarding will be provided around the site works to minimise the dispersion of dust from the working areas;* *• Any generators will be located away from sensitive receptors in so far as practicable; and* *• Stockpiles will be located as far as possible from sensitive receptors and covered and/or dampened during dry weather.* *Employee awareness is also an important way that dust may be controlled on any site. Staff training and the management of operations will ensure that all dust suppression methods are implemented and continuously inspected.* *During the construction phase of the proposed development it is possible that disturbance of ACMs on site could cause asbestos fibres to be released into the ambient environment. An asbestos audit will be carried out on the buildings scheduled for demolition prior to demolition works. Any asbestos discovered will be removed by a Specialist Contractor in accordance with Safety, Health, and Welfare at Work (exposure to Asbestos) Regulations 2006/20137, and disposed of by specialist contractors to an appropriately licensed facility. Traceable records of this activity, including the disposal licence, will be kept.*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		Noise *The impact assessment conducted for the construction activity during the construction phase has highlighted that the predicted construction noise levels are above the adopted criteria at distances of 20m or less, and that a negative impact on nearby receivers will occur.* *The following mitigation measures will be implemented during construction activities in order to reduce the noise and vibration impact to nearby noise sensitive areas. The contractor will provide proactive community relations and will notify the public and vibration sensitive premises before the commencement of any works forecast to generate appreciable levels of noise or vibration, explaining the nature and duration of the works. The contractor will distribute information circulars informing people of the progress of works and any likely periods of significant noise and vibration.* *With regard to potential mitigation measures during construction activities, the standard planning condition typically issued by Dublin City Council states:* *"During the construction and demolition phases, the proposal development shall comply with British Standard 5228 "Noise Control on Construction and open sites Part 1. Code of practice for basic information and procedures for noise control."* *BS5228 includes guidance on several aspects of construction site mitigation measures, including, but not limited to:* • *•selection of quiet plant;* • *•control of noise sources;* • *•screening;* • *•hours of work, and;* • *•liaison with the public.* *Thus, the following noise mitigation will be adhered to during construction:* ***Selection of Quiet Plant*** *The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site. The least noisy item should be selected wherever possible. Should a particular item of plant already on the site be found to generate high noise levels, the first action should be to identify whether or not said item can be replaced with a quieter alternative.* ***Noise Control at Source*** *If replacing a noisy item of plant is not a viable or practical option, consideration will be given to noise control "at source". This refers to the modification of an item of plant or the application of improved sound reduction methods in consultation with the supplier. For example, resonance effects in panel work or cover plates can be reduced through stiffening or application of damping compounds; rattling and grinding noises can often be controlled by fixing resilient materials in between the surfaces in contact.* *Referring to the potential noise generating sources for the works under consideration, the following best practice migration measures should be considered:*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		•Site compounds will be located away from noise sensitive receptors within thesite constraints. The use lifting bulky items, dropping and loading of materialswithin these areas will be restricted to normal working hours. *•Mobile plant should be switched off when not in use and not left idling.* *•For piling plant, noise reduction can be achieved by enclosing the drivingsystem in an acoustic shroud. For steady continuous noise, such as thatgenerated by diesel engines, it may be possible to reduce the noise emitted byfitting a more effective exhaust silencer system or utilising an acoustic canopyto replace the normal engine cover.* *•For concrete mixers, control measures will be employed during cleaning toensure no impulsive hammering is undertaken at the mixer drum.* *•For all materials handling ensure that materials are not dropped fromexcessive heights, lining drops chutes and dump trucks with resilientmaterials.* *•Demountable enclosures can also be used to screen operatives using handtools and will be moved around site as necessary.* *•All items of plant will be subject to regular maintenance. Such maintenancecan prevent unnecessary increases in plant noise and can serve to prolong theeffectiveness of noise control measures.* ***Piling*** *Piling is the construction activity which is most likely to cause disturbance. Mitigation in relation to piling is outlined in the following paragraphs.* *Piling programmes will be arranged so as to control the amount of disturbance in noise and vibration sensitive areas at times that are considered of greatest sensitivity. If piling works are in progress on a site at the same time as other works of construction or demolition that themselves may generate significant noise and vibration, the working programme will be phased so as to prevent unacceptable disturbance at any time.* *During consultation the planner, developer, architect and engineer, as well as the local authority, should be made aware of the proposed method of working of the piling contractor. The piling contractor will in turn have evaluated any practicable and more acceptable alternatives that would economically achieve, in the given ground conditions, equivalent structural results.* *Noise reduction will be achieved by enclosing the driving system in an acoustic shroud.* *Screening by barriers and hoardings is less effective than total enclosure but can be a useful adjunct to other noise control measures. For maximum benefit, screens should be close either to the source of noise (as with stationary plant) or to the listener. Removal of a direct line of sight between source and listener can be advantageous both physically and psychologically. In certain types of piling works there will be ancillary mechanical plant and equipment that may be stationary, in which case, care should be taken in location, having due regard also for access routes. When appropriate, screens or enclosures will be provided for such equipment.* *Contributions to the total site noise can also be anticipated from mobile ancillary equipment, such as handling cranes, dumpers, front end loaders etc. These machines may only have to work intermittently, and when safety permits, their engines will be switched off (or during short breaks from duty reduced to idling speed) when not in use.*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		Screening *Screening is an effective method of reducing the noise level at a receiver location and can be used successfully as an additional measure to all other forms of noise control. Construction site hoarding will be constructed around the site boundaries as standard. The hoarding will be constructed of a material with a mass per unit of surface area greater than 7 kg/m2 to provide adequate sound insulation.* *In addition, careful planning of the site layout will also be considered. The placement of site buildings such as offices and stores will be used, where feasible, to provide noise screening when placed between the source and the receiver.* ***Liaison with the Public*** *A designated environmental liaison officer will be appointed to site during construction works. Any noise complaints should be logged and followed up in a prompt fashion by the liaison officer. In addition, where a particularly noisy construction activity is planned or other works with the potential to generate high levels of noise, or where noisy works are expected to operate outside of normal working hours etc., the liaison officer will inform the nearest noise sensitive locations of the time and expected duration of the noisy works.* ***Monitoring*** *Construction noise monitoring will be undertaken at periodic sample periods at the nearest noise sensitive locations to the development works to check compliance with the construction noise criterion.* *Noise monitoring should be conducted in accordance with the International Standard ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.* ***Project Programme*** *The phasing programme will be arranged so as to control the amount of disturbance in noise and vibration sensitive areas at times that are considered of greatest sensitivity. During excavation/ piling or other high noise generating works are in progress on a site at the same time as other works of construction that themselves may generate significant noise and vibration, the working programme will be phased so as to prevent unacceptable disturbance at any time.* ***Vibration*** *Any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in BS 7385-2 (1993).* *Biodiversity* ***Terrestrial Environment*** *Mammals*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		The buildings on site present roosting potential to bats. However, none were recorded in two separate surveys at the appropriate time of the year. There are no proposed mitigation measures for bats with regard to the demolition of buildings. *There will be no direct lighting of the river during the construction period. All arc or flood lighting will be directed into the site and away from the river to reduce potential effects on commuting otters and bats during night time hours.* *Birds* *There are no specific measures required for birds during construction.* ***Aquatic Environment*** *Surface Water* *Surface water from the proposed development will discharge to the River Liffey. A foreshore consent will be sought for this discharge. Mitigation measures relating to the protection of surface water quality and status are described in* ***Chapter 14****, Water and Hydrology and are summarised below.* *"The employment of good construction management practices will minimise the risk of pollution of soil, surface water and groundwater. The following site-specific measures will be implemented for the proposed development which will include:* *•Earthworks operations shall be carried out such that surfaces shall bedesigned with adequate falls, profiling and drainage to promote safe run-offand prevent ponding and flooding;* *•Run-off will be controlled to minimise the water effects in outfall areas;* *•All concrete mixing and batching activities will be located in areas away fromwatercourses and drains; and* *•Good housekeeping (site clean-ups, use of disposal bins, etc.) will beimplemented on the site.* *In order to prevent the accidental release of hazardous materials (fuels, cleaning agents, etc.) during construction site activity, all hazardous materials will be stored within secondary containment designed to retain at least 110% of the storage contents. Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the project. Safe materials handling of all potentially hazardous materials will be emphasised to all construction personnel employed during this phase of the proposed development. The contractor's sanitary facilities will discharge into the existing combined sewer on Parkgate Street or as otherwise agreed with Dublin City Council."* ***Water*** *The employment of good construction management practices will minimise the risk of pollution of soil, surface water and groundwater. The following site-specific measures will be implemented for the proposed development which will include:* *•Earthworks operations shall be carried out such that surfaces shall be designedwith adequate falls, profiling and drainage to promote safe run-off and preventponding and flooding; and* *•Run-off will be controlled to minimise the water effects in outfall areas; and* *•All concrete mixing and batching activities will be located in areas away fromwatercourses and drains; and*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		•Good housekeeping (site clean-ups, use of disposal bins, etc.) will beimplemented on the site. *In order to prevent the accidental release of hazardous materials (fuels, cleaning agents, etc.) during construction site activity, all hazardous materials will be stored within secondary containment designed to retain at least 110% of the storage contents. Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the project. Safe materials handling of all potentially hazardous materials will be emphasised to all construction personnel employed during this phase of the proposed development. The contractor's sanitary facilities will discharge into the existing combined sewer on Parkgate Street or as otherwise agreed with Dublin City Council.* ***Land & Soils*** ***General*** *Precautionary measures will be taken to contain any areas within the planning boundary at risk of contaminated run-off.* *•Potential pollutants shall be adequately secured against vandalism and will beprovided with proper containment according to the relevant codes of practice.Any spillages will be immediately contained, and contaminated soil shall beremoved from the proposed development and properly disposed of in anappropriately licensed facility;* *•Dust generation shall be kept to a minimum through the wetting down of haulroads as required and other dust suppression measures;* *•Any stockpiles of earthworks and site clearance material shall be stored onimpermeable surfaces and covered with appropriate materials;* *•Silt traps shall be placed in gullies to capture any excess silt in the run-offfrom working areas;* *•Soil and water pollution will be minimised by the implementation of goodhousekeeping (daily site clean-ups, use of disposal bins, etc.) and the properuse, storage and disposal of these substances and their containers as well asgood construction practices; and* *This CEMP includes good housekeeping and emergency response measures to be implemented during the construction phase of the project, including actions for dealing with any potential pollution incidents, in accordance with the following measures which are detailed in CIRIA Guidance 37:* *•Containment measures;* *•Emergency discharge routes;* *•List of appropriate equipment and clean-up materials;* *•Maintenance schedule for equipment;* *•Details of trained staff, location and provision for 24-hour cover;* *•Details of staff responsibilities;* *•Notification procedures to inform the EPA or Environmental Department ofthe Dublin City Council;* *•Audit and review schedule;* *•Telephone numbers of statutory water consultees; and*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		•List of specialist pollution clean-up companies and their telephone numbers. ***Compression of Substrata*** *•Excavations shall be kept to a minimum, using shoring or trench boxes whereappropriate. For more extensive excavations, a temporary works designer shallbe appointed to design excavation support measures in accordance with allrelevant guidelines and standards.* ***Loss of Overburden*** *•All excavated material will, where possible, be reused as construction fill. Theappointed contractor will ensure acceptability of the material for reuse for theproposed development with appropriate handling, processing and segregationof the material. This material would have to be shown to be suitable for suchuse and subject to appropriate control and testing according to the EarthworksSpecification(s);* *•These excavated soil materials will be stockpiled using an appropriate methodto minimise the impacts of weathering. Care will be taken in reworking thismaterial to minimise dust generation, groundwater infiltration and generationof runoff; and* *•Any surplus suitable material excavated that is not required elsewhere for theproposed development, shall be used for other projects where possible, subjectto appropriate approvals/notifications.* ***Earthworks Haulage*** *•Earthworks haulage will be along agreed predetermined routes along existingnational, regional and local routes. Where compaction occurs due to truckmovements and other construction activities on unfinished surfaces,remediation works will be undertaken to reinstate the ground to an acceptablecondition. Where practicable, compaction of any soil or subsoil which is toremain in situ will be avoided; and* *•Earthworks operations shall be carried out such that surfaces shall be designedwith adequate falls, profiling and drainage to promote safe runoff and preventponding and flooding. Runoff will be controlled through erosion and sedimentcontrol structures appropriate to minimise the possible impacts.* ***Impact on surrounding ground:*** *•Ground settlement, horizontal movement and vibration monitoring will beimplemented during construction activities to ensure that the construction doesnot exceed the design limitations; and* *•Ground settlements will be controlled through the selection of a foundationtype and construction methods which are suitable for the particular groundconditions.* ***Hydrogeology*** ***Pollution from Construction Activities***

