



**Former Co Op Funeral
Directors and Land to
the Rear of 14 Queen
Anne Square, North
Road, Cardiff**

DRAFT

Ecological Appraisal

Prepared by:
**The Environmental Dimension
Partnership Ltd**

On behalf of:
Stone Property Services

November 2023

Report Reference
edp7987_r004

Document Control

DOCUMENT INFORMATION

Client	Stone Property Services
Report Title	Ecological Appraisal
Document Reference	edp7987_r004_DRAFT

VERSION INFORMATION

	Author	Formatted	Peer Review	Proofed by/Date
004_DRAFT	EWi	GGi	KHe	Fje 031123

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Executive Summary

- S1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Stone Properties Services (hereafter referred to as 'the Applicant'). This Appraisal considers the ecological implications of proposed development at the Former Co Op Funeral Home and Land to the Rear of Queen Anne Square, North Road, Cardiff (hereafter referred to as 'the Site'). The proposed development will comprise: the construction of 15 apartments in two blocks and the change of use of the retained Rosemount Villa Funeral Home to create four apartments; the associated demolition of existing garages, workshop and part boundary wall; together with parking, access, amenity space and landscaping.
- S2 To establish the ecological baseline of the Site and subsequently inform a planning application submission for residential development, a desk study, Extended Phase 1 Habitat survey and further detailed surveys with respect to bats were completed by EDP during 2023.
- S3 With respect to habitats on-site, the Site comprises the two buildings (**B1-B2**) associated with a former funeral parlour, associated access road, car park and landscape planting in addition to an area of dense scrub habitat enclosed by a stone wall to the north of the buildings. Habitats are predominantly considered to be of negligible-site ecological importance albeit with potential to support protected and notable species.
- S4 With respect to further detailed surveys in respect of bats, both buildings **B1** and **B2** are deemed to offer high potential to support roosting bats. Subsequent bat emergence/re-entry surveys were therefore completed on three occasions during August 2023 to reliably confirm presence/infer absence of a bat roost. A single soprano pipistrelle (*Pipistrellus pygmaeus*) bat was noted emerging from building **B1** on two occasions, confirming presence of a low status, soprano pipistrelle summer day roost.
- S5 Accordingly, EDP has provided specific proposals for the avoidance, mitigation and compensation of any predicted impacts including, where possible, the retention, protection and enhancement of those features of site level ecological importance (namely semi-mature broadleaved and coniferous trees). With respect to roosting bats, proposed renovation of building **B1** associated with development proposals must be completed under a Natural Resources Wales (NRW) Development Licence, with sufficient replacement roosting habitat provided.
- S6 Overall, however, given the small scale of the development proposals and scope of those proposed mitigation measures in respect of habitats and protected species, EDP considers that the scheme is capable of compliance with relevant wildlife legislation and planning policy for the conservation of the natural environment at all levels.

Section 1 Introduction

- 1.1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Stone Properties Services (hereafter referred to as 'the Applicant'). This Appraisal considers the ecological implications of proposed development at Former Co Op Funeral Home and Land to the Rear of Queen Anne Square, North Road, Cardiff (hereafter referred to as 'the Site').
- 1.2 This report has been prepared with reference to the following key guidance:
- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal¹;
 - CIEEM Guidelines for Ecological Impact Assessment²; and
 - British Standard: Biodiversity - Code of Practice for Planning and Development³.
- 1.3 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

- 1.4 The Site is centred approximately at Ordnance Survey Grid Reference (OSGR) ST 31767 17745. The Local Planning Authority (LPA) is Cardiff Council. The location and extents of the Site are illustrated on **Plan EDP 1-3**.
- 1.5 The Site is located on the eastern side of North Road, near Cardiff City Centre. The Site encompasses the grounds of the former Rosemount Funeral Home, which comprises two buildings, one of which is Grade II listed. Semi-natural vegetation is limited to a line of trees along the eastern boundary of the Site in addition to scattered trees and shrub planting around the peripheries of hardstanding areas. A wall delineates the western boundary of the Site punctuated by two, wide vehicular entrances. The Site also encompasses an additional circa 0.04 hectares (ha) of land to the immediate north, encircled by stone walls and overgrown with much dense scrub.

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester

² CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2*. Chartered Institute of Ecology and Environmental Management, Winchester

³ BSI (2013) *Biodiversity - Code of Practice for Planning and Development*. BS 42020:2013. British Standards Institute

DEVELOPMENT PROPOSALS

- 1.6 In brief, the proposed development comprises the construction of 15 apartments in two blocks and the change of use of the retained Rosemount Villa Funeral Home to create four apartments; the associated demolition of existing garages, workshop and part boundary wall together with parking, access, amenity space and landscaping. A Site Block Plan - Proposed is included in **Appendix EDP 1**. Landscape Proposals for the Site are provided at **Appendix EDP 2**.
- 1.7 The ecological sensitivities of the Site have influenced the final layout through an iterative design process. Thus, the masterplan incorporates a degree of 'inherent' mitigation to avoid or reduce the severity of potential ecological impacts.

SCOPE OF THE ASSESSMENT

- 1.8 This Ecological Appraisal describes the current ecological interest within and around the Site, which has been identified through standard desk- and field-based investigations. It then considers the potential ecological impacts and opportunities for ecological enhancement based on the final proposals (incorporating inherent mitigation) in the context of relevant legislation and planning policy. Finally, this Appraisal identifies the necessary additional measures to avoid, mitigate or provide compensation for potential impacts, and the mechanisms for securing such measures.
- 1.9 The remainder of this report is structured as follows:
- **Section 2** summarises the methodology employed in determining the baseline ecological conditions within and around the Site (with further details provided within Appendices and on Plans where appropriate);
 - **Section 3** summarises the baseline ecological conditions (with further details also provided within Appendices and on Plans where appropriate) and identifies and evaluates any pertinent ecological features/receptors;
 - **Section 4** describes how the development design has responded to the ecological constraints and any embedded/inherent mitigation, and then considers the potential impacts of the proposals on pertinent ecological features;
 - **Section 5** proposes mitigation and enhancement measures for the current and possible future planning stages, in the context of relevant legislation and planning policy, and mechanisms to secure their delivery; and
 - **Section 6** summarises the Mitigation and Enhancement Strategy for the Site and provides the overall conclusions of the Appraisal.

Section 2

Baseline Methodology

2.1 This section of the Ecological Appraisal summarises the methodologies employed in determining the baseline ecological conditions within and around the Site. This has been undertaken by appropriately qualified ecologists using relevant best practice methodologies wherever possible. Reasons for any departure from best practice methodology are given and normally relate to the timing of EDP's commission and/or the availability of access to parts of the Site or wider study area. Full details of the techniques and process adopted are, where appropriate, provided within Appendices and on Plans to the rear of this report.

DESK STUDY

2.2 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, which entails the initial collation and review of contextual information, such as designated sites, together with known records of important habitats or species.

2.3 The desk study involved collating biodiversity information from the following sources:

- South East Wales Biological Records Centre (SEWBRc); and
- Multi-Agency Geographic Information for the Countryside (MAGIC) website⁴.

2.4 The desk study was undertaken during August 2023 and involved obtaining the following information:

- International statutory designations (10km radius around site);
- National statutory designations and non-statutory local sites (2km radius);
- Annex II bat species⁵ records (6km radius);
- All other protected, priority and notable species records (2km radius);
- Ancient woodland units (2km radius); and
- Phase 1 Habitats (2km).

2.5 These search areas are considered sufficient to cover the potential zones of influence⁶ of the proposed development in relation to designated sites, habitats and species, particularly given its location in the city of Cardiff.

⁴ www.magic.gov.uk

⁵ Bat species listed in Annex II of the EC Habitats Directive, namely Greater horseshoe, Lesser horseshoe, Barbastelle and Bechstein's bats.

⁶ Zone of Influence - the areas and resources that may be affected by the proposed development.

- 2.6 The adopted Cardiff Local Development Plan⁷ and Cardiff Green Infrastructure Supplementary Planning Guidance⁸ were also reviewed as part of the desk study to understand local priorities with regard to protection of ecological features/biodiversity.

EXTENDED PHASE 1 HABITAT SURVEY

- 2.7 The survey technique adopted for the initial habitat assessment was at a level intermediate between a standard Phase 1 survey technique⁹, based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey technique is commonly known as an Extended Phase 1 Habitat Survey. This level of survey does not aim to compile a complete floral and faunal inventory for the Site.
- 2.8 The level of survey involves identifying and mapping the principal habitat types and identifying the dominant plant species present in each principal habitat type. In addition, any actual or potential protected species or species of principal importance¹⁰ are identified and scoped.
- 2.9 An Extended Phase 1 Habitat Survey of the Site was completed by a suitably experienced surveyor from EDP on 17 May 2023 during which the weather was dry with circa 40% cloud cover and 15°C.

Limitations

- 2.10 May is within the optimum period for undertaking an Extended Phase 1 Habitat Survey, such that seasonal and climatic factors are not considered a constraint to survey area.
- 2.11 Surveys were limited to recording plant species present in both vegetative and floristic forms at the time of survey; the lack of any species record from this report does not automatically imply species' absence from the Site.
- 2.12 There was no access to the northern plot comprising the Site such that an assessment of habitats therein was undertaken from the Site's western boundary with North Road. This is not considered a significant constraint to the assessment however, with sufficient information collected to inform the type and ecological importance of habitats present therein.

DETAILED (PHASE 2) SURVEYS

- 2.13 The scope of Phase 2 Surveys undertaken within the Site was defined following the initial studies described above.

⁷ Cardiff Council (2016). Cardiff Local Development Plan (2006-2026). Available at: <https://www.cardiffldp.co.uk/wp-content/uploads/Final-Adopted-Local-Development-Plan-English.pdf> [Accessed on 10 October 2023]

⁸ Cardiff Council (2017). City of Cardiff Council Green Infrastructure Supplementary Planning Guidance. Available at: <https://cardiff.moderngov.co.uk/documents/s18690/Item%209%20App%201%20SPG%20Green%20Infrastructure.pdf> [Accessed on 10 October 2023]

⁹ Joint Nature Conservation Council (2004) Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit (reprinted with minor corrections for original Nature Conservancy Council publication).

¹⁰ Species considered of key significance to sustain and improve biodiversity in Wales, as defined under Section 7 of Part 1 of the Environment (Wales) Act 2016.

- 2.14 The surveys 'scoped in' based upon the findings of the Extended Phase 1 Habitat Survey are summarised in turn below, with reference to sources of further detailed information where applicable.

Bat Surveys

- 2.15 During the Extended Phase 1 Habitat Survey, two buildings present within the Site were identified as having potential to support roosting bats whilst trees within/adjacent to the Site were also considered for their potential to support roosting bats. The following surveys for bats were therefore undertaken, with reference to the relevant published best practice guidelines at the time¹¹:

- Preliminary ground level roost assessment of trees for bat roosting suitability, undertaken on 17 May 2023;
- External preliminary roost assessment of onsite buildings to search for evidence of bats and determine the suitability of features to support roosting, undertaken on 17 May 2023, followed by an internal assessment on 14 June 2023; and
- Two dusk emergence and one dawn re-entry survey of each building to confirm presence/likely absence of bats within buildings **B1** and **B2** undertaken on 01 August, 18 August and 31 August 2023.

- 2.16 Full details of the bat survey methodologies and any limitations encountered, are provided in **Appendix EDP 3**.

Badger Survey

- 2.17 During the survey, any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified, the following signs of badger activity were searched for in order to determine whether they were currently in use:

- Fresh spoil outside entrances;
- Bedding material (typically dried grass) outside entrances;
- Holes being cleared of leaf litter/other debris;
- Badger guard hairs; and
- Footprints and fresh tracks leading to/from the holes.

Limitations

- 2.18 Badger surveys can be undertaken at any time of year and are, therefore, not limited by seasonal factors.

¹¹ Collins, J. (ed.) (2016). *Bat Surveys: for Professional Ecologists: Good Practice Guidelines (3rd edition)*. The Bat Conservation Trust, London.

- 2.19 Dense scrub and the proximity of adjacent buildings precluded access to the northernmost plot comprising the Site such that evidence of badger may have been missed. This is, however, not considered a constraint to an assessment of the Site's potential to support badger, given its location within an urban area of Cardiff whilst boundary walls are also likely to preclude dispersal of this species between the Site and adjacent semi-natural habitat.

ECOLOGICAL SURVEYS SCOPED OUT

- 2.20 **Table EDP 2.1** summarises other survey types which, whilst occasionally required to inform a planning submission for development sites, are not deemed to be necessary/appropriate in this case.

Table EDP 2.1: Ecology Surveys Scoped Out

Survey Type	Reasons for Scoping Out
Botanical Assessment	The Site is dominated by hardstanding and the footprint of two buildings with semi-natural vegetation largely limited to non-native trees and shrubs. No further assessment of floristic communities is, therefore, required.
Bats (Hibernating)	On-site buildings offer little potential for hibernating bats, with any potential internal cavities within the loft void considered non-classic examples of a potential hibernation site. Rather, such features are likely to support low numbers of common and widespread crevice dwelling species only. No further survey is therefore proposed. Additionally, access to the loft void was precluded by presence of asbestos. Precautionary measures of working are therefore recommended during demolition/renovation of on-site buildings.
Bats (Commuting/Foraging)	Given the relatively small size of the Site and nature of those habitats supported therein, the Site is considered to be of low suitability to support commuting/foraging bats such that no further survey is proposed. In respect of the presence of bat roosts within building B1 on-site, it is, however, assumed that low numbers of relatively common species will utilise the Site opportunistically for foraging and community between their roosts and foraging habitat in the wider landscape.
Breeding and Wintering Birds	Given the small size of the Site and nature of those habitats supported therein, no further breeding or wintering bird surveys are recommended in this instance. Precautionary measures of clearance during the pre-construction phases of development are instead recommended to ensure no harm/disturbance to nesting birds (if found to be present).
Dormouse (<i>Muscardinus avellenarius</i>)	Suitable habitat on-site is limited to dense scrub across the northern plot and predominantly, non-native trees and shrubs. Such habitats are, however, isolated from suitable habitat within the wider landscape with the Site located within Cardiff and surrounded by urban development. This species is thus presumed absent.

