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Marine & Environmental Consultancy

Ecological Impact Assessment (EcIA) for a Proposed Residential Development at Knockrabo, Goatstown, Dublin 14.

01st November 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Knockrabo Investments DAC

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Introduction

Background

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

The following EcIA has been prepared by Altemar Ltd. at the request of Knockrabo Investments DAC for a proposed residential development at Knockrabo, Goatstown, Dublin 14.

Study Objectives

The objectives of this EcIA are to:

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

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

- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002);
- Guidelines on the information to be contained in 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). This report has also been prepared by Frank Spellman (BSc Zoology, MSc Zoology) and Emma Peters (BSc (Hons.) Environmental Science). Frank has previous experience in carrying out a wide range of fauna surveys as both a sub-contractor and employee for consultancies and organisations in Ireland and the US. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, and freshwater ecology surveys. Emma is a skilled ecological assessor with aptitude for flora identification, invasive species and bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys. Emma has been the lead ecologist in 30+ projects responsible for mammal tracking, camera trapping, wintering bird, breeding bird, bat surveys, flora and habitat mapping.

Description of the Proposed Project

Knockrabo Investments DAC intend to apply for permission for a Large-scale Residential Development (for a period of 7 years) with a total application site area of c. 2.54 hectares, at Knockrabo, Mount Anville Road, Goatstown, Dublin 14. The proposed development relates to Phase 2 of the development on the 'Knockrabo' lands. Phase 1 of 'Knockrabo' was granted under Dún Laoghaire-Rathdown County Council (DLRCC) Reg. Ref. D13A/0689/An Bord Pleanála (ABP) Ref. PL06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1) and DLRCC Reg. Ref. D16A/0960 (Phase 1A) and comprises a total of 119 No. units.

The site is bounded to the south-east by Mount Anville Road; to the south by 'Mount Anville Lodge' and by the rear boundaries of 'Thendara' (a Protected Structure – RPS Ref. 812), 'The Garth' (a Protected Structure – RPS Ref. 819), 'Chimes', 'Hollywood House' (a Protected Structure – RPS Ref. 829); to the south-west by existing allotments; to the north by the reservation corridor for the Dublin Eastern By-Pass (DEBP); and to the east by the site of residential development 'Knockrabo' (Phase 1, permitted under DLRCC Reg. Ref. D13A/0689 / An Bord Pleanála (ABP) Ref. PL.06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1); and DLRCC Reg. Ref. D16A/0960 (Phase 1A)). The site includes 'Cedar Mount' (a Protected Structure- RPS Ref. 783), 'Knockrabo Gate Lodge (West)' (a Protected Structure RPS Ref. 796), including Entrance Gates and Piers.

The development with total of c.17,312.2 sq.m. gross internal area (GIA) will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility (c.400 sq.m. GIA) and Community / Leisure Uses (c. 223 sq.m. GIA), as follows:

- Block E (c.1,077 sq.m. GIA): a 5-storey including semi-basement podium level apartment block, comprising 8 No. apartments (1 No. 1 bed and 7 No. 2 beds);
- Block F: (c.8,390.8 sq.m. GIA): a part 2 to part 8 storeys including semi basement podium apartment block, comprising 84 No. units (31 No. 1 beds, 50 No. 2 beds and 3 No. 3 bed duplex units);
- Block G: (c.2,022.1 sqm GIA): a part 4 to part 5-storey apartment block, comprising 20 No. units (3 No. 1 bed units, 14 No. 2 bed units and 3 No. 3 bed units); (with sedum roof/PV panels at roof level of Blocks E, F and G; a communal Roof Terrace of c. 198 sqm on Block F; and balconies/wintergardens on all elevations of Blocks E, F and G);
- Duplex Blocks: (c. 3,292.6 sqm GIA): 1 No. 3 storey and 1 No. 4 storey block, comprising a total of 32 No. units (8 No. 2 bed units and 24 No. 3 bed duplex units);
- 10 No. (new build) houses: 6 No. 4 bed 2.5-3 storey terraced/semi-detached units (ranging in size from c.162.1 sqm GIA to c.174.2 sq.m. GIA); 1 No. 3 bed 2 storey detached unit (126.2 sq.m. GIA); 1 No. 3 bed 2 storey mid terrace unit (c.127.4 sq.m. GIA); 1 No. 3 bed 2 storey end of terrace unit (c.127.9 sq.m. GIA); and 1 No. 1 - 2 storey 'Gate House' (c. 122.6 sq.m. GIA) to the west of proposed repositioned entrance to Cedar Mount from Mount Anville Road;
- The use of existing 'Coach House' as a residential dwelling and for internal / external repair / refurbishment works at ground and first floor levels, including the removal of 3 No. roof lights, 1 No. metal clad dormer roof window and external water tank; the construction of 2 No. single storey flat roof extensions (c.35.5 sq.m. GIA), revisions to the external facade including the addition of 1 No. new window ope on the south facade and rendered finish to all original facades, solar panels at roof level; removal / re-use of stone to form new garden wall; to provide 1 No. 2 bed house (c. 99.5 sq.m. GIA) with refurbished stone shed (c. 13.9 sq.m. for storage GIA).
- The use of Knockrabo Gate Lodge (West) (a Protected Structure) as a residential dwelling; and for repair / refurbishment works including demolition of existing section of extension on top of stone boundary wall; removal of 1 No. roof light and 1 No. internal partition wall; construction of replacement extension (c.77.5 sq.m. GIA) to provide 1 No. 3-bed unit (c. 128 sq.m. GIA) with solar panels at roof level, bin storage, landscaping, all repair works to the existing Gate and Piers, and all associated internal and external elevational changes.
- The proposed development comprises works to Cedar Mount (a Protected Structure) to provide: 1 No. Childcare Facility at Lower Ground Floor level (c.400 sq.m. GIA) with associated external play and bin storage areas; Community / Leisure Uses at Ground Floor Level (c. 223 sq.m. GIA), comprising Gym / Studio (c.35.6 sq.m. GIA), Library / Office (c. 35.9 sq.m. GIA), Meeting room (c.28.4 sq.m. GIA) and Conservatory room (c. 21.6 sq.m. GIA); and 2 No. 2 bed apartments at 1st floor level, (c.77.6 sq.m. GIA and c.88.2 sq.m. GFA). The works to Cedar Mount to consist of: o At lower ground floor/ basement level, the removal of

internal walls and sections of external and internal walls and access doors; insertion of openings through external and internal walls; repair of existing "loggia" (covered external corridor) on northern, north-western and north-eastern facades, with revised elevations comprising glazed panels / glazed entrance doors located within loggia opes; the additional area (c. 58 sq.m. GIA) to form part of proposed Childcare Facility;

- At ground floor level removal of wooden staircase to 1st floor level and replacement with open-tread staircase, and construction of conservatory room (c. 21.6 sqm GIA) with flat roof on south - western side of Cedar Mount with sedum roof; removal of 1 No. WC;
- At 1st floor level removal of sections of internal walls; insertion of doors through internal walls;
- Re-instatement of 1 no. new chimney stack on the western end of the existing roof; replacement of rubble masonry finish with lime and sand plaster finish on all elevations relating to sections of original façade; removal of security bars from existing windows in front porch; replacement / reconfiguration of rainwater downpipes, hopper heads and associated roof outlets; Re-modelling of extension on northern side including replacement of timber / pressed metal cladding with brick / zinc cladding and glazing at ground and 1st floor levels, removal / replacement of external doors and windows; replacement of flat roof deck, parapet, eaves and roof-light with flat roof comprising brick / zinc clad parapet and removal of internal link at 1st floor level; repair works to external walls at ground floor level; Construction of rendered blockwork wall and steel handrail to terrace and associated repair works to section of existing parapet wall on eastern side of Cedar Mount; all hard and soft landscaping; revisions to garden wall and pillars on western side of Cedar Mount; and all associated internal and elevational changes; and
- The repositioning of existing access (including gates and piers) to Cedar Mount (a Protected Structure) on Mount Anville Road to the northeast with associated works to boundary wall to Mount Anville Road.

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

All other ancillary site development works to facilitate construction, site services, piped infrastructure, 1 No. sub-station, plant, public lighting, bin stores, bike stores, boundary treatments, provision of public, communal and private open space areas comprising hard and soft landscaping, site services all other associated site excavation, infrastructural and site development works above and below ground. In addition to the repositioned access to Cedar Mount (a Protected Structure) as referenced above, the development will be served by the permitted access road 'Knockrabo Way' (DLRCC Reg. Ref. D13A/0689; ABP Ref. PL.06D.243799, DLRCC Reg. Ref. D16A/0821 and DLRCC Reg. Ref. D16A/0960). The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

The proposed site outline, site location and site plan are seen in Figures 1-3.

Landscape

The landscape strategy for the proposed development has been prepared by DFLA to accompany this planning application. The proposed landscape plan is demonstrated in Figure 4.

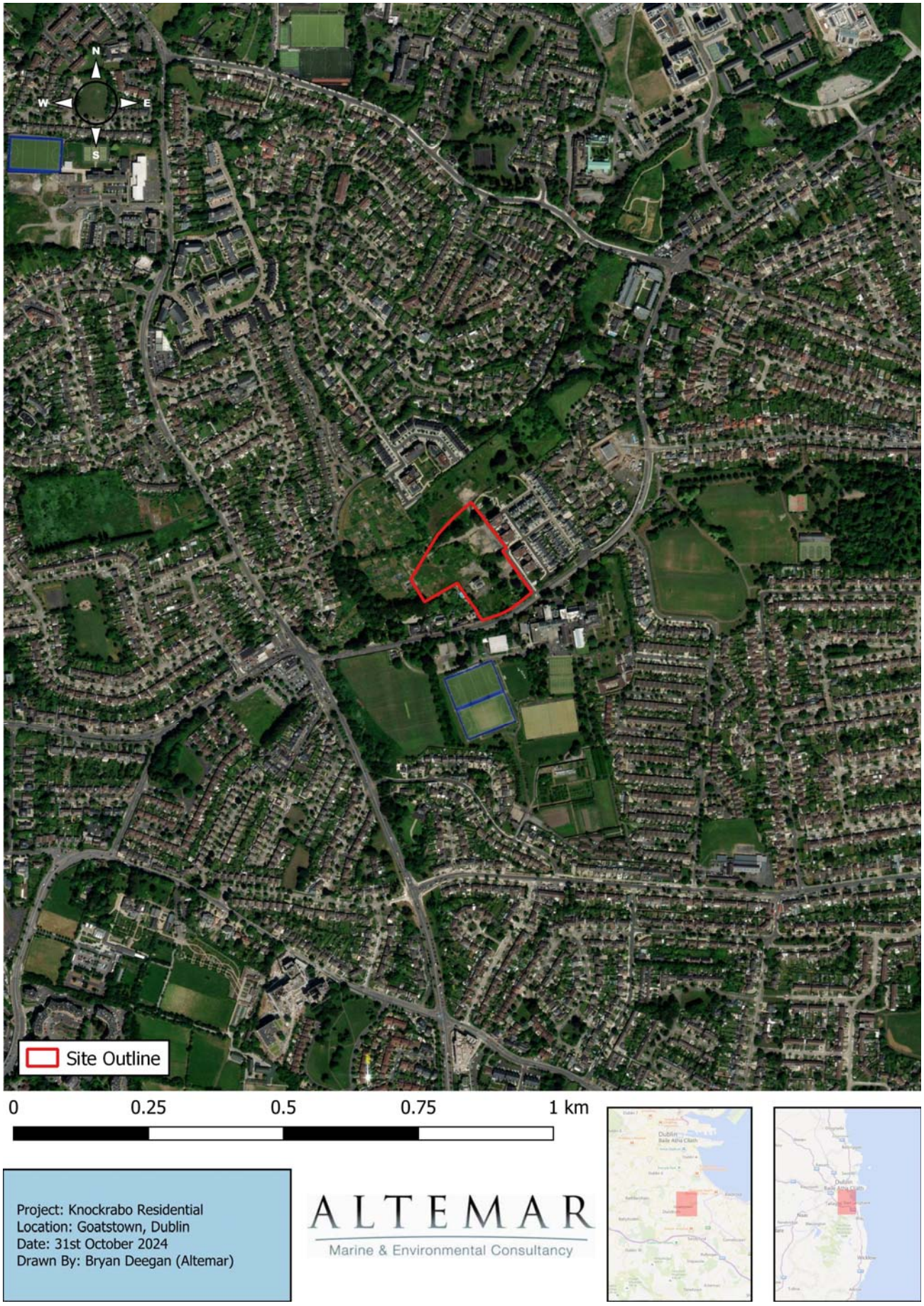

Figure 1. *Site outline and location context.*

Figure 2. *Site outline*

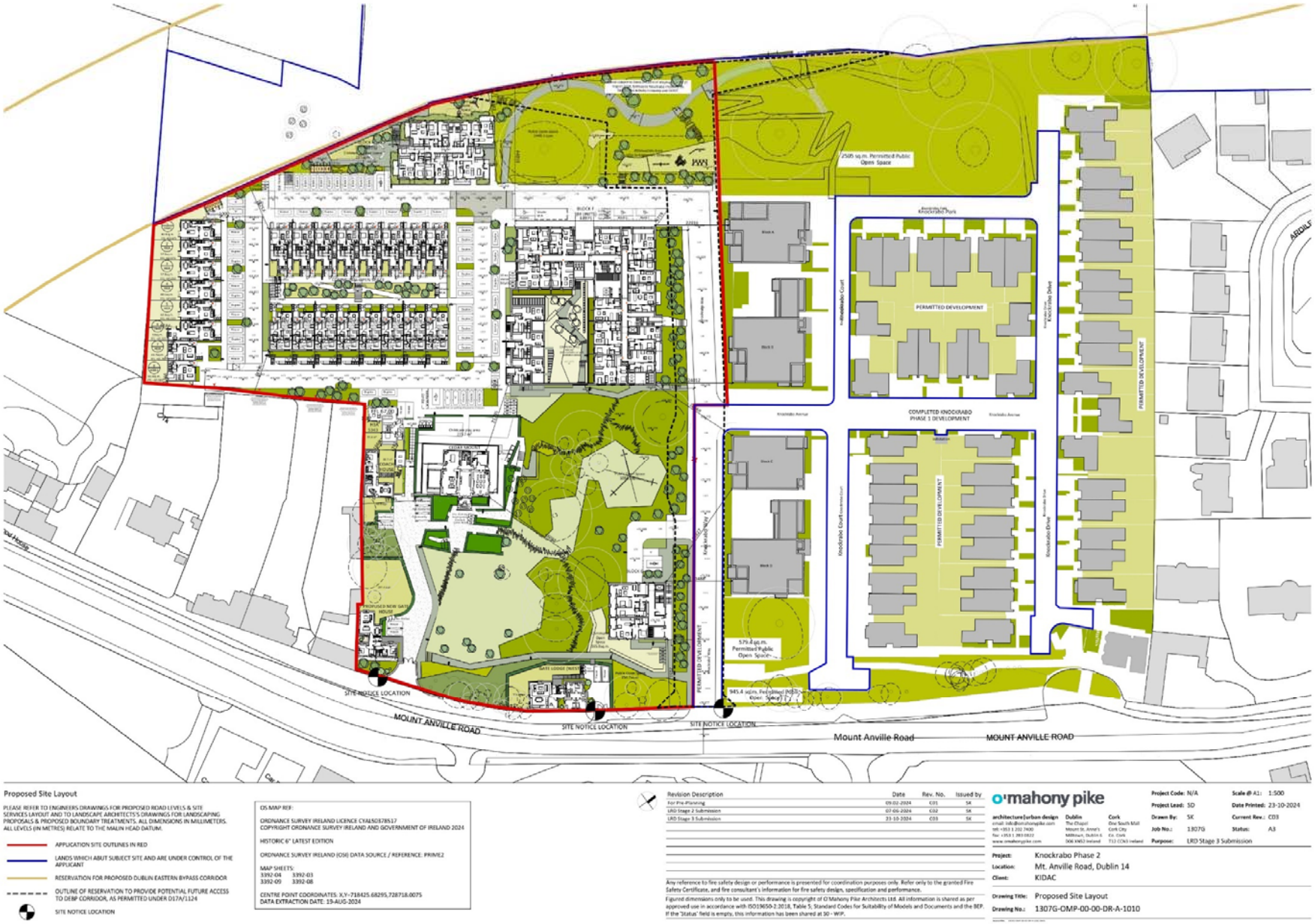

***Figure 3**. Proposed Site Plan*

***Figure 4**. Proposed Landscape Masterplan*

Drainage

An Engineering Assessment Report has been prepared by Waterman Moylan Consulting Engineers Ltd. to accompany this planning application. This report outlines the following drainage strategy for the proposed development:

Existing Surface Water Network

'The following section deals with surface water drainage design including details of the SUDS measures proposed as part of the development.

The existing site is greenfield. It is proposed that the development will attenuate the surface water on site before discharging it, at a restricted rate, to an outfall pipe in the north-eastern corner of the development, constructed as part of the adjacent Knockrabo Phase 1 development and installed to facilitate development of the subject lands.

The Surface Water design calculations, reports and drawings had been audited (Stage 1 Audit) by JBA consulting, as required by Dun Laoghaire Rathdown County Council.

This Stormwater Audit required a Flow Model to be provided which now has been completed and informs the surface water design.'

'The Stormwater Audit and Flow Model supports and addresses several of the drainage items raised in Dun Laoghaire Rathdown County Council's Pre-Planning Opinion report as follows:

1. *Proposed surface water management system including attenuation features and cross sections of all SuDS features proposed on site in the context of surface water management on the site, discharge rates equal to greenfield sites, integration of appropriate phased works.*
2. *SOIL value 4 has been justified for this application. We now propose an overall flow restriction of 8.56 l/s for contributing site area of 1.441 ha. This has been supported by infiltration test failing on the subject site, indicating very poor permeability.*
3. *The design now incorporate SuDS measures appropriate to the scale of the proposed development such as green roofs, bioretention areas, permeable paving, rainwater harvesting, swales, etc. that minimise flows to the public drainage system and maximises local infiltration potential for low flows as the soil is not suitable for full infiltration SuDS devices.*
4. *We now confirm the drainage arrangements for the Gate Lodge West is positively drained via infiltration drains.*
5. *We have used a SAAR of 836mm as site specific SAAR for analysis and modelling.'*

SuDS

'*Sustainable Drainage System (SuDS) are a collection of water management practices that aim to align modern drainage systems with natural water processes.*

By using SuDS techniques, water is either infiltrated or conveyed more slowly to the drainage system and ultimately more slowly to water courses via permeable paving, swales, & detention basins.

The SuDS strategies employed within this development align with the Dun Laoghaire Rathdown County Council's document titled 12.8.6.2 SuDS (Sustainable Drainage Systems) and the National Guidance Document 'Nature Based Solutions to the Management of Rainwater, Surface Water Runoff in Urban Areas. The latter reflects the provisions of the EU Water Framework Directive (2000/60/EC) (WFD).

In the following sections of the surface water chapter, it will be outlined in detail how SuDS devices have been utilised and incorporated to the overall plan for the proposed development, and how their inclusion will mitigate the risk of localised and downstream flooding, while also promoting residential amenity and biodiversity.'

Proposed Surface Water Network and SuDS Strategy

'It is proposed to construct a surface water drainage network that will service and attenuate the development internally before discharging at the current greenfield (or allowable) rates to the local natural ditch systems. For surface water drainage layout and attenuation strategy details please see drawings 20-086-P121A and 20-086-P140B. The subject site includes a single catchment.

The following parameters have been used in greenfield run-off rate calculations, which are also provided in the GDSDS Calculations, supplied in Appendix D.

| Surface Water Catchment Details

	Catchment
Site Redline Area (Gross) – Ha	2.54
Site Hardstanding and positively drained Area (Net) - Ha	1.441
SAAR - mm*1	836
SOIL Index*2	0.47
Climate Change	20%

**1 – From MetEireann data*

**2 – The soil type map of Ireland indicated Soil Type 2 however the SI would suggest this is not correct for this particular site with soil conditions being compacted clay/silt above weathered bedrock in the southern part of the site and shallow bedrock in the northern end of the site, expected for Soil Type 4. Therefore 0.47 is used as the Soil Index for this site. In addition, there is a natural steep slope of c. 1:12 across the site which will increase the rate of run-off from the site, even in its greenfield state.'*

Greenfield Run-off Rates

'The Local Authority requirements are that post-development run-off rates are limited to greenfield run-off rates for the site. The greenfield run-off rates for the site have been calculated in accordance with the Institute of Hydrology report No 124 "Flood Estimation for Small Catchments", using the UK SUDS Website. As outlined above, a Soil Index of 0.47 was used in our drainage design calculations. The Greenfield run-off for the site is 8.56 l/s (Qbar). These calculations have been provided in Appendix D of this report. Site investigations have been undertaken to determine the soil infiltration values and to verify the above Soil Index value, and are included as Appendix B. It was determined that it is not viable to use soakaways to infiltrate the surface water at source for this site and that the ground conditions would be typical of Soil Type 4.'

Proposed Surface Water Strategy

'It is proposed to drain surface water from the development by gravity to the existing public surface water drainage outfall pipe in the north-eastern corner of the development site. Storm water will discharge to the outfall at a controlled rate, limited to the greenfield equivalent runoff. Excess surface water runoff during storm events will be attenuated in new below ground stormwater attenuation tanks within the open space at the northern end of the site, as shown on Waterman Moylan Drainage Layout Drawing No. 20-086-P121A. As noted in section 3.4 above, the suitability of the soil for infiltration soakaways has been explored through site investigation, however the ground conditions are not favourable to this means of surface water design. As such, alternative SuDS measures including attenuation tanks are proposed, as further explained below.

The proposed surface water outfall pipe from the development is a 225mm diameter pipe laid at a gradient of 1:100, giving a capacity of 51.9 l/s. Therefore, the proposed outfall has more than adequate capacity to cater for restricted greenfield rate flows from the development lands.

Furthermore, the adjacent Stage 1 development lands are similarly attenuated. The Stage 1 lands are restricted to 13l/s, which, when combined with phase 2 equates to a combined flow rate of 21.56l/s, still within the capacity limits of permitted combined surface water outfall drainage through the Phase 1 Lands.

Strict separation of surface water and wastewater will be implemented throughout the development. Internal private surface water will consist of uPVC (to IS 123) or concrete socket and spigot pipes (to IS 6). These drains will be laid to comply with the Building Regulations 2010, and in accordance with the recommendations

contained in the Technical Guidance Documents, Section H. Surface water sewers will consist of uPVC or concrete socket and spigot pipes (to IS 6) and will be laid strictly in accordance with Dun Laoghaire Rathdown Council requirements for taking in charge.

The proposed development has been designed to incorporate best drainage practice. Section 3.4, above, sets out the methodology used in determining the existing greenfield runoff rate and calculating attenuation storage requirements for the site.

It is proposed to incorporate a Storm Water Management Plan through the use of various SuDS techniques to treat and minimise surface water runoff from the site. The methodology involved in developing a Storm Water Management Plan for the subject site is in accordance with the requirements of Dun-Laoghaire Rathdown County Council and is based on recommendations set out in the Greater Dublin Strategic Drainage Study (GDSDS) and in the SuDS Manual (Ciria C753).

As stated in Section 3.2, the SuDS strategies employed within this development align with the Dun Laoghaire Rathdown County Council's document titled 12.8.6.2 SuDS (Sustainable Drainage Systems) and the National Guidance Document 'Nature Based Solutions to the Management of Rainwater, Surface Water Runoff in Urban Areas. The latter reflects the provisions of the EU Water Framework Directive (2000/60/EC) (WFD).

Based on three key elements – Water Quantity, Water Quality and Amenity – the targets of the SuDS train concept have been implemented in the design, providing SuDS devices for each of the following:

- *Source Control*
- *Site Control*
- *Regional Control'*

The following drainage hierarchy was used to determine the most suitable and sustainable SUDS strategy. This is in accordance with the GDSDS initiative that all new developments will conform to Best Management Practices for urban storm water drainage:

1. The use of green roofs;

2. Store rainwater for later use;

3. Use infiltration techniques, such as porous surfaces in non-clay areas;

4. Attenuate rainwater in ponds or open water features for gradual release;

5. Attenuate rainwater by storing in tanks or sealed water features for gradual release;

6. Discharge rainwater direct to a watercourse;

7. Discharge rainwater to a surface water sewer/drain;

8. Discharge rainwater to the combined sewer.'

Existing Foul Water Network

'A Pre-Connection Enquiry was submitted to Uisce Eireann (formerly Irish Water) and received a reference number of CDS24002545 in May 2024. The Confirmation of Feasibility Letter (CoF) dated 4 June 2024 is included in appendix F. The letter notes that connection to the 225mm sewer adjacent to the site on Mount Anville Road is feasible without infrastructure upgrades to the foul water network.

Further, an Uisce Eireann Statement of Design Acceptance (SoDA) was received on 18 September 2024. The SoDA confirms Uisce Eireann has no objection to the proposed development foul water drainage connection.'

Proposed Foul Water Network

'There is an existing 225mm diameter foul sewer outfall in the northeast of the subject site which was constructed under Phase 1 of the Knockrabo development and was designed and built to drain the Phase 1 and 2 lands.

It is proposed to serve the subject site with a drainage network containing a series of 150mm and 225mm diameter pipes, which will outfall to the existing outfall in the northeast of the site as mentioned above.

The proposed internal foul drainage network has been designed and sized in accordance with the Uisce Eireann Code of Practice for Wastewater Infrastructure and Standard Details. Please refer to drawings 20-086-P121A which shows the proposed foul drainage layout to serve the subject site.'

The Confirmation of Feasibility Letter and Statement of Design Acceptance issued by Uisce Eireann for the proposed development is demonstrated in Appendix II. The proposed drainage layout and SuDS strategy plan are demonstrated in Figures 6 & 7.

Flood Risk Assessment

A Site-Specific Flood Risk Assessment has also been prepared by Waterman Moylan Consulting Engineers Limited to accompany this planning application. This report concludes with the following:

Tidal Flooding

'Given that the site is located 3 kilometres inland from the Irish Sea, that there is at large level difference between the proposed buildings and the high tide, and given that the site is outside of the 1-in-1,000 year flood plain, it is evident that a pathway does not exist between the source and the receptor. The risk from tidal flooding is therefore extremely low and no flood mitigation measures need to be implemented.'

Fluvial Flooding

'The OPW's National Flood Information Portal indicates that the subject site is a significant distance away from the flood zone of the local river systems, including that of the Carysfort/Maretimo fluvial flood extents to the southeast and the Dodder catchment fluvial flood extents to the west. Similarly, Dun Laoghaire Rathdown County Development Plan Flood Zone Maps have been referenced, and these too indicate that that the development site lies outside of the local fluvial flood extents.'

'Given that the site is outside of the 1-in-1,000 year flood plain, the likelihood of fluvial flooding is low.'

Pluvial Flooding

- *'With a high likelihood and moderate consequence of flooding the site from surcharging the on-site drainage system, the resultant risk is high.*
- *With a low likelihood and moderate consequence of flooding the site from the existing surface water network, the resultant risk is low.*
- *With a moderate likelihood and moderate consequence of surface water discharge from the subject site, the resultant risk is moderate.*
- *With a low likelihood and moderate consequence of overland flooding from the surrounding areas, the resultant risk is low.*
- *With a moderate likelihood and moderate consequence of overland flooding from the subject site, the resultant risk is moderate.'*

Hydrological Risk Assessment

A Hydrological & Hydrogeological Qualitative Risk Assessment Report has been prepared by AWN Consulting to accompany this planning application. This report concludes with the following:

'A conceptual site model (CSM) has been prepared following a desk top review of the site and surrounding environs. Based on this CSM, plausible Source-Pathway-Receptor linkages have been assessed assuming an absence of any measures intended to avoid or reduce harmful effects of the proposed project (i.e. mitigation measures) in place at the proposed development site.

During construction and operation phases there is no direct source pathway linkage between the proposed development site and open water (i.e. South Dublin Bay SAC/pNHA and South Dublin Bay and River Tolka SPA). There are indirect source pathway linkages from the proposed development through public sewers which discharge to the Elm Park Stream which ultimately outfalls into Dublin Bay (2.4 km downgradient of the site). There is also an indirect connection through the foul sewer which will eventually discharge to the Ringsend WWTP and ultimately discharges to Dublin Bay. The future development has a peak foul discharge that would equate to 0.063% of the licensed discharge at Ringsend WWTP (peak hydraulic capacity).

It is concluded that there are no pollutant linkages as a result of the construction or operation (without mitigation) of the proposed development which could result in a water quality impact which could alter the habitat requirements of the Natura 2000 sites within Dublin Bay.

Finally, in line with good practice, preventive measures are included during construction to minimise the potential for any accidental releases off site. These measures are to be included in the design of any such developments. During operation, the potential for an impact to ground or storm water is negligible and there are design measures incorporated within the proposed development to manage stormwater run-off quality. These specific measures will provide further protection to the receiving soil and water environments. However, the protection of downstream European sites is in no way reliant on these measures.'

Lighting

A Public Lighting Report has been prepared by Sabre Lighting to accompany this planning application. Altemar carried out detailed consultation with Sabre Lighting in relation to the proposed external lighting design onsite. In order to reduce the potential for lighting impacts on nocturnal fauna species, no lighting is proposed within central and northern open space areas and there will be minimal light spill into these areas (between 0.25-1 lux along the fringes of these areas). In addition, lighting onsite is set to 2200oK, in compliance with bat lighting guidelines. The horizontal luminescence is seen in figure 5. The public lighting layout is demonstrated in figure 8.

Horizontal Illuminance (lux)

Grid 1

Results

Eav	5.14
Emin	1.06
Emax	33.84
Emin/Emax	0.03
Emin/Eav	0.21

Figure 5. *Horizontal Illuminance (lux)*

Arborist

An Arboricultural Assessment of the Tree Vegetation was prepared by Arborist Associates to accompany this planning application. The report concludes the following in relation to the arboricultural impact of the proposed development:

'***Breakdown of Trees for Removal:***

From the 59No. Trees entries within the site area, 29 (49%) are being shown for removal to accommodate the current proposed development layout or as part of active management and this is made up of a mix of tree species, age classes and sizes and these are dispersed out over the entire site area.

This is broken down into the following category grades:

- *10No. (100%) category 'U' trees with 3No. needing to be removed directly due to the development layout and 7No. being recommended for removal as part of active management.*
- *2No. (25%) category 'A' trees.*
- *2No. (18%) category 'B' tree.*
- *15No. (50%) category 'C' trees plus 3No. Small Tree Groups, 2No. Hedges and one scrub area.*

In respect of arboricultural considerations pertaining to retained and removed trees at the subject site, we note 84No. Trees have been previously removed, as permitted under DLRCC Reg. Ref. D17A/1124 (now expired - Refer to 'Appendix 3' of this report for full schedule of trees which were assessed and removed as permitted under DLRCC Reg. Ref. D17A/1124) with a further 4No. Trees also removed or have fallen since giving a total of 88No. trees lost from the site area. A further 29No. existing trees are now proposed to be removed as part of the current scheme, resulting in a total loss of 117No. trees from the site area over the permitted / proposed schemes. We note that the proposed landscaping of the development provides for the additional planting of 188No. trees and in this regard, the proposed quantum of planting will result in a net gain in the number of trees on this site area 71No. trees.

All efforts have been made to retain as much of the tree and shrub vegetation around the site area that is important to its treescape and sylvan character. The loss of the above list of trees will have minimal impact on the overall treescape and sylvan character of this area as the bulk of the trees requiring removal to facilitate the proposed development are of a small size, many of which had been planted in more recent years (within the last 20 years) as part of a landscaping project when 'Cedarmount House' was separated from the 'Knockrabo' lands and refurbished as a private residential home.

To help compensate for the loss of tree vegetation from this area as a result of the proposed development layout; condition and to improve the diversity and continuity of tree cover on these grounds, new tree, shrub and hedge planting using a variety of species and sizes including extra heavy standards (35-40 cm girth) are to be used in the landscaping of these grounds once the development is completed. See 'Landscape Architects Drawings' and 'Schedules' for details.

The majority of the large prominent mature trees that are important to the treescape of these grounds and the greater area are being retained within open areas within this development and will continue to be an asset to the treescape of this area for the future.

For those trees proposed for retention, all necessary protection measures will need to be put in place in order to prevent or reduce impact to its very minimum. protection measures used will include the erection of protective fencing at the very start of the works, monitoring of the works by the project Arboriculturist throughout the construction process and the use of tree friendly techniques and products for the construction process.

For the most part, the trees are being retained within open spaces around the proposed development and will be easily incorporated into these open spaces with no impact from the works. It will be important that the root zones of these trees as shown on our tree protection plan are cordoned off at the commencement of the construction works by strong sturdy protective fencing as shown in the sample of such fencing on our tree protection plan and within 'Appendix 1' of this report. Landscaping within the root zone of the trees will need to be kept simple with minimal hard landscaping and planting within these root zones and where surfacing is required for paths, these will need to be installed over the existing ground levels using a No-Dig methodology to avoid causing soil and root damage within the root zone of the surrounding trees.'

The tree constraints plan, tree removals plan and tree protection plan are demonstrated in figures 9-11.