Sensitive Receptors	Potential Impacts	Mitigation Measures
		The employment of good construction management practices will minimise the risk of pollution of soil, storm water run-off, adjacent watercourses and groundwater. The construction management of the site will take account of the recommendations of the CIRIA guidance Control of Water Pollution from Construction Sites – Guidance for consultants and contractors (Masters-Williams et al., 2001) to minimise as far as possible the risk of soil, groundwater and surface water contamination. *Measures that will be implemented to minimise the risk of spills and contamination of soils and waters, will include:* *•Where feasible all excavated spoil will be treated to remove excess fluid priorto stockpiling and transportation;* *•Where feasible transfer of excess soil materials from stockpile areas off-sitewill be undertaken during dry periods;* *•Stockpile and transfer of excess soil material will be restricted to specified andimpermeable areas that are isolated from the surrounding environment;* *•Wheel washes will be provided at site entrances to clean vehicles prior toexiting the work site;* *•All staff will be trained and follow vehicle cleaning procedures. Details ofthese procedures will be posted in all work sites for easy reference; and* *•The implementation of the above measures will ensure that the risk ofpollution of groundwater and nearby water bodies resulting from theconstruction activities will be minimised.* *•Training of site managers, foremen and workforce, including allsubcontractors, in pollution risks and preventative measures;* *•Careful consideration will be given to the location of any fuel storagefacilities. These will be designed in accordance with guidelines produced byCIRIA, and will be fully bunded;* *•All vehicles and plant will be regularly inspected for fuel, oil and hydraulicfluid leaks. Suitable equipment to deal with spills will be maintained on site;* *•Ensure that all areas where liquids are stored, or cleaning is carried out are indesignated impermeable areas that are isolated from the surrounding area e.g.by a roll-over bund, raised kerb, ramps or stepped access;* *•Minimise the use of cleaning chemicals; and* *•Use trigger-operated spray guns, with automatic water-supply cut-off.* ***Air Quality*** *Dust monitoring will be undertaken at a range of nearest sensitive receptors during the demolition and construction phases. The TA Luft dust deposition limit values of 350 mg/m2/day (averaged over one year) will be applied as a 30-day average* ***Noise & Vibration*** *Where required, construction noise monitoring will be undertaken at periodic sample periods at the nearest noise sensitive locations to the development works to check compliance with the construction noise criteria. Noise monitoring should be conducted in accordance with the International Standard ISO 1996: 2017: Acoustics –Description, measurement and assessment of environmental noise.*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		Vibration monitoring will be implemented during construction activities to ensure that vibration levels are in accordance with criteria set out in Section 9.2.7.2. Monitoring will be more rigorous in the proximity of any protected structures; including more frequent monitoring and additional monitoring points. Monitoring points will be located on the face of the structures and centred every 1m. ***Biodiversity*** *During the construction phase when and if dewatering of excavations is required, the Contractor will be responsible for monitoring the suspended solids content of the adjacent River Liffey water. The discharge of treated surface water from construction activities will be monitored to ensure that the discharged treated water will be in accordance to the Dublin City Council Discharge Licence if required.* *The settlement tank and silt bag will be monitored by a Site Environmental Manager who will direct the control of settlement and whether a silt bag needs to be changed.* ***Water*** ***Hydrology, Water Quality and Drainage*** *Visual monitoring will be undertaken as part of the regular site audits during the construction of the proposed development to ensure existing surface water runoff is draining from the site and is not exposed to any contaminants.* ***Wastewater*** *The contractor will be required to ensure that the sanitary facilities for the site personnel are maintained and effluent storage is regularly emptied and disposed of.* ***Water Supply*** *The contractor will be required to ensure that the water supply to the site is maintained and free of contaminants.* ***Flood Risk*** *The contractor is required to monitor the weather forecasts to inform the programming of earthworks and stockpiling of materials.* ***Land & Soils*** *Excavations in made ground will be monitored by an appropriately qualified person to ensure that any contaminated material is identified, segregated and disposed of appropriately. Any identified hotspots shall be segregated and stored in an area where there is no possibility of runoff generation or infiltration to ground or surface water drainage. Care will be taken to ensure that the hotspot does not cross-contaminate clean soils elsewhere.* *Any excavation shall be monitored during earthworks to ensure the stability of side slopes and to ensure that the soils excavated for disposal are consistent with the descriptions and classifications according to the waste acceptance criteria testing carried out as part of the site investigations.* *Ground settlement, horizontal movement and vibration monitoring will be implemented during construction activities to ensure that the construction does not exceed the design limitations. Monitoring will be more rigorous in the proximity of any protected structures.*

