ALTEMAR
Marine & Environmental Consultancy

Ecological Impact Assessment (EcIA) for a proposed development at Rathfarnham Castle, Rathfarnham, Co. Dublin.

15th April 2025

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: South Dublin County Council

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

Document Control Sheet			
Project	Ecological Impact Assessment (EcIA) for a proposed Development at Rathfarmham Castle, Rathfarnham, Co. Dublin		
Report	Ecological Impact Assessment		
Date	15th April 2025		
Version	Author	Reviewed	Date
Draft 01	Michael Wall	Gayle O'Farrell	10th April 2025
Planning	Bryan Deegan		15th April 2025

Table of Contents

Introduction

Background

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

The following EcIA has been prepared by Altemar Ltd. at the request of South Dublin County Council.

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 been prepared by Ecological Consultant Michael Wall of Altemar Ltd., who holds a BSc in Environmental Science and an MSc in Marine Biology. With extensive expertise in ornithological surveys, particularly seabirds - Michael also has a wealth of experience in environmental consultation and compliance. His work spans various industries, with a specialized focus on infrastructure and ICT facilities.

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 60+ 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 South Dublin County Council for an development located at Rathfarnham Castle, Rathfarnham, Co. Dublin.

South Dublin County Council intends to carry out development at the former South Dublin County Council Depot, at the Stables and Courtyards of Rathfarnham Castle and the adjoining Sean Keating Garden, Grange Road/Rathfarnham Road, Dublin14 (D14 FC62 & D14 XT02), Rathfarnham Castle (Protected Structure RPS. 221) Grange Road, Rathfarnham, Dublin 14, on a development site of 1.1725 hectares. The site is bounded by Castleside Drive to the north, Rathfarnham Road to the west and Rathfarnham Castle and its grounds to the south and east.

The development will consist of the refurbishment and change of use of the former stable buildings and former council depot yards, to provide mixed-use cultural/arts/cafe/ restaurant uses together with retail use, WC's, storage areas and a switch room.

Detailed Description of the works:

1. Works to the building to the north of the castle known as Cromwell's Fort (GFA 269m2), and its change of use to two multi-purpose event spaces and associated lobby areas.

The proposed works to include:

i) the removal of a modern flat roof covering and the replacement with a pitched roof with zinc finish and rendered masonry gable-ends;
ii) the removal of the existing solid floor to the southern internal room and replacement with a new insulated floor slab and the insertion of a new raised floor to the northern room;
iii) the removal of infill blockwork from existing openings and the provision of new windows and doors to existing openings;
iv) Installation of new services, partitions and repair and repointing works as required, including application of lime render finish.

2. Works to the existing single storey former stable buildings (GFA 591m2) within the existing courtyards to the north of the Castle and change of use to cultural/arts spaces, retail, café/restaurant, public toilets and ancillary lobby, storage and services spaces. The proposed works to include:

i) the removal of temporary roof coverings and the replacement with slate roof coverings;
ii) the minor modification of roof profiles above 2no. entrance doorways to provide sufficient head height at entrances;
iii) the removal of temporary bracing to windows and doors and replacement with new windows and doors to existing openings;
iv) the insertion of a new opening to the western perimeter wall to provide a new public entrance to the courtyard immediately to the north of the castle, and the closing up of an adjacent existing doorway opening;
v) The creation of new openings withing dividing walls of the existing stable buildings to provide improved connection between the buildings;
vi) The construction of a new single-storey mono-pitch extension (GFA 83m2) to the northern elevation of a former stable building;
vii) New insulated floor slabs, installation of new services and repair, repointing and lime render works as required.

3. The provision of a new single storey café and restaurant and ancillary support space (area GFA 528m2) within the former council depot yards comprising:

i) The demolition of a section of wall to the north-west to provide access between the proposed restaurant dining area and back of house areas;

ii) The construction of a single storey mono-pitch structure in the north-west corner including clerestory windows facing north and west along the existing perimeter walls of the site to provide a café/restaurant dining area, and an associated single storey flat-roof structure to the north to provide ancillary support to the café/restaurant, including kitchens, staff and visitor WCs;

iii) The provision of an internal plant room to the rear;

iv) The provision of external ancillary support areas including a screened bin store, screened plant enclosure at ground level and screened rooftop plant enclosure;

v) The provision of two new openings within the existing western perimeter wall to facilitate the insertion of secure entrance gates, to provide staff, deliveries and bin store access to the rear of the ancillary space and bin storage areas;

vi) The provision of four new openings within the existing western perimeter wall to facilitate the insertion of new glazed window openings to the café/restaurant;

vii) Repairs and repointing to the existing walls as required.

4. The provision of new, single storey, slated roof structures to the existing structures (GFA 33m2) to the north of the building known as the Seismograph Building consisting of:

i) A secure bike store area and provision of 10no. long term bicycle storage spaces including 1no. enlarged bicycle space for a cargo bike;

ii) A secure bin storage area for the retail spaces;

5. The demolition and reconstruction of the walls to the north and west of the northernmost former depot yard;

6. The provision of a new car park on part of the Sean Keating garden adjacent to the boundary with Castleside Drive, with entry from the existing Rathfarnham Road car park, including:

i) the demolition of 2no. existing gate posts and part of the adjacent existing garden wall and railings, and the removal of 14no. existing trees to facilitate the construction of a new pedestrian and vehicular entrance, pedestrian footpath and delivery drop-off area;

ii) the regrading and relevelling of the existing sunken pond and garden area to provide 54 no. car parking spaces (including 4no. accessible parking spaces and 10 no. EV parking spaces) and 42 no. short-term bicycle parking spaces to the north of the site and associated landscaping;

iii) The reconfiguration of the existing pedestrian entrance gate and new hard and soft landscaping to the north-west corner of the site to facilitate improved pedestrian access;

7. All associated site services, site development works and landscaping comprising:

i) Removal of temporary cabin structures from the existing former council depot yards and associated site clearances;

ii) The construction of new gated entrance and railings between Rathfarnham Castle forecourt and the proposed site;

iii) The removal of 4no. car spaces from the existing Rathfarnham Road car park to provide a new enlarged pavement area adjacent to the entrance to the Café/Restaurant;

iv) The reallocation of the existing bus set down area to accommodate a universally accessible set down area;

v) The local regrading of the footpath within the Rathfarnham Road car park along the perimeter wall to the west of the courtyards to provide accessible entrance points to the courtyards;

vi) The removal of part of southern end of the existing low level boundary wall between the existing car park and Rathfarnham Road to facilitate a new raised table and improved pedestrian crossing point; installation of a new access control gate to the carpark entrance from Rathfarnham Road;

vii) The regrading and relevelling of the existing surfaces to facilitate universal access throughout the site

viii) The provision of new hard and soft landscaping to the existing courtyards;

ix) The provision of new secure entrance gates to the existing openings between the park and courtyards;

x) The infilling with masonry construction of an existing unused entrance between the northern courtyard and the park to facilitate the regrading of the courtyard.

xi) Installation of new drainage, attenuation and site services and associated trenching and reinstatement works.

xii) Installation of new external site lighting to the car parking areas and courtyard spaces;

xiii) Repairs and repointing of existing structures throughout, as required.

The former council depot yards and former stable buildings fall within the zone of notification for Rathfarnham Castle, a National Monument (RMP DU022-014, Nat.Mon. 628) and a Protected Structure (RPS. 221) The proposed site outline, site location, site plan, proposed site elevations and landscape are seen in Figures 1-4.

Landscape

The landscape strategy for the proposed development has been prepared by DFLA Landscape Architects to accompany this planning application. The proposed landscape plans are demonstrated in Figure 5. The landscape strategy has been carried out with consultation with Altemar.

Figure 1. *Site location*

Figure 1. *Site outline*

***Figure 2**. Proposed Site Plan*

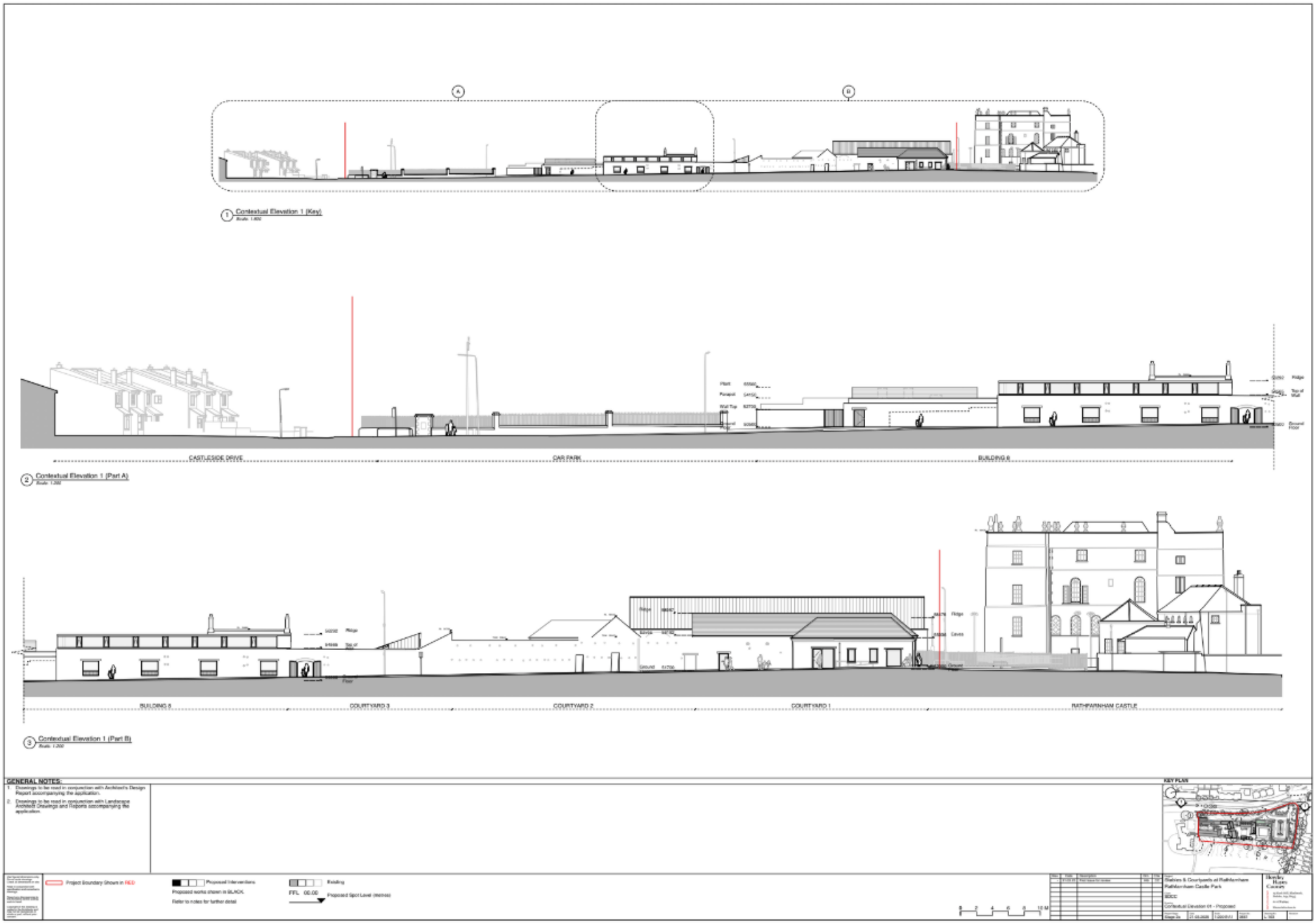

Figure 4. *Proposed contiguous elevations*

***Figure 5**. Proposed Landscape Plan*

Drainage

A Stormwater Management Plan Report has been prepared by CORA Consulting Engineers to accompany this planning application. This report outlines the following drainage strategy for the proposed development:

Existing Surface Water Drainage System

"2 Stormwater Management Plan

2.1 Existing Site & Surface Water Run-Off

The proposed application site is approximately 10054m² and has been broken down into three catchment areas.

As noted above catchment area 01 is an existing carpark. There is to be no significant works to this area as part of these redevelopment works and it is proposed to maintain the current drainage network in this area.

Catchment area 02 consists of the four courtyards & associated buildings. With regard to the existing paved courtyards and buildings there is no discernible surface water strategy.

The roofs of the existing buildings are constructed from corrugated sheathing and the surface runoff from these is carried via rainwater downpipes to a series of gullies and some rainwater pipes discharge directly to the ground. The surface courtyards currently consist of a mix of hard landscaped surfaces including concrete, asphalt and cobbles.

***Catchment area 03** currently consists of landscaped park with a small pond and walkways.*

The site slopes naturally downhill from courtyard 01 to courtyard 04. A CCTV survey of the existing drainage pipework has established that there is network of pipework and gullies in courtyards 03 and 04. This connects to an existing combined sewer which is then connected to the Irish Water foul sewer on Castleside Drive – A copy of the survey drawing is shown in Appendix B.

*Using Met Eireann Rainfall Data the greenfield run-off for the overall site (Qbar) is taken as **2.87 l/s**. Details of the input data and calculations are in Appendix A.*

2.2 Ground Conditions and Site Investigations

Trial Pits and soakaways were carried out on the site to establish the ground conditions. A layer of made ground overlays sandy gravel at approximately 800mm down. The overlying strata is considered soil type 3.

Two soakaway test were carried out – One in Courtyard 03 and the second in Courtyard 04. The first test resulted in a failure and did not produce a f-value. The second produced a value of 0.00019m/s and indicated water stabilising at 0.64m

Both tests indicate a low to zero value for soil permeability.

A record of these tests are included in Appendix C.

2.3 Proposed Stormwater Management Plan – Design Methodology

Area 01

Area one comprises of the existing carpark that is situated adjacent to Rathfarnham Road – As part of this development there are no significant works proposed in this area and therefore it is proposed to maintain the existing stormwater infrastructure.

Area 02

Area 02 consists of the existing courtyards 01, 02, 03 & 04 and all associated buildings. The results of the soil infiltration tests indicate low to zero infiltration so the entire stormwater runoff for this area will be managed by means of an attenuation system.

A total storage capacity of 435m³ will be provided. A single attenuation tank formed from proprietary Aqua-cells units and wrapped in an impermeable membrane will be constructed beneath the finished level of the proposed carpark – Refer to CORA drawings C0001 for details.

An attenuated discharge will be connected to the existing surface water network located to the north of the site. The discharge will be attenuated to the 2.3 l/s which is the calculated apportioned Qbar for the greenfield run-off.

As noted above the soil infiltration test indicate very poor permeability. However it is noted, that in order to install the proposed landscape finishes the soil will be required to be excavated and cultivated/rotovated to a depth of approximately 400mm. This will likely greatly improve the permeability of the soil and allow greater infiltration

Area 03

Area 03 consists of the proposed car park and soft landscaping area. The stormwater runoff fromthe asphalt road and parking bays will be managed by means of an attenuation system. A totalstorage capacity of 140m3will be provided

A attenuated discharge will be connected to the existing surface water network located to the north of the site. The discharge will be attenuated to the 0.56l/s which is the calculated apportioned Qbarfor the greenfield run-off

A thick layer of crushed stone will form the subbase for the parking areas which will also serve asthe attenuation tank. This will be wrapped in an Inbitex membrane to remove any hydrocarbons from the stormwater flow. Refer to drawing C0001 for details

3.0 Conclusion of Stormwater Management Plan

The above stormwater management plan proposes nature-based solutions where practicable to treat stormwater runoff on the site. The suite of measures included in the proposed development shall make a significant improvement to the current situation where there is a substantial stormwater run-off directed to the public sewers, particularly on Castleside Drive."