Figure 6. *Proposed drainage layout*

Figure 7. *Proposed SuDS Strategy Plan*

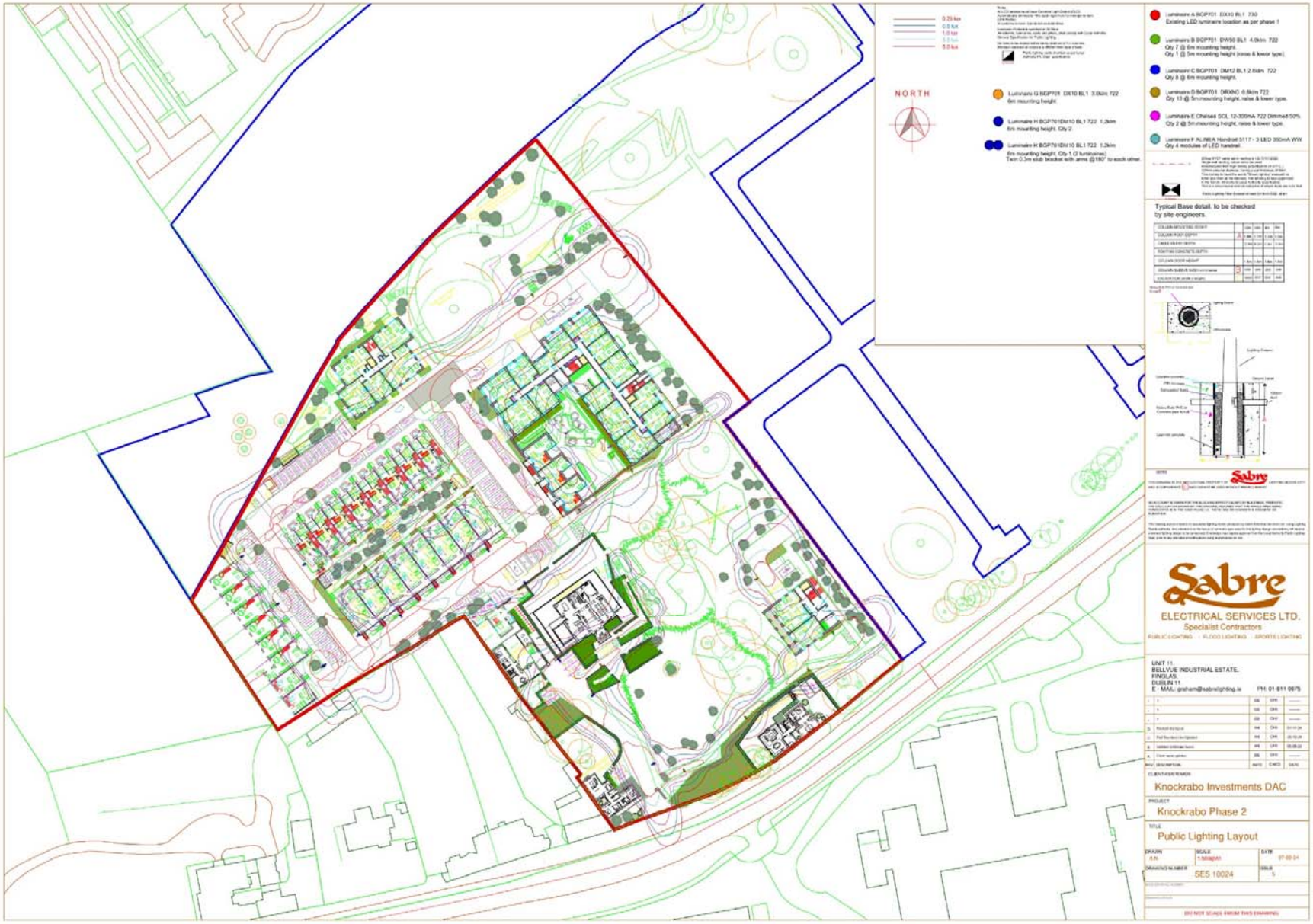

Figure 8. *Proposed public lighting layout*

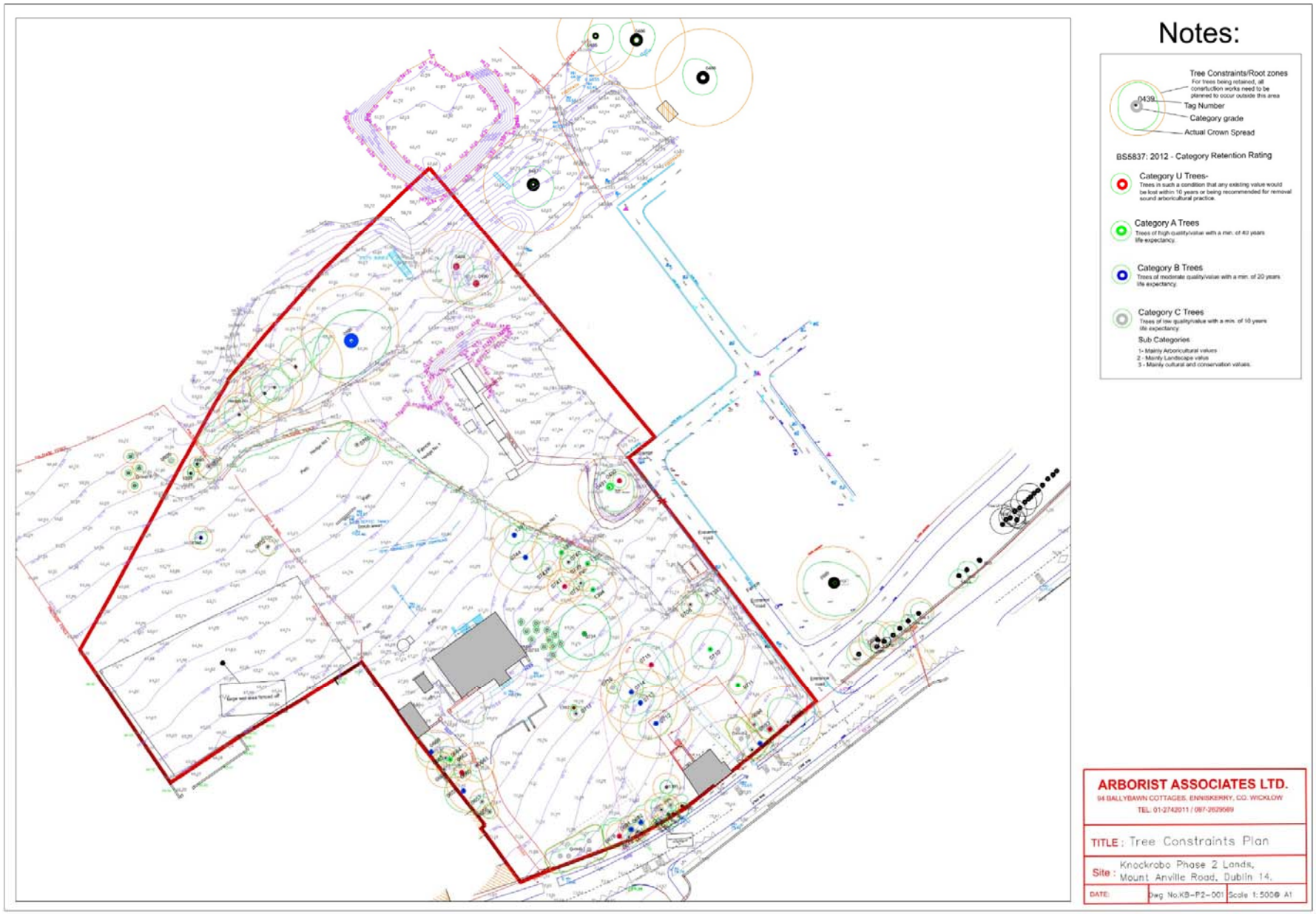

Figure 9. *Tree Constraints Plan*

Figure 10. *Tree Removal Plan*

Figure 11. *Tree Removal Plan*

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 October 2023 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 ZoI of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and lighting impacts during construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any designated conservation sites. The nearest European site to the subject site is 2.4 km away (South Dublin Bay and River Tolka Estuary SPA). Given the minimum distance to the nearest European site (2.4km to South Dublin Bay and River Tolka Estuary SPA) across a densely populated suburban environment, any noise pollution created during the construction of the proposed development will be localised to the immediate site area and will not have a likely significant effect on the conservation objectives of the features of interest of any European sites. During operation, surface water from the proposed development shall discharge into the Elm Park Stream via an existing public surface water network.

Field Survey

Field surveys of the proposed development site at Knockrabo, Goatstown, Co Dublin, were carried out by Altemar Ltd., Emma Peters and Frank Spellman. The purpose of the field surveys 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. The bat survey is seen in Appendix I, Mammal Survey (Appendix II) and bird surveys (Appendix III). |Survey dates are seen in Table 1.

Table 1. Survey dates.

Survey	Surveyor	Dates
Flora and Habitat	Emma Peters (Altemar)	10th May 2024
Bat	Bryan Deegan (Altemar)	29th May 2024 & 5th June 2024
Mammal	Frank Spellman (Altemar)	27th November 2023 & 8th January 2024
Breeding Birds	Frank Spellman and Emma Peters (Altemar)	10th/17th/21st May 2024
Wintering Birds	Frank Spellman (Altemar)	27th/29th November 2023, 05th/07th December 2023, 08th/11th January 2024, 29th February 2024, 12th March 2024.

Survey Limitations

The surveys covered appropriate seasons for flora, fauna and bat assessments. A final follow up habitat survey was carried out by Emma Peters on the 10th of May 2024. 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 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.

Magnitude of effect and typical descriptions

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.

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.

Importance	Ecological Valuation
Local	Areas supporting resident or regularly occurring populations of protected and red data listed-species of local importance (e.g. 1% of local population), Undesignated sites or features which enhance or enrich the local area, sites containing viable area or populations of local Biodiversity Plan habitats or species, local Red Data List species etc.
Site	Very low importance and rarity. Ecological feature of no significant value beyond the site boundary

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

Significance of Effects

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

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

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

Results

Proximity to Designated Conservation Sites

The nearest European site to the subject site is 2.4 km away (South Dublin Bay and River Tolka Estuary SPA) (Figure 13). As outlined in the Hydrological & Hydrogeological Qualitative Risk Assessment Report prepared by AWN Consulting to accompany this planning application, the nearest surface water receptor to the west is the River Slang which is c. 1.2km west of the proposed development site boundary; the Elm Park Stream is c. 1.0km at its nearest point to the north of the proposed development site. There are no NHAs within 15 km of the proposed development and no potential hydrological pathways from the proposed development site to any NHAs located further than 15 km. Watercourses and potential pathways to proximate pNHAs, SACs and SPAs are seen in Figures 16- 20. Foul wastewater will be directed to the Ringsend Wastewater Treatment Plant (WwTP). Foul wastewater drainage will ultimately be treated along this public network under licence (see Appendix V for Confirmation of Feasibility received from Uisce Eireann for the proposed development). The treated effluent from the existing WwTP will discharge to South Dublin Bay. There will, therefore, be an indirect pathway from the proposed development site to European sites within Dublin Bay, namely, South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA and North-West Irish Sea cSPA. Additionally, there is a remote indirect pathway to European sites that extend beyond Dublin Bay. European sites within 15 km and the distance from the proposed development to these sites are displayed in Table 2. Proposed Natural Heritage Areas within 15 km and the distances from the proposed development site are seen in table 3.

Table 2. European sites within 15km of the proposed site

NATURA 2000 Site	Distance
Special Areas of Conservation	
South Dublin Bay SAC	2.5 km
Wicklow Mountains SAC	7.3 km
North Dublin Bay SAC	7.4 km
Rockabill to Dalkey Island SAC	8.8 km
Knocksink Wood SAC	9.1 km
Glenasmole Valley SAC	10.2 km
Ballyman Glen SAC	10.2 km
Howth Head SAC	11.8 km
Baldoyle Bay SAC	12.9 km
Bray Head SAC	14.0 km
Special Protection Areas	
South Dublin Bay and River Tolka Estuary SPA	2.4 km
North Bull Island SPA	7.4 km
North-West Irish Sea cSPA	7.5 km
Wicklow Mountains SPA	7.5 km
Dalkey Islands SPA	8.7 km
Baldoyle Bay SPA	12.9 km
Howth Head Coast SPA	13.7 km

Table 3. (proposed) NHAs within 15km of the proposed development site

Status	Site Name	Distance
pNHA	South Dublin Bay pNHA	2.5km
pNHA	Booterstown Marsh pNHA	2.3km
pNHA	Grand Canal pNHA 4.6km	4.6km
pNHA	Fitzsimon's Wood pNHA	2.6km
pNHA	Grand Canal pNHA	4.7km
pNHA	Dolphins, Dublin Docks pNHA	5.2 km
pNHA	Dalkey Coastal Zone and Killiney Hill pNHA	6.3km
pNHA	Dodder Valley pNHA	7.1km
pNHA	Dingle Glen pNHA	6.4km
pNHA	Royal Canal pNHA	6.1km
pNHA	Loughlinstown Woods pNHA	7.9km
pNHA	Ballybetagh Bog pNHA	7.7km
pNHA	North Dublin Bay pNHA	7.4km
pNHA	Knocksink Wood pNHA	9.1km

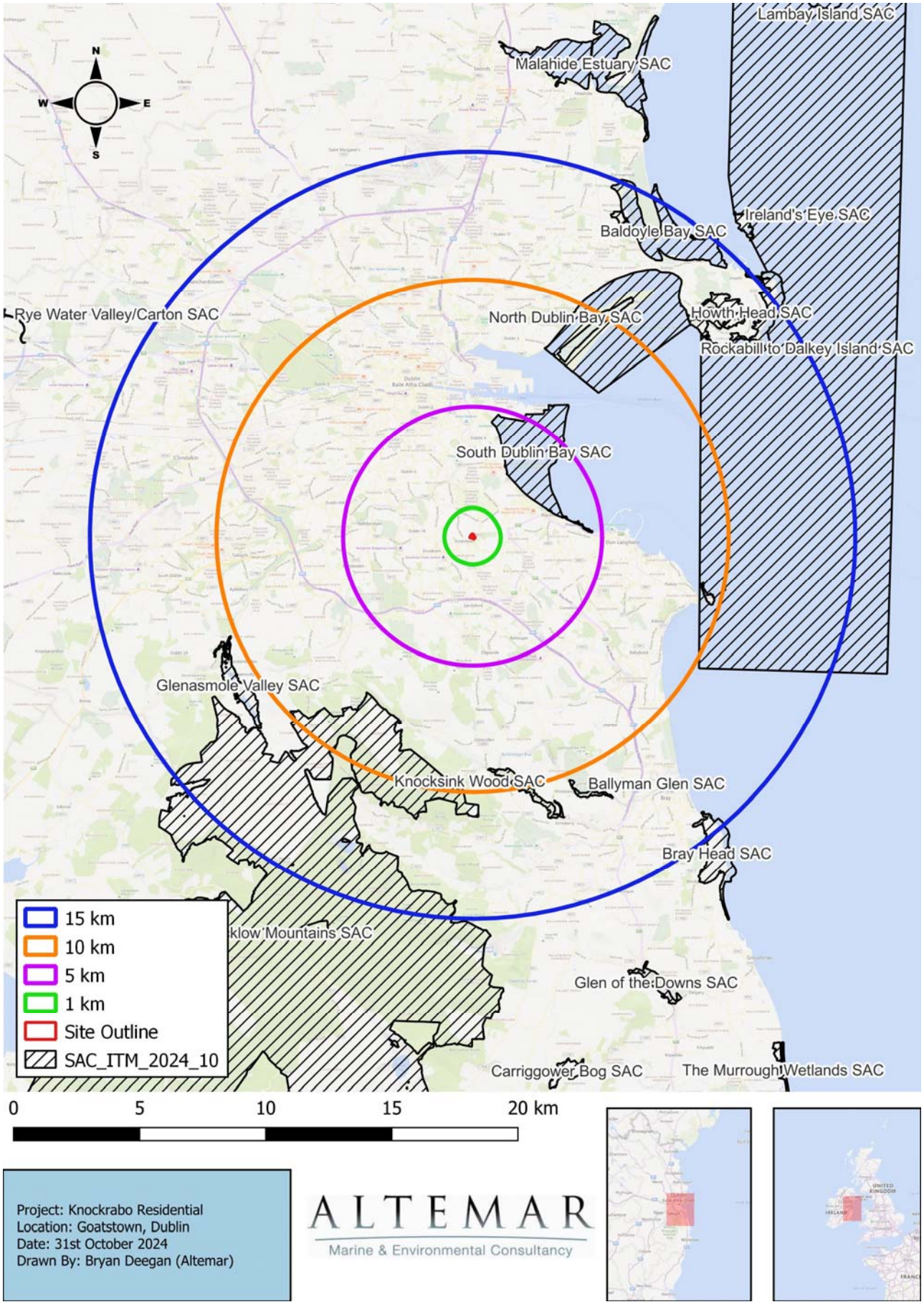

Figure 12. *Special Areas of Conservation (SACs) within 15km of proposed development*

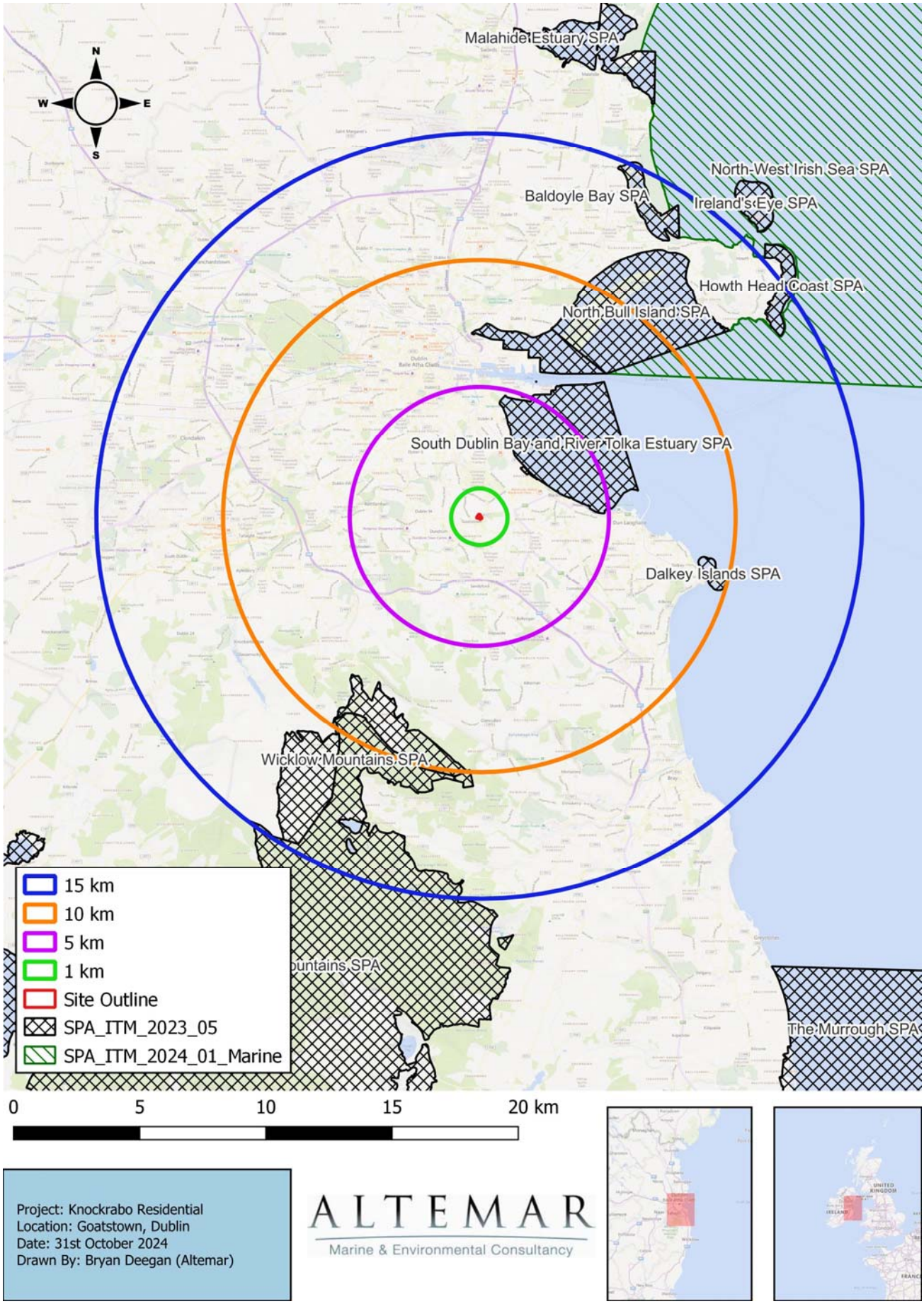

Figure 13. *Special Protection Areas (SPAs) within 15km of proposed development*

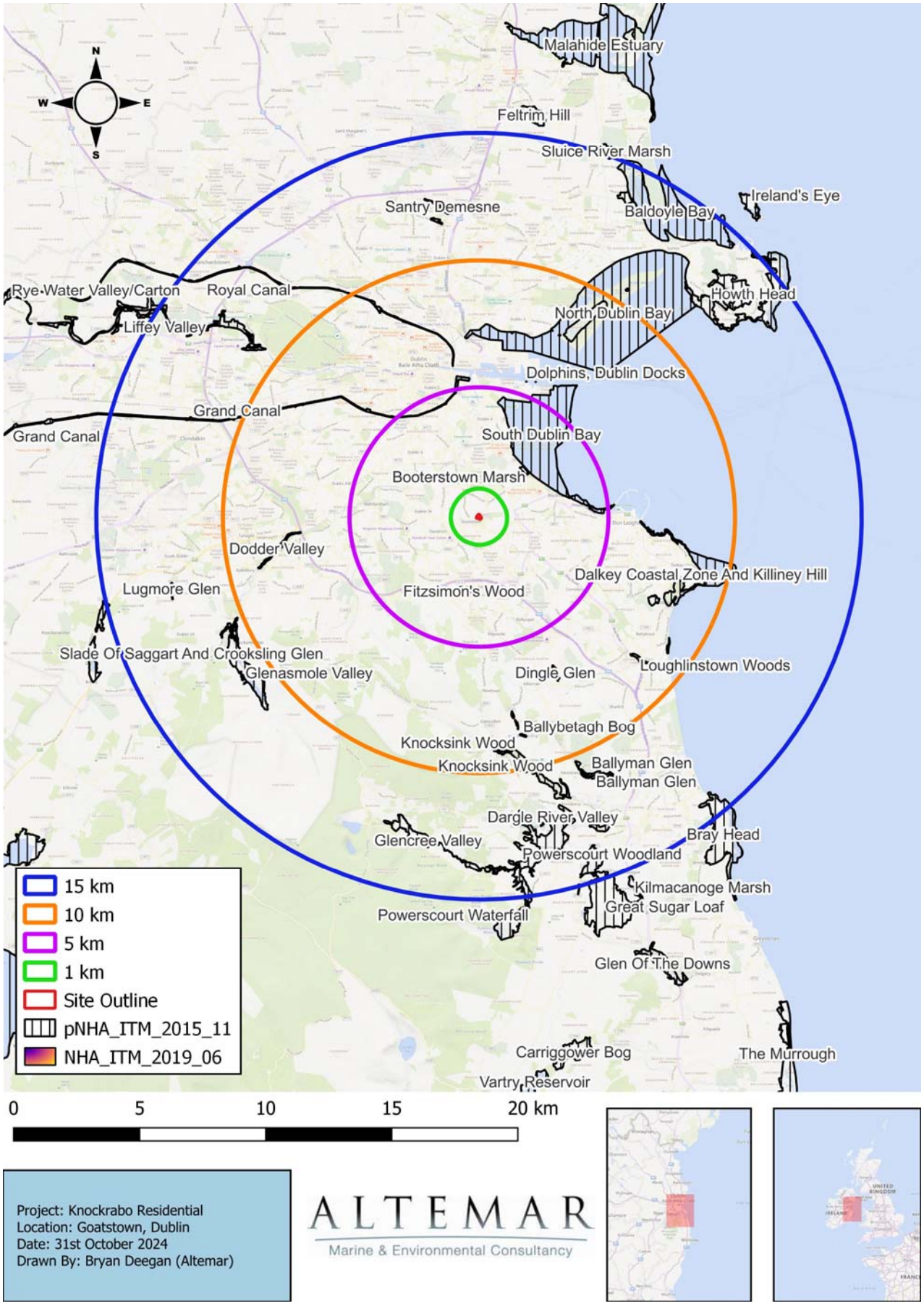

Figure 14. *Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs) within 15km of proposed development.*