Survey Type	Reasons for Scoping Out
Otter (<i>Lutra lutra</i>)/Water Vole (<i>Arvicola amphibius</i>)	There is no suitable habitat for either species on or adjacent to the Site.
Great crested newt (<i>Triturus cristatus</i>)	There is no suitable aquatic or terrestrial habitat onsite. The Site is located within the city of Cardiff with existing development and main roads isolating the Site from suitable habitat in the wider landscape such that this species is presumed absent.
Invertebrates	Habitats present on-site are considered likely to support a limited assemblage of common and widespread invertebrate species only. In respect of the relatively small size of the Site, dominated by hardstanding and the footprint of two buildings, no further survey is considered necessary in this instance.

Section 3

Baseline Results

- 3.1 This section of the Ecological Appraisal summarises the baseline ecological conditions determined through the course of desk-based and field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors that lie within the Site's potential zone of influence, and which are pertinent in the context of the proposed development. Further technical details are, where appropriate, provided within Appendices and on Plans to the rear of this report.
- 3.2 Where a particular ecological feature/receptor has been confirmed to be present, or presence is inferred based on habitat suitability, its ecological importance is assessed. The level of ecological importance assigned to each ecological feature is based upon established geographical value systems and the uses the following scale: International and European (highest) > National > Regional > County > District > Local > Negligible (lowest).

DESIGNATED SITES

- 3.3 Information regarding designated sites was obtained during the desk study. Statutory designations (those receiving legal and planning policy protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below.

Statutory Designations

- 3.4 Statutory designations represent the most significant ecological receptors. Internationally important statutory designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites (including potential SPAs, possible SACs and proposed Ramsars). These designations are protected under the *Conservation of Habitats and Species Regulations 2017* (as amended) (hereafter referred to as 'the Habitats Regulations').
- 3.5 Nationally important statutory designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). NNRs are also SSSIs, both of which are protected under the *Wildlife and Countryside Act 1981* (as amended).
- 3.6 The legal protection of SACs, SPAs, Ramsar Sites and SSSIs is also reflected in policies included within *Planning Policy Wales* (PPW) and *Technical Advice Note 5: Nature Conservation and Planning* (TAN5), which are a material consideration during the planning application process.
- 3.7 Local level statutory designations include Local Nature Reserves (LNRs) and are generally considered to be of importance at the County level or lower. LNRs are designated under the *National Parks and Access to the Countryside Act 1949*, however, protection of LNRs is given via local planning policies and/or by-laws.

- 3.8 Statutory designations are also recognised as key natural assets within the *Cardiff Local Development Plan*, specifically Policy KP 16 (Green Infrastructure) and EN5 (Designated Sites). Specifically, EN5 states:

“Development will not be permitted that would cause unacceptable harm to sites of international or national nature conservation importance. Development proposals that would affect locally designated sites of nature conservation and geological importance should maintain or enhance the nature conservation and/or geological importance of the designation. Where this is not the case and the need for the development outweighs the conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development which avoids nature conservation impacts, and compensation measures designed to ensure that there is no reduction in the overall nature conservation value of the area or feature.”

- 3.9 Policy KP16 states, in brief: *“Cardiff’s distinctive natural heritage provides a network of green infrastructure which will be protected, enhanced and managed to ensure the integrity and connectivity of this multi-functional green resource is maintained. Protection and conservation of natural heritage network needs to be reconciled with the benefits of development. Proposed development should therefore demonstrate how green infrastructure has been considered and integrated into the proposals. If development results in overall loss of green infrastructure, appropriate compensation will be required.”*

- 3.10 No part of the Site is covered by any statutory designations. However, there are four internationally important designations within 10km of the Site. There are no nationally or county important designations within 2km of the Site. Statutory designations identified are summarised in **Table EDP 3.1** and illustrated on **Plan EDP 1**.

Table EDP 3.1: Statutory Designations within the Site's Potential Zone of Influence

Designation	Approx. Distance from Site	Interest Feature(s)
Internationally Important Statutory Designated Sites (within 10km of the Site)		
Severn Estuary Ramsar Site	3.7km south-west	The Severn Estuary regularly supports over 20,000 wintering waterfowl. Internationally important populations of five species of waterfowl are regularly supported including European white-fronted goose (<i>Anser albifrons albifrons</i>), shelduck (<i>Tadorna tadorna</i>), gadwall (<i>Anas strepera</i>), dunlin (<i>Calidris alpina</i>) and redshank (<i>Tringa totanus</i>). In addition, the islands of Flat Holm and Steep Holm support a nationally important breeding population of lesser black-backed gulls (<i>Larus fuscus</i>).

Designation	Approx. Distance from Site	Interest Feature(s)
Severn Estuary SAC	3.7km south-west	The Severn Estuary is important for its unique tidal range and diverse assemblage of habitats supported including Atlantic salt meadows, intertidal mudflats and sandflats, reefs and subtidal sandbanks. The estuary also supports uncommon species such as twaite shad (<i>Alosa fallax</i>), river lamprey (<i>Lampetra fluviatilis</i>) and sea lamprey (<i>Petromyzon marinus</i>).
Severn Estuary SPA	3.7km south-west	The Severn Estuary is an important site for migratory birds with an internationally important population of Bewick's swan (<i>Cygnus columbianus bewickii</i>) being supported. The estuary is also important for migratory fish with species such as the rare and endangered allis shad (<i>Alosa alosa</i>), salmon (<i>Salmo salar</i>), sea trout (<i>Salmo trutta</i>), sea lamprey (<i>Petromyzon marinus</i>), river lamprey, twaite shad and eel (<i>Anguilla anguilla</i>), all recorded to be using the estuary.
Cardiff Beech Woods SAC	6.67km north-west	An area of semi-natural broadleaved woodland dominated by beech (<i>Fagus sylvatica</i>). This SAC comprises one of the largest concentrations of <i>Asperulo-Fagetum</i> beech forests in Wales. Notable ground flora includes ramsons (<i>Allium ursinum</i>), sanicle (<i>Sanicula europaea</i>), bird's-nest orchid (<i>Neottia nidus-avis</i>) and yellow bird's-nest (<i>Hypopitys monotropa</i>).

Non-statutory Designations

- 3.11 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although such designations are typically considered to be of importance at a County level. In Cardiff, such designations are termed Sites of Importance for Nature Conservation (SINCs). Additional sites such as non-designated nature reserves (e.g. Wildlife Trust nature reserves) and Ancient Semi-natural Woodland (ASNW) are considered here when not covered by other designations. The importance of SINCs is recognised in PPW and in the Cardiff Local Development Plan, specifically Policy KP16 (Green Infrastructure 16) and EN5 (Designated Sites).
- 3.12 No part of the Site is covered by any non-statutory designations. There are six SINCs located within 2km of the Site, as summarised in **Table EDP 3.2** and shown on **Plan EDP 2**.

Table EDP 3.2: Non-Statutory Designations Within 2km of the Site

Designation	Approx. distance from Site	Interest Feature(s)
Blackweir and Dock Feeder SINC	61m south-east	An area of secondary ornamental woodland bisected by the abandoned dock feeder canal with a variety of natural and introduced ground flora.
River Taff SINC	277m west	Important river for migratory fish, otter, wildfowl and bankside vegetation. Major wildlife corridor, with bats, otter, Atlantic salmon, trout, grass snake (<i>Natrix helvetica</i>) and kingfisher (<i>Alcedo atthis</i>) recorded around the SINC.
Cathays Cemetery SINC	879m north	Supports grassland with a diverse assemblage of wax caps fungi.
Gabalfa Woods SINC	1.04km north-west	A linear area of secondary broadleaved woodland on the banks of the River Taff. The site is contiguous to the south with the Blackweir and Dock Feeder SINC, which supports similar habitat. Several small streams also flow into the River Taff, adding variety to the habitats within the site. The river, together with the woodlands and green spaces that adjoin it, forms an important corridor for the dispersal and movement of plant and animal species within Cardiff.
Roath Brook SINC	1.5km north-east	Designated as a small watercourse (streams, canals, brooks etc.) which is comparatively unmodified, supports good aquatic, emergent or bankside plant communities, and where the water is not grossly polluted by long-term sources. Eel (<i>Anguilla anguilla</i>), trout and kingfishers have all been recorded in and along the Roath Brook SINC.
Roath Lake SINC	1.99km north-east	A site supporting populations of both breeding and wintering or passage refuelling birds. The lake is an important habitat for bird species including Slavonian grebes (<i>Podiceps auratus</i>), pintail (<i>Anas acuta</i>), white stork (<i>Ciconia ciconia</i>) and red-necked grebe (<i>Podiceps grisegena</i>).

- 3.13 Of further pertinence, an area of Restored Ancient Woodland is associated with the banks of Blackweir and Dock Feeder SINC, 32m west of the Site on the opposite side of North Road, whilst Ancient Semi-natural Woodland is associated with the banks of the River Taff further west.

HABITATS

3.14 There are several mechanisms by which habitats that lie outside of statutory and non-statutory designations are protected, or by which their importance is recognised at a national level. This includes the following:

- 'Important' hedgerows are protected from removal (out with the planning process) by the *Hedgerows Regulations 1997*;
- Certain habitats are listed priority habitats, which public authorities in Wales must seek to maintain and enhance (to promote ecosystem resilience) as part of policy or decision making under Section 6 of the *Environment (Wales) Act 2016*;
- PPW includes a presumption against development which results in significant harm to biodiversity and ecosystem functioning, or results in the loss of irreplaceable habitat¹². PPW also sets out the how planning authorities should fulfil their 'Biodiversity and Resilience of Ecosystems Duty' as required the *Environment (Wales) Act*; and
- The importance of protecting habitats, and networks of habitats, is reflected in the Cardiff Local Development Plan including the following Policies:
 - KP16 Green Infrastructure;
 - EN4 Natural River Corridors: *"The Natural Heritage, character and other key features of Cardiff's river corridors will be protected, promoted and enhanced, together with facilitating sustainable access and recreation"*;
 - EN6 Ecological Networks and Features of Importance for Biodiversity: *"Development will only be permitted if it does not cause unacceptable harm to: i. Landscape features of importance for wild flora and fauna, including wildlife corridors and 'stepping stones' which enable the dispersal and functioning of protected and priority species; ii. Networks of importance for landscape or nature conservation. Particular priority will be given to the protection, enlargement, connectivity and management of the overall nature of semi natural habitats. Where this is not the case and the need for the development outweighs the nature conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development and compensatory provision will be made of comparable ecological value to that lost as a result of the development"*;
 - EN7 Priority Habitats and Species – *"Development proposals that would have a significant adverse effect on the continued viability of habitats and species which are legally protected or which are identified as priorities in the UK or Local Biodiversity Action Plan will only be permitted where: i. The need for development outweighs the nature conservation importance of the site; ii. The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts; and iii. Effective mitigation measures are provided by the*

¹² Irreplaceable habitats are technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed. Habitats noted as irreplaceable within PPW are ancient woodland, semi-natural woodland, and ancient, veteran and heritage trees.

developer. Where harm is unavoidable it should be minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not possible compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species should be provided.”; and

- EN8 Trees Woodland and Hedgerows: “Development will not be permitted that would cause unacceptable harm to trees, woodlands and hedgerows of significant public amenity, natural or cultural heritage value, or that contribute significantly to mitigating the effects of climate change”.

3.15 The distribution of different habitat types within the Site is illustrated on **Plan EDP 3**. Illustrative photographs are provided at **Appendix EDP 4**. A summary and qualitative assessment of these habitats is provided in **Table EDP 3.3**.

Buildings and Hardstanding

3.16 The Site is dominated by the footprint of two buildings (**B1-B2**), formerly comprising the Rosemount Funeral Home, with associated areas of hardstanding. A detailed description of each building is provided in the section below, relating to bats. Scattered scrub consisting largely of butterfly bush (*Buddleja davidii*) and bramble (*Rubus fruticosus* agg.) with ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*) saplings was recorded growing through the concrete with sedum (*Sedum* sp.) also establishing at ground level. This habitat is considered of negligible ecological importance.

Line of Trees

3.17 The eastern boundary of the Site is defined by a line of Leyland cypress (*Cupressus x Leylandii*) trees with some scattered sycamore growing amongst these. Holly (*Ilex aquifolium*) and honeysuckle are also present here (*Lonicera periclymenum*). A ground flora community is dominated by ground ivy (*Glechoma hederacea*) with occurrences of red campion (*Silene dioica*), herb-Robert (*Geranium robertianum*), sow thistle (*Sonchus oleraceus*), jasmine (*Jasminum* sp.) and Yorkshire fog (*Holcus lunatus*). Although dominated by non-native species, this habitat provides some habitat to nesting birds and is also of some value to the green infrastructure resource of the Site. This habitat is thus considered to be of Site level importance.

Ornamental Tree/Shrub Planting

3.18 Two main areas of ornamental shrub planting were recorded within the Site, predominantly along the western boundary. Privet (*Ligustrum* sp.), red robin (*Photinia* sp.), cotoneaster (*Cotoneaster* sp.) and butterfly bush were recorded here alongside native trees comprising ash and wild cherry (*Prunus avium*). These areas are currently unmanaged and overgrown. Given the small extent this habitat covers, dominated by non-native species and previously managed for amenity, ornamental tree/shrub planting is considered to be of negligible importance.

Scattered Trees

- 3.19 A number of scattered coniferous and broadleaved trees were recorded within the Site predominantly along its southern boundary and around the main, southern entrance to the Site. In addition to Leylandii cypress tree specimens include oak (*Quercus* sp.), cherry (*Prunus* sp.), ash, Norway maple (*Acer platanoides*) and red Norway maple (*Acer platanoides* 'Crimson King'). The majority of broadleaved, native specimens comprise young trees. Although limited in distribution across the Site, given their potential to support protected and notable species, namely nesting birds, whilst providing further benefits to climate regulation and ecosystem resilience, such habitats are considered to be of Site level importance.

Dense Scrub

- 3.20 The northern plot comprising the Site is entirely enclosed by a stone wall with no visible access into this area. A survey undertaken from North Road noted this area to be entirely overgrown with dense scrub comprising butterfly bush, bramble and young tree saplings with common ivy (*Hedera helix*) growing up the walls. Given the poor botanical and structural diversity combined with limited extent, dense scrub habitat is considered to be of negligible ecological importance.