Proposed Foul Water Network

A Water Supply and Wastewater Management Plan & Flood Risk Assessment Report has been prepared by CORA Consulting Engineers to accompany this planning application. This report outlines the following foul drainage strategy for the proposed development:

*"**2 Wastewater Discharge***

The total wastewater discharge from the site is calculated using the Irish Water Codes of Practice for Waste Water. This includes discharge for general occupancy and the café. Wastewater discharge from the new building is proposed via the existing foul sewer that connects to the Irish Water sewer on Castleside Drive Details of the proposed foul drainage are detailed on CORA Drawing no. C0003Wastewater discharge calculations are shown in Appendix A.

3 Water Supply

The water supply will be taken from the Uisce Éireann existing network located to the east of the side. Water demand calculations are shown in Appendix A. To comply with current Building Regulations a new fire hydrant is required. The water supply layout is shown on CORA drawing C0004

4 Pre-Connection Enquiry to Uisce Éireann

A pre-connection enquiry for the development will be submitted to Uisce Éireann in conjunction with this planning application"

Flood Risk

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

*"**4 Flood Risk Assessment***

See diagram below showing extract from SDCC showing flood maps. There is no record of flooding on the site and it is not located in a flood zone. Therefore, it can be said there is no flood risk on the site."

Extract from SDCC Flood Maps

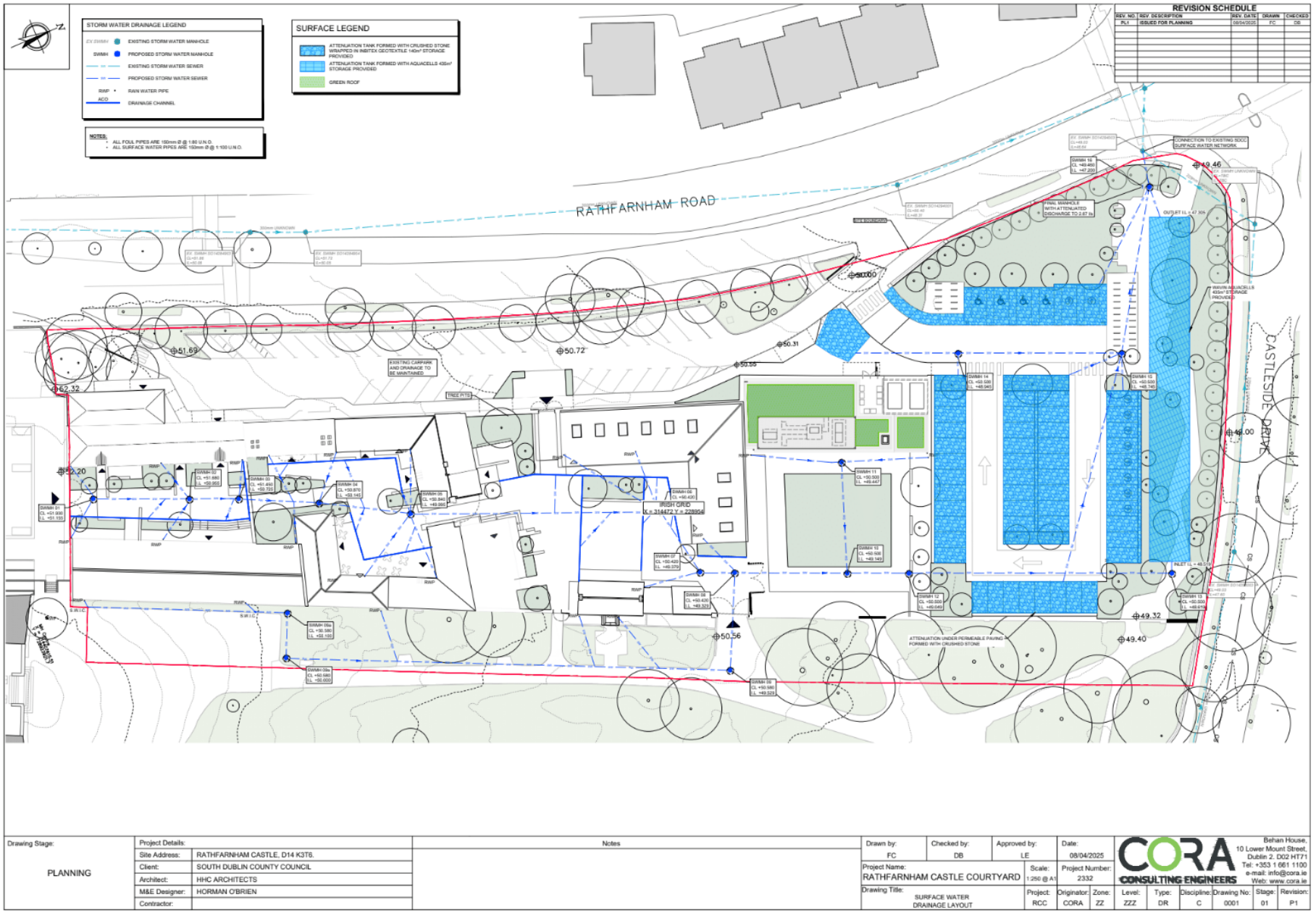

Figure 6. *Proposed ground floor drainage layout*

Arboricultural Assessment

An Arboricultural Report was composed by John Morris Arboricultural Consultancy, in relation to the trees at the proposed site at Rathfarnham Castle, Rathfarnham. In summary, the report states that:

'South Dublin County Council intends to carry out development at the former South Dublin County Council Depot, at the Stables and Courtyards of Rathfarnham Castle and the adjoining Sean Keating Garden, Grange Road/Rathfarnham Road, Dublin14 (D14 FC62 & D14XT02), Rathfarnham Castle (Protected Structure RPS. 221) Grange Road, Rathfarnham, Dublin 14, on a development site of 1.1725 hectares. The development will consist of the refurbishment and change of use of the former stable buildings and former council depot yards, to provide mixed-use cultural/arts/cafe/ restaurant used together with retail use, WC's, storage areas and a switch room.

The eastern half of the site comprises a semi-formal parkland landscape of early mature beech, ash, lime and yew with more recent plantings of pin oak and birch in keeping with the historical context of the area. The north-western corner has been recently landscaped with single avenues of pleached limes and formal box hedges. A line of mixed birch species borders the R114 and car park together with a small group of small-leaved lime. Adjacent to the café entrance, a mature Monterey cypress, pedunculate oak and sycamore comprise some of the oldest trees, together with the yews. Street trees comprise semi/early mature Norway maple lining the R114 and early mature London plane forming an avenue on Castleside Drive. Most trees are in fair/good health apart from a semi-mature beech (T7) in advanced physiological decline and one recently planted Pin oak (T15) in poor health. Minor works are required to clear canopies from adjacent buildings, footpaths and road signs as well as removal of small diameter hanging limbs from recent storms.

The proposed works will require the removal of trees 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101,102, 103, G104, 105, 121 & 122, hedge H60 and part of hedge H9. The reason for these removals is to facilitate a new pedestrian crossing, new vehicular access off the R114, landscaping works and for underground services including attenuation and stormwater. It is proposed to plant 61 no. new trees comprising 12 different species across the site. This new planting will increase species diversity and canopy cover in the local landscape to provide a future net gain in canopy cover and improvement on the pre-development baseline. The following tree protection measures are required on site:

- *Tree Protection Fencing*
- *Construction Exclusion Zones*
- *Specialist Methods of Working(use of AirSpade / Soil Pick under supervision of arboriculturist for installation of150mm diameter underground stormwater with Root Protection Area of trees 5 & 6).'*

Figure 7. *Tree Constraints Plan*

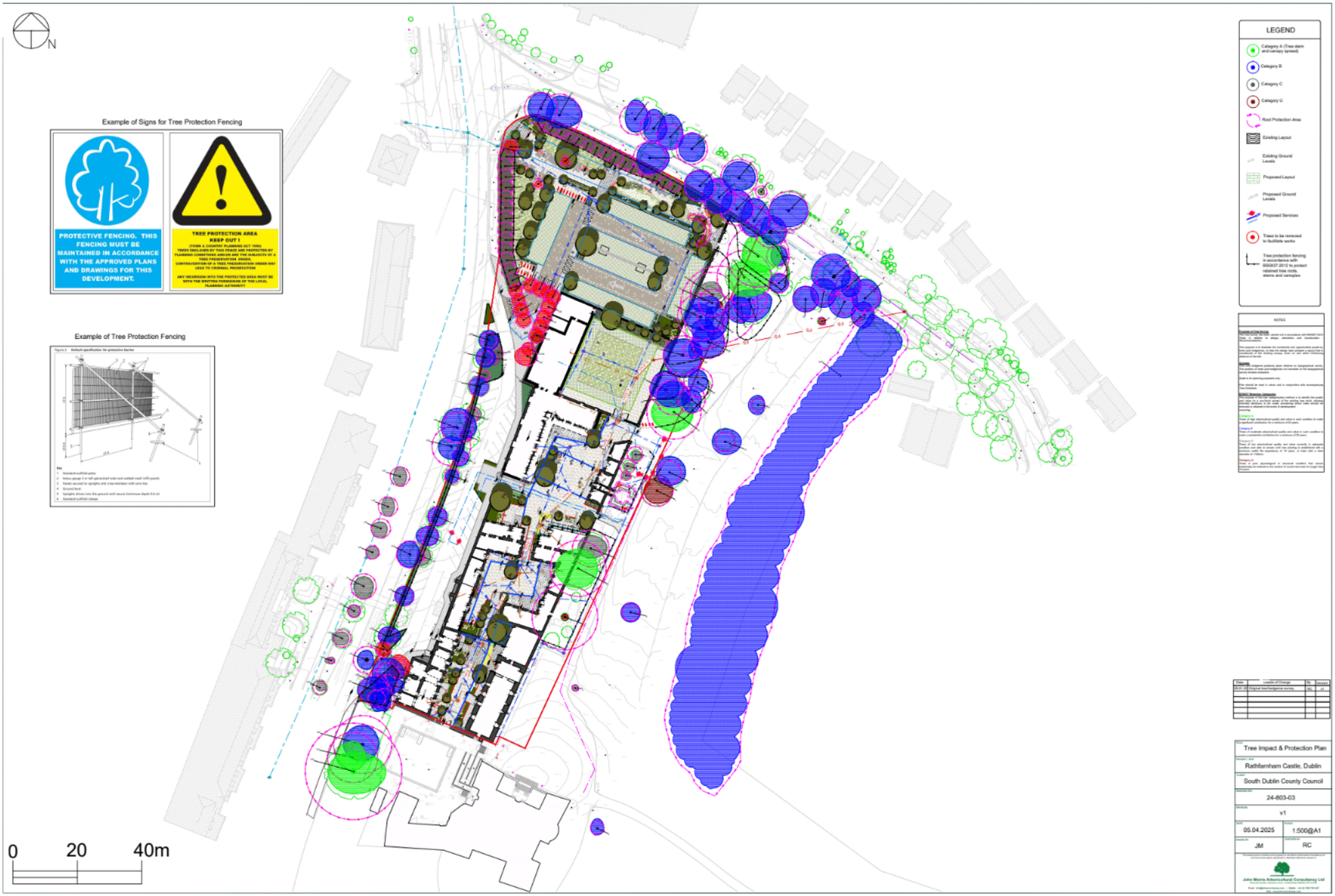

Figure 8. *Tree Impact and Protection Plan*

Lighting

The lighting impact assessment report for the proposed development has been prepared by Homan O'Brien Ltd. The proposed public lighting layout is demonstrated in Figure 9. The lighting assessment report concluded with the following:

"The calculation results, generated by Lighting Reality and confirm that the design as presented complies with the design criteria of an E3 environment.

The design includes for mitigation to bat foraging which are light sensitive, 3000k lamps are used throughout.

Light fittings used throughout with no upward light output throughout to minimise light spill.

Good optical control will be used with an upward light ratio of 0% for the fittings.

The proposed layout offers a design aesthetically pleasing for occupants and for the site as a whole.

Homan O' Brien believe the proposed layout will blend seamlessly into the surrounding environment."

In addition the following is also noted:

"For Bat protection, the following mitigation measures have been imposed.

Lighting has only been installed where necessary for public safety. These lights have been designed and selected with specific shutters and filters to minimise any potential for back spills into the sensitive locations while still providing the primary function of safely lighting to the circulation routes.

5.1 Reflectance's

Downward lighting can be reflected from bright surfaces. To minimize bat disturbance, the design avoids the use of bright surfaces and incorporates darker colour lamp heads and poles to reduce reflectance (RAL Anthracite grey).

5.2 Shielding of Luminaires & Light

To minimize bat disturbance, the design avoids the use of upward lighting by shielding or by downward directional focus. Light should only be directed to where it is needed.

5.3 Type of Light

To minimize bat disturbance, the design avoids the use of strong UV lighting. The lighting design is based on the use of LED lighting which has minimal or no UV output of significance and use of monochromatic sources and a warm-white (3000K or less) LED with low blue content.

Glare, stray light and upward and sideward light from the luminaires has been be avoided where possible.

5.4 Illumination

The illumination should be no brighter than necessary and should be integrated into a demand-based control system.2"

The proposed public lighting layout is outlined in figure 9. Lighting is compliant with bat lighting guidelines.

