ALTEMAR
Marine & Environmental Consultancy

Ecological Impact Assessment (EcIA) for a proposed Large-scale Residential Development (LRD) at Fortfield Road, Terenure, Dublin.

10th December 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: 1 Celbridge West Land Limited

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

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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 1 Celbridge West Land Limited.

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

Planning permission is being sought by 1 Celbridge West Land Limited on a site located at Fortfield Road, Terenure, Dublin 6W.

The development will comprise a Large-Scale Residential Development (LRD) on a site at Fortfield Road, Terenure of 284 no. units delivering 19 no. houses and 265 no. apartments made up of studios; 1 beds; 2 beds; 3 beds; and 4 beds. The development will also provide community, cultural and arts space and a creche. Communal internal space for residents will also be delivered. Provision of car, cycle and motorbike parking will be provided throughout the development, including at basement and surface level. Vehicular/pedestrian/cyclist access from Fortfield Road. Proposed upgrade works to the surrounding road network is also included. All associated site development works, open space, services provision, ESB substations, plant areas, waste management areas, landscaping (both public and communal) and boundary treatments.

The proposed site outline, site location, site plan, and proposed site elevations are seen in Figures 1-4.

Landscape

The landscape strategy for the proposed development has been prepared by NMP Landscape Architects to accompany this planning application. The proposed landscape plans are demonstrated in Figure 5-10.

Lighting

The lighting strategy for the proposed development has been prepared by OCSC. The proposed public lighting layout is demonstrated in Figure 19.

Figure 1. *Site outline and location context.*

Figure 2. *Site outline*

Figure 3. *Proposed Site Plan*

Figure 4. *Proposed contiguous elevations*

***Figure 5**. Landscape General Arrangements Plan (Sheet 1 of 6)*

***Figure 6**. Landscape General Arrangements Plan (Sheet 2 of 6)*

Figure 7. *Landscape General Arrangements Plan (Sheet 3 of 6)*

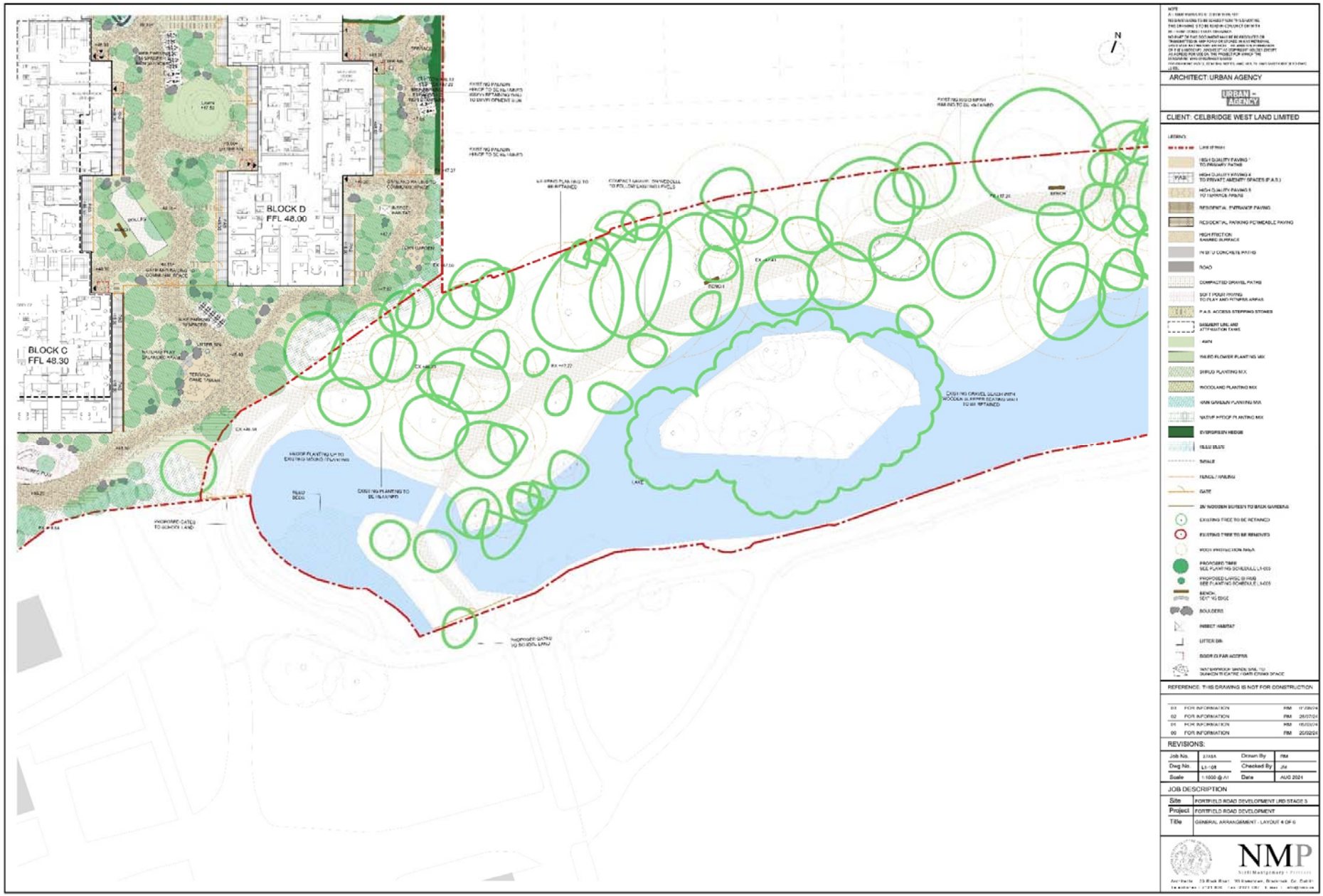


Figure 8. *Landscape General Arrangements Plan (Sheet 4 of 6)*

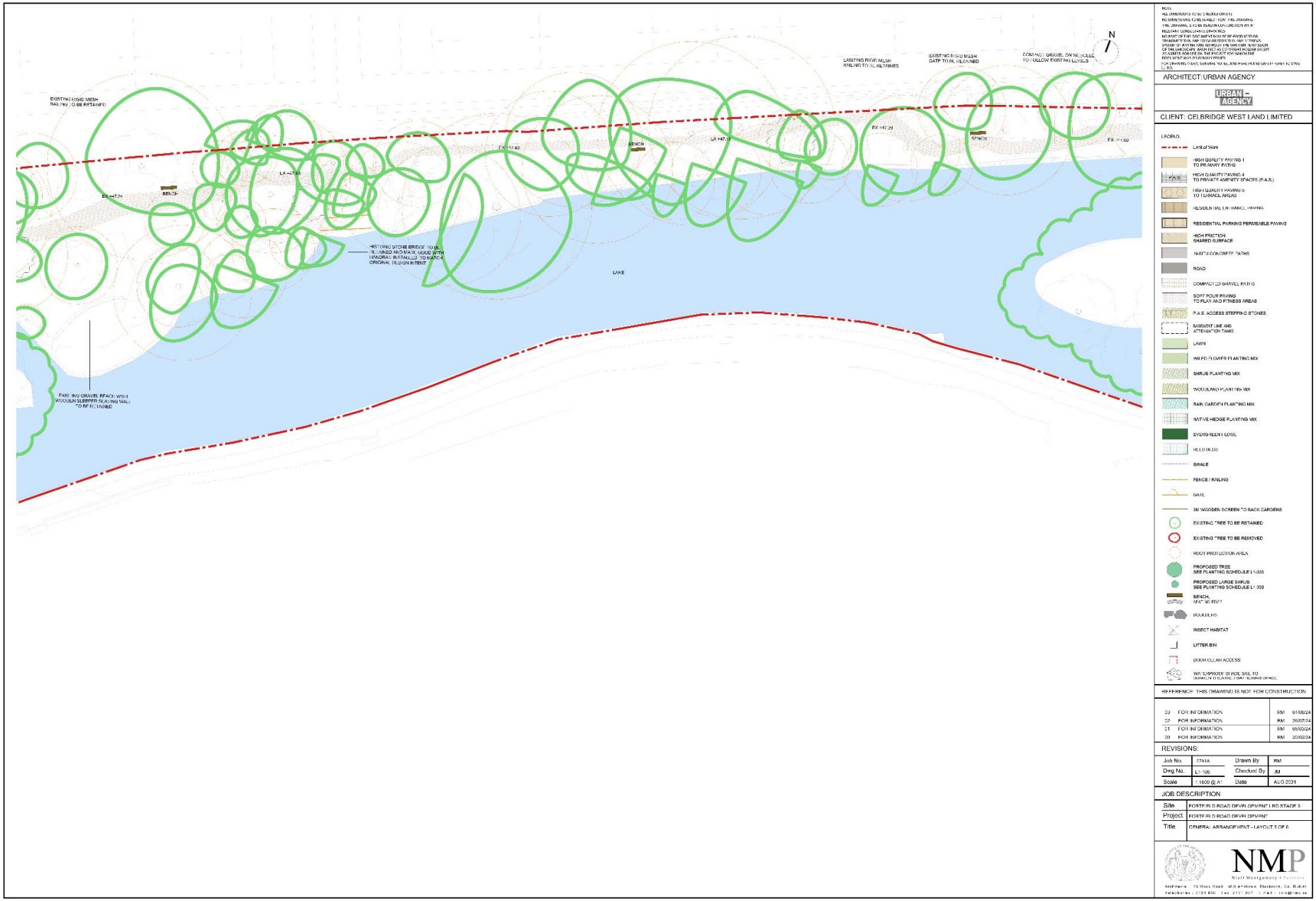


Figure 9. *Landscape General Arrangements Plan (Sheet 5 of 6)*

Figure 10. *Landscape General Arrangements Plan (Sheet 6 of 6)*

Drainage

A Civil and Structural Engineering Services Report has been prepared by Punch Consulting Engineers to accompany this planning application. This report outlines the following drainage strategy for the proposed development:

Existing Surface Water Drainage System

'Based on available records, the following stormwater drainage exists adjacent to the development site:

1. 300mm concrete stormwater sewer flowing south to north along Fortfield Road. This increases to 450mm on approach to the Greenlea Road junction.

2. There is an existing lake located at the site's south-eastern boundary adjacent to Terenure College Rugby Club. According to the drainage records the pond is fed from an existing offtake on the River Poddle, known as Lakelands Overflow, which is located at Wainsfort Manor to the west of the subject site. The overflow is piped underground via a 1230mm x 1230mm concrete box culvert for a distance of 1.4km before discharging into the pond. The pond discharges to the River Dodder located to the southeast of the subject site via a 1450mm x 1480mm concrete box culvert.'

Proposed Surface Water Drainage System

''The proposed surface water drainage system has been designed using Causeway Flow software in accordance with the Department of Environment and Local Government's guidance document "Recommendations for Site Development Works for Housing Areas", with guidance taken from the "Greater Dublin Strategic Drainage Study" (GDSDS) and the Dublin City Development Plan.

The model will analyse a range of storms at the 1% AEP (1 in 100-year return period storm), with a 20% additional rainfall to allow for climate change.

The network will be modelled with the proposed attenuation tank volumes and associated hydrobrake flow control outlets included.

Depths of water in the network model (including pipework, manholes, the attenuation tanks and hydrobrakes) have been assessed for surcharging and flood risk. The model is established such that a flood risk is identified in the simulation results if the water rises to within 300mm of the cover level. If the water level rises to a level below this, it is identified as a surcharge within the model results. It is important to note that this warning is given related to proposed ground level at the node and not related to Finished Floor level. All proposed drainage is within roadways, and the adjacent Floor levels will be higher than the road level at that location. The maximum water level in the attenuation tanks is more than 500mm below the Finished Floor level of the adjacent property. This aligns with Criterion 3 of the GDSDS.

Causeway includes a design setting called "additional storage". This is included in the software to account for storage volume in the network provided by secondary drainage including access junctions, inspection chambers, service connections etc. This provides additional storage in the network above the storage provided within the attenuation tank and primary drainage network. 20m3/ha is the standard allowance provided for in Causeway Flow and was utilised for this design.''

In relation to Sustainable Urban Drainage Systems (SuDS) the report states that:

''The proposed development has been assessed in relation to Sustainable Urban Drainage Systems (SuDS). A variety of SuDS measures have been proposed to comply with Council recommendations. All SuDS measures are to be implemented with reference to the UK SuDS Manual and Dublin City Council drainage requirements.

Relatively small volumes of rainwater collected on the respective SuDS systems will enter the public sewer network during typical low intensity storms. This is because the proposed SuDS measures will retain rainwater until it is either used via evapotranspiration in the green areas or infiltrated to the ground.

The SuDS processes decrease the impact of the development on the receiving environment by providing amenity and biodiversity in many cases. Regular maintenance of the SuDS proposals is required to ensure they are operating to their optimal level throughout their design life.''

Proposed Foul Water Network

''Available records show the following foul water drainage infrastructure exists adjacent to the development site:

1. 225mm vitrified clay foul sewer flowing south to north along Fortfield Road. This sewer increases in size to a 300mm foul sewer and splits into two lines at the junction of Fortfield Road and Greenlea Road.

2. 375mm concrete combined sewer flows west-east along Greenlea Road.

The proposed foul water sewers have been designed using Causeway Flow software in accordance with Irish Water's Code of Practice for Wastewater Infrastructure and the DOE's Recommendations for Site Development Works for Housing Areas. The foul loading has been calculated in accordance with the Code of Practice for Wastewater Infrastructure (particularly Section 3.6, Appendix C and Appendix D) published by Irish Water.

It is proposed that the foul sewer will discharge by gravity to the sewer on Fortfield Road. All foul water drainage shall be designed in accordance with Irish Water's Wastewater Code of Practice and Standard Details.

To ensure the proposed foul drainage can connect to the existing foul sewer on Fortfield Road, and to ensure pipe gradients are provided in accordance with Irish Water's Wastewater Code of Practice, the proposed site levels have been raised to achieve adequate cover, with a concrete surround proposed to pipes where adequate cover as per Irish Water's Wastewater Code of Practice cannot be achieved.

The construction phase of the proposed development is estimated to have a duration of 36 months. Therefore, the timeline for connection to the public foul drainage system will be approx. 34-36 months after commencement of construction on site.

Irish Water have confirmed via the Pre-Connection Enquiry process that the development can be supported by the public foul water network.''

Flood Risk Assessment

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

'A Site-Specific Flood Risk Assessment has been prepared by PUNCH Consulting Engineers. In conclusion, the report states that:

'PUNCH Consulting Engineers were appointed to carry out a Site-Specific Flood Risk Assessment (SSFRA) for a proposed development at Fortfield Road, Terenure, Dublin 6W. This SSFRA report evaluates the potential flood risks to the site, ensuring that the development proposals are safe, sustainable, and resilient to flooding. The following document forms part of the planning application to be submitted to Dublin City Council and should be reviewed alongside the planning drawings prepared by Urban Agency Architects.

A flood risk identification exercise was undertaken for the development site as part of this SSFRA which revealed that the pond within the site has not been included in the Catchment Flood Risk Assessment and Management Study (CFRAMS) for the area. Additionally, a review of the Dublin City Development Plan (DP) 2022-2028 Strategic Flood Risk Assessment (SFRA) mapping showed the site to be partially located within Flood Zones A and B.

To adequately assess the flood risk from the pond within the site, a 1D hydraulic model of the water-feature was developed and analysed. The results of the hydraulic modelling indicate that flood waters from the 1%AEP and 0.1%AEP events are retained within the contoured lands around the pond and do not pose a flood risk to the proposed development.

To further investigate the flooding shown on the Dublin City DP SFRA mapping, PUNCH consulted Dublin City Council (DCC) and Nicholas O'Dwyer, their appointed engineers for the Poddle Flood Alleviation Scheme, and confirmed that the flooding is pluvial in nature. Section 2.24 of the OPW's "The Planning System and Flood Risk Management Guidelines" states that "..flood zones are determined on the basis of the probability of river and coastal flooding only..". This point is echoed in Section 1.4.1 of the Dublin DP 2022-2028 SFRA report. As pluvial flooding should not be used in the designation of flood zones, and in the absence of any identifiable fluvial or coastal flood risk to the site, it is concluded that the proposed development site is wholly located in Flood Zone C.

To alleviate concerns relating to pluvial flooding at the site, the associated pluvial flow paths and flood volumes were examined. A proposal has been developed, in direct consultation with DCC, to address the pluvial flooding on Fortfield Road, which includes the provision of a detention basin within the proposed development site boundary. These flood alleviation measures will also remove pluvial flooding from a section of Fortfield Road for storm events up to and including the 1%AEP event, offering a significant reduction in pluvial flood risk to that area over existing conditions. A further exercise was carried out which confirmed that there is sufficient storage available within the site to ensure that the development will not flood even in the extreme 0.1%AEP pluvial event. The redevelopment of the site will not adversely affect pluvial flood levels or extents in the area.

To mitigate against fluvial flood risk to the site, the Finished Floor Levels (FFL) of the ground floor of the proposed buildings will be set at or above 48.0mOD. This level equates to the 0.1%AEP fluvial flood level including a 20% allowance for climate change and 300mm freeboard. The proposed basement will be isolated from the flood zone and the entrance will be set at a level at or above 48.0mOD.

It is asserted that the proposed development site is wholly located in Flood Zone C and therefore a Justification Test is not strictly required as part of this SSFRA report. However, given that the site is shown within Flood Zones A and B on the DP SFRA mapping it was deemed prudent to complete the Justification Test.

The mitigation measures proposed in this SSFRA will ensure that the development is in compliance with the relevant sections of the Dublin City DP as well as in full compliance with the Dublin City DP SFRA and OPW's The Planning System & Flood Risk Management Guidelines.''

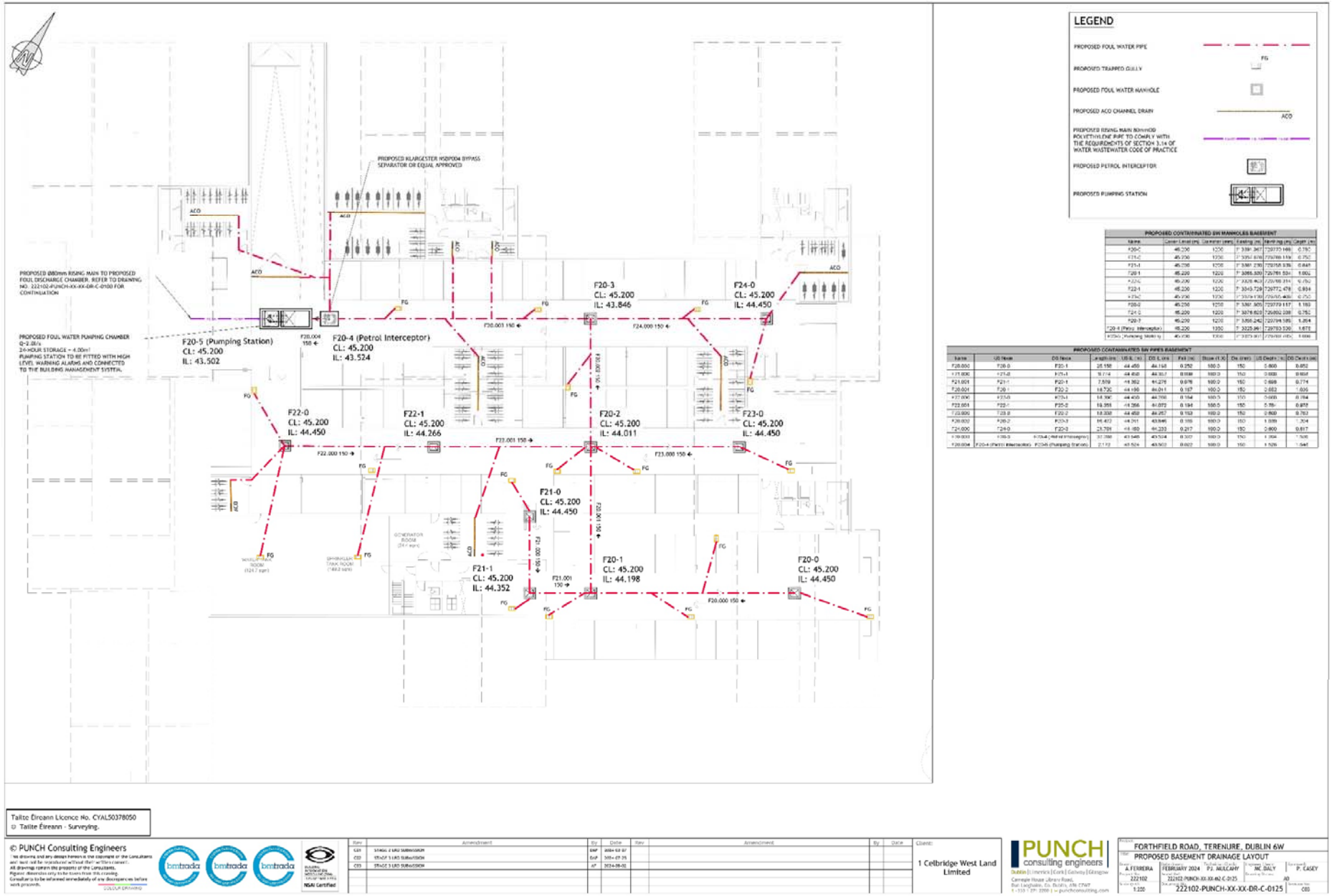


Figure 11. *Proposed basement drainage layout*

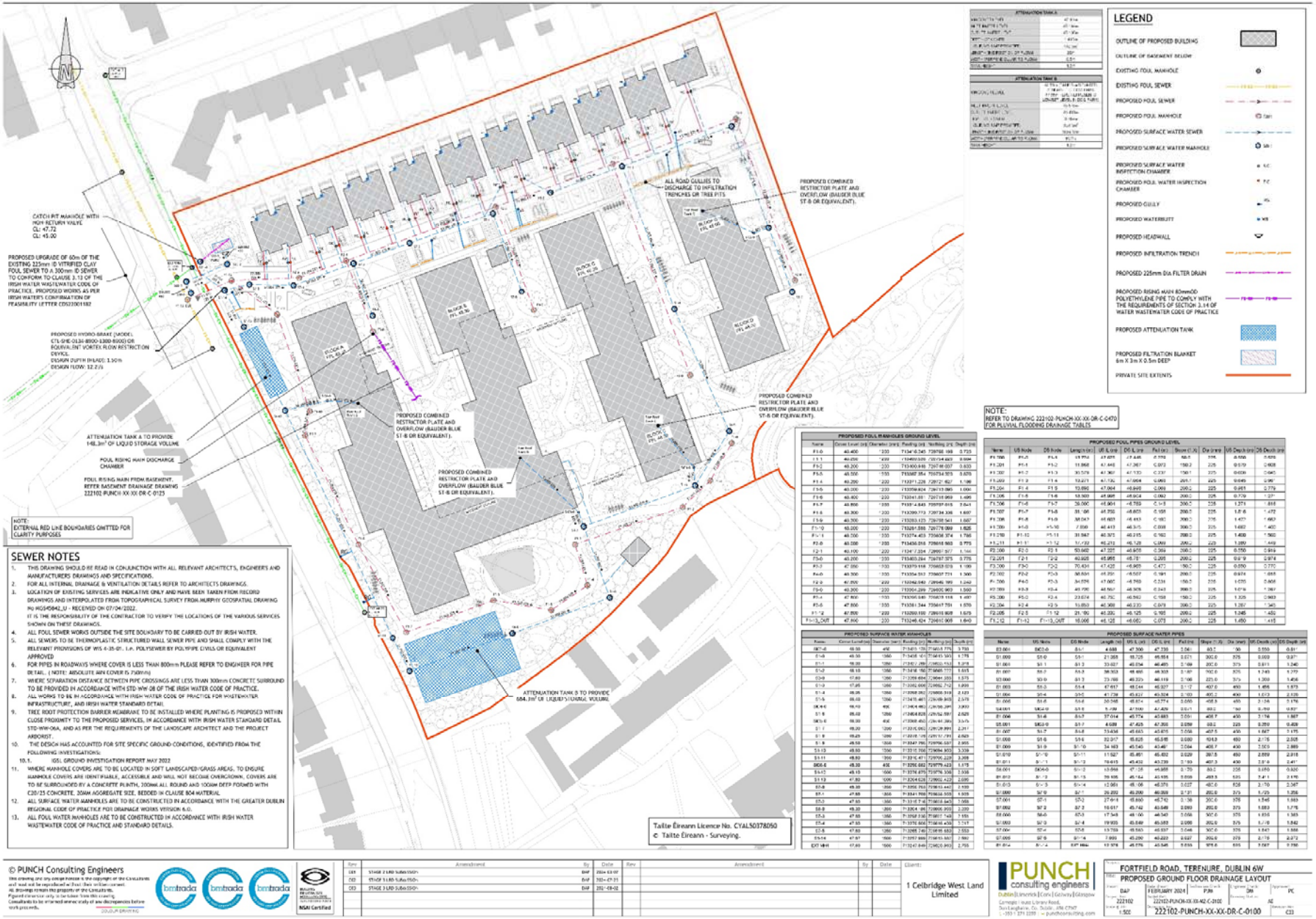


Figure 12. *Proposed ground floor drainage layout*

Arboricultural Assessment

An Arboricultural Report was composed by The Tree File Ltd, in relation to the trees at the proposed site at Fortfield Road, Terenure. In summary, the report states that:

'Ultimately, sustainable tree retention is based on protecting and conserving existing ground, particularly soil conditions. Excavation works can directly sever, and damage tree roots, and general site activity and vehicular and plant passage denatures soil to a point where it cannot support tree roots or root function. If a tree is to be retained, then such activity must be excluded from a minimum area surrounding the tree, as defined in the tree survey table at Appendix 2, Table 1. Though the overall site area supports many trees, the form and location of the proposed development works are such as to affect very few. Much of the historic landscape and wooded area to the north of the ponds remains wholly unaffected. Those trees that are most likely to be adversely affected, tend to be small enough to be readily replaced, or of poor quality and offering limited sustainability.

The proposed development will retain 192 of the 213 trees reviewed. This accounts for the immediate loss of all 17 category "U" trees; however, some might be retained with management for the short term. This represents a retention rate of circa 98%, of the site's sustainable category A, B and C trees (see category system at "Survey Key, Appendix 2). Notwithstanding the issues outlined in this report, this outcome is considered particularly positive.

All 17 trees attain their "U" grade categorisation because of their poor conditions (see category system at "Survey Key, Appendix 2). The loss of these trees is not linked with the development of the eastern site. These trees must be regarded as unsustainable and the future use and occupancy of the area will likely require the removal of these trees within the short term and on site-safety grounds.

The Lombardy Poplars to the north of the development will be retained. These trees are of reduced quality, all having been severely decapitated in the past. This has resulted in sucker growth, some of which is breaking, as well as varying degrees of decay and deterioration about the cutting zone. While potentially suitable for retention, such retention will require ongoing maintenance over time, both to address the deterioration and also to manage size development in light of the potential for growth associated with Lombardy Poplars.

The Lombardy Poplars will be encroached upon to a minor extent by the proposed work, though the terracing of garden spaces to address floor levels disparities and the restriction of construction activities to the building footprints with access from the south only, will assist in limiting such effects. The trees will be retained in what will become private open space.

Along Fortfield Road, several trees, typical Small Hornbeams, will be affected by secondary works associated with site entrances, the provision of site services and the provision of traffic and particularly bus infrastructure. Though inarguably an impact on the tree population, many of these trees are particularly small and could, if required, be

replaced with new stock. In this respect and appreciating that their loss can be mitigated if required, then the loss in the short term might be considered acceptable.

Elsewhere near Fortfield Road and College Drive, we note that the majority of works will occur within existing road structures where encountering tree roots is far less likely. Note is also made that in some instances, much of the infrastructure already exists in situ and thus will not require tree disturbance, an example of this being the existing

water main lines along Fortfield Road near Hornbeams Nos.29 to 38 and at the entrance to College Drive near Sycamore No.39 (See western side of drawing "Fortfield Road Tree Constraints Plan West" and "Fortfield Road Tree Impacts Plan West")

Tree retention and protection during the construction phase will be achieved by simple "construction exclusion". This will entail the erecting of robust tree protection fencing prior to the commencement of any on-site works (See drawing inserts on drawing "Fortfield Road Tree Protection Plan" – East and West and guidance at "Appendix 1"). The intention of such fencing is to prevent inadvertent access by plant, machinery and vehicles and to limit works to manual landscape works or other controlled works only.

As standard tree protection methodologies will interfere with existing pedestrian access, discussion and agreement with local authorities regarding tree protection within public realm areas will be required. Some trees, for example, on Fortfield Road and College Drive, may require temporary and localised tree protection at certain times of the construction process. However, this must be coordinated with public access and the closure or restriction of pedestrian footpaths. In most instances, the tree protection will be orientated to protecting open/soft ground from disturbance; consideration must be given also to tree canopies, for example, where overhanging existing hard surfaces or roadways that would otherwise offer protected access.

Longer-term tree and woodland management will also require discussion and agreement, for example as part of a site-wide management scheme. Though the historic woodland area has already gained some impromptu social use, it is likely that the level of use will increase. In this respect, a management plan should be agreed upon that addresses both site safety and the conservation of a historic landscape context.''

The Tree Conditions, Tree Categories, Tree Age, Useful Life Expectancy and Tree Species found on site are seen in the below figures taken from the report. The Tree Constraints Plan, Tree Impact Plan and Tree Protection Plan are displayed in Figures 13-18.