Sensitive Receptors	Potential Impacts	Mitigation Measures
		This will include more frequent monitoring and additional monitoring points. Monitoring points will be located on the face of the structures and centred every 1m. Horizontal, vertical and rotational displacement in all directions will be monitored. *Movement monitoring shall be carried out during any activities which may result in ground movements or movements of any nearby structures.* ***Hydrogeology*** *In relation to soils contamination a suitably experienced environmental consultant will be required to oversee the excavation works for the proposed development so that potential contamination can be segregated, classified and suitably disposed.* *The works will be monitored by a Resident Engineer.* *Visual monitoring will be undertaken as part of the regular site audits during the construction of the proposed development to ensure the groundwater resource is not impacted by the proposed development.'* **Additonal Mitigation Measures** In addition to the measures outlined above, the following mitigation will be implemented: • 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 River Liffey. • Upon lifting of the concrete slab/hard standing and removal the building on site, the soils will be will be assessed for contamination prior to any site discharge. • Local drainage connections, gullies and watercourses 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. • Staging of project will initially stabilise, isolate, fence and landscape the watercourse on site • 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 Manager will be responsible for the pollution prevention programme and will ensure that at least daily checks are carried out to ensure compliance. A record of these checks will be maintained. • 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. • A project ecologist will be appointed and consulted in relation to all onsite drainage during works. • 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 or the River Liffey.

Sensitive Receptors	Potential Impacts	Mitigation Measures
		• Contamination testing of surface water discharges will be carried out on a weekly basis so long as pumped discharges are required. • 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 River Liffey. Following the demolition of the site a watching brief will be put in place in relatio to potentiai contamination on site. The ecologist will be informaed of any potential areas of soil contamination on site. **Operational Mitigation** The project ecologist will inspect the petrochemical interceptors on site (post construction).
Birds (National Protection)	Destruction and/or disturbance to nests (injury/death).	Pre construction survey "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.
Bats (international Protection)	Removal roosting/foraging habitat.	Pre Construction survey for bats. If bats are found roosting on site a derogation licence will be required from the NPWS prior to demolition.

Cumulative Impacts

There are several proposed developments located in the area immediately surrounding the subject site. The following is a list of planning applications in close proximity to the subject site as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal[2],:

Table 5. Cumulative impacts considered

Ref. No.	Address	Proposal
2730/19	3 & 4, Conyngham Road, Phoenix Park, Dublin 8	PROTECTED STRUCTURE: Permission is sought for works to Nos. 3 and 4 Conyngham Road, Phoenix Park, Dublin 8, Protected Structures (RPS no. 2035 and 2036), to consist of the following: Change of use of no. 4 from residential (other) to office use (318m2); Demolition of single storey rear extension to no. 3 (12m2), demolition of external boiler house to No. 4 (2m2) and removal of existing external steel stair at the rear of No. 4; Construction of separate single storey extensions to the rear of both No. 3 (11m2) and No. 4 (50m2) and construction of a new three storey mews building (172m2) to rear lane (Eaves Height 7.1m from external ground level), consisting of two-storey office accommodation over car parking (four spaces including one disabled space), on the footprint of the original mews building. Internal works: includes material alterations, repairs and services internally, to both properties with an interconnecting doorway on the first floor and the provision of an internal lift at No. 4. External works: replacement of windows to include new vertical sliding timber sash windows to the front of No. 4, details to match the existing windows at No. 3, formation of new ope in garden wall between properties, new hard and soft landscaping proposal, new covered pergola walkway linking the three buildings within the garden area, ten new sheltered bicycle parking spaces and all associated site services. The proposal will result in office use throughout No. 3, No. 4 and the new mews building, catering for 69 persons, including auxiliary facilities.
3067/22	26, Montpelier Hill, Arbour Hill, Dublin 7, D07 R821	PROTECTED STRUCTURE: The development will consist of the change of use from commercial to residential, including: 1) The removal of internal modern partitions at ground and first floor levels; 2) The removal of 2 nos. modern WCs and provision of new stairs from basement to half-landing and reinstatement of existing stairs from half-landing to ground floor; 3) The provision of 1 no. new kitchen services and 1 no. new tea-station for home office at ground floor; 4) The provision of 2 nos. new bathrooms and services at first floor; 5) The reinstatement of 15 nos. sash windows and provision of 2 nos. new windows at closed up openings on rear elevation.
4563/23	32 Infirmary Road (corner of Infirmary Road and Montpelier Hill), Dublin 7, D07 X628	Permission sought for the demolition of an existing two storey building plus site clearance and the erection of a part five storey /part six storey building, containing 11 no 1 & 2 bed apartments communal open space at roof level, office unit on two levels, bicycle and bin storage with yard and associated site works.
4281/24	19, Conyngham Road, Dublin 8 , D08CH92	The development will consist of a change of use of petrol filling station to provide bus parking and all associated site works including new boundary treatment to the Northern side of the site adjacent to Conyngham Road. This proposal also seeks to remove the hoarding to the boundary facing Conyngham Road. The site at present is derelict and has not been used as a petrol filling station since 2019. Vehicular access and egress will be by existing dished kerb entrance to the eastern side of the site. A new pedestrian entrance from Conyngham Road will also be created.
2522/19	43-53 Montpelier Hill, Dublin 7	PROTECTED STRUCTURE: Planning permission for permanent building signage at the site of the Student Accommodation development, 43-53 Montpelier Hill, Dublin 7, granted permission under Reg. Ref. nos. 3772/16, 3896/17 and 4760/18. The 0.46ha site is located adjacent to two Protected Structures, nos.

[2] https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de

Ref. No.	Address	Proposal
		41 and 55 Montpelier Hill. The site is accessed from Montpelier Hill. The development consists of permanent illuminated signage to be mounted to the front face of Block A entrance canopy at first floor level on Montpelier Hill. Proposed sign, 390 mm (h) x 4373mm (l) x 70mm (d), comprises halo illuminated lettering and logo. All lettering to be built up PPC aluminium and translucent opal acrylic backplate to allow for halo illumination using long life LEDs housed within letters. All to be mounted to canopy using translucent opal spacers to allow for halo illumination.
3060/18	Cambridge House, 41, Montpelier Hill, Dublin 7	PROTECTED STRUCTURE: Development will consist of repair and modifications to new and historic doors and windows, including: Expansion of 1 no. window opening at rear into basement door opening and the installation of slim-profile double glazing.

No significant projects are proposed or currently under construction that could potentially cause in combination effects on designated conservation sites.

Given this, it is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on designated conservation sites will be seen as a result of the proposed development alone or combination with other projects.

An AA screening/NIS was also carried out for current development proposal. It concluded that '*No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on Natura 2000 sites*.'