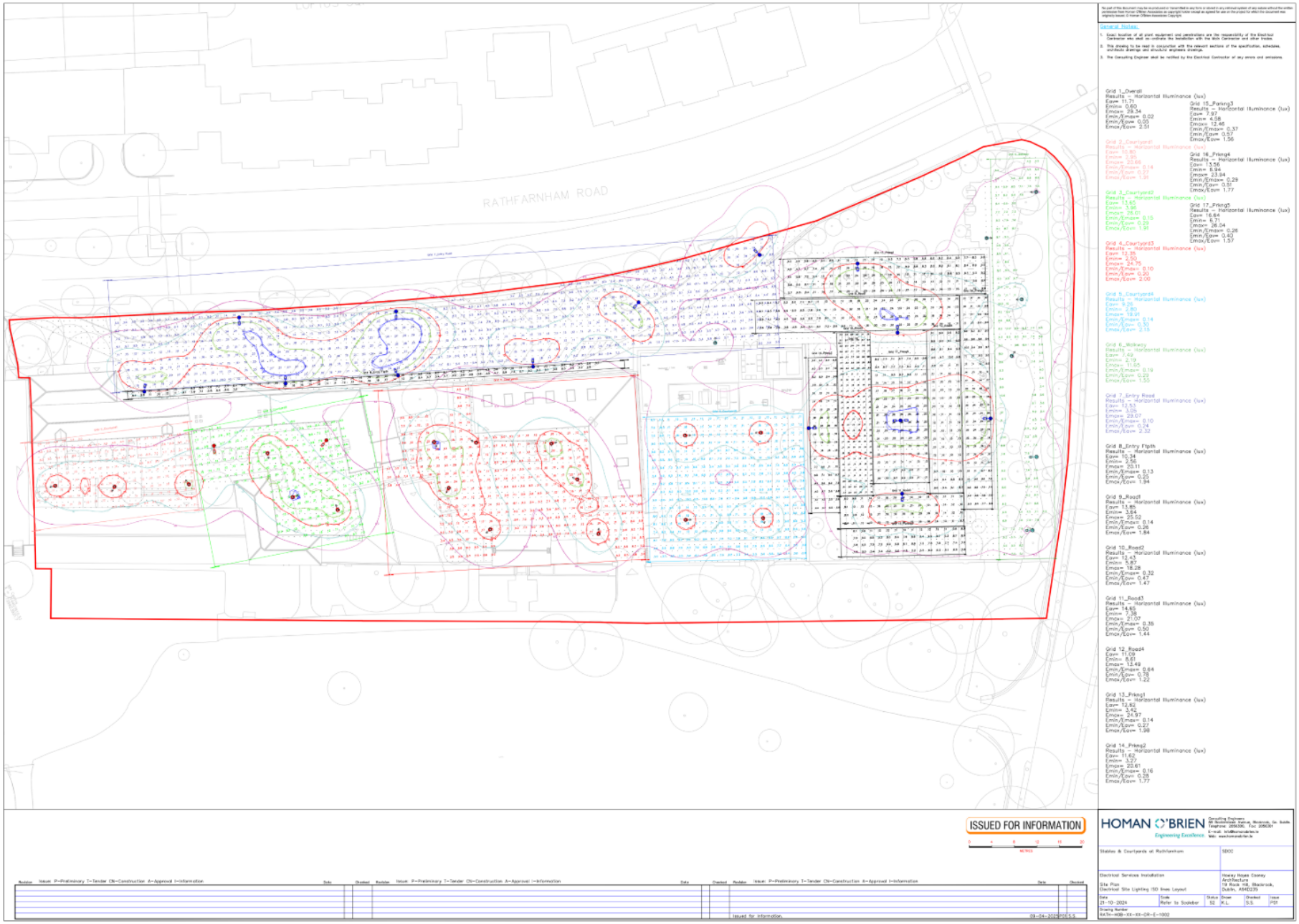

Figure 9. *Proposed site services – public lighting*

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 9th and 20th May 2024. This was updated on the 10th April 2025. 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 5.5 km away (South Dublin Bay SAC). 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 or Nationally designated sites. During construction, standard surface water management measures will be in place to comply with Water Pollution Acts.

Field Survey

Field surveys of the proposed development site at Rathfarnham Castle, Rathfarnham, Co. Dublin, were carried out by Altemar Ltd. Bryan Deegan MSc & Emma Peters BS. 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).

Table 1. Survey dates.

Survey	Surveyor	Dates
Flora and Habitat	Emma Peters (BSc) (Altemar)	9th of May 2024 and 20th of May 2024
Bat	Bryan Deegan (MCIEEM) of Altemar and Emma Peters (BSc) (Altemar)	9th of May 2024 and 20th of May 2024

Survey Limitations

The surveys outlined were within the optimal survey seasons based on CIEEEM guidelines.

Consultation

Data was acquired from National Parks and Wildlife Service (NPWS) 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.

Quality of Effects	Effect Description
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 5.5 km away (South Dublin Bay SAC) (Figure 10). 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 11). The Dodder Valley pNHA is 3.5km from the proposed development. 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 or Nationally designated sites. During construction, surface water from the proposed development shall be directed to the surface water drainage network which leads to the River Dodder, discharging to the River Liffey Estuary and ultimately out falling to the marine environment at Dublin Bay. Watercourses and potential pathways to proximate Ramsar sites, pNHAs, SACs and SPAs are seen in Figures 12-18.

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 and Nationally designated sites within 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	5.5 km
IE001209	Glenasmole Valley SAC	7.3 km
IE002122	Wicklow Mountains SAC	6.8 km
IE000206	North Dublin Bay SAC	9.6 km
IE000725	Knocksink Wood SAC	10.8 km
IE000713	Ballyman Glen SAC	12.8 km
IE003000	Rockabill to Dalkey Island SAC	12.9 km
IE000202	Howth Head SAC	14.6 km
IE000199	Baldoyle Bay SAC	14.9 km
Special Protected Area		
IE0004024	South Dublin Bay and River Tolka Estuary SPA	5.7 km
IE0004040	Wicklow Mountains SPA	6.9 km
IE0004006	North Bull Island SPA	9.6 km
IE004236	North-West Irish Sea SPA	10.2 km
IE0004172	Dalkey Islands SPA	12.8 km
IE0004016	Baldoyle Bay SPA	14.9 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

Status	Site Name	Distance
pNHA	Liffey Valley	6.3 km
pNHA	Grand Canal	3.4 km
pNHA	South Dublin Bay	5.5 km
pNHA	Dodder Valley	3.5 km
pNHA	Fitzsimon's Wood	4.5 km
pNHA	Dolphins, Dublin Docks	7.7 km
pNHA	North Dublin Bay	7.7 km
pNHA	Howth Head	14.5 km
pNHA	Santry Demesne	11.3 km
pNHA	Glenasmole Valley	7.3 km
pNHA	Liffey Valley	7.7 km
pNHA	Ballybetagh Bog	9.7 km
pNHA	Lugmore Glen	8.9 km
pNHA	Knocksink Wood	10.9 km
pNHA	Dingle Glen	9.3 km
pNHA	Dalkey Coastal Zone and Killiney Hill	10.1 km
pNHA	Loughlinstown Wood	11.5 km
pNHA	Ballyman Glen	12.8 km
pNHA	Ballybetagh Wood	10.7 km
pNHA	Glencree Valley	12.3 km
pNHA	Powerscourt Woodland	13 km
pNHA	Slade of Saggart and Crooksling Glen	11.5 km
Ramsar	Sandymount Strand/Tolka Estuary	5.6 km
Ramsar	North Bull Island	10.1 km
Ramsar	Baldoyle Bay	14.9 km

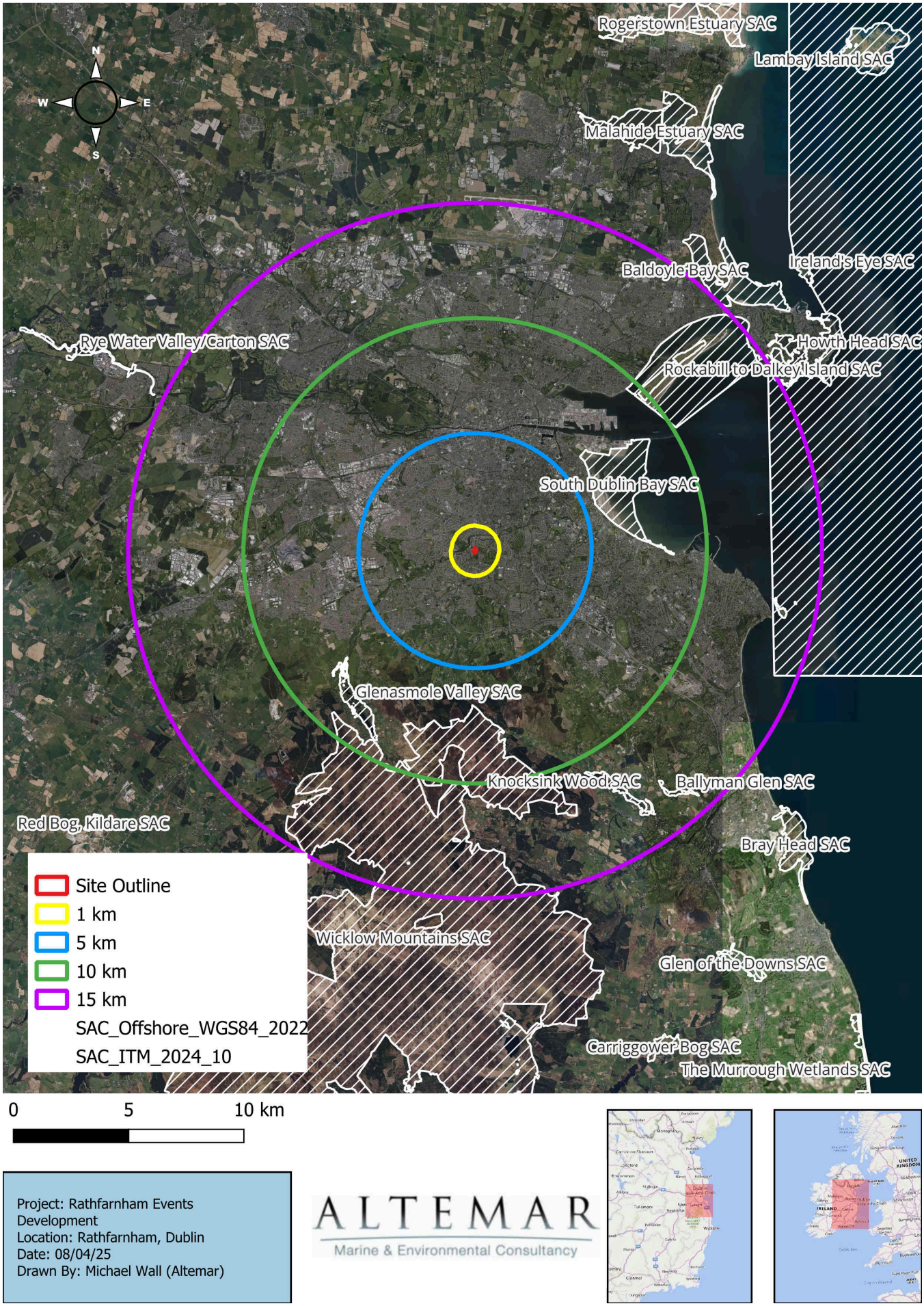

Figure 10. *Special Areas of Conservation (SACs) within 15km of proposed development*

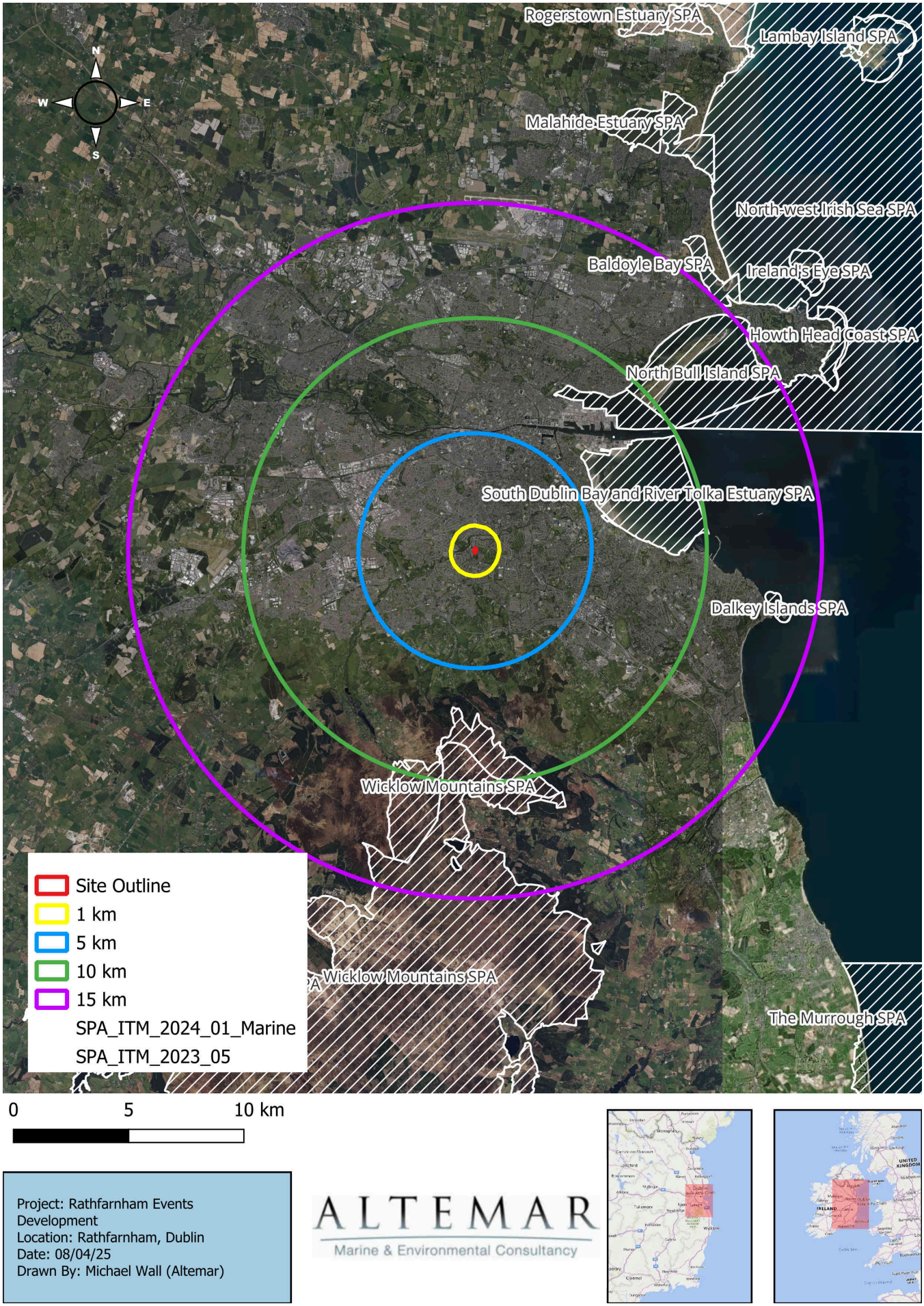

Figure 11. *Special Protection Areas (SPAs) within 15km of proposed development*

Project: Rathfarnham Events Development
Location: Rathfarnham, Dublin
Date: 08/04/25
Drawn By: Michael Wall (Altemar)

ALTEMAR
Marine & Environmental Consultancy

Figure 12. *Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs) within 15km of proposed development.*