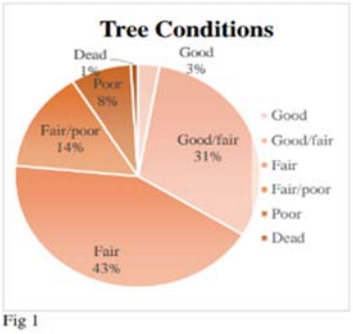


Fig 1

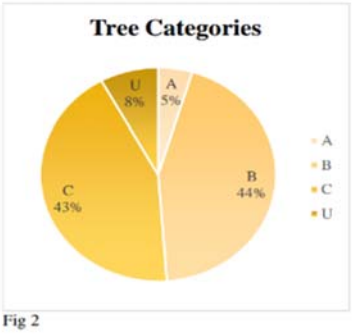
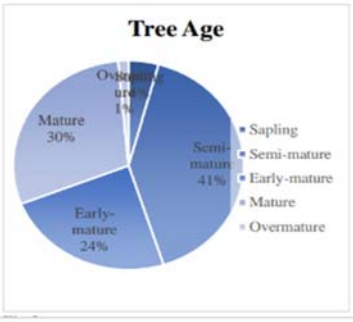
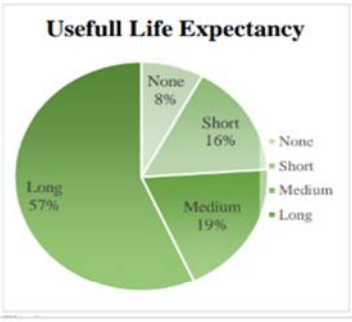


Fig 2





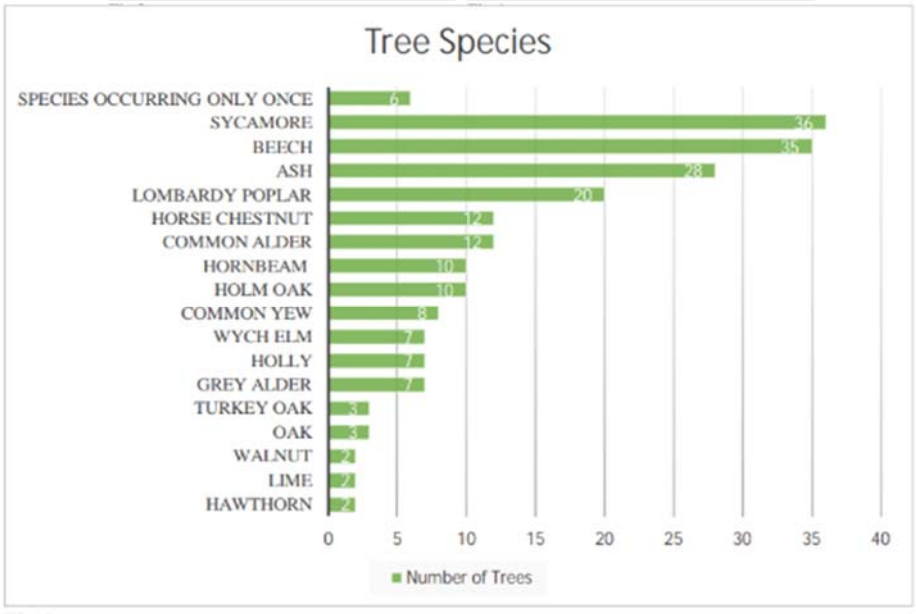


Fig 5

Figure 13. *Tree Constraints Plan- East*

Figure 14. *Tree Constraints Plan- West*

Figure 15. *Tree Impacts Plan- East*

Figure 16. *Tree Impacts Plan-West*

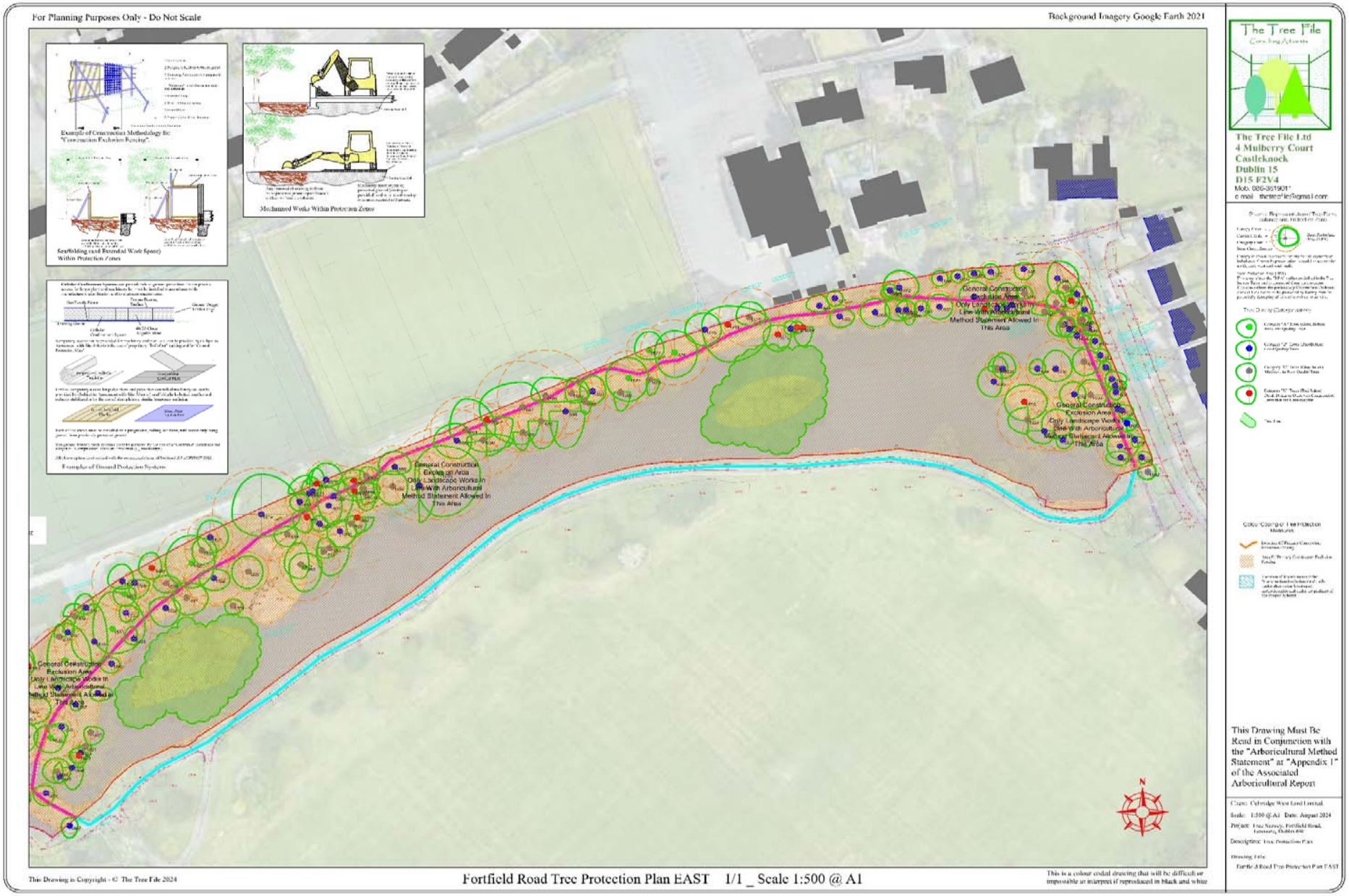


Figure 17. *Tree Protection Plan - East*

Figure 18. *Tree Protection Plan - West*

Lighting

A Public Lighting Report has been prepared by OCSC Consulting Engineers to accompany this planning application. This report outlines the following public lighting design for the proposed development:

''The lighting scheme has been designed to adhere to the following lighting characteristics:

- *The minimum level of appropriate/required lighting level will be provided within the developed/residential areas;*
- *Light fittings will be fitted with low intensity, horizontal cut-off LED light fittings employing a narrow directional light or cowled light. This will avoid the effect of light spill arising within the residential area;*
- *No light spill into biodiversity areas. In particular there will be no light spill from the development area onto the woodland/ pond area to the east of the development;*
- *The lighting includes dimming the 4m poles by 30% post curfew hours;*
- *Light fittings and associated lighting will be directed away from areas of open space;*
- *No floodlighting will be used in the development;*

The lighting design adheres to the following standard guidance

- *Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010);*
- *Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2018).*
- *Marnell, F., Kelleher, C. & Mullen, E. (2022) Bat mitigation guidelines for Ireland v2. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland*

Also:

- *Guidance Notes for the Reduction of Obtrusive Light GN01 (Institute of Lighting Professionals, 2011).''*

The proposed public lighting layout is outlined in figure 19. Lighting is compliant with bat lighting guidelines.

Figure 19. *Proposed site services – public lighting*

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 March and May 2022 and updated visit in September 2023. 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 5.8 km away (South Dublin Bay & River Tolka SPA). 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 into the River Dodder and outfalls into the River Liffey Estuary. Any pollutants, silt laden run off or dust which would enter the surface water network would be dispersed or diluted within the River Dodder, River Liffey Estuary and the marine environment at Dublin Bay, to negligible levels, prior to reaching any European sites which are a minimum distance of 5.8 km away (and in any event as discussed below construction measures are in place to address this)

Field Survey

Field surveys of the proposed development site at Fortfield Road, Terenure, Co Dublin, were carried out by Altemar Ltd. Bryan Deegan & Emma Peters. 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) and bird surveys (Appendix II-V). Survey dates are seen in Table 1.

Table 1. Survey dates.

Survey	Surveyor	Dates
Flora and Habitat	Bryan Deegan (MSc) & Emma Peters (BSc) (Altemar)	27th March 2022, 16th May 2022, 7th September 2023 & 9th April 2024.
Bat	Bryan Deegan (MCIEEM) of Altemar	5th May 2022, 25th May 2022, 7th September 2023 16th May 2024 and 30th July 2024
Mammal	Bryan Deegan (MCIEEM) of Altemar & Emma Peters (Altemar)	27th March 2022, 7th September 2023 & 9th April 2024
Breeding Bird	Hugh Delaney	May 9th 2022, May 25th 2022, 26th April 2023, 20th May 2023, 25th June 2023, 30th May 2024, 12th June 2024, 14th July 2024
Wintering Bird	Hugh Delaney	February 13th 2022, February 19th 2022, February 24th 2022, February 28th 2022, March 3rd2022, March 12th 2022, March 19th 2022, March 30th2022, 10 surveys between November 2022 & March 2023 and 9 surveys between November 2023 & March 2024.
Aquatic	Bryan Deegan (MCIEEM) of Altemar	16th May 2022 & 7th September 2023

Survey Limitations

The surveys outlined were within the optimal survey seasons. Based on CIEEM guidance wintering bird surveys should be carried out "*Monthly during relevant period*". In 2022, the assessment carried out 8 wintering bird surveys at the latter end of the wintering bird season. This was supported by additional, albeit anecdotal, discussions with birders in the vicinity of Terenure and online checks were carried out with bird record depositories (for example www.irishbirding.com) to assess the importance of the proposed development site to wintering birds (See Appendix II & III).

Consultation

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

Impact Assessment Significance Criteria

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

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.
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.

Environmental Assessment Results

Proximity to Designated Conservation Sites

The nearest European site to the subject site is 5.8 km away (South Dublin Bay and River Tolka Estuary SPA) (Figure 21). 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 (Figure 22). 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 be directed to the River Dodder via the onsite pond, discharging to the River Liffey Estuary and ultimately out falling to the marine environment at Dublin Bay. In the absence of mitigation, pollutants, silt laden run off or dust which enter the surface water network will be dispersed or diluted within the River Dodder, River Liffey and the marine environment at Dublin Bay, to negligible levels, prior to reaching any European sites. Watercourses and potential pathways to proximate Ramsar sites, pNHAs, SACs and SPAs are seen in Figures 25-28.

Foul wastewater will be directed to the Ringsend Wastewater Treatment Plant (WwTP). Foul wastewater drainage will ultimately be treated along this public network. 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 SPA. 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

Site Code	NATURA 2000 Site	Distance
Special Areas of Conservation		
IE000210	South Dublin Bay SAC	5.9 km
IE001209	Glenasmole Valley SAC	6.9 km
IE002122	Wicklow Mountains SAC	7.9 km
IE000206	North Dublin Bay SAC	9.6 km
IE000725	Knocksink Wood SAC	11.6 km
IE003000	Rockabill to Dalkey Island SAC	13.6 km
IE000713	Ballyman Glen SAC	13.8 km
IE001398	Rye Water Valley/ Carton SAC	14.0 km
IE000199	Baldoyle Bay SAC	14.8 km
IE000202	Howth Head SAC	14.9 km
IE0004024	South Dublin Bay and River Tolka Estuary SPA	5.8 km
IE0004040	Wicklow Mountains SPA	7.6 km
IE0004006	North Bull Island SPA	8.0 km
IE004236	North-West Irish Sea SPA	10.4 km
IE0004172	Dalkey Islands SPA	13.4 km
IE0004016	Baldoyle Bay SPA	14.8 km

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

Status	Site Name	Distance
pNHA	Royal Canal	5.6 km
pNHA	Liffey Valley	6.3 km
pNHA	Grand Canal	2.5 km
pNHA	South Dublin Bay	5.9 km
pNHA	Dolphins, Dublin Docks	7.7 km
pNHA	North Dublin Bay	7.4 km
pNHA	Howth Head	14.9 km
pNHA	Santry Demesne	10.4 km
pNHA	Glenasmole Valley	6.7 km
pNHA	Lugmore Glen	7.9 km
pNHA	Knocksink Wood	11.7 km
pNHA	Dingle Glen	10.3 km
pNHA	Dalkey Coastal Zone and Killiney Hill	12.1 km
pNHA	Loughlinstown Wood	12.4 km
pNHA	Ballyman Glen	13.8 km
pNHA	Ballybetagh Wood	10.7 km
pNHA	Glencree Valley	13.7 km
pNHA	Powerscourt Woodland	14.3 km
pNHA	Slade of Saggart and Crooksling Glen	10.5 km
Ramsar	Sandymount Strand/Tolka Estuary	6.0 km
Ramsar	North Bull Island	9.7 km
Ramsar	Baldoyle Bay	14.7 km

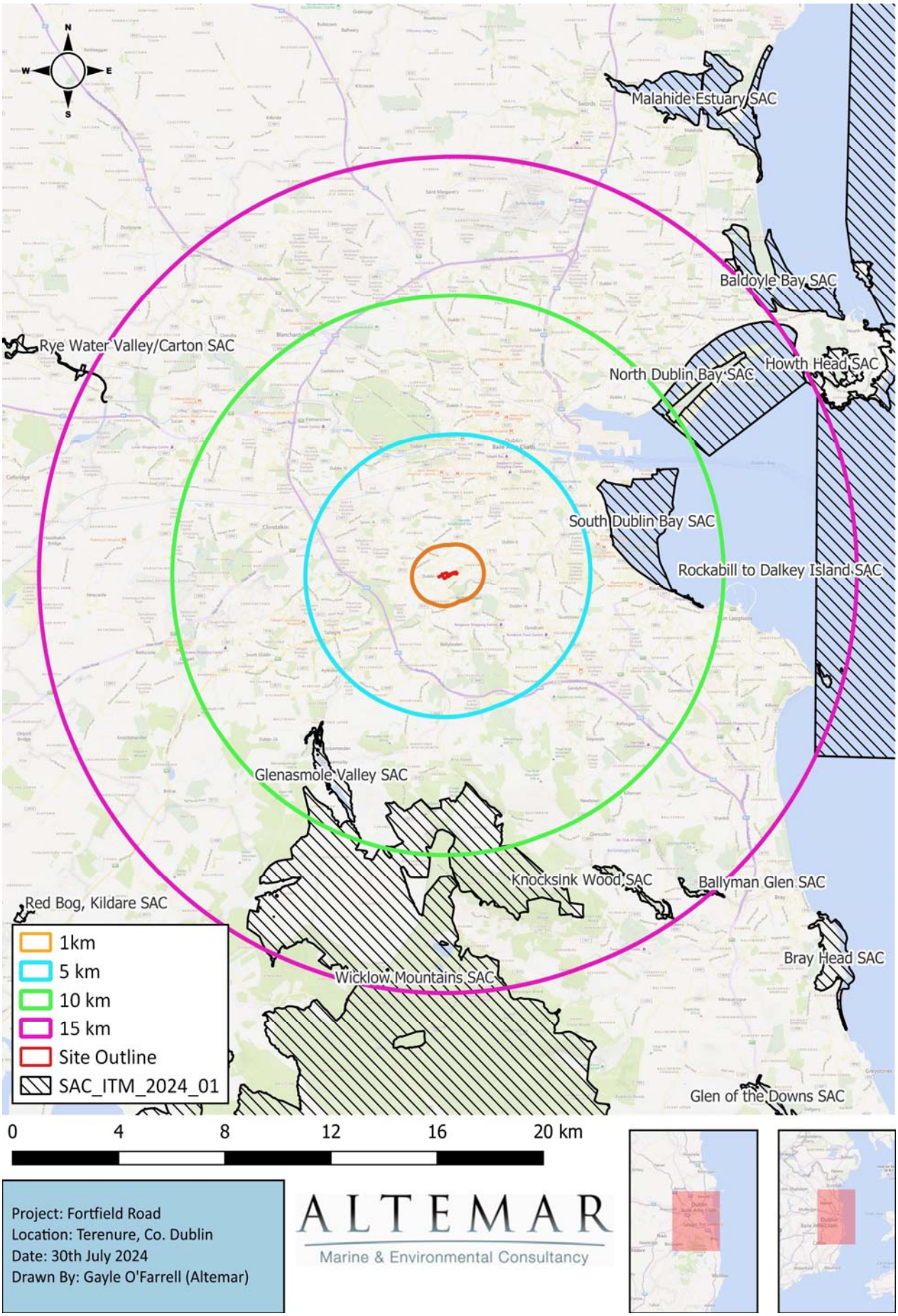


Figure 20. *Special Areas of Conservation (SACs) within 15km of proposed development*

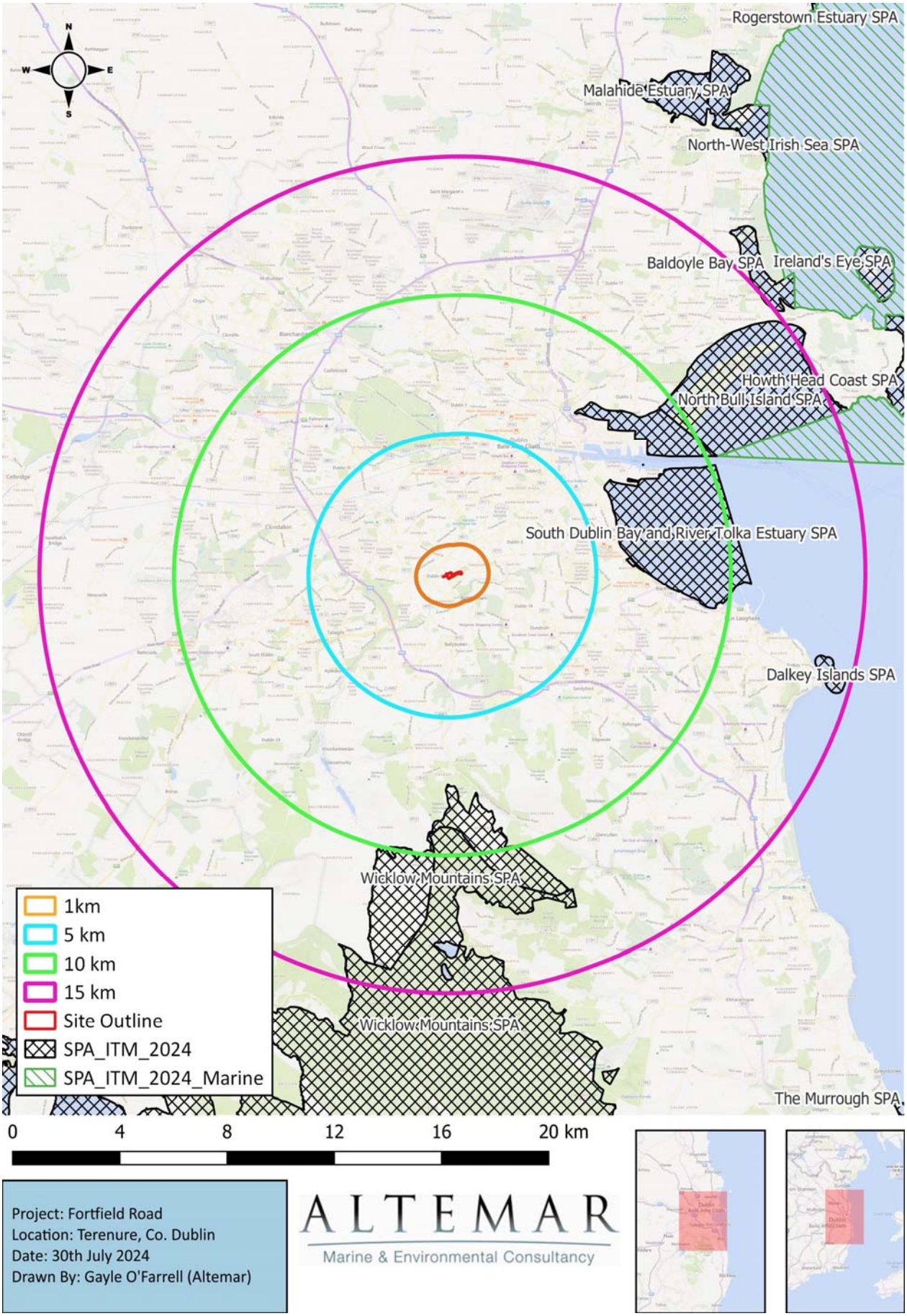


Figure 21. *Special Protection Areas (SPAs) within 15km of proposed development*

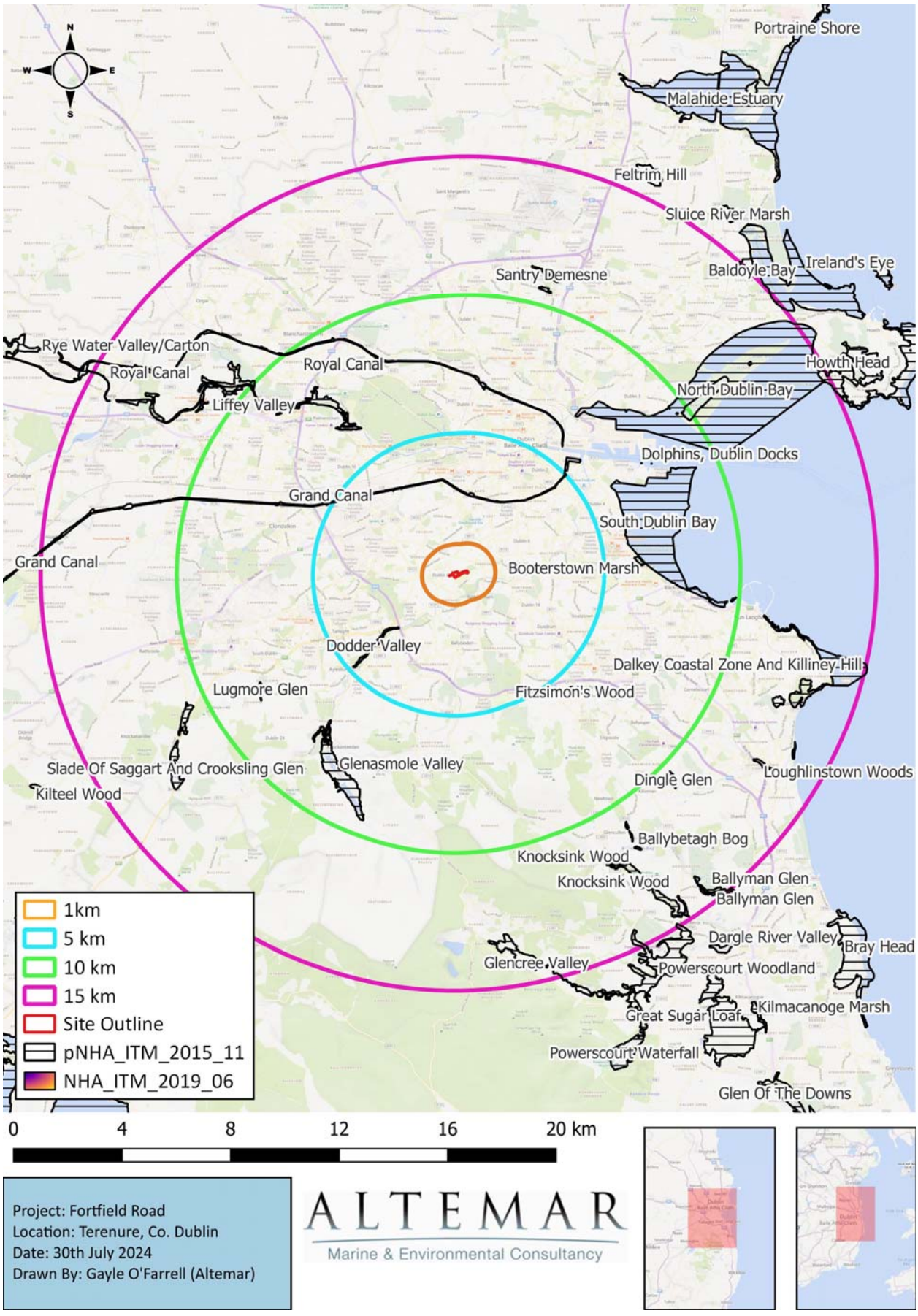


Figure 22. *Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs) within 15km of proposed development.*