Poor Semi-improved Grassland

- 3.21 A small area of poor-semi proved grassland was recorded along the southern boundary of the Site and was likely subject to frequent management when the buildings were occupied but is now unmanaged (circa 0.2m high). Yorkshire fog is dominant with occurrences of daisy (*Bellis perenne*), dandelion (*Taraxacum officinalis*) and speedwell (*Veronica* sp.). The area of grassland directly abutting the eastern boundary of the Site is slightly more species-rich than the rest of the sward with a community represented by soft brome (*Bromus hordeaceus*), Yorkshire fog, sweet vernal grass (*Anthoxanthum odoratum*), rough meadow-grass (*Poa trivialis*), meadow foxtail (*Alopecurus pratensis*), daisy, hawkbit (*Leontodon* sp.), dandelion, speedwell, lamb's-ear (*Stachys byzantine*), yarrow (*Achillea millefolium*), common sedge (*Carex nigra*), cuckoo flower (*Cardamine pratensis*), ribwort plantain (*Plantago lanceolata*), weigela (*Weigela* sp.) and pendulous sedge (*Carrex pendula*).
- 3.22 Given the poor structural and botanical diversity, combined with its limited extent and presence of non-native/ornamental species, poor semi-improved grassland is considered to be of negligible importance.

Wall

- 3.23 The boundaries of the Site are delineated by a stone/brick wall circa 2m high with some common ivy cover. Sections of low, brick walls (circa 30cm high) were also recorded within the Site itself. An artificial habitat with no distinctive habitat features, boundary walls are considered to be of negligible ecological importance.

Table EDP 3.3: Summary of Habitats within the Site

Habitat Type	Distribution	Intrinsic Ecological Importance*
Buildings and Hardstanding	Dominates the Site.	Negligible
Line of Trees	Delineates eastern boundary of the Site	Site
Ornamental Shrub Planting	Scattered patches along western boundary of the Site.	Negligible
Scattered Scrub	Scattered across hardstanding areas.	Negligible
Dense Scrub	Present in the northernmost plot of the Site.	Negligible
Scattered Trees	Predominantly along southern boundary of the Site.	Site
Poor Semi-improved Grassland	Present along the southern boundary of the Site	Negligible
Wall/Fence	Full wraps around the Site, marking its boundaries with North Road to the west, open space to the north and residential properties to the east and south.	Negligible

*Importance irrespective of any protected, priority or other notable species which may be present

- 3.24 As noted within **Table EDP 3.3**, the majority of the Site is made up of habitats which are of negligible, intrinsic importance. The line of trees, although non-native, comprise a linear, semi-natural feature with potential to facilitate dispersal of protected/notable species and thus is considered to be of Site level importance only. Furthermore, a number of the habitats, including those which are of negligible intrinsic importance, also require consideration in relation to their importance in maintaining populations of protected, priority or other notable species. This is discussed further below.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

- 3.25 Certain species receive legal protection in the UK and are commonly known as ‘protected species’. In reality, the level of protection for different species varies considerably, from protection solely against ‘killing and injury’ to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species-groups are provided below.
- 3.26 In addition to protected species there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status. This includes priority species, which public authorities in Wales must seek to maintain and enhance as part of policy or decision making under Section 7 of the *Environment (Wales) Act 2016*. PPW recognises species as an important component of biodiversity, as does the *Cardiff Local Development Plan*, Policy EN7 (Priority Habitats and Species).

- 3.27 The likelihood of presence, or confirmed presence, of protected, priority or other notable¹³ wildlife species within the Site is summarised below with reference to desk study records, habitat suitability and detailed surveys where relevant. Further details are made available within the appendices and plans where referenced.

Breeding and Wintering Birds

- 3.28 All wild birds, their nests and eggs are protected under the *Wildlife and Countryside Act 1981* (as amended) (WCA). This makes it an offence to:
- Intentionally kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Take, damage or destroy the egg of any wild bird; or
 - To have in one's possession or control any wild bird (dead or alive) or egg, or any part of a wild bird or egg.
- 3.29 In addition, further protection is afforded to those wild bird species listed on Schedule 1 of the WCA, prohibiting any intentional or reckless disturbance to these species while it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird. A number of species are also included as priority species.
- 3.30 A large number of records of bird species were retrieved during the desk study, including records of WCA Schedule 1 species, priority species, and those species included on the latest Red and Amber lists of Birds of Conservation Concern in Wales¹⁴. The vast majority of records received relate to species that would not normally breed in habitats found within the Site including several wader and waterfowl species associated with Cardiff Bay and the River Taff.
- 3.31 Records of red listed species typically pertinent to those habitats onsite, whether for nesting or foraging, include black-headed gull (*Chroicocephalus ridibundus*), cuckoo (*Cuculus canorus*), goldcrest (*Regulus regulus*), grasshopper warbler (*Locustella naevia*), greenfinch (*Chloris chloris*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), lesser black-backed gull (*Larus fuscus*), turtle dove (*Streptopelia turtur*) swift (*Apus apus*), starling (*Sturnus vulgaris*), lesser spotted woodpecker (*Dryobates minor*), linnet (*Linaria cannabina*), marsh tit (*Poecile palustris*), spotted flycatcher (*Muscicapa striata*), willow warbler (*Phylloscopus trochilus*) and whitethroat (*Curruca communis*).
- 3.32 Amber listed species include bullfinch (*Pyrrhula pyrrhula*), common gull (*Larus canus*), dunnoek (*Prunella modularis*), glaucous gull (*Larus hyperboreus*), great black-backed gull (*Larus marinus*), green woodpecker (*Picus viridis*), hawfinch (*Coccothraustes coccothraustes*), little gull (*Hydrocoloeus minutus*), Iceland gull (*Larus glaucoides*), hooded crow (*Corvus cornix cornix*), lesser redpoll (*Acanthis cabaret*), Mediterranean gull (*Ichthyaetus melanocephalus*), mistle thrush (*Turdus viscivorus*) and pied flycatcher (*Ficedula hypoleuca*).

¹³ Notable species are those which are not legally protected but are formally identified as being of conservation concern.

¹⁴ Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. 2022. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus 2:1.

- 3.33 Records of Schedule 1 species returned include fieldfare (*Turdus pilaris*), firecrest (*Regulus ignicapilla*), red kite (*Milvus milvus*) and peregrine falcon (*Falco peregrinus*), the latter associated with Cardiff Civic Centre south of the Site.
- 3.34 Dense scrub, shrub and coniferous/broadleaved trees onsite provide suitable nesting habitat for a limited assemblage of breeding birds likely dominated by those common and widespread species that typically frequent gardens and urban areas. Such habitats also provide a limited foraging resource for a bird assemblage whilst the buildings also provide additional nesting opportunities for such species as house sparrow and gulls. Given the limited extent of nesting habitat, the assemblage of breeding birds likely supported by the Site is considered to be of no more than Site level importance, with a wintering bird assemblage considered to be of negligible importance.

Bats

- 3.35 All species of British bat are listed as European Protected Species (EPS) on Schedule 2 of the *Conservation of Habitats and Species Regulations 2017* (as amended) (referred to as the 'Habitats Regulations'). This affords strict protection to bats and their roosts, and makes it an offence to:
- Deliberately capture, injure or kill a wild animal of an EPS;
 - Deliberately disturb wild animals of an EPS wherever they are occurring, in particular, any disturbance which is likely to impair their ability to survive, to breed or reproduce, to significantly affect the local distribution or abundance of the species to which they belong, or in the case of hibernating or migratory species, to hibernate or migrate; or
 - Damage or destroy a breeding site or resting place of a wild animal of an EPS.
- 3.36 Additional protection for bats is also afforded under the WCA, making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place. In addition, soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), greater horseshoe bat (*Rhinolophus ferrumequinum*), barbastelle bat (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), and lesser horseshoe bat (*Rhinolophus hipposideros*) are also listed as priority species.
- 3.37 The desk study returned a large number of records for bats within the 2km search radius around the Site. The vast majority of these are associated with Bute Park and the Taff Trail and include records for common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle, Daubenton's (*Myotis daubentonii*), greater horseshoe, lesser horseshoe, noctule, Nathusius pipistrelle (*Pipistrellus nathusii*), Myotis (*Myotis* sp.) and serotine (*Eptesicus serotinus*) bats.
- 3.38 A desk study also returned records of roosts for several of these species including: a roost for Daubenton's bat 300m west, dated 2010; two lesser horseshoe bat roosts (the closest 3km west); one noctule bat roost in Bute Park circa 560m north: 15 pipistrelle bat roosts (the closest within 390m west), a long-eared bat roost (202m south west), a brown long-eared bat roost 1.1km north west and multiple soprano pipistrelle and common pipistrelle bat roosts. This includes a maternity roost for both species circa 1.4km north-west and 850m south.

Bat Roosting

Trees

- 3.39 No trees with suitable features for bat roosting, were identified on-site, with the majority of the tree stock comprising young specimens, or early mature in the case of coniferous tree species.

Buildings/Built Structures

- 3.40 With respect to buildings, a total of two buildings were identified with suitable features for bat roosting, with both having 'High' suitability for bat roosting. Both buildings offer limited opportunities for hibernating bats however, with no cellars or underground areas that offer suitable conditions. The potential for cavities suitable for crevice dwelling bats within the loft voids cannot be ruled out however, although such internal building features are not characteristic of a classic hibernation site.
- 3.41 Following further dusk emergence/dawn re-entry surveys of each building, building **B1** was found to support a summer day roost for low numbers of non-breeding soprano pipistrelle bats.
- 3.42 Soprano pipistrelle bats are widely distributed across the UK, and whilst populations declined dramatically in the twentieth century, field survey data show statistically significant population increases¹⁵. With reference to *Table 3.2: Assessing Importance of Roosts* in the Bat Mitigation Guidelines¹⁶, the non-breeding soprano pipistrelle roost supported by the Site is considered to be of Site level importance.
- 3.43 Full details are provided within **Appendix EDP 3**, with building locations shown on **Plan EDP 3** and results of dusk emergence/dawn re-entry surveys illustrated on **Plans EDP 4-6**.

Bat Foraging/Commuting Activity

- 3.44 Overall, the habitats present within the Site were assessed as being of 'Low' suitability for foraging and commuting bats, being dominated by hardstanding and buildings with only small areas of predominantly non-native shrub/tree planting, dense scrub and species-poor grassland.
- 3.45 Low levels of common pipistrelle and soprano pipistrelle bats were recorded commuting across the Site, typically in an east-west direction during the dusk emergence surveys, with bats presumably dispersing to foraging grounds within Bute Park. Low levels of foraging activity were recorded within the Site. Overall, a foraging/commuting bat assemblage is considered to be of Site level importance only.

¹⁵ Bat Conservation Trust, 2023. The National Bat Monitoring Programme Annual Report 2022. Bat Conservation Trust, London. Available at www.bats.org.uk/our-work/national-bat-monitoringprogramme/reports/nbmp-annual-report.

¹⁶ Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

Dormouse

- 3.46 Hazel dormouse is an EPS receiving strict protection under the Habitats Regulations as summarised above in respect of bats. Additional protection is also afforded to this species under the WCA as summarised above in respect of bats. This species is also listed as a priority species.
- 3.47 A desk study returned three historical records for dormouse associated with Cooper's Field in Bute Park circa 700m south of the Site, dated 1912 and 2005. More recent records dated between 2010 and 2018 were associated with Howardian Local Nature Reserve and adjacent allotments circa 2.7km north-west. There is no connectivity between the Site and these records given the Site's location near Cardiff City Centre, with North Road delineating the western boundary and residential development lying to the north, east and south. Dense and scattered scrub, trees and shrubs present on-site are considered unsuitable for dormouse given their scattered nature and limited extent combined with their relative isolation from suitable habitat in the wider landscape. Dormouse is thus presumed absent from the Site.

Otter and Water Vole

- 3.48 Otter is an EPS receiving strict protection under the Habitats Regulations as summarised above in respect of bats. Additional protection is also afforded to this species under the WCA as summarised above in respect of bats. This species is also listed as a priority species.
- 3.49 Water vole and their burrows receive protection under Schedule 5 of the WCA. This makes it an offence to:
- Intentionally kill, injure or take (capture) a water vole;
 - Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a water vole uses for shelter or protection; and
 - Intentionally or recklessly disturb water voles while they are in a place of shelter or protection.
- 3.50 Water vole is also listed as a priority species.
- 3.51 No records of water vole were returned within 2km of the Site's boundaries, with the exception of an historical record for Roath Park dated 1900-1905. With respect to otter, a desk study returned 20 records, all associated with the River Taff which flows approximately 320m west of the Site.
- 3.52 There is no suitable habitat for either species either onsite or immediately adjacent. Water vole and otter are thus considered absent from the Site.

Badger

- 3.53 Badgers and their setts are protected under the *Protection of Badgers Act 1992*, which makes it an offence (*inter-alia*) to:
- Wilfully kill, injure, take, or cruelly ill-treat a badger; and

- Damage or interfere with a sett, by doing one of the following things:
 - Damage a badger sett or any part of it;
 - Destroy a badger sett;
 - Obstruct access to, or any entrance of, a badger sett;
 - Cause a dog to enter a badger sett; or
 - Disturb a badger when it is occupying a sett.

3.54 The 1992 Act defines a badger sett as “*any structure or place which displays signs indicating current use by a badger*”.

3.55 The protection afforded to badgers is primarily due to animal welfare issues and history of persecution rather than concerns over their unfavourable nature conservation status.

3.56 A desk study returned three records of badger were returned within 2km of the Site, the closest of which was returned was returned for Llandaff Fields circa 1.2km and 1.4km north-west of the Site. The third record was associated with Llandaff Cathedral, located 2.2km north-west. No evidence of badger was identified on-site during the Extended Phase 1 survey. Dense scrub in the north of the Site does provide some cover for this species as well as a foraging resource, albeit limited, with some connectivity to off-site foraging habitat comprising amenity grassland associated with Queen Anne Square. Presence of this species is, however, considered unlikely with the Site, being surrounded by high stone walls, whilst North Road, a busy main road into Cardiff City Centre, further limits dispersal of badger between the Site and suitable habitat within the wider landscape including Bute Park to the west. Nevertheless, given limitations to survey of the northern plot comprising dense scrub habitat, this species cannot be entirely ruled out. Badger is therefore considered to be of Site level importance given the widespread and common status of this species.

Other Mammal Species

3.57 Records of the following Priority mammal species were returned within 2km of the Site:

- European hedgehog (*Erinaceus europaeus*)¹⁷ – multiple records of this species, the closest circa 150m south of the Site;
- Weasel – 5 records of weasel, the closest circa 550m west, all associated with Bute Park or its boundaries; and
- Brown hare (*Lepus europaeus*) – one historical record dated 1970, returned for Bute Park circa 910m south.