No significant effects are likely from in combination effects

Residual Impacts and Conclusion

Based on the successful implementation of the construction/demolition phase controls and proposed works to be carried out in accordance with this EcIA and the accompanying AA Screening/NIS, it is likely that there will be no significant ecological impact arising from demolition works, site clearance works, and operation of the proposed development. Designated conservation sites will not be impacted by the proposed development.

A robust series of standard construction phase control measures have been outlined to ensure that the proposed project does not impact on species or habitats of conservation importance, conservation areas or watercourses. It is essential that these measures are complied with, to ensure that the proposed works do not have downstream environmental impacts. These measures are to protect the River Liffey, which is potentially the primary vector of impacts from the site, is not impacted during demolition and operational phases of the proposed development.

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

References

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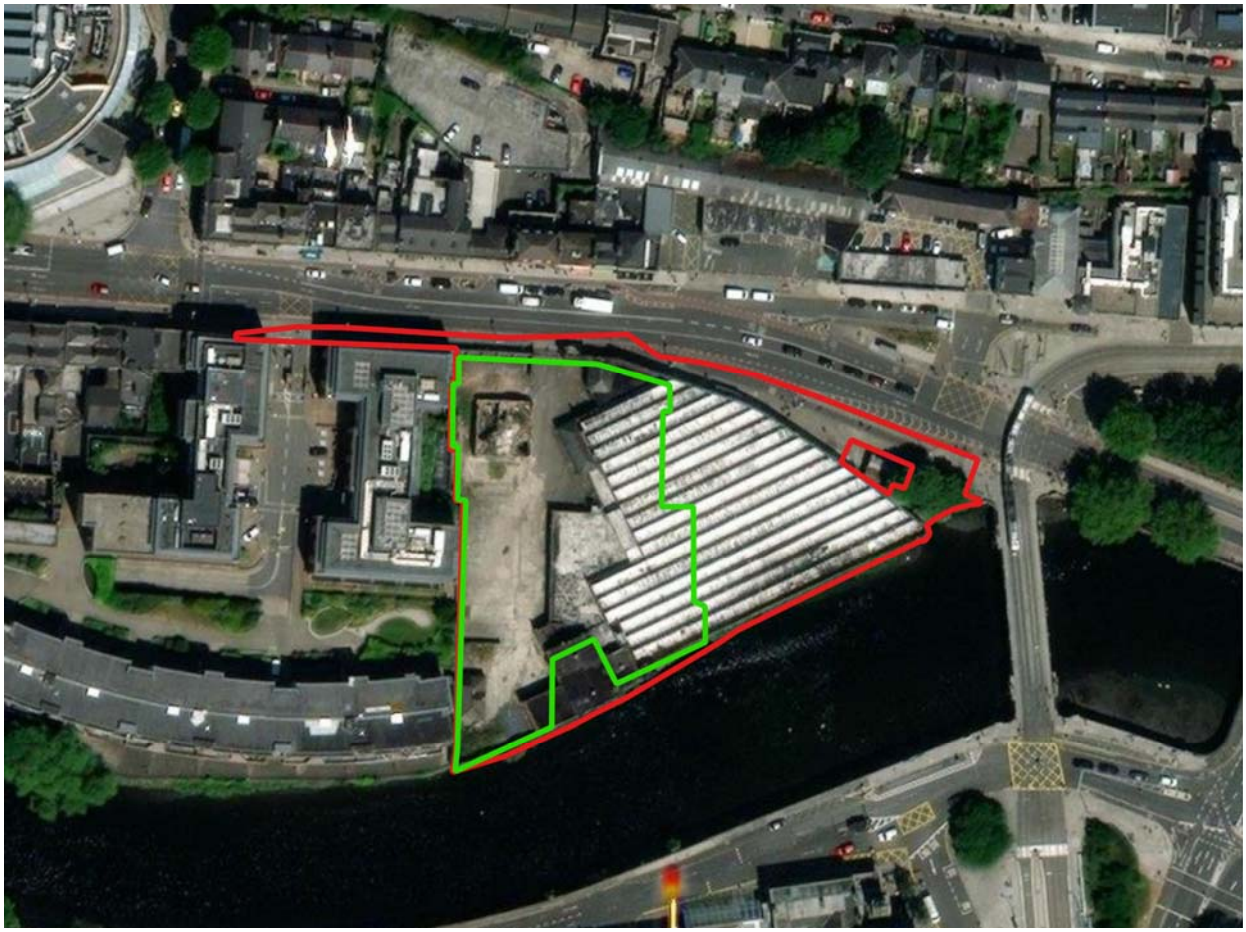
ALTEMAR
Marine & Environmental Consultancy

Bat Fauna Impact Assessment for a Proposed Large-Scale Residential Development (Block B1 & C) at No. 42A Parkgate Street, Dublin 8, Co. Dublin.



6th December 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Ruirside Developments Limited.

Document Control Sheet			
Project	Bat Fauna Impact Assessment for a proposed large-scale residential development (Block B1 & C) at No. 42 A Parkgate Street, Dublin 8, Co. Dublin.		
Report	Bat Fauna Impact Assessment		
Date	4th December 2024		
Version	Author	Reviewed	Date
Draft 01	Jeff Boyle	Bryan Deegan	4th November 2024
Planning	Bryan Deegan		6th December 2024

SUMMARY

Structure:	The site is brownfield consisting of roof and hardstanding areas and contains a number of low-rise buildings which will be demolished.
Location:	Parkgate Street, Dublin 8.
Bat species present:	None present onsite.
Proposed work:	Large-scale residential development.
Impact on bats:	The proposed development will change the local environment as new lights and structures are to be erected and the minor existing vegetation will be removed. No trees of bat roosting potential are noted within the site. No bats were observed roosting or foraging within the site outline. Based on the existing use of the site as a residential garden, and the fact no bats were found onsite, the proposed development will not have any significant effect on local bat populations. No bat roosts or potential bat roosts will be lost due to this development. The residual impact is considered to be minor adverse/not significant in the short term and neutral in the long term.
Survey by:	Bryan Deegan.
Survey date:	10th October 2024.

Project Description

Proposed Large-scale Residential Development comprising mixed use residential, community and commercial redevelopment, accommodated in 2no. blocks (Block B1 and Block C) ranging in height from 8 to 13 storeys with basement and undercroft, and including: 315no. apartments (176no. 1-bed units and 139no. 2-bed units) with private balconies/terraces; co-working/community/cultural space available for public hire; ground level retail. And all associated and ancillary demolition, conservation, landscaping and site development works including bicycle parking; car parking; public open space; communal open space; 2no. new pedestrian site entrances at Parkgate Street, connecting to proposed public plaza and the proposed riverside amenity walkway; 1no. new vehicular access via Parkgate Street to surface areas at western edge of the site. All at No. 42A Parkgate Street, Dublin 8 (Protected Structures on site).

The site outline and site location is shown in Figures 1 & 2.

Additional Context

Planning permission was granted in 2020 (ABP Ref. 306569-20) at the site for 321 no. Build-to-Rent (BTR) residential units, ancillary residents' amenity facilities, commercial office space, retail space and café/restaurant accommodated in 5no. blocks ranging from 8 to 13 storeys over ancillary basement area, and all associated and ancillary conservation, landscaping and site development works (with amendments to car parking, basement and undercroft approved by the Board under s.146B (ABP 311507-21 refers), this permission is due to wither in 2025. In the eastern apex of the site, permission was also ultimately granted for a 30-storey Block A tower in 2021 under ABP Ref. 310567-21 which comprises 198 residential units resulting in an overall number of 519 units accommodated on site. A further application for the change of use for Block B2 from commercial office space to 40 number residential units was granted permission in 2023 under DCC Reg. Ref. LRD6042/23.

The planning application, for which this Ecological Impact Assessment forms part of, seeks a new permission for Block B1 and Block C ranging in height from 8 to 13 storeys with basement and under croft, and including: 316no. apartments (176no. 1-bed units and 140no. 2-bed units). These blocks remain largely as per the previously consented development, with amendments made to comply with Dublin City Council Development Pan 2022-2028.