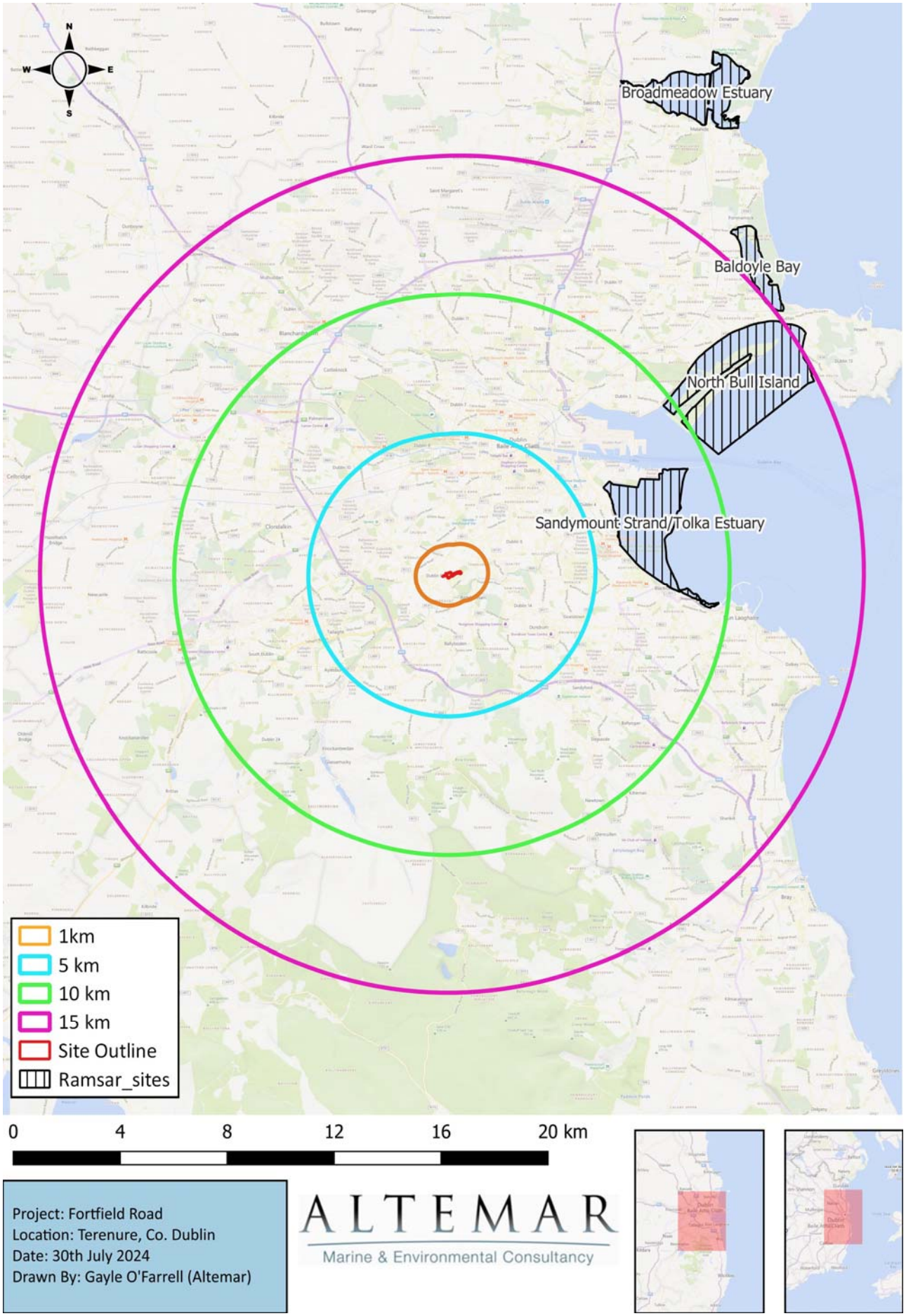


Figure 23. *Ramsar sites within 15km of proposed development*

Figure 24. *Watercourses within and proximate to the proposed development*

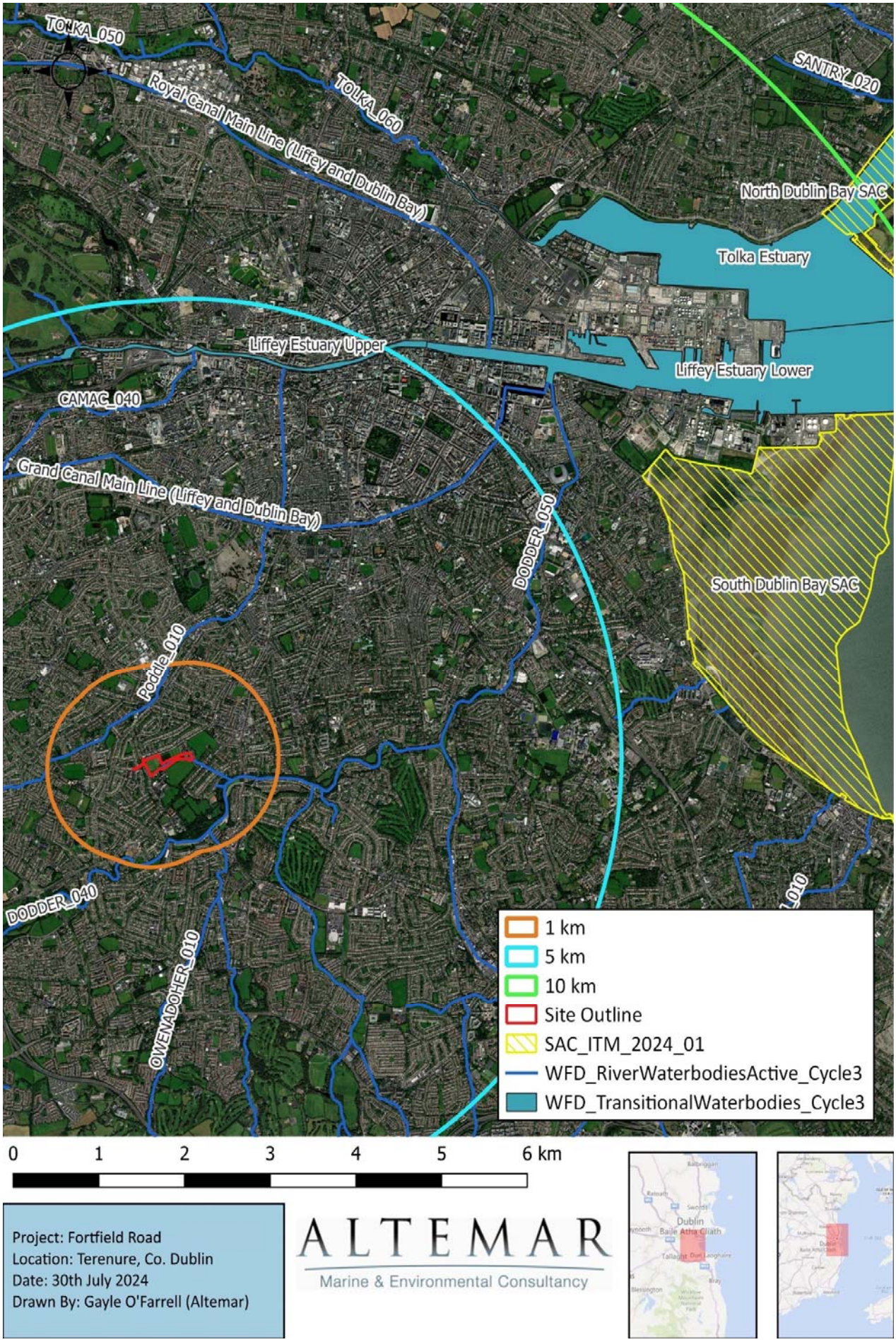


Figure 25. *Watercourses and SACs proximate to the proposed development*

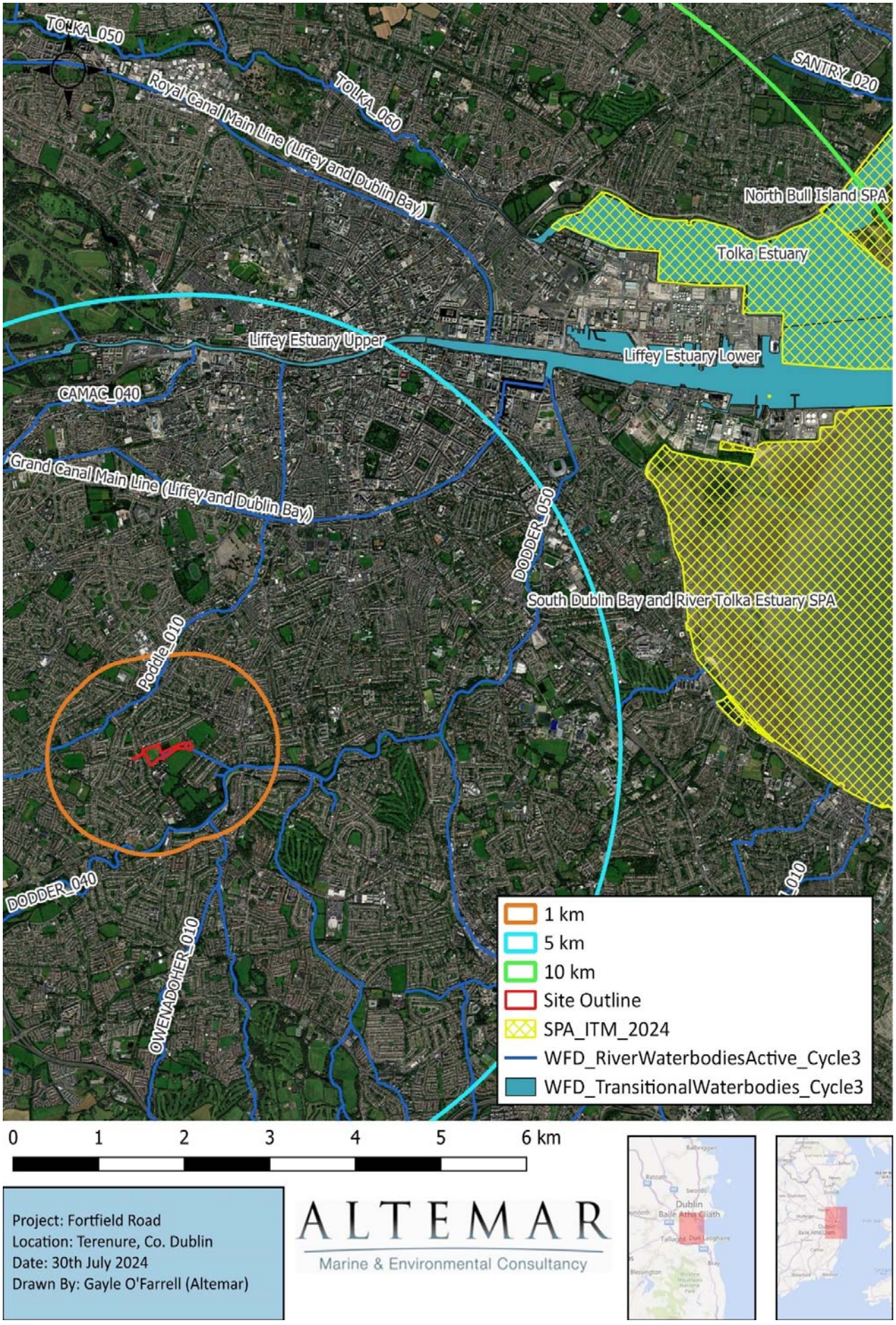


Figure 26. *Watercourses and SPAs proximate to the proposed development site*

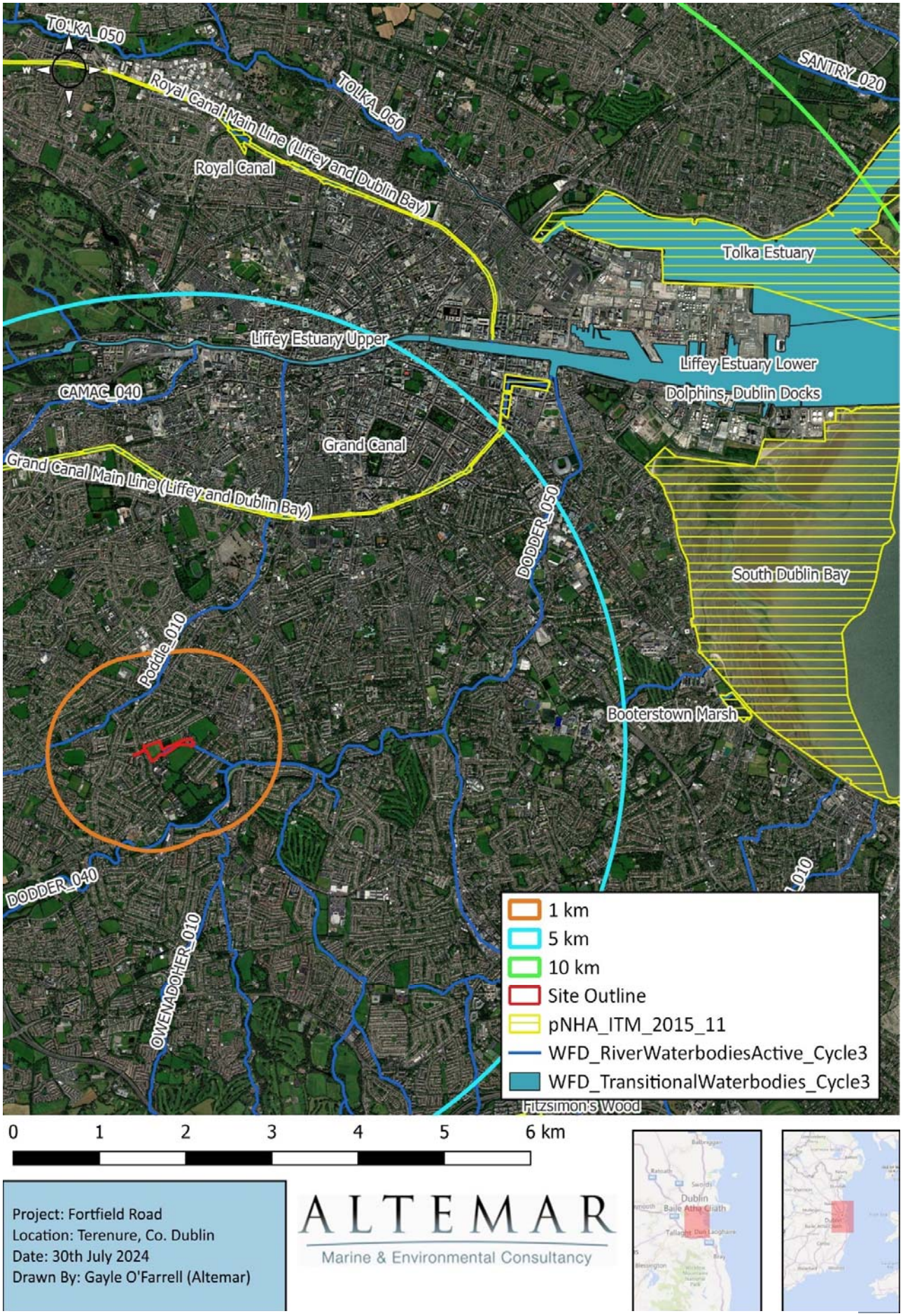


Figure 27. *Watercourses and pNHAs proximate of proposed development*

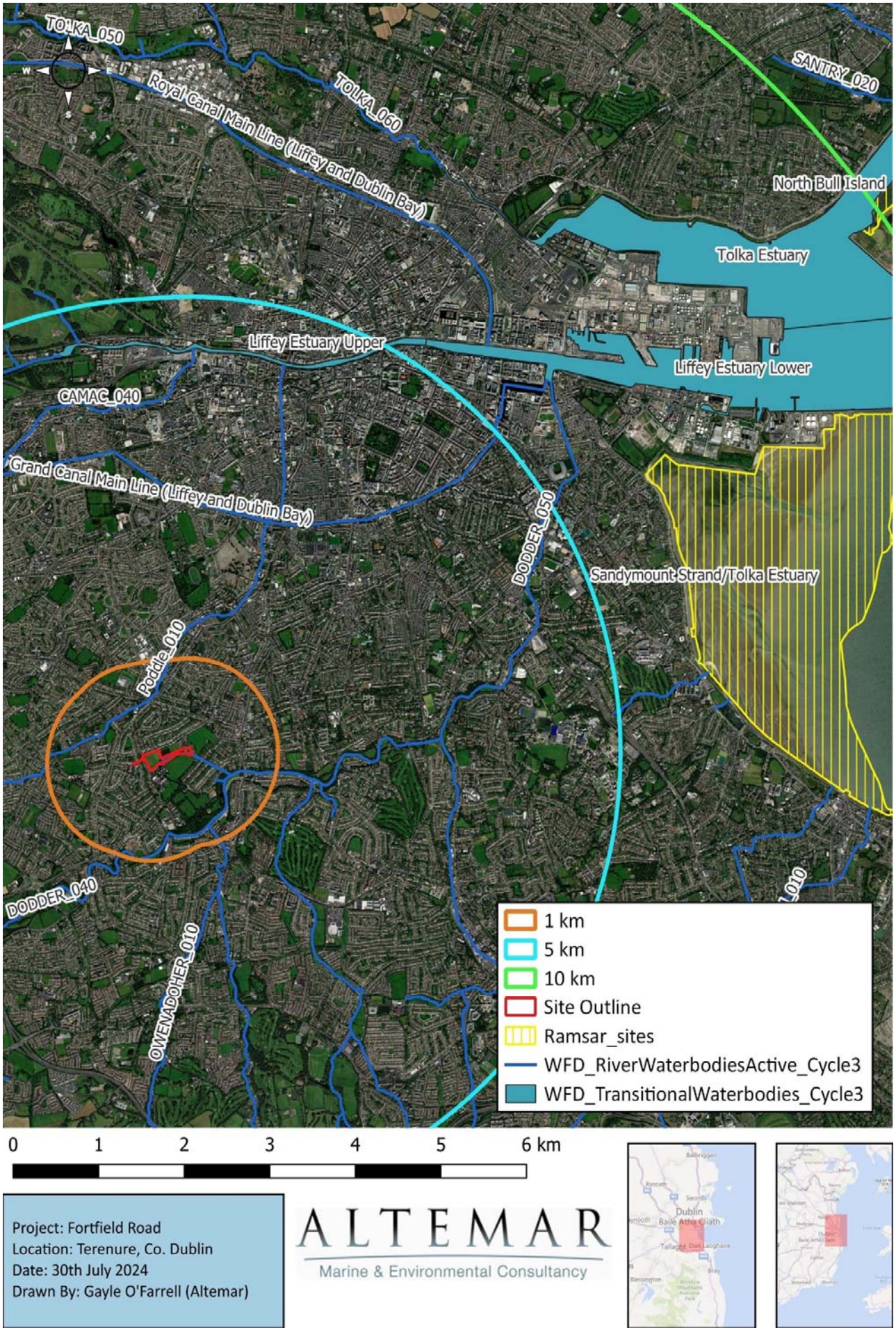


Figure 28. *Watercourses and Ramsar sites proximate of proposed development*

Habitats and Species

Numerous site assessments were carried out. The following site assessment in relation to Fossitt (2000) was carried out on 7th of September 2023. The Fossitt (2000) habitat map for the site is seen in Figure 29. The habitat and species observed on site are outlined in the following sections.

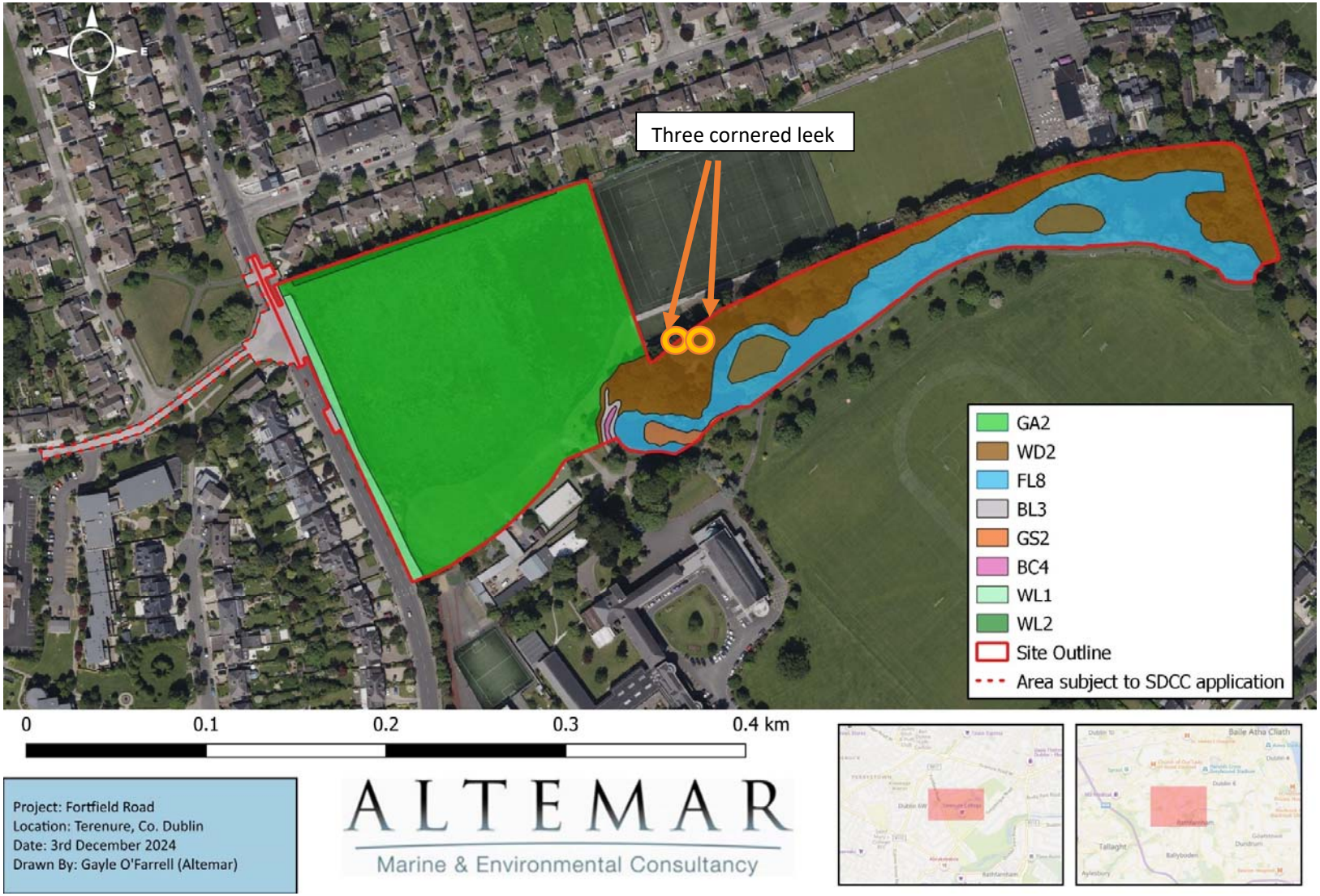


Figure 29. *Fossitt (2000) Habitat map of proposed development site*

Terenure College is a long-standing private school consisting mainly of parklands and school buildings. The Dodder River flows through the college forming a large pond area running the length of the site. Many mature trees gather to form a woodland of many native and some non-native species onsite.

GA2- Amenity Grassland.

Amenity grassland occupies approximately half of the proposed development site. It is maintained and had a medium length sward. Species within the amenity grassland included, creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum spp*.), docks (*Rumex spp*.), daisy (*Bellis perennis*), clover (*Trifolium repens*), plantains (*Plantago spp*.), thistles (*Cirsium vulgare*), and nettle (*Urtica dioica*).

A large portion of amenity grassland had been left unmanaged, succeeding to a dry meadow but remained species poor. The grass swards contained typical species listed above.

Plate1. *Amenity grassland.*

Plate 2. *Recently unmanaged amenity grassland.*

BC4 – Flower beds and borders.

A raised bed which had been left for native wildflowers was located at the east point of the lake onsite. Species noted within this habitat included great willowherb (*Epilobium hirsutum*), wallflower (*Erysimum cheiri / Cheiranthus cheiri*), white clover (*Trifolium repens*), red clover (*Trifolium pratense*), ribwort plantain (*Plantago lanceolata*), greater plantain (*Plantago major*), fool's parsley (*Aethusa cynapium*), hoary willowherb (*Epilobium parviflorum*), rose-bay willowherb (*Chamaenerion angustifolium*),nettles (*Urtica dioica*),), thistles (*Cirsium spp.*), knotgrass (*Polygonum aviculare*), broad-leafed doc (*Rumex obtusifolius*), hedge mustard (*Sisymbrium officinale*), cleavers (*Galium aparine*), autumn hawksbit (*Scorzoneroides autumnalis*), nipplewort (*Lapsana communis*), ox-eye daisy (*Leucanthemum vulgare*), lady-fern (*Athyrium filix-femina*), prickly sow-thistle (*Sonchus asper*), smooth sow-thistle (*Sonchus oleraceus*), meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*),sun spurge (*Euphorbia helioscopia*), tree mallow (*Malva arborea (Lavatera arborea)*), great mullein (*Verbascum Thapsus*), brambles (*Rubus fruticosus agg*) and garden privet (*Ligustrum ovalifolium*). Some rarer wildflower species such as corn marigold (*Glebionis segetum* (*Chrysanthemum segetum)*), cornflower (*Centaurea cyanus*), burnet –saxifrage (*Pimpinella saxifraga*) and Sainfion (*Onobrychis viciifolia*), was also noted in this habitat. A small amount of long-headed poppy (*Polygonum arenastrum*) and common sunflower (*Helianthus annuus*) also occupied this habitat.

Plate 3. *Wildflower bed.*

FI8 – Artificial lakes and ponds

An artificial pond of approximately 1.5 hectares is located on site. The pond is shallow in nature and has a relatively thick, muddy bed. It would appear from several areas of the lake that nutrient levels within the pond are high and black anoxic sediments are present, with areas of Beggiatoa sp. i.e. anoxic bacterial mats. The invasive plant Curly Waterweed (*Lagarosiphon major*) was observed within the pond. Aquatic species included Lesser Duckweed / Common Duckweed (*Lemna minor*), Yellow Iris / Yellow Flag (*Iris pseudacorus*), Lesser Water-parsnip (*Berula erecta*), Peppermint (*Mentha x piperita* (*Mentha aquatica x M. spicata)).* Shoals of sticklebacks (*Gasterosteus sp*.) were noted within the pond. common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*) have been reported to be within the pond also they were not observed during site surveys. Red-eared Terrapin (*Trachemys scripta*) (invasive) has been noted in Tymon Park approx. 1km to the west of the site. There is anecdotal evidence that species is also within the pond on site, although it was not observed during the site assessments. It would be expected that due to the high nutrient input (poor water quality watercourse and from birds), the shallow nature of the pond and the open exposure of daylight that there are significant fluctuations in oxygen and temperature levels within the pond. There is a strong waterbird population associated with the pond (Appendix IV of the EcIA-Breeding Bird Survey). Depending on waterflows during summer months the above parameters may lead to algal blooms and further deterioration in water quality with for example high fluctuations in oxygen between day and night.

Plate 4. *Vegetation around the edges of the pond.*

Plate 5. *Pond floor.*

WD2 – (Mixed) broadleaf and conifer woodland

A mixed broadleaf woodland is located surrounding the pond on site. This woodland extends onto three small islands within the pond. Mature tree species are seen across the woodland and it would be seen to form an important local biodiversity area for both birds and bat species, particularly as it is closely associated with the pond on site where there is a relatively high population of insects on which to forage. Species found within the woodland include mature ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), horse chestnut (*Aesculus hippocastanum*), holly (*Ilex aquifolium*), lime (*Tilia europea*), oak (*Quercus robur*), common alder (*Alnus glutinosa*) wych elm (*Ulmus glabra*), Scots pine (*Pinus sylvestris*), willow (salix sp.) common yew (*Taxus baccata*), holm oak (*Quercus ilex*), Turkey oak (*Quercus cerris*) and whitebeam (Sorbus aria). Within the darker areas of the woodland ground flora is dominated by ivy and lesser celandine (in the eastern section of the woodland prior to leaves coming on trees). Other species included common nettle (*Urtica dioica*), docks (*Rumex sp*.), herb-Robert (*Geranium robertianum*), sun spurge (*Euphorbia helioscopia*), bramble (*Rubus fructicosus*), meadowsweet (*Filipendula ulmaria*), bluebell (*Hyacinthoides non-scripta*), cow parsley (*Anthriscus sylvestris*), common dog-violet (*Viola riviniana*), cleavers (*Galium aparine*), wild carrot (*Daucus carota*), dog-rose (*Rosa canina*), privet (*Ligustrum ovalifolium*), dandelion (*Taraxacum vulgaria*) in addition to non-native species including cherry laurel (*Prunus laurocerasus*) and New Zealand Flax (*Phormium sp.).* It should be noted that several areas of three cornered leek (*Allium triquetrum*) (invasive species) were noted within and on the fringes of the woodland, particularly at the north western edge of the woodland. The woodland has several formal and informal paths and the footfall within the woodland would be seen as high. However, of specific importance to biodiversity and particularly nesting waterbirds are the three "island" areas which have limited access. A disused fox den with leaves within the entrance was located within the woodland.

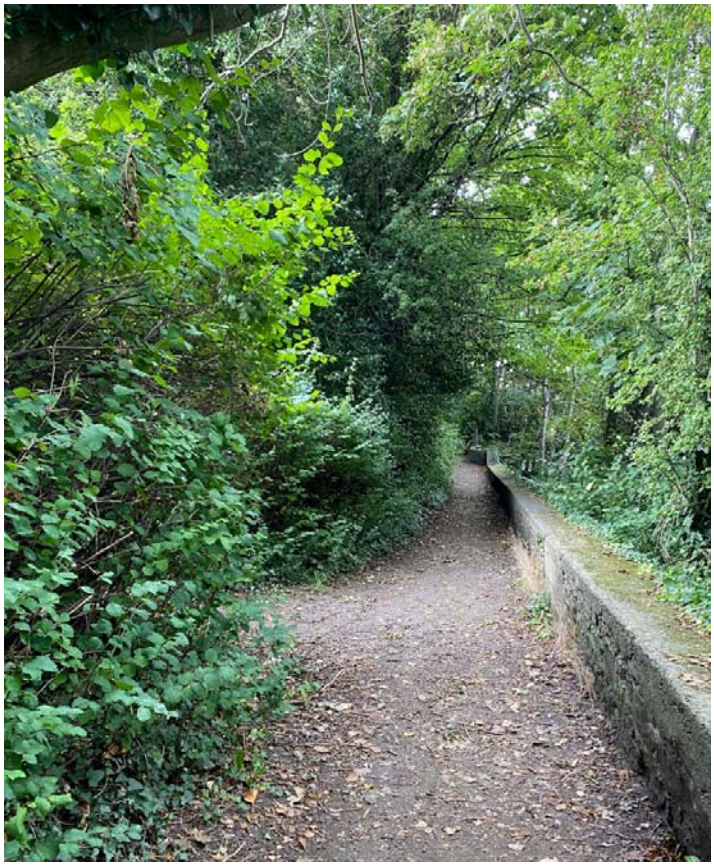


Plate 6. *Woodland.*

WL1 – Hedgerow

N native hedgerow is located on the western boundary of the site and periodically. Native species included bramble *(Rubus fruticosus), i*vy *(Hedera helix)*, holly *(Ilex aquifolium)* and horse chestnut (*Aesculus hippocastanum*). Other species include Pyrocantha (*Pyrocantha berberis*) and privet (*Ligustrum ovalifolium*).

Plate 7. *Non-native hedgerow.*

WL2 – Treelines

A single treeline of lombardy poplar (*Populus nigra "Italica")* is located in the north perimeter of the site. Within this treeline other species include holly (*Ilex aquifolium*), common nettle (*Urtica dioica*), docks (*Rumex sp*.), herb-Robert (*Geranium robertianum*), sun spurge (*Euphorbia helioscopia*), bramble (*Rubus fructicosus*), cleavers (*Galium aparine*) hedge bindweed (Calystegia sepium) and dandelion (*Taraxacum vulgaria*).

Plate 8. *Teeline.*

Evaluation of Habitats and species

No rare or protected habitats were noted. However, the pond on site and surrounding woodland would be locally important for biodiversity as it provides significant nesting and foraging area for birds in addition to providing a locally important foraging and potentially roosting areas for bats.

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 NPWS were examined. No rare or threatened plant species were recorded in the vicinity of the proposed site.

Three cornered leek (Allium triquetrum) (Invasive species) was noted within the perimeter of the western end of the woodland area. Curly Waterweed (*Lagarosiphon major*) (Invasive species) was noted within the pond. No other invasive species e.g. Japanese knotweed, giant rhubarb, Himalayan balsam or giant hogweed were noted on site.

Amphibians and reptiles

The common frog (*Rana temporaria*) or Smooth Newt (*Lissotriton vulgaris*) were not observed on site. However, it is likely that these species are present within the pond. Red-eared Terrapin (*Trachemys scripta*) (invasive) may be present on site.

Terrestrial Mammals

No signs of terrestrial mammals of conservation importance were noted on site. A disused fox (*Vulpes vulpes*) burrow was noted within the woodland. Hedgehogs have been recorded by NBDC within the 10km square but not within 2km at a finer resolution. No hedgehogs were seen during the site visit but maybe present.

Bats

The pond currently provides a dark sheltered habitat with high numbers of flying insects. High levels of bat foraging were noted over the pond. Three bat species (Leisler's bat (Lesser Noctule (*Nyctalus leisleri*)), soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted on site. A bat roost was noted within a Scots Pine, however no trees of bat roosting potential are to be felled for the proposed project. The proposed lighting plan was prepared in conjunction with Altemar to provide a sensitive lighting plan to reduce the potential impact on bat species. A derogation license is not required for the proposed development.

Wintering Birds

As outlined in the Wintering Bird Assessments (Appendix II -III of the EcIA), a total of 47 species were recorded over 9 surveys at the survey site area at Terenure College, during 2023-2024 survey season. In total 38 green, 8 amber and 1 red listed species[1] of conservation concern in Ireland were recorded either within, over or immediately adjacent to the overall survey area boundary.

A total of 43 species were recorded over 10 surveys during the 2022-2023 survey season. In total, 34 green, 8 amber and 1 red listed species of conservation concern in Ireland were recorded either within, over or immediately adjacent to the overall survey area boundary. Brent Geese were not observed foraging in the Terenure College survey area. As outline in Appendix II & III the "*Results suggest that the site is not an important ex-situ[2] foraging or roosting site for species of qualifying interest from nearby Special protection areas (SPA's)*."

Breeding Birds

As outlined in Appendix V, In 2023, '*Eleven species – Mallard (2 pairs), Little Grebe (1 pair), Moorhen (2 pairs), Robin (Several pairs), Dunnock (1 pair), Wren (Several pairs), Blackbird (2 pair), Mistle Thrush (1 pair), Blue Tit (2 pairs), Coal Tit (1 pair) and Magpie (1 pair) were recorded breeding on-site. Mallard is amber listed as a bird of medium conservation concern in Ireland (2020-2026), (minimum of two pairs bred in the Lakelands area of the survey site).*

In 2024, '*Ten species – Mallard (2+ pairs), Tufted Duck (1 pair), Moorhen (3+ pairs), Robin (Several pairs), Blackcap (1 pair), Wren (4+ pairs), Blue Tit (3+pairs), Coal Tit (2+pairs), Great Tit (1 pair) and Long-tailed Tit (1 pair) were recorded breeding on-site. Tufted Duck and Mallard are amber listed as birds of medium conservation concern in Ireland (2020-2026), both of which bred in the Lakelands area of the survey site.'*

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 (O12J) 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.

[1] https://birdwatchireland.ie/app/uploads/2021/04/BOCCI-2020-2026.pdf

[2] ex-situ foraging habitats utilised by qualifying interests faunal species associated with Natura 2000 sites.