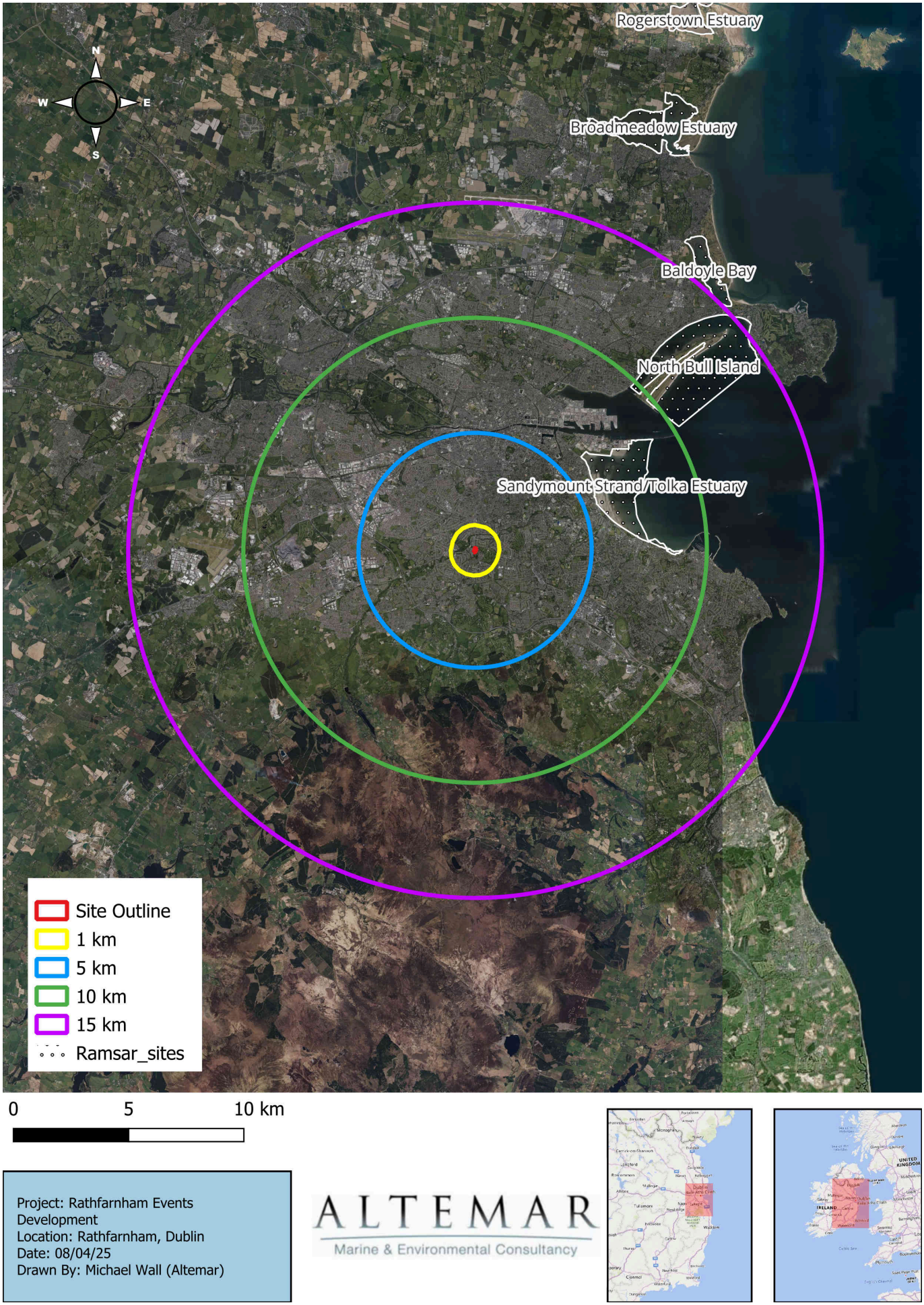

Figure 13. *Ramsar sites within 15km of proposed development*

Figure 14. *Watercourses within and proximate to the proposed development*

Figure 15. *Watercourses and SACs proximate to the proposed development*

Figure 16. *Watercourses and SPAs proximate to the proposed development site*

Figure 17. *Watercourses and pNHAs proximate of proposed development*

Figure 18. *Watercourses and Ramsar sites proximate of proposed development*

Habitats and Species

Two site visits were carried out.The following site assessment in relation to Fossitt (2000) was carried out on 9th of May 2024. The Fossitt (2000) habitat map for the site is seen in Figure 19. The habitat and species observed on site are outlined in the following sections.

Figure 19. *Fossitt (2000) Habitat map of survey area*

WD5 - Scatter trees and parkland

The subject site had many mature trees of species including common lime (*Tilia x europaea (T. cordata x platyphyllos*), willow (*Salix sp.*), beech (*Fagus sylvatica*), rowan (*Sorbus aucuparia*), cyprus (*Cupressus spp.*), buddleja (*Buddleja davidii*), birch (*Betula pendula*) and buddleja (*Buddleja davidii*).

This habitat was highly managed with an amenity grassland cover over species including common ragwort (*Jacobaea vulgaris*), daisy (*Bellis perennis*), dandelions (*Taraxacum officinale* agg.), fool's parsley (*Aethusa cynapium*), bluebell (*Hyacinthoides non-scripta*), broad-leafed dock (*Rumex obtusifolius*), Garden Lady's-mantle (*Alchemilla mollis*), smooth hawksbeard (*Crepis capillaris*), sun spurge (*Euphorbia helioscopia*) and herb Robert (*Geranium roberianum*).

Some hedging consisted of box hedge (*Buxus Sempervirens*) with field bindweed *(Convolvulus arvensis*).

Plate 1.

GA2 - Amenity grassland

Amenity grassland was in small patches though out the site and in a large section towards the east of the site with species including dandelions (*Taraxacum officinale* agg.), red valerian (*Centranthus ruber*), red dead-nettle (*Lamium purpureum*), creeping buttercup (*Ranunculus repens*), catnip (*Nepeta cataria*) and ivy (*Hedera helix*).

Plate 2. Amenity grassland habitat.

BL3 – Built land

A large portion of the land consisted of old buildings, tarmac paving, boundary walls and a small car park. No plants of invasive or conservation concern were found here. A large growth of forget-me-not (*Myosotis secunda*) was noted growing in the courtyard area.

Plate 4. Courtyard inside stone walls.

Plate 5. Tarmac pavement.

Plate 6. Courtyard and old buildings.

WS1 – Scrub

A small amount of scrub was on site consisting of brambles (*Rubus fruticosus agg*), dandelions (*Taraxacum officinale* agg.), cleavers (*Galium aparine*) and creeping cinquefoil *(Potentilla reptans*).

Gardens

In the northwest of the site is a garden consisting of **BL1- stone wall**, **FL8 – artificial pond**, **BC4 – flowerbeds** and **GA2- Amenity grassland**.

Plant species noted within this habitat predominantly in the flowerbeds, included snapdragon (*Antirrhinum majus*), slender speedwell (*Veronica filiformis*), white clover (*Trifolium repens*), nettle (*Urtica dioica*), great willowherb (*Epilobium hirsutum*), dandelions (*Taraxacum officinale* agg.), herb Robert (*Geranium roberianum*), buddleja (*Buddleja davidii*), hare's-foot clover (*Trifolium arvense*), red valerian (*Centranthus ruber*), ribwort plantain (*Plantago lanceolata*), water dock (*Rumex hydrolapathum*), ivy (*Hedera helix*), brambles (*Rubus fruticosus agg*), corn salad (*Valerianella locusta*), bush vetch (*Vicia sepium*) and bracken (*Pteridium aquilinum*).

Plate 7. Walled gardens.

WL2 – Treeline

Along the east boundary consisted of mature deciduous trees including oak (*Quercus sp.*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), horse chestnut (*Aesculus hippocastanum*) and beech (*Fagus sylvatica*).

Evaluation of Habitats

The subject site has a diverse number of habitats. The most common habitats include Amenity grassland, parkland, built land, stonewall, a small artificial pond, flowerbeds, treelines and a small area of scrub. There were many mature standalone trees. Where there are clusters of these trees together with an amenity grassland ground cover, there areas have been classified as scattered trees and parkland.

Plant Species

The plant species encountered at the various locations on site are detailed above. No rare or plant species of conservation value were noted during the field assessment. Records of rare and threatened species from NBDC and NPWS were examined. Buddleja (*Buddleja davidii*) is a medium impact invasive that was found

onsite and should be removed as part of this development. No invasive species listed in Articles 49 & 50 of the Habitats Directive (2011) were noted on site.

Amphibians and reptiles

The common frog (*Rana temporaria*) or Smooth Newt (*Lissotriton vulgaris*) were not observed on site. It is unlikely these species are present in the artificial water feature.

Terrestrial Mammals

No signs of terrestrial mammals of conservation importance were noted on site.

Bats

Three bat species (Leisler's bat (Lesser Noctule (*Nyctalus leisleri*)), soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted on site. A tree of high bat roosting potential was noted on the east of the site boundary. The proposed lighting plan was prepared to provide a sensitive lighting plan to reduce the potential impact on bat species. A derogation license is not required for the proposed development.

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 (O12P) was assessed. Tables 5 provides a list of all species recorded in both grid areas that possess a specific designation, such as Invasive Species or Protected Species.

Table 5. Recorded species and associated designations (Grid ref. O12P)

Species name	Date of last record	Title of dataset	Designation
Barn Swallow (Hirundo rustica)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Black-headed Gull (Larus ridibundus)	01/03/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Common Coot (Fulica atra)	06/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Kingfisher (Alcedo atthis)	03/04/2023	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)	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Pheasant (Phasianus colchicus)	10/03/2018	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
Common Starling (Sturnus vulgaris)	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Swift (Apus apus)	16/06/2022	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

Species name	Date of last record	Title of dataset	Designation
Common Wood Pigeon (Columba palumbus)	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Great Cormorant (Phalacrocorax carbo)	07/02/2018	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
Herring Gull (*Larus argentatus*)	20/04/2023	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)	22/04/2016	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow (Passer domesticus)	29/03/2021	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)	06/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mallard (Anas platyrhynchos)	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Mew Gull (Larus canus)	09/10/2018	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
Mute Swan (Cygnus olor)	20/05/2023	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
Rock Pigeon (Columba livia)	20/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Spotted Flycatcher (Muscicapa striata)	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	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)	06/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Arthurdendyus triangulatus	02/03/2012	New Zealand Flatworm (Arthurdendyus triangulatus) Database	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species
Butterfly-bush (Buddleja davidii)	25/07/2024	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
Fallopia japonica x sachalinensis = F. x bohemica	23/06/2012	National Invasive Species Database	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Himalayan Honeysuckle (Leycesteria formosa)	21/01/2019	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
Indian Balsam (Impatiens glandulifera)	16/08/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Japanese Knotweed (Fallopia japonica)	23/09/2024	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Sycamore (Acer pseudoplatanus)	25/07/2024	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species

Species name	Date of last record	Title of dataset	Designation
Three-cornered Garlic (Allium triquetrum)	05/01/2024	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Traveller's-joy (Clematis vitalba)	28/04/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
Harlequin Ladybird (Harmonia axyridis)	12/02/2025	Ladybirds of Ireland	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Grayling (Hipparchia semele)	25/08/2017	Irish Butterfly Monitoring Scheme	Threatened Species: Near threatened
Small Heath (Coenonympha pamphilus)	08/09/2020	Irish Butterfly Monitoring Scheme	Threatened Species: Near threatened
Andrena (Melandrena) nigroaenea	04/04/2021	Bees of Ireland	Threatened Species: Vulnerable
Large Red Tailed Bumble Bee (Bombus (Melanobombus) lapidarius)	21/04/2022	Bees of Ireland	Threatened Species: Near threatened
Megachile (Megachile) centuncularis	29/06/1921	Bees of Ireland	Threatened Species: Near threatened
Moss Carder-bee (Bombus (Thoracombus) muscorum)	26/08/2018	Bees of Ireland	Threatened Species: Near threatened
Tawny Mining Bee (Andrena (Andrena) fulva)	04/04/2019	Bees of Ireland	Threatened Species: Regionally Extinct
Procloeon bifidum	31/12/1947	Mayflies (Ephemeroptera) of Ireland	Threatened Species: Vulnerable
Budapest Slug (Tandonia budapestensis)	09/04/2002	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
Jenkins' Spire Snail (Potamopyrgus antipodarum)	09/09/2016	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species
American Mink (Mustela vison)	11/08/2024	National Invasive Species Database	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Daubenton's Bat (Myotis daubentonii)	18/08/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Eastern Grey Squirrel (Sciurus carolinensis)	01/07/2022	Mammals of Ireland 2016-2025	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> EU Regulation No. 1143/2014 || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Eurasian Badger (Meles meles)	19/03/2014	Atlas of Mammals in Ireland 2010-2015	Protected Species: Wildlife Acts
European Otter (Lutra lutra)	19/09/2017	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex II || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Lesser Noctule (Nyctalus leisleri)	19/07/2007	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Pine Marten (Martes martes)	12/02/2015	Atlas of Mammals in Ireland 2010-2015	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
Pipistrelle (Pipistrellus pipistrellus sensu lato)	19/07/2007	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)	19/07/2007	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts

An assessment of files requested and received from the NPWS (Code No. 2022_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 following table provides a summary of the species identified, the year of identification, survey name and sample year.

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

Sample ID	Species	Survey Name	Sample Year
1105	Common Frog (Rana temporaria)	AFF Mammals, Reptiles & Amphibians Distribution Atlas 1978	1972
1514	West European Hedgehog (Erinaceus europaeus)	Animal Survey IBRC - Location Species Lists	1960
1515	Irish Stoat (Mustela erminea subsp. hibernica)	Animal Survey IBRC - Location Species Lists	1960
1516	Irish Hare (Lepus timidus subsp. hibernicus)	Animal Survey IBRC - Location Species Lists	1960
1517	Eurasian Red Squirrel (Sciurus vulgaris)	Animal Survey IBRC - Location Species Lists	1960
1518	Eurasian Badger (Meles meles)	Animal Survey IBRC - Location Species Lists	1960
1519	Brown Hare (Lepus europaeus)	Animal Survey IBRC - Location Species Lists	1960
2000	Red Hemp-nettle (Galeopsis angustifolia)	Galeopsis angustifolia	1967
2110	Weasel's-snout (Misopates orontium)	Misopates orontium	1849
2816	Eurasian Badger (Meles meles)	Badger and Habitat Survey of Ireland	1991
3159	Sika Deer (Cervus nippon)	Badger and Habitat Survey of Ireland	1991
3444	Irish Hare (Lepus timidus subsp. hibernicus)	Badger and Habitat Survey of Ireland	1991
9996	Green-winged Orchid (Orchis morio)	NPWS Rare/Threatened Plants Database	1895
9997	Green-winged Orchid (Orchis morio)	NPWS Rare/Threatened Plants Database	1895
10215	Weasel's-snout (Misopates orontium)	NPWS Rare/Threatened Plants Database	1849
10231	Greater Broomrape (Orobanche rapum-genistae)	NPWS Rare/Threatened Plants Database	1726
10583	Small Cudweed (Filago minima)	Herbarium and Literature Database 19/02/2013	1897
10584	Small Cudweed (Filago minima)	Herbarium and Literature Database 19/02/2013	1902
10585	Small Cudweed (Filago minima)	Herbarium and Literature Database 19/02/2013	1946
10586	Small Cudweed (Filago minima)	Herbarium and Literature Database 19/02/2013	1988

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 and outside the site outline. It is proposed that temporary surface water drainage and attenuation is installed during construction to the surface water network, discharging to the River Dodder, which ultimately outfalls to the River Liffey and the marine environment at Dublin Bay. Standard measures will be in place to comply with Water Pollution Acts. In the absence of these measures there is potential for pollutants to enter the watercourse via the surface water network. Mitigation measures are outlined in table 8.

Designated Conservation sites within 15km

The proposed development is not within a designated conservation site. The nearest Natura 2000 sites is South Dublin Bay SAC (5.5 km). An Appropriate Assessment Screening has 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 direct hydrological pathways from the proposed development site to any NHAs or pNHA's. 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 designated sites. Standard measures will be in place to comply with Water Pollution Acts.

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 and Nationally designated sites. However, given the distance from the site to Dublin Bay via indirect pathway any pollutants, silt laden run off or dust will be dispersed or diluted within the

surface water network, freshwater, estuarine and marine environment to negligible levels prior to reaching designated 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.