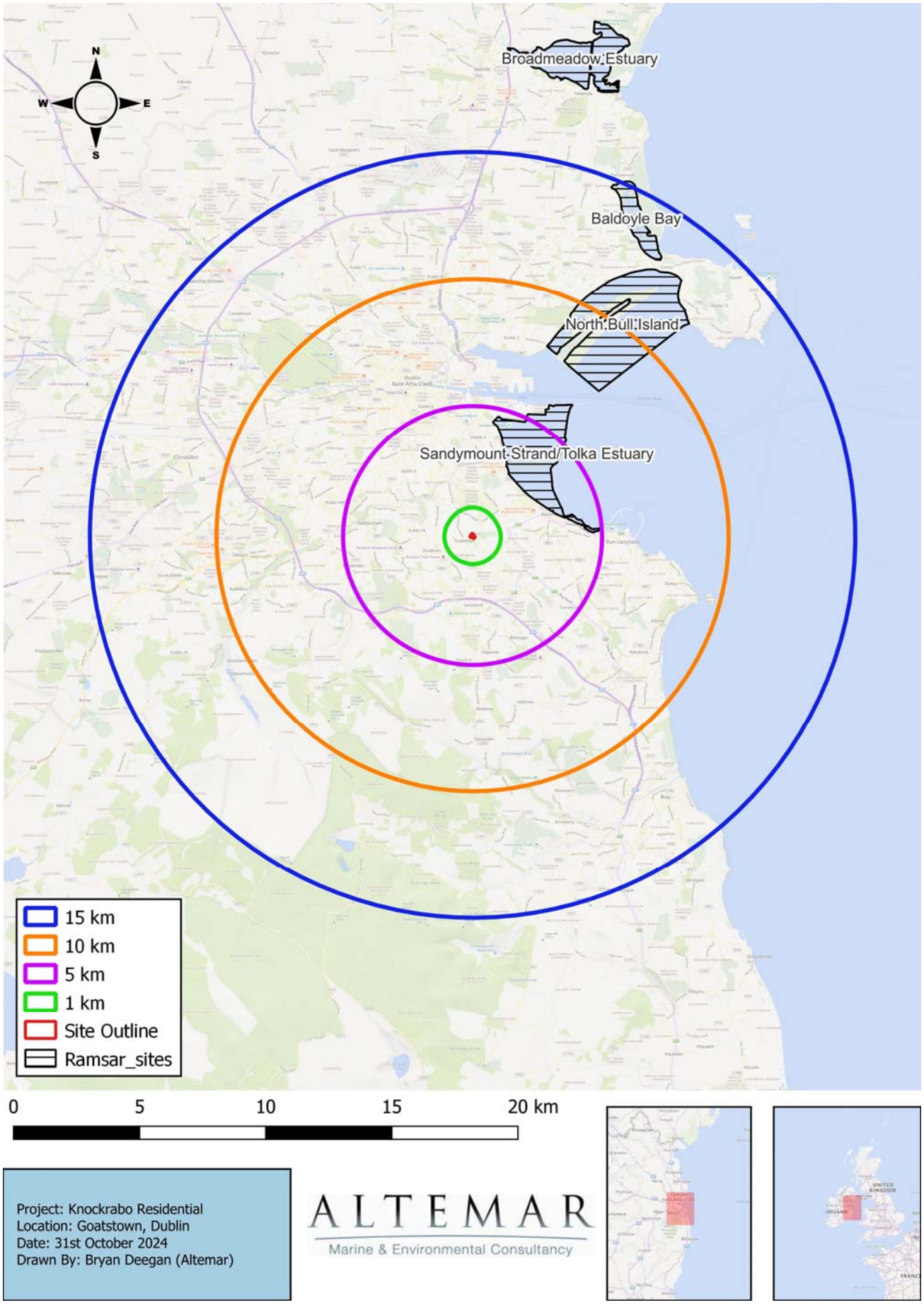

Figure 15. *Ramsar sites within 15km of proposed development*

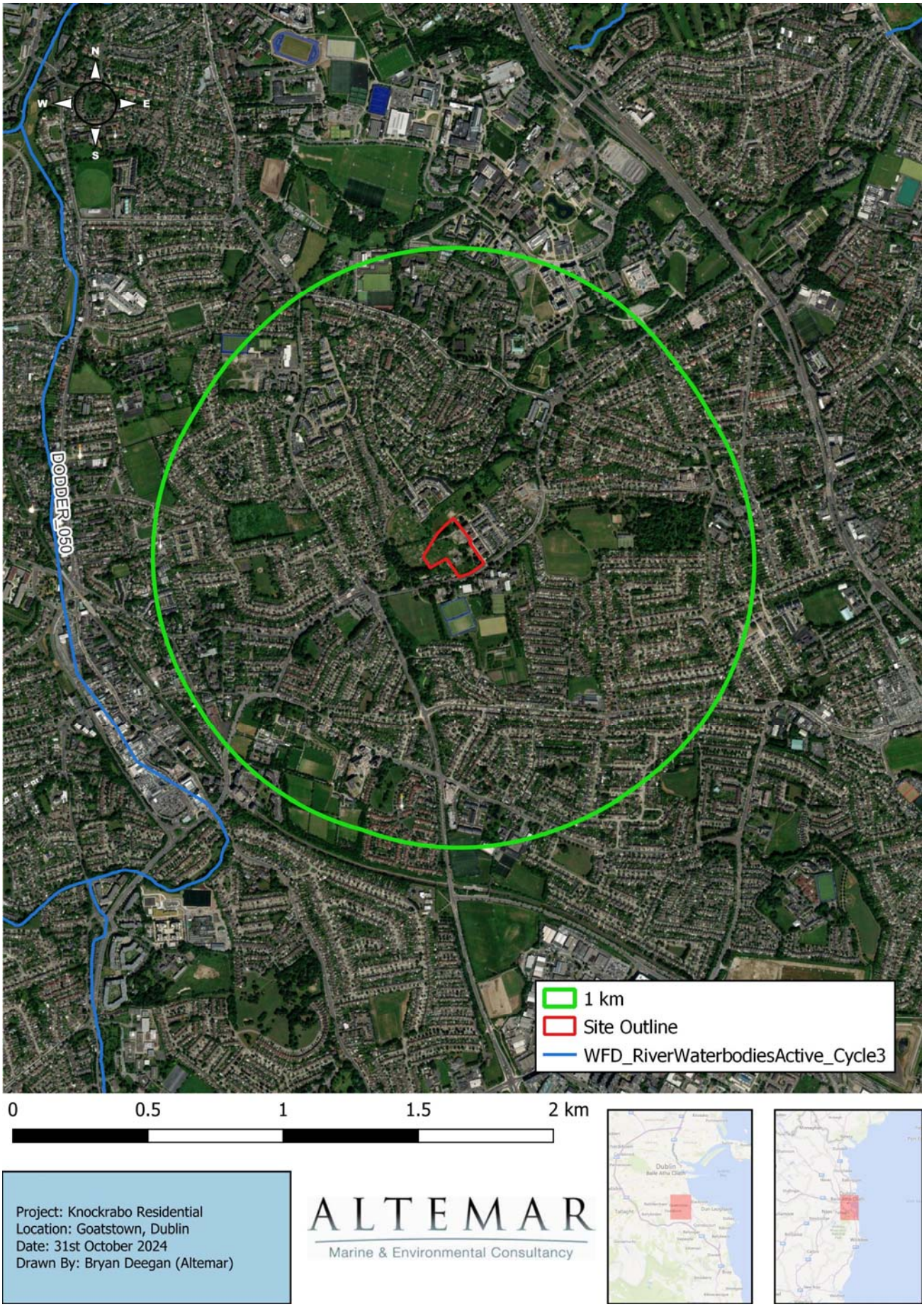

Figure 16. *Watercourses proximate to the proposed development*

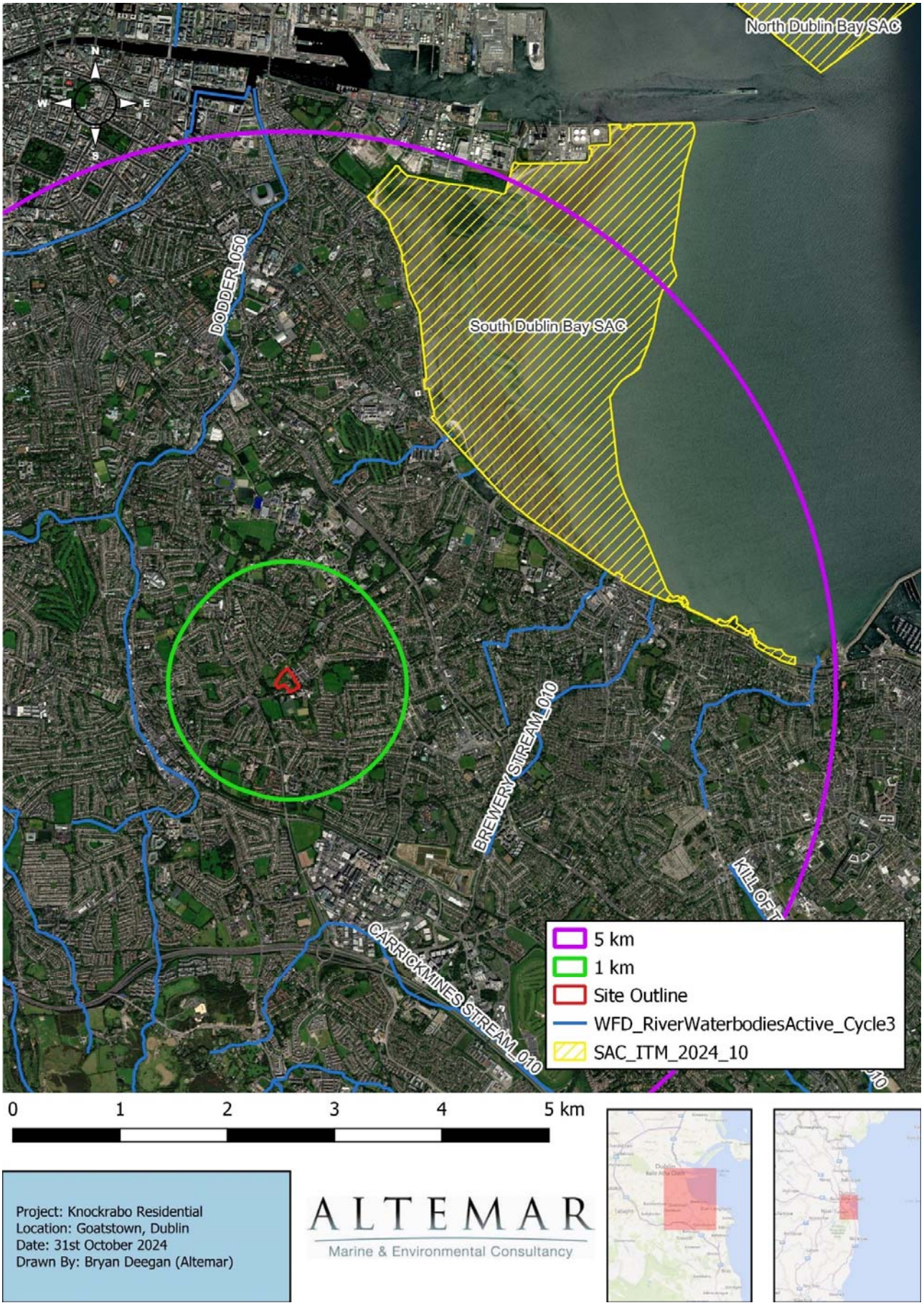

Figure 17. *Watercourses and SACs proximate to the proposed development site*

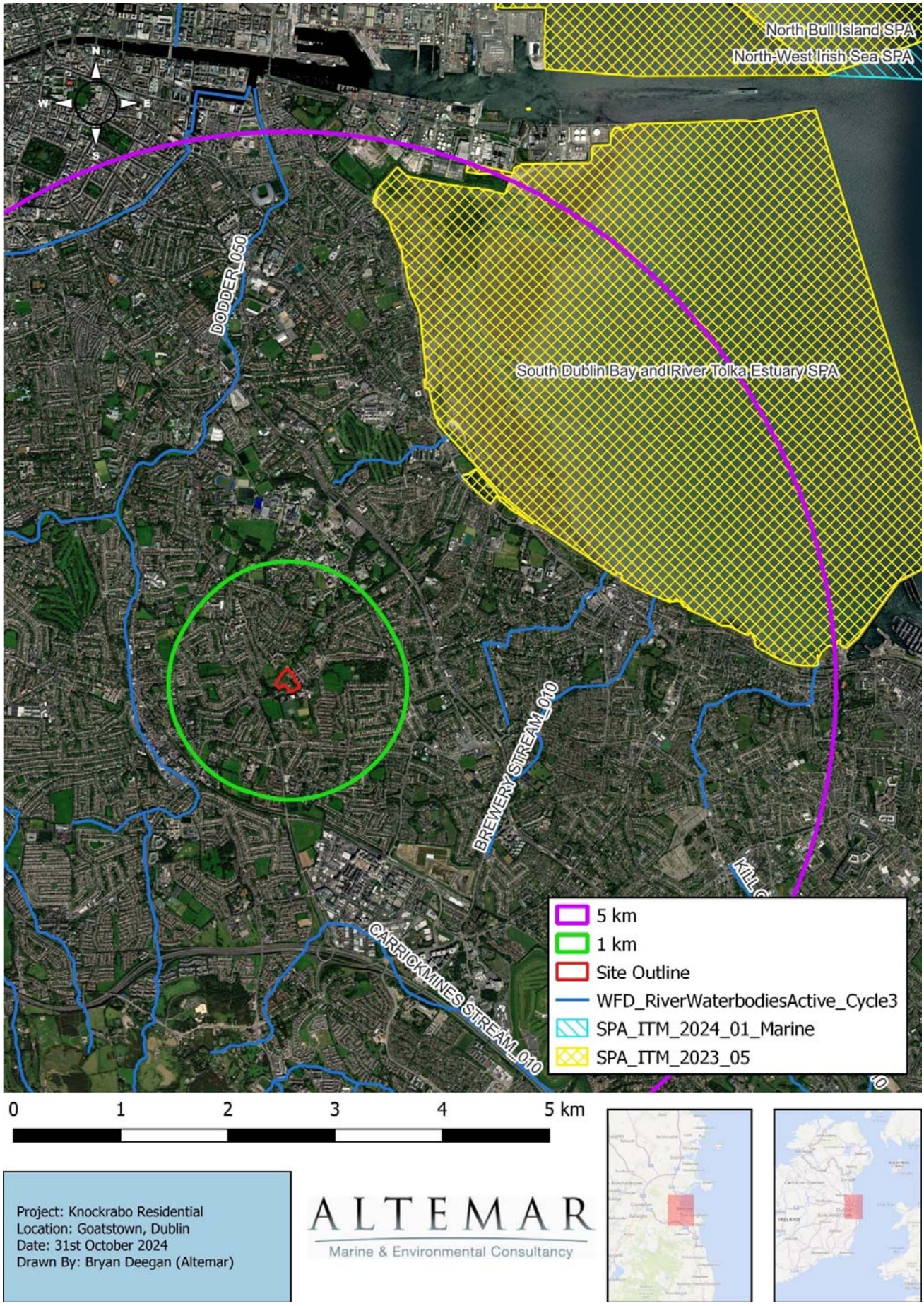

Figure 18. *Watercourses and SACs proximate to the proposed development site*

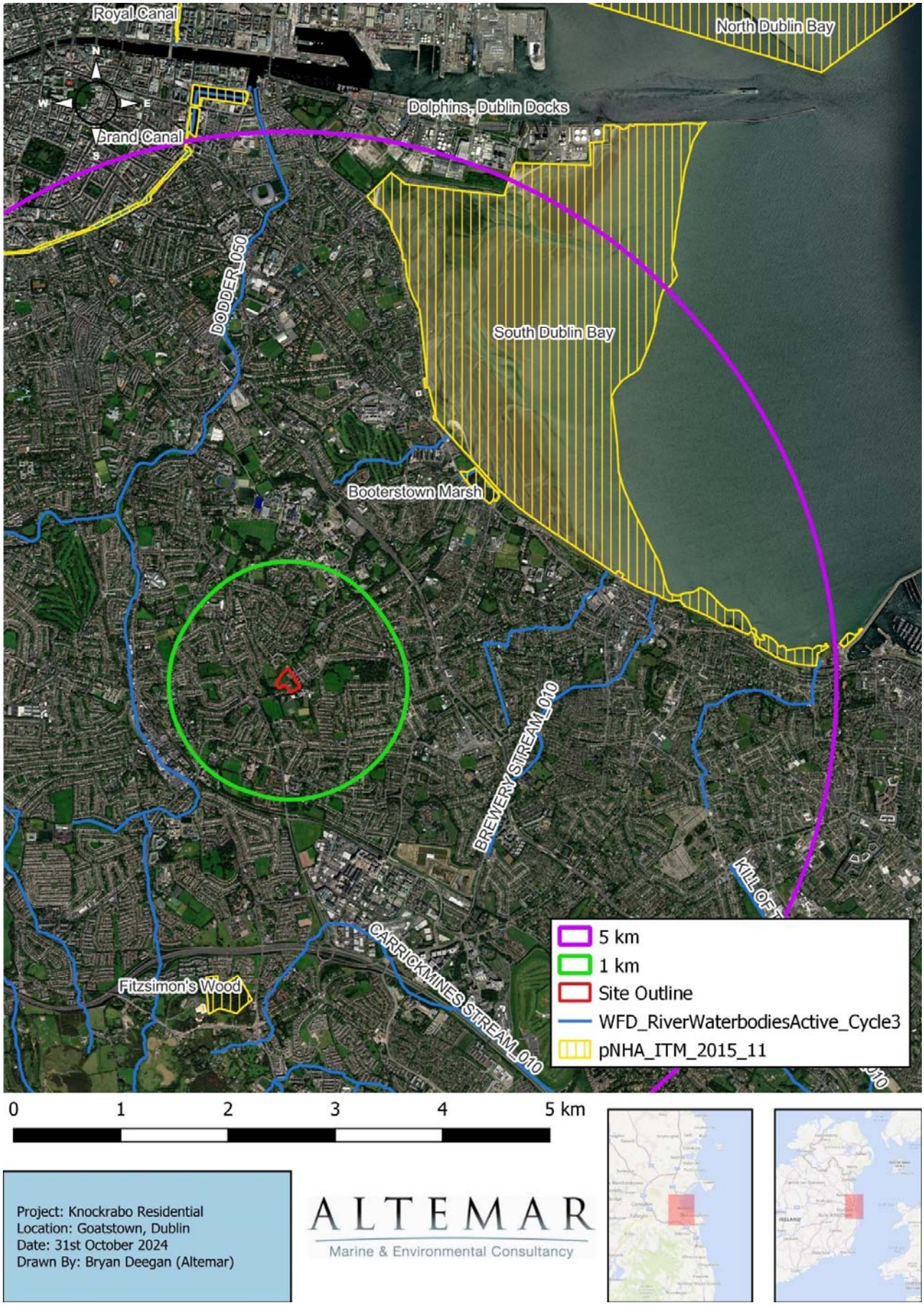

Figure 19. *Watercourses and pNHAs within 5km of proposed development*

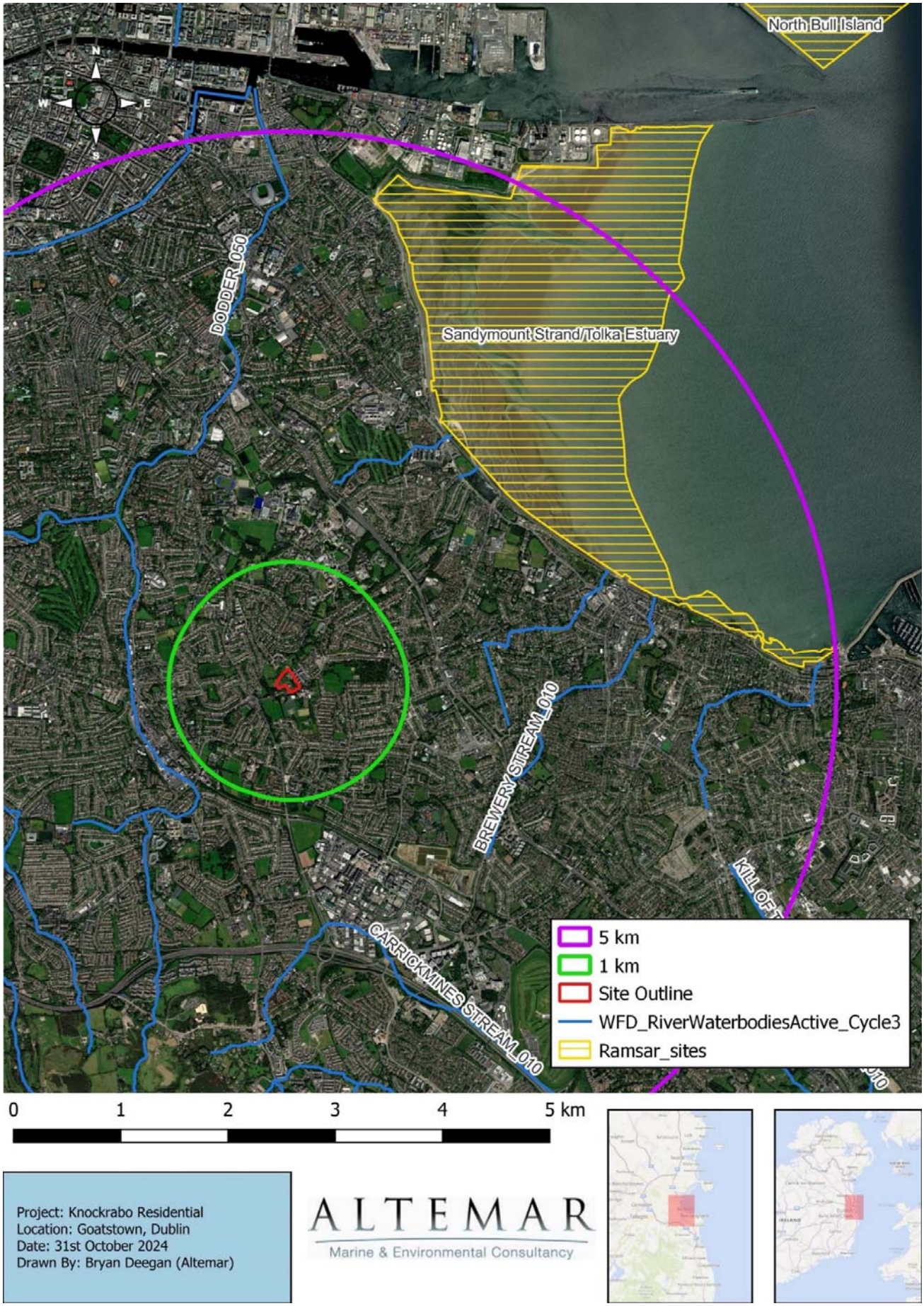

Figure 20. *Watercourses and Ramsar sites within 5km of proposed development*

Habitats and Species

The most recent assessment was carried out on 10th May 2024. Habitats within the proposed site were classified according to Fossitt (2000) (Figure 21). Species noted within each habitat have been outlined.

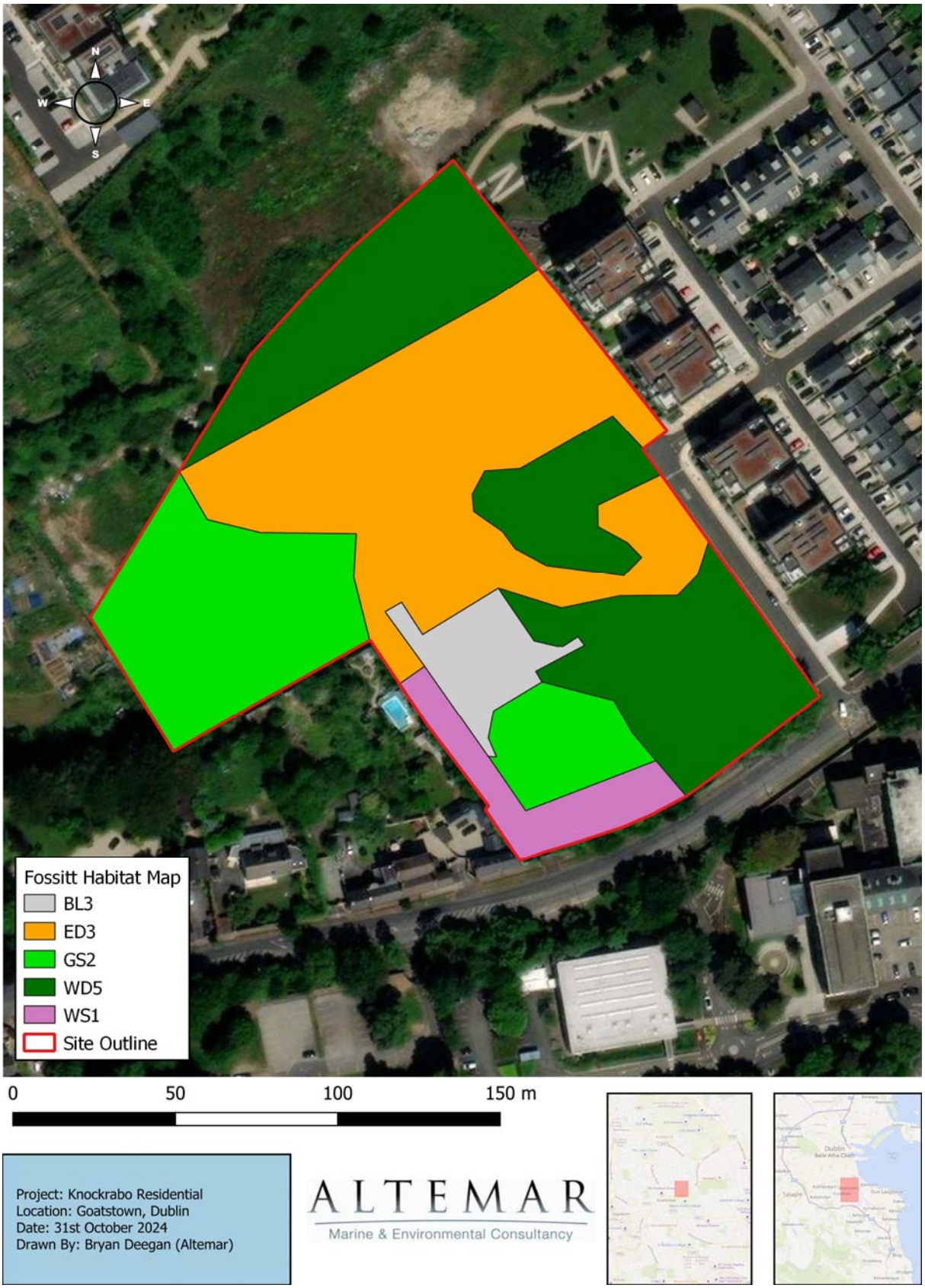

Figure 21. *Fossitt (2000) Habitat map of proposed development site.*

ED3 - Recolonising bare ground

The ground onsite has been disturbed in its past and some gravel brought in. The site has been left unmanaged allowing vegetation to colonise the ground. Species noted in this habitat include docks (*Rumex spp*.), dandelion (*Taraxacum* spp.), fat hen (*Chenopodium album*), hoary willowherb (*Epilobium parviflorum*), pineappleweed (*Matricaria discoidea*), cleavers (*Galium aparine*), herb Robert (Geranium *roberianum*), coltsfoot (*Tussilago farfara*), thistles (*Cirsium spp.*), smooth sow-thistle (*Sonchus oleraceus*), ribwort plantain (*Plantago lanceolata*), white clover (*Trifolium repens*), red clover (*Trifolium pratense*), common ragwort (*Jacobaea vulgaris*), rough hawk's-beard *(Crepis biennis), buddleja (Buddleja davidii),* paperplant (*Fatsia japonica*), birdsfoot trefoil (*Lotdiasyus corniculatus*),shining cranes-bill (*Geranium lucidum*), meadow buttercup (*Ranunculus acris*), Canadian fleabane (*Erigeron canadensis*), common vetch (*Vicia sativa*), hedge bindweed (*Calystegia sepium),* teasel (*Dipsacus fullonum*), Cuckoo-flower (*Cardamine pratensis*), red valerian (*Centranthus ruber*), ivy (*Hedera helix*), germander speedwell (*Veronica chamaedrys*), hogweed (*Heracleum sphondylium*), field rose (*Rosa arvensis*), common chickweed (*Stellaria media*), feverfew (*Tanacetum parthenium*), holly (*Ilex aquifolium*), St.Johnwort (*Hypericum spp*.), barren broom (*Anisantha sterilis*), snowberry (*Symphoricarpos albus*), cowslip (*Primula veris),* nettles (*Urtica dioica*), kohuhu (*Veronica salicifolia*), honeysuckle (*Lonicera periclymenum*), pheasant berry (*Leycesteria formosa*), field forget-me-not (*Myosotis arvensis*), cornsalad (*Valerianella locusta*), garlic mustard (*Alliaria petiolata*), hairy bittercress (*Cardamine hirsuta*), bluebell (*Hyacinthoides non-scripta*), hedge mustard (*Sisymbrium officinale),* dog-violet (*Viola riviniana*), Lords and ladies (*Arum maculatum*), snapdragon (*Antirrhinum majus*), lesser stitchwort (*Stellaria graminea*). Most of the species noted in this habitat were native with some garden escapes. The invasive species found in this are were Spanish bluebell (*Hyacinthoides hispanica*), and Virginia creeper (*Parthenocissus quinquefolia*). Japanese knotweed (*Fallopia japonica*) was present onsite during the habitat and flora survey. An invasive species management plan is currently in place in line with Legislative requirements.

Plate 1. *Recolonising bare ground*

WS1 - Scrub

Due to management, scrub has encroached and grown in many places across the site. The scrub is dominated by brambles (*Rubus fruticosus agg*) with smalleramounts of box hedge (*Buxus sempervirens*), cotoneaster (*Cotoneaster spp.*), buddleja (*Buddleja davidii*), honeysuckle (*Lonicera periclymenum*), Laburnum (*Laburnum vossii x wateri*) and ivy (*Hedera helix*).

Plate 2. *Scrub.*

GS2- Dry meadow and grassy verges.

This area was focused North and South of the abandoned house. It was likely a managed lawn in the past but now wildflowers and garden escapes have self-seeded resulting in long swards of species including red valerian (*Centranthus ruber*), columbine (*Aquilegia vulgaris*), sun spurge (*Euphorbia helioscopia*), common chickweed (*Stellaria media*), bluebell (*Hyacinthoides non-scripta*), hedge mustard (*Sisymbrium officinale)*, cowslip *(Primula veris),* nettles (*Urtica dioica*), meadow buttercup *(Ranunculus acris),* winter heliotrope (*Petasites pyrenaicus*), water dock (*Rumex hydrolapathum*), *Carex sp.,* marsh horsetail (*Equisetum palustre*) and dandelion (*Taraxacum* spp.).

Plate 3. *Dry meadows and grassy verges*

WD5 - Scattered trees and parklands

Throughout the site were clustered and standalone trees with some native but mainly non-native species including cherry laurel (*Laurocerasus officinalis*), purple maple (*Acer palmatum*), cabbage palm (*Cordyline australis*), Larch (*Larix decidua*), Hornbeam (*Carpinus betulus*), elder (*Sambucus nigra*), *Potinia sp*., sycamore (*Acer pseudoplatanus*), Lawson Cypress (*Cupressus x leylandii*), bamboo (*Bambusa vulgaris*), Scot's pine (*Pinus sylvestris*), willow (*Salix sp.*), beech (*Fagus sylvatica*), horse chestnut (*Aesculus hippocastanum*), rowan (*Sorbus aucuparia*), Atlantic Cedar (*Cedrus atlantica*), oak (*Quercus sp.*) and birch (*Betula pendula*).

Plate 4. *Scattered trees and parklands*

BL3 – Buildings and artificial surfaces.

There were two abandoned buildings onsite and a tarmac driveway. These were inspected for breeding birds and bats. Feral pigeons (*Columba livia domestica*) were noted breeding within the house. No bats or other birds were noted in the vicinity of the buildings on site.

Plate 5. *Buildings and artificial surfaces.*

Evaluation of Habitats

The subject site was once a house with manicured gardens but has been left unmanaged. The habitats according to Fossitt (2000) include built land (BL3) Recolonising bare ground (ED3), scrub (WS1), dry meadow and grassy verges (GS2) and scattered trees and parkland (WD5). The site is in a built-up area.

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. There are no NBDC or NPWS records of rare or threatened species within the proposed development site.

Invasive Plant species

Japanese knotweed (*Fallopia japonica*) was present onsite during the habitat and flora survey within the recolonising bare ground habitat. This species is noted as an invasive species that is listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) which makes it an offence under Regulation 49 to plant, disperse, allow or cause to grow these plants. This species is currently under a management plan. Winter heliotrope was also noted on site. This species is not noted as an invasive species that is listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) and will be controlled.

Fauna

Bats

As seen in Appendix I, bat activity was noted on site. Bat foraging activity is typically concentrated in specific places where insects are likely to be plentiful and have the ability to swarm. Three species were noted on site:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Leisler's bat (*Nyctalus leisleri*)

No bats were detected emerging from any of the onsite buildings or trees. No evidence of bats was noted within the buildings on site. It should be noted that existing light spill extends from the R112 and neighbouring Knockrabo Apartments. No bats roosts were observed on site. A tree (Ash-0715) is considered to be of low-medium bat roosting potential and should be inspected prior to removal. No bats were observed emerging or in the vicinity of the tree. If bats are recorded roosting within any onsite structures or trees prior to removal, a bat derogation licence will be obtained.

Non Volant mammals

As outlined in Appendix II a total of four mammal species were confirmed within the survey area by visual confirmation and behavioural evidence: badger (*Meles meles*), grey squirrel (*Sciurus carolinensis*), fox (*Vulpes vulpe*s) and brown rat (*Rattus norvegicus*). Badger and fox trails were confirmed by camera in the southwest of the survey area to the south and east of the allotments. Snuffle holes were recorded adjacent to these trails.

High brown rat activity (burrows) was recorded in the northwest corner of the survey area in vegetated piles of loose earth. A fox den being excavated was recorded in the northwest corner of the survey area. Fox trails were recorded throughout the survey area. No badger setts were recorded within the overall survey area. However, the site is within the territory of a family of badgers. A review of existing records revealed that three additional species, Eurasian Red Squirrel (*Sciurus vulgaris*), West European Hedgehog (*Erinaceus europaeus*) and Pine Marten (*Martes martes*) have been recorded in the vicinity of the survey area (all of which are protected under the Wildlife Act 1976). No evidence of these three species was observed within the survey area. Overall, the survey area is of low importance to mammal species. An active badger foraging corridor exists in the west of the site outline, and active foraging is evident adjacent to the proposed site outline. As outlined in Appendix II: '*The site itself has considerable areas of stony recolonising bare ground which is a poor quality habitat for badgers. It would be expected that the proposed development will reduce the existing territory area for badgers. However, no works are proposed where snuffles were located and access to adjacent lands surrounding the development would still be possible via the allotments to the west and the underdeveloped area to the north of the site*.' It should be noted that the treeline located adjacent to where the badger was observed onsite will be retained.

Amphibians/Reptiles

The common frog (*Rana temporaria*) was not observed on site. There are no features within the site boundary that could be important to frog species.

Birds

As outlined in the Breeding Bird Assessment (Appendix III) a total of 23 species were recorded within the survey area across three surveys. Nine species were recorded breeding or displaying behaviour indicative of breeding. Seven green-listed bird species of conservation concern were recorded breeding within the survey area; blackbird, blue tit, feral pigeon, goldcrest, goldfinch, robin, woodpigeon and wren. One amber-listed bird species of conservation concern was recorded breeding within the survey area (goldcrest) within a large mature cypress tree in the centre of the survey area to the west of Knockrabo Apartments. As outlined in the Wintering Bird Assessment (Appendix IV) A total of 30 species were recorded within and above the survey areas across 8 surveys (see Appendix 1a for individual observations). In total, 22 green, 6 amber and 2 red species of conservation concern in Ireland were recorded either within, over or immediately adjacent to, the overall survey area boundary.

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 and it recorded no species of interest in the site area. Following this a 2km^2 grid (O12Z) was assessed. Tables 5 provides a list of all species recorded in both grid areas that possess a specific designation, such as Invasive Species or Protected Species.

Table 5. Recorded species and associated designations (Grid ref. O12Z)

Species name	Date of last record	Title of dataset	Designation
Barn Swallow (Hirundo rustica)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Black-headed Gull (Larus ridibundus)	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Common Coot (Fulica atra)	08/04/2023	Birds of Ireland	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
Common Kestrel (Falco tinnunculus)	17/08/2012	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Linnet (Carduelis cannabina)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Redshank (Tringa totanus)	04/12/2022	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Common Starling (Sturnus vulgaris)	29/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Swift (Apus apus)	28/06/2023	Swifts of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Wood Pigeon (Columba palumbus)	02/05/2023	Birds of Ireland	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
Eurasian Curlew (Numenius arquata)	09/03/2018	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List

Species name	Date of last record	Title of dataset	Designation
Eurasian Oystercatcher (Haematopus ostralegus)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Gadwall (Anas strepera)	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Great Cormorant (Phalacrocorax carbo)	30/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Herring Gull (Larus argentatus)	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
House Martin (Delichon urbicum)	18/05/2001	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow (Passer domesticus)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mallard (Anas platyrhynchos)	08/04/2023	Birds of Ireland	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
Mew Gull (Larus canus)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mute Swan (Cygnus olor)	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Northern Goshawk (Accipiter gentilis)	30/08/1998	Rare birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Peregrine Falcon (Falco peregrinus)	06/06/2014	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
Rock Pigeon (Columba livia)	29/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Sand Martin (Riparia riparia)	14/05/2001	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

Species name	Date of last record	Title of dataset	Designation
Spotted Flycatcher (Muscicapa striata)	31/05/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Tufted Duck (Aythya fuligula)	08/04/2023	Birds of Ireland	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

Potential Impacts

This report has been prepared to outline the construction and operational phase measures in addition to detailing the potential impacts on sensitive receptors within the Zone of Influence (ZOI) in the absence of mitigation measures.

Potential Construction Impacts

The overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora. 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.

Designated Conservation sites within 15km

The proposed development is not within a designated conservation site. The nearest designated conservation site is Booterstown Marsh pNHA (2.3 km). The nearest Natura 2000 sites is South Dublin Bay and River Tolka Estuary SPA (2.4 km).

As outlined in the Hydrological & Hydrogeological Qualitative Risk Assessment Report prepared by AWN Consulting to accompany this planning application, the nearest surface water receptor to the west is the River Slang which is c. 1.2km west of the proposed development site boundary; the Elm Park Stream is c. 1.0km at its nearest point to the north of the proposed development site. There are no National Heritage Areas (NHAs) within 15 km of the proposed development and no potential hydrological pathways from the proposed development site to any NHAs located further than 15 km. Noise pollution created during the construction of the proposed development will be localised to the immediate site area and will not have a likely significant effect on the conservation objectives of the features of interest of any European sites. During construction, surface water from the proposed development shall discharge to South Dublin Bay via a public surface water network and Elm Park Stream. However, as confirmed in the Hydrological & Hydrogeological Qualitative Risk Assessment Report prepared by AWN Consulting, '*in the event of a worst case hydrocarbon leak of 1,000 litres this would be diluted to background levels (water quality objectives as outlined in S.I. No. 272 of 2009, S.I. No. 386 of 2015 and S.I. No. 77 of 2019) by the time the stormwater reaches the nearest Natura 2000 Sites (South Dublin Bay SAC/SPA, c. 2.4 km downgradient from the site)*.' Any pollutants, silt laden run off or dust which enters the surface water network will be dispersed or diluted within the marine environment, to negligible levels, prior to reaching any European sites.

Foul wastewater will be directed to the Ringsend Wastewater Treatment Plant (WwTP) via a public foul sewer network. Foul wastewater drainage will ultimately be treated along this public network (see Appendix V for Confirmation of Feasibility received from Uisce Eireann for the proposed development). The treated effluent from the WwTP will discharge into Dublin Bay There will, therefore, be an indirect pathway from the proposed development site to European sites within Dublin Bay, namely, South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA and North-West Irish Sea cSPA. However, given the distance from the site to European sites (2.4km minimum distance) any pollutants, silt laden run off or dust will be dispersed or diluted within the marine environment to negligible levels prior to reaching European sites.

As a result, the project is not likely to cause a deterioration in surface or groundwater status or to compromise the ability of any surface or groundwater to meet the objectives of the WFD in the RBMP, that there are not likely to be any significant discharges of pollutants of priority or other polluting substances to groundwater or surface water so the chemical status of the surface and groundwater will not deteriorate. Moreover, as demonstrated in the AASR, the ecological status of surface waters is not likely to be significantly affected by any discharge to surface waters or water abstraction and there is not likely to be a significant effect on any European or other protected site.

Potential Impacts in the absence of mitigation: Neutral / National / Not significant / short-term.

Biodiversity

In the absence of mitigation, 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

Badgers (*Meles meles)* were noted on site. No setts were located on site. No otters (*Lutra lutra*) inhabiting or foraging were noted onsite. Foxes (*Vulpes vulpes*) have been seen onsite as well as various rodent species found in Ireland.

Potential Impacts in the absence of mitigation: Low adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of a pre-construction inspection for terrestrial mammals of conservation importance. Badgers would be expected to continue to use the site and wider area for foraging.

Flora

No protected or rare species were noted onsite. Three third schedule invasive species were noted onsite Spanish bluebell (*Hyacinthoides hispanica)*, Japanese knotweed (*Fallopia japonica*), cherry laurel (*Laurocerasus officinalis*), purple and Virginia creeper (*Parthenocissus quinquefolia*).

Potential Impacts in the absence of mitigation: Low adverse / site / Negative Impact / Not Significant / Short term. Mitigation is needed in the form of an invasive species management plan.

Bat Fauna

Bats were noted foraging on site. However, no roosts are present on site, One tree of low-medium bat roosting potential is to be felled. Lighting during construction could impact on foraging corridors in not carried out sensitively.

Potential Impacts in the absence of mitigation: Minor adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of the control of light spill during construction.

Bird Fauna

Due to the presence of breeding birds on site the construction will result in a loss of foraging and nesting habitat for breeding habitat. Planting throughout the development, particularly of native hedgerows, could result in a positive impact. Biodiversity enhancement measures will be placed on site.

Potential Impacts in the absence of mitigation: Minor adverse / Local / Negative Impact / Not significant / short term. Mitigation is needed in the form of control site clearance and the provision of compensatory nesting habitat.

Potential Operational Impacts

Once developed, the site would be seen as a stable ecological environment. Planting of native species will be important to re-establish nesting and foraging habitats lost. Proximate bat species will be sensitive to light spill.

Appropriate measures have been taken within the design to implement a sensitive lighting strategy and prevent light spill into openspaces. The new drainage networks will comply with SUDS and Water Pollution Acts, as a result, would have negligible impact on habitats and species surrounding proposed development site.

Designated Conservation sites within 15km

The proposed development includes a sustainable drainage strategy. There are no designated European sites which could potentially be impacted by the operational phase of the proposed development. In the absence of mitigation flocculation, settlement and mixing will occur and any pollutants, silt laden run off or dust would be settled and dispersed to negligible levels within the surface water network and would not impact on European sites. However, standard operational measures will be required to comply with Water Pollution Acts.

Potential Impacts in the absence of mitigation: Neutral / Local / Not significant / Long-term.

Biodiversity

Biodiversity value of the site will improve as landscaping matures.

Terrestrial mammalian species

A total of four fauna species were confirmed within the survey area by visual confirmation and behavioural evidence: badger (*Meles meles*), grey squirrel (*Sciurus carolinensis*), fox (*Vulpes vulpes*) and brown rat (*Rattus norvegicus*). No badger setts were found onsite.

Potential Impacts in the absence of mitigation: minor adverse / local/ Negative Impact / Not significant / long term.

Flora

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

Potential Impacts in the absence of mitigation: Neutral / site / Not significant / long-term. Mitigation is required in relation to the ongoing maintenance of invasive species on site.

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. Species expected to occur onsite should persist. A sensitive lighting and landscape strategy have been prepared to incorporate bat foraging on site.

Potential Impacts in the absence of mitigation: Low adverse / International /Negative Impact / Not significant / long term.

Bird Fauna

The proposed development will change the local environment as new structures are to be erected. The buildings are comprised of solid materials consisting of a solid material on the exterior which includes sections of concrete and glass. These buildings would be clearly visible to bird species and would not pose a significant collision risk. However, the presence of buildings on site and increased human activity may reduce the potential for breeding birds to forage. Enhancement measures have been incorporated into the design and construction mitigation.

Potential Impacts in the absence of mitigation: Minor adverse / site / Negative Impact / Not significant / short term.

Mitigation Measures & Monitoring

Standard construction and operational controls will be incorporated into the proposed development project to minimise the potential negative impacts on the ecology within the Zone of Influence (ZoI) including the downstream biodiversity, and local biodiversity within / proximate to the subject site are outlined in Table 6.

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
Biodiversity on site and proximate to the proposed development	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Negative impacts on aquatic fauna	A Construction Management Plan has been prepared by Waterman Moylan Consulting Engineers Limited to accompany this planning application. This document details the following mitigation measures that will be implemented during the construction phase of development: ***'Control of Dirt and Dust*** *The main consideration will be to combat dirt and dust at source so as not to let it adversely affect the surrounding areas. The objective will be to contain any dirt or dust within the site, which is large enough for comprehensive control measures. The main problems, which may arise during the early part of construction, will be controlled by the measures described above and by the following measures:* • *The use of hardcore access route to work front;* • *A regime of 'wet' road sweeping will be set up to ensure the roads around the immediate site are as clean and free from dirt / dust arising from the site, as is reasonably practicable. This cleaning will be carried out by approved mechanical sweepers.* • *Footpaths immediately around the site will be cleaned by hand regularly, with damping as necessary.* • *High level walkways and surfaces such as scaffolding will be cleaned regularly using safe 'wet' methods, as opposed to dry methods.* • *Vehicle waiting areas or hard standings will be regularly inspected and kept clean by brushing or vacuum sweeping and will be regularly sprayed to keep moist, if necessary.* • *Vehicle and wheel washing facilities will be provided at site exit(s) where practicable. If necessary, vehicles can be washed down before exiting the site.* • *Netting will be provided to enclose scaffolding in order to mitigate escape of air borne dust from the demolition (none projected).* • *Vehicles and equipment shall not emit black smoke from exhaust system, except during ignition at start up.* • *Engines and exhaust systems will be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.* • *Servicing of vehicles and plant should be carried out regularly, rather than just following breakdowns.* • *Internal combustion plant will not be left running unnecessarily.* • *Exhaust direction and heights should be such as not to disturb dust on the ground and to ensure adequate local dispersal of emissions.* • *Where possible fixed plant such as generators will be located away from residential areas.* • *The number of handling operations for materials will be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.* • *The transport of dusty materials and aggregates will be carried out using covered / sheeted lorries.* • *Material handling areas should be clean, tidy, and free from dust.*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• *Vehicle loading should be dampened down and drop heights for material will be kept to a minimum.* • *Drop heights for chutes / skips will be kept to a minimum* • *Dust dispersal over the site boundary will be minimised using static sprinklers or other watering methods as necessary.* • *Stockpiles of materials will be kept to a minimum and if necessary, they should be kept away from sensitive receptors such as residential areas etc.* • *Stockpiles were necessary, will be sheeted or watered down.* • *Methods and equipment will be in place for immediate clean-up of spillages of dusty material.* • *No burning of materials will be permitted on site.* • *Earthworks excavations will be kept damp where necessary and where reasonably practicable.* • *Cutting on site will be avoided where possible by using pre-fabrication methods to facilitate any temporary works that may be required to enable the demolition (none projected).* • *Equipment and techniques for cutting / grinding / drilling / sawing etc, which minimise dust emissions and which have the best available dust suppression measures, will be employed.* • *Prior to commencement, the main contractor will identify the demolition operations (none projected) which are likely to generate dust and to draw up action plans to minimise emissions, utilising the methods highlighted above. Furthermore, the main contractor will prepare environmental risk assessments for all dust generating processes, which are envisaged.* • *The main contractor will allocate suitably qualified personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.* • *Demolition works (none projected) to incorporate water spray to reduce dust.* ***Vehicle Washdown*** *Where possible the permanent connection to the public foul sewer will be used temporarily for construction phase. Vehicle wash down water will discharge directly, via suitable pollution control and attenuation, to the foul sewer system.* ***Surface Water Run-off*** *On-site treatment measures will be installed to treat surface water run-off from the site prior to discharge to the receiving surface water sewer. This treatment will be achieved by the construction of cut off trenches along the lowest parts of the site. Cut off trenches will incorporate straw bales to reduce sediment loading, settlement tanks/ponds, the installation of proprietary surface water treatment systems including class 1 full retention petrol interceptors and spill protection control measures. Settlement tanks/ponds will be sized to deal with surface run-off*

Table 8. Mitigation Measures.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		and any groundwater encountered. All measures will be approved prior to commencement with the Pollution Section of DLRCC. *A sampling chamber with shut down valve will be installed downstream of the settlement pond/tank and water quality monitoring will be carried out here prior to discharge to the surface water sewer within adjacent constructed Phase 1 and subsequently to the nearby watercourse.'* ***Surface Water Monitoring Parameters*** *In addition to daily visual inspections, a surface water monitoring programme, as outlined in Table 2 must be followed during construction in order to ensure maintenance of water quality protection. This is in line with Transport Infrastructure Ireland (TII)'s 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan'. It is considered that the parameter limit values (Guide/Mandatory) defined in the Fresh Water Quality Regulations (EU Directive 2006/44/EEC) should act as a trigger value for the monitoring of Surface Water.'* Additionally, the following mitigation measures will be implemented: **Construction Phase Mitigation** • Prior to commencement on site a project ecologist will be appointed to oversee all construction works. • A preconstruction inspection for mammals will be carried out. • Drains will be protected from dust, silt and surface water throughout the works. • Local silt traps established throughout site. • Mitigation measures on site include dust control, stockpiling away from drains. • Stockpiling of loose materials will be kept to a minimum of 40m from drains. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system. • Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains or, excavations and other locations where it may cause pollution. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. Any water-filled excavations, including the attenuation tank during construction, that require pumping will not directly discharge to the stream. Prior to discharge of water from excavations adequate filtration will be provided to ensure no deterioration of water quality. • Mitigation measures on site include dust control, stockpiling away from drains • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system.

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• Fuel, oil and chemical storage will be sited within a bunded area. A risk-based approach will be taken. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. • During the construction works silt traps will be put in place in the vicinity of all runoff channels of the stream to prevent sediment entering the watercourse. • Petrochemical interception and bunds in refuelling area • On-site inspections to be carried out by project ecologist. • Maintenance of any drainage structures (e.g. de-silting operations) will not result in the release of contaminated water to the surface water network. • Sufficient onsite cleaning of vehicles prior to leaving the site and on nearby roads, will be carried out, particularly during groundworks. • 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 be consulted in relation to all onsite drainage during construction 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 into the watercourse during the works. • Concrete trucks, cement mixers or drums/bins are only permitted to wash out in designated wash out area greater than 50m from sensitive receptors including drains and drainage ditches. • 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. • All site personnel will be trained in the importance of good environmental practices including reporting to the site manager when pollution, or the potential for pollution, is suspected. All persons working on-site will receive work specific induction in relation to surface water management and run off controls. Daily environmental toolbox talks / briefing sessions will be conducted to outline the relevant environmental control measures and to identify any environment risk areas/works. • Environmental risks due to construction and operation of the proposed development do potentially exist, particularly in relation runoff from sloping site, drains that could lead to the watercourse. Ecological supervision will be required during excavation and enabling works stages. Silt interception measures will be in place to ensure that the watercourses are not impacted during works and in particular during the site

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		clearance and reprofiling stages. Landscaping of the areas of the site proximate to the watercourse will take place immediately following any re-profiling, to act as a buffer to protect the watercourse and marsh. • Daily turbidity, oxygen and photographic monitoring of the watercourse (upstream, within & downstream of works) will take place twice daily during works and the results supervised by the project ecologist. This would be particularly important following high rainfall events. It is recommended that sufficient baseline readings are made prior to construction commencing to understand the existing turbidity on site particularly in the pond area as this appeared turbid during the site visit. • Materials, plant and equipment shall be stored in the proposed site compound location; • Plant and equipment will not be parked within 50m of the watercourse at the end of the working day; • Hazardous liquid materials or materials with potential to generate run-off shall not be stored within 50m of the watercourse. • All oils, fuels and other hazardous liquid materials shall be clearly labelled and stored in an upright position in an enclosed bunded area within the proposed development site compound. The capacity of the bunded area shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater; • Fuel may be stored in the designated bunded area or in fuel bowsers located in the proposed compound location. Fuel bowsers shall be double skinned and equipped with certificates of conformity or integrity tested, in good condition and have no signs of leaks or spillages; • Smaller quantities of fuel may be carried/stored in clearly labelled metal Jeri cans. Green for diesel and red for petrol and mixes. The Jeri cans shall be in good condition and have secure lockable lids. The Jeri cans shall be stored in a drip tray when not in use. They will not be stored within 50m of the watercourse. • Drip trays will be turned upside down if not in use to prevent the collection of rainwater; • Waters collected in drip trays will be assessed prior to discharge. If classified as contaminated, they shall be disposed by a permitted waste contractor in accordance with current waste management legal and regulatory requirements; • Plant and equipment to be used during works, will be in good working order, fit for purpose, regularly serviced/maintained and have no evidence of leaks or drips; • Re-fuelling of machinery, plant or equipment will be carried out in the site compound as per the appointed Construction Contractor re-fuelling controls; • The appointed Construction Contractor EERP will be implemented in the event of a material spillage; • All persons working will receive work specific induction in relation to material storage arrangements and actions to be taken in the event of an accidental spillage. Daily environmental toolbox talks / briefing sessions will be conducted for all persons working to outline the relevant environmental control measures and to identify any environment risk areas/works.