Table 5. Recorded species and associated designations (Grid ref. O12J)

Species name	Date of last record	Title of dataset	Designation
Black-headed Gull *(Larus ridibundus)*	07/03/2023	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 Eider *(Somateria mollissima)*	18/05/2015	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Goldeneye *(Bucephala clangula)*	18/05/2015	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 - Amber List
Common Kingfisher *(Alcedo atthis)*	06/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Linnet *(Carduelis cannabina)*	18/05/2015	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 Starling *(Sturnus vulgaris)*	11/03/2023	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
Common Swift *(Apus apus)*	14/06/2023	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)*	10/12/2022	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
Herring Gull *(Larus argentatus)*	01/04/2023	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)*	18/05/2015	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
House Sparrow *(Passer domesticus)*	26/05/2023	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
Little Grebe *(Tachybaptus ruficollis)*	18/05/2015	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
Mallard *(Anas platyrhynchos)*	15/04/2020	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
Mute Swan *(Cygnus olor)*	18/05/2015	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
Rock Pigeon *(Columba livia)*	07/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Stock Pigeon *(Columba oenas)*	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
Tufted Duck *(Aythya fuligula)*	31/12/2011	Bird Atlas 2007 - 2011	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
Whooper Swan *(Cygnus cygnus)*	27/02/2018	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

An assessment of files requested and received from the NPWS (Code No. 2020_185) which contain records of rare and protected species and grid references for sightings of these species within and proximate to the area was carried out as part of this EcIA. There are no NPWS recorded rare and protected species sightings within the site itself, however there are some records are in close proximity to the subject site. The Common Frog (*Rana temporaria*) was recorded approximately 628 m from the proposed development site to the North. The Common Frog was also recorded within 1 km to the East, South and West of the proposed development. The following table provides a summary of the species identified, the year of identification, survey name and Grid Reference.

Table 6. Recorded species within NPWS Records proximate to the site.

Sample ID	Species	Survey Name	Sample Year
20329	Common Frog (*Rana temporaria*)	Frog IPCC data from National Frog Survey 2011	2007
29521	Otter (*Lutra lutra*)	Otter survey of Ireland 1982 - Vincent Wildlife Trust	1980
23908	West European Hedgehog (*Erinaceus europaeus*)	AFF Mammals, Reptiles & Amphibians Distribution Atlas 1978 (II)	1973
16393	Viviparous Lizard (*Lacerta vivipara*)	Lizards IBRC data	1968

Sample ID	Species	Survey Name	Sample Year
27163	Henbane (*Hyoscyamus niger*)	Herbarium and Literature Database 19/02/2013	1978
25134	Smooth Newt (*Lissotriton vulgaris*)	AFF Mammals, Reptiles & Amphibians Distribution Atlas 1978	1974
28272	Irish Stoat (*Mustela erminea subsp. Hibernica*)	Mustela erminea subsp. hibernica Records	1969
30481	Yellow Archangel (*Lamiastrum galeobdolon subsp. Montanum*)	NPWS Rare/Threatened Plants Database	1903
15536	Reindeer Moss (*Cladonia portentosa*)	BLS Lichen Recording Card	1976
15295	Common Lizard (*Zootoca vivipara*)	AFF Mammals, Reptiles & Amphibians Distribution Atlas 1978	1960
18415	Freshwater Crayfish (*Austropotamobius pallipes*)	Crayfish EPA data	2005
11664	Bog Orchid (*Hammarbya paludosa*)	NPWS Rare/Threatened Plants Database	1884
17514	Grey Seal (*Halichoerus grypus*)	Seals: Harbour seal population assessment in the Republic of Ireland	2003
12928	Many-seasoned Thread-moss (*Bryum intermedium*)	Rare and Threatened Bryophyte Survey in Southern & Eastern Ireland 2007	2007
22862	Cernuous Thread-moss (*Bryum uliginosum*)	Rare and Threatened Bryophyte Survey in Southern & Eastern Ireland 2007	2007
8455	Lesser Centaury (*Centaurium pulchellum*)	Rare Vascular Plants: Additional Records on Survey Cards 2011	2005

Potential Impacts

Potential Construction Impacts

In the absence of mitigation measures the overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora within the site outline. It should be noted that the pond on site drains to the River Dodder, which ultimately outfalls to the River Liffey and the marine environment at Dublin Bay. In the absence of mitigation measures there is potential for pollutants to enter the watercourse via the surface water network and travel downstream to 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 SPA. Mitigation measures are outlined in table 8. Site clearance and construction on site will take place primarily in the vicinity of the amenity grassland and adjacent habitats on site.

Designated Conservation sites within 15km

The proposed development is not within a designated conservation site. The nearest Natura 2000 sites is South Dublin Bay and River Tolka Estuary SPA (5.8 km). An Appropriate Assessment Screening and Natura Impact Statement have been carried out for the proposed project and accompany this submission. 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 Dublin Bay via the River Dodder and River Liffey. Mitigation is required to protect downstream designated 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. 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 SPA. However, given the distance from the site to European sites (5.8 km 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. Potential Impacts in the absence of mitigation: Moderate Adverse, National, negative Impact, Not significant & short-term. Mitigation measures will be required to protect designated sites.

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 with potential for downstream effects. Potential impacts within the EcIA are outlined as per EPA EIAR guidelines (EPA, 2022).

Terrestrial mammalian species

No signs of badgers (*Meles meles)* or otters (*Lutra lutra*) inhabiting or foraging were noted onsite. No protected non-volant mammals were recorded on site. There is potential for disturbance of common mammal species on site particularly during site clearance works.

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.

Flora

No protected flora was noted on site. Site clearance will remove the flora species on site. None of the flora species to be removed are of conservation significance. Invasive species were noted on site: The invasive Three Cornered Leek *(Allium triquetrum) and* Curly Waterweed (*Lagarosiphon major*) were noted on site.

Potential Impacts in the absence of mitigation: Low adverse, site, Negative Impact, Not Significant & Short term. Mitigation is required in relation to invasive species on site.

Bat Fauna

No trees or buildings of bat roosting potential are to be removed as part of the proposal. Lighting during the construction phase has the potential to impact on bat foraging on site and particularly over the pond area.

Potential Impacts in the absence of mitigation: Low adverse, site, Negative Impact, Not significant & short term. Mitigation is needed in the form of control of light spill during construction and pre construction inspections.

Aquatic Biodiversity

There is a culverted watercourse and pond onsite which will drain the surface water runoff from the proposed development site. The pond then drains to the River Dodder, which ultimately discharges to the River Liffey and the marine environment at Dublin Bay. Due to the extent of the proposed works and the potential for surface runoff and pollution to enter the pond there is potential for negative effects directly on the biodiversity associated with the pond and downstream biodiversity.

Potential Impacts in the absence of mitigation: Medium adverse, county/ Negative Impact& short term. Robust mitigation is needed in the form of control of silt, petrochemical and dust entering the watercourse during construction.

Bird Fauna

Due to the presence of breeding birds on site and the removal of nesting and foraging habitat the construction will result in a loss of foraging and nesting habitat for breeding habitat for breeding birds. However, these effects will not be in the vicinity of the pond which is the primary area of breeding bird activity on site. Planting throughout the development, particularly of native hedgerows, could result in a positive impact through the provision of both nesting and foraging habitat.

Potential Impacts in the absence of mitigation: Low 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. In total 332 trees will be planted on site, in addition to 56 roof garden trees. As outlined in the landscape report "..it is anticipated that the development will offer a net gain to biodiversity through the development of additional habitat."

Appropriate measures will be taken to prevent light spill, contaminated surface water run-off and dust entering into adjacent riparian habitats, and in particular the onsite pond and ultimately the River Dodder. It is anticipated that the new drainage network, to be installed on site, which is required to comply with provisions of the Development Plan as regards SUDS will have a negligible impact on habitats and species

Designated Conservation sites within 15km

There are no designated European sites which could potentially be impacted by the operational phase of the proposed development. Surface water during operation will discharge to a storm water sewer on Fortfield Road. Surface water during construction will be discharged to the River Dodder, via a surface water drainage network. 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 River Dodder, River Liffey Estuary and the marine environment at South Dublin Bay and would not impact on European sites. However, standard operational mitigation measures will be required to comply with water pollution Acts.

Potential Impacts in the absence of mitigation: Negligible, International, Neutral Impact, Not significant, Long-term

Mitigation is required in the form of standard operational controls on discharges from the site to protect marine environments within Dublin Bay.

Biodiversity

The biodiversity value of the site will improve as landscaping matures. Based on the implementation of a landscape plan that is focused on increasing biodiversity it is anticipated that the development will offer a net gain to biodiversity through the development of additional habitat.

Terrestrial mammalian species

No signs of badgers (*Meles meles)* or otters (*Lutra lutra*) inhabiting or foraging were noted onsite. During operation additional habitat and foraging will be created for common mammal species. Human and canine disturbance would increase on site. As observed during fieldwork the site already has high levels of human and canine disturbance and this development would not be seen to have a significant impact mammals of conservation importance as mammals of conservation importance were not observed on site.

Potential Impacts in the absence of mitigation: Low adverse, local/ Negative Impact, Not significant, long term. No mitigation measures are required.

Flora

No protected flora was noted on site. Landscaping will increase flora diversity and remove invasive species on site.

Potential Impacts in the absence of mitigation: Neutral, site, Not significant, long-term. No mitigation measures are required.

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. Three bat species Leisler's bat (Lesser Noctule (*Nyctalus leisleri*)), soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted on site. Species observed foraging onsite should persist. Lighting on site is restricted to the housing development area and no lighting is proposed in the vicinity of the woodland area or the pond where foraging was observed. No trees of bat roosting potential will be felled as a result of the proposed development. Potential Impacts in the absence of mitigation: Low adverse, International /Negative Impact, Not significant, long term.

Aquatic Biodiversity

Standard measures including petrochemical interception will be in place in relation to surface water discharges. No additional mitigation is required.

Potential Impacts in the absence of mitigation: Low adverse, local, Negative Impact, Not significant, long term

Bird Fauna

The proposed development will change the local environment as new structures are to be erected. The buildings are comprised of solid materials consisting of a solid material on the exterior which includes sections of concrete and glass. These buildings would be clearly visible to bird species and would not pose a significant collision risk as a significant portion of the buildings are constructed of opaque materials (approx.. 50%). However, the presence of buildings on site and increased human activity may reduce the potential for breeding birds to forage.

Potential Impacts in the absence of mitigation: Low adverse, site, Negative Impact, Not significant, long term

Mitigation Measures & Monitoring

Construction and operational mitigation (Table 8) 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 8.

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
River Dodder River Liffey South Dublin Bay SAC North Dublin Bay SAC South Dublin Bay and River Tolka Estuary SPA North Bull Island SPA Aquatic and avian biodiversity	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Downstream impacts • Negative impacts on the aquatic environment, habitats, aquatic species, bird fauna, and qualifying interests.	The accompanying NIS, OCMP, CEMP and Outline Resource & Waste Management Plan outline the required mitigation measures. which will l be carried out. T The outlined mitigation measures, ecological supervision and monitoring will prevent significant residual impacts on the River Dodder which is the pathway for potential impacts on European sites. **Construction Phase Mitigation** • *A project ecologist will be appointed to oversee all works.* • *A preconstruction inspection for mammals Including Otter (Annex II & IV of the Habitats Directive) will be carried out.* • *Local watercourses (River Dodder), the onsite pond and 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 watercourse and drains* • *Stockpiling of loose materials will be kept to a minimum of 40m from watercourses, ponds and drains.* • *Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses.* • *Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains, ditches or the watercourse, 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 watercourses and drains* • *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 river 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.* • *The diversion works will be undertaken before any other major works, minimizing the potential for down impact ie. Silting of the downstream watercourse.* • *No discharges will be to the watercourse or pond during works.* • *No abstraction of water from the pond or watercourse will be carried out during woks.*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• *Silt traps established throughout site including a double silt fence between the site and the watercourse.* • *Sufficient onsite cleaning of vehicles prior to leaving the site and on nearby roads, will be carried out, particularly during groundworks to prevent silt entering the road network drainage.* • *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.* • *The proposed basement will involve the excavation of approximately 13,000m^3 of material. 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. Any discharges will have twice daily turbidity, oxygen and pH monitoring (between 11am-1pm & 3.30pm-5pm). These monitoring records will be taken upstream of any discharge, within the discharge and downstream of the discharge. Daily photographic records of the sampling site to be sampled at each sampling event will be catalogued and held for inspection by the ecologist and Inland Fisheries Ireland. In the absence of discharges on- site monitoring will be carried out during working days at the inflow and outflow of the pond for the length of construction works on site. Sufficient baseline readings will be made prior to construction commencing to understand the existing turbidity on site particularly in the inflow area as this appeared turbid during the site visit. Anoxic sediments were also located in this area.* • *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.* • *Abstraction of water from watercourses/ponds will not to be permitted.* • *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. Booms will be placed "ready to be deployed" proximate to any risk areas identified by the ecologist.* • *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.* • *Ecological supervision will be required during construction works stages to ensure works do not result in surface water runoff impacting on adjacent habitats including the pond and drainage networks. Silt interception measures will be put in place to ensure that the watercourses are not impacted during works and in particular during the site clearance and reprofiling stages. Landscaping of the areas of the site proximate to the watercourse/pond will take place immediately following any re-profiling where possible, to act as a buffer to protect the watercourse.*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• *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.* • *Oils, fuel and other potential hazardous liquid materials will 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;* • *No plant used shall cause a public nuisance due to fumes, noise, and leakage or by causing an obstruction;* • *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 remedial action 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.* • *Consultation with Inland Fisheries Ireland will be carried out pre and post works and will be led by the project ecologist.* • *No entry of solids to the associated stream or drainage network during the connection of pipework to the public water system will take place through silt interception as outlined by the project ecologist.* • *Landscaping of the pond will be carried out to the satisfaction of IFI and the project ecologist.* • *Any works in the vicinity of the pond will be subject to approval of the project ecologist.* **Operational Phase Mitigation**

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in 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.* • *Post Construction assessment/compliance with proposed lighting strategy* ***OCMP*** ***'Site Set-Up and Security*** *The Main Contractor will be required to submit a site layout plan that will detail the proposed location of the site compound. The Contractor will ensure that the site compound will be serviced as required and will be secured with appropriate fencing/hoarding. The site compound will be used as the primary location for the storage of materials, plant and equipment, site offices and worker welfare facilities. As Project Supervisor Construction Stage (PSCS), the Contractor will be responsible for site security and they are to ensure that the site and site compound are adequately secured at all times.* *As with the other construction activities that are being carried out within the Dublin City Council local authority area, activities associated with the construction compounds will be subject to restrictions to the nature and timing of operations so that they do not cause undue disturbance to neighbouring areas and communities. The site layout plan will also include the site perimeter and the proposed detail with regards the hoarding and gate system.'* ***'General Construction Approach*** ***Construction Working Space*** *Construction working space will be set out in the detailed construction management plan at compliance stage. Construction access routes, haul routes and delivery routes to the site are to be agreed with the Engineer/Employer's Representative in advance of works commencing onsite. Any road closures required will be submitted and approved in advance with the local authority. It is the responsibility of the Main Contractor to prepare and submit the road closure application to the local authority in advance of works commencing onsite.'* ***'Hoarding, Site Set-up and Formation of Site Access/Egress*** *The site area will be enclosed with hoarding details of which are to be agreed with DCC. Hoarding panels will be maintained and kept clean for the duration of the works. This will involve erecting hoarding around the proposed site perimeter in line with the finished development extents. The available site footprint will enable the Contractor to set up the site compound within the site boundary. The Contractor will be responsible for the security of the site.* *The Contractor will be required to:* *•Operate a Site Induction Process for all site staff;* *•Ensure all site staff shall have current 'Safe Pass' cards and appropriate PPE;* *•Install adequate site hoarding to the site boundary;*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		•Maintain site security at all times; *•Install access security in the form of turn-styles and gates for staff;* *•Separate public pedestrian access from construction vehicular traffic'* ***'Construction Noise, Dust and Vibration*** *The Main Contractor will be required to monitor noise, dust and vibration as will be outlined in the planning conditions. The Contractor will establish baselines for noise, dust and vibration in advance of works commencing onsite. As part of their detailed construction management plan, the Contractor will be required to clearly indicate how they plan on monitoring noise, dust and vibration throughout the course of the project. This will be especially critical in relation to the basement construction and associated piling works. The Contractor will also be required to clearly outline the mitigation measures they plan on putting in place to ensure any breaches in the baselines are mitigated. For more details please refer to the 'Outline Resource & Waste Management Plan 'prepared and included in the planning submission.'* ***Outline Resource & Waste Management Plan*** *Prevention of Waste* *The primary effort therefore should be to engage in waste prevention and reduce the amount of waste generated in the first place i.e. minimise the resources needed to do the job. Prevention is financially advantageous as it reduces the purchase of construction materials and obviates the need to remove wastes from site. It is important to emphasise the potential for certain purchasing procedures to contribute to a reduction in excessive material wastage on site. Examples include:* *•ensuring materials are ordered on an "as needed" basis to prevent over supply to site;* *•purchasing construction materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site;* *•ensuring correct storage and handling of construction materials to minimise generation of damaged materials/waste, e.g. keeping deliveries packaged until they are ready to be used;* *•ensuring correct sequencing of operations; and* *•assigning individual responsibility (through appropriate contractual arrangements) to sub-contractors for the purchase of raw materials and for the management of wastes arising from their activities, thereby ensuring that available resources are not expended in an extravagant manner at the expense of the main contractor.* ***Reuse of Waste*** *Waste material that is generated will be reused on site or salvaged for subsequent reuse to the greatest extent possible and disposal should only be considered as a last resort. Initiatives will be put in place to maximise the efficient use/reuse of materials.* ***Recycling of Waste*** *There are a number of established markets available for the beneficial use of C&D waste:*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		•waste timber can be: *•recycled as shuttering or hoarding, or* *•sent for reprocessing as medium density fibreboard;* *•waste concrete can be utilised as fill material for roads or in the manufacture of new concrete when arising at source; and* *•in addition, the technology for the segregation and recovery of stone, for example, is well established, readily accessible and there is a large reuse market for aggregates as fill for roads and other construction projects.* ***Overall Management of Construction and Demolition Waste*** *Waste minimisation, reuse and recycling can best be managed operationally by nominating a "Construction and Demolition Waste Manager" to take responsibility for all aspects of waste management at the different stages of the Project.* *This C&D Waste Manager may well be a number of different individuals over the life-cycle of the Project, but in general is intended to be a reliable person chosen from within the Contracting Team, who is technically competent and appropriately trained, who takes the responsibility to ensure that the objectives and measures within the Project Waste Management Plan are delivered and who is assigned the requisite authority to secure achievement of this purpose.* *Specifically, the function of the C&D Waste Manager will be to communicate effectively with colleagues in relation to the aims and objectives for waste management on the Project. The primary responsibility for delivery of the objectives of the Waste Management Plan will fall upon the C&D Waste Manager designated at the demolition/ construction stage. A key objective for the C&D Waste Manager should be to maintain accurate records on the quantities of waste/ surpluses arising and the real cost (including purchase) associated with waste generation and management.* *The preparation, application and documentation of a Project Waste Management Plan should enable all parties - including contractors, designers and competent authorities -to learn from the systematic implementation and assessment of best practice, particularly through the recording of summary information on performance outcomes.* ***'Disposal of Water, Wastewater and Sewage*** *'All site facilities during construction will be located entirely within the site. The facilities will include canteen, toilet block and drying room for all staff/workers. These facilities will be connected to the Local Authority sewage system with local authority approval.'* ***'Water Disposal***

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		Throughout the works, all surface water (water from excavations etc.) will be pumped to a holding tank on site. From here the water will be pumped to a series of settlement tanks. These tanks will act as primary and secondary settlement. The settlement tanks will be of sufficient number and size to allow the necessary retention time for solids to settle. The discharge water from the final tank will be routed to the existing surface water system with approval from the local authority. Visual checks of the pumping and settlement system will be carried out on a routine basis.' ***'Control of Fuels and Lubricants*** *In order to provide fuel to the relevant items of plant on site, a certified double skinned metal fuel tank with integrated pump, delivery hose, meter, filter and locking mechanism will be situated in a secure area on the construction site. It will be situated within a bund. This tank will be certified for lifting when full. Sand piles and emergency clean up spill kits will be readily available in the event of a fuel spill. A hazardous bin will also be available to contain any spent sand or soak pads. New metal gerry cans with proper pouring nozzles will be used to move fuel around the site for the purposes of refuelling items of small plant on site. Drip trays will be used under items of small plant at all times. Any waste oils etc. contained in the drip trays or the bunded area will be emptied into a waste oil drum, which will be stored within the bund. Metal gerry cans and any other items of fuel containers will be stored in certified metal bunded cabinets. Any gas bottles will be stored in a caged area at a secure location on the site. All will be properly secured at point of work.* ***Air Quality*** *There is the potential for a number of emissions to the atmosphere during the bulk excavation/demolition stage of the project. In particular, activities may generate quantities of dust. Construction vehicles, generators etc., will also give rise to some exhaust emissions. Vehicular movements to and from the site will make use of existing roads. It is estimated that peak construction HGV movements will be 6HGV'sper hour. Considering the existing traffic levels in the area, the likely air quality impact associated with construction traffic is not significant. A dust minimisation plan will be formulated for the bulk excavation/demolition and construction phase of the project, as construction activities are likely to generate dust emissions. The potential for dust to be emitted depends on the type of activity being carried out in conjunction with environmental factors including levels of rainfall, wind speeds and wind direction. The potential for impact from dust depends on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. The majority of any dust produced will be deposited close to the potential source and any impacts from dust deposition will typically be within several hundred metres of the construction area. In order to ensure that no dust nuisance occurs, a series of measures will be implemented.* *Roads shall be regularly cleaned and maintained as appropriate. Hard surface roads shall be swept to remove mud and aggregate materials from their surface. Furthermore, any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions. Vehicles delivering material with dust potential both on and off the site shall be enclosed or covered with tarpaulin at all times to ensure no potential for dust emissions. All vehicles exiting the site shall make use of a wheel wash facility, if required, prior to*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		entering onto public roads, to ensure mud and other wastes are not tracked onto public roads. Public roads outside the site shall be regularly inspected for cleanliness and cleaned as necessary. Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind. Water misting or sprays shall be used as required particularly dusty activities are necessary during dry or windy periods. At all times, the procedures put in place will be strictly monitored and assessed. In the event of dust nuisance occurring outside the site boundary, satisfactory procedures will be implemented to rectify the problem. The dust minimisation plan shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practise and procedures.'
Birds (National Protection)	• Removal of nesting habitat. • Removal of foraging habitat. • Destruction and/or disturbance to nests (injury/death). • Predation.	• "Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2023) in relation bird nesting. Should this not be possible, a pre-works check by a qualified ecologist should be undertaken to ensure nesting birds are absent. • 20 Nest boxes placed on site to compensate for nesting resource loss resource loss due to the removal of existing vegetation. • Planting will provide suitable cover for nesting birds and encourage insect diversity that would sustain birds. • During construction light falling upon any areas of benefit to birds such will not exceed 3 lux to ensure that resting and nesting species are not unnecessarily disrupted. All lighting during construction phase will be to the satisfaction of the project ecologist, will be point inwards to the site and will be downward facing so as not to impact on surrounding habitats.
Bats (International Protection)	• Removal roosting/foraging habitat. • Lighting Impacts	• Lighting at all stages will be done sensitively on site in line with Bat Lighting Guidelines (Bat Conservation Trust, 2018) with no direct lighting of treelines or hedgerows. • Post Construction assessment/compliance with proposed lighting strategy. • A pre-construction assessment of trees to be felled will be carried out. If bats are found during the pre construction inspection NPWS will be informed, a Derogation Licence will be applied for and any conditions imposed complied with. • A post construction lighting assessment will be carried out by the project ecologist.
Amphibians	• Death/injury	• A pre-construction inspection will be carried out. • Protection of the pond and watercourse from dust, surface water and pollution (See above mitigation)
Mammals	• Death/injury • Destruction of resting/breeding places	• Badgers may construct setts in the intervening period between the initial survey and the commencement of construction. A pre-construction inspection will be conducted to ensure that there are no badger setts on site. If badgers are found during the pre construction inspection NPWS will be informed and any conditions imposed complied with. • Lighting at all stages should be done sensitively on site with no direct lighting of treelines. • Post Construction assessment/compliance with proposed lighting strategy.
Plants	• Invasive Species	• Invasive plant species are present on site. Prior to commencing construction on site an invasive species management plan will be developed and implemented to control the three cornered leek (*Allium triquetrum*) and curly waterweed (*Lagarosiphon major*) on site.

Residual 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 and pond is clean and uncontaminated. However, early implementation of ecological supervision and consultation with Inland Fisheries Ireland, prior initial mobilisation and enabling works is seen as an important element to the project, particularly in relation to the implementation of surface water runoff, dust mitigation, bat, amphibian, mammal and avian mitigation.

With the successful implementation of standard mitigation measures to limit surface water impacts on the watercourses, biodiversity mitigation/supervision, no significant impacts are foreseen from the construction or operation of the proposed project on terrestrial or aquatic ecology. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed development.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on terrestrial biodiversity, aquatic biodiversity and bats through the application of the standard construction and operational phase controls as outlined above. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the pond/watercourse satisfactorily address the potential impacts on downstream biodiversity and European sites. An increase in disturbance would be seen on site and mitigation measures will be carried out to ensure that bats continue to forage and breeding waterbirds are maintained on site. No significant adverse impacts on the conservation objectives of European sites are likely in the absence of mitigation measures outlined above.

It is essential that these measures outlined are complied with, to ensure that the proposed development does not have “downstream” environmental impacts and significant impacts on biodiversity on site.

Potential Residual Impacts: Low adverse, local, Negative Impact, Not significant & long term.

Cumulative Impacts

The following is a list of planning application(s) as identified on the Department of Housing, Local Government and Heritage’s ‘National Planning Application Database’ portal (Table 3)[3]:

Table 9. Planning applications proximate to the subject site

DLRCC/ ABP Reg. Ref.	Address	Overview of Development
4510/22	Terenure Rugby Football Club, 'Lakelands', Greenlea Grove, Terenure, Dublin 6W	- RETENTION: Permission for the retention of 1no. cafe facility, 3m x 2.4m x2.57m with a store space of 3.06m x 1.63m x 2.57m, presently located in the parking lot alongside the existing club house, and 1no. charcoal pizza facility, 4.7m x2.5m x2.57m located at the southern end of the parking lot adjacent to the main grass pitch at a 2.73 hectare site at Terenure Rugby Football Club, 'Lakelands', Greenlea Grove, Terenure, Dublin 6W. The site is accessed via Greenlea Grove.
SD22A/0404	Templeogue College, Templeville Road, Dublin 6	- The development will consist of the change of use of Templeogue College Community Residence and garage (c.767sqm) to a special educational needs school. The proposed works consists of the following; 1) reconfiguration and refurbishment (internal and external alterations) of existing building with new extension (c.9sqm) to the rear. The revised internal layout consists of 4no. classrooms and related ancillary school facilities (including reception area, principal's office, meeting room, living skills room, staff room, student and staff WC. 's and shower room, a sensory room, storage and new stairs. 2) reconfiguration of existing garage for rear access. The development will also consist of associated minor alterations to the existing facades and siteworks to facilitate the proposed development: 1) replace all existing windows, 2) new external classroom doors on the Western elevation, 3) new gently sloped access ramps and external covered walkways to the North, East and

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

DLRCC/ ABP Reg. Ref.	Address	Overview of Development
		West elevations 4) 5 no. new car parking spaces and drop-,off point. 5) development of rear garden to include landscaping for 2no. soft play areas. 6) a new pedestrian access from Temple Ville Road
2033/19	ETB Sports Grounds, Templeogue Road, Terenure, Dublin 6W	The development will consist of alteration to existing boundary wall, including relocation of pillars and gates, to improve visibility and sightlines at existing vehicular entrance at Templeogue Road.
2997/20	Terenure Sports Club, 54, Terenure Road North, Dublin 6W	Planning permission for the removal of two existing single storey prefabricated changing room buildings, and the installation of two new single storey prefabricated changing room buildings in their place, with associated site works.
2134/18	St. Pancras Works, Mount Tallant Avenue, Terenure, Dublin 6W	PROTECTED STRUCTURE: Planning permission for development consisting of amendments and additions to a previously permitted development Reg. Ref 2710/14, 4296/15, 3609/16 and PL 29S.244337 comprising: (a) the replacement of 6 no. permitted apartments (2 no. 1 bed, 2 no. 2 bed, 2 no. 3 bed) with 8 no. apartments (2 no. 1 bed, 6 no. 2 bed) all at Third Floor level; (b) the provision of 3 no. additional apartments (1 no. 2 bed, 2 no. 3 bed) and associated access core and balconies at a new set-back Fourth Floor level; (c) elevational changes to all facades; (d) all associated works including balconies, rooflights, infrastructural works, car parking and landscaping. - The 1.39 hectare (3.44 acres) site is accessed by an existing gateway from Mount Tallant Avenue, including piers and railings on a plinth wall which is a Protected Structure. No works are proposed to the Protected Structure as part of this planning application.
D17A/0716/C2	Castle Golf Club, Woodside Drive, Rathfarnham, Dublin 14	- Compliance re Condition no. 4. Permission for: 1. Demolition of existing single storey Caddy Masters building and general Store and construction of new single storey Caddy Masters building and single storey extension to existing Clubhouse Pro-Shop and bar store room with associated internal alterations. 2. Demolition of existing single storey Clubhouse kitchen service access, stores and plant rooms as well as kitchen extract and boiler chimney and construction of new two storey extension comprised of kitchen access stairway, stores, plant rooms and furniture store, including new rooftop mechanical plant installation in screened enclosure, new boiler with external flue as well as interior remodelling of existing kitchen and associated internal alterations. 3. Construction of new single storey coaching bay building adjacent to the existing practise tees and main entrance driveway off Woodside Drive. 4. Associated hard and soft landscape works, surface water attenuation works as required and associated general site works.
SD17A/0263	Grange Golf Club, Taylor's Lane, Rathfarnham, Dublin 16	The extension of the golf course playing area into the car-park located towards the north-western corner of the site, resulting in the loss of 16 car parking spaces; landscaping works and all associated works above and below ground (a Protected Structure).
2571/19	The High School, Zion Road, Rathgar, Dublin 6	- The development will consist of the replacement of an existing prefab shed with a new portal frame shed for use as maintenance machinery storage and associated site works.
SD14A/0204	St. Pius X Boys National School, Fortfield Park, Terenure, Dublin 6W	- Construction of a 15sq.m single storey flat roofed universal access toilet with ancillary and enabling works within an existing internal courtyard.
SD04A/0242/FEP	Former Eircom Training Centre, Wainsford Road, Terenure, Dublin 6W.	The modified development will consist of the construction of a reduced number of 189 no. residential units comprising: - 4 no. 3-storey 5/6 bedroom detached houses; 18 no. 3-storey 5 bedroom detached houses; 12 no. 3-storey 5 bedroom semi-

DLRCC/ ABP Reg. Ref.	Address	Overview of Development
		detached houses; 31 no. 4 bedroom and 13 no. 3 bedroom townhouses in 12 no. 2 and 2.5 storey blocks; 2 no. 4 bedroom 2 storey detached houses (formerly semi-detached); 109 no. 1, 2 and 3 bedroom apartments with associated balconies and 263sq.m. fitness centre located in 3 no. 4 storey blocks over semi-basement car park; one sheltered housing unit containing 51 1 and 2 bedroom suites and communal facilities in a 4 storey block over semi-basement car park; a reduced 2 storey 200sq.m. crèche; and ancillary works including relocated sub-surface waste and surface water holding tanks; demolition of existing buildings within the site; on lands comprising the former Eircom Training Centre. Vehicular access to the proposed development would be provided from Wainsfort Manor Drive.
3959/21	Leo Pharma, 285 Cashel Road, Dublin 12	- Planning permission for the development will consist of construction of a single storey commodity store between buildings L and C and all associated site woks.