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. One medium impact invasive species was noted onsite: Buddleja (*Buddleja davidii*) and should be removed as part of this development. No invasive species that would restrict soil movement (listed under Articles 49 & 50 of the Habitats Directive (2011) were noted on site.

Potential Impacts in the absence of mitigation: Low adverse, site, Negative Impact, Not Significant & long 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.

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

Temporary drainage system will be installed prior to the commencement of construction works. A temporary surface water management facility will be used to attenuate and remove suspended solids prior to discharging to the surface water drainage network. No additional mitigation is required.

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

Potential Operational Impacts

Once developed, the site would be seen as a stable ecological environment. Planting of native species will be beneficiary to the local environment. In total 67 trees will be planted on site, in addition to 820 square meters of hedges, groundcover and herbaceous species. As outlined in the landscape report from DFLA, the landscape plan incorporates both native and ornamental species, flowering trees and species recommended in the All-Ireland Pollinator Plan.

Appropriate measures will be taken to prevent light spill, contaminated surface water run-off and dust entering into the surface water network and ultimately the River Dodder. The new drainage network, to be installed on site, will comply with provisions of the Development Plan as regards SUDS and Water Pollution Acts 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 be attenuated onsite prior to reaching the River Dodder.

Surface water during construction will be discharged to the River Dodder, via the public surface water drainage network. In the absence of standard 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 designated sites. However, standard operational compliance measures will be in place.

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. Three ELISA model Woodcrete bat boxes are to be installed on the large trees on the east of the site boundary.

Terrestrial mammalian species

No signs of badgers (*Meles meles)* or otters (*Lutra lutra*) inhabiting or foraging were noted onsite. 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. Invasive species Budjella is to be removed.

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 development area and no lighting is proposed in the vicinity of the parkland to the east of the site and the wall will prevent light spill into this area. Lighting is to be 3000K in colour and equipped with spill protection. It is expected that some bat foraging area will be lost within the courtyard area when lighting is on. No trees of bat roosting potential will be felled as a result of the proposed development. Three ELISA model Woodcrete bat boxes are to be installed on the large trees on the east of the site boundary .

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

Aquatic Biodiversity

Attenuation tanks will be placed onsite for removal of silt from surface waters prior to entering the surface water network. No additional mitigation is required.

Potential Impacts in the absence of mitigation: Low adverse, local, 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 Mammal 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 CEMP from CORA consulting engineers outlines mitigation measures to be used during construction. **Construction Phase Mitigation** ***"4.2.3 Demolition Works on the Site The works can be defined as follows:-*** *• Removal of existing cobbled floors within outbuildings* *• Removal of all loose elements including glass, aluminium, brickwork and blockwork.* *• Demolition of selected timber roofs • Demolition of walls and removal of existing ground surfaces* ***4.2.4 Excavations on the Site*** *Excavations on the site will be shallow for local foundations, trench fill and drainage runs.* ***4.2.5 Storage of plant, materials and operatives vehicles*** *In addition to minimising materials on site, it is proposed that all plant, materials and operatives vehicles shall be stored in dedicated compound areas within the site in order to minimise the interaction that each element may have on the other. That is, the separation of operative vehicles from aggregate material stockpiles will minimise the potential for vehicle movements to generate dust. All plant shall be stored in a dedicated area following the cessation of site activities at the end of each working day or during periods when the plant is not being utilised. It is recommended that a specific area on site shall be delineated.* *Site vehicles and mobile plant (e.g. Generators) have the potential to contaminate soil and groundwater by leaking oil or fuel. The storage of these items of plant in a suitable dedicated area on mobile bunded units and drip trays will serve to minimise the potential for contamination as any leaks, oil spills or stains on the ground will be more readily identifiable and will better ensure that an immediate or more timely response.* *The Site Manager shall conduct a daily visual inspection of the site to identify any signs of ground contamination from plant storage areas and that where a spill is identified, the source shall be identified and the appropriate repair / maintenance be conducted. All daily visual inspections shall be recorded by the site manager or his/her delegate on a "Daily Site Inspection Sheet". All fuels, oils and liquid materials shall be stored in a dedicated bunded area or within a dedicated impermeable storage unit to minimise the potential for soil and groundwater contamination. Storage units containing all fuels oils and liquid material must be locked and secured overnight so as to prevent against pilferage and vandalism.* *A policy of "zero tolerance" shall be applied at the site in relation to the dumping of empty or partially empty oil, lubricant, fuel, or any other non solid material in the vicinity of the site. All empty containers must be stored in a*

Table 8. Mitigation Measures.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		dedicated area designed to prevent the contamination of soil and groundwater as a result of leaking drums or containers prior to the proper disposal off site to a suitably licensed waste disposal facility. ***4.3 Dust Management Programme*** *Construction site activities have the potential to generate fugitive emissions of dust levels as a result of demolition works and vehicle movement on unsealed site surfaces, windblown dusts from aggregate / fine material stockpiles, angle grinding of concrete and stone, crushing activities if required and the movement and deposition of aggregates, soils / clay and other materials at the site.* ***4.3.1 Proposed Dust Monitoring Programme*** *Dust deposition levels will be routinely monitored in order to assess the impact that site activities may have on the local ambient air quality and to demonstrate that the environmental control measures in place at the site are effective in minimising the impact of construction site activities on the local receiving environment.* ***4.3.2 Dust Management and Suppression / Abatement Techniques*** *It shall be the responsibility of the Site Manager to ensure that dust emissions generated by site activities are controlled and minimised and as such will implement appropriate dust suppression techniques as appropriate. Appropriate techniques will include water spraying of stockpiles and haul roads and temporarily curtailing specific operations when unfavourable weather conditions are prevailing (e.g. during dry, windy weather when the prevailing winds may cause dust to be blown towards local receptors).* *A road sweeper vehicle shall be used to clean soiled roads in the vicinity of the site when required. This will also ensure that the potential for elevated concentrations of particulate matter entering any surface water drain will be minimised.* *The Site Manager shall maintain a complaints log and in the event of a complaint relating to dust nuisance, an investigation shall be initiated.* ***4.4 Pollution Control*** ***4.4.1** General Contamination of Watercourses, storm sewers and ground water is a risk during the construction phase. Detailed construction method statements will be prepared by the appointed civil/ ground works contractors and approved by the local authority and relevant statutory bodies (e.g. Inland Fisheries).* *Identified risks include spillages into storm sewers and unprotected ground, allowing pollutants to enter watercourses, storm sewers or ground water. A construction management strategy shall be put in place to manage this risk would be the use of exclusion zones where practicable.*

Table 8. Mitigation Measures.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		4.4.2 Sediment and Erosion *Similar to the above, adjacent watercourses/groundwater need to be protected from sedimentation and erosion due to direct surface water runoff generated onsite during the construction phase. To prevent this from occurring surface water discharge from site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete.* *A temporary drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction. The temporary surface water management facility will include throttle runoff and allow suspended solids to be settled out and removed before being discharged in a control manner to the agreed outfall. All inlets to the cascading settling basins will be riprapped to prevent scour and erosion in the vicinity.* ***4.4.3 Accidental Spills and Leaks*** *All oils, fuels, paints and other chemicals will be stored in a secure bunded construction hardstand area located at the site compound. Refuelling and servicing of construction machinery will take place in a designated hardstand area which is also remote from any surface water features and ditches (when not possible to carry out such activities off site). A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available and construction staff will be familiar with the emergency procedures and use of the equipment* ***4.4.4 Concrete*** *Concrete batching will take place off site, wash down and wash out of concrete trucks will take place off site and any excess concrete is not to be disposed of on site. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings are not to be discharged into surface water drains.* ***4.4.5 Disposal of Wastewater from Site*** *Discharge from any vehicle wheel wash areas is to be directed to on-site settlement ponds, debris and sediment captured by vehicle wheel washes are to be disposed off-site at a licensed facility. Foul drainage discharge from the construction compound will be tankered off site to a licensed facility until a connection to the public foul drainage network has been established.* ***4.4.6 Pest Control*** *It is essential that a good standard of hygiene be maintained on site during the course of construction if rodents are not to be attracted to it. A specialist Pest Control Contractor shall be appointed to manage potential infestations around the site and around the site compounds. It is not unusual for construction sites to be infested with rats before construction commences. The rats may be living in hedges, on the banks of a nearby river, in old drains etc. Prior to Construction the following work is carried out*

Table 8. Mitigation Measures.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• Determine if the land is infested, and if so, the land should be disinfested before building operations commence. • All refuse should be removed from site. *• Old drains and other disused pipes should either be filled with concrete, or alternatively dug out and the junctions with working drains sealed. Good housekeeping and high hygiene standards are essential to maintaining high levels of pest control on the site. The following day to day controls are strictly adhered to.* *• Canteen and break facilities are provided at a single location. Taking breaks and eating food are not permitted in construction areas.* *• Waste food, empty food tins, and other waste which might attract rodents should be stored in bins with tight fitting lids.* *• Accumulations of old timber, bricks and debris, provide harbourage for rodents and should be cleared away as quickly as is possible.* *• Stocks of building material should be neatly stacked and stored in the site compound.* *• Building materials are delivered to site as needed to avoid prolonged stockpiling of materials.* *• Waste is removed from site regularly by a licenced waste contractor. All waste permit numbers and records are maintained in the site folders.* ***5 Liaison with Local Community & Neighbours*** *It is recognized that there may be concerns among the local Community & Residential neighbours and about the impacts of construction. In addition, to developing this Preliminary Plan and setting out clear and thorough procedures for the management of the project the Contractor will be required to:* *• Appoint a Community Liaison Officer as a single point of contact to engage with the community and respond to concerns.* *• Ensure specific construction tasks such as large deliveries and standard material deliveries are pre- planned and scheduled to minimize disruption where possible.* *• Keep local residents and neighbours informed of progress and the timing of particular construction activities that may impact on them."*
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. • Three ELISA model Woodcrete bat boxes are to be installed on the large trees on the east of the site boundary. • As per Homan O'Briens lighting impact assessment ○ *"The calculation results, generated by Lighting Reality, confirm that the design as presented complies with the design criteria of an E3 environment.*

Table 8. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		The design includes for mitigation to bat foraging which are light sensitive; 3000k lamps are used throughout. *Light fittings used throughout with no upward light output to minimise light spill.* *Good optical control will be used with an upward light ratio of 0% for the fittings.* *The proposed layout offers a design aesthetically pleasing for occupants and for the site as a whole.* *Homan O'Brien believe the proposed layout will blend seamlessly into the surrounding environment."*
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 bat and badger assessment/compliance with proposed lighting strategy.
Plants	• Invasive Species	• Prior to commencing construction on site the invasive *budjella* plants are to be removed.

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 is clean and uncontaminated. However, early implementation of ecological supervision and consultation prior to initial mobilisation and enabling works is seen as an important element to the project, particularly in relation to the implementation of surface water runoff, dust mitigation and bat mitigation.

With the successful implementation of standard compliance 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, standard measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the surface water netwoks 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. No significant adverse impacts on the conservation objectives of European sites are likely in the absence of mitigation measures outlined above.

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)[1]:

Table 9. Planning applications proximate to the subject site

DLRCC/ ABP Reg. Ref.	Address	Overview of Development
SD20A/0296	Loreto Primary School, Grange Road, Rathfarnham, Dublin 14.	- Redevelopment at the site of existing Girls National School (Part of the site is in the curtilage of Loreto Abbey, a Protected Structure - RPS No. 253) consisting of demolition of existing school buildings and portacabins; construction of new 3,833sq.m part 3-, 2-, and 1-storey 21 classroom primary school building, connected to existing 2-storey granite building which is to be refurbished; demolition of existing 3-storey red brick Lourdes Nursing Home fronting Convent Lane; refurbishment of and alterations to existing Teresa Ball House with new 85sq.m extension and change of use from nursing home to educational use with 3-classrooms and ancillary resource teaching areas; Teresa Ball House is in the curtilage of Loreto Abbey, a Protected Structure (RPS No. 253); construction of 2-storey, 20-classroom temporary school prefabricated accommodation for school use during the demolition and construction works; associated vehicular drop-off, set-down and parking provisions; associated hard-surface play areas, landscaping, boundary treatments; associated surface water attenuation, foul and surface water drainage connections, site works and ancillary services.
SD15A/0070	St. Mary's Boys National School, Grange Road, Rathfarnham, Dublin 14	- Single storey classroom extension with ancillary works to the south-east corner of the existing school building.

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

DLRCC/ ABP Reg. Ref.	Address	Overview of Development
SD22A/0039	Silveracre Bungalow, Whitechurch Road, Rathfarnham, Dublin 14.	(a) The demolition of two existing habitable structures on site including a bungalow (Silveracre), an existing cottage (No. 6 Whitechurch Road) and a row of 5 derelict structures/cottages located along the western boundary of the site (extent of proposed demolition is 433sq.m) (b) the construction of 22 4 bed, 3-4 storey units ranging in size from 197sq.m to 214sq.m, all with associated private balcony/terrace areas. Vehicular and pedestrian access is proposed via new entrance on Whitechurch Road. The proposed development shall provide for 44 car parking spaces, a new single storey bicycle storage shed (approx 34sq.m) and provision of bin storage to be provided at the front curtilage of the dwelling for all terraced units, all boundary treatment, all site services and all associated site works.
SD17A/0093	Rathfarnham Castle, Grange Road, Dublin 14	Works in the basement of the protected structure (South Dublin County Council register of protected structures Ref. 221) comprising: creation of a new door ope in an existing wall; removal of an existing 20th century concrete ramp and replacement with steps; removal of existing 20th century obscure glass and replacement with appropriate clear glass to 3 windows; provision of new lime plaster finish to existing 20th century exposed blockwork walls; provision of 2 new fire doors and revisions to existing to existing modern fire door; repair and making good of existing finishes including lime plaster to walls and ceiling vaults, and limestone floor; all associated servicing, including heating, lighting and fire and smoke detection systems.
307746	Whitechurch Road, Rathfarnham, Dublin 16	- Flood alleviation works along Whitechurch Stream between St. Enda's Park and its confluence to the Owendoher River at Ballyboden Road
D15A/0819	Nutgrove Shopping Centre, Nutgrove Avenue, Rathfarnham, Dublin 14	- Permission is sought for (a) new 2 nos. glazed entrance lobbies (90.6sq.m) as
D24A/0125	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.

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.

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.