The proposed development, for the purposes of this report, is considered in the context of the application site in its entirety, comprising the proposed development (i.e. revised Blocks B1 & C) and the same associated demolition, conservation, site works, landscape and boundary works, and development previously permitted under 306569-20 (as amended). It is further considered in the context of ABP Ref. 310567-21 as amended by DCC Reg. Ref. LRD6042/23 (Block A and B2). This will collectively be referred to as "the development"/ "the proposed development".

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 30 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 (2022)) 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).

Legislative Context

Wildlife Act 1976 (as amended by, inter alia, the Wildlife (Amendment) Act 2000).

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to "*Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). See Art.73 of the 2011 Regulations which revokes the 1997 Regulations.

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), all bat species are listed under the First Schedule and, pursuant to, *inter alia*, Part 6 and Regulation 51, it is an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat particularly during the period of breeding, hibernating or migrating;
- Damage or destroy a breeding site or resting place of a bat;
- Keep, sell, transport, exchange, offer for sale or offer for exchange any bat taken in the wild.

Landscape

The landscape strategy for the proposed development has been prepared by Mitchell & Associates. The landscape masterplan is shown in Figure 3.

Lighting

The lighting strategy for the proposed development has been prepared by IN2 Engineering. The external lighting layout is shown in Figure 4.

Arborist

An Arboricultural Impact Assessment Report has been prepared by CMK Hort and Arb Ltd. for the proposed development. This report outlines the following in relation to Arboricultural impacts:

'Site Description

The site is a former industrial complex to the north of the river Liffey. The only existing trees are located within a small enclosed space to the east of the buildings adjacent to the R109.

Abroricultural Impact:

The proposed development of Blocks B1 & C do not necessitate the removal of theexisting trees however permission has been granted for their removal for the developmentof Block A. The impact on trees of the proposed development as shown on drawing TPAR002 102Arboricultural Impact will be locally significant in terms of the treescape in this location.However it is considered that given the nature of the planting and the trees proximity tothe existing buildings which limit their long term potential the overall significance of theirloss is reduced.Mitigation measures for the loss of these trees are to be found within the LandscapeMasterplan which accompanies this submission. '

The arboricultural impacts drawing is shown in Figure 5.