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

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, supported 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 development at Fortfield Road and College Drive, Terenure, Co. Dublin.

20th August 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: 1 Celbridge West Land Limited

Document Control Sheet			
Client	1 Celbridge West Land Limited		
Project	Bat fauna impact assessment for Fortfield Road, Terenure, Dublin 6W		
Report	Bat Fauna Assessment		
Date	20th August 2024		
Version 1	Author	Reviewed	Date
Planning	Bryan Deegan		May 2022
Version 2	Author	Reviewed	Date
Planning	Bryan Deegan	Gayle O'Farrell	20th August 2024

SUMMARY

Structure:	The proposed development is on the lands of Terenure College. It consists of an unmanaged grassland field, treelines, large pond running the length of the proposed development surrounded by woodland of mostly mature trees.
Location:	Fortfield Road and College Drive, Terenure, Co. Dublin
Bat species present:	Three bat species Leisler's bat (Lesser Noctule (*Nyctalus leisleri*)), soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted on site.
Proposed work:	Proposed LRD
Impact on bats:	Lighting on site is restricted to the housing development area and no lighting is proposed in the vicinity of the woodland area or the pond where foraging was observed. No trees of bat roosting potential will be felled as a result of the proposed development. The residual impact of the proposed development will be a minor adverse long term not significant.
Survey by:	Bryan Deegan, Emma Peters & Gayle O' Farrell
Survey dates:	5th May 2022, 25th May 2022, 7th September 2023, 16th May 2024 and 30th July 2024

Description of the Proposed Project

Planning permission is being sought by 1 Cellbridge West Land Limited for a Large-scale Residential Development (LRD), on a site located at Fortfield Road, Terenure, Dublin 6W.

The development will comprise a Large-Scale Residential Development (LRD) on a site at Fortfield Road, Terenure of 284 no. units delivering 19 no. houses and 265 no. apartments made up of studios; 1 beds; 2 beds; 3 beds; and 4 beds. The development will also provide community, cultural and arts space and a creche. Communal internal space for residents will also be delivered. Provision of car, cycle and motorbike parking will be provided throughout the development, including at basement and surface level. Vehicular/pedestrian/cyclist access from Fortfield Road. Proposed upgrade works to the surrounding road network is also included. All associated site development works, open space, services provision, ESB substations, plant areas, waste management areas, landscaping (both public and communal) and boundary treatments.

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 NMP Landscape Architects to accompany this planning application. The proposed landscape masterplans are demonstrated in Figure 5-10.

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

Figure 2. *Bat Foraging (Yellow = Leisler's bat, blue =soprano pipistrelle & orange =common pipistrelle) (2022)*

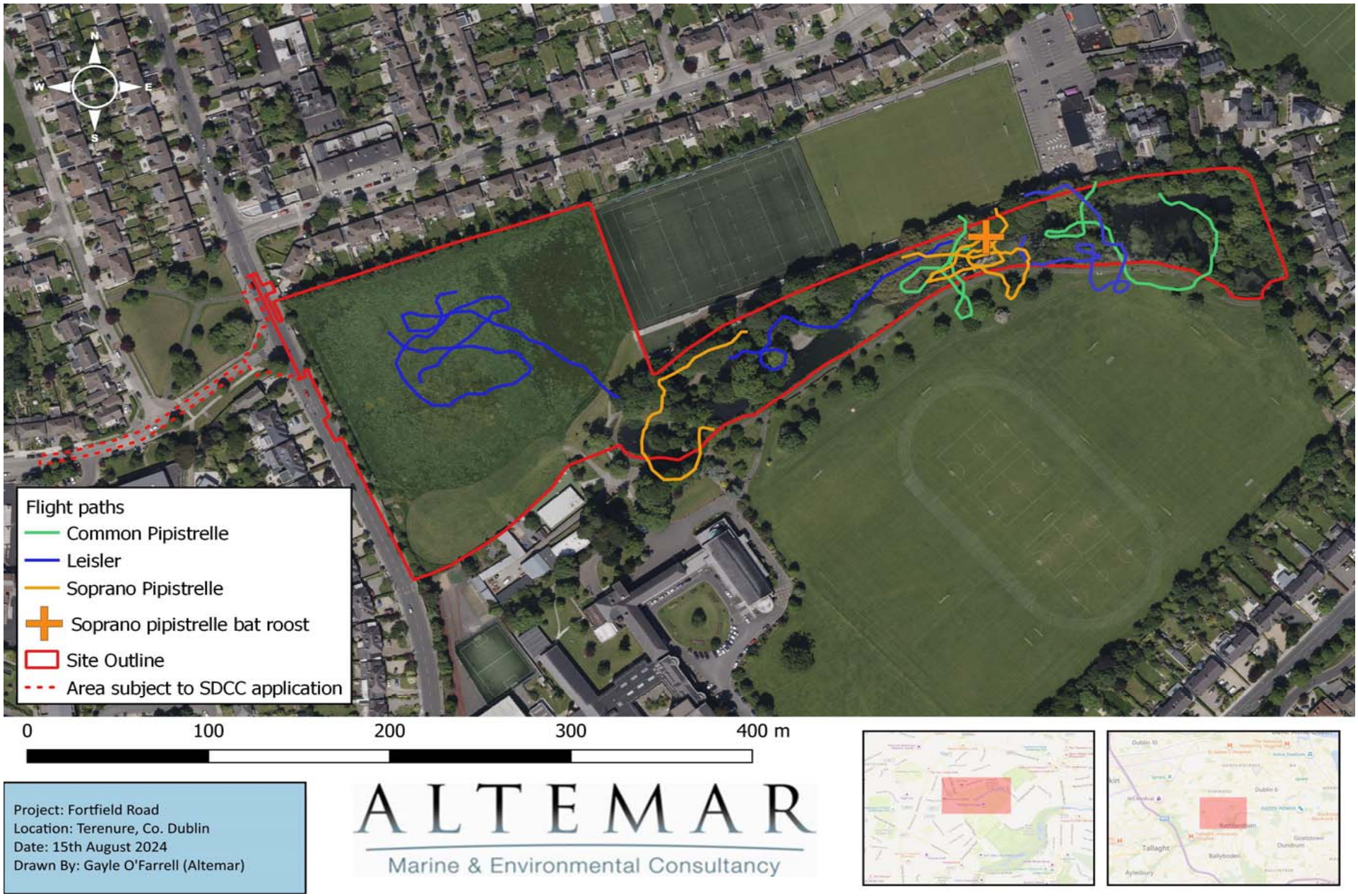

Figure 3. *Bat Foraging (Blue= Leisler's bat, orange =soprano pipistrelle & yellow =common pipistrelle) (orange circle- soprano pipistrelle roost) (2023 & 2024)*

***Figure 4**. Proposed site layout plan*

Figure 5- *Landscape General Arrangements Plan (Sheet 1 of 6)*

Figure 6- *Landscape General Arrangements Plan (Sheet 2 of 6)*

Figure 7- *Landscape General Arrangements Plan (Sheet 3 of 6)*

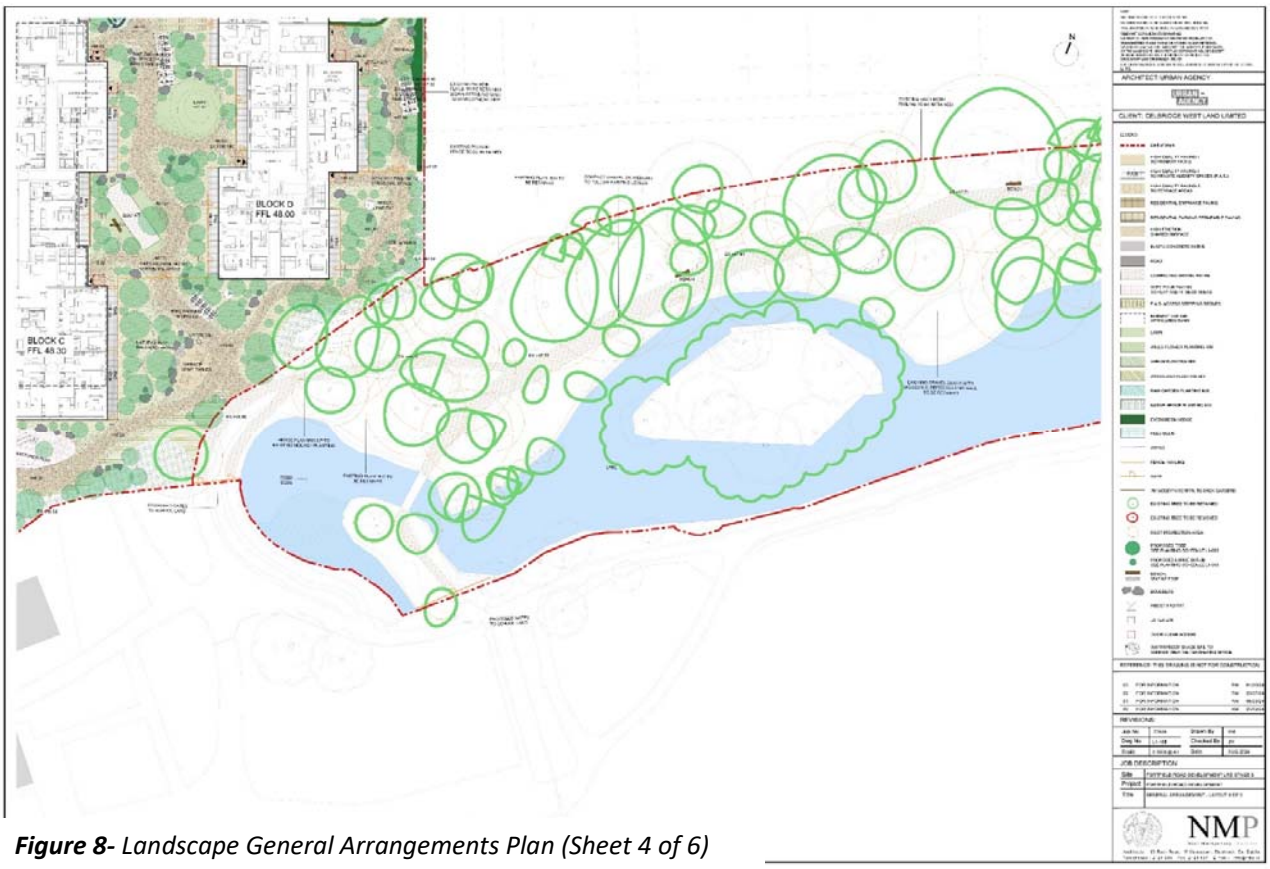

Figure 8- *Landscape General Arrangements Plan (Sheet 4 of 6)*

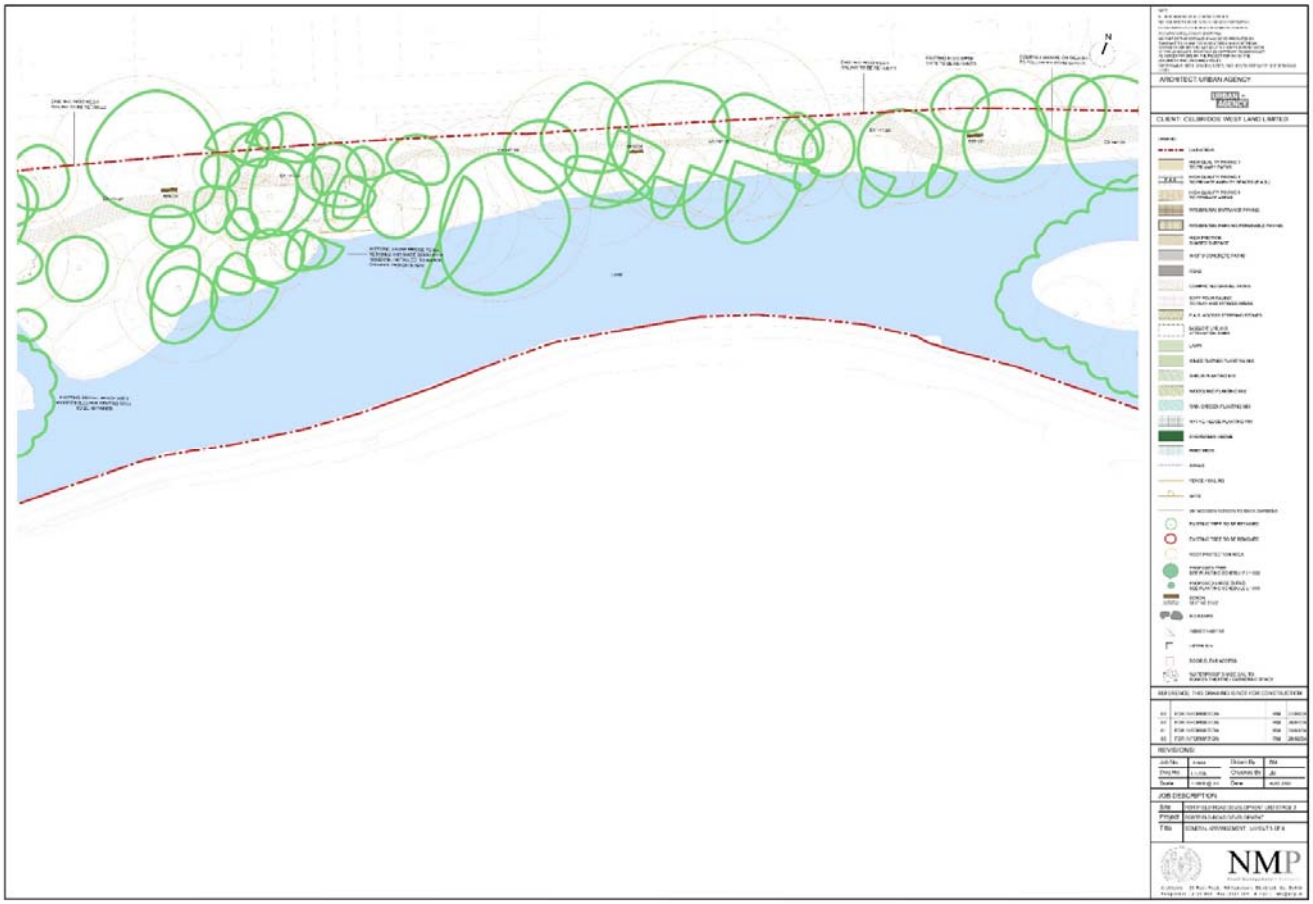

Figure 9- *Landscape General Arrangements Plan (Sheet 5 of 6)*

Figure 10- *Landscape General Arrangements Plan (Sheet 6 of 6)*

Lighting

A Public Lighting Report has been prepared by OCSC Consulting Engineers to accompany this planning application. This report outlines the following public lighting design for the proposed development:

''The lighting scheme has been designed to adhere to the following lighting characteristics:

• The minimum level of appropriate/required lighting level will be provided within the developed/residential areas;

• Light fittings will be fitted with low intensity, horizontal cut-off LED light fittings employing a narrow directional light or cowled light. This will avoid the effect of light spill arising within the residential area;

• No light spill into biodiversity areas. In particular there will be no light spill from the development area onto the woodland/ pond area to the east of the development;

• The lighting includes dimming the 4m poles by 30% post curfew hours;

• Light fittings and associated lighting will be directed away from areas of open space;

• No floodlighting will be used in the development;

The lighting design adheres to the following standard guidance

• Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010);
• Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2018).
Also:
• Guidance Notes for the Reduction of Obtrusive Light GN01 (Institute of Lighting Professionals, 2011);''

The proposed public lighting layout is outlined in figure 11. Lighting is compliant with bat lighting guidelines and is not in the vicinity of main foraging areas on site in the vicinity of the pond.

Figure 11. *Proposed site services – public lighting*

Arboricultural Assessment

An Arboricultural Report was composed by The Tree File Ltd, in relation to the trees at the proposed site at Fortfield Road, Terenure. In summary, the report states that:

'Ultimately, sustainable tree retention is based on protecting and conserving existing ground, particularly soil conditions. Excavation works can directly sever, and damage tree roots, and general site activity and vehicular and plant passage denatures soil to a point where it cannot support tree roots or root function. If a tree is to be retained, then such activity must be excluded from a minimum area surrounding the tree, as defined in the tree survey table at Appendix 2, Table 1.

Though the overall site area supports many trees, the form and location of the proposed development works are such as to affect very few. Much of the historic landscape and wooded area to the north of the ponds remains wholly unaffected. Those trees that are most likely to be adversely affected, tend to be small enough to be readily replaced, or of poor quality and offering limited sustainability.

The proposed development will retain 192 of the 213 trees reviewed. This accounts for the immediate loss of all 17 category "U" trees; however, some might be retained with management for the short term. This represents a retention rate of circa 98%, of the site's sustainable category A, B and C trees (see category system at "Survey Key, Appendix 2). Notwithstanding the issues outlined in this report, this outcome is considered particularly positive.

All 17 trees attain their "U" grade categorisation because of their poor conditions (see category system at "Survey Key, Appendix 2). The loss of these trees is not linked with the development of the eastern site. These trees must be regarded as unsustainable and the future use and occupancy of the area will likely require the removal of these trees within the short term and on site-safety grounds.

The Lombardy Poplars to the north of the development will be retained. These trees are of reduced quality, all having been severely decapitated in the past. This has resulted in sucker growth, some of which is breaking, as well as varying degrees of decay and deterioration about the cutting zone. While potentially suitable for retention, such retention will require ongoing maintenance over time, both to address the deterioration and also to manage size development in light of the potential for growth associated with Lombardy Poplars.

The Lombardy Poplars will be encroached upon to a minor extent by the proposed work, though the terracing of garden spaces to address floor levels disparities and the restriction of construction activities to the building footprints with access from the south only, will assist in limiting such effects. The trees will be retained in what will become private open space.

Along Fortfield Road, several trees, typical Small Hornbeams, will be affected by secondary works associated with site entrances, the provision of site services and the provision of traffic and particularly bus infrastructure. Though inarguably an impact on the tree population, many of these trees are particularly small and could, if required, be replaced with new stock. In this respect and appreciating that their loss can be mitigated if required, then the loss in the short term might be considered acceptable.

Elsewhere near Fortfield Road and College Drive, we note that the majority of works will occur within existing road structures where encountering tree roots is far less likely. Note is also made that in some instances, much of the infrastructure already exists in situ and thus will not require tree disturbance, an example of this being the existing

water main lines along Fortfield Road near Hornbeams Nos.29 to 38 and at the entrance to College Drive near Sycamore No.39 (See western side of drawing "Fortfield Road Tree Constraints Plan West" and "Fortfield Road Tree Impacts Plan West")

Tree retention and protection during the construction phase will be achieved by simple "construction exclusion". This will entail the erecting of robust tree protection fencing prior to the commencement of any on-site works

(See drawing inserts on drawing "Fortfield Road Tree Protection Plan" – East and West and guidance at "Appendix 1"). The intention of such fencing is to prevent inadvertent access by plant, machinery and vehicles and to limit works to manual landscape works or other controlled works only.

As standard tree protection methodologies will interfere with existing pedestrian access, discussion and agreement with local authorities regarding tree protection within public realm areas will be required. Some trees, for example, on Fortfield Road and College Drive, may require temporary and localised tree protection at certain times of the construction process. However, this must be coordinated with public access and the closure or restriction of pedestrian footpaths. In most instances, the tree protection will be orientated to protecting open/soft ground from disturbance; consideration must be given also to tree canopies, for example, where overhanging existing hard surfaces or roadways that would otherwise offer protected access.

Longer-term tree and woodland management will also require discussion and agreement, for example as part of a site-wide management scheme. Though the historic woodland area has already gained some impromptu social use, it is likely that the level of use will increase. In this respect, a management plan should be agreed upon that addresses both site safety and the conservation of a historic landscape context.''

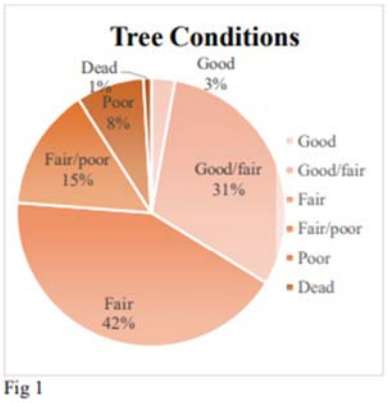

Fig 1

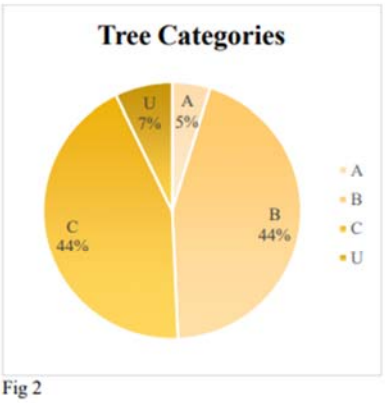

Fig 2

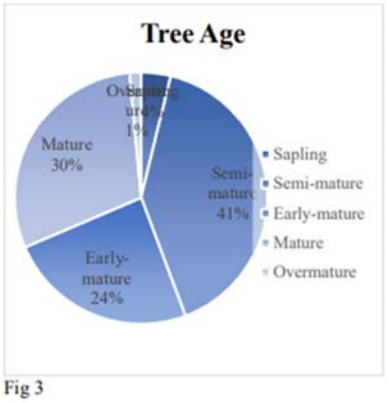

Fig 3

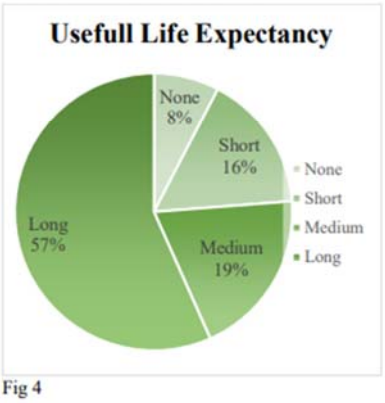

Fig 4

The Tree Constraints Plan, Tree Impact Plan and Tree Protection Plan are displayed in Figures 12-17.

Figure 12. *Tree Constraints Plan-East*

Figure 14. *Tree Impacts Plan-East*

Figure 15. *Tree Impacts Plan-West*

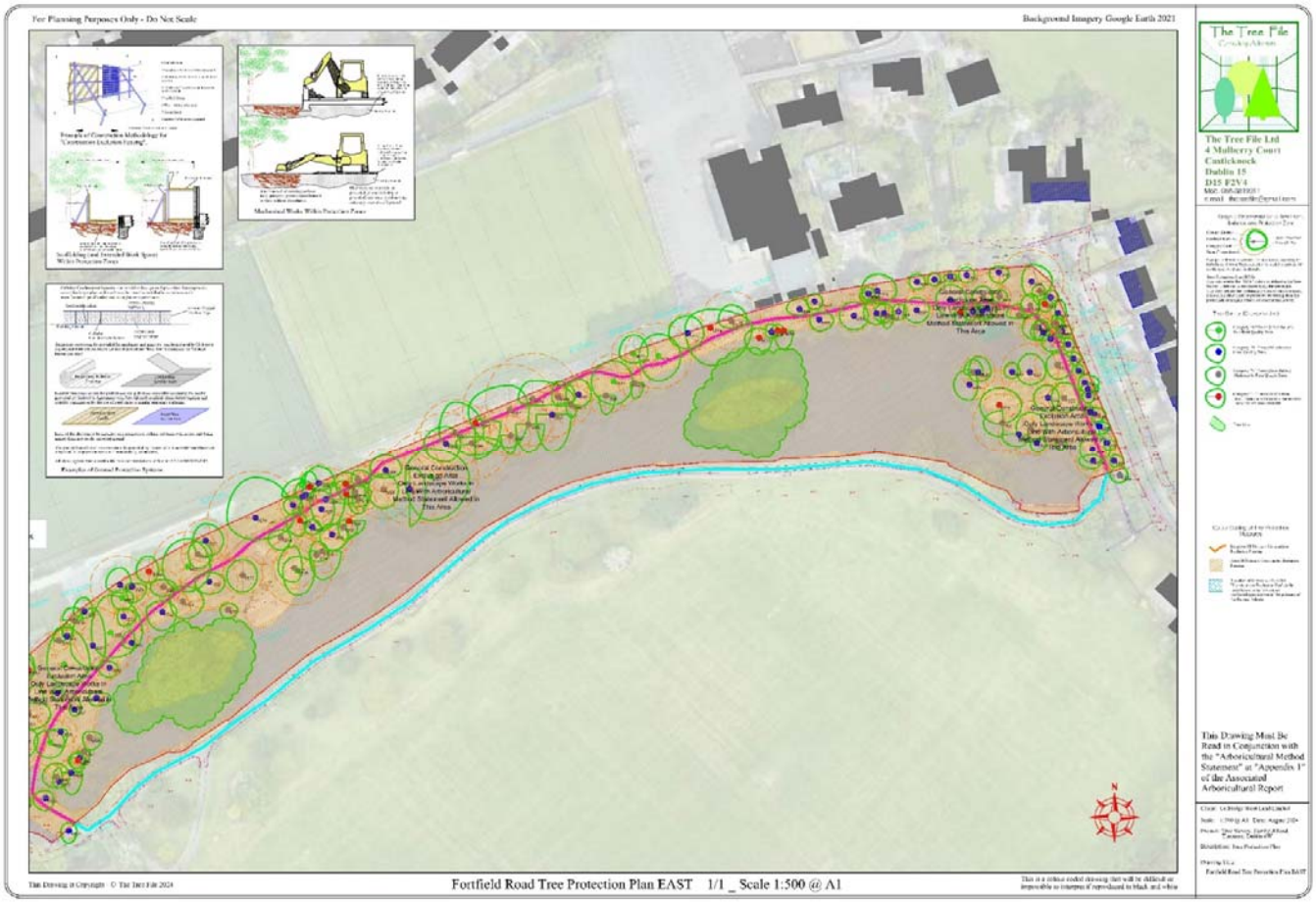

Figure 16. *Tree Protection Plan-East*

Figure 17. *Tree Protection Plan-West*

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 (2022), 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, bat detector surveys were carried out onsite using a Batbox Duet heterodyne/frequency division detector and Echo Meter Touch 2 Pro bat detectors, 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:

- Collins. J (ed.) (2023) Bat surveys for Professional Ecologists: Good Practice Guidelines (4th Edition);
- Bat Mitigation Guidelines for Ireland (Marnell, 2022); 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 5th & 16th May 2022 and Gayle O'Farrell on the 30th July 2024.

Survey constraints.

Bat surveys were undertaken during the active bat season in May and July. Weather conditions were ideal with mild temperatures of between 15°C and 17°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 six 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.