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• No entry of solids to the associated stream or drainage network during the connection of pipework to the public water system. **Operational Phase Mitigation** • A project ecologist will be appointed to oversee completion of all landscape and drainage works. • Petrochemical interception will be inspected by the project ecologist to ensure compliance with Water Pollution Acts.
Invasive Species	• Spread of invasive species distribution	• An invasive species specialist will be employed to remove/control invasive species on site.
Birds (National Protection)	• Removal nesting habitat. • Removal foraging habitat. • Destruction and/or disturbance to nests (injury/death). • Predation.	• "An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas including birds will not be impacted. • Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) in relation to the removal of trees and timing of nesting birds will be followed e.g. do not remove trees or shrubs during the nesting season (1st March to 31st August). Should this not be possible a pre-clearance inspection will be carried out by an ecologist and clearance will not take place if nests are present. • 30 bird boxes will be placed on site. • The landscaping will be inspected by the ecologist post construction. • 10 Rowan (*Sorbus aucuparia*) will be planted on site for redwing (*Turdus iliacus*) foraging. • The species used within the wildflower meadow will be selected by the project ecologist and will use pollinator friendly species that will provide foraging for Grey wagtail.
Bats (International Protection)	• Removal roosting/foraging habitat. • Lighting Impacts	• The project ecologist will ensure that lighting during construction is not directed towards trees on site. • A pre construction assessment of buildings will be carried out on site. • A post construction assessment of the light spill on site will be carried to ensure conformity with the low light levels predicted from the light spill analysis. • Tree 715 (Ash) will be inspected prior to felling. Bats are not currently using this tree as a bat roost. If bats are found utilising the tree prior to felling a derogation licence will be obtained. Ten bat boxes will be placed on site in consultation with the project ecologist.
Amphibians	• Death/injury	• A pre-construction inspection will be carried out.

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
Mammals	• Death/injury • Destruction of resting/breeding places • Disturbance	• An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas will not be impacted. • Preconstruction surveys for mammals will be carried out within the optimal survey season prior to construction taking place on site. • Construction operations outside of daylight hours will be kept to a minimum in order to minimise disturbance to fauna in addition to roosting bird species. No security lighting will be placed on site without approval of the ECoW) • Excavation and infilling will be carried out in small progressive stages. • The site will be enclosed by robust fencing. • Excavations will allow for mammals to escape via sloped side (<45o) or planks.

Adverse Effects likely to occur from the project (post mitigation)

Standard construction and operational mitigation measures are proposed. These would ensure that water entering the surface water drainage network is clean and uncontaminated. However, early implementation of ecological supervision, prior to initial mobilisation and enabling works is seen as an important element to the project, particularly in relation to the implementation of surface water runoff mitigation.

With the successful implementation of standard mitigation measures to limit effects on surface water and biodiversity, no significant impacts are foreseen from the construction or operation of the proposed project on biodiversity. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on terrestrial biodiversity, birds and bats through the application of the standard construction and operational phase controls as outlined above. No significant adverse impacts on the conservation objectives of European sites are likely in the absence of mitigation measures outlined above.

Cumulative Impacts

A search of the DLRCC and ABP planning application databases has been carried out to identify any recent existing or approved projects in the site area. Selected projects represent approved SHD or LRD schemes.

There are several development proposals located in the areas surrounding the subject site and within the potential Zone of Influence (ZoI). These have been assessed for potential cumulative impacts. The following is a list of relevant planning application(s) as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal:

Table 9. Planning applications proximate to the subject site

DLRCC Reg. Ref. / ABP Ref. No.	Address	Proposal
ABP 313176	Lands at the Central Mental Hospital, Dundrum Road, Dundrum, Dublin 14.	Demolition of existing structures, 10-year permission for the construction of 977 no. residential units (20 no. houses, 957 no. apartments), creche and associated site works.
JA06D.320912	Lands at the Central Mental Hospital, Dundrum Road, Dundrum, Dublin 14.	Demolition of existing structures and permission for the construction of 934 No. residential units, creche, restaurant, community centre and associated site works.
ABP TA0001	University College Dublin, Belfield, Dublin 4.	10 year permission for 512 student accommodation units (3006 no. bed spaces) including student facility centre, car parking and all associated site works.
D16A/0818 / ABP 248265	Greenacres, Kilmacud Road Upper, Dublin 14.	Demolition of the former Green Acres Convent and the construction of 120 no. apartments in 2 blocks ranging in height from 2 to 5 storeys with all associated site works.
ABP 304469	Greenacres, Longacre and Drumahill House, Upper Kilmacud Road, Dundrum, Dublin 14.	253 no. apartments and associated works. (Amended by ABP 307683 to add 54 no. additional apartments).
ABP 312170	Marmalade Lane, Wyckham Avenue, Dundrum, Dublin 16.	531 no. Build to Rent apartments, creche and associated site works.
ABP 304405	Rockbrook, Carmanhall Road, Sandyford Business District, Sandyford, Dublin 18.	428 no. apartments, creche, 4 no. local/neighbourhood retail units and associated site works.
ABP 305940	Former Aldi Site, Carmanhall Road, Sandyford Business District, Dublin 18.	Demolition of existing structures on site and construction of 564 no. build to rent apartments, creche and associated site works.
ABP 311722	Former Siemens Site, Corner of Blackthorn Avenue and Ballymoss Road, Sandyford Industrial Estate, Dublin 18.	Demolition of the existing building on site, construction of 190 no. Build to Rent apartments and associated site works.

DLRCC Reg. Ref. / ABP Ref. No.	Address	Proposal
ABP 310138	Mount Saint Mary's and Saint Joseph's, Dundrum Road, Dundrum, Dublin 14.	Demolition of existing buildings on site and part of the granite wall along Dundrum Road, excluding Small Hall, construction of 231 no. apartments, childcare facility and associated site works.

The above developments have been assessed for cumulative impacts. Following this assessment, it is considered that there are no significant projects that have been granted planning or currently under construction, proximate to the development, that could potentially cause cumulative impacts on European sites. Any impacts due to the overlap of the construction phases of these or other projects in the site area will be short term. Taking into account the location of the development, it is not considered likely that it would result in cumulative impacts with other existing and/ or approved plans or projects.

Given this, it is considered that cumulative impacts with other existing and proposed developments in proximity to the application area would be unlikely, neutral, insignificant and localised. It is concluded that no significant effects on Natura 2000 sites will occur due to the proposed development in combination with other projects. No cumulative impacts are foreseen.

Residual Impacts and Conclusion

The construction and operational mitigation proposed for the development satisfactorily addresses the potential impacts on the sensitive receptors through the application the standard construction and operational phase controls. The overall impact on the ecology of the proposed development will result in a long term minor adverse not significant long term residual impact on the ecology of the area and locality overall. This is primarily as a result of the loss of terrestrial habitats on site, mitigated by the creation of additional biodiversity features including sensitive landscaping and lighting strategy.

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ALTEMAR
Marine & Environmental Consultancy

Appendix I. Bat fauna impact assessment for the proposed residential development at Knockrabo, Goatstown, Dublin.

01st November 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Knockrabo Investments DAC

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Document Control Sheet			
Client	Knockrabo Investments DAC		
Project	Bat fauna impact assessment for Knockrabo, Goatstown, Dublin 14.		
Report	Bat Fauna Assessment		
Date	01st November 2024		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Gayle O'Farrell	6th September 2024
Planning	Bryan Deegan		01st November 2024

SUMMARY

Structure:	One large, derelict house with a small adjacent shed opposite a smaller, stone house.
Location:	Knockrabo, Goatstown, Dublin 14
Bat species present:	Lesser Noctule (*Nyctalus leisleri*), Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano pipistrelle (*Pipistrellus pygmaeus*) bats.
Proposed work:	Proposed Housing Development.
Impact on bats:	There are multiple buildings on site. No bat roosts were noted on site. In the absence of mitigation foraging activity within the area may be reduced. Detailed consultation was carried out in relation to lighting and lighting is proposed at 2200oK, which is warm lighting, well within bat lighting guidelines. A derogation licence is not required for this site as no bat roosts were observed roosting on site.
Survey by:	Bryan Deegan
Survey dates:	29th May and 5th June 2024.

Description of the Proposed Project

Knockrabo Investments DAC intend to apply for permission for a Large-scale Residential Development (for a period of 7 years) with a total application site area of c. 2.54 hectares, at Knockrabo, Mount Anville Road, Goatstown, Dublin 14. The proposed development relates to Phase 2 of the development on the 'Knockrabo' lands. Phase 1 of 'Knockrabo' was granted under Dún Laoghaire-Rathdown County Council (DLRCC) Reg. Ref. D13A/0689/An Bord Pleanála (ABP) Ref. PL06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1) and DLRCC Reg. Ref. D16A/0960 (Phase 1A) and comprises a total of 119 No. units.

The site is bounded to the south-east by Mount Anville Road; to the south by 'Mount Anville Lodge' and by the rear boundaries of 'Thendara' (a Protected Structure – RPS Ref. 812), 'The Garth' (a Protected Structure – RPS Ref. 819), 'Chimes', 'Hollywood House' (a Protected Structure – RPS Ref. 829); to the south-west by existing allotments; to the north by the reservation corridor for the Dublin Eastern By-Pass (DEBP); and to the east by the site of residential development 'Knockrabo' (Phase 1, permitted under DLRCC Reg. Ref. D13A/0689 / An Bord Pleanála (ABP) Ref. PL.06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1); and DLRCC Reg. Ref. D16A/0960 (Phase 1A)). The site includes 'Cedar Mount' (a Protected Structure- RPS Ref. 783), 'Knockrabo Gate Lodge (West)' (a Protected Structure RPS Ref. 796), including Entrance Gates and Piers.

The development with total of c.17,312.2 sq.m. gross internal area (GIA) will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility (c.400 sq.m. GIA) and Community / Leisure Uses (c. 223 sq.m. GIA), as follows:

- Block E (c.1,077 sq.m. GIA): a 5-storey including semi-basement podium level apartment block, comprising 8 No. apartments (1 No. 1 bed and 7 No. 2 beds);
- Block F: (c.8,390.8 sq.m. GIA): a part 2 to part 8 storeys including semi basement podium apartment block, comprising 84 No. units (31 No. 1 beds, 50 No. 2 beds and 3 No. 3 bed duplex units);
- Block G: (c.2,022.1 sqm GIA): a part 4 to part 5-storey apartment block, comprising 20 No. units (3 No. 1 bed units, 14 No. 2 bed units and 3 No. 3 bed units); (with sedum roof/PV panels at roof level of Blocks E, F and G; a communal Roof Terrace of c. 198 sqm on Block F; and balconies/wintergardens on all elevations of Blocks E, F and G);
- Duplex Blocks: (c. 3,292.6 sqm GIA): 1 No. 3 storey and 1 No. 4 storey block, comprising a total of 32 No. units (8 No. 2 bed units and 24 No. 3 bed duplex units);
- 10 No. (new build) houses: 6 No. 4 bed 2.5-3 storey terraced/semi-detached units (ranging in size from c.162.1 sqm GIA to c.174.2 sq.m. GIA); 1 No. 3 bed 2 storey detached unit (126.2 sq.m. GIA); 1 No. 3 bed 2 storey mid terrace unit (c.127.4 sq.m. GIA); 1 No. 3 bed 2 storey end of terrace unit (c.127.9 sq.m. GIA); and 1 No. 1 - 2 storey 'Gate House' (c. 122.6 sq.m. GIA) to the west of proposed repositioned entrance to Cedar Mount from Mount Anville Road;
- The use of existing 'Coach House' as a residential dwelling and for internal / external repair / refurbishment works at ground and first floor levels, including the removal of 3 No. roof lights, 1 No. metal clad dormer roof window and external water tank; the construction of 2 No. single storey flat roof extensions (c.35.5 sq.m. GIA), revisions to the external facade including the addition of 1 No. new window ope on the south facade and rendered finish to all original facades, solar panels at roof level; removal / re-use of stone to form new garden wall; to provide 1 No. 2 bed house (c. 99.5 sq.m. GIA) with refurbished stone shed (c. 13.9 sq.m. for storage GIA).
- The use of Knockrabo Gate Lodge (West) (a Protected Structure) as a residential dwelling; and for repair / refurbishment works including demolition of existing section of extension on top of stone boundary wall; removal of 1 No. roof light and 1 No. internal partition wall; construction of replacement extension (c.77.5 sq.m. GIA) to provide 1 No. 3-bed unit (c. 128 sq.m. GIA) with solar panels at roof level, bin storage, landscaping, all repair works to the existing Gate and Piers, and all associated internal and external elevational changes.
- The proposed development comprises works to Cedar Mount (a Protected Structure) to provide: 1 No. Childcare Facility at Lower Ground Floor level (c.400 sq.m. GIA) with associated external play and bin storage areas; Community / Leisure Uses at Ground Floor Level (c. 223 sq.m. GIA), comprising Gym / Studio (c.35.6 sq.m. GIA), Library / Office (c. 35.9 sq.m. GIA), Meeting room (c.28.4 sq.m. GIA) and Conservatory room (c. 21.6 sq.m. GIA); and 2 No. 2 bed apartments at 1st floor level, (c.77.6 sq.m. GIA and c.88.2 sq.m. GFA). The works to Cedar Mount to consist of: o At lower ground floor/ basement level, the removal of internal walls and sections of external and internal walls and access doors; insertion of openings through external and internal walls; repair of existing "loggia" (covered external corridor) on northern, north-western and north-eastern facades, with revised elevations comprising glazed panels / glazed entrance doors located within loggia opes; the additional area (c. 58 sq.m. GIA) to form part of proposed Childcare Facility;

- At ground floor level removal of wooden staircase to 1st floor level and replacement with open-tread staircase, and construction of conservatory room (c. 21.6 sqm GIA) with flat roof on south - western side of Cedar Mount with sedum roof; removal of 1 No. WC;
- At 1st floor level removal of sections of internal walls; insertion of doors through internal walls;
- Re-instatement of 1 no. new chimney stack on the western end of the existing roof; replacement of rubble masonry finish with lime and sand plaster finish on all elevations relating to sections of original façade; removal of security bars from existing windows in front porch; replacement / reconfiguration of rainwater downpipes, hopper heads and associated roof outlets; Re-modelling of extension on northern side including replacement of timber / pressed metal cladding with brick / zinc cladding and glazing at ground and 1st floor levels, removal / replacement of external doors and windows; replacement of flat roof deck, parapet, eaves and roof-light with flat roof comprising brick / zinc clad parapet and removal of internal link at 1st floor level; repair works to external walls at ground floor level; Construction of rendered blockwork wall and steel handrail to terrace and associated repair works to section of existing parapet wall on eastern side of Cedar Mount; all hard and soft landscaping; revisions to garden wall and pillars on western side of Cedar Mount; and all associated internal and elevational changes; and
- The repositioning of existing access (including gates and piers) to Cedar Mount (a Protected Structure) on Mount Anville Road to the northeast with associated works to boundary wall to Mount Anville Road.

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

All other ancillary site development works to facilitate construction, site services, piped infrastructure, 1 No. sub-station, plant, public lighting, bin stores, bike stores, boundary treatments, provision of public, communal and private open space areas comprising hard and soft landscaping, site services all other associated site excavation, infrastructural and site development works above and below ground. In addition to the repositioned access to Cedar Mount (a Protected Structure) as referenced above, the development will be served by the permitted access road 'Knockrabo Way' (DLRCC Reg. Ref. D13A/0689; ABP Ref. PL.06D.243799, DLRCC Reg. Ref. D16A/0821 and DLRCC Reg. Ref. D16A/0960). The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

The proposed site outline and site layout plan are demonstrated in Figures 1 & 3. Bats noted on site are demonstrated in Figure 2.

Landscape

The landscape strategy for the proposed development has been prepared by DFLA to accompany this planning application. The proposed landscape masterplan is demonstrated in Figure 4.

***Figure 1**. Site outline and location context*

Figure 2. *Bats Species noted on site Lesser Noctule (orange), Common Pipistrelle (blue) and soprano pipistrelle (yellow). No bat roosts were noted on site.*

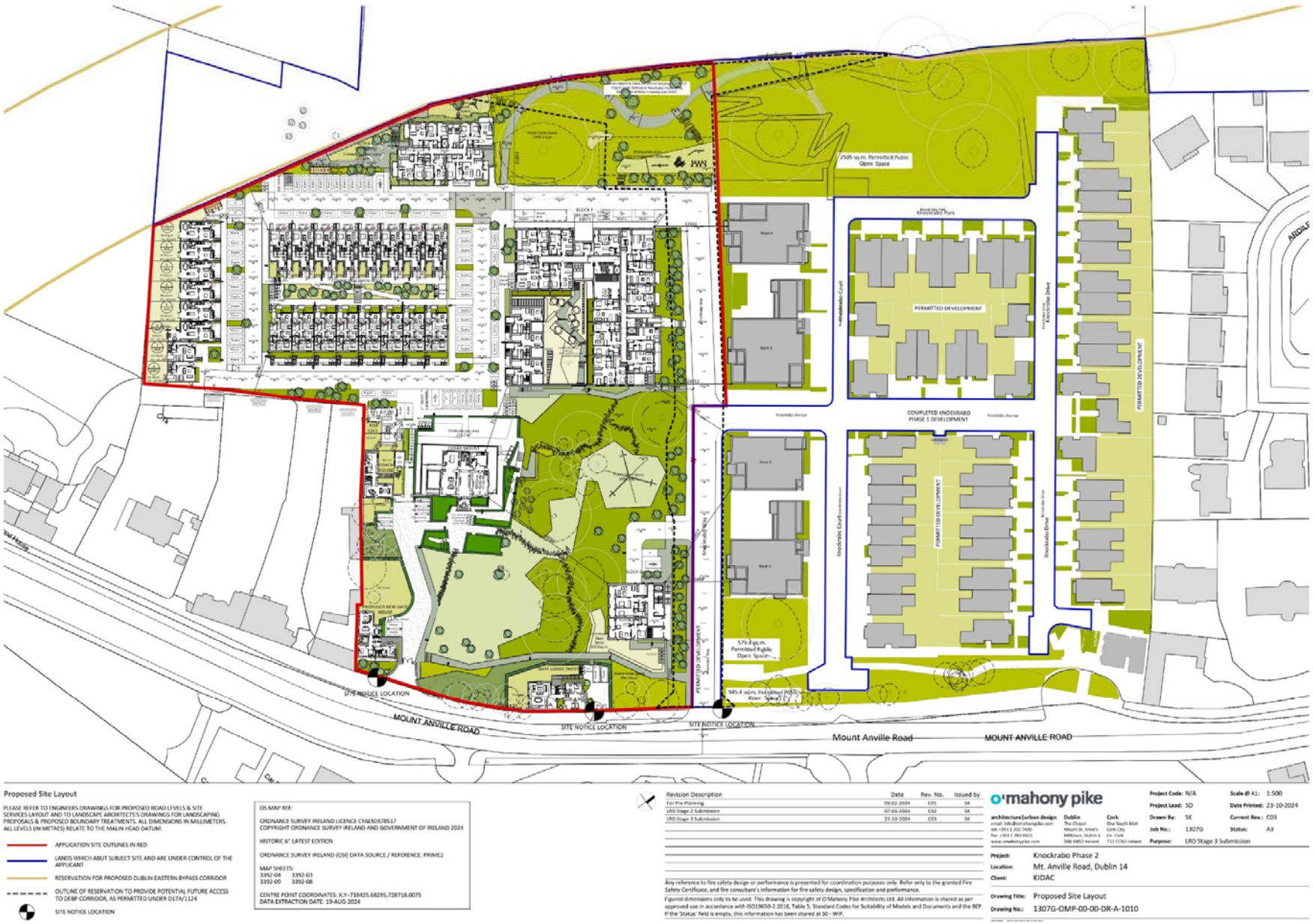
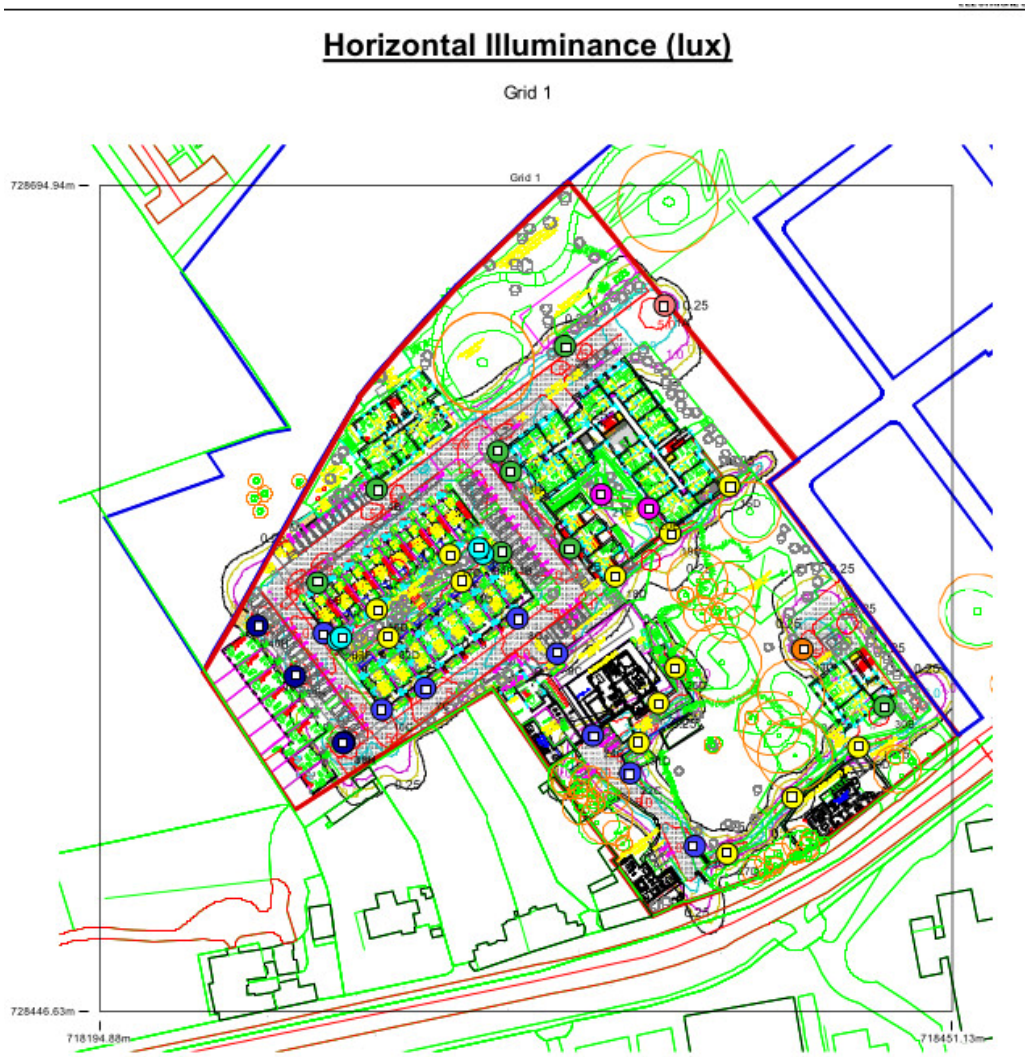


Figure 3. *Proposed Site Plan*

Figure 4. *Proposed Landscape Plan*

Lighting

A Public Lighting Report has been prepared by Sabre Lighting to accompany this planning application. Altemar carried out detailed consultation with Sabre Lighting in relation to the proposed external lighting design onsite. In order to reduce the potential for lighting impacts on nocturnal fauna species, no lighting is proposed within central and northern open space areas and there will be minimal light spill into these areas (between 0.25-1 lux along the fringes of these areas). In addition, lighting onsite is set to 2200oK, in compliance with bat lighting guidelines. The horizontal luminescence is seen in figure 5. The public lighting layout is demonstrated in figure 6.



Results

Eav	5.14
Emin	1.06
Emax	33.84
Emin/Emax	0.03
Emin/Eav	0.21

Figure 5. *Horizontal Illuminance (lux)*

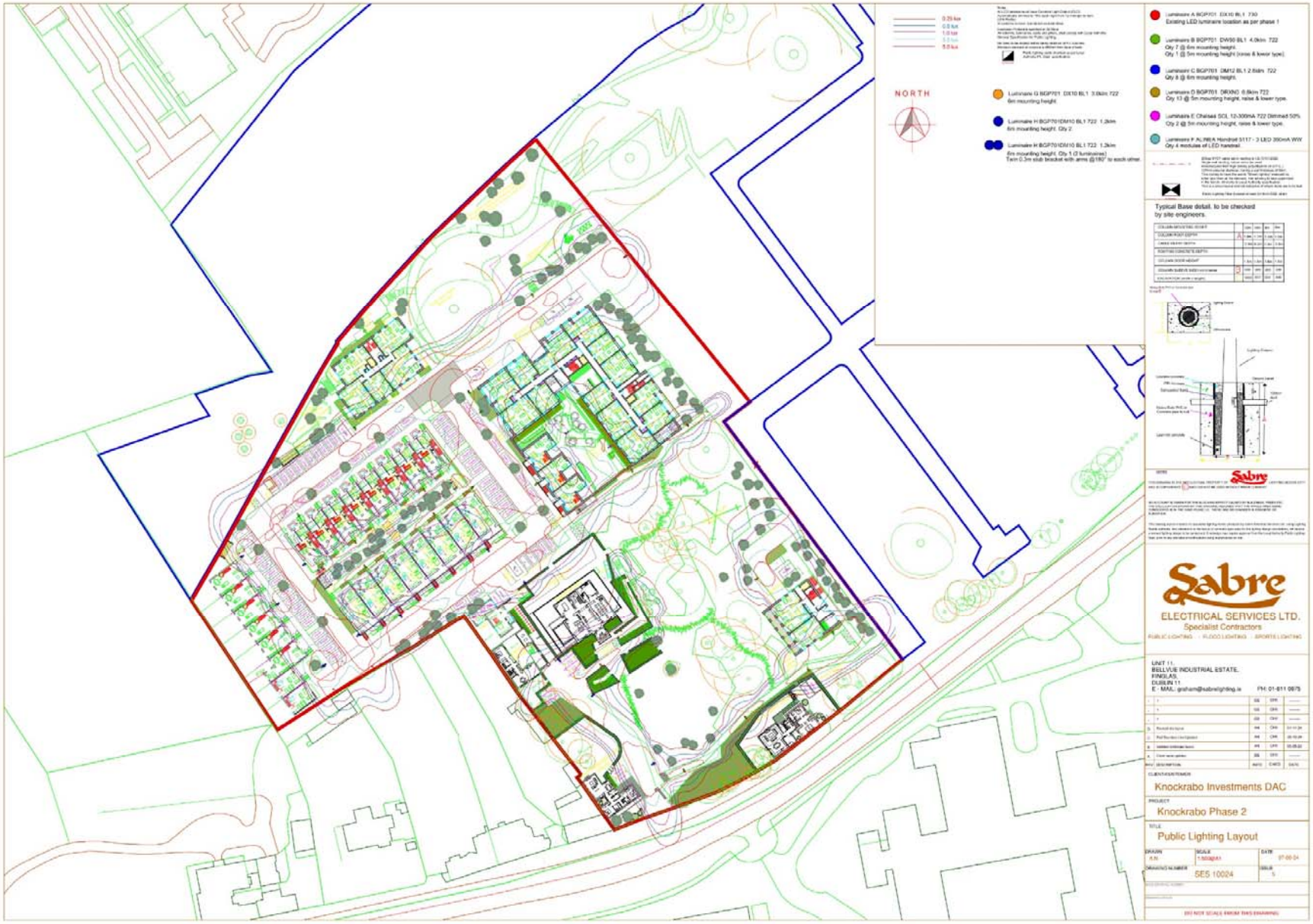


Figure 6. *Proposed public lighting layout*

Arboricultural Assessment

An Arboricultural Assessment of the Tree Vegetation was prepared by Arborist Associates to accompany this planning application. The report concludes the following in relation to the arboricultural impact of the proposed development:

'***Breakdown of Trees for Removal:***

From the 59No. Trees entries within the site area, 29 (49%) are being shown for removal to accommodate the current proposed development layout or as part of active management and this is made up of a mix of tree species, age classes and sizes and these are dispersed out over the entire site area.

This is broken down into the following category grades:

- *10No. (100%) category 'U' trees with 3No. needing to be removed directly due to the development layout and 7No. being recommended for removal as part of active management.*
- *2No. (25%) category 'A' trees.*
- *2No. (18%) category 'B' tree.*
- *15No. (50%) category 'C' trees plus 3No. Small Tree Groups, 2No. Hedges and one scrub area.*

In respect of arboricultural considerations pertaining to retained and removed trees at the subject site, we note 84No. Trees have been previously removed, as permitted under DLRCC Reg. Ref. D17A/1124 (now expired - Refer to 'Appendix 3' of this report for full schedule of trees which were assessed and removed as permitted under DLRCC Reg. Ref. D17A/1124) with a further 4No. Trees also removed or have fallen since giving a total of 88No. trees lost from the site area. A further 29No. existing trees are now proposed to be removed as part of the current scheme, resulting in a total loss of 117No. trees from the site area over the permitted / proposed schemes. We note that the proposed landscaping of the development provides for the additional planting of 188No. trees and in this regard, the proposed quantum of planting will result in a net gain in the number of trees on this site area 71No. trees.

All efforts have been made to retain as much of the tree and shrub vegetation around the site area that is important to its treescape and sylvan character. The loss of the above list of trees will have minimal impact on the overall treescape and sylvan character of this area as the bulk of the trees requiring removal to facilitate the proposed development are of a small size, many of which had been planted in more recent years (within the last 20 years) as part of a landscaping project when 'Cedarmount House' was separated from the 'Knockrabo' lands and refurbished as a private residential home.

To help compensate for the loss of tree vegetation from this area as a result of the proposed development layout; condition and to improve the diversity and continuity of tree cover on these grounds, new tree, shrub and hedge planting using a variety of species and sizes including extra heavy standards (35-40 cm girth) are to be used in the landscaping of these grounds once the development is completed. See 'Landscape Architects Drawings' and 'Schedules' for details.

The majority of the large prominent mature trees that are important to the treescape of these grounds and the greater area are being retained within open areas within this development and will continue to be an asset to the treescape of this area for the future.

For those trees proposed for retention, all necessary protection measures will need to be put in place in order to prevent or reduce impact to its very minimum. protection measures used will include the erection of protective fencing at the very start of the works, monitoring of the works by the project Arboriculturist throughout the construction process and the use of tree friendly techniques and products for the construction process.

For the most part, the trees are being retained within open spaces around the proposed development and will be easily incorporated into these open spaces with no impact from the works. It will be important that the root zones of these trees as shown on our tree protection plan are cordoned off at the commencement of the construction works by strong sturdy protective fencing as shown in the sample of such fencing on our tree protection plan and within 'Appendix 1' of this report. Landscaping within the root zone of the trees will need to be kept simple with minimal hard landscaping and planting within these root zones and where surfacing is required for paths, these will need to be installed over the existing ground levels using a No-Dig methodology to avoid causing soil and root damage within the root zone of the surrounding trees.'

The tree constraints and protection plan are demonstrated in figure 7 & 8.

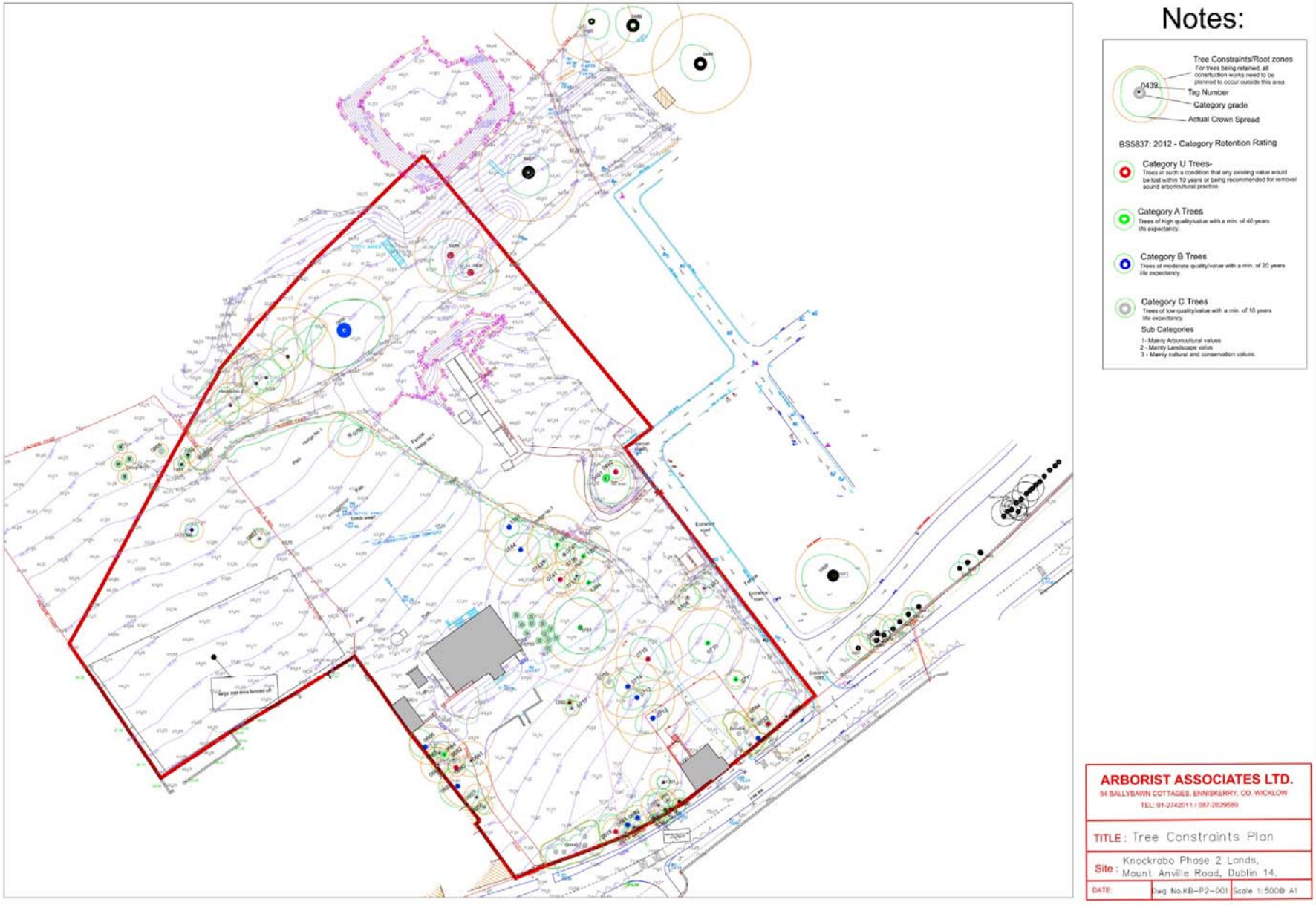


Figure 7. *Tree Constraints Plan*

Figure 8. *Tree Removals Plan*

Figure 9. *Tree Protection Plan*

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 (2007)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Kelleher and Marnell (2007), Bat Mitigation Guidelines for Ireland.

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.

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.'

At dusk, a bat detector survey was carried out onsite using a Batbox Duet heterodyne/frequency division detector to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations. Surveys were carried out having regard to the following guidelines:

- Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016);
- Bat Mitigation Guidelines for Ireland (NPWS, 2006); and,
- Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes (NRA, 2006).

Bat survey.