References

1. **Bat Conservation Ireland 2004** on-going, *National Bat Record Database.* Virginia, Co. Cavan
2. **Boyd, I. and Stebbings, R.E. 1989** Population changes in brown long-eared bats (*Plecotus auritus*) in Bat Boxes at Thetford Forest. *Journal of Applied Ecology* **26**: 101 - 112
3. **Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1982**
4. **Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979**
5. **EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive) 1992**
6. Collins. J (ed.) (2023) Bat surveys for Professional Ecologists: Good Practice Guidelines (4th Edition);
7. **Marnell, F., Kelleher, C., & Mullen, E. (2022),** BAT MITIGATION GUIDELINES FOR IRELAND – V2 https://www.npws.ie/sites/default/files/publications/pdf/IWM134.pdf
8. CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.
9. **Jefferies, D.J. 1972** Organochlorine insecticide residues in British bats and their significance. *Journal of Zoology*, London **166**: 245 - 263
10. **Kelleher, C. 2004**, Thirty years, six counties, one species – an update on the lesser horseshoe bat *Rhinolophus hipposideros* (Bechstein) in Ireland – *Irish Naturalists' Journal* **27**, No. 10, 387 – 392
11. **Kelleher, C. 2015** *Proposed Residential Development, Church Road, Killiney, Dublin: Bat Fauna Study*. Report prepared for Altemar Marine and Environmental Consultants
12. **Marnell, F., Kingston, N. and Looney, D. 2009** *Ireland Red List No. 3: Terrestrial Mammals.* National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin
13. **Racey, P.A. and Swift, S.M. 1986** The residual effects of remedial timber treatments on bats. *Biological Conservation* **35**: 205 – 214
14. **Smal, C.M.** 1995 *The Badger & Habitat Survey of Ireland.* The Stationery Office, Dublin
15. **Wildlife Act 1976 and Wildlife [Amendment] Act 2000**. Government of Ireland.
16. NPWS (2017) Conservation Objectives: Buckroney-Brittas Dunes and Fen SAC 000729. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
17. NPWS (2017) Conservation Objectives: Magherabeg Dunes SAC 001766. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
18. NPWS (2013) Conservation Objectives: Wicklow Reef SAC 002274. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
19. NPWS (2021) Conservation Objectives: Deputy's Pass Nature Reserve SAC 000717. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
20. NPWS (2021) Conservation Objectives: Vale of Clara (Rathdrum Wood) SAC 000733. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
21. NPWS (2022) Conservation objectives for Wicklow Head SPA [004127]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.
22. NPWS (2022) Conservation objectives for The Murrough SPA [004186]. First Order Sitespecific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage
23. NPWS (2021) Conservation Objectives: The Murrough Wetlands SAC 002249. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
24. Bat Conservation Trust (2018). Bats and artificial Lighting. Bata and the built environment series.

Appendix I. Bat fauna impact assessment for the proposed development at Rathfarnham Castle, Rathfarnham, Co. Dublin.

14th April 2025

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: South Dublin County Council

Document Control Sheet			
Client	South Dublin County Council		
Project	Rathfarnham Castle, Rathfarnham, Co. Dublin		
Report	Bat Fauna Assessment		
Date	14th April 2025		
Version 1	Author	Reviewed	Date
Planning	Bryan Deegan		14th April 2025

SUMMARY

Structure:	A proposed mixed use development located on the grounds of Rathfarnham Castle, Rathfarnham, Co. Dublin.
Location:	Rathfarnham Castle, Rathfarnham, 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 mixed use development consisting of cultural/arts/café/restraint/retail uses along with WCs, storage areas and switch room.
Impact on bats:	Lighting on site is restricted to the development area and no lighting is proposed in the vicinity of tree of high roosting potential. Some bat foraging area is expected to be lost as part of this development. It is proposed that 3 bat boxes be installed on areas The residual impact of the proposed development will be a minor adverse long term not significant.
Survey by:	Bryan Deegan & Emma Peters
Survey dates:	9th of May and 20th of May 2024

Description of the Proposed Project

Detailed Description of the works:

1. Works to the building to the north of the castle known as Cromwell's Fort (GFA 269m2), and its change of use to two multi-purpose event spaces and associated lobby areas.

The proposed works to include:

i) the removal of a modern flat roof covering and the replacement with a pitched roof with zinc finish and rendered masonry gable-ends;
ii) the removal of the existing solid floor to the southern internal room and replacement with a new insulated floor slab and the insertion of a new raised floor to the northern room;
iii) the removal of infill blockwork from existing openings and the provision of new windows and doors to existing openings;
iv) Installation of new services, partitions and repair and repointing works as required, including application of lime render finish.

2. Works to the existing single storey former stable buildings (GFA 591m2) within the existing courtyards to the north of the Castle and change of use to cultural/arts spaces, retail, café/restaurant, public toilets and ancillary lobby, storage and services spaces. The proposed works to include:

i) the removal of temporary roof coverings and the replacement with slate roof coverings;
ii) the minor modification of roof profiles above 2no. entrance doorways to provide sufficient head height at entrances;
iii) the removal of temporary bracing to windows and doors and replacement with new windows and doors to existing openings;
iv) the insertion of a new opening to the western perimeter wall to provide a new public entrance to the courtyard immediately to the north of the castle, and the closing up of an adjacent existing doorway opening;
v) The creation of new openings withing dividing walls of the existing stable buildings to provide improved connection between the buildings;
vi) The construction of a new single-storey mono-pitch extension (GFA 83m2) to the northern elevation of a former stable building;
vii) New insulated floor slabs, installation of new services and repair, repointing and lime render works as required.

3. The provision of a new single storey café and restaurant and ancillary support space (area GFA 528m2) within the former council depot yards comprising:

i) The demolition of a section of wall to the north-west to provide access between the proposed restaurant dining area and back of house areas;
ii) The construction of a single storey mono-pitch structure in the north-west corner including clerestory windows facing north and west along the existing perimeter walls of the site to provide a café/restaurant dining area, and an associated single storey flat-roof structure to the north to provide ancillary support to the café/restaurant, including kitchens, staff and visitor WCs;
iii) The provision of an internal plant room to the rear;
iv) The provision of external ancillary support areas including a screened bin store, screened plant enclosure at ground level and screened rooftop plant enclosure;
v) The provision of two new openings within the existing western perimeter wall to facilitate the insertion of secure entrance gates, to provide staff, deliveries and bin store access to the rear of the ancillary space and bin storage areas;
vi) The provision of four new openings within the existing western perimeter wall to facilitate the insertion of new glazed window openings to the café/restaurant;
vii) Repairs and repointing to the existing walls as required.

4. The provision of new, single storey, slated roof structures to the existing structures (GFA 33m2) to the north of the building known as the Seismograph Building consisting of:

i) A secure bike store area and provision of 10no. long term bicycle storage spaces including 1no. enlarged bicycle space for a cargo bike;
ii) A secure bin storage area for the retail spaces;

5. The demolition and reconstruction of the walls to the north and west of the northernmost former depot yard;

6. The provision of a new car park on part of the Sean Keating garden adjacent to the boundary with Castleside Drive, with entry from the existing Rathfarnham Road car park, including:

i) the demolition of 2no. existing gate posts and part of the adjacent existing garden wall and railings, and the removal of 14no. existing trees to facilitate the construction of a new pedestrian and vehicular entrance, pedestrian footpath and delivery drop-off area;

ii) the regrading and relevelling of the existing sunken pond and garden area to provide 54 no. car parking spaces (including 4no. accessible parking spaces and 10 no. EV parking spaces) and 42 no. short-term bicycle parking spaces to the north of the site and associated landscaping;

iii) The reconfiguration of the existing pedestrian entrance gate and new hard and soft landscaping to the north-west corner of the site to facilitate improved pedestrian access;

7. All associated site services, site development works and landscaping comprising:

i) Removal of temporary cabin structures from the existing former council depot yards and associated site clearances;

ii) The construction of new gated entrance and railings between Rathfarnham Castle forecourt and the proposed site;

iii) The removal of 4no. car spaces from the existing Rathfarnham Road car park to provide a new enlarged pavement area adjacent to the entrance to the Café/Restaurant;

iv) The reallocation of the existing bus set down area to accommodate a universally accessible set down area;

v) The local regrading of the footpath within the Rathfarnham Road car park along the perimeter wall to the west of the courtyards to provide accessible entrance points to the courtyards;

vi) The removal of part of southern end of the existing low level boundary wall between the existing car park and Rathfarnham Road to facilitate a new raised table and improved pedestrian crossing point; installation of a new access control gate to the carpark entrance from Rathfarnham Road;

vii) The regrading and relevelling of the existing surfaces to facilitate universal access throughout the site

viii) The provision of new hard and soft landscaping to the existing courtyards;

ix) The provision of new secure entrance gates to the existing openings between the park and courtyards;

x) The infilling with masonry construction of an existing unused entrance between the northern courtyard and the park to facilitate the regrading of the courtyard.

xi) Installation of new drainage, attenuation and site services and associated trenching and reinstatement works.

xii) Installation of new external site lighting to the car parking areas and courtyard spaces;

xiii) Repairs and repointing of existing structures throughout, as required.

The former council depot yards and former stable buildings fall within the zone of notification for Rathfarnham Castle, a National Monument (RMP DU022-014, Nat.Mon. 628) and a Protected Structure (RPS. 221)
The proposed site outline and site layout plan are demonstrated in Figures 1 & 3. Bats noted on site are demonstrated in Figure 2.

Landscape

The landscape strategy for the proposed development has been prepared by DFLA Landscape Architects to accompany this planning application. The proposed landscape masterplans are demonstrated in Figure 4.

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

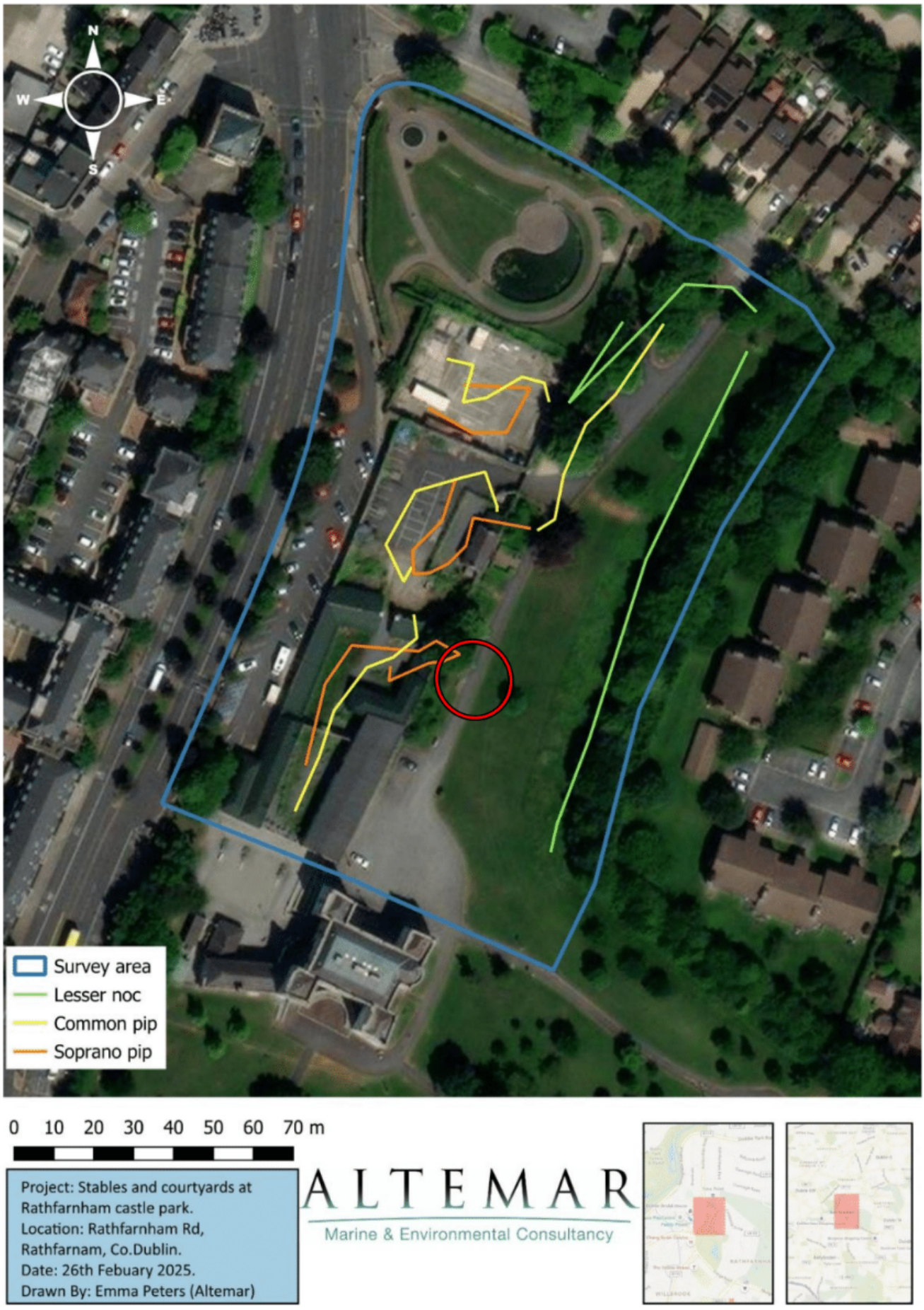

Figure 2. *A map demonstrating flight paths noting during the survey. Flight paths of the lesser noctule (Nyctalus leisleri) in green, Common pipistrelle (Pipistrellus pipistrellus) in yellow and Soprano pipistrelle (Pipistrellus pygmaeus) in orange. A tree of high bat roosting potential is denoted by red ring.*

***Figure 3**. Proposed site layout plan*

Figure 4. *Proposed landscape plan*

Lighting

The lighting impact assessment report for the proposed development has been prepared by Homan O'Brien Ltd. The proposed public lighting layout is demonstrated in Figure 9. The lighting assessment report concluded with the following:

"The calculation results, generated by Lighting Reality and confirm that the design as presented complies with the design criteria of an E3 environment.

The design includes for mitigation to bat foraging which are light sensitive, 3000k lamps are used throughout.

Light fittings used throughout with no upward light output throughout to minimise light spill.

Good optical control will be used with an upward light ratio of 0% for the fittings.

The proposed layout offers a design aesthetically pleasing for occupants and for the site as a whole.

Homan O' Brien believe the proposed layout will blend seamlessly into the surrounding environment."

In addition the following is also noted:

"For Bat protection, the following mitigation measures have been imposed.

Lighting has only been installed where necessary for public safety. These lights have been designed and selected with specific shutters and filters to minimise any potential for back spills into the sensitive locations while still providing the primary function of safely lighting to the circulation routes.

5.1 Reflectance's

Downward lighting can be reflected from bright surfaces. To minimize bat disturbance, the design avoids the use of bright surfaces and incorporates darker colour lamp heads and poles to reduce reflectance (RAL Anthracite grey).

5.2 Shielding of Luminaires & Light

To minimize bat disturbance, the design avoids the use of upward lighting by shielding or by downward directional focus. Light should only be directed to where it is needed.

5.3 Type of Light

To minimize bat disturbance, the design avoids the use of strong UV lighting. The lighting design is based on the use of LED lighting which has minimal or no UV output of significance and use of monochromatic sources and a warm-white (3000K or less) LED with low blue content.

Glare, stray light and upward and sideward light from the luminaires has been be avoided where possible.

5.4 Illumination

The illumination should be no brighter than necessary and should be integrated into a demand-based control system.2"

The proposed public lighting layout is outlined in figure 5. Lighting is compliant with bat lighting guidelines.