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
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

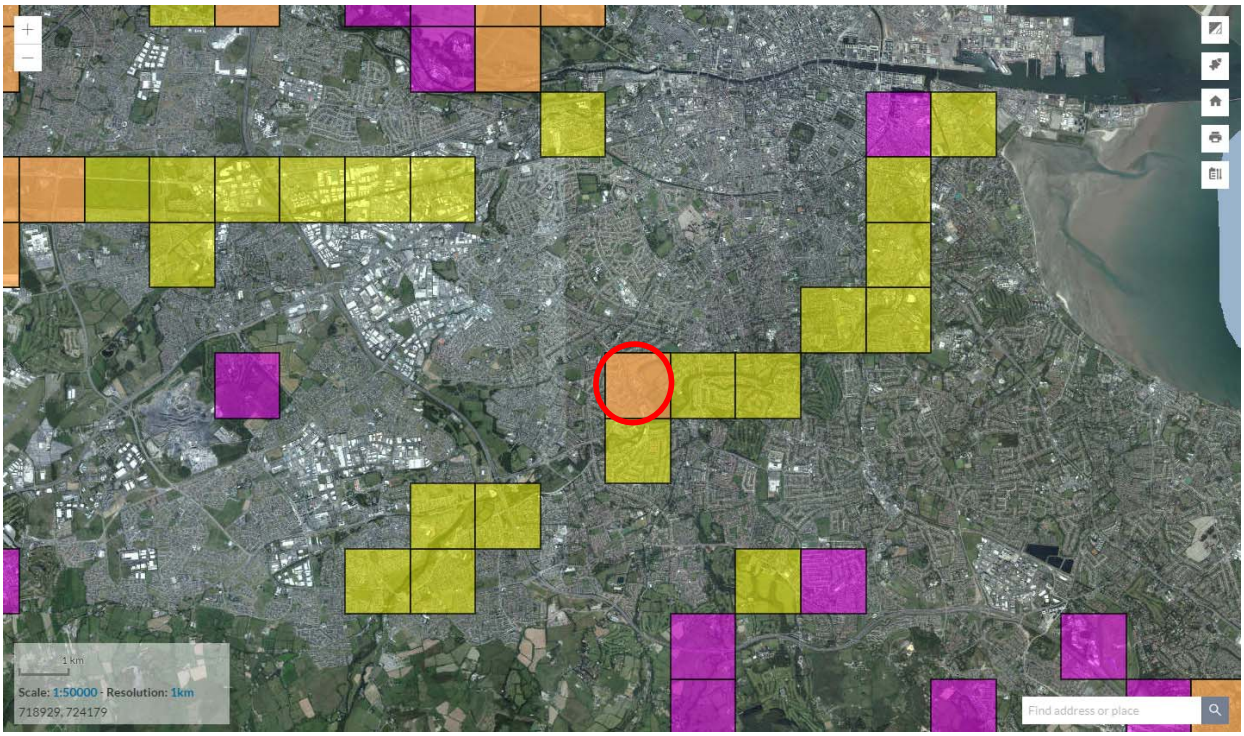

Figure 19. Brown Long-eared Bat (*Plecotus auritus*) (purple), Daubenton's Bat (*Myotis daubentonii*) (yellow) and both Brown Long-eared Bat and Daubenton's Bat (orange) (Source:NBDC) (Site – red circle)

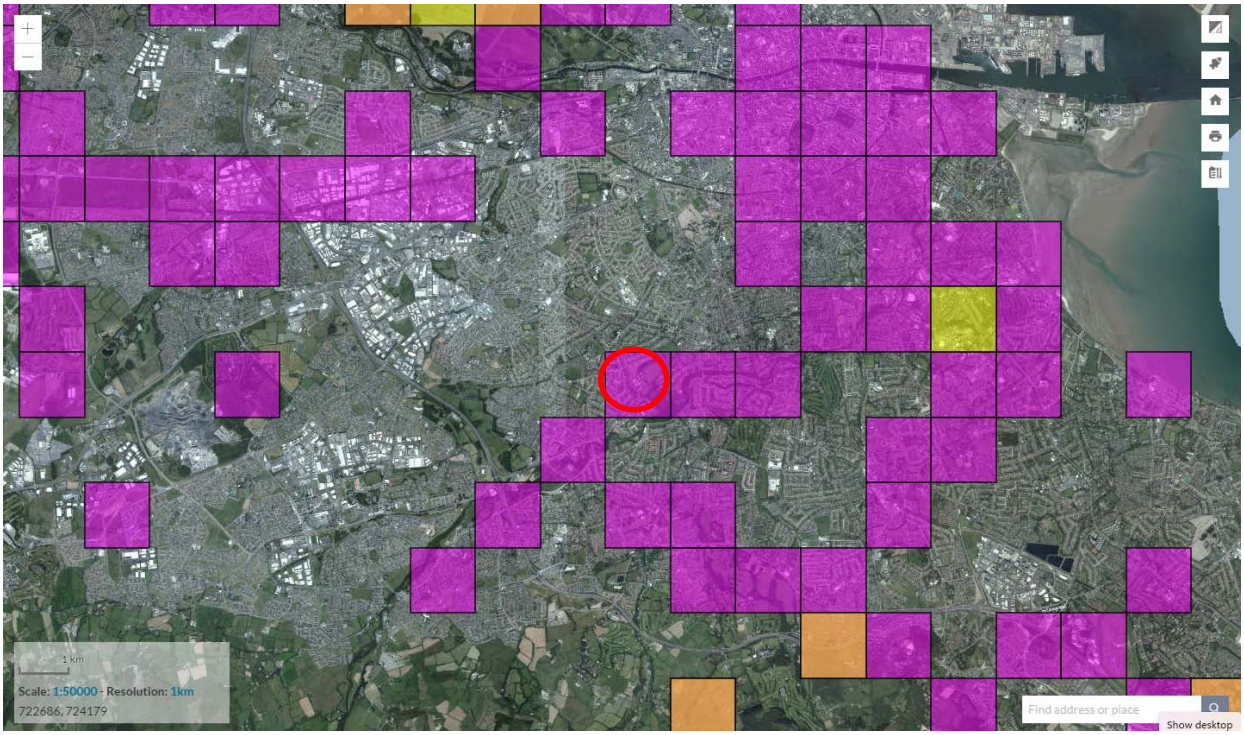

Figure 20. Lesser Noctule (*Nyctalus leisleri*) (purple) and Natterer's Bat (*Myotis nattereri*) and both the Lesser Noctucle and Natterer's Bat (orange) (Source:NBDC) (site: red circle)

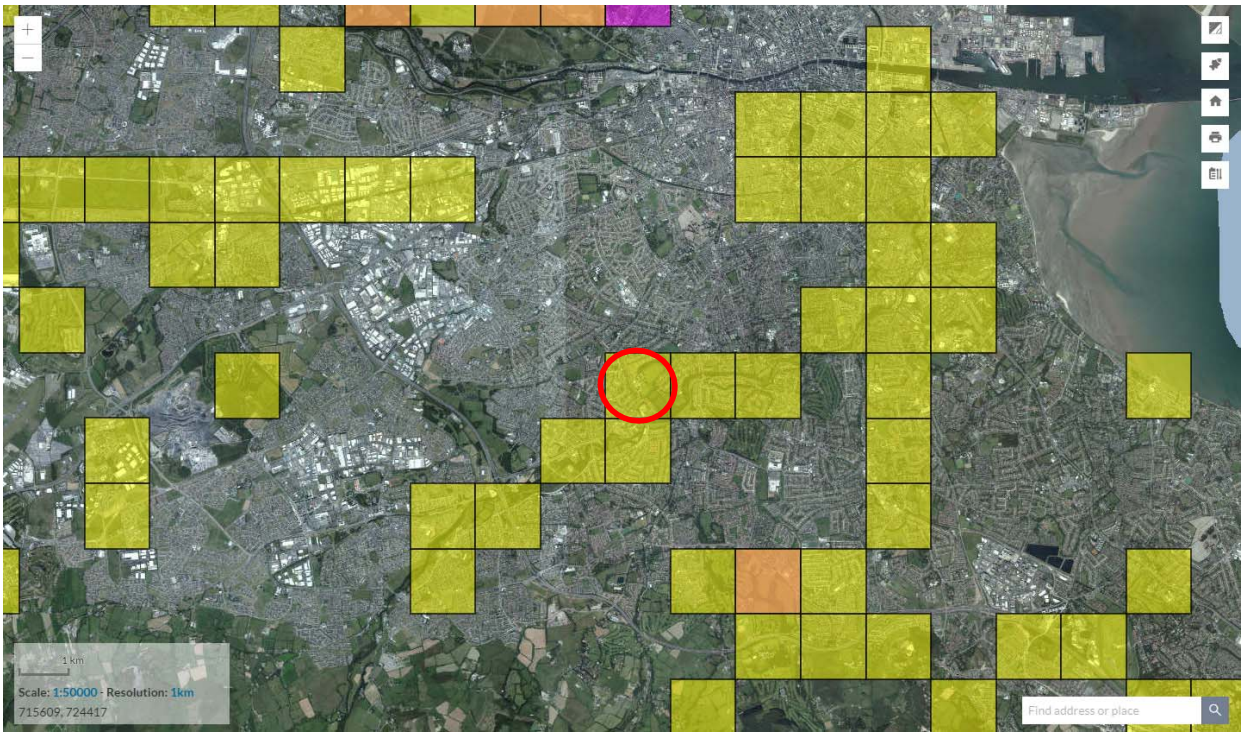

Figure 21. Whiskered Bat (Myotis mystacinus) (purple), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow) and both Whiskered Bat and Soprano Pipistrelle (orange) (Source: NBDC) (site: red circle)

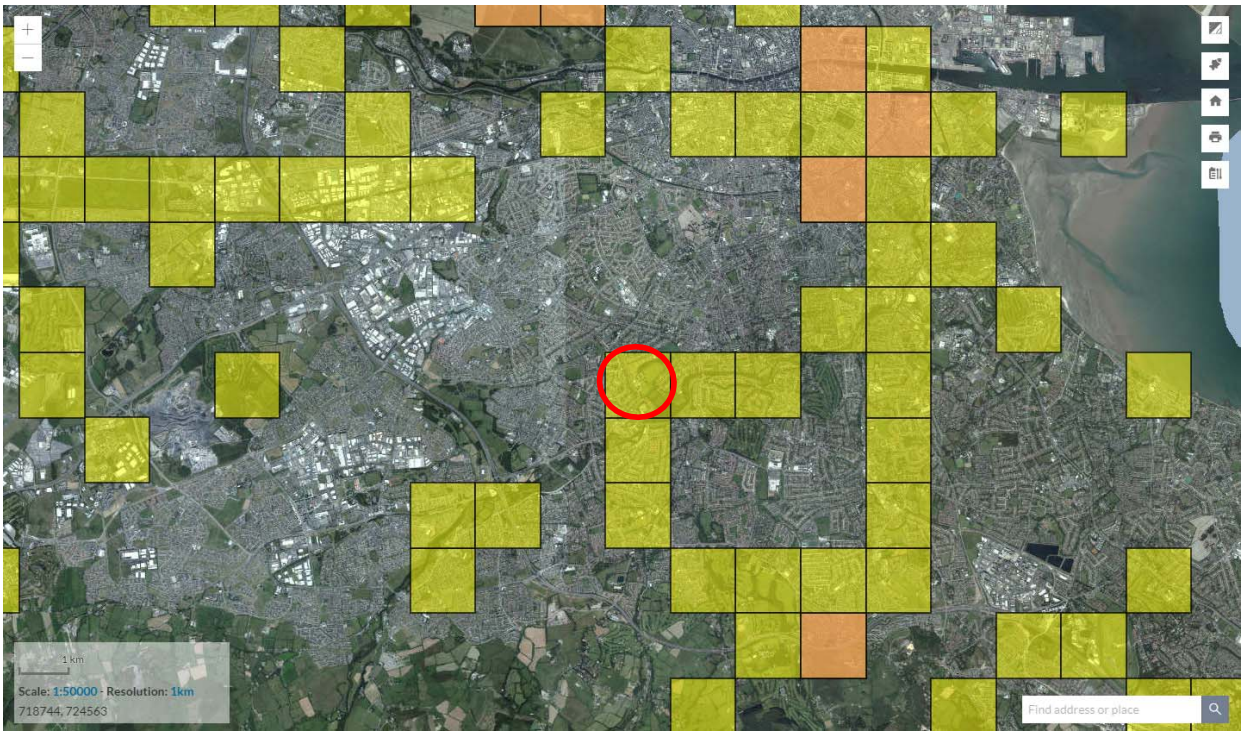

Figure 22. Nathusius's Pipistrelle (Pipistrellus nathusii) (purple), Pipistrelle (Pipistrellus pipistrellus sensu lato) (Species Aggregate) (yellow), and both Nathusius's Pipistrelle and Pipistrelle (Species Aggregate) (orange) (Source: NBDC) (site: red circle)

Detector survey

As seen in Figure 1 and 2, bat activity was noted on site. Foraging activity was concentrated around the pond area on site where a significant amount of insects were swarming in the sheltered conditions over the water. Two Leisler's were also noted foraging above the grassland northwest of the site. A single soprano pipistrelle was observed emerging from a Holm Oak tree along the woodland path in 2024. It is possible that more roosts were within the trees on site as numerous trees of bat roosting potential were noted on site. It should the noted that the canopy of trees is dense, and it was difficult to determine where most bats observed were roosting. Three species were noted on site:

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

Bat Roosts

No existing buildings are on site. A ground level roost assessment was carried out upon arrival to the site and used to examine the trees and structures on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark, roof rafters, cracks in buildings, attic spaces, stone walls etc. All trees on site were assessed for bat roosting potential. No trees of bat roosting potential are to be felled within the survey area. A derogation license is therefore not required for the removal of the trees on site. In 2024, a bat roost was noted in a Holm Oak along the woodland path. The woodland area comprised of numerous trees of low to medium bat roosting potential. These included the following all of which are to be retained:

Tree Number	Species
1622	Lime (*Tilia europea*)
1677	Oak (*Quercus robur*)
1687	Holm Oak (*Quercus ilex*)
1689	Holm Oak (*Quercus ilex*)
1691	Holm Oak (*Quercus ilex*)
1692	Holm Oak (*Quercus ilex*)
1819	Beech (*Fagus sylvatica*)
1820	Sycamore (*Acer pseudoplatanus*)
1827	Oak (*Quercus robur*)

Potential impacts of proposed redevelopment on bats

Lighting on site is restricted to the housing development area and no lighting is proposed in the vicinity of the woodland area or the pond where foraging and a roost was observed. No trees of bat roosting potential will be felled as a result of the proposed development. The residual impact of the proposed development will be a minor adverse long term not significant due to the potential minor loss of foraging area where buildings are to be constructed and increased lighting on site, although this is not within the main bat foraging areas on site. .

Mitigation measures

As a result of the high level of foraging activity and roosting within the trees no lighting is proposed in the vicinity of the woodland or pond. Lighting has involved mitigation through design and will be restricted to key areas of the development only and will not be within the woodland or proximate to the pond. As outlined in the public lighting report: ''*No light spill into biodiversity areas. In particular there will be no light spill from the development area onto the woodland/ pond area to the east of the development;''* Lighting on site during construction will not be directed towards woodland or the pond area. A post Construction light spill assessment/compliance with proposed lighting strategy will be carried out.

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.'*

Predicted and residual impact of the proposal

The proposed development will not result in the loss of any bat roosts, buildings or trees of bat roosing potential. Following the implementation of the mitigation measures outlined above, it would be expected that there would be a minor adverse/long term/ not significant impact on bats on site and in the locality. Based on the successful implementation of the lighting and landscaping on site it would be expected that foraging would continue on site. Foraging would expect to improve as landscaping matures.

Legal status and conservation issues – bats

All Irish bat species are protected under the Wildlife Act (1976) and Wildlife Amendment Acts (1976-2023). Also, the EC Directive 92/43/EEC on the conservation of Natural habitats and of Wild Fauna and Flora ("Habitats Directive") , seeks to protect rare species, including bats, and their habitats and requires that appropriate monitoring of populations be undertaken. All Irish bats are listed in Annex IV of the Habitats Directive and the lesser horseshoe bat *Rhinolophus hipposideros* is further listed under Annex II. Across Europe, they are further protected under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982), which, in relation to bats, exists to conserve all species and their habitats. The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979, enacted 1983) was instigated to protect migrant species across all European boundaries. The Irish government has ratified both these conventions.

All Irish bats are listed in Annex IV of the Habitats Directive and the lesser horseshoe bat is further listed under Annex II.

The current status and legal protection of the known bat species occurring in Ireland is given in the following table.

Common and scientific name	**Wildlife Act 1976 & Wildlife (Amendment) Acts 2023**	**Irish Red List status**	**Habitats Directive**	**Bern & Bonn Conventions**
Common pipistrelle *Pipistrellus pipistrellus*	Yes	Least Concern	Annex IV	Appendix II
Soprano pipistrelle *P. pygmaeus*	Yes	Least Concern	Annex IV	Appendix II
Nathusius pipistrelle *P. nathusii*	Yes	Not referenced	Annex IV	Appendix II
Leisler's bat *Nyctalus leisleri*	Yes	Near Threatened	Annex IV	Appendix II
Brown long-eared bat *Plecotus auritus*	Yes	Least Concern	Annex IV	Appendix II
Lesser horseshoe bat *Rhinolophus hipposideros*	Yes	Least Concern	Annex II Annex IV	Appendix II
Daubenton's bat *Myotis daubentonii*	Yes	Least Concern	Annex IV	Appendix II
Natterer's bat *M. nattereri*	Yes	Least Concern	Annex IV	Appendix II
Whiskered bat *M. mystacinus*	Yes	Least Concern	Annex IV	Appendix II

Common and scientific name	Wildlife Act 1976 & Wildlife (Amendment) Acts 2023	Irish Red List status	Habitats Directive	Bern & Bonn Conventions
Brandt's bat *M. brandtii*	Yes	Data Deficient	Annex IV	Appendix II

Also, under existing legislation, the destruction, alteration or evacuation of a known bat roost is a notifiable action, and a derogation licence has to be obtained from the National Parks and Wildlife Service before works can commence.

It should also be noted that any works interfering with bats and especially their roosts, including for instance, the installation of lighting in the vicinity of the latter, may only be carried out under a licence to derogate from SI 477/2011 EC(Birds and Natural Habitats) 2011 Article 12 Habitats Directive is transposed Regulations 51 and 52 of SI 477/2011 provide for Strict protection of certain species and the proposed development will not breach that protection for bat species.

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Appendix II- Terenure College, Dublin, Winter Bird Surveys 2023-2024.

Terenure College, Dublin, Winter Bird Surveys 2023-2024

1. Introduction

Between November 2023 and March 2024 9 Winter Bird Surveys were undertaken at grounds at Terenure College, South County Dublin by Hugh Delaney, a freelance Ecologist (Birds primarily) Hugh has extensive experience surveying numerous sites with ecological consultancies over 12+ years. Hugh is local to the Dun Laoghaire-Rathdown area in Dublin and is especially familiar with the bird life and its ecology in its environs and elsewhere in the country going back over 35 years.

2. Winter Bird Survey Methodology

Winter bird surveys are conducted from soon after sunrise until late in the afternoon, or alternatively started later in the day until sunset, a survey period is a minimum of six hours, the site is monitored throughout the survey period and all bird species utilizing the site recorded, including species flying through site area overhead. Checks are also made on suitable habitat nearby or adjacent to the site for comparative purposes and to monitor any interchange of birds between sites. Target species (species of more special interest) utilizing the site are mapped and estimates of the time these species frequented the site are recorded.

Site Location

Fig. 1. Terenure College Bird Survey area (encircled in red), the site was divided into the following areas for the purposes of the surveys –

1. Primary survey site.
2. Main playing fields area.
3. Secondary playing fields area.
4. Terenure College Rugby grounds.
5. VEC Football Club grounds.
6. Lakelands area (encircled in blue).

3. Site Description

The site is a parkland-type area situated in suburban south Dublin, at the east side of the site Terenure College and grounds are located and adjacent to this are large areas of playing fields bordered at the boundaries by large trees. A significant feature of the site is the 'Lakelands' area which features a slow-moving water body that moves from west to east via an underground channel arising from the west side that exists the site via a channel underground at the east side passing through the north side of the site, it is bordered also by large trees (notably mainly Holm Oak on the north side) and contains some tree covered islets. The survey site itself (1) at the northwest corner of the survey area of Terenure College is part of the playing field areas and is bordered by trees at its outer boundaries. Dividing the survey site area and Terenure Rugby Club to the east is an artificial pitch area.

Significant adjacent sites of interest to the survey area are VEC Football club immediately to the east and Bushy Park to the south of the survey area.

4. Specific site survey methodology

The site and areas within were comprehensively surveyed during the surveys, twice monthly with an early visit and a later visit made alternately, all areas including the survey site (1) were checked at least hourly during the survey periods, by way of a cyclical check around the site on foot and bicycle (also large portion of site area is viewable simultaneously at the west side of Lakelands). In addition, several dedicated specific counts of the Lakelands area were completed during surveys in order to document the waterbird species numbers present in this area. Outlying sites adjacent to the survey area were also checked during surveys, these specifically being VEC football grounds to the east and Bushy Park to the south. The survey area playing field areas were checked on all surveys specifically for evidence of Brent Goose scat, these being an excellent indicator of any visitations on-site by the species.

5. Survey Results

a) November 30th, 2023

Sunrise- 08.15hrs/Sunset 16.12hrs. Weather – Wind Northwest F4, Cloud 4/8, Light showers, 5c, Excellent visibility. On-site 10.00hrs – 16.00hrs.

Species recorded – Brent Goose (flyover only), Mallard, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Herring Gull, Feral Pigeon, Woodpigeon, Pied Wagtail, Grey Wagtail, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch.

10.00hrs-12.00hrs – Survey commenced at the survey site (1) north of the Terenure College, grass sward length here was estimated at 20+cm in areas and appeared to be no longer being tended (i.e. mown to a playing field standard like the other playing field areas), the other playing field areas were of normal short-cropped playing field standard. No species recorded. A flock of Brent Geese (<19) were observed flying east over the north end of Area 1 at 10.36hrs (height 20m) and were headed towards the VEC FC site (Brent were later recorded there), the birds not landing into the site. 10.44hrs another flock of Brent Geese (<70) followed the same flight path over area 1 and also appeared to land into VEC FC. Starling (<70) foraging in area 1 were the only species noted foraging in this area. At area 2 Black-headed Gulls roosting and foraging peaked at 24 at 11.40hrs, with single Herring Gull and Common Gull also noted. At area 3 peak numbers of Black-headed Gull (<42) and Common Gull (<1) were noted foraging at 11.37hrs. A single Common Gull was observed foraging in area 4 (Terenure Rugby Grounds) at 11.50rs.

A waterbird survey of the Lakelands from 10.50-11.10hrs recorded – Mallard (13), Little Grebe (<3), Little Egret (<1), Grey Heron (<1), Moorhen (<18) and Coot (<1).

12.00hrs-16.00hrs – At VEC FC Brent Geese (<29) were foraging at 12.10hrs and all 29 were still present there at 14.40hrs. At area 1 Starling (<40) and Goldfinch (<6) were noted foraging during the afternoon, no other species foraging on-site. No species recorded foraging at area 4 during the afternoon. At area 2 foraging Gull numbers peaked at 13.55hrs with Black-headed Gull (<24), Common Gull (<3) and Herring Gull (<1) noted. At area 3 Gull numbers peaked at 13.45hrs with Black-headed Gull (<28) and Common Gull (<1) present.

A waterbird survey of the Lakelands from 14.10-14.30hrs recorded – Mallard (14), Little Grebe (<3), Little Egret (<1), Moorhen (<16) and Coot (<1).

Passerine species recorded around the site were again typical of a suburban Dublin parkland, Pied Wagtail (<2) and Mistle Thrush (<2) recorded foraging on the playing fields, Grey Wagtail (<1) at the Lakelands, the woodland around the lakelands was again the most productive area for passerine species, four Tit species, Goldcrest (<2), Goldfinch (<12), Chaffinch (<5) and Greenfinch (<2) present in this area.
A check of all the suitable playing fields found did not locate Brent Goose scat.

b) December 8th, 2023

Sunrise- 08.26hrs/Sunset 16.07hrs. Weather – Wind Southwest F3, Cloud 6/8, Dry, 9c, Excellent visibility. On-site 08.30hrs – 14.30hrs.
Species recorded – Brent Goose (flyover & offsite only), Mallard, Tufted Duck, Little Grebe, Little Egret, Grey Heron, Sparrowhawk, Moorhen, Coot, Black-headed Gull, Common Gull, Herring Gull, Feral Pigeon, Woodpigeon, Pied Wagtail, Grey Wagtail, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin.
08.30hrs-12.00hrs – Survey commenced at area 3 and onwards to area 1, area 4, and area 2 etc. At area 3 peak counts of foraging Gulls were Black-headed Gull (<33), Herring Gull (<5) and Common Gull (<8) recorded at 10.05hrs, averaging about 20 Black-headed Gull during the remainder of the morning. At area 1 a flock of Brent Geese (<11) were observed flying northwest over the middle of the site at 09.10hrs (height 25m), Starling (<25), Goldfinch (<10) and Meadow Pipit (<2) were the only species noted foraging here during the morning. Common Gull (<3) and Black-headed Gull (<4) were noted in area 4 at 10.45hrs only. At area 2 Gull numbers peaked at 10.15hrs with Black-headed Gull (<58), Common Gull (<10) and Herring Gull (<5) noted foraging. At VEC FC Brent Geese (<120) were noted foraging at 11.30hrs (off-site).

A waterbird survey of the Lakelands from 10.00-10.30hrs recorded – Mallard (22), Tufted Duck (<2), Little Grebe (<3), Little Egret (<1), Grey Heron (<2), Moorhen (<15), Coot (<2) and Kingfisher (<1).
12.00hrs-14.30hrs – At VEC FC the Brent Geese flock (<120) were foraging at 12.45hrs, and not recorded thereafter. At area 1 Starling (<30) and Goldfinch (<15) were noted foraging during the afternoon, no other species foraging on-site. No species recorded foraging at area 4 during the afternoon. At area 2 foraging Gull numbers peaked at 12.15hrs with Black-headed Gull (<45), Common Gull (<6) and Herring Gull (<12) noted. At area 3 Gull numbers peaked at 12.50hrs with Black-headed Gull (<30) and Herring Gull (<3) present.

A waterbird survey of the Lakelands from 13.15-13.45hrs recorded – Mallard (17), Tufted Duck (<2), Little Grebe (<3), Little Egret (<1), Moorhen (<14) and Coot (<2).

Mistle Thrush (<2) recorded foraging on the playing fields at area 3 and 2, around the lakelands four Tit species, Goldcrest (<3), Goldfinch (<15), Chaffinch (<10) and Siskin (<5) were present in this area. A Sparrowhawk was observed hunting at the Lakelands at 12.20hrs.

A check of all the suitable playing fields found did not locate Brent Goose scat.

c) December 19th, 2023

Sunrise- 08.36hrs/Sunset 16.07hrs. Weather – Wind West F2, Cloud 3/8, Dry, 5c, Excellent visibility. On-site 09.30hrs – 15.30hrs.
Species recorded –Brent Geese (flyover only), Mute Swan, Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Mediterranean Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Redwing, Mistle Thrush, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin.
09.30hrs-12.00hrs – Surveys commenced on arrival at area 3 at entrance, and onwards to area 1, Lakelands, area 4 etc. At area 3 foraging gull numbers peaked at Black-headed Gull (<42), Common Gull (<6) and Herring Gull (<5) at 10.52hrs. At area 1 no foraging species were noted during morning, Starling (<20), Redwing (<5) and Goldfinch (<12) noted around the site. Common Gull (<3) were noted foraging in area 1 intermittently during morning. At Area 2 a peak morning count of Black-headed Gull (<54), Mediterranean Gull (<2), Herring Gull (<9) and Common Gull (<16) were noted roosting and foraging at 10.35hrs, also Redwing (<25) noted foraging

around the area. No Brent Geese noted in VEC FC or Bushy Park. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.15-09.45hrs recorded – Mute Swan (<1), Coot (<3), Mallard (26), Tufted Duck (<3), Little Grebe (<4), Moorhen (<17) and Grey Heron (<1).
12.00hrs-15.30hrs – At area 1 Brent Geese (<13) were noted flying northwest over the north end at 13.10hrs and four flew east at 15.05hrs (height both sightings was 20m). At area 4 Black-headed Gull (<3) and Common Gull (<1) were noted foraging intermittently during the afternoon. At area 2 peak counts for foraging Gull species were at 13.35hrs with Black-headed Gull (<64) and Common Gull (<11) at 14.25hrs, at other times averaging 30-40 Black-headed Gulls. At area 3 Black-headed Gulls (<27), Mediterranean Gull (<2) and Herring Gull (<4) were noted at 13.50hrs. Redwing (<25) noted feeding across area 3 and 2 during the afternoon.
At the VEC FC Brent Geese (<30) were noted foraging from 13.50hrs-15.20hrs.
A waterbird survey of the Lakelands from 14.30-14.50hrs recorded – Mute Swan (<1), Coot (<3), Mallard (19), Tufted Duck (<3), Little Grebe (<4), Moorhen (<19) and Grey Heron (<1).

No Brent Goose scat recorded on the any of the playing fields.

d) January 6th, 2024

Sunrise- 08.39hrs/Sunset 16.23hrs. Weather – Wind West F3, Cloud 1/8, Dry, 3c, Good visibility. On-site 08.45hrs – 14.45hrs.
Species recorded – Mallard, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Oystercatcher, Black-headed Gull, Common Gull, Herring Gull, Feral Pigeon, Woodpigeon, Dunnock, Robin, Mistle Thrush, Fieldfare, Blackbird, Wren, Coal Tit, Great Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Bullfinch.
08.45hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 10.00hrs with Black-headed Gull (<65) and Common Gull (<3) noted foraging in the area, averaging 50 Black-headed Gull feeding in the area at other times. At area 1 no foraging species were noted during morning, small numbers of Black-headed Gull (<5) and Herring Gull (<3) noted passing over the site. In area 4 Black-headed Gull (<2), Common Gull (<1) and a Fieldfare were noted foraging during the morning. At Area 2 a peak morning count of Black-headed Gull (<43), Herring Gull (<1) and Common Gull (<1) were noted roosting and foraging at 09.27hrs. A pair Oystercatcher flew southwest over the Lakelands at 09.07hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat. No Brent noted in the VEC FC.

A waterbird survey of the Lakelands from 09.15-09.45hrs recorded – Mallard (<14), Little Grebe (<4), Moorhen (<20), Coot (<1), Little Egret (<1) and Grey Heron (<1).
12.00hrs-14.45hrs – No target species noted at area 1 during afternoon, with occasional flyover Black-headed and Herring Gulls only. No species were recorded foraging in area 4. At area 2 a peak of Black-headed Gull (<50), Herring Gull (<1) and Common Gull (<7) were noted at 12.25hrs. At area 3 Gull numbers peaked at 12.30hrs with Black-headed Gull (<14), Herring Gull (<1) and Common Gull (<1) present.
A waterbird survey of the Lakelands from 13.15-13.45hrs recorded – Mallard (<9), Little Grebe (<4), Moorhen (<17), Coot (<1) and Grey Heron (<1).

No sightings of target species in VEC FC or Bushy Park.

e) January 26th, 2024

Sunrise- 08.19hrs/Sunset 16.55hrs. Weather – Wind Southwest F2, Cloud 2/8, Dry, 4c, Excellent visibility. On-site 10.30hrs – 16.30hrs.
Species recorded –Brent Goose (off-site), Mute Swan, Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Mediterranean Gull, Herring Gull, Woodpigeon, Collared Dove, Pied Wagtail, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Redwing, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Bullfinch.
10.30hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 11.42hrs with Black-headed Gull (<28), Herring Gull (<3)

and Mediterranean Gull (<3) noted foraging in the area. At area 1 no foraging species were noted during morning, Redwing (<5), Goldfinch (<8) and occasional Black-headed and Herring Gull noted passing over only. Black-headed Gull (<6) and Common Gull (<3) were noted foraging in area 4 intermittently during the morning. At Area 2 a peak morning count of Black-headed Gull (<25), Herring Gull (<17) and Common Gull (<5) were noted roosting and foraging at 11.15hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat. No Brent Geese were noted at VEC FC or Bushy Park.

A waterbird survey of the Lakelands from 11.15-11.45hrs recorded – Mute Swan (<1), Coot (<4), Mallard (<20), Tufted Duck (<2), Little Grebe (<3), Moorhen (<14) and Grey Heron (<2).
12.00hrs-16.30hrs – No target species noted at area 1 during afternoon, with occasional flyover Black-headed and Herring Gull noted passing over only (<10 each in total). No species were recorded foraging in area 4. At area 2 Gulls were noted foraging and roosting throughout the afternoon with a peak of Black-headed Gull (<61), Herring Gull (<10), Common Gull (<6) and Mediterranean Gull (<4) noted at 14.00hrs. At area 3 a peak count of Black-headed Gull (<15) and Common Gull (<6) was made at 12.55hrs. At the VEC FC Brent Geese (<76) were noted foraging from 13.05hrs to 15.15hrs.
A waterbird survey of the Lakelands from 14.45-15.15hrs recorded – Mute Swan (<1), Coot (<4), Mallard (<28), Tufted Duck (<2), Little Grebe (<3) and Moorhen (<15).

Mistle Thrush (<4), Redwing (<20) and Pied Wagtail (<3) were recorded foraging on the playing fields.