This report presents the results of site visit by Bryan Deegan on the 29th of May and the 5th June 2024

Survey constraints.

Bat surveys were undertaken during the active bat season in May. Weather conditions were ideal with mild temperatures of 15°C and 13°C. Winds were light and there was no rainfall during the surveys.

Bat Assessment Findings

Review of local bat records

The review of existing bat records (sourced from National Biodiversity Data Centre's online viewer) within a 10km^2 grid (Reference grid O12) encompassing the study area reveals that all of the nine known Irish species have been observed locally (Table 1). National Biodiversity Data Centre's online viewer was also used to look at the wider area of the site to reveal that in addition to the species listed in Table 1, the Whiskered bat (*Myotis mystacinus*) and the Natterer's bat (*Myotis nattereri*) have been recorded in the wider area of the subject site.

Table 1: Status of bat species within a 10km^2 grid encompassing the subject site (Reference no. O12)

Species Name	Last date of Record	Title of Dataset	Designation
Brown Long-eared Bat (*Plecotus auritus*)	09/08/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Common Pipistrelle (*Pipistrellus pipistrellus sensu stricto)*	11/05/2022	National Bat Database of Ireland	
Daubenton's Bat (*Myotis daubentonii*)	20/08/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Lesser Noctule (*Nyctalus leisleri*)	11/05/2022	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats

			Directive >> Annex IV || Protected Species: Wildlife Acts
Nathusius's Pipistrelle (*Pipistrellus nathusii*)	06/08/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Natterer's Bat (*Myotis nattereri*)	28/07/2016	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Pipistrelle (*Pipistrellus pipistrellus sensu lato*)	21/08/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	11/05/2022	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Whiskered Bat (*Myotis mystacinus*)	01/09/2016	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts

Figure 10. Common pipistrelle (*Pipistrellus pipistrellus*)(yellow), Brown Long-eared Bat (*Plecotus auritus*) (purple) and both Brown Long-eared Bat and Common pipistrelle (orange) (Source: NBDC) (Site – red circle)

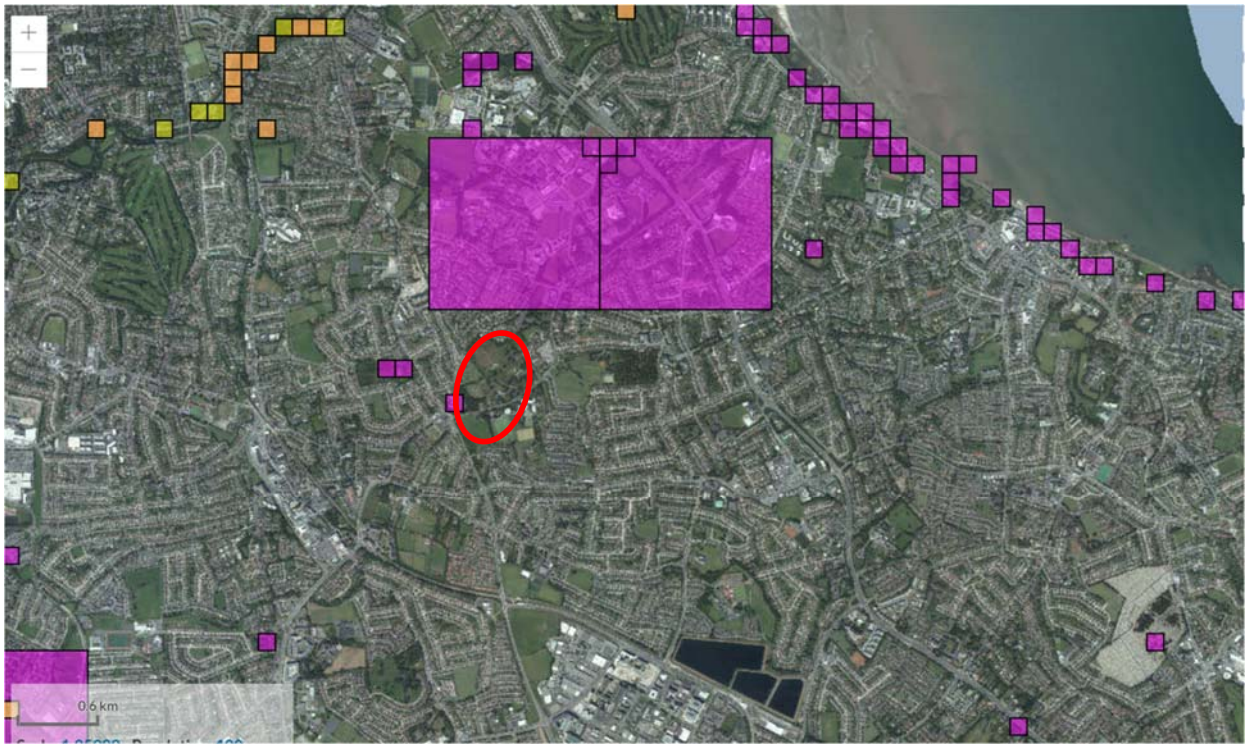


Figure 11. Lesser Noctule (*Nyctalus leisleri*) (Purple) and Daubenton's bat (*Myotis daubentonii*) (Yellow) and both the Lesser Noctule and Daubenton's bat (orange) (Source: NBDC) (site: red circle)

Figure 12. Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow) and Natterer's bat (*Myotis nattereri*) (Purple). Both Soprano and Natterer's bat are in orange. (Source: NBDC) (site: red circle).

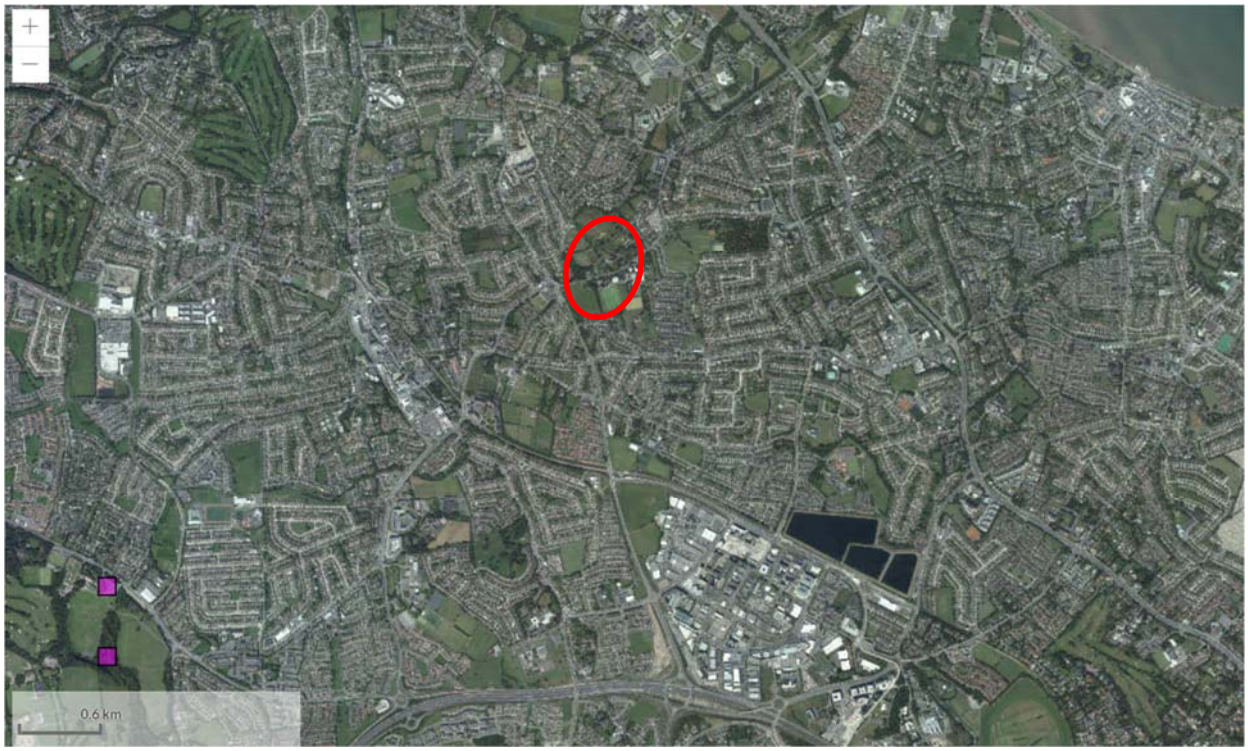


Figure 13. Whiskered bat (*Myotis mystacinus*) (purple) (Source: NBDC) (site: red circle)

Detector survey

As seen in Figure 2, bat activity was noted on site. Bat foraging activity is typically concentrated in specific places where insects are likely to be plentiful and have the ability to swarm. Three species were noted on site:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (Pipistrellus pygmaeus)
- Leisler's bat (*Nyctalus leisleri*)

No bats were detected emerging from any of the onsite buildings or trees. No evidence of bats was noted within the buildings on site. It should be noted that existing light spill extends from the R112 and neighbouring Knockrabo Apartments.

Bat Roosts

No bats roosts were observed on site. A tree (Ash-0715) is considered to be of low-medium bat roosting potential and should be inspected prior to removal. No bats were observed emerging or in the vicinity of the tree. If bats are observed using prior to removal a bat derogation licence will be required.

Potential impacts of proposed redevelopment on bats

As seen in Plates 1-5, there are multiple buildings of bat roosting potential on site. No evidence of bats roosting on site was noted. Foraging activity within the area may be lost unless light spill is controlled. However, lighting has been designed in consultation with Altemar and a sensitive lighting plan is proposed with warm lighting (2200oK) and no lighting in open spaces. A derogation licence is not required for this site as no bat roosts were observed historically, or during this survey. Foraging activity is expected within the open spaces on site.

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.*'

Light spill from the public lighting has been designed to be sensitive to bats and bat foraging and will follow the Bat Conservation Ireland "Bats & Lighting Guidance Notes for: Planners, engineers, architects and developers (December 2010). Landscaping has also been designed to include bat friendly plants including trees and climbers to attract insects. The project ecologist will ensure that lighting during construction is not directed towards trees on site. A pre construction assessment of buildings will be carried out on site. A post construction assessment of the light spill on site will be carried to ensure conformity with the low light levels predicted from the light spill analysis. Tree 715 (Ash) will be inspected prior to felling. Bats are not currently using this tree as a bat roost. If bats are found utilising the tree prior to felling a derogation licence will be required. Ten bat boxes will be placed on site in consultation with the project ecologist.

Previous Bat Surveys

A bat emergent survey was undertaken by Scott Cawley on the 28th of September 2017, which concluded with "*No evidence of the presence of bats was recorded during the external and internal inspections of Cedar Mount House, Knockrabo Gate Lodge (West) the Coach House and the two relatively small outbuildings located within the proposed development site; however both Cedar Mount house, Knockrabo Gate Lodge (West) and the Coach House contained structures that were considered suitable for bats to roost in. A number of trees located within the proposed development site were also considered suitable for roosting bats*." Although the buildings and trees have bat roosting potential, no roosts were observed on site.

Altemar completed another bat emergent survey on the 1st of September 2021 which, again, observed no bat roost on site: "*There is no evidence of an actual bat roost on site, therefore no negative impacts on roosts these animals are expected to result from the proposed development*."

Predicted and residual impact of the proposal

Buildings of bat-roosting potential are noted on site. Common pipistrelles (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Leisler's bats (*Nyctalus leisleri*) were observed foraging on site. No bats emerging from onsite buildings or trees were observed. One tree of bat roosting potential is to be felled and will be inspected prior to felling. Following the implementation of mitigation (control of light spill) it would be expected that bat foraging would continue in the open space areas but may be locally reduced within the site, but this would be deemed not to be significant. A derogation licence is not required for this site as no bat roosts were observed historically, or during this survey.

Plate 1. *South-facing main entrance to main house*

Plate 2. *Western-facing side of main house*

Plate 3. *Smaller house, west of main house*

Plate 5. *Interior of main house, with roosting pigeons*

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Appendix II. Non-volant terrestrial mammal impact assessment for a proposed development at Knockrabo, Mount Anville Road, Goatstown, Dublin 14

01st November 2024

Prepared by: Frank Spellman of Altemar Ltd.
On behalf of: Knockrabo Investments DAC

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Document Control Sheet			
Client	Knockrabo Investments DAC		
Project	Non-avian terrestrial mammal impact assessment for a proposed development at Knockrabo, Mount Anville Road, Goatstown, Dublin 14		
Report	Non-avian terrestrial mammal impact assessment		
Date	01st November 2024		
Version	Author	Reviewed	Date
Draft 01	Frank Spellman	Bryan Deegan	6th September 2024
Planning	Frank Spellman	Bryan Deegan	01st November 2024

Summary

Structure/features:	The survey area consists primarily of grassland, scrub, treelines, mature standalone coniferous and deciduous tree, derelict buildings, recolonised bare ground, bare ground and some planted ornamentals.
Location:	Mount Anville Road, Goatstown, Dublin 14.
Fauna species present:	Badger (*Meles meles*), grey squirrel (*Sciurus carolinensis*), fox (*Vulpes vulpes*) and brown rat (*Rattus norvegicus*)
Proposed work:	Strategic Housing Development
Impact on non-avian mammals:	The overall impact on the ecology of the proposed development will result in a long term minor adverse, not significant, residual impact on the ecology of the site and locality overall. A NPWS derogation licence is not required for the proposed development.
Surveys by:	Frank Spellman & Bryan Deegan
Survey date:	27th November 2023 & 8th January 2024 (periodic monitoring from November 2023 to March 2024). Additional sighting on the 5th June 2024.

Receiving environment

Development Description

Knockrabo Investments DAC intend to apply for permission for a Large-scale Residential Development (for a period of 7 years) with a total application site area of c. 2.54 hectares, at Knockrabo, Mount Anville Road, Goatstown, Dublin 14. The proposed development relates to Phase 2 of the development on the 'Knockrabo' lands. Phase 1 of 'Knockrabo' was granted under Dún Laoghaire-Rathdown County Council (DLRCC) Reg. Ref. D13A/0689/An Bord Pleanála (ABP) Ref. PL06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1) and DLRCC Reg. Ref. D16A/0960 (Phase 1A) and comprises a total of 119 No. units.

The site is bounded to the south-east by Mount Anville Road; to the south by 'Mount Anville Lodge' and by the rear boundaries of 'Thendara' (a Protected Structure – RPS Ref. 812), 'The Garth' (a Protected Structure – RPS Ref. 819), 'Chimes', 'Hollywood House' (a Protected Structure – RPS Ref. 829); to the south-west by existing allotments; to the north by the reservation corridor for the Dublin Eastern By-Pass (DEBP); and to the east by the site of residential development 'Knockrabo' (Phase 1, permitted under DLRCC Reg. Ref. D13A/0689 / An Bord Pleanála (ABP) Ref. PL.06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1); and DLRCC Reg. Ref. D16A/0960 (Phase 1A)). The site includes 'Cedar Mount' (a Protected Structure- RPS Ref. 783), 'Knockrabo Gate Lodge (West)' (a Protected Structure RPS Ref. 796), including Entrance Gates and Piers.

The development with total of c.17,312.2 sq.m. gross internal area (GIA) will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility (c.400 sq.m. GIA) and Community / Leisure Uses (c. 223 sq.m. GIA), as follows:

- Block E (c.1,077 sq.m. GIA): a 5-storey including semi-basement podium level apartment block, comprising 8 No. apartments (1 No. 1 bed and 7 No. 2 beds);
- Block F: (c.8,390.8 sq.m. GIA): a part 2 to part 8 storeys including semi basement podium apartment block, comprising 84 No. units (31 No. 1 beds, 50 No. 2 beds and 3 No. 3 bed duplex units);
- Block G: (c.2,022.1 sqm GIA): a part 4 to part 5-storey apartment block, comprising 20 No. units (3 No. 1 bed units, 14 No. 2 bed units and 3 No. 3 bed units); (with sedum roof/PV panels at roof level of Blocks E, F and G; a communal Roof Terrace of c. 198 sqm on Block F; and balconies/wintergardens on all elevations of Blocks E, F and G);
- Duplex Blocks: (c. 3,292.6 sqm GIA): 1 No. 3 storey and 1 No. 4 storey block, comprising a total of 32 No. units (8 No. 2 bed units and 24 No. 3 bed duplex units);
- 10 No. (new build) houses: 6 No. 4 bed 2.5-3 storey terraced/semi-detached units (ranging in size from c.162.1 sqm GIA to c.174.2 sq.m. GIA); 1 No. 3 bed 2 storey detached unit (126.2 sq.m. GIA); 1 No. 3 bed 2 storey mid terrace unit (c.127.4 sq.m. GIA); 1 No. 3 bed 2 storey end of terrace unit (c.127.9 sq.m. GIA); and 1 No. 1 - 2 storey 'Gate House' (c. 122.6 sq.m. GIA) to the west of proposed repositioned entrance to Cedar Mount from Mount Anville Road;
- The use of existing 'Coach House' as a residential dwelling and for internal / external repair / refurbishment works at ground and first floor levels, including the removal of 3 No. roof lights, 1 No. metal clad dormer roof window and external water tank; the construction of 2 No. single storey flat roof extensions (c.35.5 sq.m. GIA), revisions to the external facade including the addition of 1 No. new window ope on the south facade and rendered finish to all original facades, solar panels at roof level; removal / re-use of stone to form new garden wall; to provide 1 No. 2 bed house (c. 99.5 sq.m. GIA) with refurbished stone shed (c. 13.9 sq.m. for storage GIA).
- The use of Knockrabo Gate Lodge (West) (a Protected Structure) as a residential dwelling; and for repair / refurbishment works including demolition of existing section of extension on top of stone boundary wall; removal of 1 No. roof light and 1 No. internal partition wall; construction of replacement extension (c.77.5 sq.m. GIA) to provide 1 No. 3-bed unit (c. 128 sq.m. GIA) with solar panels at roof level, bin storage, landscaping, all repair works to the existing Gate and Piers, and all associated internal and external elevational changes.
- The proposed development comprises works to Cedar Mount (a Protected Structure) to provide: 1 No. Childcare Facility at Lower Ground Floor level (c.400 sq.m. GIA) with associated external play and bin storage areas; Community / Leisure Uses at Ground Floor Level (c. 223 sq.m. GIA), comprising Gym / Studio (c.35.6 sq.m. GIA), Library / Office (c. 35.9 sq.m. GIA), Meeting room (c.28.4 sq.m. GIA) and Conservatory room (c. 21.6 sq.m. GIA); and 2 No. 2 bed apartments at 1st floor level, (c.77.6 sq.m. GIA and c.88.2 sq.m.

GFA). The works to Cedar Mount to consist of: o At lower ground floor/ basement level, the removal of internal walls and sections of external and internal walls and access doors; insertion of openings through external and internal walls; repair of existing "loggia" (covered external corridor) on northern, north-western and north-eastern facades, with revised elevations comprising glazed panels / glazed entrance doors located within loggia opes; the additional area (c. 58 sq.m. GIA) to form part of proposed Childcare Facility;

- At ground floor level removal of wooden staircase to 1st floor level and replacement with open-tread staircase, and construction of conservatory room (c. 21.6 sqm GIA) with flat roof on south - western side of Cedar Mount with sedum roof; removal of 1 No. WC;
- At 1st floor level removal of sections of internal walls; insertion of doors through internal walls;
- Re-instatement of 1 no. new chimney stack on the western end of the existing roof; replacement of rubble masonry finish with lime and sand plaster finish on all elevations relating to sections of original façade; removal of security bars from existing windows in front porch; replacement / reconfiguration of rainwater downpipes, hopper heads and associated roof outlets; Re-modelling of extension on northern side including replacement of timber / pressed metal cladding with brick / zinc cladding and glazing at ground and 1st floor levels, removal / replacement of external doors and windows; replacement of flat roof deck, parapet, eaves and roof-light with flat roof comprising brick / zinc clad parapet and removal of internal link at 1st floor level; repair works to external walls at ground floor level; Construction of rendered blockwork wall and steel handrail to terrace and associated repair works to section of existing parapet wall on eastern side of Cedar Mount; all hard and soft landscaping; revisions to garden wall and pillars on western side of Cedar Mount; and all associated internal and elevational changes; and
- The repositioning of existing access (including gates and piers) to Cedar Mount (a Protected Structure) on Mount Anville Road to the northeast with associated works to boundary wall to Mount Anville Road.

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

All other ancillary site development works to facilitate construction, site services, piped infrastructure, 1 No. sub-station, plant, public lighting, bin stores, bike stores, boundary treatments, provision of public, communal and private open space areas comprising hard and soft landscaping, site services all other associated site excavation, infrastructural and site development works above and below ground. In addition to the repositioned access to Cedar Mount (a Protected Structure) as referenced above, the development will be served by the permitted access road 'Knockrabo Way' (DLRCC Reg. Ref. D13A/0689; ABP Ref. PL.06D.243799, DLRCC Reg. Ref. D16A/0821 and DLRCC Reg. Ref. D16A/0960). The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

The proposed site and survey area outline, location, and proposed site layout are demonstrated in figures 1-3. Observations beyond the walking survey area. The proposed landscape plan is demonstrated in figure 4.

Figure 1. *Proposed site outline and walking survey area.*

Figure 2. *Proposed site and walking survey area location*

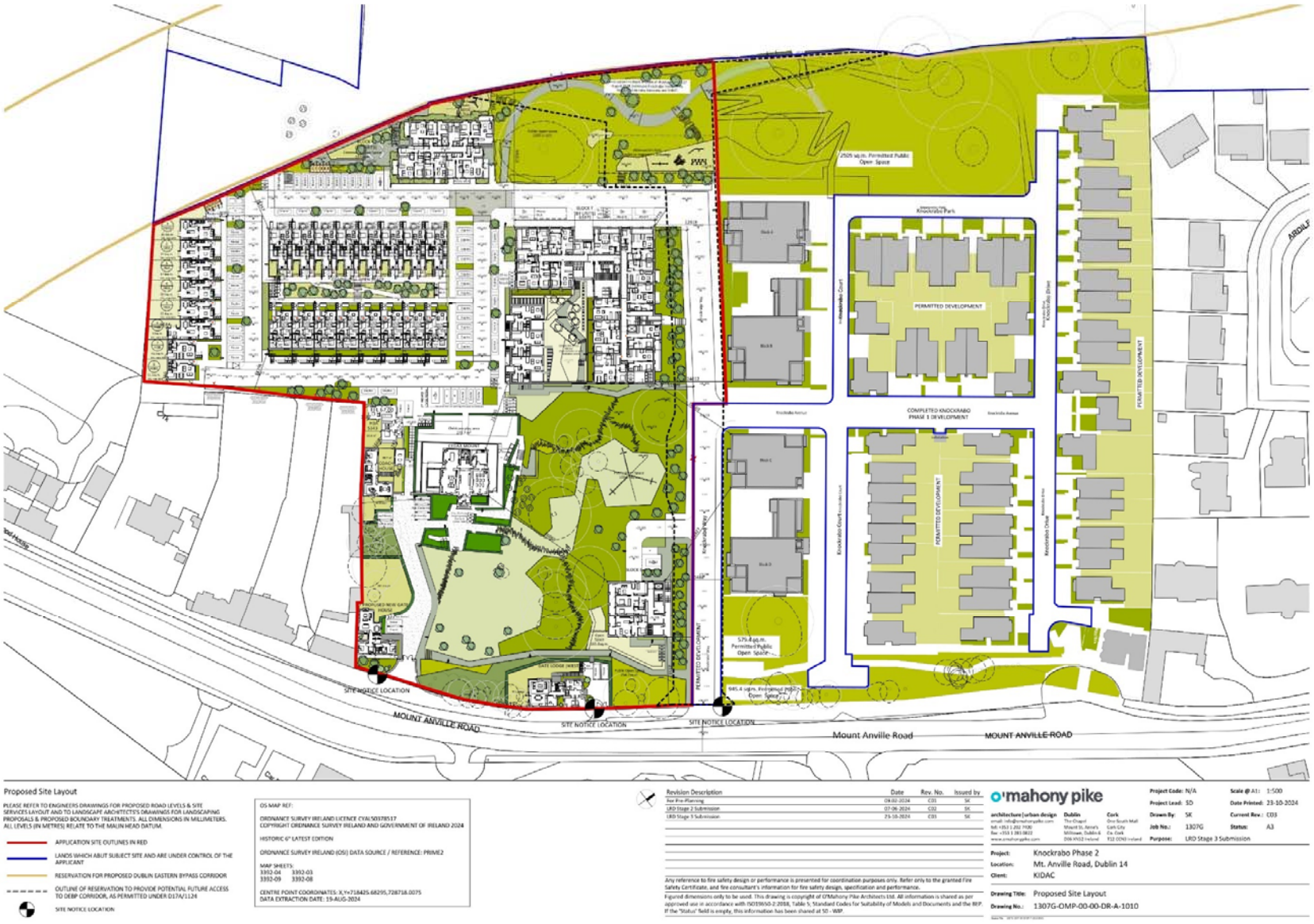

Figure 3. *Proposed overall layout*

Figure 4. *Proposed landscape plan*

Competency of assessor

This report has been prepared by Frank Spellman (MSc Zoology, BSc Zoology). Frank has previous experience in carrying out a wide range of fauna surveys as both a sub-contractor and employee for consultancies and organisations in Ireland and the US. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, and freshwater ecology surveys. The desk and field surveys were carried out using techniques approved and recommended by CIEEM. Bryan Deegan (MCIEEM) also carried out site assessments and integrated additional observations into this report.

Legislative context

A number of non-avian terrestrial mammal species are protected under the Wildlife Act (1976), Wildlife [Amendment] Acts (2000 to 2012), and Annex IV of the Habitats Directive (transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations, 2011-2021. These include species such as badger, Irish stoat, Irish hare, brown hare, pine marten, red squirrel, otter, hedgehog, all deer species, and pygmy shrew.

The badger is also a Red Data Book species, but it is a relatively common species and ubiquitous through much of the Irish countryside (Smal, 1995).

It is standard best practice to make special provisions for badgers affected by development. Whilst the species is common in much of the Irish landscape, badgers are notable for their practice of constructing large underground tunnel and chamber systems (setts). Provisions are made for their humane removal or for their conservation on site where feasible or practicable. The Wildlife [Amendment] Act (2000-2012) protects all resting places of protected species.

Otters are protected under the Irish Wildlife Acts and are also listed under Annex II and Annex IV of the EU Habitats Directive.

Otters are relatively common in Ireland, and they do occur on most rivers in this country. Protection of this species is important and provisions are made to ensure that holts are not interfered with except under especial circumstances and to ensure the quality of their foraging habitat.

Non-volant mammal survey

This report presents the results of site visits by Frank Spellman from November 2023 to January 2024. Two mammal specific surveys were carried out on 27th November and 8th January. A badger/mammal transect survey was carried out on each occasion. Mammal observations recorded during wintering bird surveys from November 2023 to March 2024 were included in this assessment. An additional sighting on the 5th June 2024 by Bryan Deegan. Surveys were carried out using techniques approved and recommended by CIEEM. Mammals observed during ornithological surveys in the same season were also noted.

Survey methodology

These non-volant mammal surveys were carried out based on techniques approved and recommended by CIEEM.

Surveys were undertaken in an area that consisted of grassland, scrub, treelines, exposed earth, recolonized bare ground and artificial surfaces/buildings. Due to the small but complex nature of the survey area, a single roving transect following the full perimeter and circumnavigating all habitats and features within the survey area was carried out on each visit.

The transect began at the access point adjacent to Knockrabo Apartments. Transects alternated between general clockwise and anti-clockwise directions. Diversions to inspect particular habitats and features, as well as to follow trails were taken where required.

Movements were carried out slowly, with pauses to observe open spaces, further following trails to determine their direction and investigate recipient areas for potential dens/setts/scatt/prints/scrapes/latrines etc. Camera

traps were brought to place in areas where high evidence of mammal activity and/or an active den/sett was likely. Two camera traps were set between 5th December and 11th January. These were placed on a potential sett/den in grassland in the west of the survey area, and in scrub in the northwest. Each mammal specific survey took approximately 3 hours.

Survey results

Habitats of non-avian terrestrial fauna potential

A site assessment was carried out and used to examine the structures and vegetation on site for features that could facilitate non-avian terrestrial mammals. Potential features include heavy scrub, piles of vegetative/construction debris, grassland etc. All vegetated areas on site were assessed for evidence of non-avian mammals.

Areas of high non-volant mammal potential in the survey area included the scrub and treelines around the perimeter and within the survey area piles of vegetative debris in the south of the site, recolonising bare ground, grassland throughout the site and a large debris consisting mostly of waste stone in the north of the site.

Non-avian terrestrial fauna surveys.

A total of four fauna species were confirmed within the survey area by visual confirmation and behavioural evidence: badger (*Meles meles*), grey squirrel (*Sciurus carolinensis*), fox (*Vulpes vulpes*) and brown rat (*Rattus norvegicus*). These are visually represented in Figure 5.

An area of high mammal activity was observed in the southwest of the survey area. Strong trails were noted between the boundary with the allotments and the rear of residential gardens to the southwest. Camera traps placed on a mammal burrow in this area identified badgers and foxes passing the camera following these trails. Snuffle holes were recorded within dense scrub in the northwest of the survey area adjacent to allotments through which these trails passed.

Other trails identified as fox trails were recorded in the north of the survey area. Snuffle holes were recorded within dense scrub in the northwest of the survey area. adjacent to allotments.

A potential fox den was located in the northwest corner of the survey area within dense scrub. A camera was placed to confirm whether or not this den was in use. An individual fox was observed excavating within this burrow but was not observed on camera fully entering it. A pair of foxes were observed on a trail camera elsewhere on site, and so it is possible that this den is being dug as a breeding den.

Also in the northwest of the site, heavy brown rat activity (multiple burrows and trails) were evident in the earth pile adjacent to the fox den along this boundary with the allotments. The loose soil likely provides easy excavation for this species.

Grey squirrel was observed on multiple occasions during wintering bird surveys in the southern portion of the site west/southwest of Knockrabo Apartments.

The entire survey area and any areas that could potentially facilitate badger setts were fully investigated. No badger setts were found. It is likely that badger based in setts elsewhere utilise this site as a foraging corridor.

It should be noted that a badger (*Meles meles*) was observed on site during the bat assessment on the 5th June 2024.

Plate 1: *Fox investigating man-made hole in southwest of survey area.*

Plate 2: *Badger passing man-made hole in southwest of survey area.*

Plate 3: *Fox excavating burrow in northwest corner of survey area.*

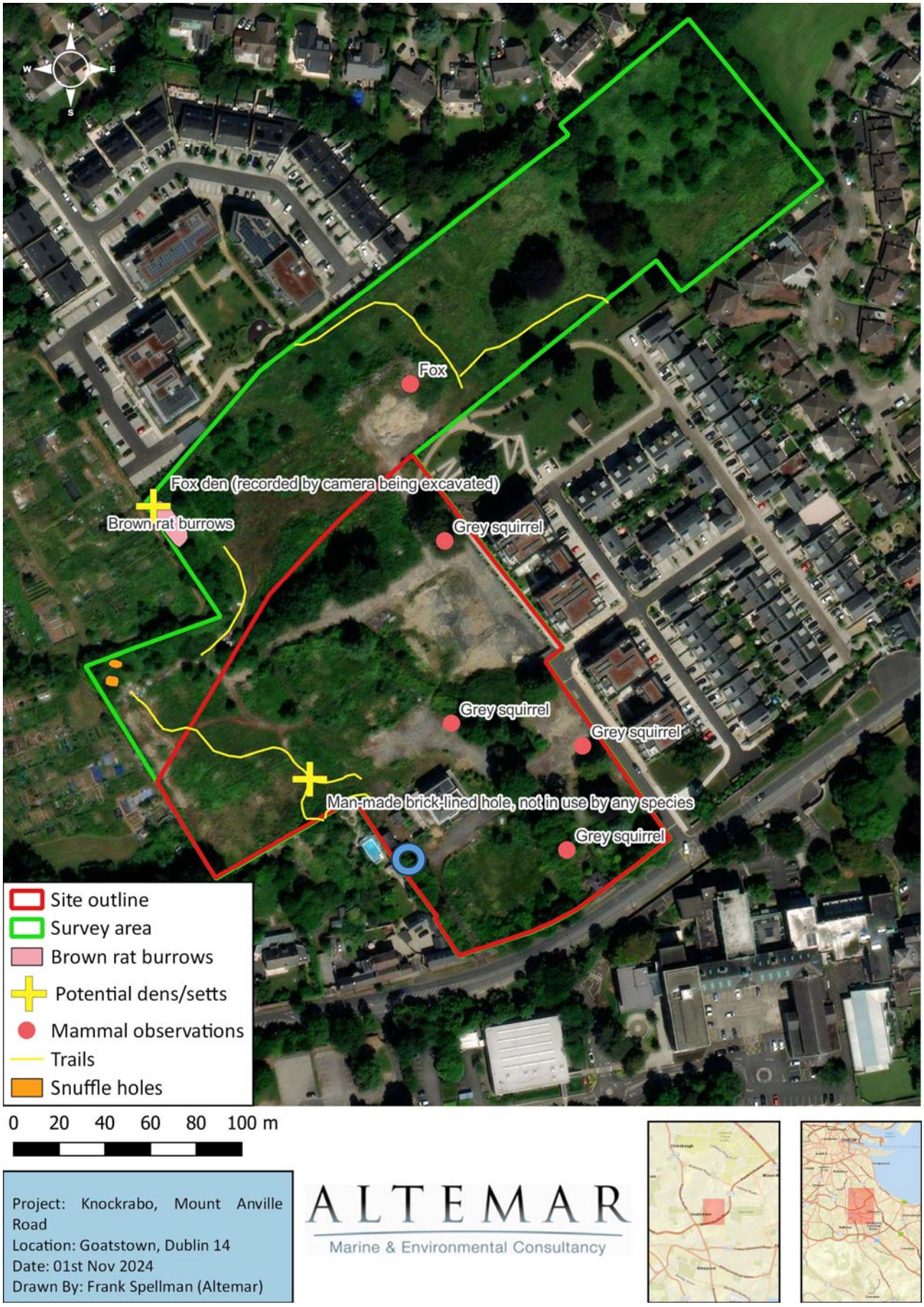

Figure 5: *Non-avian fauna activity/evidence/ observed/recorded. Badger observed on the 5th June 2024 (blue circle).*

Non-volant mammal assessment findings

Review of local mammal records

The review of existing terrestrial mammal records (sourced from NBDC Database) within a 2km^2 grid (Reference grid O12Z) encompassing the study area reveals that six known Irish species have been observed locally (Table 1).

Table 1: *Status of non-avian mammal species within the 2km^2 grid (*O12Z*)*

Species Name	Record Count	Date of Last Record	Designation
Brown Rat (*Rattus norvegicus*)	6	28/02/2013	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Eastern Grey Squirrel (*Sciurus carolinensis*)	15	04/12/2022	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)
Eurasian Red Squirrel (*Sciurus vulgaris*)	2	23/02/2016	Protected Species: Wildlife Acts
Pine Marten (*Martes martes*)	2	03/12/2018	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
Red Fox (*Vulpes vulpes*)	12	05/06/2018	
West European Hedgehog (*Erinaceus europaeus*)	1	31/08/2021	Protected Species: Wildlife Acts

Evaluation of results

The mammal surveys comply with CIEEM guidelines.

A total of four mammal species were confirmed within the survey area by visual confirmation and behavioural evidence: badger (*Meles meles*), grey squirrel (*Sciurus carolinensis*), fox (*Vulpes vulpes*) and brown rat (*Rattus norvegicus*).

Badger and fox trails were confirmed by camera in the southwest of the survey area to the south and east of the allotments. Snuffle holes were recorded adjacent to these trails.

High brown rat activity (burrows) was recorded in the northwest corner of the survey area in vegetated piles of loose earth.

A fox den being excavated was recorded in the northwest corner of the survey area. Fox trails were recorded throughout the survey area.

No badger setts were recorded within the overall survey area. However, the site is within the territory of a family of badgers.

A review of existing records revealed that three additional species, Eurasian Red Squirrel (*Sciurus vulgaris*), West European Hedgehog (*Erinaceus europaeus*) and Pine Marten (*Martes martes*) have been recorded in the vicinity of the survey area. No evidence of these three species was observed within the survey area.

Overall, the survey area is of low importance to mammal species. An active badger foraging corridor exists in the west of the site outline, and active foraging is evident adjacent to the proposed site outline.

Potential impact of the development on non-volant fauna

Badgers are present on site and the proposed development will introduce increased human activity in the area. No badger sett is located on site. The site itself has considerable areas of stony recolonising bare ground which is a poor quality habitat for badgers. It would be expected that the proposed development will reduce the existing territory area for badgers. However, no works are proposed where snuffles were located and access to adjacent lands surrounding the development would still be possible via the allotments to the west and the underdeveloped area to the north of the site. However, in the absence of mitigation there is potential for additional effects on badgers.