3.58 Given the small size of Site, its location within a built-up area of Cardiff, combined with limited extent of semi-natural habitat, the Site is considered unsuitable for brown hare. Dense scrub does, however, provide suitable foraging habitat and cover for European hedgehog and weasel

¹⁷ Hedgehogs are also protected from capture or killing by specific methods under Schedule 6 of the WCA.

which are less reliant on availability of large, open habitat. Indeed, European hedgehog was identified onsite during the course of bat dusk/dawn surveys undertaken during August 2023. Such species are considered to be of Site level importance.

Great Crested Newt and Other Amphibian Species

- 3.59 Great crested newt is an EPS receiving strict protection under the Habitats Regulations as summarised above in respect of bats. Additional protection is also afforded to this species under the WCA as summarised above in respect of bats. This species is also listed as a priority species.
- 3.60 Other legally protected amphibians are rare and have a very restricted distribution¹⁸, however, common toad (*Bufo bufo*) is a widespread species which is listed as a priority species.
- 3.61 A desk study identified 14 records of great crested newt, all greater than 2km from the Site. The majority of these are associated with Heath Pond, circa 2.3km north of the Site. Records for other common amphibians within 2km of the Site include common frog (*Rana temporaria*), common toad, smooth newt (*Lissotriton vulgaris*) and palmate newt (*Lissotriton helveticus*).
- 3.62 No aquatic features occur within 500m of the Site with the exception of the River Taff and Black weir Dock Feeder, both flowing watercourses considered unsuitable for great crested newt. No suitable aquatic habitat is present on-site whilst terrestrial vegetation is limited to ornamental shrub/tree planting, species-poor grassland and dense scrub. The Site is furthermore isolated from suitable habitat in the wider landscape by main roads and residential housing. Although areas of green space lie to the immediate north of the Site, this appears to be managed for amenity and thus considered sub-optimal for an amphibian population. As such, great crested newt is considered likely absent from the Site, although there remains potential for low numbers of common amphibians to be present.

Reptiles

- 3.63 All species of common reptile, namely common lizard (*Zootoca vivipara*), slow-worm, grass snake (*Natrix helvetica*) and adder (*Vipera berus*), receive at least limited protection from harm under the WCA, making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as priority species.
- 3.64 Seventeen records for slow-worm were returned within 2km of the Site, the closest associated with residential housing 1.2km north of the Site. This is in addition to one record for adder and three records relating to grass snake. Suitable habitat is limited to dense scrub, shrub/tree planting and species-poor grassland of value as a foraging resource, although this is limited in extent and isolated by areas of hardstanding onsite. Suitable refugia and hibernacula is otherwise mostly absent onsite. The Site is, furthermore, isolated from suitable habitat in the wider landscape by main roads and residential housing. Although areas of green space lie to the immediate north of the Site, this appears to be managed for amenity. The Site is thus only likely to support low numbers of common reptile species, limited to dense scrub habitat and site boundaries. A common reptile population is thus considered to be of Site level importance.

¹⁸ Natterjack toad (*Epidalea calamita*) and Northern pool frog (*Pelophylax lessonae*) are EPS, protected under WCA and priority species.

Invertebrates

- 3.65 A desk study returned multiple records for invertebrate species, largely dominated by priority moth species recorded in association with open green space areas within the wider landscape. This is in addition for records of small blue (*Cupido minimus*), white-lettered hairstreak (*Satyrrium w-album*) and purple emperor (*Apatura iris*), all listed under Schedule 5 of the WCA and several Red Data Book species.
- 3.66 The Site is dominated by hardstanding with isolated patches of dense scrub, poor semi-improved grassland and tree/shrub planting exhibiting poor botanical diversity and thus of limited value as a foraging resource to a diverse assemblage of invertebrate species and/or significant populations of notable species. A notable invertebrate assemblage is thus considered to be of negligible importance.

Rare/Scarce Plant Species

- 3.67 A desk study returned multiple records of notable and locally important plants most notably for a number of red data book bryophyte species and waxcap fungi of local importance. Such records are primarily associated with the River Taff and Cathays Cemetery, the latter 890m north-east of the Site. Records of a number of vascular species were also returned, including wild clary (*Salvia verbenaca*), a local priority species returned circa 180m east of the Site, and yellow vetchling (*Lathyrus aphaca*), returned circa 510m south of the Site, with several Red data Book, priority species and species listed under Schedule 8 of the WCA returned for Bute Park and the River Taff. No notable plant species were recorded during the Extended Phase 1 Survey, with a dominance of non-native shrubs and trees.
- 3.68 A desk study also returned records of several invasive species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended). These included records for Japanese knotweed (*Fallopia japonica*), Japanese Rose, Montbretia (*Crocasmia pottsii* x *aurea* = *C. x crocosmiiflora*), three cornered garlic (*Allium triquetum*), Himalayan balsam (*Impatiens glandulifera*), rhododendron (*Rhododendron ponticum*), wall cotoneaster (*Cotoneaster horizontalis*), false Virginia-creeper (*Parthenocissus inserta*), Virginia creeper (*Parthenocissus quinquefolia*), hollyberry cotoneaster (*Cotoneaster bullatus*), Himalayan cotoneaster (*Cotoneaster simonsii*), giant hogweed (*Heracleum mantegazzianum*), and giant rhubarb (*Gunnera tinctoria*). No Schedule 9 species were identified during the Extended Phase 1 Habitat Survey however.

SUMMARY OF KEY SURVEY FINDINGS

- 3.69 The key ecological features/receptors pertinent to the development proposals, based on the survey findings described above, are set out in **Table EDP 3.4**.

Table EDP 3.4: Summary of Ecological Features

Feature	Key Attributes	Ecological Importance
Statutory Designated Sites		
Severn Estuary Ramsar Site	Supports important populations of overwintering waterfowl. Located 3.7km south-west.	International
Severn Estuary SAC	Important for Atlantic salt meadows, intertidal mudflats and sandflats, reefs and subtidal sandbanks and supports populations of several fish species. Located 3.7km south-west.	European
Severn Estuary SPA	An important site for migratory birds. The estuary is also important for migratory fish with species. Located 3.7km south-west.	European
Cardiff Beech Woods SAC	An area of semi-natural broadleaved woodland dominated by beech. Located 6.67km north-west.	European
Non-Statutory Designated Sites		
Blackweir and Dock Feeder SINC	An area of secondary ornamental woodland bisected by the abandoned dock feeder canal with a variety of natural and introduced ground flora. Located 61m south-east.	County
River Taff SINC	Important river for migratory fish, otter, wildfowl and bankside vegetation. Located 277m west.	County
Habitats		
Line of Trees	Delineates eastern boundary of the Site.	Site
Scattered Trees	Predominantly along southern boundary of the Site.	Site
Species		
Breeding Birds	Buildings, scattered trees and shrubs provide limited nesting habitat for common and widespread species.	Site
Roosting and Foraging/Commuting Bats	Building B1 supports one-two summer day roosts for non-breeding soprano pipistrelle whilst the eastern boundary tree line provides a green corridor for the dispersal of bat assemblage. Dense scrub, tree and shrub planting provides some foraging opportunities.	Site
Badger	Dense scrub across the northern plot provides some limited, suitable habitat for foraging badger.	Site

Feature	Key Attributes	Ecological Importance
Other Mammals	European hedgehog identified onsite whilst shrub/tree/grassland planting provides some limited foraging opportunities and cover.	Site
Other Amphibians	Shrub/tree/grassland planting provides some limited foraging opportunities and cover.	Site
Reptiles	Shrub/tree/grassland planting provides some limited foraging opportunities and cover.	Site

Section 4 Impact Assessment

- 4.1 This section of the Ecological Appraisal first considers any avoidance/mitigation which is embedded within development design, as represented by the Site Block Plan - Proposed and Landscape Proposals provided as **Appendix EDP 1** and **2** respectively. It then considers the likely impacts of the development proposals on the pertinent ecological features identified in **Section 3** in the absence of additional mitigation.
- 4.2 In brief, proposals comprise: construction of 15 apartments in two blocks and the change of use of the retained Rosemount Villa Funeral Home to create four apartments; the associated demolition of existing garages, workshop and part boundary wall; together with parking, access, amenity space and landscaping.

EMBEDDED MITIGATION

- 4.3 The development layout, reflects some important measures to avoid, mitigate or compensate for ecological impacts as well as other measures designed to provide long-term ecological enhancements. This embedded mitigation comprises the following:
- The retention of circa 169m² of the eastern boundary coniferous tree line;
 - Retention of trees **T2**, **T3** and **T8** as illustrated within the Arboriculture Impact Assessment to be submitted with a planning application;
 - Inclusion of sustainable drainage systems including a detention basin and rain gardens to manage surface water-runoff from new development; and
 - Inclusion of new green infrastructure features including shrub, tree and grassland planting as illustrated at **Appendix EDP 2**.

IMPACTS ON DESIGNATED SITES

Statutory Designations

- 4.4 As described in **Section 3**, there are four statutory designations within the potential zone of influence of the Site. The potential impacts on these designations, in the absence of additional mitigation, are discussed below.

International Designations

- 4.5 The Severn Estuary Ramsar Site, SPA and SAC all lie within 3.7km of the Site and together are designated for significant populations of overwintering waterfowl, important migratory fish species and coastal, intertidal and subtidal habitats. In addition, the Cotswold Beechwoods designated for its woodland habitat, is located 6.67km north-west of the Site.

- 4.6 In accordance with Part 6 of the Habitats Regulations, a Habitat Regulations Assessment (HRA) is required where a plan or project may give rise to significant effects upon any European site designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the European Community. This includes SACs designated for their habitats and/or species of European importance, and SPAs classified for rare, vulnerable and regularly occurring migratory bird species. Such requirements also apply to those sites going through the formal designation process, including candidate SACs (cSACs) and Sites of Community Importance (SCIs). Additionally, Government policy also affords the same level of protection to internationally important wetlands (Ramsar sites), potential SPAs (pSPAs), possible SACs (pSACs) and proposed Ramsar Sites, requiring such sites to also be treated as European sites for planning purposes.
- 4.7 Cardiff Council's deposit LDP and Preferred Strategy were previously subject to a Habitat Regulations Assessment (HRA) in 2012¹⁹, which considered the likely significant effects to arise through allocated development (Policies H1 and KP2), on European sites within the zone of influence such as the Severn Estuary Ramsar, SAC and SPA.
- 4.8 The HRA identified several potential effects of allocated on the Severn Estuary Ramsar, SAC and SPA, comprising:
- Dust, noise, vibration, movement and odour associated with industrial and construction processes leading to disturbance of species and changes in nutrient and/or organic loading;
 - Impacts on surface water run-off leading to contamination and changes in nutrient and/or organic loading;
 - Increased traffic movements leading to disturbance of species and contamination of habitats;
 - Land take leading to loss of habitat;
 - Wastewater and sewage leading to contamination and changes in nutrient and/or organic loading; and
 - Increased noise and light pollution, leading to disturbance of species.
- 4.9 The HRA report determined that there would be no likely significant effects on the Severn Estuary subject to implementation of development in accordance with those policies of the Local Development Plan, in addition to effluent consent limits laid down by the Environment Agency/NRW and pollution contingency plans by the Cardiff Harbour Authority.

¹⁹ Cardiff Council/Enfusion (2012) Habitats Regulations Appraisal Screening Report. Background Technical Paper No. 4, October 2012.

- 4.10 Subsequent HRAs of the deposit LDP were undertaken in June 2015²⁰, October 2015²¹ and January 2016²² for the new Matters Arising Changes Schedule (MAC) and the Inspector Changes arising from Hearing Sessions 20-26. None of the new MACs or Inspector Changes were judged to have the potential to affect any of the International Sites in and around Cardiff, above or beyond those potential impacts already considered in the original HRA. As such, no further assessment under the Habitat Regulations was considered necessary with respect to allocated development across the Site.
- 4.11 The Site itself does not benefit from any formal allocation but nevertheless comprises previously developed land dominated by hardstanding and is sufficiently distant from the Severn Estuary such that no impacts associated with habitat loss, air quality and disturbance are anticipated.
- 4.12 Whilst there are no surface waterbodies on-site, there does remain the potential for some level of surface/ground hydrological connection between the Site and Cardiff Bay, particularly given the proximity of the River Taff Which flows circa north to south 277m west of the Site. As such and in the absence of mitigation, there is the potential for more frequent use of the Site and occupation by new residents to increase the level of contaminated surface water runoff to land drains with subsequent negative effects the water quality of the Severn Estuary Ramsar site/SPA/SAC. Inherent within development proposals, however, is the inclusion of sensitive drainage features including rain gardens and a detention basin, to manage surface water runoff from the Site during the operational phase of proposed development. Such features are to incorporate new planting including native species and ornamental flowering shrubs which provide a new foraging resource for breeding birds, bats and invertebrates whilst the detention basin is to be seeded with a species-rich grassland mix, providing additional foraging opportunities to wildlife.
- 4.13 There does, however, remain the potential for impacts associated with increased contaminated surface water runoff during the construction phase of development which could be transferred further downstream to the Severn Estuary. Pollution incidents could also arise as a result of leaks and spills from construction activities, resulting in the introduction of hydrocarbons and other contaminants from demolition activities, site plant or of sediment loads arising from dust deposition or spoil movement.
- 4.14 With respect to Cardiff Beech Woods SAC, no impacts associated with, for example, habitat loss, air pollution and disturbance are predicted given its distance and spatial separation from the Site. Although the SAC is sensitive to recreational disturbance, given the availability of significant areas open green space within close proximity to the Site (most notably Bute Park) which offers alternative opportunities for recreation, likely significant effects upon the Cotswold Beechwoods arising from proposed development are not considered to arise.

²⁰ Cardiff Council/Enfusion (2015a) Habitats Regulations Appraisal of Matters Arising Schedule, June 2015.

²¹ Cardiff Council/Enfusion (2015b) Habitats Regulations Appraisal of Matters Arising Schedule, October 2015.

²² Cardiff Council/Enfusion (2016) Habitats Regulations Appraisal of Matters Arising Schedule of Deposit Local Development Plan, January 2016.

Non-statutory Designations

- 4.15 As described in **Section 3**, there are six statutory designations within the potential zone of influence of the Site. The potential impacts on these designations, in the absence of additional mitigation, are discussed below.
- 4.16 In respect of Cathays Cemetery SINC, Gabalfa Woods SINC, Roath Brook SINC and Roath Lake SINC, these are sufficiently distant from the Site such that no direct or indirect effects are anticipated. There is, furthermore, no hydrological connectivity between the Site and aquatic habitats associated with Roath Brook and Roath Lake SINC's, these flowing being located within different catchments and joining the River Rhymney before discharging into Cardiff Bay.
- 4.17 The Blackweir and Dock Feeder SINC and River Taff SINC are however located within 61m and 277m west of the Site respectively such that there is the potential for indirect effects associated with an increase in contaminated surface water runoff from the Site during the construction and operation phase of development.