No Brent Goose scat recorded on the any of the playing fields.

f) February 7th, 2024

Sunrise- 07.59hrs/Sunset 17.19hrs. Weather – Wind Northwest F1, Cloud 4/8, Dry, 2c, Excellent visibility. On-site 08.15hrs – 14.30hrs.
Species recorded –Brent Goose (flyover & offsite only), Mute Swan, Mallard, Tufted Duck, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Black-headed Gull, Mediterranean Gull, Common Gull, Herring Gull, Lesser black-backed Gull, Woodpigeon, Pied Wagtail, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Redwing, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Treecreeper, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin.
08.15hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 10.32hrs with Black-headed Gull (<56), Mediterranean Gull (<1), Herring Gull (<8) and Common Gull (<11) noted foraging and roosting in the area. At area 1 no foraging species were noted, a flock of Brent Geese (<45) flew northwest over the north end at 10.10hrs. Black-headed Gull (<5) and Common Gull (<2) were noted foraging in area 4 during the morning. At Area 2 a peak morning count of Black-headed Gull (<48), Herring Gull (<11), Lesser black-backed Gull (<1), Common Gull (<13) and Mediterranean Gull (<3) were noted roosting and foraging at 11.35hrs. At the VEC FC a foraging flock of Brent Geese (<34) were noted at 09.50hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 10.30-11.55hrs recorded – Mute Swan (<2), Coot (<5), Mallard (<21), Tufted Duck (<6), Little Grebe (<3), Moorhen (<18), Little Egret (<1) and Grey Heron (<2).
12.00hrs-14.30hrs – At area 1 Brent Geese (<4) flew east over the north end at 13.35hrs (height 20m). No species were recorded foraging in area 4. At area 2 Gulls were noted foraging and roosting throughout the afternoon with a peak of Black-headed Gull (<35), Herring Gull (<15) and Common Gull (<6) noted at 12.20hrs. At area 3 small numbers of Black-headed Gull (<15) were noted foraging the afternoon. At VEC FC grounds a flock of Brent Geese (<46) were noted foraging at 14.05hrs.
A waterbird survey of the Lakelands from 13.00-13.25hrs recorded – Mute Swan (<2), Coot (<5), Mallard (<23), Tufted Duck (<6), Little Grebe (<4), Moorhen (<15) and Grey Heron (<1).

Pied Wagtail (<1), Mistle Thrush (<4) and Redwing (<15) were recorded foraging on the playing fields, in areas 2 and 3.

g) February 23rd, 2024

Sunrise- 07.27hrs/Sunset 17.50hrs. Weather – Wind West F2, Cloud 5/8, Dry, 5c, Excellent visibility. On-site 11.00hrs – 17.00hrs.

Species recorded – Brent Goose (flyover & offsite), Mute Swan, Mallard, Tufted Duck, Little Grebe, Grey Heron, Sparrowhawk, Moorhen, Coot, Black-headed Gull, Common Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Treecreeper, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Greenfinch, Goldfinch.

11.00hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 11.05hrs with Black-headed Gull (<39), Herring Gull (<2) and Common Gull (<1) noted foraging in the area. At area 1 Starling (<35), Goldfinch (<12) and Woodpigeon (<4) noted foraging only. At Area 4 no foraging species were recorded. At area 2 a peak morning count of Black-headed Gull (<32), Herring Gull (6) and Common Gull (<5) were noted roosting and foraging at 11.45hrs. Sparrowhawk noted soaring over the east end of the Lakelands at 11.39hrs.

12.00hrs-17.00hrs At area 1 a flock of Brent Geese (<30) passed east over the middle of the site at 13.05hrs (height 20m). Common Gull (<1) and Black-headed Gull (<4) noted foraging in area 4 intermittently during the afternoon. At area 2 a peak of Black-headed Gull (<36), Herring Gull (<14) and Common Gull (<9) were noted at 14.35hrs. At area 3 Black-headed Gull (<29), Common Gull (<5) and Herring Gull (<3) foraging at 13.10hrs was the peak count of foraging Gulls in this area. At the VEC FC Brent Geese (<180) were noted foraging from 13.07hrs until 14.40hrs.

A waterbird survey of the Lakelands from 13.30-14.00hrs recorded – Mute Swan (<1), Coot (<3), Mallard (<17), Tufted Duck (<4), Little Grebe (<2), Moorhen (<11) and Grey Heron (<2).

No Brent Goose scat recorded on the any of the playing fields.

h) March 8th, 2024

Sunrise- 06.55hrs/Sunset 18.17hrs. Weather – Wind East F2, Cloud 7/8, Dry, 7c, Excellent visibility. On-site 07.30hrs – 14.30hrs.

Species recorded – Brent Goose (Off-site), Mallard, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Mediterranean Gull, Common Gull, Herring Gull, Feral Pigeon, Woodpigeon, Kingfisher, Pied Wagtail, Dunnock, Robin, Mistle Thrush, Redwing, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Treecreeper, Magpie, Jackdaw, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch, Bullfinch.

07.30hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 09.12hrs with Black-headed Gull (<95),Common Gull (<9) and Mediterranean Gull (<1) noted foraging in the area. At area's 1 & 4 no foraging species were noted. At Area 2 a peak morning count of Black-headed Gull (<36), Mediterranean Gull (<1), Herring Gull (2) and Common Gull (<68) were noted roosting and foraging at 09.20hrs. At the VEC FC Brent Geese (<23) briefly landed into the site from 08.53-09.00hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.35-09.55hrs recorded – Mallard (<10), Little Grebe (<2), Moorhen (<13), Coot (<1), Kingfisher (<1 at west end) and Grey Heron (<1).

12.00hrs-14.30hrs – Jackdaw (<28) were the only species recorded foraging in field area at area 1. Black-headed Gull (<5) noted foraging in area 4 intermittently during the afternoon. At area 2 no foraging species were recorded as fields were in use throughout. At area 3 Black-headed Gull (<66) and Common gull (<5) foraging at 12.20hrs was the peak count of foraging birds in this area.

A waterbird survey of the Lakelands from 13.30-13.55hrs recorded – Mallard (<12), Little Grebe (<2), Moorhen (<11), Coot (<1) and Grey Heron (<1).

No Brent Geese noted on checks on VEC FC or Bushy Park.

i) March 22nd, 2024

Sunrise- 06.22hrs/Sunset 18.43hrs. Weather – Wind West F4, Cloud 7/8, Dry, 10c, Excellent visibility. On-site 10.45hrs – 16.45hrs.

Species recorded –Mallard, Little Grebe, Grey Heron, Moorhen, Coot, Herring Gull, Lesser black-backed Gull, Feral Pigeon, Woodpigeon, Robin, Mistle Thrush, Blackbird, Blackcap, Chiffchaff, Goldcrest, Wren, Great Tit,

Coal Tit, Blue Tit, Long-tailed Tit, Treecreeper, Magpie, Jackdaw, Hooded Crow, Chaffinch, Goldfinch, Greenfinch, Siskin, Bullfinch.

10.45hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 no foraging were noted. At area 1 no foraging species were noted, Herring Gull (<3) noted passing over the site only. No species were noted foraging in area 4 or 2 during the morning (all pitches in use by school). Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat. No Brent noted in VEC FC or Bushy Park.

A waterbird survey of the Lakelands from 11.15-11.40hrs recorded – Mallard (<8), Little Grebe (<2), Moorhen (<10), Coot (<1) and Grey Heron (<1). One Chiffchaff in song at the east end (migrant).

12.00hrs-16.45hrs – No species recorded foraging in field area at area 1. Gull species Black-headed Gull and Common Gull not recorded on-site appearing to have now departed the area for breeding grounds, Herring Gull (<10) noted perched on the school buildings only. Lesser-black-backed Gull (<2) noted intermittently at the Lakelands during the afternoon, no birds noted foraging at area 4, 2 or 3. No Brent recorded at the VEC FC or Bushy Park sites.

A waterbird survey of the Lakelands from 13.15-13.40hrs recorded – Mallard (<9), Little Grebe (<2 Displaying), Moorhen (<9), Coot (<1) and Grey Heron (<1). One Blackcap in song at the east end (migrant).

No Brent Goose scat recorded on the any of the playing fields.

6. Comments and observations on survey results

In total 47 bird species were recorded over 9 surveys at the survey site area at Terenure College, Dublin, during the winter bird surveys in 2023-2024, one species red-listed as a species listed of conservation concern (per Birdwatch Ireland's species of conservation concern 2020-2026) recorded on-site, were wintering **Redwing**, recorded in small numbers (averaging 15-25) foraging on the site. Species amber-listed as wintering species of conservation concern were Mute Swan, Tufted Duck, Mallard, Coot, Black-headed Gull, Common Gull, Lesser black-backed Gull and Herring Gull.

Brent Geese were recorded foraging in the VEC Football Grounds adjacent to Terenure College on seven survey dates (29 on 30/11/23, 120 on 08/12/23, 30 on 19/12/23, 76 on 26/01/24, 46 on 07/02/24, 120 on 23/02/24 and 23 on 08/08/24), none were observed in Bushy Park. Similar again to the recording season 2022-2023 Brent Geese were not observed foraging in the Terenure College survey area, and no geese scat was found on-site, from experience surveying other sites it would appear between the high volume of public footfall on the site, combined with the very regular recreational use of the pitches, negates the visitation of Geese to the site. During surveys birds were noted passing over the site (all over the primary survey site -area 1, these birds are likely moving between outlying sites, including VEC FC).

Results suggest that the site is not an important ex-situ foraging or roosting site for species of qualifying interest from nearby Special protection areas (SPA's).

Appendix III - Terenure College, Dublin, Winter Bird Surveys 2022-2023.

Terenure College, Dublin, Winter Bird Surveys 2022-2023

1) Introduction

Between November 2022 and March 2023 10 Winter Bird Surveys were undertaken at grounds at Terenure College, South County Dublin by Hugh Delaney, a freelance Ecologist (Birds primarily) Hugh has extensive experience surveying numerous sites with ecological consultancies over 12+ years. Hugh is local to the Dun Laoghaire-Rathdown area in Dublin and is especially familiar with the bird life and its ecology in its environs and elsewhere in the country going back over 35 years.

2) Winter Bird Survey Methodology

Winter bird surveys are conducted from soon after sunrise until late in the afternoon, or alternatively started later in the day until sunset, a survey period is a minimum of six hours, the site is monitored throughout the survey period and all bird species utilizing the site recorded, including species flying through site area overhead. Checks are also made on suitable habitat nearby or adjacent to the site for comparative purposes and to monitor any interchange of birds between sites. Target species (species of more special interest) utilizing the site are mapped and estimates of the time these species frequented the site are recorded.

Site Location

Fig. 1. Terenure College Bird Survey area (encircled in red), the site was divided into the following areas for the purposes of the surveys –
(1. Primary survey site.**2.** Main playing fields area.**3.** Secondary playing fields area.**4.** Terenure College Rugby grounds.**5.** VEC Football Club grounds.**6.** Lakelands area (encircled in blue)).

3) Site Description

The site is a parkland-type area situated in suburban south Dublin, at the east side of the site Terenure College and grounds are located and adjacent to this are large areas of playing fields bordered at the boundaries by large trees. A significant feature of the site is the 'Lakelands' area which features a slow-moving water body that moves from west to east via an underground channel arising from the west side that exists the site via a channel underground at the east side passing through the north side of the site, it is bordered also by large trees (notably mainly Holm Oak on the north side) and contains some tree covered islets. The survey site itself (1) at the northwest corner of the survey area of Terenure College is part of the playing field areas and is bordered by trees at its outer boundaries. Dividing the survey site area and Terenure Rugby Club to the east is an artificial pitch area.

Significant adjacent sites of interest to the survey area are VEC Football club immediately to the east and Bushy Park to the south of the survey area.

4) Specific site survey methodology

The survey site and areas within were comprehensively surveyed during the surveys, twice monthly with an early visit and a later visit made alternately, all areas including the survey site (1) were checked at least hourly during the survey periods, by way of a cyclical check around the site on foot and bicycle (also large portion of site area is viewable simultaneously at the west side of Lakelands). In addition, several dedicated specific counts of the Lakelands area were completed during surveys in order to document the waterbird species numbers present in this area. Outlying sites adjacent to the survey area were also checked during surveys, these specifically being VEC football grounds to the east and Bushy Park to the south. The survey area playing field areas were checked on all surveys specifically for evidence of Brent Goose scat, these being an excellent indicator of any visitations on-site by the species.

5) Survey Results

a) November 11th, 2022

Sunrise- 07.42hrs/Sunset 16.35hrs. Weather – Wind South F4 decreasing to F2, Cloud 6/8, Dry, 14c, Excellent visibility. On-site 10.00hrs – 16.15hrs.

Species recorded – Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Herring Gull, Kittiwake, Woodpigeon, Grey Wagtail, Robin, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch.

10.00hrs-12.00hrs – Survey commenced at the survey site (1) north of the Terenure College, grass sward length here was estimated at 15+cm in areas and appeared to be no longer being tended (i.e. mown to a playing field standard like the other playing field areas), the other playing field areas were of normal short-cropped playing field standard. The longer grass length here was deemed not be conducive to foraging species such as Brent Geese, Gull species or wader species (only possible exception being perhaps Curlew). No species recorded. At area 2 a peak count of roosting gull species were of Black-headed Gull (<148), Herring Gull (<4), Common Gull (<4) and Kittiwake (<1). At Area 3 Black-headed Gull (<9) were noted roosting. No species present in area 4.

A waterbird survey of the Lakelands from 11.15-11.35hrs recorded – Coot (<2), Mallard (<24), Tufted Duck (<6), Little Grebe (<3), Moorhen (<12) and Grey Heron (<2).

12.00hrs-16.15hrs – At 12.20hrs Black-headed Gull (<190), Herring Gull (<39) and Common Gull (<6) were noted roosting on area 2. This was the peak count of roosting gull species recorded during the afternoon with lower numbers recorded thereafter, at 13.40hrs Black-headed Gull (<68), Herring Gull (<4) and Common Gull (<2) recorded at area 2, at area 3 Black-headed Gulls roosting peaked at 14 at 13.30hrs, with 4 recorded at area 4 at 14.05hrs. No species noted foraging at area 1.

A waterbird survey of the Lakelands from 13.30-13.50hrs recorded – Coot (<3), Mallard (<32), Tufted Duck (<6), Little Grebe (<3), Moorhen (<13), and Grey Heron (<1).

Passerine species recorded around the site were typical of a suburban Dublin parkland, Mistle Thrush (<4) recorded foraging on the playing fields, Grey Wagtail (<1) at the Lakelands, the woodland around the lakelands was the most productive area for passerine species, four Tit species, Goldcrest (<3), Goldfinch (<10), Chaffinch (<8) present in this area.

No Brent Goose scat was recorded on the any of the playing fields.

b) November 21st, 2022

Sunrise- 08.00hrs/Sunset 16.20hrs. Weather – Wind Southeast F3 to F2 west later, Cloud 7/8, Light showers, 7c, Good visibility. On-site 08.15hrs – 14.15hrs.

Species recorded – Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch, Siskin.

08.15hrs-12.00hrs – Surveys commenced on arrival at area 3 at entrance, and onwards to area 1, Lakelands, etc. At area 3 a peak count of roosting and foraging gull species were of Black-headed Gull

(<45), Herring Gull (<11) and Common Gull (<6) at 11.05hrs, smaller numbers averaging about 20 mainly Black-headed Gull were present here during the morning. At area 1 no foraging species were noted, with occasional flyover Gulls (mainly Herring Gull) noted passing over the site. No species noted foraging in area 4. At Area 3 a peak count of Black-headed Gull (<59), Herring Gull (<11) and Common Gull (<7) were noted roosting and foraging at 11.40hrs. VEC football grounds and Bushy Park were checked several times during the morning and no foraging species were noted on the playing fields at these sites.

A waterbird survey of the Lakelands from 09.15-09.30hrs recorded – Coot (<3), Mallard (<36), Tufted Duck (<6), Little Grebe (<4), Moorhen (<15) and Grey Heron (<2).
12.00hrs-14.15hrs – No target species noted at area 1, several Black-headed Gulls noted occasionally landing into the site briefly only. At area 4 Black-headed Gull (<2) and Common Gul (<3) noted foraging at 12.50hrs. At 13.35hrs Black-headed Gull (<72), Herring Gull (<14) and Common Gull (<9) were noted mainly roosting on area 2.
A waterbird survey of the Lakelands from 12.15-12.40hrs recorded – Coot (<3), Mallard (<28), Tufted Duck (<6), Little Grebe (<4), Moorhen (<12), and Grey Heron (<1).

Again, the habitats surrounding the Lakelands were most productive for passerines with a majority of species recorded here. Mistle Thrush (<6) recorded foraging on the playing fields.

No Brent Goose scat was recorded on the any of the playing fields.

c) December 4th, 2022

Sunrise- 08.21hrs/Sunset 16.08hrs. Weather – Wind East F2, Cloud 8/8, Occasional showers, 5c, Good visibility. On-site 10.00hrs – 16.00hrs.
Species recorded –Brent Goose (off-site only in VEC), Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Mediterranean Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Redwing, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Treecreeper, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Linnet.
10.00hrs-12.00hrs – Surveys commenced on arrival at area 3 at entrance, and onwards to area 1, Lakelands, area 4 etc. At area 3 a peak count of roosting and foraging gull species were of Black-headed Gull (<31), Herring Gull (<17) and Common Gull (<2) at 11.42hrs, smaller numbers averaging about 15 mainly Black-headed Gull foraging at other times. At area 1 no foraging species were noted during morning. Black-headed Gull (<4) noted foraging in area 4 during morning. At Area 3 a peak morning count of Black-headed Gull (<28), Mediterranean Gull (<2), Herring Gull (<14) and Common Gull (<8) were noted roosting and foraging at 10.50hrs. AT 11.45hrs 27 Brent Geese were noted foraging in the grounds of the VEC Football grounds (viewed over wall from Greenlea Grove).

A waterbird survey of the Lakelands from 10.25-10.40hrs recorded – Coot (<5), Mallard (<41), Tufted Duck (<5), Little Grebe (<4), Moorhen (<18) and Grey Heron (<1).
12.00hrs-16.00hrs – The Brent Geese flock (<27) noted in the VEC were still noted present at 13.10hrs, not observed after this time, none observed on-site or flying over the survey area. No target species noted at area 1, occasional flyover Black-headed and Herring Gull noted passing over only. No species noted foraging in area 4 during the afternoon. At area 3 Gulls were noted foraging and roosting throughout the afternoon with peaks of Black-headed Gull (<77 at 13.12hrs), Herring Gull (<14 at 13.56) and Common Gull (<16 at 14.34hrs). No Brent geese scat located on check of playing fields.
A waterbird survey of the Lakelands from 14.00-14.25hrs recorded – Coot (<5), Mallard (<35), Tufted Duck (<5), Little Grebe (<4) and Moorhen (<16).

Redwing (<12), Mistle Thrush (<6) and Pied Wagtail (<3) were recorded foraging on the playing fields.

No Brent Goose scat recorded on the any of the playing fields.

d) December 30th, 2022

Sunrise- 08.40hrs/Sunset 16.14hrs. Weather – Wind South F2 veering southwest, Cloud 6/8, Dry, 8c, Excellent visibility. On-site 08.15hrs – 14.15hrs.

Species recorded –Mute Swan, Mallard, Tufted Duck, Little Grebe, Grey Heron, Sparrowhawk, Moorhen, Coot, Black-headed Gull, Common Gull, Mediterranean Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Redwing, Mistle Thrush, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch, Siskin.
08.15hrs-12.00hrs – Surveys commenced on arrival at area 3 at entrance, and onwards to area 1, Lakelands, area 4 etc. Area 3 foraging gull numbers peaked at Black-headed Gull (<24) and Herring Gull (<4) at 08.25hrs. At area 1 no foraging species were noted during morning, a Sparrowhawk passed north over area 1 at 11.45hrs. Black-headed Gull (<2) were noted foraging in area 4 during morning. At Area 2 a peak morning count of Black-headed Gull (<66), Mediterranean Gull (<4), Herring Gull (<9) and Common Gull (<16) were noted roosting and foraging at 10.35hrs. Checks on VEC FC and Bushy Park returned with no significant foraging species noted. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.15-09.45hrs recorded – Mute Swan (<2), Coot (<4), Mallard (<30), Tufted Duck (<7), Little Grebe (<3), Moorhen (<11) and Grey Heron (<2).
12.00hrs-14.15hrs – No target species noted at area 1 during afternoon, occasional flyover Black-headed and Herring Gull noted passing over only. Common Gull (<3) noted foraging in area 4 from 12.20hrs-14.00hrs in the afternoon. At area 3 Gulls were noted foraging and roosting throughout the afternoon with a peak of Black-headed Gull (<24) and Herring Gull (<6) at 13.34hrs.
A waterbird survey of the Lakelands from 13.30-13.55hrs recorded – Mute Swan (<2), Coot (<4), Mallard (<28), Tufted Duck (<6), Little Grebe (<4) and Moorhen (<19).

Redwing (<8), Mistle Thrush (<4) and Pied Wagtail (<2) were recorded foraging on the playing fields. No sightings of target species in VEC or Bushy Park.

No Brent Goose scat recorded on the any of the playing fields.

e) January 11th, 2023

Sunrise- 08.35hrs/Sunset 16.30hrs. Weather – Wind Southwest F3, Cloud 7/8, Light showers, 6c, Good visibility. On-site 10.00hrs – 16.00hrs.
Species recorded –Mute Swan, Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Mediterranean Gull, Herring Gull, Woodpigeon, Kingfisher, Meadow Pipit, Grey Wagtail, Dunnock, Robin, Song Thrush, Redwing, Mistle Thrush, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch, Siskin, Bullfinch.
10.00hrs-12.00hrs – On route to survey site Brent Geese (<120) were noted foraging in the VEC Football grounds at 09.50hrs. Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 11.15hrs with Black-headed Gull (<27), Herring Gull (<5) and Common Gull (<3) noted foraging in the area. At area 1 no foraging species were noted during morning, small numbers of Black-headed Gull (<5) noted passing over the site. No species were noted foraging in area 4 during the morning. At Area 2 a peak morning count of Black-headed Gull (<22), Mediterranean Gull (<1), Herring Gull (<7) and Common Gull (<5) were noted roosting and foraging at 10.45hrs. A flock of Brent Geese (<90) were noted to be still foraging in the VEC football grounds at 11.50hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.30-09.55hrs recorded – Mute Swan (<2), Coot (<6), Mallard (<26), Tufted Duck (<4), Little Grebe (<4), Moorhen (<19) and Grey Heron (<1).
12.00hrs-16.00hrs – No target species noted at area 1 during afternoon, with occasional flyover Black-headed, Common and Herring Gull noted passing over only. No species were recorded foraging in area 4. At area 2 Gulls were noted foraging and roosting throughout the afternoon with a peak of Black-headed Gull (<54), Herring Gull (<13) and Common Gull (<12) noted at 14.10hrs. A flock of Brent Geese (<90) in the VEC FC were last recorded at 14.45hrs. None recorded in the survey area and a check of the playing fields did not find any BG scat.
A waterbird survey of the Lakelands from 14.15-14.25hrs recorded – Mute Swan (<2), Coot (<6), Mallard (<22), Tufted Duck (<4), Little Grebe (<3), Moorhen (<15) and Kingfisher (<1 seen briefly at the east end of the Lakelands).

Redwing (<25), Mistle Thrush (<6) and Pied Wagtail (<2) were recorded foraging on the playing fields. No sightings of target species in VEC or Bushy Park.

No Brent Goose scat recorded on the any of the playing fields.

f) January 23rd, 2023

Sunrise- 08.23hrs/Sunset 16.50hrs. Weather – Wind North F1, Cloud 6/8, Dry, 8c, Excellent visibility. On-site 08.30hrs – 14.30hrs.

Species recorded –Mute Swan, Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Coot, Black-headed Gull, Common Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Redwing, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Greenfinch, Siskin, Bullfinch.

08.30hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 10.10hrs with Black-headed Gull (<42), Herring Gull (<6) and Common Gull (<11) noted foraging in the area. At area 1 no foraging species were noted during morning, at 11.22hrs a flock of Brent Geese (<20) flew east over the north boundary of area 1 (height 25m), not located on-site or in VEC afterwards, small numbers of Black-headed Gull (<8) and Herring Gull (<10) were noted passing over the site. Black-headed Gull (<4) were noted foraging in area 4 during the morning. At Area 2 a peak morning count of Black-headed Gull (<45), Herring Gull (<13) and Common Gull (<15) were noted roosting and foraging at 09.40hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.15-09.45hrs recorded – Mute Swan (<2), Coot (<5), Mallard (<24), Tufted Duck (<6), Little Grebe (<3), Moorhen (<16) and Grey Heron (<3).

12.00hrs-14.30hrs – No target species noted at area 1 during afternoon, with occasional flyover Black-headed, Common and Herring Gull noted passing over only (<5 each). No species were recorded foraging in area 4. At area 2 Gulls were noted foraging and roosting throughout the afternoon with a peak of Black-headed Gull (<30), Herring Gull (<14) and Common Gull (<6) noted at 12.20hrs. A check of the playing fields did not find any Brent Goose scat.

A waterbird survey of the Lakelands from 14.00-14.25hrs recorded – Mute Swan (<2), Coot (<6), Mallard (<25), Tufted Duck (<6), Little Grebe (<4) and Moorhen (<18).

Mistle Thrush (<6), Redwing (<25) and Pied Wagtail (<2) were recorded foraging on the playing fields. No sightings of target species in VEC or Bushy Park.

No Brent Goose scat recorded on the any of the playing fields.

g) February 5th, 2023

Sunrise- 08.03hrs/Sunset 17.15hrs. Weather – Wind North F2, Cloud 3/8, Dry, 2c, Excellent visibility. On-site 10.30hrs – 16.30hrs.

Species recorded –Brent Goose (flyover only), Mute Swan, Mallard, Tufted Duck, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Black-headed Gull, Mediterranean Gull, Common Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Redwing, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Bullfinch.

10.30hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 11.42hrs with Black-headed Gull (<31), Mediterranean Gull (<3), Herring Gull (<10) and Common Gull (<5) noted foraging in the area. At area 1 no foraging species were noted, Goldfinch (<8) and Mistle Thrush (<2) foraging in area, small numbers of Black-headed Gull (<5) and Herring Gull (<3) noted passing over the site. Black-headed Gull (<10) were noted foraging in area 4 during the morning. At Area 2 a peak morning count of Black-headed Gull (<18), Herring Gull (<5) and Common Gull (<2) were noted roosting and foraging at 11.00hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.25-09.50hrs recorded – Mute Swan (<2), Coot (<7), Mallard (<20), Tufted Duck (<8), Little Grebe (<4), Moorhen (<23), Little Egret (<1) and Grey Heron (<1).

12.00hrs-16.30hrs – A flock of Brent Geese (<15) flew northwest over the north end of area 1 at 12.34hrs (height 30m), no other species were recorded with the exception of flyover Gull species. No species were recorded foraging in area 4. At area 2 Gulls were noted foraging and roosting throughout the afternoon with a peak of Black-headed Gull (<45), Herring Gull (<9) and Common Gull (<16) noted at 13.10hrs. At VEC FC grounds a flock of Brent Geese (<130) were noted foraging from 14.40hrs, the birds were not present at 15.50hrs.
A waterbird survey of the Lakelands from 14.00-14.25hrs recorded – Mute Swan (<2), Coot (<7), Mallard (<31), Tufted Duck (<8), Little Grebe (<4) and Moorhen (<19).

Mistle Thrush (<5) and Redwing (<30) were recorded foraging on the playing fields, in areas 2 and 3.

No Brent Goose scat recorded on the any of the playing fields.

h) February 18th, 2023

Sunrise- 07.37hrs/Sunset 17.41hrs. Weather – Wind Southwest F2, Cloud 6/8, Dry, 8c, Excellent visibility. On-site 08.00hrs – 14.00hrs.
Species recorded –Brent Goose (flyover only), Mute Swan, Mallard, Tufted Duck, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Black-headed Gull, Mediterranean Gull, Common Gull, Herring Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Redwing, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Bullfinch.

08.00hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 10.05hrs with Black-headed Gull (<46), Mediterranean Gull (<5), Herring Gull (<7) and Common Gull (<11) noted foraging in the area. At area 1 at flock of Brent Geese (<22) flew west over site at 08.43hrs (height 25m), no foraging species were noted, Goldfinch, small numbers of Black-headed Gull (<4) and Herring Gull (<8) also noted passing over the site. Common Gull (<3) were noted foraging in area 4 intermittently during the morning. At Area 2 a peak morning count of Black-headed Gull (<56), Mediterranean Gull (<2), Herring Gull (14) and Common Gull (<10) were noted roosting and foraging at 09.55hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.15-09.45hrs recorded – Mute Swan (<2), Coot (<5), Mallard (<17), Tufted Duck (<6), Little Grebe (<4), Moorhen (<19), Little Egret (<1) and Grey Heron (<2).

12.00hrs-14.00hrs – No species recorded foraging in field area at area 1. Common Gull (<2) and Black-headed Gull (<1) noted foraging in area 4 at 12.15hrs. At area 2 a peak of Black-headed Gull (<58), Herring Gull (<12) and Common Gull (<18) noted at 13.30hrs. At area 3 Black-headed Gull (<8) and Herring Gull (<9) foraging at 13.45hrs was the peak count of foraging birds in this area.
A waterbird survey of the Lakelands from 14.00-14.25hrs recorded – Mute Swan (<2), Coot (<5), Mallard (<15), Tufted Duck (<6), Little Grebe (<4) and Moorhen (<17).

Mistle Thrush (2) and Redwing (<15) were recorded foraging on the playing fields, mainly in area 2.

No Brent Goose scat recorded on the any of the playing fields.

i) March 1st, 2023

Sunrise- 07.13hrs/Sunset 18.02hrs. Weather – Wind Northeast F2, Cloud 4/8, Dry, 6c, Excellent visibility. On-site 10.30hrs – 16.45hrs.
Species recorded –Mute Swan, Mallard, Tufted Duck, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Black-headed Gull, Mediterranean Gull, Common Gull, Herring Gull, Lesser black-backed Gull, Woodpigeon, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Bullfinch.
10.30hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 10.45hrs with Black-headed Gull (<23), Mediterranean Gull (<1), Herring Gull (<4), Lesser black-backed Gull (<2) and Common Gull (<4) noted foraging in the area. At area 1 no foraging species were noted. Common Gull (<1) and

Black-headed Gull (<3) were noted foraging in area 4 during the morning. At Area 2 a peak morning count of Black-headed Gull (<53), Mediterranean Gull (<5), Herring Gull (18) and Common Gull (<10) were noted roosting and foraging at 11.25hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 11.20-11.45hrs recorded – Mute Swan (<2), Coot (<4), Mallard (<15), Tufted Duck (<5), Little Grebe (<3), Moorhen (<16), Little Egret (<1) and Grey Heron (<1).
12.00hrs-16.45hrs – No species recorded foraging in field area at area 1. Black-headed Gull (<5) noted foraging in area 4 intermittently during the afternoon. At area 2 a peak of Black-headed Gull (<62), Herring Gull (<15) and Common Gull (<18) was noted mainly foraging noted at 13.15hrs. At area 3 Black-headed Gull (<16), Common gull (<3) and Herring Gull (<5) foraging at 14.40hrs was the peak count of foraging birds in this area. At the VEC FC a flock of Brent Geese (<55) were noted foraging from 13.05hrs, still present at 15.10hrs.
A waterbird survey of the Lakelands from 14.00-14.25hrs recorded – Mute Swan (<2), Coot (<4), Mallard (<18), Tufted Duck (<5), Little Grebe (<3), Moorhen (<15) and Little Grebe (<1).