Mitigation measures

The following mitigation measures relevant to mammals will be implemented to minimise any potential negative impact on biodiversity:

- An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas will not be impacted.
- Preconstruction surveys for mammals will be carried out within the optimal survey season prior to construction taking place on site.
- Construction operations outside of daylight hours should be kept to a minimum in order to minimise disturbance to fauna in addition to roosting bird species. No security lighting will be placed on site without approval of the ECoW)
- Excavation and infilling will be carried out in small progressive stages.
- The site will be enclosed by robust fencing.
- Excavations will allow for mammals to escape via sloped side (<45o) or planks.

Predicted residual impact of development

The overall impact on the ecology of the proposed development will result in a long term minor adverse, not significant, residual impact on mammals overall.

A pre-construction survey will be carried out for terrestrial mammals of conservation importance. A NPWS derogation licence is not required.

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ALTEMAR
Marine & Environmental Consultancy

Appendix III. Breeding Bird Assessment for a proposed development at Knockrabo, Mount Anville Road, Goatstown, Dublin 14

01ST NOVEMBER 2024

Prepared by: Frank Spellman of Altemar Ltd.
On behalf of: Knockrabo Investments DAC

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Document Control Sheet			
Client	Knockrabo Investments DAC		
Project	Breeding Bird Assessment for a proposed development at Knockrabo, Mount Anville Road, Goatstown, Dublin 14		
Report	Breeding Bird Assessment		
Date	01st November 2024		
Version	Author	Reviewed	Date
Draft 01	Frank Spellman	Bryan Deegan	6TH SEPTEMBER 2024
Final	Frank Spellman	Bryan Deegan	01st November 2024

Summary

Structure/features:	The survey area consists primarily of grassland, scrub, treelines, mature standalone coniferous and deciduous tree, derelict buildings, recolonised bare ground, bare ground and some planted ornamentals.
Location:	Mount Anville Road, Goatstown, Dublin 14.
Bird species breeding:	Blackbird, Blackcap, Blue Tit, Feral Pigeon, Goldcrest, Goldfinch, Robin, Woodpigeon, Wren.
Proposed work:	Housing Development
Impact on breeding birds:	The proposed development will result in a long-term low adverse effect on breeding birds due to habitat loss. Mitigation measures are proposed.
Surveys by:	Frank Spellman & Emma Peters
Survey dates:	10th/17th/21st May 2024

Receiving environment

Development Description

Knockrabo Investments DAC intend to apply for permission for a Large-scale Residential Development (for a period of 7 years) with a total application site area of c. 2.54 hectares, at Knockrabo, Mount Anville Road, Goatstown, Dublin 14. The proposed development relates to Phase 2 of the development on the 'Knockrabo' lands. Phase 1 of 'Knockrabo' was granted under Dún Laoghaire-Rathdown County Council (DLRCC) Reg. Ref. D13A/0689/An Bord Pleanála (ABP) Ref. PL06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1) and DLRCC Reg. Ref. D16A/0960 (Phase 1A) and comprises a total of 119 No. units.

The site is bounded to the south-east by Mount Anville Road; to the south by 'Mount Anville Lodge' and by the rear boundaries of 'Thendara' (a Protected Structure – RPS Ref. 812), 'The Garth' (a Protected Structure – RPS Ref. 819), 'Chimes', 'Hollywood House' (a Protected Structure – RPS Ref. 829); to the south-west by existing allotments; to the north by the reservation corridor for the Dublin Eastern By-Pass (DEBP); and to the east by the site of residential development 'Knockrabo' (Phase 1, permitted under DLRCC Reg. Ref. D13A/0689 / An Bord Pleanála (ABP) Ref. PL.06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1); and DLRCC Reg. Ref. D16A/0960 (Phase 1A)). The site includes 'Cedar Mount' (a Protected Structure- RPS Ref. 783), 'Knockrabo Gate Lodge (West)' (a Protected Structure RPS Ref. 796), including Entrance Gates and Piers.

The development with total of c.17,312.2 sq.m. gross internal area (GIA) will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility (c.400 sq.m. GIA) and Community / Leisure Uses (c. 223 sq.m. GIA), as follows:

- Block E (c.1,077 sq.m. GIA): a 5-storey including semi-basement podium level apartment block, comprising 8 No. apartments (1 No. 1 bed and 7 No. 2 beds);
- Block F: (c.8,390.8 sq.m. GIA): a part 2 to part 8 storeys including semi basement podium apartment block, comprising 84 No. units (31 No. 1 beds, 50 No. 2 beds and 3 No. 3 bed duplex units);
- Block G: (c.2,022.1 sqm GIA): a part 4 to part 5-storey apartment block, comprising 20 No. units (3 No. 1 bed units, 14 No. 2 bed units and 3 No. 3 bed units); (with sedum roof/PV panels at roof level of Blocks E, F and G; a communal Roof Terrace of c. 198 sqm on Block F; and balconies/wintergardens on all elevations of Blocks E, F and G);
- Duplex Blocks: (c. 3,292.6 sqm GIA): 1 No. 3 storey and 1 No. 4 storey block, comprising a total of 32 No. units (8 No. 2 bed units and 24 No. 3 bed duplex units);
- 10 No. (new build) houses: 6 No. 4 bed 2.5-3 storey terraced/semi-detached units (ranging in size from c.162.1 sqm GIA to c.174.2 sq.m. GIA); 1 No. 3 bed 2 storey detached unit (126.2 sq.m. GIA); 1 No. 3 bed 2 storey mid terrace unit (c.127.4 sq.m. GIA); 1 No. 3 bed 2 storey end of terrace unit (c.127.9 sq.m. GIA); and 1 No. 1 - 2 storey 'Gate House' (c. 122.6 sq.m. GIA) to the west of proposed repositioned entrance to Cedar Mount from Mount Anville Road;
- The use of existing 'Coach House' as a residential dwelling and for internal / external repair / refurbishment works at ground and first floor levels, including the removal of 3 No. roof lights, 1 No. metal clad dormer roof window and external water tank; the construction of 2 No. single storey flat roof extensions (c.35.5 sq.m. GIA), revisions to the external facade including the addition of 1 No. new window ope on the south facade and rendered finish to all original facades, solar panels at roof level; removal / re-use of stone to form new garden wall; to provide 1 No. 2 bed house (c. 99.5 sq.m. GIA) with refurbished stone shed (c. 13.9 sq.m. for storage GIA).
- The use of Knockrabo Gate Lodge (West) (a Protected Structure) as a residential dwelling; and for repair / refurbishment works including demolition of existing section of extension on top of stone boundary wall; removal of 1 No. roof light and 1 No. internal partition wall; construction of replacement extension (c.77.5 sq.m. GIA) to provide 1 No. 3-bed unit (c. 128 sq.m. GIA) with solar panels at roof level, bin storage, landscaping, all repair works to the existing Gate and Piers, and all associated internal and external elevational changes.
- The proposed development comprises works to Cedar Mount (a Protected Structure) to provide: 1 No. Childcare Facility at Lower Ground Floor level (c.400 sq.m. GIA) with associated external play and bin storage areas; Community / Leisure Uses at Ground Floor Level (c. 223 sq.m. GIA), comprising Gym / Studio (c.35.6 sq.m. GIA), Library / Office (c. 35.9 sq.m. GIA), Meeting room (c.28.4 sq.m. GIA) and Conservatory room (c. 21.6 sq.m. GIA); and 2 No. 2 bed apartments at 1st floor level, (c.77.6 sq.m. GIA and c.88.2 sq.m.

GFA). The works to Cedar Mount to consist of: o At lower ground floor/ basement level, the removal of internal walls and sections of external and internal walls and access doors; insertion of openings through external and internal walls; repair of existing "loggia" (covered external corridor) on northern, north-western and north-eastern facades, with revised elevations comprising glazed panels / glazed entrance doors located within loggia opes; the additional area (c. 58 sq.m. GIA) to form part of proposed Childcare Facility;

- At ground floor level removal of wooden staircase to 1st floor level and replacement with open-tread staircase, and construction of conservatory room (c. 21.6 sqm GIA) with flat roof on south - western side of Cedar Mount with sedum roof; removal of 1 No. WC;
- At 1st floor level removal of sections of internal walls; insertion of doors through internal walls;
- Re-instatement of 1 no. new chimney stack on the western end of the existing roof; replacement of rubble masonry finish with lime and sand plaster finish on all elevations relating to sections of original façade; removal of security bars from existing windows in front porch; replacement / reconfiguration of rainwater downpipes, hopper heads and associated roof outlets; Re-modelling of extension on northern side including replacement of timber / pressed metal cladding with brick / zinc cladding and glazing at ground and 1st floor levels, removal / replacement of external doors and windows; replacement of flat roof deck, parapet, eaves and roof-light with flat roof comprising brick / zinc clad parapet and removal of internal link at 1st floor level; repair works to external walls at ground floor level; Construction of rendered blockwork wall and steel handrail to terrace and associated repair works to section of existing parapet wall on eastern side of Cedar Mount; all hard and soft landscaping; revisions to garden wall and pillars on western side of Cedar Mount; and all associated internal and elevational changes; and
- The repositioning of existing access (including gates and piers) to Cedar Mount (a Protected Structure) on Mount Anville Road to the northeast with associated works to boundary wall to Mount Anville Road.

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

All other ancillary site development works to facilitate construction, site services, piped infrastructure, 1 No. sub-station, plant, public lighting, bin stores, bike stores, boundary treatments, provision of public, communal and private open space areas comprising hard and soft landscaping, site services all other associated site excavation, infrastructural and site development works above and below ground. In addition to the repositioned access to Cedar Mount (a Protected Structure) as referenced above, the development will be served by the permitted access road 'Knockrabo Way' (DLRCC Reg. Ref. D13A/0689; ABP Ref. PL.06D.243799, DLRCC Reg. Ref. D16A/0821 and DLRCC Reg. Ref. D16A/0960). The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

The proposed site and survey outline, location, site layout and landscape plan are demonstrated in figures 1-4.

Landscape

The landscape strategy for the proposed development has been prepared by DFLA to accompany this planning application.

Figure 1. *Proposed site outline and walking survey area.*

Figure 2. *Proposed site and walking survey area location*

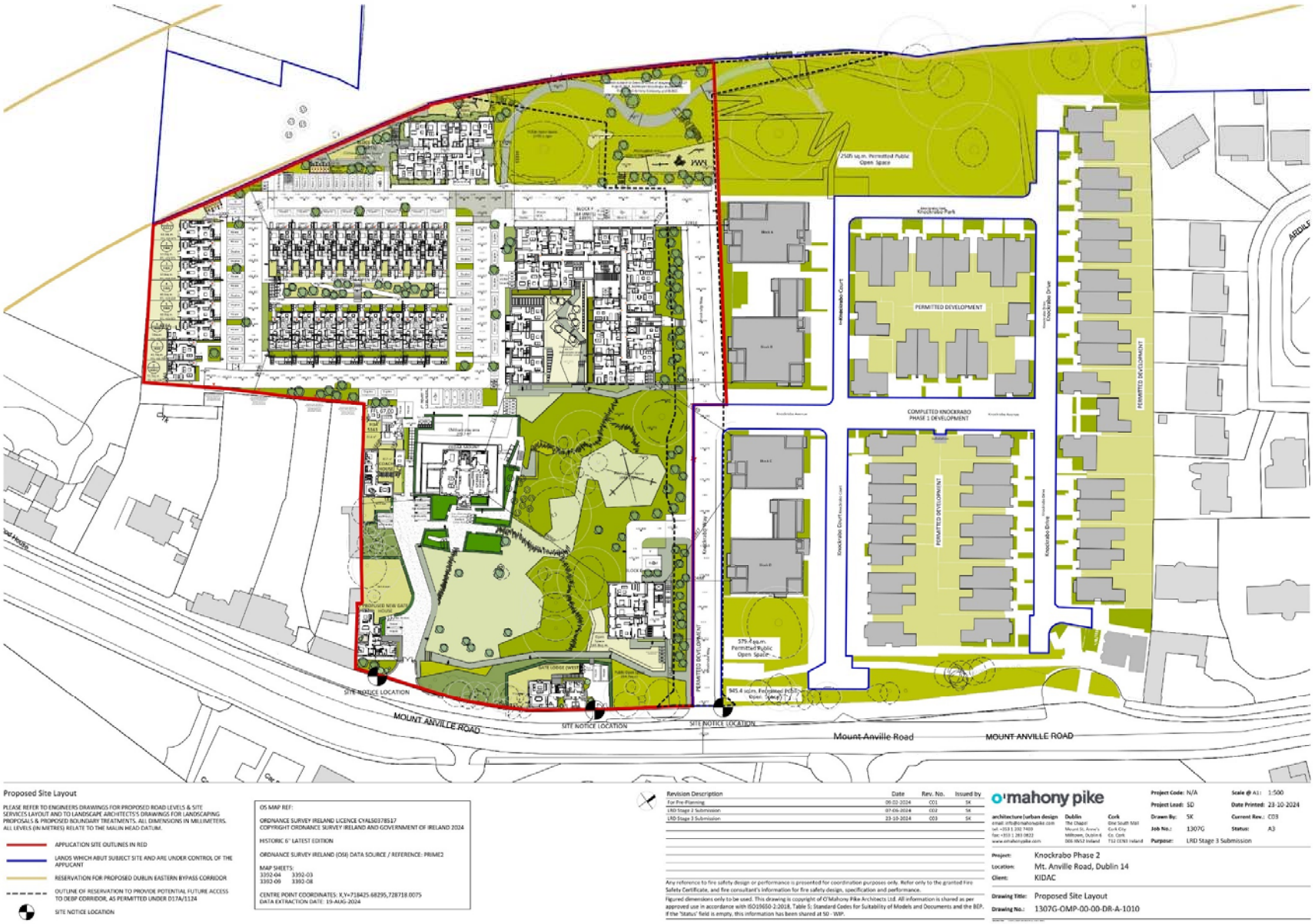

Figure 3. *Proposed overall layout*

Figure 4. *Proposed landscape plan*

Competency of assessor

This report has been prepared by Frank Spellman (MSc Zoology, BSc Zoology). Frank has previous experience in carrying out a wide range of fauna surveys as both a sub-contractor and employee for consultancies and organisations in Ireland and the US. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, and freshwater ecology surveys. The desk and field surveys were carried out using techniques approved and recommended by CIEEM.

This Report has been contributed to by Emma Peters (BSc Environmental Science). Emma has carried out a range of wintering and breeding ornithological surveys in Ireland. Emma has experience in bat detection through static detector surveys, dusk emergence, and down re-entry surveys and is a member of Bat Conservation Ireland. She is also skilled in habitat identification, native and non-native species identification and terrestrial mammal surveys.

Legislative context

The Wildlife Act 1976 protects wild birds in Ireland. Based on this legislation it is an offence to wilfully interfere with or destroy wild birds and their nests and eggs (other than the wild species mentioned in the Third Schedule of this Act). Under this legislation it is an offence for any person who "*wilfully takes or removes the eggs or nest of a protected wild bird otherwise than under and in accordance with such a licence, wilfully destroys, injures or mutilates the eggs or nest of a protected wild bird, wilfully disturbs a protected wild bird on or near a nest containing eggs or unflown young*."

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).

Council Directive 2009/147/EC 2010 on the conservation of wild birds provides for the conservation of wild birds by, among other things, classifying important ornithological sites as Special Protection Areas. The Directive relates to the conservation of all species of naturally occurring birds in the wild state, their eggs, nests and habitats in the European territory of the Member States. The Directive prohibits in particular:

- deliberate killing or capture by any method;
- deliberate destruction of, or damage to, their nests and eggs or removal of their nests;
- taking their eggs in the wild and keeping these eggs even if empty;
- deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of this Directive;
- keeping birds of species the hunting and capture of which is prohibited.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under Regulation 54, a person who in respect of the species referred to in Part 1 of the First Schedule:

- deliberately captures or kills any specimen of these species in the wild,
- deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration,
- deliberately takes or destroys eggs of those species from the wild,
- damages or destroys a breeding site or resting place of such an animal, or
- keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence.

Breeding bird survey

This report presents the results of three site visits, by Emma Peters on 10th May and Frank Spellman on the 17th and 21st May 2024. A breeding bird transect survey was carried out on each occasion.

Survey methodology

This Breeding bird survey was carried out based on the BTO Common Bird Census (Bibby *et al.*, 2000 and Gilbert *et al.*, 1998) and following CIEEM guidelines.

A 15-minute settlement period was given following arrival to allow resumption of bird activity after any possible disturbance caused by arrival to the site. Various features and habitats such as artificial buildings/surfaces, scrub, grassland, treelines, mature trees and exposed earth were present within the survey area. A single transect following the full perimeter of the survey area was carried out on each occasion, covering all areas and features available for breeding activity within and adjacent to the survey area. Each survey was carried out by a single surveyor. The abandoned buildings within the survey area were also assessed for breeding activity.

The survey was carried out on 3 occasions, beginning at dawn and ending once all areas/features had been surveyed. Care was taken not to double count any observations. Weather conditions were optimal on each occasion.

Survey results

Habitats of breeding bird potential

A desk and ground level breeding habitat assessment were carried and used to examine the structures and vegetation on site for features that could provide breeding habitat. Potential nesting features include scrub, treelines, mature conifer/deciduous canopies, an abandoned building etc. All vegetated areas and man-made structures on site were assessed for breeding bird potential.

Areas of high breeding bird potential included the scrub, treelines and structures throughout the survey area and its boundaries.

Breeding activity survey

A total of 23 species were recorded within the survey area across three surveys. Of these, five species (goldcrest, greenfinch, herring gull, starling and swallow) are amber listed BoCCI. The remaining species are all green listed BoCCI. No red listed BoCCI were recorded.

In total, 9 species were recorded breeding or displaying behaviour indicative of breeding within the survey area. One breeding species (goldcrest) is an amber listed BoCCI, the remaining being green listed BoCCI.

Table 1. *Species confirmed breeding within the survey area.*

Common name	BTO	Latin name	BoCCI
Blackbird	B.	*Turdus merula*	Green
Blue Tit	BT	*Cyanistes caeruleus*	Green
Feral Pigeon	FP	*Columba livia f. domestica*	Green
Goldcrest	GC	*Regulus regulus*	Amber
Goldfinch	GO	*Carduelis carduelis*	Green
Robin	R.	*Erithacus rubecula*	Green
Woodpigeon	WP	*Columba palumbus*	Green
Wren	WR	*Troglodytes troglodytes*	Green

Table 2. *Total species recorded as present on site (including flyovers).*

Common name	BTO	Latin name	BoCCI
Blackbird	B.	*Turdus merula*	Green
Blackcap	BC	*Sylvia atricapilla*	Green
Blue Tit	BT	*Cyanistes caeruleus*	Green
Chaffinch	CH	*Fringilla coelebs*	Green
Coal Tit	CT	*Periparus ater*	Green
Dunnock	D.	*Prunella modularis*	Green
Feral Pigeon	FP	*Columba livia f. domestica*	Green
Goldcrest	GC	*Regulus regulus*	Amber
Goldfinch	GO	*Carduelis carduelis*	Green
Great Tit	GT	*Parus major*	Green
Greenfinch	GR	*Chloris chloris*	Amber
Grey Heron	H.	*Ardea cinerea*	Green
Herring Gull	HG	*Larus argentatus*	Amber
Hooded Crow	HC	*Corvus cornix*	Green
Jackdaw	JD	*Corvus monedula*	Green
Magpie	MG	*Pica pica*	Green
Robin	R.	*Erithacus rubecula*	Green
Siskin	SK	*Spinus spinus*	Green
Song Thrush	ST	*Turdus philomelos*	Green
Starling	SG	*Sturnus vulgaris*	Amber
Swallow	SL	*Hirundo rustica*	Amber
Woodpigeon	WP	*Columba palumbus*	Green
Wren	WR	*Troglodytes troglodytes*	Green

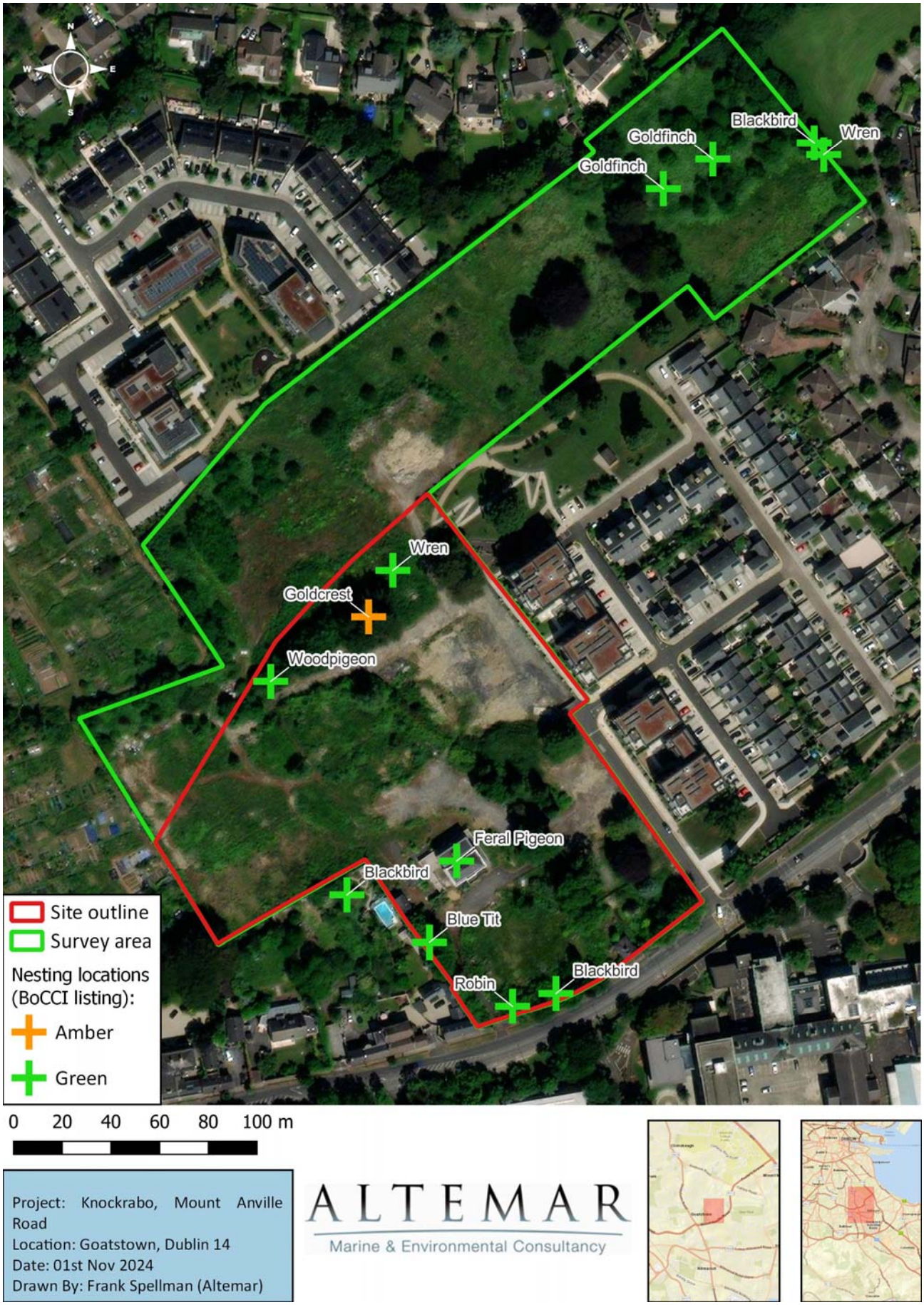

Figure 5. *Breeding locations.*

Figure 6. *Breeding hotspots.*

Breeding bird assessment findings

Review of local bird records

The review of existing bird records (sourced from NBDC Database) within a 2 km^2 grid (Reference grid O12Z) encompassing the study area reveals that 63 known bird species have previously been observed and recorded locally (*Table 2*).

Table 2: *Status of bird species within 2 km^2 (grid O12Z)*

Species Name	Record Count	Date of Last Record	Dataset	BoCCI Status
Barn Swallow (Hirundo rustica)	9	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Black Redstart (Phoenicurus ochruros)	1	08/04/2023	Birds of Ireland	
Black-billed Magpie (Pica pica)	20	31/05/2023	Birds of Ireland	
Blackcap (Sylvia atricapilla)	7	31/05/2023	Birds of Ireland	
Black-headed Gull (Larus ridibundus)	3	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Blue Tit (Cyanistes caeruleus)	22	02/05/2023	Birds of Ireland	
Brambling (Fringilla montifringilla)	1	31/12/2011	Bird Atlas 2007 - 2011	
Chaffinch (Fringilla coelebs)	15	02/05/2023	Birds of Ireland	
Coal Tit (Periparus ater)	7	30/09/2016	Ireland's BioBlitz	
Common Blackbird (Turdus merula)	19	31/05/2023	Birds of Ireland	
Common Bullfinch (Pyrrhula pyrrhula)	2	31/12/2011	Bird Atlas 2007 - 2011	
Common Buzzard (Buteo buteo)	1	01/05/2021	Birds of Ireland	
Common Chiffchaff (Phylloscopus collybita)	10	29/09/2016	Ireland's BioBlitz	
Common Coot (Fulica atra)	3	08/04/2023	Birds of Ireland	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
Common Kestrel (Falco tinnunculus)	3	17/08/2012	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Linnet (Carduelis cannabina)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Moorhen (Gallinula chloropus)	12	01/03/2023	Birds of Ireland	
Common Redshank (Tringa totanus)	1	04/12/2022	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List

Common Starling (Sturnus vulgaris)	16	29/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Swift (Apus apus)	11	28/06/2023	Swifts of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Wood Pigeon (Columba palumbus)	21	02/05/2023	Birds of Ireland	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
Eurasian Collared Dove (Streptopelia decaocto)	13	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Curlew (Numenius arquata)	2	09/03/2018	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Eurasian Jackdaw (Corvus monedula)	24	31/05/2023	Birds of Ireland	
Eurasian Jay (Garrulus glandarius)	1	28/03/2022	Birds of Ireland	
Eurasian Oystercatcher (Haematopus ostralegus)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Eurasian Sparrowhawk (Accipiter nisus)	3	01/04/2023	Birds of Ireland	
Eurasian Treecreeper (Certhia familiaris)	2	31/12/2011	Bird Atlas 2007 - 2011	
European Goldfinch (Carduelis carduelis)	12	02/05/2023	Birds of Ireland	
European Greenfinch (Carduelis chloris)	13	31/12/2011	Bird Atlas 2007 - 2011	
European Robin (Erithacus rubecula)	21	02/05/2023	Birds of Ireland	
Fieldfare (Turdus pilaris)	2	31/12/2011	Bird Atlas 2007 - 2011	
Gadwall (Anas strepera)	2	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Goldcrest (Regulus regulus)	21	02/05/2023	Birds of Ireland	
Great Cormorant (Phalacrocorax carbo)	3	30/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Great Tit (Parus major)	9	01/03/2023	Birds of Ireland	
Grey Heron (Ardea cinerea)	7	01/03/2023	Birds of Ireland	
Grey Wagtail (Motacilla cinerea)	2	08/03/2023	Birds of Ireland	
Hedge Accentor (Prunella modularis)	14	01/03/2023	Birds of Ireland	
Herring Gull (Larus argentatus)	7	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Hooded Crow (Corvus cornix)	16	01/03/2023	Birds of Ireland	

House Martin (Delichon urbicum)	10	18/05/2001	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow (Passer domesticus)	12	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Lesser Redpoll (Carduelis cabaret)	2	31/12/2011	Bird Atlas 2007 - 2011	
Long-eared Owl (Asio otus)	1	09/02/2009	Birds of Ireland	
Long-tailed Tit (Aegithalos caudatus)	10	30/09/2016	Ireland's BioBlitz	
Mallard (Anas platyrhynchos)	15	08/04/2023	Birds of Ireland	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
Mew Gull (Larus canus)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mistle Thrush (Turdus viscivorus)	3	31/12/2011	Bird Atlas 2007 - 2011	
Mute Swan (Cygnus olor)	4	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Northern Goshawk (Accipiter gentilis)	1	30/08/1998	Rare birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Peregrine Falcon (Falco peregrinus)	1	06/06/2014	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
Pied Wagtail (Motacilla alba subsp. yarrellii)	5	01/03/2023	Birds of Ireland	
Redwing (Turdus iliacus)	1	31/12/2011	Bird Atlas 2007 - 2011	
Rock Pigeon (Columba livia)	3	29/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Rook (Corvus frugilegus)	21	01/03/2023	Birds of Ireland	
Sand Martin (Riparia riparia)	1	14/05/2001	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Song Thrush (Turdus philomelos)	13	02/05/2023	Birds of Ireland	
Spotted Flycatcher (Muscicapa striata)	1	31/05/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Tufted Duck (Aythya fuligula)	9	08/04/2023	Birds of Ireland	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
White Wagtail (Motacilla alba)	2	31/12/2011	Bird Atlas 2007 - 2011	
Willow Warbler (Phylloscopus trochilus)	1	31/12/2011	Bird Atlas 2007 - 2011	

Winter Wren (Troglodytes troglodytes)	20	31/05/2023	Birds of Ireland	

Mitigation

The proposed site outline within the survey area is of relatively low importance to the local breeding bird population. However, the impact of the development during construction phase will be a loss of existing habitats and species. The following mitigation measures relevant to birds, as well as those outlined within the accompanying EIAR, shall be implemented to minimise any potential negative impact on biodiversity:

- An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas including birds will not be impacted.
- Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) in relation to the removal of trees and timing of nesting birds be followed e.g. do not remove trees or shrubs during the nesting season (1st March to 31st August). Should this not be possible a pre-clearance inspection will be carried out by an ecologist and clearance will not take place if nests are present.
- 30 bird boxes will be places on site.
- The landscaping will be inspected by the ecologist post construction.

Conclusion

This report presents the results of three site visits, by Emma Peters on 10th May and Frank Spellman on the 17th and 21st May 2024. A breeding bird transect survey was carried out on each occasion. The surveys comply with bird survey guidance documentation including BTO Common Bird Census (Bibby *et al.*, 2000 and Gilbert *et al.*, 1998) following CIEEM guidelines. Weather conditions were favourable on each occasion.

A total of 23 species were recorded within the survey area across three surveys. 9 species were recorded breeding or displaying behaviour indicative of breeding.

Seven green-listed bird species of conservation concern were recorded breeding within the survey area; blackbird, blue tit, feral pigeon, goldcrest, goldfinch, robin, woodpigeon and wren.

One amber-listed bird species of conservation concern was recorded breeding within the survey area (goldcrest) within a large mature cypress tree in the centre of the survey area to the west of Knockrabo Apartments.

The hotspots of breeding activity observed within the survey area consist of scrub, treelines and buildings within the survey area. Mitigation measures are proposed.

The residual effect would be a minor adverse not significant in the long term.

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3. **Chartered Institute of Ecology and Environmental Management (2018).** *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal, and Marine.* Chartered Institute of Ecology and Environmental Management, Winchester.
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9. **EU Directive on the Conservation of Wild Birds 2009**
10. **Gilbert, G., Gibbons, D.W., & Evans, J. (1998)** Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
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12. **Wildlife Act 1976 and Wildlife [Amendment] Act 2000**. Government of Ireland.

ALTEMAR
Marine & Environmental Consultancy

Appendix IV. Wintering Bird Assessment at Knockrabo, Mount Anville Road, Goatstown, Dublin 14

01ST NOVEMBER 2024

Prepared by: Frank Spellman of Altemar Ltd.
On behalf of: Knockrabo Investments DAC

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Document Control Sheet			
Client	Knockrabo Investments DAC		
Project	Wintering Bird Assessment at Knockrabo, Mount Anville Road, Goatstown, Dublin 14		
Report	Wintering Bird Assessment		
Date	01st November 2024		
Version	Author	Reviewed	Date
Draft 01	Frank Spellman	Bryan Deegan	10th June 2024
Final	Frank Spellman	Bryan Deegan	01st November 2024

Summary

Structure/features:	The survey area consists primarily of grassland, scrub, treelines, mature standalone coniferous and deciduous tree, derelict buildings, recolonised bare ground, bare ground and some planted ornamentals.
Location:	Mount Anville Road, Goatstown, Dublin 14.
Bird species present:	Blackbird, Blackcap, Black-headed Gull, Blue Tit, Chaffinch, Coal Tit, Common Gull, Dunnock, Feral Pigeon, Goldcrest, Goldfinch, Great Tit, Greenfinch, Grey Wagtail, Herring Gull, Hooded Crow, Jackdaw, Jay, Linnet, Long-tailed Tit, Magpie, Pied Wagtail, Raven, Redwing, Robin, Rook, Siskin, Treecreeper, Woodpigeon, Wren.
Proposed work:	Housing Development
Surveys by:	Frank Spellman (MSc Zoology, BSc Zoology). Emma Peters (BSc Environmental Science)
Survey dates:	27th/29th November 2023, 05th/07th December 2023, 08th/11th January 2024, 29th February 2024, 12th March 2024.

Receiving Environment

Development Description

Knockrabo Investments DAC intend to apply for permission for a Large-scale Residential Development (for a period of 7 years) with a total application site area of c. 2.54 hectares, at Knockrabo, Mount Anville Road, Goatstown, Dublin 14. The proposed development relates to Phase 2 of the development on the 'Knockrabo' lands. Phase 1 of 'Knockrabo' was granted under Dún Laoghaire-Rathdown County Council (DLRCC) Reg. Ref. D13A/0689/An Bord Pleanála (ABP) Ref. PL06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1) and DLRCC Reg. Ref. D16A/0960 (Phase 1A) and comprises a total of 119 No. units.

The site is bounded to the south-east by Mount Anville Road; to the south by 'Mount Anville Lodge' and by the rear boundaries of 'Thendara' (a Protected Structure – RPS Ref. 812), 'The Garth' (a Protected Structure – RPS Ref. 819), 'Chimes', 'Hollywood House' (a Protected Structure – RPS Ref. 829); to the south-west by existing allotments; to the north by the reservation corridor for the Dublin Eastern By-Pass (DEBP); and to the east by the site of residential development 'Knockrabo' (Phase 1, permitted under DLRCC Reg. Ref. D13A/0689 / An Bord Pleanála (ABP) Ref. PL.06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1); and DLRCC Reg. Ref. D16A/0960 (Phase 1A)). The site includes 'Cedar Mount' (a Protected Structure- RPS Ref. 783), 'Knockrabo Gate Lodge (West)' (a Protected Structure RPS Ref. 796), including Entrance Gates and Piers.

The development with total of c.17,312.2 sq.m. gross internal area (GIA) will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility (c.400 sq.m. GIA) and Community / Leisure Uses (c. 223 sq.m. GIA), as follows:

- Block E (c.1,077 sq.m. GIA): a 5-storey including semi-basement podium level apartment block, comprising 8 No. apartments (1 No. 1 bed and 7 No. 2 beds);
- Block F: (c.8,390.8 sq.m. GIA): a part 2 to part 8 storeys including semi basement podium apartment block, comprising 84 No. units (31 No. 1 beds, 50 No. 2 beds and 3 No. 3 bed duplex units);
- Block G: (c.2,022.1 sqm GIA): a part 4 to part 5-storey apartment block, comprising 20 No. units (3 No. 1 bed units, 14 No. 2 bed units and 3 No. 3 bed units); (with sedum roof/PV panels at roof level of Blocks E, F and G; a communal Roof Terrace of c. 198 sqm on Block F; and balconies/wintergardens on all elevations of Blocks E, F and G);
- Duplex Blocks: (c. 3,292.6 sqm GIA): 1 No. 3 storey and 1 No. 4 storey block, comprising a total of 32 No. units (8 No. 2 bed units and 24 No. 3 bed duplex units);
- 10 No. (new build) houses: 6 No. 4 bed 2.5-3 storey terraced/semi-detached units (ranging in size from c.162.1 sqm GIA to c.174.2 sq.m. GIA); 1 No. 3 bed 2 storey detached unit (126.2 sq.m. GIA); 1 No. 3 bed 2 storey mid terrace unit (c.127.4 sq.m. GIA); 1 No. 3 bed 2 storey end of terrace unit (c.127.9 sq.m. GIA); and 1 No. 1 - 2 storey 'Gate House' (c. 122.6 sq.m. GIA) to the west of proposed repositioned entrance to Cedar Mount from Mount Anville Road;
- The use of existing 'Coach House' as a residential dwelling and for internal / external repair / refurbishment works at ground and first floor levels, including the removal of 3 No. roof lights, 1 No. metal clad dormer roof window and external water tank; the construction of 2 No. single storey flat roof extensions (c.35.5 sq.m. GIA), revisions to the external facade including the addition of 1 No. new window ope on the south facade and rendered finish to all original facades, solar panels at roof level; removal / re-use of stone to form new garden wall; to provide 1 No. 2 bed house (c. 99.5 sq.m. GIA) with refurbished stone shed (c. 13.9 sq.m. for storage GIA).
- The use of Knockrabo Gate Lodge (West) (a Protected Structure) as a residential dwelling; and for repair / refurbishment works including demolition of existing section of extension on top of stone boundary wall; removal of 1 No. roof light and 1 No. internal partition wall; construction of replacement extension (c.77.5 sq.m. GIA) to provide 1 No. 3-bed unit (c. 128 sq.m. GIA) with solar panels at roof level, bin storage, landscaping, all repair works to the existing Gate and Piers, and all associated internal and external elevational changes.
- The proposed development comprises works to Cedar Mount (a Protected Structure) to provide: 1 No. Childcare Facility at Lower Ground Floor level (c.400 sq.m. GIA) with associated external play and bin storage areas; Community / Leisure Uses at Ground Floor Level (c. 223 sq.m. GIA), comprising Gym / Studio (c.35.6 sq.m. GIA), Library / Office (c. 35.9 sq.m. GIA), Meeting room (c.28.4 sq.m. GIA) and Conservatory room (c. 21.6 sq.m. GIA); and 2 No. 2 bed apartments at 1st floor level, (c.77.6 sq.m. GIA and c.88.2 sq.m.