IMPACTS ON HABITATS

- 4.18 Habitats within the Site have been assessed through an Extended Phase 1 survey. The Site mainly contains habitats that are considered to have negligible or site-level ecological value, comprising predominantly hardstanding. Habitat losses are confined to small, isolated areas of dense and scattered scrub, non-native shrub and tree planting and species-poor grassland. The loss of such habitat features are not considered significant on ecological grounds, however, given their small extent and limited potential to support protected and notable species. Of further note, development design has sought to retain those habitats of greater intrinsic ecological value or those which contribute to the green infrastructure resource of the Site, including the majority of the conifer tree line along the eastern boundary of the Site (amounting to 169m²) and some scattered broadleaved trees (trees T2, T3 and T8) as identified in the Arboriculture Impact Assessment (report reference: edp7987_r003).
- 4.19 Notwithstanding there remains the potential for physical damage and/or indirect degradation of these feature to occur during construction, given the proximity of built development and/or proposed landscaping works. Retained trees and may be further subject to indirect impacts, such as soil compaction, erosion and pollution (including air pollution). In the absence of mitigation, the extent and magnitude of such negative, medium-term (i.e. duration of the construction phase), is likely to be relatively minor owing to such habitat being restricted to site boundaries, albeit the effects could be permanent and potentially irreversible.
- 4.20 Indirect effects associated with increased levels of disturbance will likely occur during the construction phase though the use of lighting and increased levels of vehicular traffic, machinery use and plant movement. Given that the majority of the works will be undertaken during daylight hours, the usage of artificial lighting will likely be limited to the early morning and early evening hours, with greater requirements for artificial lighting during the winter months. This could potentially impact upon retained trees and the species using it (see below). In the absence of additional mitigation, impacts associated with disturbance and lighting may persist during the operational phase following occupation of the Site.

IMPACTS ON PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

Breeding Birds

- 4.21 The loss of potential bird nesting habitats following development of the Site will primarily be limited to dense bramble scrub associated with the northern plot, scattered non-native tree and shrub planting, and building **B2**. In contrast, the eastern boundary coniferous tree line and building **B1** will be retained, although disturbance of nesting and foraging habitat through light spill, noise, visual and human disturbance during construction could potentially occur, particularly in light of proposals to re-furbish building **B1**.
- 4.22 In respect of the magnitude of habitat loss, degradation and disturbance combined with the importance of a breeding bird assemblage onsite, such impacts are considered limited and will occur at the Site level only.
- 4.23 Of further pertinence, is the potential for clearance/demolition of vegetation/buildings to result in direct harm/injury to nesting birds if present. However, the legal protection afforded to birds and their nest (their eggs and young) and the requirement to avoid commencement of such works during the breeding bird season is considered inherent mitigation to ensure no effects relating to direct harm/injury arise in respect of the breeding bird assemblage. Therefore, negligible impact is predicted.

Bats

Impacts on Roosting Bats

- 4.24 In respect of the non-breeding soprano pipistrelle summer day roosts supported by building **B1**, this building will be retained, albeit subject to renovation with replacement/repair of external features and removal of the two rear projections to the building and fire escapes. As such, there is potential for impacts associated with loss/modification of a roost to arise should proposals require the removal/replacement of identified roosting features.
- 4.25 With respect to building **B2**, although considered to have 'High' suitability to support roosting bats following a visual assessment undertaken by EDP in 2023, further dusk emergence/dawn re-entry surveys found no evidence of roosting bats.
- 4.26 Development will also result in the loss of several trees present across the Site; however, all trees onsite are considered to have negligible potential to support roosting bats. As such, no impacts to roosting bats are anticipated during removal of trees on-site.
- 4.27 With respect to a foraging/commuting bat assemblage, relatively low levels of activity dominated by common and soprano pipistrelle were observed during the dusk emergence/dawn re-entry surveys. Although dense scrub, shrub/tree planting and species-poor grassland offers a foraging resource to a bat assemblage, these habitats are limited in extent and patchy in their distribution, whilst existing lighting within/adjacent to the Site is likely to deter a significant bat assemblage. As such, effects associated with loss of foraging habitat and dispersal corridors are considered negligible, particularly given the proposed retention of the eastern boundary tree line comprising the only linear, semi-natural feature with some value as a wildlife corridor.

- 4.28 Indirect disturbance (particularly light spill) upon roosts associated with building **B1** and commuting/foraging habitat may arise during construction. However, given that the majority of the works will be undertaken during daylight hours, the usage of artificial lighting will likely be limited to the early morning and early evening hours, with greater requirements for artificial lighting during the winter months. There further remains the potential for an increase in disturbance upon the roosting bat assemblage during the occupational phase of development due to an increase in disturbance arising from increased human presence, vehicular use, noise and light originating from residential dwellings. The usage of artificial lighting across the Site could also result in detrimental effects upon bat species due to light spill upon adjacent habitats in use as foraging and commuting corridors. However, suitable bat habitat is already subject to some level of disturbance given the location of the Site within a built-up area of Cardiff subject to background levels of lighting, such that impacts are considered much reduced.

Badger

- 4.29 With respect to badger, dense scrub across the northern plot and areas of shrub and grassland planting provides some foraging habitat, albeit limited in extent and quality. Given the small extent of semi-natural habitat combined with the availability of higher quality habitats within the wider landscape, loss of foraging habitat from the Site is not considered significant.
- 4.30 No active setts were identified on-site, such that no impacts to badger associated with loss of/damage to a place of rest are likely. However, given the potential for badger to excavate setts in a short space of time there is potential for badger to occupy suitable habitat in future. Future development may therefore result in loss/damage to an active sett in addition to the potential for harm/injury to this species resulting from an increase in the movement of construction traffic and entrapment within open excavations.

Reptiles, Amphibians and other Mammals

- 4.31 Development will require the loss of dense scrub, grassland and shrub/tree planting. Such habitat is, for the main part, scattered and fragmented in its distribution, surrounded by existing hardstanding and buildings and, therefore, considered unlikely to support a common reptile population, although low numbers of these species in addition to common amphibians and European hedgehog may be associated with dense scrub habitat across the northern plot and the vegetated eastern boundary. Indeed, European hedgehog was recorded on-site during the dusk emergence/dawn re-entry surveys of the Site. Overall, the reduction of available habitat to population of these species is considered negligible.
- 4.32 In the absence of additional mitigation there is, furthermore, the potential for damage/degradation of retained habitats of limited value to reptiles, amphibians and European hedgehog, combined with the killing and injury of such species during vegetation clearance and following increased levels of traffic movements by vehicles, machinery and plant throughout the construction and operational phases of development.

Section 5

Mitigation and Enhancement Strategy

- 5.1 This section of the Ecological Appraisal considers the impacts set out in **Section 4** and puts forward additional measures to firstly avoid any ecological impact, and if this is not possible then to minimise the likely impacts of the proposed development to insignificant levels, to comply with relevant planning policy and avoid any infringement of relevant legislation.
- 5.2 This section also sets out proposed ecological enhancements for the Site, in line with the wording within PPW and local planning policy including EN7, requiring developments to contribute to and enhance the natural and local environment.

DESIGNATED SITES

Statutory Designations

- 5.3 To protect water quality of the Severn Estuary Ramsar Site/SPA/SAC, appropriate pollution control measures will be employed in accordance with the relevant *Pollution Prevention Guidelines* (PPGs) published by the Environment Agency²³, namely PPG1 'General Guide to the Prevention of Pollution', PPG5 'Works and Maintenance in or Near Water', PPG6 'Pollution Prevention Guidance for Working at Construction and Demolition Sites', and PPG21 'Pollution Incident Response Planning', to ensure that detrimental effects on nearby watercourse as a result of surface run-off, spillage and pollution arising throughout the construction phases are avoided.
- 5.4 Subject to the implementation of the measures summarised above and inherent mitigation previously discussed in **Section 4**, impacts on statutory designations will be avoided or reduced to insignificant levels, such that the development can be delivered in accordance with relevant legislation and planning policy.

Non-statutory Designations

As described in **Section 3**, there are six statutory designations within the potential zone of influence of the Site of which there is potential for impacts to arise upon the Blackweir and Dock Feeder SINC and River Taff SINC. However, subject to the implantation of sustainable drainage strategy combined with adoption of pollution prevention measures during construction, impacts on non-statutory designations will be avoided or reduced to insignificant levels, such that the development can be delivered in accordance with relevant planning policy.

HABITATS

- 5.5 With respect to retained vegetation including the majority of the eastern boundary tree line and trees **T2**, **T3**, **T8** and **T12** protective fencing will be erected as recommended within BS5837:

²³ PPGs were withdrawn in December 2015; however, they remain the main source of information on good practice in Wales with respect to guidance on pollution prevention. A replacement guidance series, comprising Guidance for Pollution Prevention (GPPs), are currently in development.

2012 *Trees in relation to design, demolition and construction* to physically protect retained habitats on-site with establishment of Ecological Protection Zones (EPZs). Protective fencing will incorporate the full root protection area of the feature to be retained and will be protected and maintained throughout the duration of all site enabling and pre-construction activities.

- 5.6 No works (other than planting), including the storage of materials, plant and machinery, will be carried out within or immediately adjacent to all areas of protective fencing/areas marked for protection as described above, so as to ensure no detrimental impacts to sensitive features arising from physical damage and/or pollution. The digging of trenches and pits for new tree and scrub planting adjacent to areas of protective fencing, where this lies inside root protection areas, will be carried out by hand only, in accordance with best practice guidance as stipulated within BS 5837:2012.
- 5.7 In addition, construction will be limited to daylight hours as far as possible to mitigate effects of increased visual and noise disturbance, with the use of temporary, artificial lighting avoided during the hours between dusk and dawn, with directional and low-level lighting used away from sensitive habitat corridors to mitigate effects relating to increased use of artificial lighting.
- 5.8 This will be combined with the provision of new tree, hedgerow and shrub planting to compensate for loss of habitats of negligible-site level importance. Detailed specifications for new planting and other habitat creation described in **Section 4** have been provided within the Landscape Proposals provided at **Appendix EDP 2**. New habitat features will include:
- The planting of native and ornamental shrubs within proposed rain gardens and around the edges of the detention basin so as to diversify habitats suitable for protected species within suitable drainage features;
 - The provision of new tree planting along the boundaries of the Site and edges of green space incorporating native and fruiting species compensating for tree loss elsewhere across the Site whilst delivering biodiversity and visual amenity benefits, including the maintenance of a wildlife dispersal corridor along the eastern boundary;
 - The planting of hedgerows to the frontage of new buildings comprising *Virburnum tinus*. Although these are to be managed for amenity. Although ornamental, hedgerows comprise a flowering species of potential value to invertebrate pollinators;
 - The seeding of the detention basin with a species-rich marshy grassland mix providing a foraging resource to protected/notable species including a bird and bat assemblage, badger, reptiles/amphibians, common reptiles and European hedgehog (Emorsgate EM8 seed mix for wetlands incorporating six grassland species and 19 herb species); and
 - The inclusion of grassland habitat around the edges of new and retained buildings and the proposed detention basin to be seeded with a species-rich lawn mix (Germinal WFG 20 comprising eight grassland species and 20 herb species).
- 5.9 Such planting is considered to sufficiently compensate for habitat losses anticipated, whilst ensuring the protection and further enhancement of retained habitats to maximise habitat function and connectivity across the Site. This will be in addition to the sensitive management

of such habitats and features in order to increase their resilience and mitigate long-term disturbance effects.

- 5.10 In addition, the scheme should implement a sensitive lighting strategy to ensure no/limited light spill occurs within close vicinity to retained features and/or offsite habitats. Where lighting is required along road/pedestrian routes adjacent, lighting columns should be sited within the development footprint itself and directed away from habitat edges to minimise disturbance and light spill. Lighting should include directional, timed and/or low-lux lighting, utilising shields and/or hoods where required. Such measures could be secured via planning condition attached to any future consent.
- 5.11 The proposed measures described above would ensure there is an overall net benefit to habitats of ecological value within the Site, thereby potentially resulting in positive effects at a Site.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

Breeding Birds

- 5.12 The habitat protection measures described above will avoid harm to breeding birds present with retained habitats. However, some removal of shrub and tree planting combined with demolition of **B2**, which are capable of supporting nesting birds, will be required to facilitate the development. Similarly, proposed renovation of building **B1** may result in further loss of/disturbance to nesting birds if present at the time of works.
- 5.13 Given the protection afforded to all breeding birds, their nests, eggs and young, sensitive vegetation clearance (and building demolition) required during the pre-construction and construction phases of development should be timed to avoid the main bird breeding season (i.e. March to August inclusive). Should this seasonal constraint prove impracticable, then vegetation clearance/building demolition outside of this period should only commence following the advice and under supervision of a suitably qualified ecologist. Pre-commencement checks for active nests will be required prior to any vegetation clearance occurring during the main bird breeding season, with appropriate buffers marked out around active nests or nests under construction, until all eggs have hatched, and chicks fledged.
- 5.14 The proposed planting of new trees and shrubs combined with retention (for the most part) and management of the eastern boundary tree line will together enhance opportunities for foraging and nesting birds post-development.
- 5.15 Further enhancement of bird nesting opportunities can be achieved through installation of bird boxes/bricks on retained trees and/or on new buildings. A variety of new nest boxes are suggested to accommodate different bird species and include:
- Two Schwegler 1B nest boxes with 26mm holes for blue tit and coal tit to be installed on retained trees along the eastern boundary of the Site;
 - Four 1SP Schwegler Sparrow Terrace or similar to be installed on the eastern and southern elevations of proposed apartment blocks; and

- Two Schwegler 17A Swift boxes or similar to be installed on the eastern and southern elevations of proposed apartment blocks.

5.16 In each instance, boxes should be hung at a height of 3m or higher above ground level, with the entrance facing away from prevailing winds and sources of light and within or immediately adjacent to good tree or shrub cover to increase the shelter and food source available to nestlings. When installed, birds should have a clear flight path to the nest without clutter directly in front of the entrance.