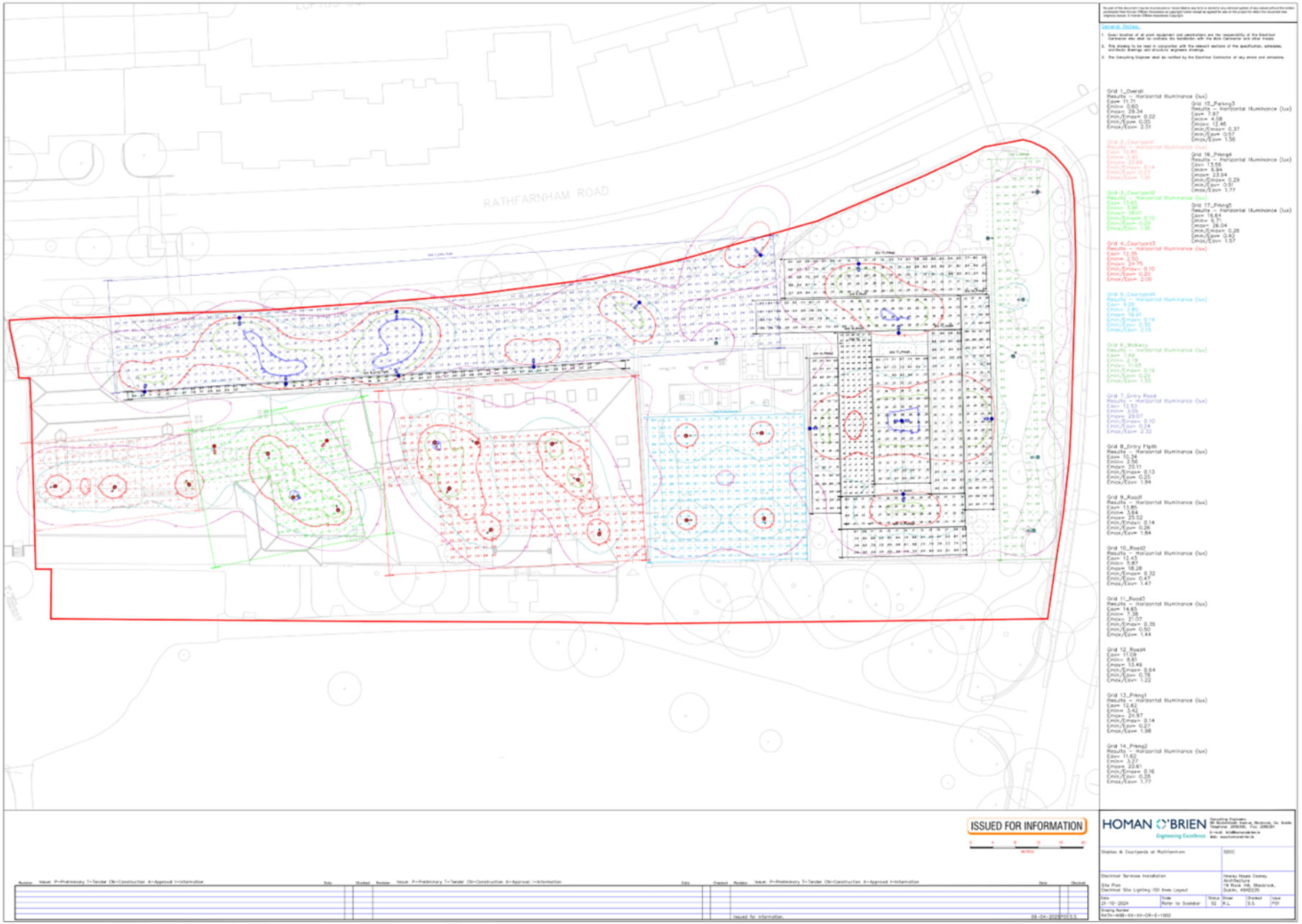

Figure 5. *Proposed site services – public lighting*

Arboricultural Assessment

An Arboricultural Report was composed by John Morris Arboricultural Consultancy, in relation to the trees at the proposed site at Rathfarnham Castle, Rathfarnham. In summary, the report states that:

*'**Executive Summary***

South Dublin County Council intends to carry out development at the former South Dublin County Council Depot, at the Stables and Courtyards of Rathfarnham Castle and the adjoining Sean Keating Garden, Grange Road/Rathfarnham Road, Dublin14 (D14 FC62 & D14XT02), Rathfarnham Castle (Protected Structure RPS. 221) Grange Road, Rathfarnham, Dublin 14, on a development site of 1.1725 hectares. The development will consist of the refurbishment and change of use of the former stable buildings and former council depot yards, to provide mixed-use cultural/arts/cafe/ restaurant used together with retail use, WC's, storage areas and a switch room.

The eastern half of the site comprises a semi-formal parkland landscape of early mature beech, ash, lime and yew with more recent plantings of pin oak and birch in keeping with the historical context of the area. The north-western corner has been recently landscaped with single avenues of pleached limes and formal box hedges. A line of mixed birch species borders the R114 and car park together with a small group of small-leaved lime. Adjacent to the café entrance, a mature Monterey cypress, pedunculate oak and sycamore comprise some of the oldest trees, together with the yews. Street trees comprise semi/early mature Norway maple lining the R114 and early mature London plane forming an avenue on Castleside Drive. Most trees are in fair/good health apart from a semi-mature beech (T7) in advanced physiological decline and one recently planted Pin oak (T15) in poor health. Minor works are required to clear canopies from adjacent buildings, footpaths and road signs as well as removal of small diameter hanging limbs from recent storms.

The proposed works will require the removal of trees 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101,102, 103, G104, 105, 121 & 122, hedge H60and part of hedge H9.The reason for these removals is to facilitate a new pedestrian crossing, new vehicular access off the R114, landscaping works and for underground services including attenuation and stormwater. It is proposed to plant 61 no. new trees comprising 12 different species across the site. This new planting will increase species diversity and canopy cover in the local landscape to provide a future net gain in canopy cover and improvement on the pre-development baseline. The following tree protection measures are required on site:

- *Tree Protection Fencing*
- *Construction Exclusion Zones*
- *Specialist Methods of Working (use of AirSpade / Soil Pick under supervision of arboriculturist for installation of150mm diameter underground stormwater with Root Protection Area of trees 5 & 6).'*

Figure 6. *Tree Constraints Plan*

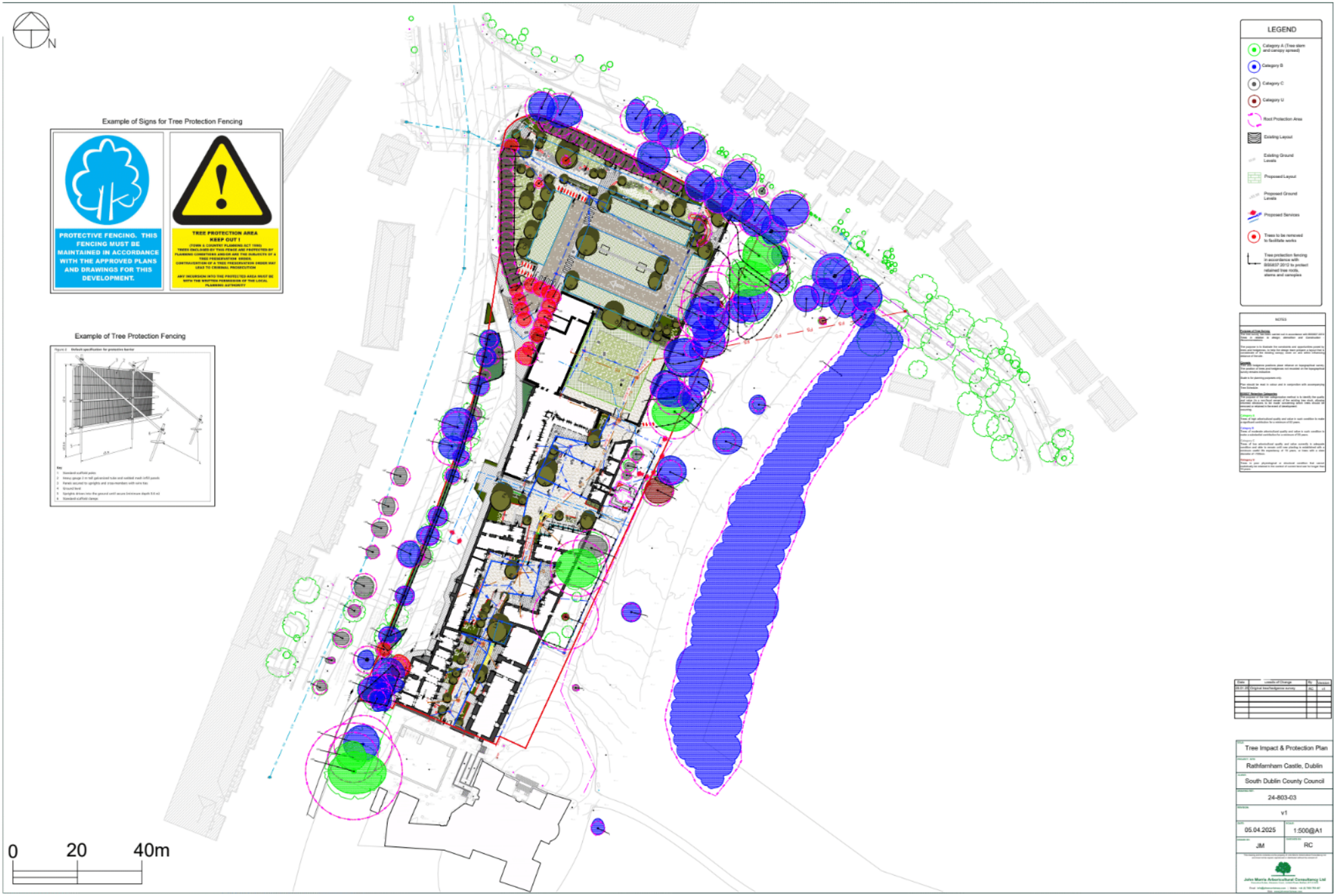

Figure 7. *Tree Impacts Plan- East*

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.

Emma has carried out a diverse array of fauna and flora surveys as an employee of Altemar Ltd. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, and invasive species surveys. The field surveys were carried out using techniques approved and recommended by CIEEM.

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 two site visits by Bryan Deegan and Emma Peters on the 9th of May 2024 and on the 20th of May 2024. Bat emergent and detector surveys were carried out. Trees on site were examined for bat roosting potential. Please note that a Bat Fauna Assessment will accompany the Planning Application.

Survey constraints.

Bat surveys were undertaken during the active bat season in May. 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
Daubenton's Bat (*Myotis daubentonii*)	20/08/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Lesser Noctule *(Nyctalus leisleri)*	11/05/2022	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts

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

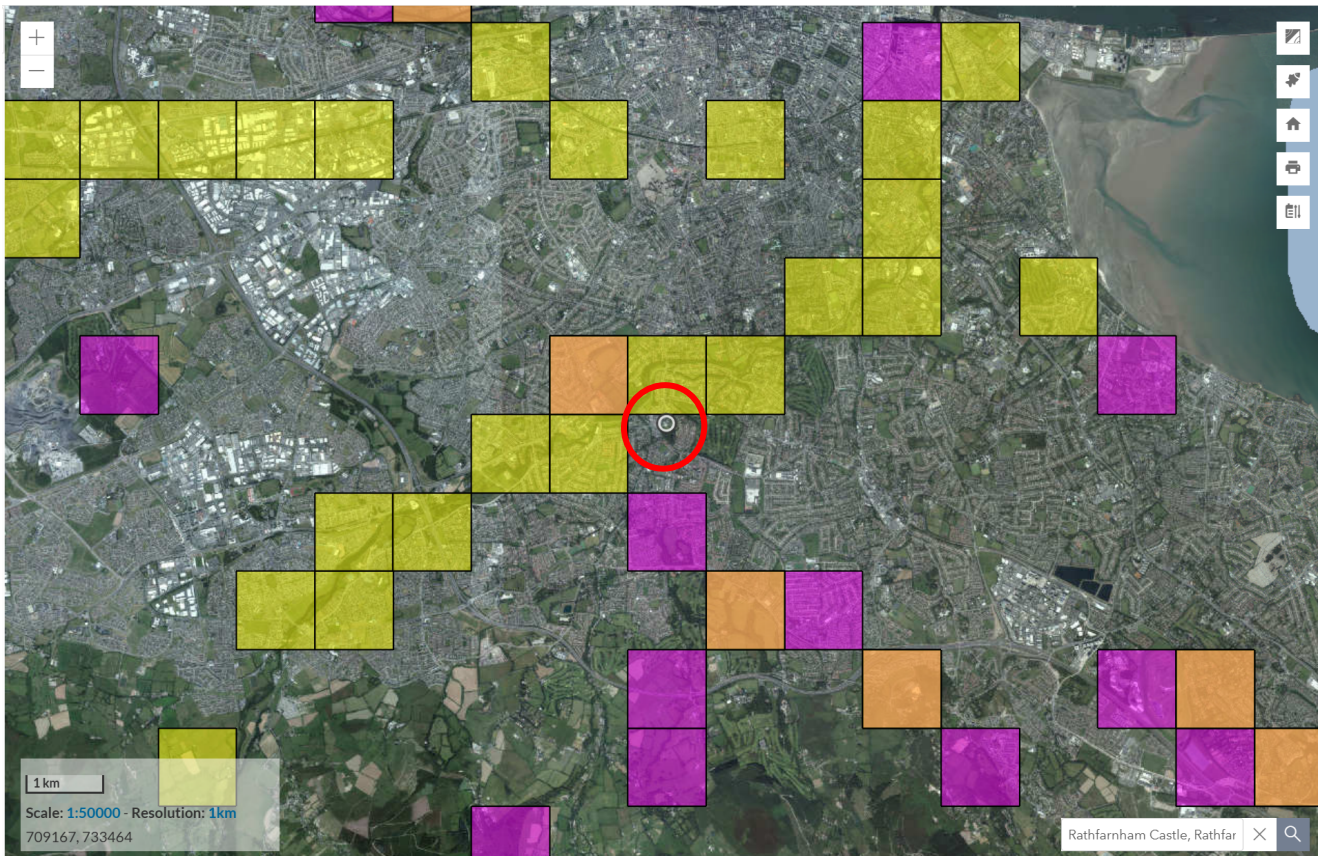

Figure 8. Brown Long-eared Bat (*Plecotus auritus*) (purple), Daubenton's Bat (*Myotis daubentonii*) (yellow) and both Brown Long-eared Bat and Daubenton's Bat (orange) (Source:NBDC) (Site – red circle)