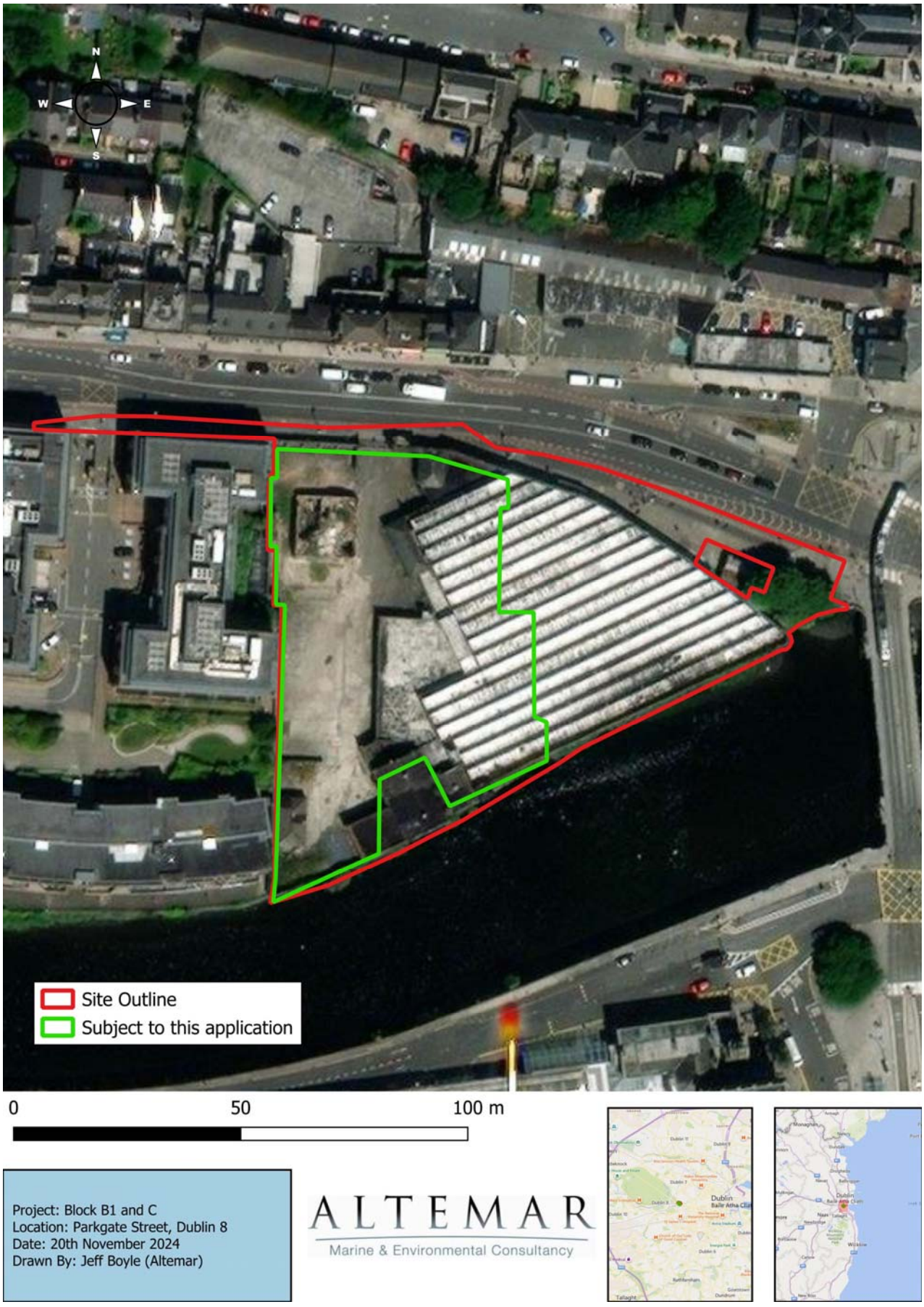


Figure 1. *Site outline*

Figure 2. *Site location*

***Figure 3**. Proposed landscape plan*

Figure 4. *Proposed lighting layout*

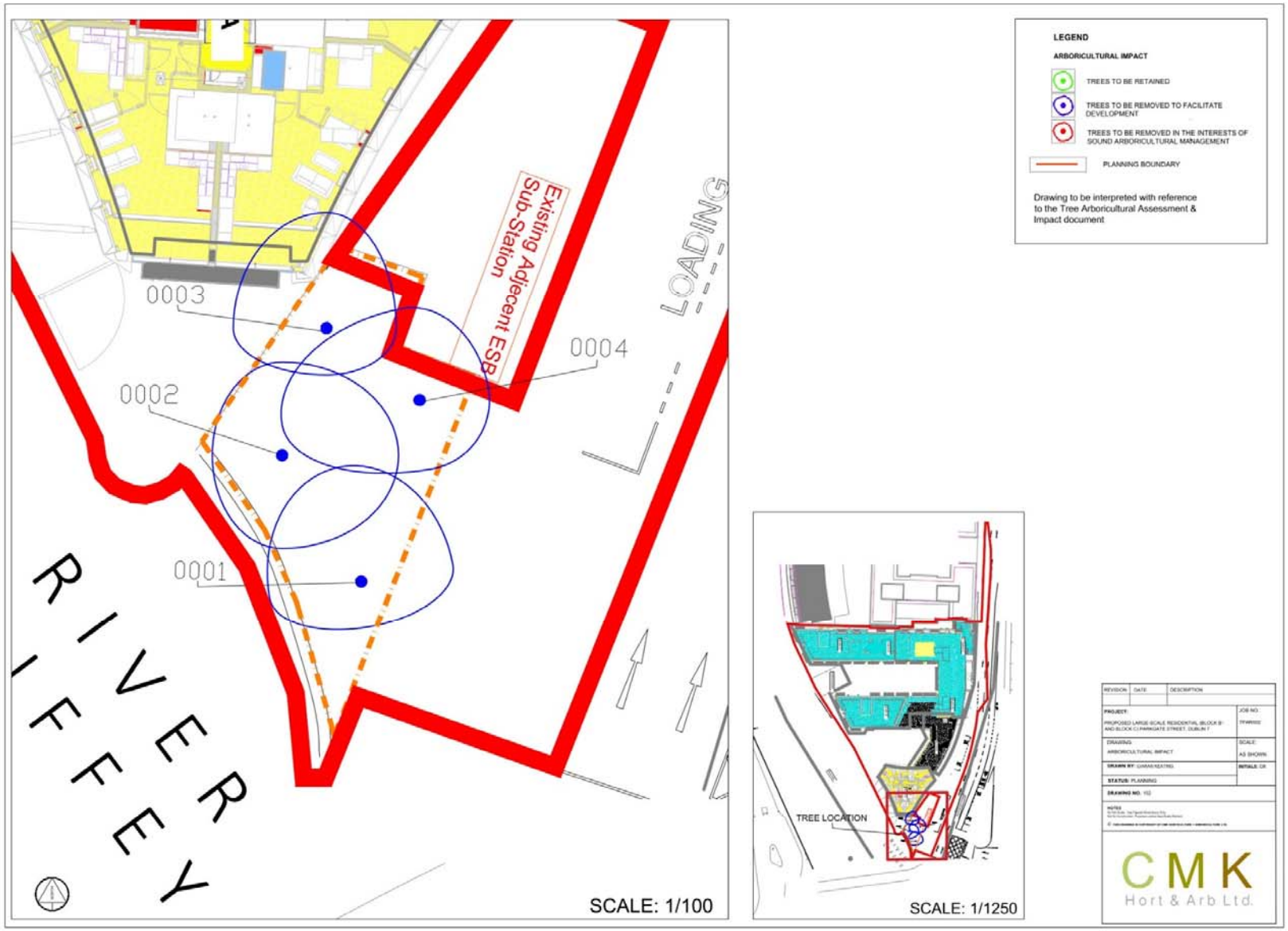


Figure 5. *Arboricultural impacts*

Bat Survey

This report presents the results of a site visit by Bryan Deegan on the 10th October 2024. A bat emergent and detector survey was carried out. Trees on site were examined for bat roosting potential.

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 Results

Trees as potential bat roosts.

A ground level roost assessment was carried and used to examine the trees on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. All trees on site were assessed for bat roosting potential. No trees of bat roosting potential are noted within the site outline.

Emergent/detector surveys.

An emergent/detector survey was carried out by Bryan Deegan on the 10th of October 2024.

The detector survey was undertaken at the latter end of the bat survey season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures greater than 10°C after sunset. Winds were light and there was no rainfall during the survey. Insects were observed in flight during the survey.

As outlined in Collins (2016) in relation to weather conditions '*The aim should be to carry out surveys in conditions that are close to optimal (sunset temperature 10°C or above, no rain or strong wind.), particularly when only one survey is planned…. Where surveys are carried out when the temperature at sunset is below 10°C should be justified by the ecologist and the effect on bat behaviour considered.*' There were no constraints in

relation to the survey carried out. All areas of the site were accessible and weather conditions were optimal for bat assessments.

At dusk, a bat detector survey was carried out onsite using a*n Echo meter touch 2 Pro* detector to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations.

No bats were emerging from any trees on site, or any trees or buildings within the larger site. No bats were observed foraging onsite.

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 a 2km^2 grid (Reference grid O13H) encompassing the study area reveals that seven of the nine known Irish species have been observed locally): Brown Long-eared Bat (Plecotus auritus), Daubenton's Bat (Myotis daubentonii), Lesser Noctule (Nyctalus leisleri), Nathusius's Pipistrelle (Pipistrellus nathusii), Common pipistrelle (Pipistrellus pipistrellus), Soprano Pipistrelle (Pipistrellus pygmaeus), Whiskered Bat (Myotis mystacinus). 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 6 – 9. The following species were noted in the wider area: Common pipistrelle (*Pipistrellus pipistrellus*), Brown Long-eared bat (*Plecotus auritus*), Leisler's bat (*Nyctalus leisleri*), Daubenton's bat (*Myotis daubentonii*), Natterer's bat (*Myotis nattereri*), Nathusius' pipistrelle (*Pipistrellus nathusii*), Whiskered bat (*Myotis mystacinus*) and Soprano pipistrelle (*Pipistrellus pygmaeus*).

Figure 6. Common pipistrelle (*Pipistrellus pipistrellus*) (yellow) and Brown Long-eared bat (*Plecotus auritus*) (purple), both (orange), Source: NBDC, site: red circle

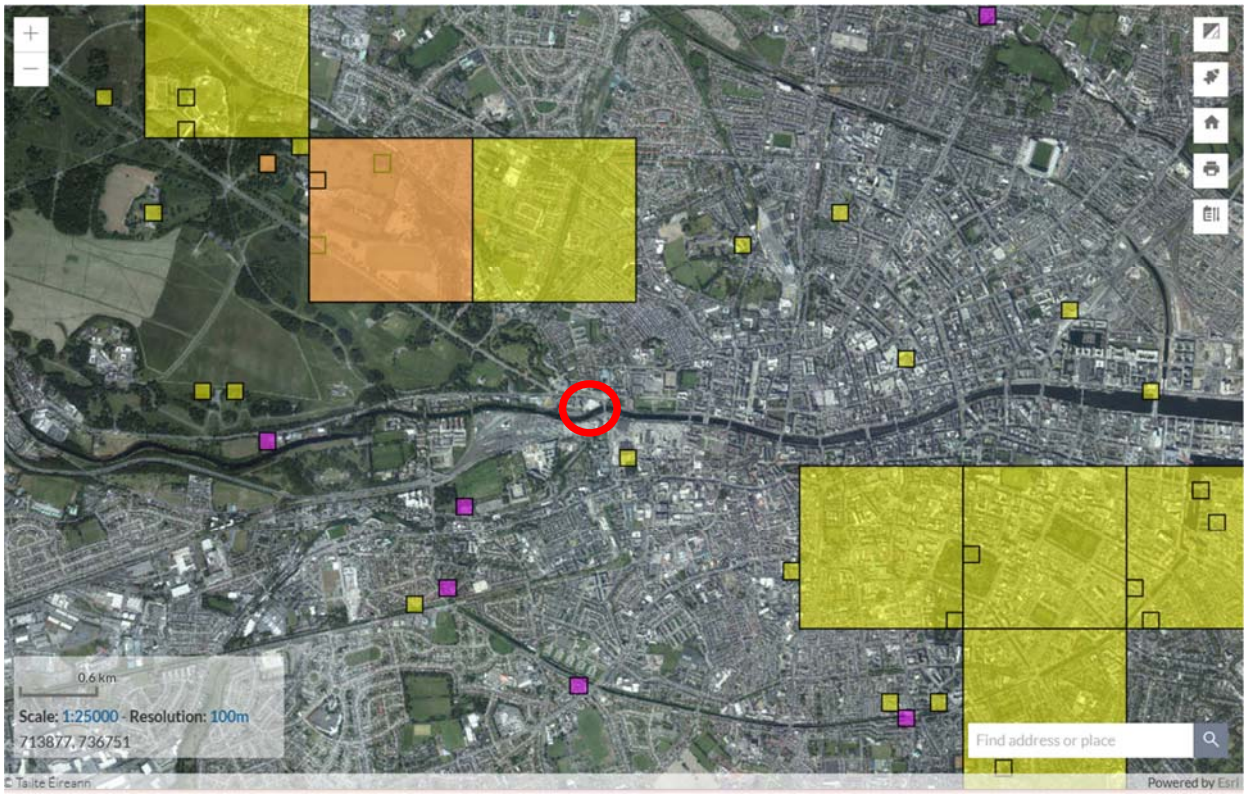


Figure 7. Leisler's bat (*Nyctalus leisleri*) (yellow) and Daubentons' bat (*Myotis daubentonii*) (purple), both (orange), source: NBDC, site: red circle