Bats

Roosting Bats

- 5.17 Given the absence of suitable roosting features within onsite trees, no impacts to tree roosting bats following development of the Site is anticipated. Nevertheless, and prior to clearance, all mature trees to be felled/subject to tree pruning will be subject to an update ground-level inspection by a suitably qualified ecologist to determine their current potential to support roosting bats. Where trees are identified as having moderate or greater potential at the time of the update survey, then such trees will be subject to a further detailed aerial inspection, whereby all suitable roosting features will be checked at height for the presence of bats. Aerial surveys will be undertaken by a suitably qualified and NRW bat licensed ecologist, arboricultural contractor with a NRW bat survey licence, or with experience of working with bats and under the supervision of a NRW bat survey licence holder.
- 5.18 If any bats are discovered during the aerial inspection, owing to the strict legal protection afforded to bats and their roosts, works are likely to require a Development Licence from NRW before works can continue.
- 5.19 If no evidence of roosting bats is uncovered during the aerial inspection, works may proceed without a Development Licence from NRW. However, regarding those trees identified as having potential to support roosting bats, a 'soft felling' technique' involving the sectional dismantling of the tree will be adopted, involving the following:
- Tree felling will avoid cutting through any cracks, cavities, limb/knot holes or any other potential roosting features – i.e. by cutting above and below the feature when removing sections with suitable features;
 - Any sections to be cut supporting suitable roosting features are to be suitably harnessed and supported before cutting using industry-standard rigging equipment, and gently lowered to the ground once cut, to avoid violent shaking of potential roosting features; and
 - Any cut sections with potential roosting features are to be retained onsite by one of the following methods:
 - Strapping to existing, retained mature trees and appropriately secured in position;
 - Retained on-site at ground level within an area of retained woodland; and
 - Retained onsite for minimum 48 hours, with potential entrances not blocked i.e. facing away from ground, before they are removed or chipped.

- 5.20 Should any bats be discovered during the felling of these or any other trees, then works will necessarily cease and a suitably qualified and NRW bat licensed ecologist contacted for further advice. It may be necessary to obtain a development licence from NRW before works can continue.
- 5.21 Given the potential for trees to degrade/decay over time such that their potential to support roosting bats may increase, should the felling of trees with bat potential occur more than 12 months since the previous bat roost assessment, then such trees should be subject to an update tree roost assessment by a suitably qualified and NRW bat licensed ecologist, with appropriate mitigation/precautionary measures followed.
- 5.22 Given the absence of bat roosts identified within buildings **B2**, no constraints to proposed demolition are anticipated such that there is no requirement to obtain a development licence from NRW. Nevertheless, and given the 'High' suitability of the building to support a roost, a precautionary approach to demolition is advised. Works to the roofs, soffits, bargeboards, fascias, and other potential roosting features should ideally be undertaken between October to March so as to avoid the main bat roost and bird breeding seasons. Should this not be practicable, then pre-commencement checks carried out by a suitably qualified ecologist will be required immediately prior to commencement of works. In addition, should demolition of **B1** occur more than 12 months since the previous bat roost assessment, then an update assessment by a suitably qualified and NRW bat licensed ecologist will be required.
- 5.23 Contractors carrying out the works should be warned of the possible presence of roosting bats and nesting birds and of their protected status. In the event of any bats (or occupied bird nests) are found during works, then all works should cease in the affected area until advice from a suitably qualified and licensed ecologist is sought.
- 5.24 Dusk emergence/dawn re-entry surveys did, however, identify non-breeding summer day roosts for soprano pipistrelle bats within building **B1**. Although this building will be retained within the development, there is the potential for loss/damage/modification/disturbance of a roost during its proposed renovation. As such, a development licence from NRW will be required prior to the proposed development of Site. In general, any renovation works to potential and confirmed external and internal roosting features (including the roof void, roof tiles, soffits, fascia and barge boards), will necessarily be confined to the autumn (September to November) or early spring (March/April) months to avoid the main bat hibernation and roosting seasons, unless otherwise approved within the future NRW Development Licence. Prior to commencement of proposed works, suitable bat boxes will be installed on suitable mature trees present along the eastern and southern boundaries to be retained following the advice of a suitably qualified ecologist. These will act as suitable receptor sites for bats in the unlikely event that any individuals are found and/or displaced during the renovation works and to compensate for roost loss arising as a result of proposed activities.
- 5.25 Soft-stripping of any features deemed to have potential for bats will be undertaken under the supervision of the named ecologist and/or accredited agents/assistants listed on the Development Licence. Contractors will remove all fascias, bargeboards, soffits, roof tiles, etc. by hand, carefully checking for any evidence of bats.

- 5.26 In addition to the bat boxes installed on trees, further compensatory measures suitable for crevice dwelling bats will be provided within retained building **B1**. Such roosting features may include the installation of bat access ridge tiles within the fabric of the building to provide access into the roof void as well as the cavity between roofing tiles and the loft space. Such cavities can be created by placing sarking board between the rafters of the loft, against the felt, creating a 20–50mm gap between them. In addition, lifted tiles can be provided across the roof to provide further opportunities for crevice-dwelling bats. Alternatively, the integration of Schwegler 1F Bat Tubes, bat bricks or similar into the exteriors of the building should be accommodated. Additional enhancement of bat roosting opportunities can also be achieved through installation of bat bricks within the fabric of new buildings.
- 5.27 With respect to a foraging/commuting bat assemblage, those habitat creation measures detailed above in relation to habitats and breeding birds will provide adequate compensation for minor losses arising across the Site.
- 5.28 To avoid disturbance of a foraging/commuting bat assemblage during construction however, working at night and the use of night lighting should be avoided. Where this is not possible (i.e. for security reasons), lighting should be kept to the lowest permissible level through the use of sensitive lighting design as detailed above in respect to habitats and directed away from retained trees lines. This should be combined with implementation of a sensitive lighting strategy during the operational phase of development to ensure that retained habitats adjacent to the Site (namely the eastern boundary tree line) used by light-sensitive species such as bats will not be adversely lit.
- 5.29 Subject to the implementation of those key mitigation measures detailed above with respect to bats and previously with respect to habitats, no significant detrimental impacts upon the roosting and foraging/commuting bat assemblage utilising the Site are considered likely to arise.

Badger

- 5.30 Due to the mobility and widespread nature of badger, in addition to the presence of foraging habitat comprising dense scrub across the northern extent of the Site, a prior survey of the Site by a suitably qualified ecologist is recommended prior to the commencement of construction or site clearance works to determine whether any badger setts have been established during the interim period.
- 5.31 In the unlikely event an active sett is identified, and owing to the strict legislation protecting active setts, a licence from NRW will be required to exclude badger from the sett (restricted to the period between July and November inclusive), with a mitigation strategy based on the following principles:
- Exclusion of badgers from setts using one-way gates where confirmed active at the time;
 - Sett monitoring of closed setts, to ensure badgers have not regained access to any setts; and
 - Excavation of the badger sett with all tunnels dug back to end.

5.32 In addition to the above and in respect of the presence of badgers more generally, the following measures will apply throughout the construction phase of the Development:

- All machinery will be operated by trained personnel only;
- There will be no working at night as far as possible; and
- All trenches/excavations will be covered up overnight and a means of escape provided to avoid wildlife becoming trapped.

Reptiles, Amphibians and Other Mammals

5.33 Given the limited potential of the Site to support low numbers of common reptiles, common amphibians and other mammals with European hedgehog confirmed present on-site, a precautionary approach to habitat clearance is recommended to ensure no harm to these species. Clearance of any suitable vegetation should be undertaken in accordance with the following precautionary methods of working:

- Vegetation clearance should be undertaken during the late spring and early autumn months so as to avoid the main hibernation period of hedgehog and common reptiles/amphibians (typically considered to be between October and March);
- Should the above seasonal constraint be considered impracticable, then clearance works between late October and March inclusive may require pre-commencement checks and/or supervision by a suitably qualified ecologist to ensure no disruption to potential hibernacula, with the adoption of additional precautionary measures as appropriate;
- A first cut should aim to reduce vegetation height to no less than 200mm and should be undertaken through the use of a hand-held strimmer or brush cutter. The second cut should be undertaken thereafter and within 24 hours of the initial cut, during which the vegetation should be reduced to ground level;
- Both cuts should be undertaken in a direction towards retained habitats, i.e. towards the coniferous tree line or adjacent semi-natural habitat off-site, so as to allow for any wildlife present to disperse safely towards this resource;
- Any suitable refugia identified during clearance works will be subject to a finger-tip search by a suitably experienced ecologist with any species identified re-located to areas of retained vegetation. Thereafter, refugia will be dismantled by hand and relocated to areas of retained vegetation to ensure suitable refuge/hibernation opportunities are retained; and
- In the event any reptiles, amphibians or European hedgehog are identified during site clearance these will be captured by hand and immediately released into retained habitat located immediately adjacent to the construction footprint.

5.34 More generally, however, and particularly in respect of hedgehog, the following precautionary measures will be adhered to during the construction phase:

- All machinery will be operated by trained personnel only;

- There will be no working at night;
- All trenches/excavations will be covered up overnight and/or a means of escape provided (such as mammal ramps) to avoid wildlife becoming trapped; and
- Any open pipework with an outside diameter of greater 120mm must be covered at the end of each working day to prevent animals entering/becoming trapped.

5.35 To facilitate the dispersal of European hedgehog across the Site during operational phases of development, any proposed close board fencing marking the boundaries between development, formal landscaping features or semi-natural habitat offsite, should have a 13cm x 13cm gap in the bottom to allow hedgehogs to pass through.

Section 6

Summary and Conclusions

6.1 **Table EDP 6.1** provides an overview of Mitigation and Enhancement Strategy described in **Section 5**.

Table EDP 6.1: Summary of Proposed Mitigation and Enhancement

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
Avoid by design	Retention of habitats with appropriate development buffers including: <ul style="list-style-type: none"> Majority of the eastern boundary coniferous tree line comprising 169m²; and T2, T3 and T8. Implementation of a sustainable drainage strategy. Retention of building B1 .	Habitat retention embedded in the Landscape Proposals provided at Appendix EDP 2 which will be an 'approved plan' to which future detailed designs must align
Avoid or minimise construction impacts	Sensitive methods of operation during enabling and construction works: <ul style="list-style-type: none"> Control of working hours; Minimise noise and vibration; Air quality measures/dust suppression; Surface water management; Storage of fuels/chemicals; and Sensitive lighting. 	Construction Environmental Management Plan (CEMP) secured via pre-commencement planning condition.
	Protection of retained habitats: <ul style="list-style-type: none"> Fencing and signage to create development exclusion zones. 	Arboricultural Method Statement (AMS) secured via pre-commencement planning condition.

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
	<p>Methods to avoid harming individuals or interfering with breeding of protected species prior to/during habitat destruction:</p> <ul style="list-style-type: none"> • Pre-commencement checks/surveys; • Implementation of works to building B1 in accordance with an NRW eps Development Licence for bats; • Avoidance of trapping animals in excavations; • Timings to avoid sensitive periods/breeding seasons; • Capture and translocation of animals from construction footprint; • Phased vegetation clearance; • Maintaining dispersal routes; • Destructive searches; and • Supervision by Ecological Clerk of Works (ECoW). 	<p>Planning condition to secure mitigation measures detailed within this report.</p> <p>Detailed Method Statements for bats submitted as part of NRW licence application.</p>
Mitigate or compensate for habitat loss and deliver net benefits	<p>Habitat creation:</p> <ul style="list-style-type: none"> • Detention basin seeded with species-rich marshy grassland mix; • Shrub planting within rain gardens and around edge of detention basin comprising native and ornamental species of value for wildlife); • Tree and shrub planting along the boundaries of the Site and open green space; • Hedgerow planting to the frontage of new buildings; and • Porviosn of amenity grassland areas seeded with a species-rich seed mix. 	<p>Space for new habitat embedded in Landscape Proposals which will be an 'approved plan' to which detailed designs must align.</p>
	<p>Habitat features to be provided in suitable locations:</p> <ul style="list-style-type: none"> • Bat boxes and/or bat bricks; • Bird boxes; • Bee/Invertebrates hotels; and • Hedgehog holes. 	<p>Details to be secured by condition.</p> <p>Measures for bats submitted as part of NRW licence applications.</p>

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
	Measures to maintain or enhance habitat connectivity: <ul style="list-style-type: none"> Retention/management of retained sections of the eastern boundary tree line; and New tree/shrub planting along the eastern boundary of the Site. 	Site layout/landscape proposals to be secured by planning consent.
	Lighting strategy to avoiding disturbance of nocturnal species, in particular foraging/commuting bats	Detailed lighting design to be secured by planning condition.
Maintenance, Monitoring and Management post-construction	Habitat-specific, namely measures to: <ul style="list-style-type: none"> Enhance retained habitat, and to ensure new habitat becomes established, to achieve target condition; and Monitor and maintain habitats in good ecological condition once enhanced/established. 	LEMP to be secured by planning condition.
	Species-specific, namely measures to: <ul style="list-style-type: none"> Monitor key species populations, including roosting bats; and Maintain habitat features (boxes etc.) in good condition or replace as necessary. 	Details to be secured by planning condition. Monitoring proposals for bats submitted as part of NRW licence applications.

- 6.2 EDP's desk-based and field-based baseline investigations have demonstrated that those habitats and species present within and around the Site do not pose a significant ecological constraint to the proposed development that is the subject of this Appraisal, given the limited extent of sensitive ecological features present combined with the dominance of built development in the wider landscape.
- 6.3 However, EDP's surveys have identified some habitat features of Site level importance which also have the potential to support protected species. Grassland, tree/shrub planting and dense scrub provide suitable habitat for breeding birds, common reptiles, amphibians, European hedgehog and a local bat assemblage, whilst a low status soprano pipistrelle day roost has been identified within building **B1**.
- 6.4 As such, EDP has provided specific proposals for the avoidance, mitigation and compensation of any predicted impacts. These measures include those already embedded within the development proposals; measures recommended for incorporation at the construction stage; and those which have been recommended for inclusion within the landscaping scheme.

- 6.5 EDP concludes that, in light of the embedded mitigation and subject to the full implementation of the additional measures summarised above, the proposed development is capable of compliance with relevant planning policy and legislation and can deliver net benefits for wildlife and biodiversity.