Mistle Thrush were recorded foraging on the playing fields.

No Brent Goose scat recorded on the any of the playing fields.

j) March 26th, 2023

Sunrise- 07.13hrs/Sunset 19.48hrs. Weather – Wind Northeast F1, Cloud 3/8, Dry, 7c, Excellent visibility. On-site 07.45hrs – 13.45hrs.
Species recorded –Mallard, Tufted Duck, Little Grebe, Little Egret, Grey Heron, Moorhen, Coot, Black-headed Gull, Mediterranean Gull, Common Gull, Herring Gull, Lesser black-backed Gull, Woodpigeon, Collared Dove, Grey Wagtail, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Coal Tit, Blue Tit, Long-tailed Tit, Treecreeper, Magpie, Jackdaw, Rook, Hooded Crow, Starling, Chaffinch, Goldfinch, Siskin, Bullfinch.

07.45hrs-12.00hrs – Surveys commenced on arrival at area 3 near entrance, and onwards to area 1, Lakelands, area 4 etc. At Area 3 foraging gull numbers peaked at 09.05hrs with Black-headed Gull (<19) and Herring Gull (<3) noted foraging in the area. At area 1 no foraging species were noted, Herring Gull (<6) noted passing over the site only. No species were noted foraging in area 4 during the morning. At Area 2 a peak morning count of Black-headed Gull (<32), Herring Gull (,8) and Common Gull (<4) were noted roosting and foraging at 10.15hrs. Checks on pitch areas in survey grounds did not find any evidence of Brent Goose scat.

A waterbird survey of the Lakelands from 09.15-09.45hrs recorded – Coot (<4), Mallard (<14), Tufted Duck (<4), Little Grebe (<4), Moorhen (<14) and Grey Heron (<1).
12.00hrs-13.45hrs – No species recorded foraging in field area at area 1. Black-headed Gull (<2) noted foraging in area 4 intermittently during the afternoon. At area 2 a peak of Black-headed Gull (<24), Herring Gull (<5) and Common Gull (<3) were noted foraging at 12.15hrs. At area 3 Black-headed Gull (<16), Common gull (<3) and Herring Gull (<5) foraging at 14.40hrs was the peak count of foraging birds in this area. At the VEC FC a flock of Brent Geese (<55) were noted foraging from 13.05hrs, still present at 15.10hrs.
A waterbird survey of the Lakelands from 12.45-13.15hrs recorded – Coot (<4), Mallard (<12), Tufted Duck (<4), Little Grebe (<4), Moorhen (<13) and Grey Heron (<2).

Mistle Thrush were recorded foraging on the playing fields. Meadow Pipit (<8) were noted passing north over the site on migration during the survey.

No Brent Goose scat recorded on the any of the playing fields.

6) Comments and observations on survey results

In total 43 bird species were recorded over 10 surveys at the survey site area at Terenure College, Dublin, during the winter bird surveys in 2022-2023, one species red-listed as a species listed of conservation concern (per Birdwatch Ireland's species of conservation concern 2020-2026) recorded on-site, were wintering Redwing, recorded in small numbers (averaging 20-30) foraging on the site.

Species amber-listed as wintering species of conservation concern were Mute Swan, Tufted Duck, Mallard, Coot, Black-headed Gull, Common Gull, Lesser black-backed Gull and Herring Gull.
Brent Geese were recorded foraging in the VEC Football Grounds adjacent to Terenure College on three survey dates (27 on 04/12/22, 120 on 11/01/23 and 55 on 01/03/23), the groundman there confirmed with me that they are quite regular at the site, the species was not recorded foraging in the grounds of Terenure College on any of the survey dates, with a few flocks noted passing over the north side of the survey area only, likely birds moving between other sites, correspondence with the grounds staff of the college and regular walkers to the site suggests they are not frequenting the site, and checks for Brent Geese scat did not record any.

Results suggest that the site is not an important ex-situ foraging or roosting site for species of qualifying interest from nearby Special protection areas (SPA's).

Appendix IV- Terenure College, Co Dublin, Breeding Bird Survey Reports 2023 & 2024.

Terenure College, Co Dublin, Breeding Bird Survey Reports 2023

Introduction

Between April and June 2023 three breeding bird surveys were conducted at lands at Terenure College, Co Dublin. The surveys were conducted by Hugh Delaney, a freelance Ecologist (Birds primarily) who has extensive bird surveying experience on numerous sites with ecological consultancies for over 15+ years. Hugh is local to the Dun Laoghaire-Rathdown area in Dublin and is especially familiar with the bird life and its ecology in the environs going back over 30 years.

Specific Site Breeding Bird Survey Methodology

Breeding bird surveys are conducted early in the day to optimize the species range recorded with this time coinciding with the maximal number of birds in song. Breeding indications specifically looked for on-site include birds singing or alarm calling, visible nest locations, nest building, birds provisioning food to fledged young or a nest site, recently fledged young etc. All species noted on-site were recorded, with all breeding indications recorded. The results are outlined below. The site was surveyed in a cyclical way (similar to the winter bird surveys) starting with Area 3, onwards to area 1, the Lakelands and area 4 and then area 2, the site area was surveyed twice over (all areas surveyed a minimal of two times).

Fig 1. Terenure College Grounds, Co Dublin.

The site was subdivided into the following areas for the purposes of the surveys –

1. Primary survey site.
2. Main playing fields area.
3. Secondary playing fields area.
4. Terenure College Rugby grounds.
5. VEC Football Club grounds.
6. Lakelands area (encircled in blue).

Site Description

The site is a parkland-type area situated in suburban south Dublin, at the east side of the site Terenure College and grounds are located and adjacent to this are large areas of playing fields bordered at the boundaries by large trees. A significant feature of the site is the 'Lakelands' area which features a slow-moving water body that moves from west to east via an underground channel arising from the west side that exists the site via a channel underground at the east side passing through the north side of the site, it is bordered also by large trees (notably mainly Holm Oak on the north side) and contains some tree covered islets. The survey site itself

(1) at the northwest corner of the survey area of Terenure College is part of the playing field areas and is bordered by trees at its outer boundaries. Dividing the survey site area and Terenure Rugby Club to the east is an artificial pitch area.

BREEDING BIRD SURVEY RESULTS

Terenure College 26/04/23

Survey results

Weather – Wind F1 Southeast, Cloud cover 6/8, 6c, Dry, Excellent visibility. Sunrise 06.02hrs/Sunset 20.44hrs. On-Site 06.30-09.15hrs.

Species recorded – Mallard, Tufted Duck, Little Grebe, Moorhen, Coot, Herring Gull, Woodpigeon, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Hooded Crow, Starling, Chaffinch, Goldfinch, Bullfinch.

Mallard – (<13) Minimum count at the Lakelands area, most birds concentrated at the west end.
Tufted Duck – One male present at the west end of the Lakelands.
Little Grebe -(<3) One pair present at the west end of the Lakelands and one present at the east end.
Moorhen – (<16) Minimum of 16 noted at the Lakelands site, courtship behaviour noted between at least three pairs on-site.
Coot – (<5) Five present in the Lakelands area, birds mainly concentrated in the middle part of the Lakelands.
Herring Gull – (<20) Minimum count on-site, birds visiting the Lakelands and birds foraging on area 3 and 2. At least five noted perched on the college buildings.
Woodpigeon – (<6) Minimum of six noted in song around the site (Lakelands and trees adjacent pitches, mainly at area 2).
Dunnock – (<8) Minimum of eight birds heard in song around the site, one singing in area 1 and others mainly around the Lakelands site and area 3.
Robin - (<6) Minimum of six noted in song around the site, one noted carrying nesting material to a site at the middle part of the Lakelands.
Song Thrush – (<2) One in song at the west end of the Lakelands area and one in song at the east side of area 2.
Mistle Thrush – (<5) Two in song, one at area 3 and one at the west end of the lakelands, two others noted foraging at area 2. One noted carrying food to a nesting location at the northeast corner of area 2 intermittently during the morning.
Blackbird – (<6) Six noted in song around the site, three at the Lakelands and others at the college entrance area and area 2. One noted carrying food to a nesting location at the east end of the Lakelands.
Goldcrest – (<2) Two noted in song, one near entrance to the college and one at the east end of the Lakelands.
Wren – (<7) Seven noted in song around the site, minimum of three at the Lakelands and two singing in area 1.
Great Tit – (<3) One in song at the east end of the Lakelands and two others noted foraging around the site.
Coal Tit – (<3) Three in song around the site, one in area 1, one near entrance to the college and one at the west end of the Lakelands.
Blue Tit – (<6) Six in song around the site, two at the lakelands and one at area 1, and others at area 2.
Long-tailed Tit – (<3) Three noted foraging in the Lakelands area.
Magpie – (<8) Minimum of eight noted foraging around the site.
Jackdaw – (<35) Singles noted passing over the site and small flocks noted foraging around the site, mainly at areas 2 and 3.
Hooded Crow – (<6) Minimum of six noted on-site.
Starling – (20) Singles noted mainly passing over the site, and small flocks noted foraging at areas 2 and 3.
Chaffinch – (<4) four in song on-site, two at the Lakelands and others near the college entrance and at area 2.
Goldfinch – (<10) Ten noted foraging around the site, mainly in the Lakelands area.
Summary of survey – At the primary survey site area (area 1), Dunnock (<2), Wren (<2) and Blue Tit (<1) were noted in song, Jackdaw and Goldfinch noted also foraging in this area. In total, three species were noted breeding on-site, these were – Robin (1 pair), Blackbird (1 pair) and Mistle Thrush (1 pair).

Terenure College 20/05/23

Survey results

Weather – Wind F1 East, Cloud cover 8/8, 14c, Dry, Excellent visibility. Sunrise 05.18hrs/Sunset 21.26hrs. On-Site 06.15-09.15hrs.
Species recorded – Mallard, Little Grebe, Moorhen, Coot, Herring Gull, Woodpigeon, Swift, Swallow, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Hooded Crow, Starling, Chaffinch, Goldfinch, Bullfinch.

Mallard – (<4 Males) Four drakes present at the Lakelands area (females at this juncture of the spring will likely be incubating at a nest site, the presence of males suggests this is possibly on-site).
Little Grebe -(<2) A pair were located nesting at the west end of the Lakelands (short distance east of the footbridge), the birds were incubating eggs on a nest platform, with a change-over of incubating duties observed.
Moorhen – (<11) Minimum of 11 noted at the Lakelands site, a pair were located nesting in a Holm Oak at the west end of the site on the north side and incubating on the nest.
Coot – (<2) Pair present at the west end of the Lakelands, no breeding behaviour noted.
Herring Gull – (<6) Minimum of six noted mainly sitting on the college buildings on-site, no breeding behaviour noted.
Woodpigeon – (<4) Minimum of four noted in song around the site (Lakelands and trees adjacent pitches).
Swift – (<3) Minimum of three noted foraging mainly over the Lakelands area intermittently during the morning.
Swallow – (<2) Two noted foraging over the Lakelands intermittently during the morning.
Dunnock – (<6) Minimum of six birds heard in song around the site, two singing in area 1 and others mainly around the Lakelands site.
Robin - (<5) Minimum of five noted in song around the site, a fledged juvenile was observed at the east end of the Lakelands at 09.02hrs being provisioned food by a parent.
Song Thrush – (<1) One in song at the west end of the Lakelands area.
Mistle Thrush – (<5) Two in song, one near entrance to college and one at the west end of the Lakelands, other birds were noted foraging on the playing fields.
Blackbird – (<4) Four noted in song around the site, two at the Lakelands and others at the college entrance area.
Goldcrest – (<2) Two in song at the Lakelands area, one at the west end and one at the east end.
Wren – (<8) Eight noted in song around the site, minimum of four at the Lakelands. Fledged juveniles noted at the east side of area 3.
Great Tit – (<2) One in song at the northwest corner of area 1 and another in the middle of the Lakelands area.
Coal Tit – (<3) A pair were provisioning food to a nest site in a tree hole along lane 50m inside main entrance to college, another was noted in song at the Lakelands area.
Blue Tit – (<4) Four noted foraging around site, mainly at the Lakelands area.
Long-tailed Tit – (<1) One noted foraging at the west end of the Lakelands.
Magpie – (<6) Six noted foraging around the site, a nest was noted at the west side of area 3.
Jackdaw – (<8) Singles noted passing over the site and foraging around the site.
Hooded Crow – (<4) Minimum of four noted on-site.
Starling – (<5) Singles noted mainly passing over the site, not observed foraging on-site.
Chaffinch – (<3) Three in song on-site, one at the Lakelands and others at the south side of the site.
Goldfinch – (<5) Five noted foraging around the site, mainly in the Lakelands area.
Bullfinch – (<2) Two noted foraging at the west end of the Lakelands area at 08.25hrs.
Summary of survey – At the primary survey site area (area 1), Dunnock (<2), Wren (<2) and Great Tit (<1) were noted in song, no other species noted displaying breeding behaviour. Overall, four species were noted breeding on-site, these were – Little Grebe (1 pair), Moorhen (1 pair), Wren (1 pair), Robin (1 pair),Coal Tit (1 pair) and Magpie (1 pair).

Terenure College 25/06/23

Survey results

Weather – Wind F2 Southeast, Cloud cover 5/8, 14c, Dry, Excellent visibility. Sunrise 04.57hrs/Sunset 21.57hrs. On-Site 06.30-09.15hrs.
Species recorded – Mallard, Little Grebe, Moorhen, Coot, Herring Gull, Woodpigeon, Swift, Swallow, House Martin, Dunnock, Robin, Song Thrush, Mistle Thrush, Blackbird, Goldcrest, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Hooded Crow, Starling, Chaffinch, Goldfinch, Bullfinch.

Mallard – (<11) Two pairs with young in the Lakelands area, one pair with six young in the middle part of the Lakelands and another pair with three young at the west end of the Lakelands.
Little Grebe -(<2) Pair with one young present at the east end of the Lakelands area.
Moorhen – (<14) Minimum of 14 noted at the Lakelands site, a pair with three young were noted at the west end of the Lakelands.
Coot – (<2) Pair present at the middle part of the Lakelands, no breeding behaviour noted.
Herring Gull – (<12) Minimum of four noted sitting on the college buildings on-site, no breeding behaviour noted. Others noted visiting the Lakelands and foraging at area 2.
Lesser black-backed Gull – (<3) Three noted visiting the Lakelands intermittently during the morning.
Woodpigeon – (<5) Minimum of five noted in song around the site (Lakelands and area 2 and 3).
Swift – (<5) Minimum of five noted foraging mainly over the Lakelands area and area 2 intermittently during the morning.
Swallow – (<4) Four noted foraging over the Lakelands and area 1 intermittently during the morning.
House Martin – Two noted foraging over the Lakelands intermittently during the morning.
Dunnock – (<8) Minimum of eight birds heard in song around the site, two singing in area 1 and others mainly around the Lakelands site. An adult was observed provisioning food to a juvenile at area 3.
Robin - (<4) Minimum of four noted in song around the site, two fledged juveniles were observed being provisioned food by parents at the west end of the Lakelands.
Song Thrush – (<2) One in song at the west end of the Lakelands area and another in song at area 2.
Mistle Thrush – (<6) One in song at the west end of the Lakelands and others noted foraging around the site mainly in areas 2 and 3.
Blackbird – (<5) Five noted in song around the site, three at the Lakelands and others at the college entrance area. A juvenile was noted being provisioned food by a parent in area 1.
Goldcrest – (<1) One in song at the west end of the Lakelands.
Wren – (<10) Seven noted in song around the site, minimum of three at the Lakelands. Three fledged juveniles were noted being provisioned food by parents in the middle part of the Lakelands.
Great Tit – (<2) One in song at the east end of the Lakelands and one in song at area 1.
Coal Tit – (<1) One in song at the east side of area 1 and one in song at the northeast corner of area 3.
Blue Tit – (<14) Mainly noted foraging around site, four fledged juveniles being provisioned food noted at the east end of the Lakelands and three more noted in area 3.
Long-tailed Tit – (<3) Three noted foraging at the Lakelands.
Magpie – (<5) Five noted foraging around the site.
Jackdaw – (<25) Singles noted passing over the site and small flocks foraging around the site, mainly at area 2.
Hooded Crow – (<3) Minimum of three noted on-site.
Starling – (<15) Singles noted mainly passing over the site, foraging at areas 2 and 3 and bringing food to nesting locations off-site.
Chaffinch – (<2) Two in song on-site, one at the Lakelands and one at the south end of area 2..
Goldfinch – (<12) Twelve noted foraging around the site, mainly in the Lakelands area.
Bullfinch – (<1) Two noted foraging at the end of the Lakelands area.
Summary of survey – At the primary survey site area (area 1), Dunnock (<1), Wren (<1) and Great Tit (<1) were noted in song, and a juvenile Blackbird was noted. Overall, four species were noted breeding on-site, these were – Mallard (2 pairs), Little Grebe (1 pair), Moorhen (1 pair), Dunnock (1 pair), Robin (1 pair), Blackbird (1 pair), Wren (1 pair) and Blue Tit (2 pairs).

Comments and observations on the survey results

In total **29 species** were recorded in the Terenure College survey area over the course of three breeding bird surveys between April and June 2023. **Eleven species** – Mallard (2 pairs), Little Grebe (1 pair), Moorhen (2 pairs), Robin (Several pairs), Dunnock (1 pair), Wren (Several pairs), Blackbird (2 pair), Mistle Thrush (1 pair), Blue Tit (2 pairs), Coal Tit (1 pair) and Magpie (1 pair) were recorded breeding on-site.
Mallard is amber listed as a bird of medium conservation concern in Ireland (2020-2026).

Terenure College, Co Dublin, Breeding Bird Survey Reports 2024

Introduction

Between May and July 2024 three breeding bird surveys were conducted at lands at Terenure College, Co Dublin. The surveys were conducted by Hugh Delaney, a freelance Ecologist (Birds primarily) who has extensive bird surveying experience on numerous sites with ecological consultancies for over 15+ years. Hugh is local to the Dun Laoghaire-Rathdown area in Dublin and is especially familiar with the bird life and its ecology in the environs going back over 30 years.

Specific Site Breeding Bird Survey Methodology

Breeding bird surveys are conducted early in the day to optimize the species range recorded with this time coinciding with the maximal number of birds in song. Breeding indications specifically looked for on-site include birds singing or alarm calling, visible nest locations, nest building, birds provisioning food to fledged young or a nest site, recently fledged young etc. All species noted on-site were recorded, with all breeding indications recorded. The results are outlined below. The site was surveyed in a cyclical way (similar to the winter bird surveys) starting with Area 3, onwards to area 1, the Lakelands and area 4 and then area 2, the site area was surveyed twice over (all areas surveyed a minimal of two times).

Fig 1. Terenure College Grounds, Co Dublin.

The site was subdivided into the following areas for the purposes of the surveys –

1. Primary survey site.
2. Main playing fields area.
3. Secondary playing fields area.
4. Terenure College Rugby grounds.
5. VEC Football Club grounds.
6. Lakelands area (encircled in blue).

Site Description

The site is a parkland-type area situated in suburban south Dublin, at the east side of the site Terenure College and grounds are located and adjacent to this are large areas of playing fields bordered at the boundaries by large trees. A significant feature of the site is the 'Lakelands' area which features a slow-moving water body that moves from west to east via an underground channel arising from the west side that exists the site via a channel underground at the east side passing through the north side of the site, it is bordered also by large trees (notably mainly Holm Oak on the north side) and contains some tree covered islets. The survey site itself (1) at the northwest corner of the survey area of Terenure College is part of the playing field areas and is bordered by trees at its outer boundaries. Dividing the survey site area and Terenure Rugby Club to the east is an artificial pitch area.

BREEDING BIRD SURVEY RESULTS

Terenure College 30/05/24

Survey results

Weather – Wind Northwest F3, Cloud cover 8/8, 13c, Dry, Excellent visibility. Sunrise 05.05hrs/Sunset 21.40hrs. On-Site 06.30-09.00hrs.

Species recorded – Mallard, Tufted Duck, Little Grebe, Grey Heron, Sparrowhawk, Moorhen, Herring Gull, Lesser black-backed Gull, Woodpigeon, Swallow, Dunnock, Robin, Song Thrush, Blackbird, Wren, Great Tit, Coal Tit, Blue Tit, Long-tailed Tit, Magpie, Jackdaw, Hooded Crow, Chaffinch, Goldfinch.

Mallard – (<5) Five present at the Lakelands including one juvenile (less than 1 week old).

Tufted Duck – (<3) Three drakes present at the Lakelands.

Little Grebe -(<3) One at the west end of the Lakelands and a pair at the east end of the Lakelands.

Grey Heron – (<3) Three foraging at the Lakelands including a juvenile.

Sparrowhawk – One hunting along the lane adjacent to the main entrance at 08.40hrs.

Moorhen – (<7) Minimum of seven, including a pair with a juvenile (a few days old) at the west end of the Lakelands and a pair nest building in the same area.

Herring Gull – (<10) Minimum of ten, passing over the site and visiting the Lakelands.

Lesser black-backed Gull – (<2) Two noted visiting the Lakelands intermittently during the morning.

Woodpigeon – (<3) Minimum of three noted in song around the site (Lakelands and in trees near the entrance).

Swallow – (<4) Four foraging over the site, mainly over the largest pitch area (area 2).

Dunnock – (<4) Minimum of four birds heard in song around the site, mainly around the Lakelands site.

Robin - (<6) Minimum of six noted around the site, three noted in song.

Song Thrush – (<2) One in song at the west end of the Lakelands area and one in song at area 2.

Blackbird – (<3) Three noted in song around the site, two at the Lakelands and one at area 3.

Wren – (<9) Four noted in song around the site, two fledged juveniles being provisioned food by adults were noted at area 1 and at the east end of the Lakelands.

Great Tit – (<3) A pair noted provisioning food to a recently fledged juvenile at the east end of the lakelands.

Coal Tit – (<5) One singing at area 3, a pair were noted provisioning food to two recently fledged juveniles at the east end of the Lakelands.

Blue Tit – (<6) Pair noted provisioning food to two fledged juveniles at area 1 and birds noted foraging at the Lakelands.

Long-tailed Tit – (<3) Pair with a juvenile noted at the west end of the Lakelands.

Magpie – (<8) Minimum of eight noted foraging around the site.

Jackdaw – (<12) Singles noted passing over the site and foraging around the site.

Hooded Crow – (<3) Minimum of three noted on-site.

Chaffinch – (<2) Two in song on-site, one at the Lakelands and one at area 2.

Goldfinch – (<6) Six noted foraging around the site, mainly in the Lakelands area.

Summary of survey – At the primary survey site area (area 1), Wren and Blue Tit were noted provisioning food to recently fledged juveniles. Overall, six species were noted breeding on-site, these were – Moorhen (2 pairs), Wren (2 pairs), Great Tit (1 pair), Coal Tit (1 pair), Blue Tit (1 pair) and Long-tailed Tit (<1 pair).

Terenure College 12/06/24

Survey results

Weather – Wind West F1, Cloud cover 8/8, 11c, Dry, Excellent visibility. Sunrise 04.57hrs/Sunset 21.53hrs. On-Site 06.15-08.45hrs.

Species recorded – Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Herring Gull, Woodpigeon, Swallow, Grey Wagtail, Dunnock, Robin, Mistle Thrush, Blackbird, Blackcap, Goldcrest, Wren, Blue Tit, Coal Tit, Long-tailed Tit, Treecreeper, Magpie, Jackdaw, Hooded Crow, House Sparrow, Chaffinch, Goldfinch, Bullfinch.

Mallard – (<16) Minimum of 16 at Lakelands, two pairs with young, one pair with one juvenile (less than week old) and a pair with three juveniles (+ 1 week old).

Tufted Duck – (<12) Female with nine juveniles (less than week old) and two drakes present at the Lakelands.

Little Grebe -(<2) Pair present at the west end of the Lakelands.

Grey Heron – (<2) Two foraging at the east end of the Lakelands (adult and a Juvenile).

Moorhen – (<15) Minimum of fifteen, including three breeding pairs, a pair with three juveniles (less than week old), a pair with one well-grown juvenile and a pair with a young (few days old) juvenile.

Herring Gull – (<12) Minimum count, passing over the site and visiting the Lakelands.
Woodpigeon – (<30) Minimum count, foraging flocks of c.10 birds foraging on the pitches, mainly area 2. Two noted in song in Lakelands area.
Swallow – (<6) Six foraging over the site, mainly over Lakelands and the largest pitch area (area 2).
Grey Wagtail – (<1) One noted foraging at the east end of the Lakelands.
Dunnock – (<3) Minimum of three birds heard in song around the site.
Robin - (<4) Minimum of four noted around the site, two noted in song, a juvenile was noted in the southeast corner of area 2.
Mistle Thrush – (<1) One noted foraging in area 3 intermittently during the morning.
Blackbird – (<5) Two noted in song, at east end of Lakelands and at area 2, a juvenile was noted at the east end of Lakelands, and others noted foraging on-site.
Blackcap – (<3) A pair provisioning a recently fledged juvenile was noted at the north end of area 1.
Goldcrest – (<2) One in song at the west end of the Lakelands and one in song at the west side of area 1.
Wren – (<13) Seven noted in song around the site, two fledged juveniles being provisioned food by adults were noted at the west end of Lakelands, and another pair provisioning food to three young were noted at the east end of Lakelands.
Blue Tit – (<8) Three pairs noted provisioning food to young around the site, at area 1, Lakelands and near the main entrance (all feeding 2-3 young).
Coal Tit – (<5) One in song at area 1, and a pair were noted provisioning food to two recently fledged juveniles at the east end of the Lakelands.
Long-tailed Tit – (<9) Pair provisioning food to seven juveniles on lane near entrance and probably same group were later noted at the west end of Lakelands.
Treecreeper – (<1) One noted foraging at the north side of the Lakelands area.
Magpie – (<6) Minimum of six noted foraging around the site.
Jackdaw – (<20) Singles noted passing over the site and small flocks foraging around the site.
Hooded Crow – (<4) Minimum of four noted on-site.
House Sparrow – (<2) Two noted foraging at the north end of area 1.
Chaffinch – (<4) Three in song at the Lakelands and one at the south end of area 2.
Goldfinch – (<8) Six noted foraging around the site, mainly in the Lakelands area, one in song at area 1.
Bullfinch – (<2) Two noted foraging along the boundary trees at the west side of area 1.
Summary of survey – At the primary survey site area (area 1), Blackcap and Blue Tit were noted provisioning food to recently fledged juveniles. Overall, eight species were noted breeding on-site, these were – Mallard (2 pairs), Tufted Duck (1 pair), Moorhen (3 pairs), Blackcap (1 pairs), Robin (1 juvenile), Wren (2 pairs), Blue Tit (3 pairs), Coal Tit (1 pair) and Long-tailed Tit (<1 pair).

Terenure College 14/07/24

Survey results

Weather – Wind East F1, Cloud cover 6/8, 12c, Dry, Excellent visibility. Sunrise 05.15hrs/Sunset 21.45hrs. On-Site 06.30-08.45hrs.
Species recorded – Mallard, Tufted Duck, Little Grebe, Grey Heron, Moorhen, Black-headed Gull, Herring Gull, Woodpigeon, Swallow, Grey Wagtail, Dunnock, Robin, Mistle Thrush, Blackbird, Goldcrest, Wren, Blue Tit, Treecreeper, Magpie, Jackdaw, Hooded Crow, Chaffinch, Goldfinch.
Mallard – (<24) Minimum of 24 at Lakelands, one pair with three well-grown (fledged) young at the east end of Lakelands.
Tufted Duck – (<4) Female with two well-grown (fledged) young at Lakelands and another female at the west end.
Little Grebe -(<1) One at the east end of the Lakelands.
Grey Heron – (<3) Three foraging at the east end of the Lakelands (adults and a Juvenile).
Moorhen – (<8) Minimum of eight at the Lakelands including two well-grown (fledged) young.
Black-headed Gull – (<25) Flock of 19 noted roosting at area 2 and others noted at Lakelands.
Herring Gull – (<10) Minimum count, passing over the site and visiting the Lakelands.
Woodpigeon – (<25) Minimum count, small foraging flocks on the pitches, mainly at area 2.
Swallow – (<5) Six foraging over the site, mainly over Lakelands and the largest pitch area (area 2), also several over areas 1.
Grey Wagtail – (<1) One noted foraging at the east end of the Lakelands.
Dunnock – (<6) Minimum of six recorded around the site, two in song at the Lakelands.

Robin - (<6) Minimum of six noted around the site.
Mistle Thrush – (<3) Three noted foraging in areas 2 and 3 intermittently during the morning.
Blackbird – (<7) Minimum count around the site, mainly in Lakelands and south end of area 2.
Goldcrest – (<3) Three noted foraging around the Lakelands.
Wren – (<10) Minimum of four in song around site, a pair provisioning food to two young noted also at the east end of Lakelands.
Blue Tit – (<7) Minimum count noted foraging around the site, including fledged juveniles.
Long-tailed Tit – (<10) Six noted foraging around the Lakelands site and others noted around areas 2 and 3.
Treecreeper – (<2) Two noted foraging at the east end of the Lakelands.
Magpie – (<8) Minimum of six noted foraging around the site.
Jackdaw – (<25) Singles noted passing over the site and small flocks foraging around the site.
Hooded Crow – (<5) Minimum of five noted on-site.
Chaffinch – (<8) Eight noted foraging around the site mainly in the vicinity of Lakelands
Goldfinch – (<15) Minimum number foraging around the site, flock of 15 frequenting area 1. Including juveniles
Summary of survey – A late breeding bird survey (to ascertain waterbirds breeding success and late breeders etc.) At the primary survey site area (area 1), Goldfinch (<15) noted foraging, Wren, blue Tit and Woodpigeon noted in same area. Mallard, Tufted Duck and Moorhen were proven to have nested at the Lakelands successfully, Little Grebe did not appear to do so.

Comments and observations on the survey results

In total **31 species** were recorded in the Terenure College survey area over the course of three breeding bird surveys between May and July 2024. **Ten species** – Mallard (2+ pairs), Tufted Duck (1 pair), Moorhen (3+ pairs), Robin (Several pairs), Blackcap (1 pair), Wren (4+ pairs), Blue Tit (3+pairs), Coal Tit (2+pairs), Great Tit (1 pair) and Long-tailed Tit (1 pair) were recorded breeding on-site.
Tufted Duck and Mallard are amber listed as birds of medium conservation concern in Ireland (2020-2026), both of which bred in the Lakelands area of the survey site.