GFA). The works to Cedar Mount to consist of: o At lower ground floor/ basement level, the removal of internal walls and sections of external and internal walls and access doors; insertion of openings through external and internal walls; repair of existing "loggia" (covered external corridor) on northern, north-western and north-eastern facades, with revised elevations comprising glazed panels / glazed entrance doors located within loggia opes; the additional area (c. 58 sq.m. GIA) to form part of proposed Childcare Facility;

- At ground floor level removal of wooden staircase to 1st floor level and replacement with open-tread staircase, and construction of conservatory room (c. 21.6 sqm GIA) with flat roof on south - western side of Cedar Mount with sedum roof; removal of 1 No. WC;
- At 1st floor level removal of sections of internal walls; insertion of doors through internal walls;
- Re-instatement of 1 no. new chimney stack on the western end of the existing roof; replacement of rubble masonry finish with lime and sand plaster finish on all elevations relating to sections of original façade; removal of security bars from existing windows in front porch; replacement / reconfiguration of rainwater downpipes, hopper heads and associated roof outlets; Re-modelling of extension on northern side including replacement of timber / pressed metal cladding with brick / zinc cladding and glazing at ground and 1st floor levels, removal / replacement of external doors and windows; replacement of flat roof deck, parapet, eaves and roof-light with flat roof comprising brick / zinc clad parapet and removal of internal link at 1st floor level; repair works to external walls at ground floor level; Construction of rendered blockwork wall and steel handrail to terrace and associated repair works to section of existing parapet wall on eastern side of Cedar Mount; all hard and soft landscaping; revisions to garden wall and pillars on western side of Cedar Mount; and all associated internal and elevational changes; and
- The repositioning of existing access (including gates and piers) to Cedar Mount (a Protected Structure) on Mount Anville Road to the northeast with associated works to boundary wall to Mount Anville Road.

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

All other ancillary site development works to facilitate construction, site services, piped infrastructure, 1 No. sub-station, plant, public lighting, bin stores, bike stores, boundary treatments, provision of public, communal and private open space areas comprising hard and soft landscaping, site services all other associated site excavation, infrastructural and site development works above and below ground. In addition to the repositioned access to Cedar Mount (a Protected Structure) as referenced above, the development will be served by the permitted access road 'Knockrabo Way' (DLRCC Reg. Ref. D13A/0689; ABP Ref. PL.06D.243799, DLRCC Reg. Ref. D16A/0821 and DLRCC Reg. Ref. D16A/0960). The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

The proposed site and survey area outline and location are demonstrated in figures 1 & 2.

Landscape

The landscape strategy for the proposed development has been prepared by DFLA to accompany this planning application. The proposed landscape plan is demonstrated in figure 3.

Figure 1. *Wintering bird survey area and proposed site outline.*

Figure 2. *Wintering bird survey area and proposed site outline location.*

Competency of assessor

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.

Frank Spellman (BSc Zoology, MSc Zoology).

Frank has extensive experience in carrying out a wide range of fauna surveys as both a sub-contractor and employee for environmental consultancies and organisations in Ireland and the US. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, and freshwater ecology surveys. Frank has been lead ornithologist on numerous development projects within Ireland carrying out full wintering bird and breeding bird assessments.

Emma Peters (BSc Environmental Science)

This Report has been contributed to by Emma Peters. Emma has carried out a range of wintering and breeding ornithological surveys in Ireland. Emma has experience in bat detection through static detector surveys, dusk emergence, and down re-entry surveys and is a member of Bat Conservation Ireland. She is also skilled in habitat identification, native and non-native species identification and terrestrial mammal surveys.

Legislative context

The Wildlife Act 1976 protects wild birds in Ireland. Based on this legislation it is an offence to wilfully interfere with or destroy wild birds and their nests and eggs (other than the wild species mentioned in the Third Schedule of this Act). Under this legislation it is an offence for any person who "*wilfully takes or removes the eggs or nest of a protected wild bird otherwise than under and in accordance with such a licence, wilfully destroys, injures or mutilates the eggs or nest of a protected wild bird, wilfully disturbs a protected wild bird on or near a nest containing eggs or unflown young.*"

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).

Council Directive 2009/147/EC 2010 on the conservation of wild birds provides for the conservation of wild birds by, among other things, classifying important ornithological sites as Special Protection Areas. The Directive relates to the conservation of all species of naturally occurring birds in the wild state, their eggs, nests and habitats in the European territory of the Member States. The Directive prohibits in particular:

- deliberate killing or capture by any method;
- deliberate destruction of, or damage to, their nests and eggs or removal of their nests;
- taking their eggs in the wild and keeping these eggs even if empty;
- deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of this Directive;
- keeping birds of species the hunting and capture of which is prohibited.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under Regulation 54, a person who in respect of the species referred to in Part 1 of the First Schedule:

- deliberately captures or kills any specimen of these species in the wild,
- deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration,
- deliberately takes or destroys eggs of those species from the wild,
- damages or destroys a breeding site or resting place of such an animal, or
- keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence.

Wintering bird surveys

This report presents the methodology and results of 6 surveys by Frank Spellman and 2 surveys by Emma Peters during the wintering bird season from November 2023 to March 2024.

Survey methodology

Wintering bird surveys were carried out over the entire wintering bird season, Knockrabo, Mount Anville Road in order to gather baseline data and to assist in assessing the potential impacts on wintering birds from future proposed developments on the grounds, in particular those listed as Qualifying Interests of SPAs within 15 km and other amber/red-listed birds of conservation concern in Ireland (BoCCI). Potential impacts on wintering bird species include disturbance, destruction of foraging areas, destruction of roosting areas and collision risk during construction and operation (cranes, buildings etc.). These wintering bird surveys were carried out based on the BTO Common Bird Census (Bibby *et al.*, 2000 and Gilbert *et al.*, 1998) and I-WeBS Counter Manual: Guidelines for Irish Wetland Bird Survey counters (BWI & NPWS), following CIEEM guidelines.

A 15-minute settlement period was given following arrival to allow resumption of bird activity after any possible disturbance caused by arrival to the site. Various features such as grassland, treelines, standalone mature trees, scrub, built land, spoil and bare ground were present within the survey area. A roving transect survey around the perimeter of the survey area, circumnavigating features within that area, was carried out on each occasion, providing clear views of all areas within and over that survey area. A vantage point in the south of the survey area was also used (figure 3.) for at least 30 minutes during each survey where the higher altitude provided the most advantageous views. Flight lines, large flights, foraging, perching and any other observed behaviour by wintering bird species within and over the survey area were recorded. Each survey was carried out by a single surveyor.

A pair of binoculars were used by the surveyor to identify and count birds at distance. Care was taken not to double count any observations. Surveys were initiated at varying times (morning/midday/afternoon) and at varying tide levels to account for potential associated fluctuations in bird activity and birds transiting to/from foraging and roosting areas. Local temperatures varied from 4 - 14^{o}C. Winds varied from 1 – 3 on the Beaufort scale. Light rain occurred throughout the 5th December survey. Weather conditions were considered favourable on all occasions. Weather postponements resulted in only one survey being carried out in both February and March.

Peak counts for the overall survey area were calculated by adding the total abundance of each species within each survey and selecting the highest total count.

Figure 3. *Vantage point location.*

Survey results/discussion

Habitats of wintering bird potential

Desk and ground level wintering bird habitat assessments were carried and used to examine the structures, features and vegetation on site that could provide wintering bird habitat.

Grassland in the north, northwest and west of the survey area were of low to moderate foraging potential for wintering birds given the unmanaged nature of the grass. Buildings within and adjacent to the site were of roosting potential for gull species. The survey area is located between a number of known wintering bird foraging and roosting areas, including a number of SPAs, and so there is a high potential for birds of various species to fly over the site.

Wintering bird activity survey

A total of 30 species were recorded within and above the survey areas across 8 surveys (see Appendix 1a for individual observations). In total, 22 green, 6 amber and 2 red species of conservation concern in Ireland were recorded either within, over or immediately adjacent to the overall survey area boundary. Details regarding the status, behaviour and abundances of species recorded on/over the site relevant to the conservation interests of Special Protected Areas (SPAs) and red listed Birds of Conservation Concern in Ireland (BoCCI) are discussed.

Herring gull (amber BoCCI) - Average altitude of flights by this species over the survey area was approximately 25 m (based on observation estimates). Flights of this species were observed originating from almost all directions. Large flights predominantly occurred over the Knockrabo Apartments to the southeast of the survey area, and over adjacent areas of the survey area. This species was observed foraging within the survey area on only one occasion (single individual on 29/02/2024). Peak count was 4 individuals. This species is a Qualifying Interest for North-West Irish Sea cSPA. The peak number is below 1% of the international population (table 2).

Black-headed gull (amber BoCCI) - Average altitude of flights by this species over the survey area was approximately 16 m (based on observation estimates). Flights of this species were observed on only three occasions (survey 1, 2 and 8). This species was not observed foraging within the survey area. Peak count was 1 individual. This species is a Qualifying Interest for South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA and North-West Irish Sea cSPA. The peak number is below 1% of the international population (table 2).

Common gull (amber BoCCI) - Only one observation of this species was recorded within the overall survey area, a single southern flight across the centre of the survey area. Estimated altitude of this species over the survey area was approximately 20 m. This species was not observed foraging within the overall survey area. Peak count was 2 individuals. This species is a Qualifying Interest for North-West Irish Sea cSPA. The peak number is below 1% of the international population (table 2).

Grey wagtail (red BoCCI) was observed within the survey area. Two observations were made during survey 1, foraging in the southeast to the west of Knockrabo Apartments and flying southwest across the centre of the site. It is likely these observations were of the same individual.

Redwing (red BoCCI) was observed within the survey area. Two observations were made during survey 8, identified by calls and visual confirmation in the treeline dividing the northern and southern portions of the survey area. Two individuals were confirmed by visual confirmation, and It is likely one of these individuals was responsible for the call observation.

Goldcrest (amber BoCCI) was observed within the survey area. One observation was made during survey 8, flying west along the north boundary of the survey area.

Greenfinch (amber BoCCI) was observed within the survey area. Four observations were made across surveys 7 and 8, in the centre and northwest of the site.

Linnet (amber BoCCI) was observed within the survey area. One observation was made during survey 8, calling from trees to the north of the abandoned house in the south of the survey area.

Table 1. *Species observed on, above and immediately adjacent to the survey area.*

Common name	BTO	Latin name	BoCCI
Blackbird	B.	*Turdus merula*	Green
Blackcap	BC	*Sylvia atricapilla*	Green
Black-headed Gull	BH	*Larus ridibundus*	Amber
Blue Tit	BT	*Cyanistes caeruleus*	Green
Chaffinch	CH	*Fringilla coelebs*	Green
Coal Tit	CT	*Periparus ater*	Green
Common Gull	CM	*Larus canus*	Amber
Dunnock	D.	*Prunella modularis*	Green
Feral Pigeon	FP	*Columba livia f. domestica*	Green
Goldcrest	GC	*Regulus regulus*	Amber
Goldfinch	GO	*Carduelis carduelis*	Green
Great Tit	GT	*Parus major*	Green
Greenfinch	GR	*Chloris chloris*	Amber
Grey Wagtail	GL	*Motacilla cinerea*	Red
Herring Gull	HG	*Larus argentatus*	Amber
Hooded Crow	HC	*Corvus cornix*	Green
Jackdaw	JD	*Corvus monedula*	Green
Jay	J.	*Garrulus glandarius*	Green
Linnet	LI	*Carduelis cannabina*	Amber
Long-tailed Tit	LT	*Aegithalus caudatus*	Green
Magpie	MG	*Pica pica*	Green
Pied Wagtail	PW	*Motacilla alba yarrellii*	Green
Raven	RN	*Corvus corax*	Green
Redwing	RE	*Turdus iliacus*	Red
Robin	R.	*Erithacus rubecula*	Green
Rook	RO	*Corvus frugilegus*	Green
Siskin	SK	*Spinus spinus*	Green
Treecreeper	TC	*Certhia familiaris*	Green
Woodpigeon	WP	*Columba palumbus*	Green
Wren	WR	*Troglodytes troglodytes*	Green

Table 2. *Peak counts of species recorded on, over and immediately adjacent to the survey area.*

Species	Peak count (2023/24)	1% national	1% international
Blackbird	2		
Blackcap	1		
Black-headed Gull	1		>10,000
Blue Tit	3		
Chaffinch	3		
Coal Tit	2		
Common Gull	2		>10,000
Dunnock	1		
Feral Pigeon	18		

Species	Peak count (2023/24)	1% national	1% international
Goldcrest	2		
Goldfinch	3		
Great Tit	1		
Greenfinch	2		
Grey Wagtail	1		
Herring Gull	4		>1000
Hooded Crow	3		
Jackdaw	4		
Jay	1		
Linnet	1		
Long-tailed Tit	3		
Magpie	7		
Pied Wagtail	1		
Raven	2		
Redwing	2		
Robin	2		
Rook	1		
Siskin	2		
Treecreeper	1		
Woodpigeon	10		
Wren	1		

Wintering bird assessment findings

Review of local bird records

The review of existing bird records (sourced from NBDC Database) within a 2 km^2 grid (Reference grid O12Z) encompassing the study area reveals that 63 known bird species have previously been observed and recorded locally (*Table 2*).

Table 3: *Status of bird species within 2 km^2 (grid O12Z)*

Species Name	Record Count	Date of Last Record	Dataset	BoCCI Status
Barn Swallow (Hirundo rustica)	9	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Black Redstart (Phoenicurus ochruros)	1	08/04/2023	Birds of Ireland	
Black-billed Magpie (Pica pica)	20	31/05/2023	Birds of Ireland	
Blackcap (Sylvia atricapilla)	7	31/05/2023	Birds of Ireland	
Black-headed Gull (Larus ridibundus)	3	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Blue Tit (Cyanistes caeruleus)	22	02/05/2023	Birds of Ireland	
Brambling (Fringilla montifringilla)	1	31/12/2011	Bird Atlas 2007 - 2011	
Chaffinch (Fringilla coelebs)	15	02/05/2023	Birds of Ireland	
Coal Tit (Periparus ater)	7	30/09/2016	Ireland's BioBlitz	

Species Name	Record Count	Date of Last Record	Dataset	BoCCI Status
Common Blackbird (Turdus merula)	19	31/05/2023	Birds of Ireland	
Common Bullfinch (Pyrrhula pyrrhula)	2	31/12/2011	Bird Atlas 2007 - 2011	
Common Buzzard (Buteo buteo)	1	01/05/2021	Birds of Ireland	
Common Chiffchaff (Phylloscopus collybita)	10	29/09/2016	Ireland's BioBlitz	
Common Coot (Fulica atra)	3	08/04/2023	Birds of Ireland	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
Common Kestrel (Falco tinnunculus)	3	17/08/2012	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Linnet (Carduelis cannabina)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Moorhen (Gallinula chloropus)	12	01/03/2023	Birds of Ireland	
Common Redshank (Tringa totanus)	1	04/12/2022	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Common Starling (Sturnus vulgaris)	16	29/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Swift (Apus apus)	11	28/06/2023	Swifts of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Wood Pigeon (Columba palumbus)	21	02/05/2023	Birds of Ireland	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
Eurasian Collared Dove (Streptopelia decaocto)	13	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Curlew (Numenius arquata)	2	09/03/2018	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Eurasian Jackdaw (Corvus monedula)	24	31/05/2023	Birds of Ireland	
Eurasian Jay (Garrulus glandarius)	1	28/03/2022	Birds of Ireland	
Eurasian Oystercatcher (Haematopus ostralegus)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Eurasian Sparrowhawk (Accipiter nisus)	3	01/04/2023	Birds of Ireland	
Eurasian Treecreeper (Certhia familiaris)	2	31/12/2011	Bird Atlas 2007 - 2011	

Species Name	Record Count	Date of Last Record	Dataset	BoCCI Status
European Goldfinch (Carduelis carduelis)	12	02/05/2023	Birds of Ireland	
European Greenfinch (Carduelis chloris)	13	31/12/2011	Bird Atlas 2007 - 2011	
European Robin (Erithacus rubecula)	21	02/05/2023	Birds of Ireland	
Fieldfare (Turdus pilaris)	2	31/12/2011	Bird Atlas 2007 - 2011	
Gadwall (Anas strepera)	2	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Goldcrest (Regulus regulus)	21	02/05/2023	Birds of Ireland	
Great Cormorant (Phalacrocorax carbo)	3	30/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Great Tit (Parus major)	9	01/03/2023	Birds of Ireland	
Grey Heron (Ardea cinerea)	7	01/03/2023	Birds of Ireland	
Grey Wagtail (Motacilla cinerea)	2	08/03/2023	Birds of Ireland	
Hedge Accentor (Prunella modularis)	14	01/03/2023	Birds of Ireland	
Herring Gull (Larus argentatus)	7	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Hooded Crow (Corvus cornix)	16	01/03/2023	Birds of Ireland	
House Martin (Delichon urbicum)	10	18/05/2001	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow (Passer domesticus)	12	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Lesser Redpoll (Carduelis cabaret)	2	31/12/2011	Bird Atlas 2007 - 2011	
Long-eared Owl (Asio otus)	1	09/02/2009	Birds of Ireland	
Long-tailed Tit (Aegithalos caudatus)	10	30/09/2016	Ireland's BioBlitz	
Mallard (Anas platyrhynchos)	15	08/04/2023	Birds of Ireland	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
Mew Gull (Larus canus)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mistle Thrush (Turdus viscivorus)	3	31/12/2011	Bird Atlas 2007 - 2011	
Mute Swan (Cygnus olor)	4	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

Species Name	Record Count	Date of Last Record	Dataset	BoCCI Status
Northern Goshawk (Accipiter gentilis)	1	30/08/1998	Rare birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Peregrine Falcon (Falco peregrinus)	1	06/06/2014	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
Pied Wagtail (Motacilla alba subsp. yarrellii)	5	01/03/2023	Birds of Ireland	
Redwing (Turdus iliacus)	1	31/12/2011	Bird Atlas 2007 - 2011	
Rock Pigeon (Columba livia)	3	29/09/2016	Ireland's BioBlitz	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Rook (Corvus frugilegus)	21	01/03/2023	Birds of Ireland	
Sand Martin (Riparia riparia)	1	14/05/2001	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Song Thrush (Turdus philomelos)	13	02/05/2023	Birds of Ireland	
Spotted Flycatcher (Muscicapa striata)	1	31/05/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Tufted Duck (Aythya fuligula)	9	08/04/2023	Birds of Ireland	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
White Wagtail (Motacilla alba)	2	31/12/2011	Bird Atlas 2007 - 2011	
Willow Warbler (Phylloscopus trochilus)	1	31/12/2011	Bird Atlas 2007 - 2011	
Winter Wren (Troglodytes troglodytes)	20	31/05/2023	Birds of Ireland	

Historical Surveys

Dr. Tess Handby

As part of PhD research by Dr. Tess Handby (2022), multiple roosting sites were recorded for Brent geese of the East Canadian High Arctic population within approximately 15km of the wintering bird survey area. As this species' preferred inland foraging habitat consists mainly of amenity grassland, the survey area under this reports assessment would not be a preferential foraging area for Brent geese. Multiple area in the vicinity of the survey area such as Deer Park, Mount Anville Secondary School and Blackrock College/Willow Park grounds would be preferential to the survey area for foraging by this species. This species was neither observed flying over or heard in the vicinity during any surveys. Core/buffer/transition zones, roost sites, suitable/unsuitable foraging areas, and overall foraging ranges of wintering Brent Geese in Dublin, identified by Dr. Handby, are demonstrated below in figure 4.

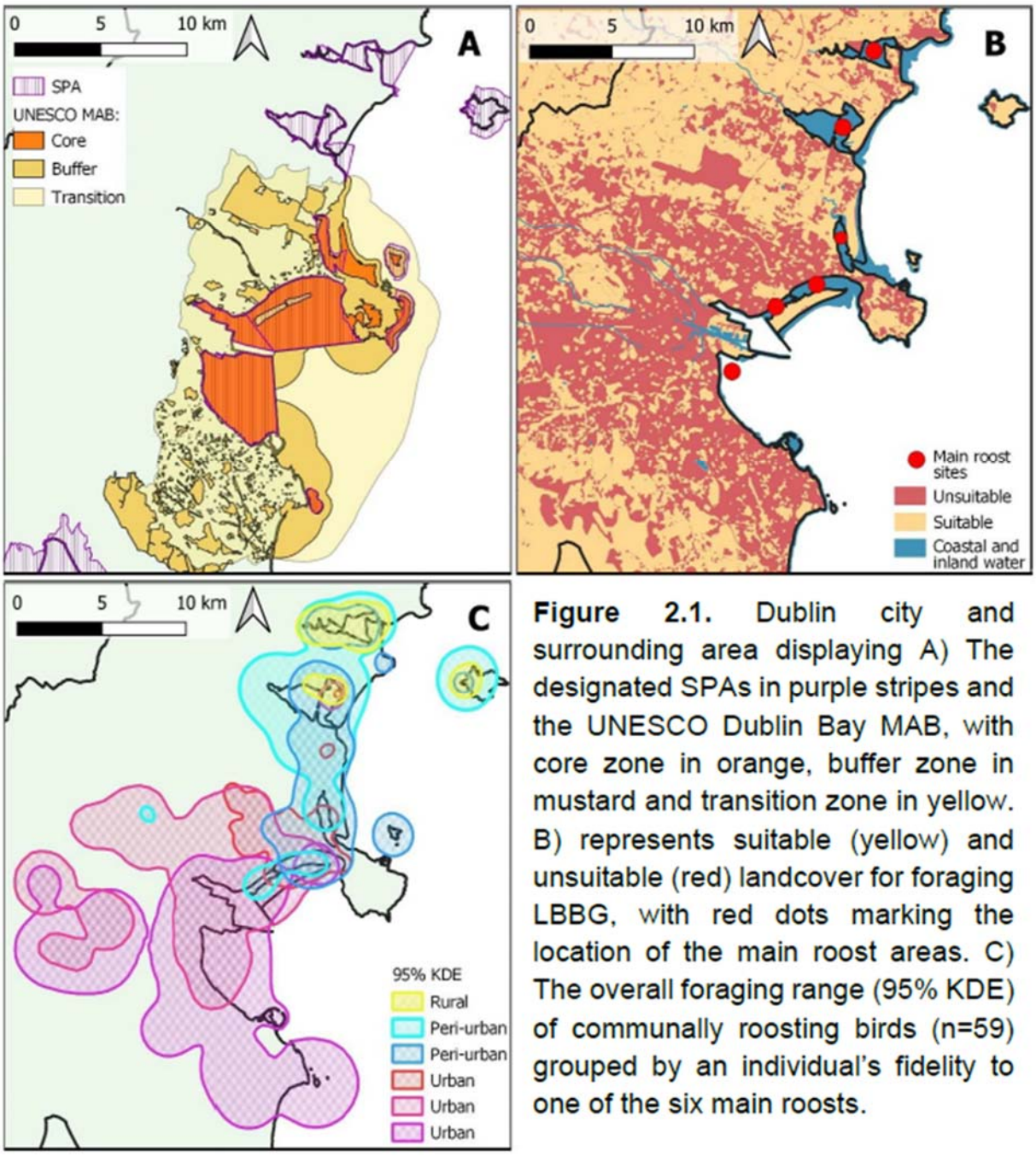

Figure 2.1. Dublin city and surrounding area displaying A) The designated SPAs in purple stripes and the UNESCO Dublin Bay MAB, with core zone in orange, buffer zone in mustard and transition zone in yellow. B) represents suitable (yellow) and unsuitable (red) landcover for foraging LBBG, with red dots marking the location of the main roost areas. C) The overall foraging range (95% KDE) of communally roosting birds (n=59) grouped by an individual's fidelity to one of the six main roosts.

Figure 4. *Designated areas and identified brent goose habitat and use areas (Handby, 2022).*

I-WeBS

I-WeBS National and Site Trends Report 1994/95 – 2019/20 report presents national and site-specific trends of wetland birds in Ireland. This report was used to assess the trends of species recorded during wintering bird surveys at Howth Demesne and Castle grounds. The survey area is proximate to Dublin Bay (OU404).

No species considered in the I-WeBS National and Site Trends Report 1994/95 – 2019/20 report were recorded on, above or immediately adjacent to the survey area.

The national wetland bird trend summary and trends for individual species in Dublin Bay are included in appendix 1b and 1c of this report.

National Summary

Species	Trend (%)			Long Term Trend
	National - 6 Year	National - 12 Year	National - 28 Year	
Scaup	-33.6	-82.9	-89.2	Large Decline
Pochard	-19.8	-60.4	-79.1	Large Decline
Goldeneye	-32.5	-39.0	-66.9	Large Decline
Lapwing	-6.5	-45.1	-63.9	Large Decline
Grey Plover	-30.6	-39.4	-57.8	Large Decline
Golden Plover	-16.9	-58.1	-54.1	Large Decline
Dunlin	5.9	-21.2	-45.2	Moderate Decline
Curlew	-9.4	-23.7	-43.1	Moderate Decline
Turnstone	-33.6	-46.0	-23.7	Intermediate Decline
Coot	-10.1	1.1	-23.2	Intermediate Decline
Mallard	-11.3	-19.7	-19.1	Intermediate Decline
Wigeon	0.9	-17.0	-18.2	Intermediate Decline
Tufted Duck	-20.7	-28.9	-17.9	Intermediate Decline
Red-breasted Merganser	-12.9	5.2	-14.7	Intermediate Decline
Pintail	-0.8	-6.0	-13.7	Intermediate Decline
Great Crested Grebe	-39.5	-6.1	-10.8	Intermediate Decline
Shoveler	23.0	-21.3	-10.8	Intermediate Decline
Knot	0.0	-12.2	-9.8	Intermediate Decline
Bar-tailed Godwit	-32.6	-13.9	-5.1	Intermediate Decline
Ringed Plover	-4.3	-26.8	-1.1	Intermediate Decline
Grey Heron	1.0	-4.9	6.6	Stable or Increasing
Redshank	-14.0	-28.4	6.7	Stable or Increasing
Shelduck	6.3	-0.8	9.3	Stable or Increasing
Oystercatcher	-17.5	-31.1	10.8	Stable or Increasing
Mute Swan	4.6	9.6	13.8	Stable or Increasing
Teal	1.8	5.7	19.4	Stable or Increasing
Purple Sandpiper	-36.4	-37.6	23.5	Stable or Increasing
Gadwall	-26.5	4.3	24.4	Stable or Increasing
Little Grebe	6.1	16.7	38.2	Stable or Increasing
Greenshank	0.9	7.3	41.0	Stable or Increasing
Cormorant	38.5	8.4	42.9	Stable or Increasing
Sanderling	-23.8	-11.1	84.6	Stable or Increasing
Black-tailed Godwit	22.5	25.0	92.3	Stable or Increasing
Light-bellied Brent Goose	-11.2	1.2	93.3	Stable or Increasing
Little Egret	34.6	61.5	483.3	Stable or Increasing

Figure 5. *I-WeBS National Trends Report.*

Impact (in the absence of mitigation)

The proposed site outline within the survey area is of low importance to the local wintering bird population. However, the impact of the development during construction phase will be a loss of existing habitats. These habitats are of low importance to wintering birds. The proposed development would not belikey to represent a significant collision risk to wintering birds. Neighbouring properties are of similar height and the proposed development will be clearly visible to bird species.

Mitigation

The following mitigation measures relevant to birds, as well as those outlined within the accompanying EIAR, shall be implemented to minimise any potential negative impact on biodiversity:

- An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas including birds will not be impacted.
- 10 Rowan (*Sorbus aucuparia*) will be planted on site for redwing (*Turdus iliacus*) foraging.
- The species used within the wildflower meadow will be selected by the project ecologist and will use pollinator friendly species that will provide foraging for Grey wagtail.

Conclusion

This report aims to gather baseline data and to assist in assessing the potential impacts on wintering birds from future proposed developments on the grounds, particularly those listed as Qualifying Interests of SPAs within 15 km and other amber/red-listed birds of conservation concern in Ireland (BoCCI). 6 surveys by Frank Spellman and 2 surveys by Emma Peters during the wintering bird season from November 2023 to March 2024.

A total of 30 species of birds were recorded within and above the survey areas across 8 surveys. Twenty two green, 6 amber and 2 red species of conservation concern were recorded either within, over or immediately adjacent to the survey area boundary. Herring Gull, Black-headed Gull and Common Gull were species listed as Qualifying Interests of designated sites within 15 km of Knockrabo. Sightings of these species during surveys almost entirely consisted of flights. Only one foraging sighting of these species (individual Herring Gull) was recorded within the survey area. Two red-listed species were only recorded during one survey each. Other amber-listed species were recorded on no more than two occasions each.

The proposed development is not predicted to have a significant impact on wintering bird species. The impact would be considered to be minor adverse, not significant, long term and permanent.

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Appendix I

Appendix 1a – Individual survey observations.

Survey	Date	Time	Species	No.	Behaviour	Height (m)	Details
1	27/11/2023	09:31	Woodpigeon	1	Flight Path	10	Northeast flight across northwest of survey area.
1	27/11/2023	09:36	Hooded Crow	2	Perched		On large tree in southeast corner of survey area.
1	27/11/2023	09:44	Black-headed Gull	1	Flight Path	20	Southeast flight across south of survey area.
1	27/11/2023	09:47	Wren	1	Singing		From vegetation along southern boundary of survey area.
1	27/11/2023	09:50	Herring Gull	3	Flight Path	30	West flight over southern survey area boundary.
1	27/11/2023	09:56	Herring Gull	2	Flight Path	20	Northeast flight from south of survey area over apartments.
1	27/11/2023	10:00	Dunnock	1	Foraging		Along trail between southwest survey area and residential gardens.
1	27/11/2023	10:15	Jackdaw	2	Flight Path	10	North flight across west of survey area.
1	27/11/2023	10:17	Herring Gull	1	Large Flight	30	Over entire southern survey area.
1	27/11/2023	10:20	Dunnock	1	Singing		In boundary vegetation between southwest northwest areas.
1	27/11/2023	10:22	Magpie	2	Perched		In large evergreen tree adjacent to west corner of Knockrabo apartments.
1	27/11/2023	10:23	Grey Wagtail	1	Flight Path	10	Southwest flight across centre of site west of Knockrabo apartments.
1	27/11/2023	10:24	Herring Gull	4	Flight Path	20	Northeast flight from south of survey area over apartments.
1	27/11/2023	10:28	Jackdaw	1	Flight Path	40	Southeast flight across south of survey area.
1	27/11/2023	10:29	Robin	1	Singing		In treeline to southwest of abandoned house.
1	27/11/2023	10:37	Magpie	1	Flight Path	20	Northeast flight from centre of survey area over apartments.
1	27/11/2023	10:42	Herring Gull	1	Flight Path	10	Northeast flight across northwest of survey area.
1	27/11/2023	10:48	Grey Wagtail	1	Foraging		In southeast of survey area.
1	27/11/2023	10:51	Robin	1	Foraging		In southeast of survey area.
1	27/11/2023	10:54	Wren	1	Singing		In vegetation in southeast corner of survey area.
2	29/11/2023	12:18	Woodpigeon	9	Flight Path	10	Northwest flight over centre of survey area.
2	29/11/2023	12:21	Herring Gull	2	Flight Path	30	Northwest flight over centre of survey area.
2	29/11/2023	12:32	Robin	1	Foraging		In northwest of south portion of survey area.
2	29/11/2023	12:35	Woodpigeon	1	Flight Path	20	Southeast flight across west of survey area.
2	29/11/2023	12:45	Herring Gull	1	Flight Path	30	East flight across south of survey area.
2	29/11/2023	12:59	Blackbird	2	Foraging		In west of south survey area.
2	29/11/2023	13:07	Feral Pigeon	12	Perched		On roof of derelict house.
2	29/11/2023	13:22	Herring Gull	2	Flight Path	20	West flight across south of survey area.
2	29/11/2023	13:25	Herring Gull	1	Perched		On roof of derelict house.
2	29/11/2023	13:41	Herring Gull	1	Flight Path	30	North flight across southwest and centre of survey area.
2	29/11/2023	13:44	Long-tailed Tit	1	Foraging		In large tree in southeast of survey area.
2	29/11/2023	13:45	Robin	1	Singing		From vegetation along southern boundary of survey area.
2	29/11/2023	13:47	Blackbird	1	Foraging		To west of derelict house.
2	29/11/2023	13:50	Blue Tit	1	Foraging		South of abandoned house.
2	29/11/2023	13:54	Herring Gull	1	Flight Path	10	South flight over southwest corner of survey area.
2	29/11/2023	13:54	Herring Gull	1	Flight Path	20	Southwest flight over south of survey area.
2	29/11/2023	13:57	Black-headed Gull	1	Flight Path	20	Northwest flight over centre of survey area.
2	29/11/2023	13:59	Hooded Crow	1	Perched		On abandoned building roof.
2	29/11/2023	14:04	Herring Gull	3	Flight Path	20	Northwest flight from Mount Anville veering southwest over west of survey area.
2	29/11/2023	14:08	Hooded Crow	3	Perched		In large tree in southeast of survey area.
2	29/11/2023	14:21	Magpie	3	Perched		In large tree in southeast of survey area.
2	29/11/2023	14:24	Feral Pigeon	1	Flight Path	20	Southeast flight across centre of survey area.

Survey	Date	Time	Species	No.	Behaviour	Height (m)	Details
3	07/12/2023	13:47	Common Gull	2	Flight Path	20	South flight across centre from north to south.
3	07/12/2023	13:49	Blackbird	1	Foraging		In north of survey area to west of rubble pile.
3	07/12/2023	13:52	Woodpigeon	2	Flight Path	10	Southwest flight across west of survey area.
3	07/12/2023	13:55	Wren	1	Foraging		In west of survey area.
3	07/12/2023	13:57	Woodpigeon	1	Flight Path	20	Southeast flight across south of survey area.
3	07/12/2023	14:00	Woodpigeon	1	Flight Path	20	Southwest flight across centre-west/south of survey area.
3	07/12/2023	14:12	Blue Tit	1	Foraging		In southwest of survey area.
3	07/12/2023	14:17	Woodpigeon	1	Flight Path	20	Northeast flight across west and north of survey area.
3	07/12/2023	14:20	Robin	1	Singing		In overgrown laneway to rear of residential gardens.
3	07/12/2023	14:21	Herring Gull	1	Flight Path	40	Northwest flight across centre of survey area.
3	07/12/2023	14:22	Feral Pigeon	4	Perched		On roof of derelict house.
3	07/12/2023	14:22	Woodpigeon	1	Perched		In treeline in southwest corner of south of survey area.
3	07/12/2023	14:23	Blue Tit	1	Foraging		In treeline along treeline to southwest of derelict house.
3	07/12/2023	14:24	Woodpigeon	1	Flight Path	10	Northeast flight across south of survey area.
3	07/12/2023	14:25	Feral Pigeon	18	Perched		On roof of derelict house.
3	07/12/2023	14:26	Magpie	1	Perched		In tree to southeast of derelict house.
3	07/12/2023	14:35	Woodpigeon	2	Perched		In treeline in centre of survey area.
3	07/12/2023	14:36	Goldfinch	2	Foraging		In scrub along west boundary with allotments.
3	07/12/2023	14:39	Herring Gull	1	Perched		On roof of derelict house.
3	07/12/2023	14:41	Herring Gull	3	Perched		On roof of residential building to southwest of survey area.
3	07/12/2023	15:00	Herring Gull	1	Flight Path	20	Southwest flight across centre/southwest of survey area.
3	07/12/2023	15:01	Woodpigeon	1	Flight Path	20	Southwest flight across west of survey area.
3	07/12/2023	15:03	Herring Gull	1	Flight Path	10	Northwest flight over south of survey area.
3	07/12/2023	15:06	Robin	1	Singing		In treeline along southern survey area boundary.
3	07/12/2023	15:10	Woodpigeon	1	Perched		In large standalone tree in southeast of survey area.
3	07/12/2023	15:12	Woodpigeon	1	Perched		In treeline along southern survey area boundary.
3	07/12/2023	15:14	Raven	1	Flight path	10	South flight across southeast of survey area.
3	07/12/2023	15:23	Hooded Crow	1	Flight Path	10	Northwest flight across centre of survey area.
3	07/12/2023	15:26	Herring Gull	2	Large Flight	40	Over northwest of survey area.
3	07/12/2023	15:38	Herring Gull	1	Flight Path	10	North flight over south of survey area veering west over northwest of survey area.
3	07/12/2023	15:42	Woodpigeon	1	Flight Path	20	West turning back east from Knockrabo apartments.
3	07/12/2023	15:49	Woodpigeon	1	Flight Path	10	East flight across south of survey area.
3	07/12/2023	15:51	Woodpigeon	1	Perched		In large standalone tree to west of apartments.
4	05/12/2023	09:50	Blackbird	1	Foraging		In west of survey area.
4	05/12/2023	09:53	Woodpigeon	1	Flight Path	20	South flight across west of survey area.
4	05/12/2023	09:56	Feral Pigeon	2	Flight Path	10	Northwest flight from derelict house.
4	05/12/2023	10:01	Herring Gull	1	Flight Path	20	Southwest flight over south of survey area.
4	05/12/2023	10:18	Robin	1	Foraging		Along trail between southwest survey area and residential gardens.
4	05/12/2023	10:25	Woodpigeon	8	Flight Path	20	Northeast flight across west and centre of survey area.
4	05/12/2023	10:29	Blackbird	1	Foraging		Adjacent to derelict house.
4	05/12/2023	10:34	Magpie	1	Perched		In boundary treeline southwest of derelict house.
4	05/12/2023	10:34	Woodpigeon	1	Perched		In boundary treeline southwest of derelict house.
4	05/12/2023	10:39	Blackbird	1	Perched		In mature tree in centre south of survey area.
4	05/12/2023	10:43	Woodpigeon	1	Perched		In treeline along south boundary in south of survey area.
4	05/12/2023	10:58	Great Tit	1	Singing		Treeline along southeast corner of south of survey area.
5	08/01/2024	09:04	Feral Pigeon	1	Flight Path		Southeast flight over southeast boundary of survey area.