Appendix EDP 1
Site Block Plan Proposed
(Hafren Designs, February 2023)



LEFT DEVELOPMENT

GROUND FLOOR - 3 X 2 BED APARTMENTS
 FIRST FLOOR - 3 X 2 BED APARTMENTS
 SECOND FLOOR - 3 X 2 BED APARTMENTS

VILLA DEVELOPMENT

GROUND FLOOR - 1 X 2 BED APARTMENT
 - 1 X 1 BED APARTMENT
 FIRST FLOOR - 1 X 2 BED APARTMENT
 - 1 X 2 BED APARTMENT

RIGHT DEVELOPMENT

GROUND FLOOR - 2 X 3 BED APARTMENTS
 FIRST FLOOR - 2 X 3 BED APARTMENTS
 SECOND FLOOR - 2 X 3 BED APARTMENTS

CAR PARKING

4 SPACES

BIKE PARKING

43 COVERED AND SECURED BIKE SPACES

REFUSE PROVIDED

2 X GENERAL WASTE BIN STORAGE
 TOTAL = 2,200L
 2 X RECYCLING STORAGE
 TOTAL = 2,200L
 2 X FOOD WASTE STORAGE
 TOTAL = 240L
 BULKY STORAGE
 TOTAL = 5MSQ

SITE BLOCK PLAN - PROPOSED

LANDSCAPE DESIGNS ARE INDICATIVE ONLY - REFER TO ADDITIONAL INFORMATION

SHEET NO.

8

FILE NAME: 21 - 26 Stone (5) COOP

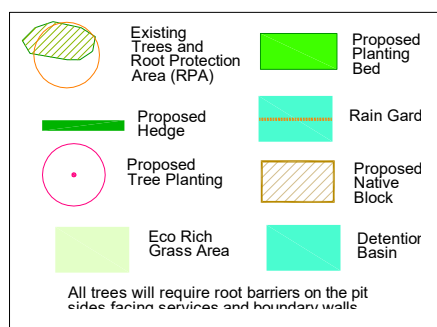
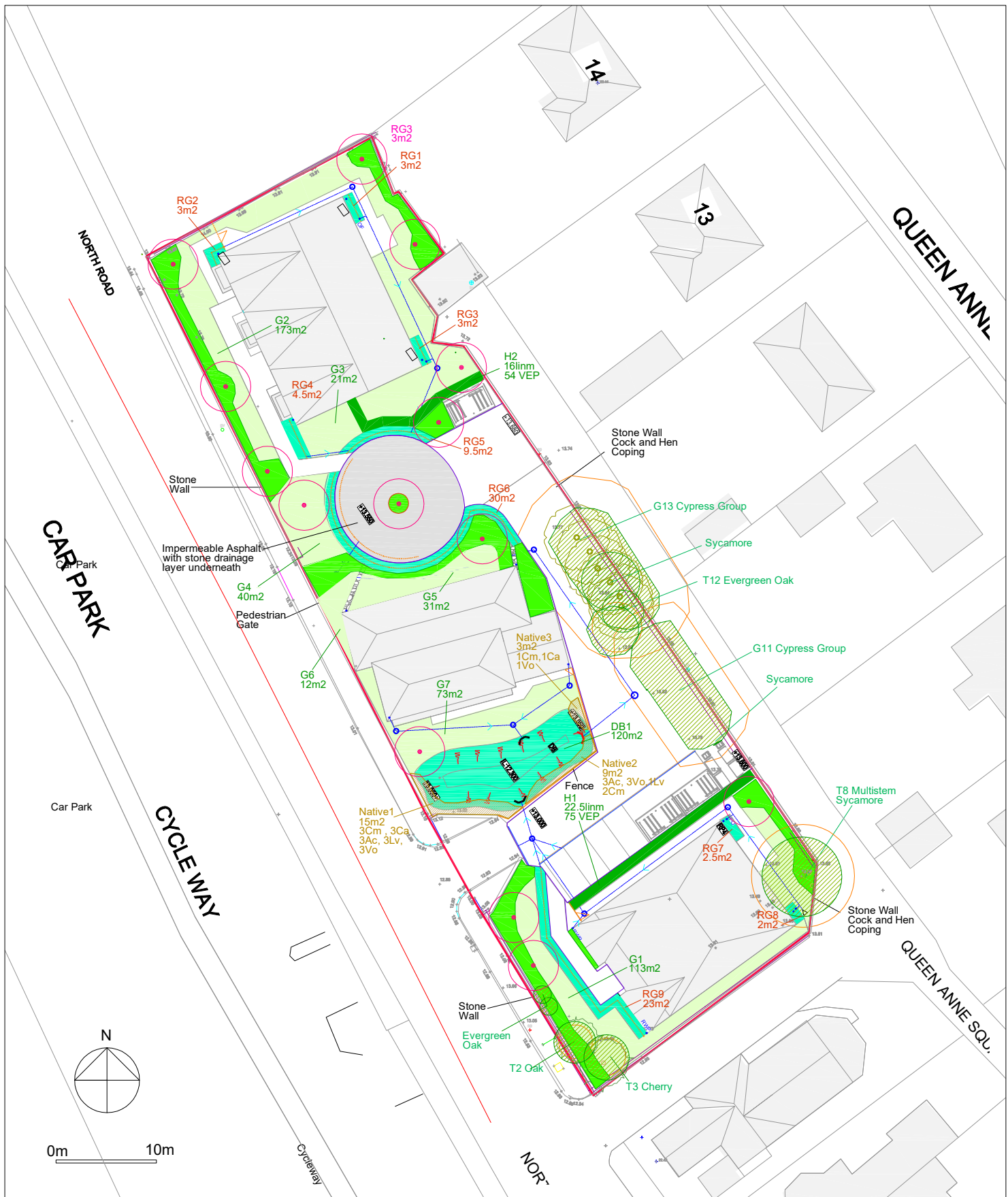
SCALE

1 : 500

CLIENT

STONE

Appendix EDP 2
Landscape Proposals
(Corscadden Associates, CA 2023-NORTH-03, CA 2023-NORTH-04,
CA 2023-NORTH-05, 16 June 2023)



30 NORTH ROAD : CARDIFF

Drawing Title **LANDSCAPE PROPOSALS, TREES HEDGES, NATIVE, GRASS**

Scale approx 1:250 at A2 Date 16 June 2023
CA 2023-NORTH-03

Corscadden Associates
77 Fairleigh Road
Pontcanna, Cardiff, CF11 9JW
Tel 02920 373053
email ca@corscaddenassociates.com

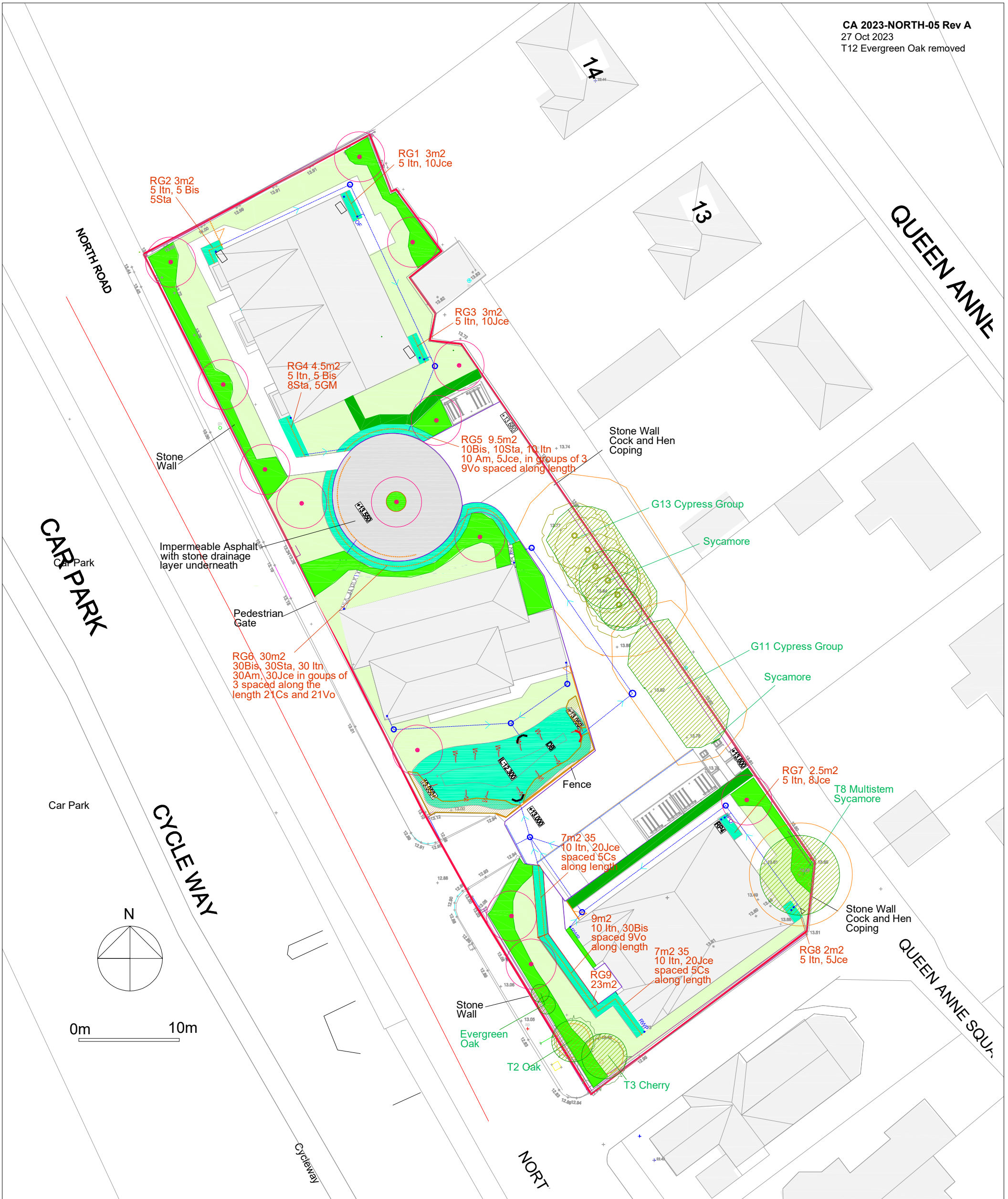


The diagram illustrates a proposed tree pit layout with the following components:

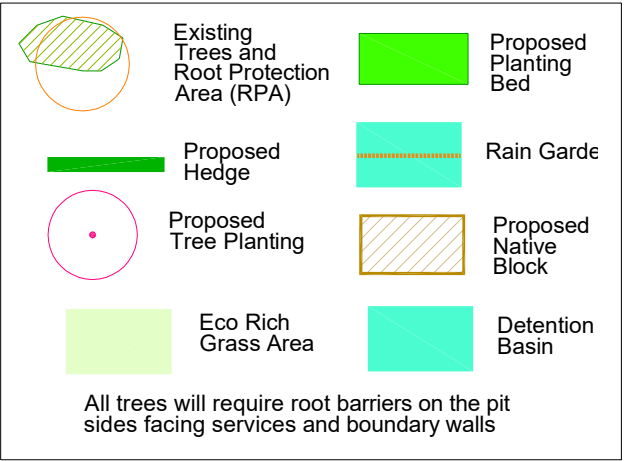
- Existing Trees and Root Protection Area (RPA):** Represented by a green hatched area within a red circle.
- Proposed Tree Planting Bed:** A solid blue rectangle.
- Rain Garde:** A yellow rectangle with a dashed line.
- Proposed Tree Planting:** A red circle with a central dot.
- Eco Rich Grass Area:** A solid light green rectangle.
- Detention Basin:** A solid yellow rectangle.
- Proposed Native Block:** A rectangle with diagonal hatching.

All trees will require root barriers on the pit sides facing services and boundary walls.

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Pontcanna, Cardiff. CF11 9JW
Tel 02920 373053
email ca@corscaddenassociates.com



RAIN GARDENS			RG1 - RG9		80.50 m2
			Planted 5 per m2	Except Cornus and Viburnum	
Am	Alchemilla mollis	P	Lady's Mantle	2Lpot	40 No
Bis	Bistorta affinis Red Darjeeling	P	E Indian Knotweed	2Lpot	80 No
Cs	Cornus sanguinea	P	Dogwood	40-60cm 3Lpot	31 No
GM	Geranium Rozanne Gerwat	P	Blue Geranium	2Lpot	5 No
ltn	Iris sibirica Tropic Night	P	Siberian Iris	2Lpot	100 No
Sta	Stachys byzantina		Lambs Ears	2Lpot	53 No
Vo	Viburnum opulus	P	Guelder Rose	40-60cm 3Lpot	39 No
Jce	Junucus effusus		Soft Rush	2Lpot	108 No
TOTAL					456 No



30 NORTH ROAD : CARDIFF
Drawing Title

LANDSCAPE
PROPOSALS,
RAIN GARDENS

Scale
approx 1:250 at A2

Date
16 June 2023

CA 2023-NORTH-05 Rev A

Corscadden Associates
77 Fairleigh Road
Pontcanna, Cardiff. CF11 9JW
Tel 02920 373053
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Appendix EDP 3 Bat Surveys

METHODOLOGY

- A3.1 The scope of bat surveys undertaken at the Site was determined following completion of the Extended Phase 1 Habitat Survey and a review of relevant desk study findings and with reference to best practice guidelines published by the Bat Conservation Trust²⁴ and current at the time of survey.

Bat Roost Surveys

Preliminary Roost Assessment of Trees

- A3.2 Owing to the presence of suitably mature trees within or adjacent to the Site, a preliminary ground level roost assessment of these trees was undertaken to record any external evidence of roosting bats or any features capable of supporting roosting bats.
- A3.3 The survey was completed on 17 May 2023 by a NRW bat licenced ecologist in accordance with the best practice guidelines referred to above. The trees were searched as thoroughly as possible from ground level with all elevations covered where these could be accessed.
- A3.4 Suitable features for roosting bats recorded (where present) include the following:
- Loss/peeling/fissured bark;
 - Natural holes e.g., rot hole, cavities and wounds from fallen limbs;
 - Woodpecker holes;
 - Cracks/splits or hollow tree trunks/limbs;
 - Bat, bird or dormouse boxes; and
 - Crevices formed by thick-stemmed ivy.
- A3.5 Signs of roosting bat presence recorded (where present) include the following:
- Bat/s roosting *in situ*;
 - Bat droppings within, around or beneath a potential roost feature;
 - Staining around or beneath a feature;
 - Audible squeaking from the roost at dusk during warm weather; and

²⁴ Collins, J. (ed.) (2016). *Bat Surveys: for Professional Ecologists: Good Practice Guidelines (3rd edition)*. The Bat Conservation Trust, London.

- Large/regularly used roosts may produce a distinctive odour.