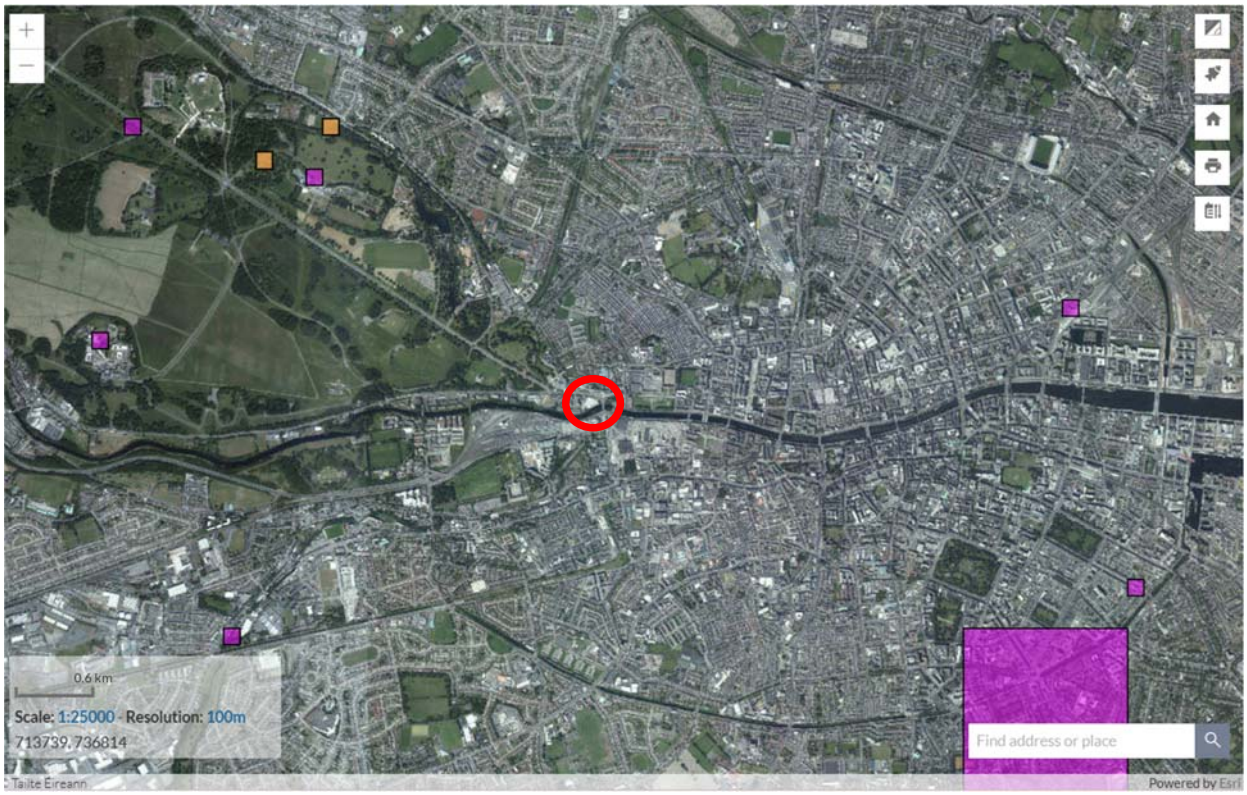


Figure 8. Natterer's bat (*Myotis nattereri*) and Nathusius' pipistrelle (*Pipistrellus nathusii*) (orange) and Nathusius' pipistrelle (*Pipistrellus nathusii*) (purple), source: NBDC, site: red circle

Figure 9. Whiskered bat (*Myotis mystacinus*) (yellow) and Soprano pipistrelle (*Pipistrellus pygmaeus*) (purple)

Evaluation of Results

The bat survey complies with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). No bat activity was confirmed within the proposed site outline. The site is considered of relatively low importance to the local bat population.

Potential Impact of the development on Bats

The removal of trees and shrubs within the site and the increase in lighting on site especially during construction may result in a negative impact on bat foraging if present in the surrounding areas. There may be negative impacts on bat flight corridors between roosting and foraging areas. Foraging within the site outline was not detected, however. Incorporation of bat-friendly lighting during construction and operation will aid in minimising potential impacts on surrounding bat populations. As there was no confirmed bat roost within the proposed site outline, a NPWS derogation licence is not required. Other areas of bat roosting potential were located away from the proposed development and will not be affected.

Mitigation Measures

As outlined in Marnell et al. (2022) "*Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected*." In addition as outlined in Marnell et. al (2022) '*Mitigation for bats normally comprises the following elements:*

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*
- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.'*

However, no bats were noted roosting or foraging on site. There is also no requirement for a *National Parks and Wildlife Service* derogation licence application to allow the planned works. The following mitigation will be carried out:

- Pre-Construction inspection for bats.
- During construction, lighting at all stages will be done sensitively with no direct lighting of hedgerows, treelines and canal.
- Lighting during construction should only be used during working hours with no floodlighting of the site.
- All lighting during construction and operation will be carried out to the satisfaction of the project ecologist.

Predicted Residual Impact of Planned Development on Bats

There is no evidence of a current bat roost or bat foraging activity on site, therefore no negative impacts on bat roosts are expected to result from the proposed development. As no confirmed bat roosts were noted on site, a derogation licence is also not required for the proposed works. The likelihood bat collision is not significant as the materials proposed are generally solid and would have good acoustic properties to reflect echolocation signals. The site is within an urban area and the proposed development will be similar in form and size. As a result, the buildings would be clearly visible to bat species. Works on site will result in a short-term modification of the site. However, the site is deemed to be of low importance to foraging bats considering the scale of the development, lack of bats using the site, the brightly lit nature of the site and lack of previously existing bat records within the site. The vegetation subject for removal on site is of no bat roosting potential. Following implementation of the sensitive lighting strategy to reduce light intensity and the proposed landscape strategy, the species which have the potential to occur in the surrounding area should persist. The impact of the proposed development on bats will be Low Adverse/Site/Negative/Not Significant/long term.

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Wildlife Act 1976 and Wildlife [Amendment] Act 2000. Government of Ireland.

Appendix II Flightlines Assessment

Flightline surveys were carried out at the proposed site on the 30th October and 1st November 2024 by Jeff Boyle (BSc) and Frank Spellman (BSc, MSc).
General flightlines of species recorded across the two surveys are demonstrated in Figure 1. Species recorded which are considered to be conservation interests in general and specifically for sites in the vicinity of the proposed site were herring gull, black-headed gull and cormorant. Five Mute Swans were observed in the Liffey (amber listed).

Herring gull was the dominant species observed followed by Black headed gulls. 150 observations of approximately 3000 individuals were recorded overall during the two surveys. Flight path height estimates ranged from 20 – 80m. The main pattern observed by flight path mapping was the tendency of birds to utilise the quay-side of the buildings along the banks of the Liffey to navigate. This was reflective of observations during surveys. Between flights, they would occasionally rest within the Liffey adjacent to the site.

Most of the birds observed flying from west to east were observed during the second survey. It is thought that due to the later time of the survey (14:00-17:00), these birds, mainly Herring Gulls and to a lesser degree Black Headed Gulls, were returning to their resting grounds at sites within and around Dublin Bay.

There were approximately 2,300 Herring Gulls and 700 Black headed gulls recorded during the two surveys. Their flight heights were estimated to be between 30m and 60m.

One observation of two Grey Wagtails (red listed) in the River Liffey adjacent to the site was made and one observation of cormorant was made of an individual foraging along the River Liffey adjacent to the site (Figure 2). The river is likely used as foraging habitat for cormorant, as well as navigating to and from foraging areas upstream and downstream towards Dublin Bay.

Flight paths over the site were generally taken by birds crossing over the western, lower portion of the site while navigating along the quay-side of buildings along the river. Flights over the main body of the site appeared to be taken due to the lower nature of the on-site structures compared to the surrounding area. In addition, the large flock of gulls observed during survey 2 used this flightline heading east to return to Dublin Bay. Their heights were approximately between 40-80m. It is likely that in the presence of structures on the proposed site of the same or higher altitude of adjacent buildings, alternative routes within the vicinity of the proposed site would be taken will minimal diversion and energetic expenditure. Following mitigation measures, it is not anticipated that the construction or operation of the proposed development will result in negative impacts on flights by species listed as Qualifying Interests of nearby SPAs or on the BoCCI status of bird species present in the surrounding area.