Survey	Date	Time	Species	No.	Behaviour	Height (m)	Details
5	08/01/2024	09:15	Coal Tit	1	Foraging		In treeline/scrub between northern and southern portions of survey area.
5	08/01/2024	09:15	Long-tailed Tit	2	Foraging		In treeline/scrub between northern and southern portions of survey area.
5	08/01/2024	09:20	Robin	1	Foraging		In overgrown laneway to rear of residential gardens.
5	08/01/2024	09:25	Rook	1	Flight Path		Northeast flight across west of survey area.
5	08/01/2024	10:00	Dunnock	1	Foraging		In southwest corner of survey area.
5	08/01/2024	10:14	Magpie	3	Flight Path		Southwest flight across northwest of survey area.
5	08/01/2024	10:23	Robin	1	Foraging		In scrub in west of foraging area.
5	08/01/2024	10:25	Woodpigeon	1	Flight Path	10	North flight across west of survey area.
5	08/01/2024	10:30	Feral Pigeon	1	Flight Path	10	North flight across west of survey area.
5	08/01/2024	10:42	Blue Tit	1	Singing		In scrub in northwest corner of survey area.
5	08/01/2024	10:43	Robin	1	Foraging		In stand of young ash trees in northwest of survey area.
5	08/01/2024	10:45	Blackbird	1	Singing		In scrub in northwest corner of survey area.
5	08/01/2024	10:52	Hooded Crow	2	Flight Path	20	Northeast flight across north portion of survey area.
5	08/01/2024	10:55	Goldfinch	2	Flight Path	10	Southeast flight across west of north portion of survey area.
5	08/01/2024	11:10	Blackbird	1	Perched		In treeline/scrub between northern and southern portions of survey area.
5	08/01/2024	11:12	Woodpigeon	1	Flight Path	10	Northeast flight across west of survey area.
5	08/01/2024	11:14	Hooded Crow	2	Foraging		Foraging on ground in northwest of southern portion of survey area.
5	08/01/2024	11:22	Herring Gull	1	Flight Path	20	North flight over Knockrabo apartments.
5	08/01/2024	11:32	Herring Gull	1	Flight Path	30	East flight over southern portion of survey area.
5	08/01/2024	11:37	Herring Gull	2	Flight Path	30	East flight over road to south of survey area.
5	08/01/2024	11:43	Woodpigeon	1	Perched		In treeline along boundary to west of abandoned house.
5	08/01/2024	11:49	Blackbird	1	Foraging		South of abandoned house.
6	11/01/2024	14:13	Herring Gull	1	Flight Path	40	South flight across west of survey area.
6	11/01/2024	14:21	Robin	1	Foraging		In southeast corner of southern portion of survey area.
6	11/01/2024	14:23	Robin	1	Foraging		In stand of young ash trees in northwest of survey area.
6	11/01/2024	14:29	Herring Gull	2	Perched		On roof of Knockrabo apartments.
6	11/01/2024	14:37	Robin	1	Perched		In tree to south of derelict house.
6	11/01/2024	14:37	Woodpigeon	1	Perched		In tree to south of derelict house.
6	11/01/2024	14:42	Woodpigeon	1	Flight Path	10	West flight across southern boundary of survey area.
6	11/01/2024	14:54	Jackdaw	2	Flight Path	80	Southwest flight across west of survey area.
6	11/01/2024	14:58	Feral Pigeon	4	Flight Path	40	Southeast flight landing on derelict house in southwest of survey area.
6	11/01/2024	15:04	Pied Wagtail	1	Flight Path	10	Northwest flight across west of survey area.
6	11/01/2024	15:10	Jackdaw	2	Flight Path	20	Northeast flight across west of survey area.
6	11/01/2024	15:22	Jackdaw	2	Perched		Treeline along west boundary of north portion of survey area.
6	11/01/2024	15:22	Magpie	1	Perched		Treeline along west boundary of north portion of survey area.
6	11/01/2024	15:29	Goldfinch	3	Foraging		In centre of west of survey area.
6	11/01/2024	15:33	Herring Gull	4	Flight Path	40	Southeast flight across west of survey area.
6	11/01/2024	15:38	Robin	1	Foraging		In scrub between southwest of site and rear of residential gardens.
6	11/01/2024	15:42	Blue Tit	1	Foraging		In scrub between southwest of site and rear of residential gardens.
6	11/01/2024	15:55	Blackbird	2	Perched		In standalone tree in west of survey area.
6	11/01/2024	15:57	Blackbird	1	Singing		From scrub in western corner of survey area.
6	11/01/2024	15:59	Herring Gull	1	Flight Path	40	East flight across south of survey area.
6	11/01/2024	16:01	Coal Tit	2	Foraging		From scrub in western corner of survey area.
6	11/01/2024	16:27	Herring Gull	1	Flight Path	50	East flight across north portion of survey area.
6	11/01/2024	16:30	Magpie	2	Flight Path	50	Northwest flight across north portion of survey area.

Survey	Date	Time	Species	No.	Behaviour	Height (m)	Details
6	11/01/2024	16:31	Woodpigeon	2	Perched		Perched in mature standalone tree to east of rubble pile.
6	11/01/2024	16:36	Robin	1	Foraging		On rubble pile in centre of north of survey area.
6	11/01/2024	16:38	Raven	2	Perched		In large evergreen tree along boundary of north and south portions of survey area.
6	11/01/2024	16:38	Woodpigeon	2	Perched		In large evergreen tree along boundary of north and south portions of survey area.
7	29/02/2024	15:30	Magpie	4	Foraging		In scrub area infested with Jap.Knotweed.
7	29/02/2024	15:36	Herring Gull	2	Flight path	20	Southeast over abandoned house.
7	29/02/2024	15:39	Greenfinch	2	Song		In bushes on mound.
7	29/02/2024	15:43	Woodpigeon	1	Flight path	15	S through centre of site.
7	29/02/2024	15:44	Magpie	4	Perched		In treetops of hedgerow NE of abandoned house.
7	29/02/2024	15:49	Herring Gull	1	Flight path	20	Over the apartments E of the site.
7	29/02/2024	15:51	Chaffinch	1	Song		In large tree E of large mound.
7	29/02/2024	15:51	Woodpigeon	2	Flight path	15	SW over wet grassland.
7	29/02/2024	15:52	Herring Gull	1	Flight path	15	W across N of site.
7	29/02/2024	15:52	Siskin	2	Song		In large tree E of large mound.
7	29/02/2024	15:54	Robin	2	Perched		In bushes on mound.
7	29/02/2024	15:55	Blue Tit	1	Call		Most E treeline
7	29/02/2024	15:55	Great Tit	1	Call		In bushes on mound.
7	29/02/2024	15:55	Great Tit	1	Call		Most E treeline
7	29/02/2024	15:55	Robin	1	Call		Most E treeline
7	29/02/2024	15:56	Blue Tit	1	Perched		In bushes on mound.
7	29/02/2024	15:56	Great Tit	1	Perched		In bushes on mound.
7	29/02/2024	16:00	Herring Gull	4	Big Flight		Over area infested with Jap. Knotweed.
7	29/02/2024	16:01	Woodpigeon	2	Flight path	15	S over centre of site.
7	29/02/2024	16:02	Jackdaw	2	Perched		In treeline W of managed gardens.
7	29/02/2024	16:02	Wren	1	Call		In treeline W of managed gardens.
7	29/02/2024	16:05	Blackbird	1	Perched		In scrub in NW corner.
7	29/02/2024	16:06	Blue Tit	1	Perched		In scrub in NW corner.
7	01/03/2024	16:07	Herring Gull	1	Flight path	30	S along E of site.
7	29/02/2024	16:13	Woodpigeon	1	Flight path	30	E across large mound.
7	29/02/2024	16:13	Woodpigeon	3	Perched		In treeline W of managed gardens.
7	29/02/2024	16:14	Blue Tit	1	Perched		In treeline W of managed gardens.
7	29/02/2024	16:14	Magpie	1	Perched		In treeline W of managed gardens.
7	29/02/2024	16:16	Jackdaw	3	Perched		In hedgerow N of area infested with Jap. Knotweed.
7	29/02/2024	16:21	Blue Tit	1	Perched		In scrub in NW corner.
7	29/02/2024	16:21	Magpie	1	Perched		In hedgerow N of area infested with Jap. Knotweed.
7	29/02/2024	16:22	Pied Wagtail	1	Perched		In treeline north of the abandoned house.
7	29/02/2024	16:22	Woodpigeon	1	Flight path	20	N over wet grassland.
7	29/02/2024	16:25	Raven	1	Call		Treeline SW corner of the site.
7	29/02/2024	16:32	Great Tit	1	Call		Treeline SW corner of the site.
7	29/02/2024	16:33	Herring Gull	3	Foraging		In wet grassland central to the site.
7	29/02/2024	16:33	Hooded Crow	1	Perched		In treeline W of managed gardens.
7	29/02/2024	16:33	Woodpigeon	7	Perched		In treeline in the North, most W treeline.
7	29/02/2024	16:34	Hooded Crow	2	Flight path	20	W across wet grassland.
7	29/02/2024	16:35	Great Tit	1	Perched		In treeline in the North, most W treeline.
7	29/02/2024	16:36	Chaffinch	1	Perched		Treeline directly N of the abandoned house.
7	29/02/2024	16:36	Goldfinch	2	Perched		In treeline in the North, most W treeline.

Survey	Date	Time	Species	No.	Behaviour	Height (m)	Details
7	29/02/2024	16:36	Robin	1	Perched		Treeline directly N of the abandoned house.
7	29/02/2024	16:37	Blue Tit	1	Call		Scrub in NW corner of site.
7	29/02/2024	16:54	Blue Tit	1	Perched		In treeline SW of the abandoned house.
7	29/02/2024	16:54	Robin	2	Perched		In walled garden W of abandoned house.
7	29/02/2024	16:58	Blackcap	1	Perched		In treetop of walled garden W of the abandoned house.
7	29/02/2024	16:58	Chaffinch	2	Perched		In walled garden W of abandoned
7	29/02/2024	16:59	Goldfinch	1	Perched		In treetop of walled garden W of the abandoned house.
7	29/02/2024	17:02	Long-tailed Tit	1	Perched		In hedgerow SW of abandoned house.
7	29/02/2024	17:06	Magpie	1	Perched		In tree In front of entrance point.
7	29/02/2024	17:06	Woodpigeon	1	Flight path	10	N along west boundary of site.
7	29/02/2024	17:10	Herring Gull	4	Large flight	20	Flying N along E of site.
7	29/02/2024	17:10	Hooded Crow	1	Perched		In hedgerow directly S of the abandoned house.
7	29/02/2024	17:17	Magpie	1	Flight path		SW over wet grassland.
7	29/02/2024	17:19	Jackdaw	2	Perched		In tree E if abandoned house.
7	29/02/2024	17:25	Woodpigeon	1	Flight path	10	W across N of site.
7	29/02/2024	17:26	Goldfinch	3	Perched		Treeline east of managed gardens.
7	29/02/2024	17:29	Robin	1	Call		In tree E if abandoned house.
7	29/02/2024	17:30	Robin	1	Perched		In hedgerow NE of abandoned house.
8	12/03/2024	14:24	Chaffinch	3	Perched		tree SE to the abandoned house.
8	12/03/2024	14:30	Herring Gull	4	Large flight		Over wet grassland portion of the site.
8	12/03/2024	14:31	Herring Gull	1	Flight path	20	N over wet grassland.
8	12/03/2024	14:31	Jackdaw	1	Calling		In tree NW of the abandoned house.
8	12/03/2024	14:33	Magpie	2	Perched		Tree in southeast corner of site.
8	12/03/2024	14:34	Woodpigeon	1	Perched		tree SE to the abandoned house.
8	12/03/2024	14:36	Blue Tit	1	Calling		tree SE to the abandoned house.
8	12/03/2024	14:36	Robin	1	Perched		In tree in SE corner.
8	12/03/2024	14:39	Jay	1	Perched		Hedgerow S of the abandoned house.
8	12/03/2024	14:40	Dunnock	1	Calling		Hedgerow SW of the abandoned house.
8	12/03/2024	14:40	Long-tailed Tit	1	Calling		Hedgerow SW of the abandoned house.
8	12/03/2024	14:42	Herring Gull	1	Flight path	20	In Trees in SE corner.
8	12/03/2024	14:45	Blackbird	1	Perched		Hedgerow S of the abandoned house.
8	12/03/2024	14:46	Blue Tit	1	Perched		In tree in SE corner.
8	12/03/2024	14:46	Woodpigeon	10	Perched		N of the roof on the abandoned house.
8	12/03/2024	14:50	Blackbird	1	Foraging		Hedgerow SW of the abandoned house.
8	12/03/2024	14:50	Goldfinch	2	Perching		In tree within walled garden.
8	12/03/2024	14:50	Jackdaw	4	Perching		In tree within walled garden.
8	12/03/2024	14:57	Blue Tit	1	Perching		In scrub within the walled garden.
8	12/03/2024	15:00	Blackbird	1	Perched		In scrub in North of site.
8	12/03/2024	15:00	Long-tailed Tit	3	Perched		In scrub in North of site.
8	12/03/2024	15:02	Magpie	1	Flight path	5	SW over wet grassland.
8	12/03/2024	15:03	Magpie	2	Flight path		S over Wet grassland.
8	12/03/2024	15:10	Greenfinch	2	Perched		In treeline W of managed gardens.
8	12/03/2024	15:10	Magpie	7	Foraging		IN area infested with Jap. Knotweed.
8	12/03/2024	15:11	Blackbird	1	Perched		In treeline W of managed gardens.
8	12/03/2024	15:11	Magpie	1	Perched		In treeline W of managed gardens.
8	12/03/2024	15:11	Woodpigeon	1	Perched		In treeline W of managed gardens.

Survey	Date	Time	Species	No.	Behaviour	Height (m)	Details
8	12/03/2024	15:15	Woodpigeon	1	Flightpath	30	W across the centre of the site.
8	12/03/2024	15:16	Pied Wagtail	1	Perched		In treeline W of managed gardens.
8	12/03/2024	15:17	Great Tit	1	Perched		In treeline in the NW corner.
8	12/03/2024	15:17	Long-tailed Tit	1	Perched		In treeline in the NW corner.
8	12/03/2024	15:18	Siskin	2	Calling		In treeline W of managed gardens.
8	12/03/2024	15:19	Wren	1	Perched		W treeline in NW corner.
8	12/03/2024	15:22	Great Tit	1	Perched		In treeline along the NW corner.
8	12/03/2024	15:30	Robin	1	Perched		In treeline W of managed gardens.
8	12/03/2024	15:31	Greenfinch	1	Perched		In scrub in NW corner of the site.
8	12/03/2024	15:31	Robin	1	Perched		In scrub in NW corner of the site.
8	12/03/2024	15:31	Wren	1	Perched		In scrub in NW corner of the site.
8	12/03/2024	15:33	Blackbird	1	Perched		In scrub in NW corner of the site.
8	12/03/2024	15:34	Coal Tit	2	Perched		In hedgerow S of the abandoned house.
8	12/03/2024	15:34	Greenfinch	1	Perched		In treeline along the NW corner.
8	12/03/2024	15:35	Linnet	1	Calling		In trees directly N of the abandoned house.
8	12/03/2024	15:37	Blackbird	1	Perched		In trees directly N of the abandoned house.
8	12/03/2024	15:38	Redwing	2	Perched		In treeline W of managed gardens.
8	12/03/2024	15:40	Blackbird	1	Perched		In treeline directly North of the abandoned house.
8	12/03/2024	15:40	Blue Tit	1	Perched		In treeline directly North of the abandoned house.
8	12/03/2024	15:40	Robin	1	Perched		In treeline directly North of the abandoned house.
8	12/03/2024	15:40	Wren	1	Perched		In treeline directly North of the abandoned house.
8	12/03/2024	15:41	Woodpigeon	1	Perched		E of mound on site.
8	12/03/2024	15:42	Blue Tit	3	Perched		In willows next to Jap.Knotweed infestation.
8	12/03/2024	15:43	Coal Tit	1	Perched		In scrub in North of site.
8	12/03/2024	15:47	Herring Gull	3	Big flight	20	W of mound onsite.
8	12/03/2024	15:48	Robin	1	Foraging		In area infested with Jap. Knotweed.
8	12/03/2024	15:52	Rook	1	Calling		In tree E of mound.
8	12/03/2024	15:54	Goldfinch	2	Perched		In scrub E of mound.
8	12/03/2024	15:57	Siskin	1	Calling		In tree E of mound.
8	12/03/2024	15:58	Blue Tit	1	Perched		E treeline.
8	12/03/2024	15:59	Jackdaw	1	Flightpath	20	W in N portion of site.
8	12/03/2024	16:01	Hooded Crow	2	Perched		E treeline.
8	12/03/2024	16:02	Magpie	2	Foraging		In NE corner of site.
8	12/03/2024	16:03	Goldcrests	2	Flight path	5	W along N boundary.
8	12/03/2024	16:08	Blackbird	1	Perched		NE corner.
8	12/03/2024	16:11	Magpie	1	Flightpath	20	W over N of site.
8	12/03/2024	16:12	Black-headed Gull	1	Flight path	10	W over wet grassland.
8	12/03/2024	16:15	Woodpigeon	1	Flight path	25	SW over E of site.
8	12/03/2024	16:21	Magpie	1	Large flight	20	Over wet grassland portion of the site.
8	12/03/2024	16:25	Redwing	1	Calling		In treeline W of Managed gardens.
8	12/03/2024	16:27	Siskin	1	Perched		In treeline W of Managed gardens.
8	12/03/2024	16:31	Treecreeper	1	Foraging		In cypress tree W of managed gardens.
8	12/03/2024	16:40	Blue Tit	1	Song		In scrub E of mound.

Appendix 1b – I-WeBS Trends for Dublin Bay.

	Trend (%)			
Species	Dublin Bay - 5 Year	Dublin Bay - 12 Year	Dublin Bay - 23 Year	Long Term Trend
Grey Plover	7.7	-5.0	-51.3	Large Decline
Lapwing	-36.0	-33.6	-40.3	Moderate Decline
Shoveler	-5.9	14.4	-32.2	
Ringed Plover	6.5	-52.1	-14.5	Intermediate Decline
Curlew	-14.1	-22.7	-4.5	
Pintail	24.4	78.3	8.1	Stable or Increasing
Bar-tailed Godwit	-20.8	20.6	31.0	
Dunlin	69.6	18.6	32.7	
Redshank	-5.3	-8.2	45.9	
Shelduck	29.8	49.3	58.0	
Wigeon	61.9	126.7	78.9	
Teal	9.2	43.4	80.3	
Sanderling	15.0	-13.2	84.0	
Mallard	32.2	134.7	91.7	
Turnstone	-26.4	-30.3	91.7	
Oystercatcher	1.9	12.8	103.8	
Golden Plover	948.0	147.2	114.8	
Red-breasted Merganser	2.9	37.3	118.8	
Knot	68.5	33.8	127.5	
Grey Heron	11.6	2.7	148.4	
Great Crested Grebe	-54.1	69.9	188.4	
Cormorant	3.8	-22.9	189.3	
Light-bellied Brent Goose	-7.0	22.2	230.0	
Greenshank	15.6	48.6	235.5	
Black-tailed Godwit	120.0	193.3	780.0	
Little Egret	78.3	121.6	1540.0	

Appendix 1c – I-WeBS Site Summary Table for 0U404 Dublin Bay.

"*Peak counts for each species in each of the most recent 10 seasons are presented. Please note:*

- *The mean is based only on available survey data from the most recent 5-season period, i.e. for the period 2016/17 - 2020/21, using I-WeBS core counts.*
- *Blank columns indicate seasons when no counts were carried out, while blank cells show that a species was absent, where other counts are in the same column.*
- *Counts that are poor quality are excluded from these tables, with the exception of known underestimates of individual species.*
- *Where peak counts were recorded outside the midwinter period (Nov, Dec, Jan) these are marked with an asterisk (*). This may indicate that higher numbers occurred during passage periods, or may be due to a lack of counts in the midwinter months.*
- *The 'Peak Months' column indicates the months when the highest number of peak counts were recorded.*"

SPECIES	1% NATIONAL	1% INTERNATIONAL	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	MEAN	PEAK MONTHS
Arctic Tern			1*										0	Oct
Bar-tailed Godwit	170	1500	1895	2141*	1710*	1642*	2164*	2653*	1599*	1773	2736*	1833*	2119	Mar
Black-headed Gull			2245*	1907*	2559	1259*	2768*	2393*	1375*	3243*	3803	4842*	3131	Sep
Black-necked Grebe			4*										0	Feb
Black-tailed Godwit	200	1100	891*	1362	1768*	873*	2185*	1274*	1474*	3369*	2987*	1499	2121	Feb, Mar, Sep, Oct
Common Gull			249*	300*	984	272*	890*	213*	141*	387*	538*	286*	313	Mar
Common Scoter	110	7500	20*	10*	42*		40*	19		24	10		11	Oct
Common Tern			5*	3	39*		1			102*	10*	2*	23	Sep
Common/Arctic Tern			163*										0	Sep
Cormorant	110	1200	132*	53	198*	41*	71	95*	112*	100*	157*	183*	129	Sep
Curlew	350	7600	1169*	874*	932*	1424	567*	750*	494	1323*	1162*	715*	889	Sep
Curlew Sandpiper			1*	1*							1*		0	Oct
Dunlin	460	13300	3559*	4163	4897*	3603*	2557*	8280	5884	7474	6017	10362	7603	Jan, Mar
Gadwall	20	1200			2*	2*							0	Jan, Feb, Mar
Glaucous Gull								1					0	Jan
Golden Plover	920	9300	390*	404*	1080*	740*	1155	1010*	1322	1430*	1610	95*	1093	Oct
Goldeneye	40	11400	11*	6*		2*		1*		2			1	Feb, Mar
Great Black-backed Gull			311*	116	188*	52*	263*	151	108	138*	145	119*	132	Sep
Great Crested Grebe	30	6300	898	87*	755	143	307	192	34	388	106*	262	196	Nov
Great Northern Diver	20	50	2		3*		5	1*	1	1*	2	1	1	Mar, Nov, Dec
Greenshank	20	3300	38*	46	34*	47*	78*	35	14	44*	51*	48*	38	Oct
Grey Heron	25	5000	28	15*	68*	40*	44*	28*	24	27*	82*	19*	36	Oct

SPECIES	1% NATIONAL	1% INTERNATIONAL	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	MEAN	PEAK MONTHS
Grey Plover	30	2000	200	307*	310*	452*	235*	245*	198	499*	560*	208*	342	Feb
Herring Gull			518*	130*	486*	261*	538*	450*	607*	483*	374*	694*	522	Sep
Iceland Gull								1*		1			0	Feb, Mar, Dec
Kingfisher					1*		1*			4	1*	1	1	Nov
Kittiwake									40*				8	Mar
Knot	160	5300	3435	3022	4547*	3450	2405*	5850*	6554	7256*	5781*	5946	6277	Feb
Lapwing	850	72300	120	67*	52	54*	143*	25*	32	31*	775*	30	179	Sep, Dec
Lesser Black-backed Gull			28*	25*	5*	20*	16*	5*	2*	69*	8	135*	44	Sep, Oct
Light-bellied Brent Goose	350	400	4053	6134*	2262	4503	3501*	4420*	3331	3662	5848	1472	3747	Dec
Little Egret	20	1100	45*	19*	59*	69*	59*	70*	57	71*	130*	140*	94	Sep
Little Grebe	20	4700	1*	9*	1	5*		4	1*	3*	8	6	4	Dec
Long-tailed Duck				2*				2				1	1	Dec
Mallard	280	53000	151*	52*	92*	106*	120	64*	82	221*	133*	96	119	Sep
Mallard (domestic)			2*	1									0	Sep, Dec
Mediterranean Gull			113*	23	39*	27*	64*	68*	6	14*	32*	7*	25	Oct
Moorhen			7	5*	5*		5*	3*	2	4	6	1	3	Nov
Mute Swan	90	100	2*	2*	4*	6*	9*	5*	11	9*	32*	7*	13	Oct
Oystercatcher	610	8200	3408	3025	3074*	2197	3572*	4042	2375	3378	3313	2466*	3115	Jan, Oct, Dec
Pintail	20	600	212	160	200*	150*	124*	190	214	318	192*	252	233	Jan
Purple Sandpiper	20	110	4	3*	2	1*	2*				1	1	0	Jan, Oct
Red-breasted Merganser	25	860	114*	50*	54*	57*	69*	80*	37	40*	96	36*	58	Mar, Oct
Red-necked Grebe					1*								0	Feb
Redshank	240	2400	2273*	2077*	2460*	1889*	1648*	1430*	2274	2312*	2299*	2517*	2166	Sep
Red-throated Diver	20	3000	8*	8*	7*	2	7	6	5	4	1		3	Feb
Ring-billed Gull				1*				1*					0	Mar, Sep
Ringed Plover	120	540	125	215*	101*	98*	109*	208	285	148	131	70	168	Dec
Sanderling	85	2000	411*	405*	510*	266	841	374*	301*	736*	588*	748*	549	Sep, Oct
Sandwich Tern			4*	23*	52*		8*		8*	75*	3*	12*	20	Sep
Shag			19*	23	36	3*	71	19*	10	10	22*	1*	12	Nov
Shelduck	100	2500	603	731	956	605	744	1811	1241	1632	1619	2586	1778	Dec

SPECIES	1% NATIONAL	1% INTERNATIONAL	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	MEAN	PEAK MONTHS
Shoveler	20	650	101	79	126	47	115	116	144	122	124	81	117	Dec
Snipe			12*	62*	20		31	53*	10	43	15*	5	25	Jan
Spotted Redshank			1*		1*		3*						0	Oct
Teal	360	5000	909*	981	1378	1233*	1291*	1654	1030	2187	1392	930*	1439	Dec
Turnstone	95	1400	328	227	466*	250*	584	286*	334	216	445*	259	308	Oct
Unidentified gull			10*	85									0	Sep, Nov
Water Rail			1*										0	Feb
Whimbrel				1*	2*	4*				2*	2*	1*	1	Sep
Whooper Swan	150	340								11*	1		2	Jan, Oct
Wigeon	560	14000	610	445	691*	702*	1106*	1839	918	1314	1833	1082	1397	Nov
Yellow-legged Gull				1	1*		2	1					0	Dec

Appendix V. Uisce Eireann Confirmation of Feasibility Letter & Statement of Design Acceptance

CONFIRMATION OF FEASIBILITY

Stephen Dent - Neville

Waterman Moylan
EastPoint Business Park, Block S,
Alfie Byrne Road,
Dublin
D03H3F4

4 June 2024

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Uisce Éireann
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

Our Ref: CDS24002545 Pre-Connection Enquiry
Knockrabo, Mount Anville Road, Goatstown, Dublin

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Uisce Éireann has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Housing Development of 144 unit(s) at Knockrabo, Mount Anville Road, Goatstown, Dublin, (the **Development)**.

Based upon the details provided we can advise the following regarding connecting to the networks;

- **Water Connection** - Feasible without infrastructure upgrade by Uisce Éireann

- Proposed connection is via Knockrabo Estate. As per Uisce Éireann GIS record, the network hasn't been taken i charge including the 150mm main along Mount Annville Road. At a connection application stage, the Developer has to provide evidence that the main is connected to Uisce Éireann network and in operation.

- **Wastewater Connection** - Feasible without infrastructure upgrade by Uisce Éireann subject to:
  - connection to the 225mm sewer adjacent to the site on Mount Anville Rad.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Uisce Éireann.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

Where can you find more information?

- **Section A -** What is important to know?
- **Section B -** Details of Uisce Éireann's Network(s)

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Uisce Éireann's network(s). This is not a connection offer and capacity in Uisce Éireann's network(s) may only be secured by entering into a connection agreement with Uisce Éireann.

For any further information, visit **www.water.ie/connections**, **email** **newconnections@water.ie** or contact 1800 278 278.

Yours sincerely,

Dermot Phelan
Connections Delivery Manager

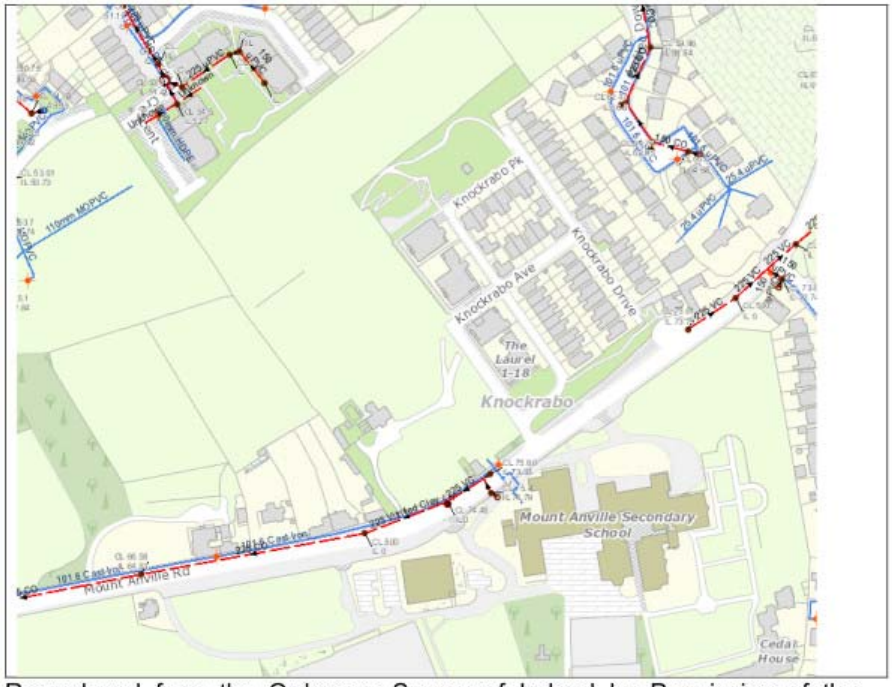
Section A - What is important to know?

What is important to know?	Why is this important?
Do you need a contract to connect?	• Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Uisce Éireann's network(s). • Before the Development can connect to Uisce Éireann's network(s), you must submit a connection application and be granted and sign a connection agreement with Uisce Éireann.
When should I submit a Connection Application?	• A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	• Uisce Éireann connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	• All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*. *Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works
Fire flow Requirements	• The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. • **What to do?** - Contact the relevant Local Fire Authority
Plan for disposal of storm water	• The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters. • **What to do?** - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.
Where do I find details of Uisce Éireann's network(s)?	• Requests for maps showing Uisce Éireann's network(s) can be submitted to: datarequests@water.ie

What are the design requirements for the connection(s)?	• The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this Development shall comply with ***the Uisce Éireann Connections and Developer Services Standard Details and Codes of Practice,*** available at www.water.ie/connections
Trade Effluent Licensing	• Any person discharging trade effluent** to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). • More information and an application form for a Trade Effluent License can be found at the following link: https://www.water.ie/business/trade-effluent/about/ **trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)

Section B – Details of Uisce Éireann's Network(s)

The map included below outlines the current Uisce Éireann infrastructure adjacent the Development: To access Uisce Éireann Maps email datarequests@water.ie



Reproduced from the Ordnance Survey of Ireland by Permission of the Government. License No. 3-3-34

Note: The information provided on the included maps as to the position of Uisce Éireann's underground network(s) is provided as a general guide only. The information is based on the best available information provided by each Local Authority in Ireland to Uisce Éireann.

Whilst every care has been taken in respect of the information on Uisce Éireann's network(s), Uisce Éireann assumes no responsibility for and gives no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided, nor does it accept any liability whatsoever arising from or out of any errors or omissions. This information should not be solely relied upon in the event of excavations or any other works being carried out in the vicinity of Uisce Éireann's underground network(s). The onus is on the parties carrying out excavations or any other works to ensure the exact location of Uisce Éireann's underground network(s) is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

Stephen Dent - Neville
Waterman Moylan
EastPoint Business Park, Block S,
Alfie Byrne Road,
Dublin 3,
D03H3F4

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
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Cathair Chorcaí

Uisce Éireann
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

18 September 2024

Re: Design Submission for Knockrabo, Mount Anville Road, Goatstown, Dublin (the "Development")
(the "Design Submission") / Connection Reference No: CDS24002545

Dear Stephen Dent - Neville,

Many thanks for your recent Design Submission.

We have reviewed your proposal for the connection(s) at the Development. Based on the information provided, which included the documents outlined in Appendix A to this letter, Uisce Éireann has no objection to your proposals.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before you can connect to our network you must sign a connection agreement with Uisce Éireann. This can be applied for by completing the connection application form at www.water.ie/connections. Uisce Éireann's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Regulation of Utilities (CRU)(https://www.cru.ie/document_group/irish-waters-water-charges-plan-2018/).

You the Customer (including any designers/contractors or other related parties appointed by you) is entirely responsible for the design and construction of all water and/or wastewater infrastructure within the Development which is necessary to facilitate connection(s) from the boundary of the Development to Uisce Éireann's network(s) (the "**Self-Lay Works**"), as reflected in your Design Submission. Acceptance of the Design Submission by Uisce Éireann does not, in any way, render Uisce Éireann liable for any elements of the design and/or construction of the Self-Lay Works.

If you have any further questions, please contact your Uisce Éireann representative:
Name: Antonio Garzón Mielgo
Email: antonio.garzonmielgo@water.ie

Yours sincerely,

Dermot Phelan
Connections Delivery Manager

Appendix A

Document Title & Revision

- KNB-WMC-PH2-ZZ-DR-C-P120 Proposed Foul & Storm Water Drainage GA
- KNB-WMC-PH2-ZZ-DR-C-P121 Drainage Layout Sheet 1 of 2
- KNB-WMC-PH2-ZZ-DR-C-P122 Drainage Layout Sheet 2 of 2
- KNB-WMC-PH2-ZZ-DR-C-P130 Proposed Watermains
- 20-086-P124 Waste Water Longitudinal Sections-Layout1

Additional Comments

The design submission will be subject to further technical review at connection application stage.

Uisce Éireann cannot guarantee that its Network in any location will have the capacity to deliver a particular flow rate and associated residual pressure to meet the requirements of the relevant Fire Authority, see Section 1.17 of Water Code of Practice.

*For further information, visit **www.water.ie/connections***

Notwithstanding any matters listed above, the Customer (including any appointed designers/contractors, etc.) is entirely responsible for the design and construction of the Self-Lay Works. Acceptance of the Design Submission by Uisce Éireann will not, in any way, render Uisce Éireann liable for any elements of the design and/or construction of the Self-Lay Works.