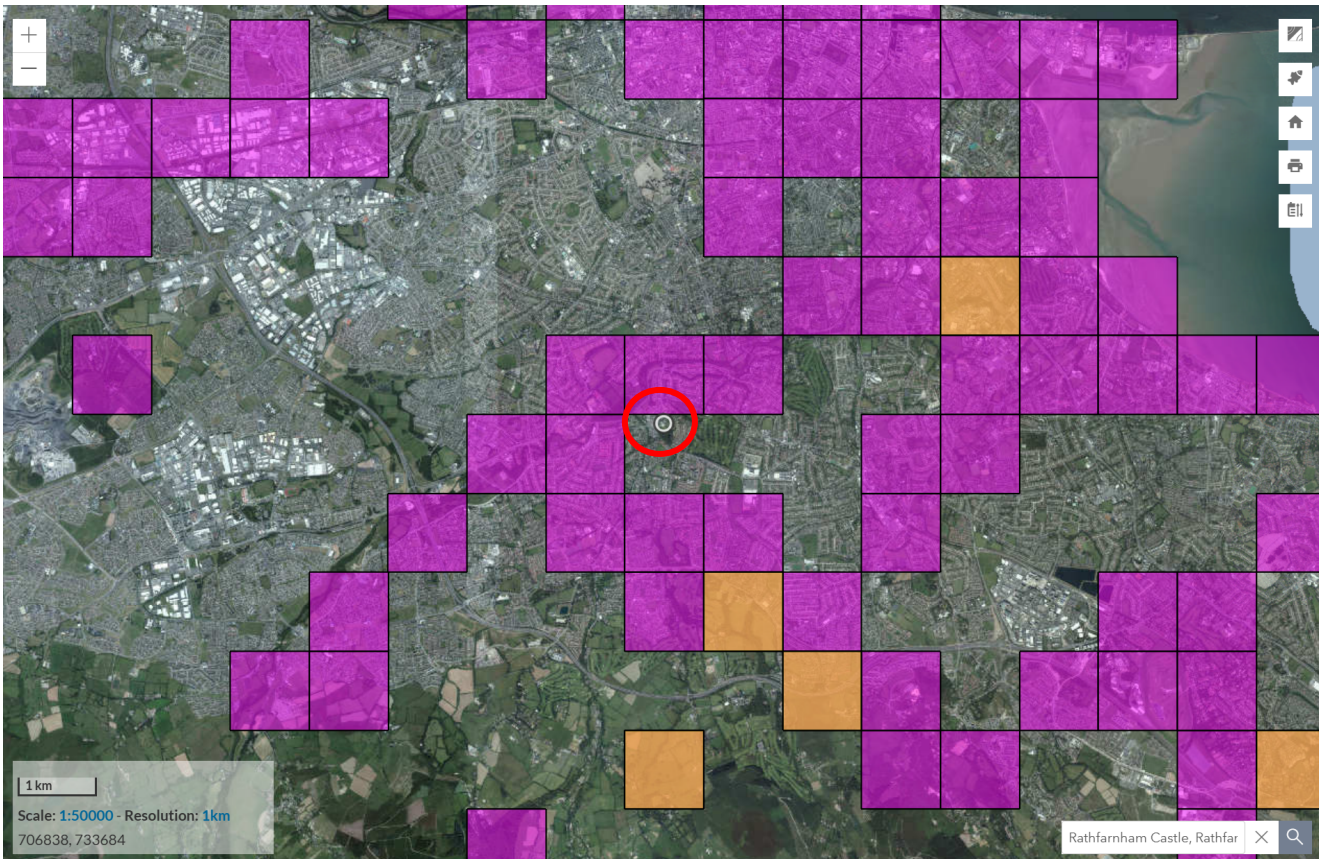

Figure 9. Lesser Noctule (*Nyctalus leisleri*) (purple) and Natterer's Bat (*Myotis nattereri*) and both the Lesser Noctucle and Natterer's Bat (orange) (Source:NBDC) (site: red circle)

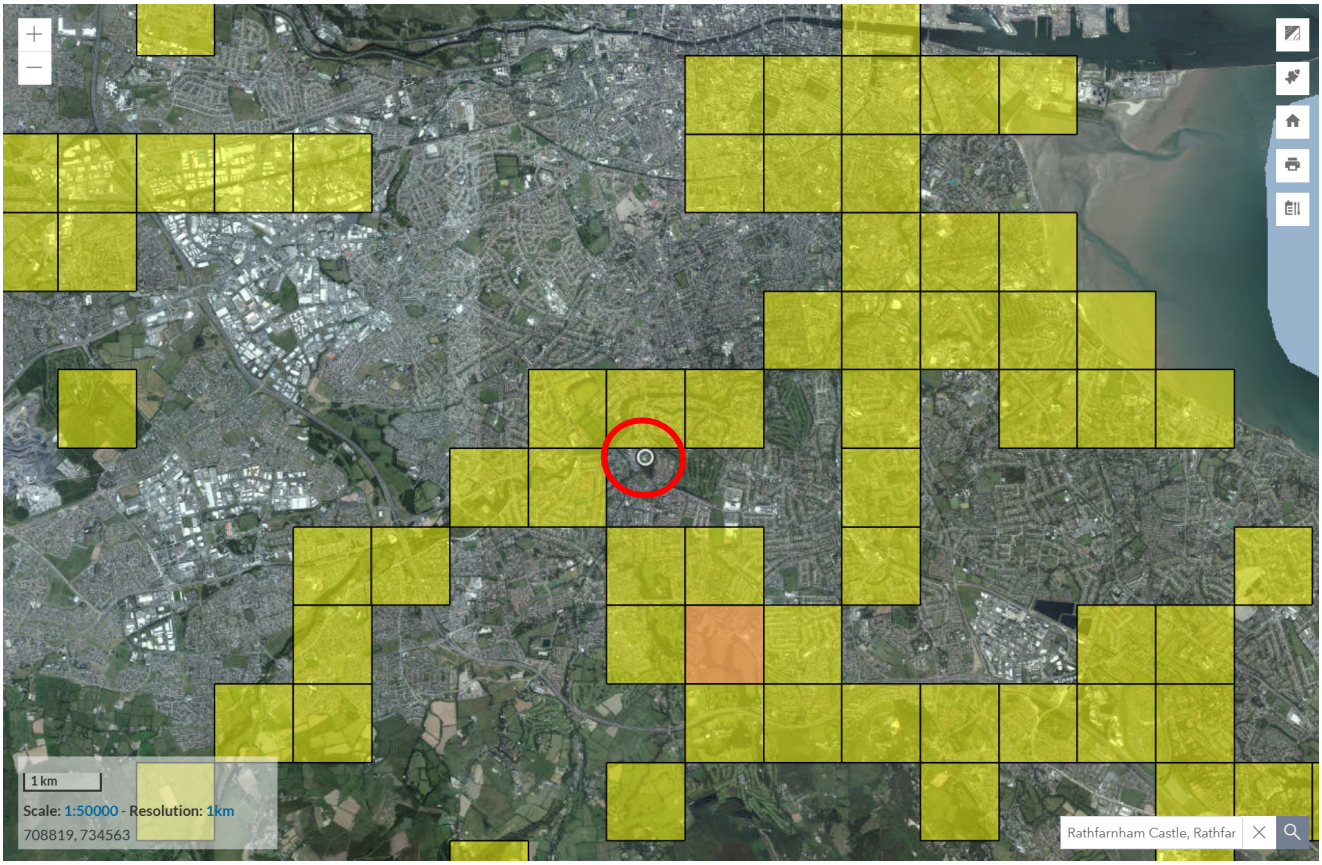

Figure 10. Whiskered Bat (Myotis mystacinus) (purple), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow) and both Whiskered Bat and Soprano Pipistrelle (orange) (Source: NBDC) (site: red circle)

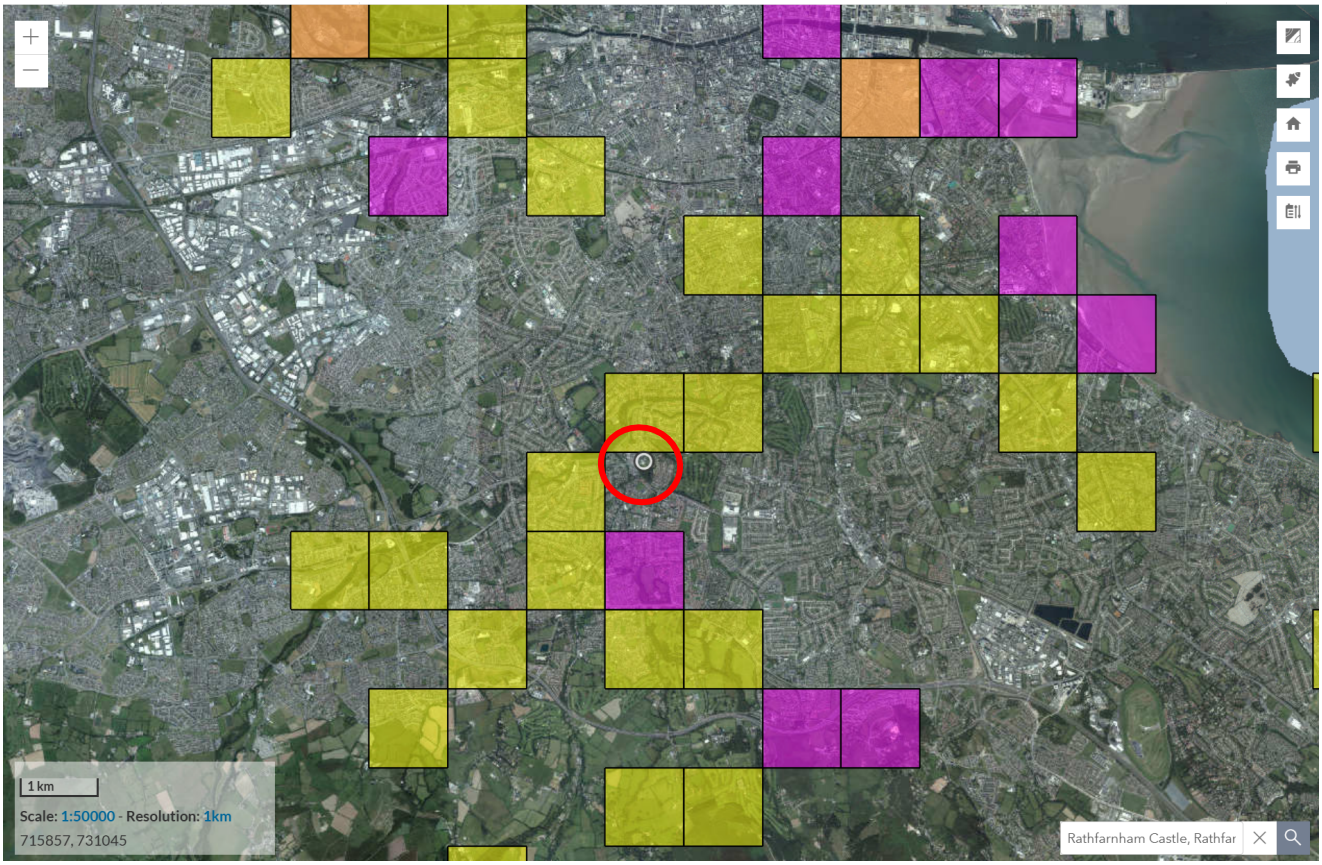

Figure 11. Nathusius's Pipistrelle (Pipistrellus nathusii) (purple), Pipistrelle (Pipistrellus pipistrellus sensu lato) (Species Aggregate) (yellow), and both Nathusius's Pipistrelle and Pipistrelle (Species Aggregate) (orange) (Source: NBDC) (site: red circle)

Detector survey

As seen in Figure 1, bat activity was noted on site. Foraging activity was seen throughout the site, over the courtyards and beside the treeline to the South East of the site. Three species were noted on site:

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

Bat Roosts

A ground level roost assessment was carried and used to examine the trees on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. All trees on site were assessed for bat roosting potential.

Large trees located throughout the survey area were considered of low bat roosting potential. A mature tree located on the east boundary of the courtyard walls (Figure 1.) is considered of high bat roosting potential. No bat roosts were identified in any onsite, buildings, trees or tree lines. A derogation license is therefore not required for the removal of trees on the proposed site. Three bat species were noted foraging on site; lesser noctule (*Nyctalus leisleri*), Common pipistrelle (*Pipistrellus pipistrellus*) and Soprano pipistrelle (*Pipistrellus pygmaeus*). The common and soprano pipistrelle were most frequent species foraging with one incidence of lesser noctule (*Nyctalus leisleri*) foraging along the woodland on the east of the site. All species that were noted on site were observed entering the courtyard from the east.

Potential impacts of proposed redevelopment on bats

Lighting on site is restricted to the development area and no lighting is proposed in the vicinity of the tree of high bat roosting potential or parkland. No trees of high 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.

Mitigation measures

As a mitigation measure as increased lighting will be within the courtyard where existing bat boxes are located, 3 no. Elisa model[1] bat boxes be installed on the larger trees present onsite. A pre construction bat assessment will be carried out to observe if bats have begun roosting on site since the initial surveys.

Lighting has involved mitigation through design and will be restricted to key areas of the development only and will not be within areas outside of the development. As outlined in the lighting impact assessment report:

''*The calculation results, generated by Lighting Reality and confirm that the design as presented complies with the design criteria of an E3 environment. The design includes for mitigation to bat foraging which are light sensitive, 3000k lamps are used throughout. Light fittings used throughout with no upward light output throughout to minimise light spill. Good optical control will be used with an upward light ratio of 0% for the fittings. The proposed layout offers a design aesthetically pleasing for occupants and for the site as a whole. Homan O' Brien believe the proposed layout will blend seamlessly into the surrounding environment;*''

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
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.

References

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

Chartered Institute of Ecology and Environmental Management (2021). *Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats. Beta version.* Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute of Ecology and Environmental Management (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal, and Marine.* Chartered Institute of Ecology and Environmental Management, Winchester.

Institution of Lighting Professionals (2018). *Bats and Artificial Lighting in the UK – Bats and the Built Environment Series: Guidance Note 08/18.* Institution of Lighting Professionals and the Bat Conservation Trust.

Department of Housing, Planning and Local Government (December, 2018). *Urban Development and Building Heights Guidelines for Planning Authorities***.**

Bat Conservation Trust (May 2022). *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys.* The Bat Conservation Trust, London.

Bat Conservation Ireland 2004 on-going, *National Bat Record Database.* Virginia, Co. Cavan

Boyd, I. and Stebbings, R.E. 1989 Population changes in brown long-eared bats (*Plecotus auritus*) in Bat Boxes at Thetford Forest. *Journal of Applied Ecology* **26**: 101 - 112

Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1982

Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979

EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive) 1992

Jefferies, D.J. 1972 Organochlorine insecticide residues in British bats and their significance. *Journal of Zoology*, London **166**: 245 - 263

Kelleher, C. 2004, Thirty years, six counties, one species – an update on the lesser horseshoe bat *Rhinolophus hipposideros* (Bechstein) in Ireland – *Irish Naturalists' Journal* **27**, No. 10, 387 – 392

Kelleher, C. 2015 *Proposed Residential Development, Church Road, Killiney, Dublin: Bat Fauna Study*. Report prepared for Altemar Marine and Environmental Consultants

Marnell, F., Kingston, N. and Looney, D. 2009 *Ireland Red List No. 3: Terrestrial Mammals.* National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin

Marnell, F., Kelleher, C., & Mullen, E. (2022), BAT MITIGATION GUIDELINES FOR IRELAND – V2
https://www.npws.ie/sites/default/files/publications/pdf/IWM134.pdf

Racey, P.A. and Swift, S.M. 1986 The residual effects of remedial timber treatments on bats. *Biological Conservation* **35**: 205 – 214

Smal, C.M. 1995 *The Badger & Habitat Survey of Ireland.* The Stationery Office, Dublin

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

Bat Conservation Trust (2018). Bats and artificial Lighting. Bata and the built environment series.