Wintering bird surveys are ongoing for the proposed development.

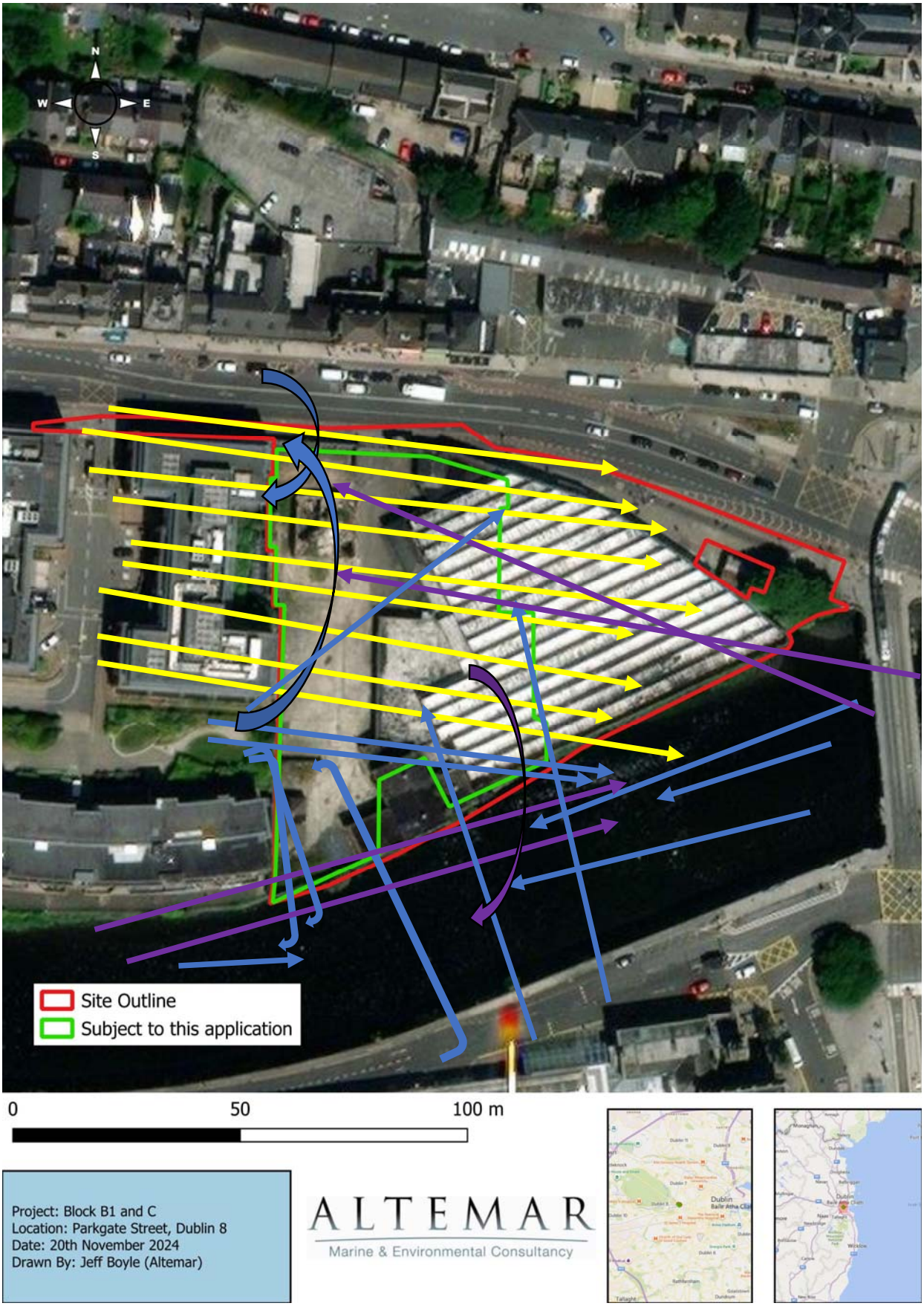

Figure 1. General flightlines of birds observed and approximate heights. Blue: 20-30m, Purple: 30-40m, Yellow: 40-80m

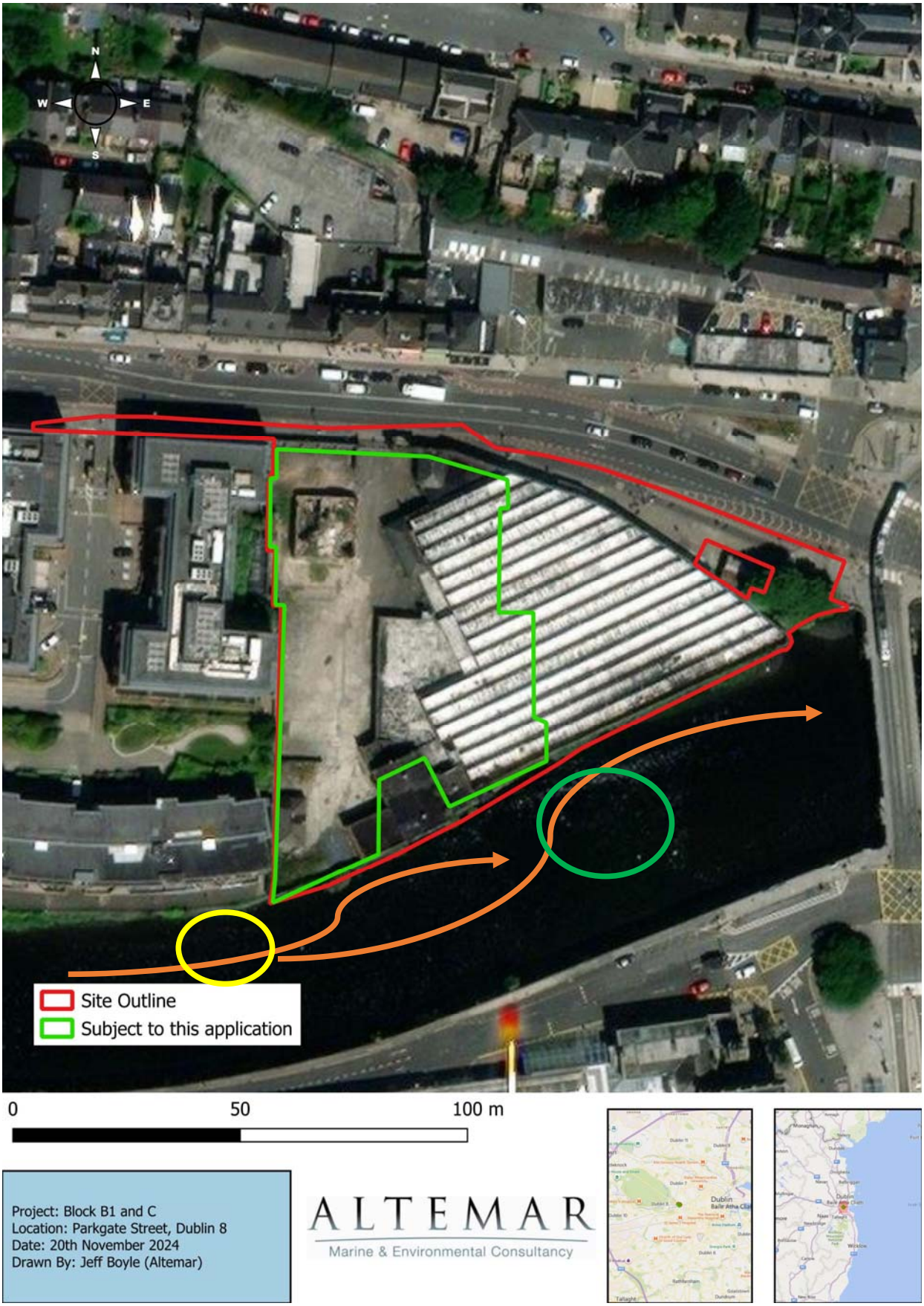

Figure 2. Cormorant foraging observed (orange arrows), Mute Swans (yellow circle) and Grey wagtail sighting location (green circle).