A3.6 Based upon the evidence/features identified, each tree was assigned to one of the following categories:

- Known or confirmed roost - European Protected Species (EPS) licence likely to be required for works to tree to be completed lawfully;
- High suitability - One or more potential roost features present that are obviously suitable for use by larger numbers of bats on a more regular basis, and potentially for longer periods of time;
- Moderate suitability - One or more potential roost features present that could be used by bats but are unlikely to support a roost type of high conservation status (with respect to roost type only);
- Low suitability - A tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features seen but with only very limited roosting potential; and
- Negligible suitability - No potential to support roosting bats.

Limitations

- A3.7 As with any ground level assessments of trees, certain features may not be visible or fully visible from the ground.
- A3.8 Bats are mobile animals and will move between a series of different tree roost sites, frequently establishing and occupying different potential roost features, depending on seasonal requirements and resources available locally. Furthermore, existing potential roost features on trees can be transient and new features formed regularly. This survey, therefore, only provides a snapshot of the conditions present at the Site at the time of survey.
- A3.9 It should be noted that this type of assessment is based on features visible from ground level and is not considered to be a definitive bat roosting survey.

Preliminary Roost Assessment of Buildings

- A3.10 Owing to the presence of potentially suitable buildings within the Site, a preliminary roost assessment of these buildings (**B1/B2**) was undertaken to record any evidence of roosting bats or any features capable of supporting roosting bats.
- A3.11 An external assessment of each building was completed on 17 May 2023 by a NRW bat licensed ecologist in accordance with the best practice guidelines referred to above. All external features considered potentially suitable for bats were assessed using a high-powered torch and binoculars, from all aspects, where access allowed. This was followed by an internal inspection of the buildings on 14 June 2023.

A3.12 Suitable features for roosting bats recorded (where present) include the following:

- Cracks/crevices in stone/brickwork/timber;
- Missing/broken/raised roof/ridge/hanging tiles;
- Loose/lifted lead flashing/bitumen felt;
- Loft voids (particularly if relatively undisturbed, potential bat access points present, clear flight space with simple truss formation, roof lining and insulation present);
- Gaps between lintels above doors and windows;
- Gaps in soffits, barge boards or fascias; and
- Cavity walls with potential bat access.

A3.13 Signs of roosting bat presence recorded (where present) include the following:

- Bat(s) roosting *in situ*;
- Bat droppings or urine splashes within or beneath a feature/access point;
- Feeding remains (e.g. insect wings and beetle wing cases);
- Oily marks, smoothly worn surfaces or staining around a feature/access point;
- Audible squeaking from the roost; and
- Large/regularly used roosts may produce a distinctive odour.

A3.14 Based upon the evidence/features identified, each building was assigned to one of the following categories:

- Known or confirmed roost - European Protected Species (EPS) licence may be required for modifications, and will be required for demolition, to be completed lawfully;
- High suitability – Structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat;
- Moderate suitability - Structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only);
- Low suitability - Structure with one or more potential roost sites that could be used by individual bats opportunistically. These roost sites do not provide enough space, shelter, protection, appropriate conditions and suitable surrounding habitat to be used on a regular basis or by large numbers of bats; and
- Negligible suitability - No potential to support roosting bats.

Limitations

- A3.15 Preliminary roost assessments of buildings can be undertaken at any time of year and these assessments were therefore not limited by seasonal or climatic factors.
- A3.16 There was no access to the roof void associated with either building due to the presence of asbestos.
- A3.17 There was no access to the far western storeroom on the ground floor of building **B2** due to the presence of clinical waste, with the room sealed against access.
- A3.18 There was no access to the single storey extension to the rear of building **B1** (referred to as **B1c** within **Table EDP A3.3**) such that survey was limited to an external inspection, with any notes of internal features undertaken through the single window present here.
- A3.19 There was no external access to the northern and eastern elevations of building **B2**, being flush with the boundary wall.

Dusk Emergence/Dawn Re-entry Surveys

- A3.20 Owing to the presence of buildings with features suitable for roosting bats which are at risk of impacts from development, dusk emergence and dawn re-entry surveys of these buildings were conducted in accordance with the best practice guidelines referred to above. The date and type of surveys conducted on each relevant building (see **Plan EDP 3** for building reference numbers) are set out in **Table EDP A3.1**.

Table EDP A3.1: Dusk Emergence and Dawn Re-entry Surveys

Building Reference	Date	Dusk/ Dawn	Number of Surveyors / Infrared Cameras
B1 & B2	01.08.2023	Dusk	4/2
B1 & B2	18.08.2023	Dawn	4/2
B1 & B2	31.08.2023	Dusk	4/2

- A3.21 During each survey, suitably qualified ecologists [and two infrared-capable video cameras (Canon XA11) with external lighting arrays (JC Infrared 12-Led 90°Wide Angle High-Power IR Illuminator) were positioned in appropriate locations, [as shown at **Plans EDP 4-6**, so that all the relevant building elevations/features could be observed. The dusk surveys commenced 15 minutes prior to sunset and continued until at least one and a half hours after, and the dawn surveys started at least an hour and a half before sunrise and finished 15 minutes after sunrise, as per best practice guidelines. The surveyors used Elekon Batlogger M bat detectors to record the echolocation calls of any bats observed during the survey.
- A3.22 The weather conditions were generally suitable for such surveys, as detailed in **Table EDP A2.2**.

Table EDP A3.2: Weather Conditions During Emergence/Re-entry Surveys

Date	Sunset/ Sunrise Time	Start- Finish Time	Temperature (°C)	Cloud Cover (%)	Wind (Beaufort)	Precipitation
01.08.2023	21:01	20:45- 22:30	15-18	70- 100	0-1	Slight drizzle between 22:05 and 22:20.
18.08.2023	06:02	04:30- 06:17	18-21	100	4	0
31.08.2023	20:01	19:46- 22:01	18	90- 100	0-1	Light drizzle for first 5 minutes of survey

A3.23 All sonogram recordings made during the dusk/dawn surveys were later analysed using BatExplorer sound analysis software to confirm species identification.

Limitations

A3.24 Light drizzle was recorded between 22:05 and 22:20 during the dusk emergence survey on 01 August 2023. This is not considered to have affected the outcome of the survey given its short duration, occurring after the majority of species would emerge, with emergence and foraging/commuting bat activity still observed.

A3.25 Light drizzle was recorded during the first 5 minutes of the dusk survey undertaken on 31 August 2023 and dry thereafter. This is not considered to have affected the outcome of the survey with no rain experienced for the remainder of the survey with foraging/commuting bat activity still observed.

RESULTS

Bat Roost Surveys

Preliminary Roost Assessment of Trees

A3.26 No trees with suitable features for bat roosting were identified onsite with the majority of the tree stock comprising young specimens, or early mature in the case of coniferous tree species.

Preliminary Roost Assessment of Buildings

A3.27 The preliminary roost assessment/inspection of buildings identified two buildings with 'High' suitability to support summer roosting bats. Both buildings offer limited opportunities for hibernating bats however, with no cellars or underground areas that offer suitable conditions. The potential for cavities suitable for crevices' dwelling bats within the loft voids cannot be ruled out however, although such internal building features are not characteristic of a classic hibernation site.

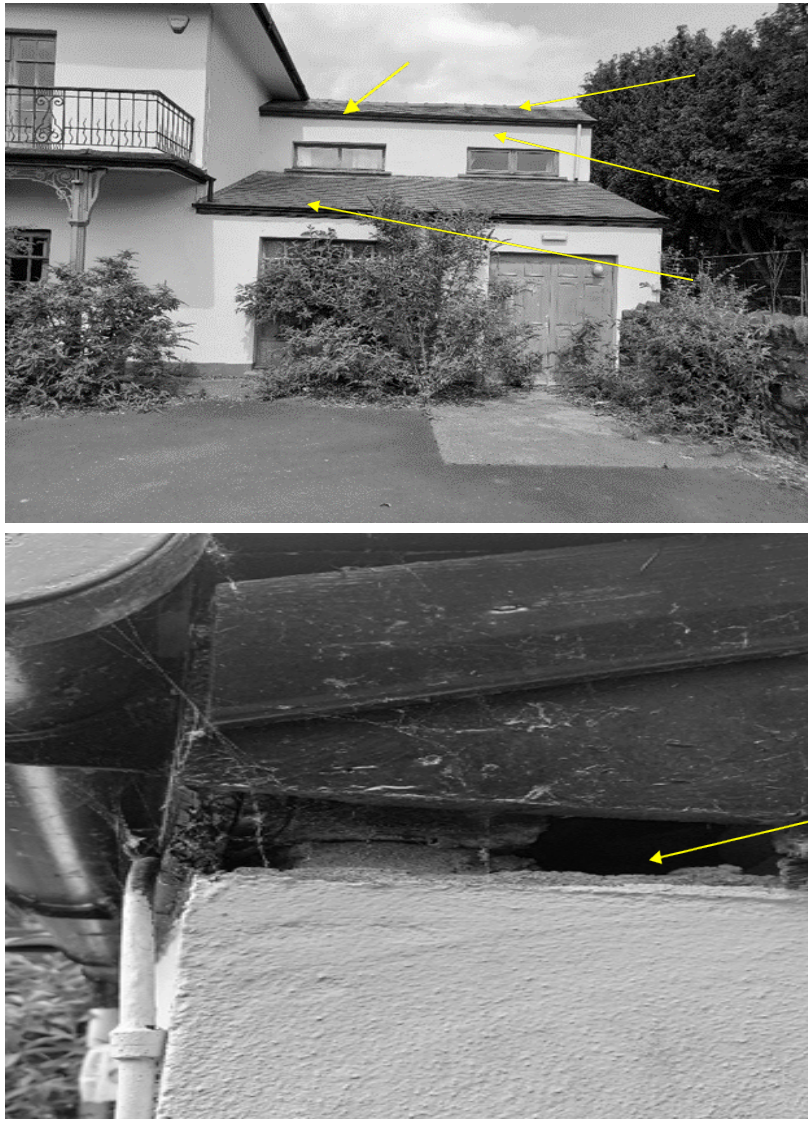
A3.28 For ease of report, building **B1** has been subdivided into three sections (**B1a**, **B1b** and **B1c** representative of the main building and its extensions). Building **B1a** is a Grade II listed building


comprising two stories and three-bays with rendered walls and a hipped slate roof that overhangs the wall forming eaves. On the ground floor there are two multi-paned windows with a single, solid panel door with semi-circular glass panel at its top. The first floor is characterised by three French doors which open onto a balcony.



- A3.29 A two-storey extension is present to the east (**B1b**) with a single storey lean to in front, continuous with the front elevation of the main building. To the rear of the building are two projections. That to the right is single storey and part stone but mainly brick, with a brick parapet and inserted window. A fire escape is located on here, leading to an inserted door on the upper storey. The left-hand extension is flat roofed and wraps around the north-eastern corner of the building. The main block has a central door with window to right and left. The upper floor has an altered and glazing uneven glazing pattern with two inserted toilet windows to left a two single opens further to left, both of unequal size. To the right is an enlarged casement window and inserted door to form a fire escape.
- A3.30 The interior of the building is arranged over two floors. The main entrance leads onto a central hall with three rooms leading off this hall. A second corridor to the rear of the building, accessed via the front lobby, leads to additional rooms including those associated with business areas of the former funeral home, storerooms and a WC. The first floor is access via a staircase to the rear of the building. The first floor is occupied by offices, storerooms and welfare facilities.
- A3.31 Several loft hatches were recorded on the first floor providing access to the roof void which appears to be subdivided into at least two main areas. Access to the roof void was, however, precluded due to potential presence of asbestos.
- A3.32 Building **B2** (subdivided into **B2a** and **B2b**) is a two-storey structure, with a rendered finish and a hipped, slate roof with a dormer window on the southern and western elevation. A wooden panel garage door and two frosted windows are present on the western elevation of the ground floor. Internally, the ground floor is occupied by an office, storage room and welfare facilities whilst the first floor.
- A3.33 A single storey, flat roof extension (**B2b**) extends from the northern elevation of building **B2a**. Two large metal doors occupy the majority its southern elevation which open into large store rooms.
- A3.34 Further details on each of the buildings inspected are provided in **Table EDP A3.1** and their locations are shown on **Plan EDP 3**.


Table EDP A3.3: Preliminary Bat Roost Assessment of Buildings




Building Ref. No.	Photograph	Description and Potential Bat Features	Roosting Suitability
B1a		<p>Southern Elevation</p> <p>A two-storey, three-bay building. On the ground floor there are two multi-paned windows with a single, solid panel door with semi-circular glass panel at its top. The first floor is characterised by three French doors which open onto a balcony. All doors and windows appear intact and well-sealed.</p> <p>The underside of the balcony is constructed from painted wooden cladding, supported by metal rafters. The balcony has metal railings and is supported by cast iron pillars which have an ornate finish. Roofing felt forms the floor of the balcony.</p> <p>Peeling paint and some rot forming a small cavity was identified within the painted wooden cladding on underside of balcony. Some gaps along the roofing felt which forms the floor of the balcony were also identified.</p> <p>UPVC guttering is present on the roof and at the base of the balcony. A brick built and rendered chimney is located on the western gable and appears to be in a good state of repair, with no missing mortar observed.</p> <p>The building supports a slate, hipped roof. Several lifted slates were identified on the roof (approximate location marked by 'a') whilst gaps were identified between the bottom of ridge tiles and roof slates (marked by 'b') and provide potential roosting features and/or access to interior of a roof space.</p>	High summer roosting potential and low hibernation potential.


Building Ref. No.	Photograph	Description and Potential Bat Features	Roosting Suitability
B1b		<p>Rendered two-storey extension (approx. 7m x 6m) with single storey lean to, adjoining building B1a to the west.</p> <p>The two-storey structure has a slated pitched roof with ridge tiles and the extension to the front consists of a slated lean-to roof, with roof lining visible in areas. Lifted tiles were identified on the second storey roof section whilst missing mortar was identified on the end ridge tile at the eastern gable end.</p> <p>Gaps were identified beneath the painted bargeboard decorating the edge of the pitched rood due to missing mortar, providing potential access for bats. Cracked and lifted tiles were present on the lean-to roof.</p> <p>The second storey has two windows, UPVC guttering and a downpipe. The ground floor is characterised by a fixed multi-paned windows and solid panel door. All doors and windows appear tightly fitting and well-sealed.</p> <p>Lead flashing is present where each extension meets the other and is tightly fitting with no raised areas. Painted facias are flush to walls, with no gaps present.</p> <p>Large hole (approx. 8cm x 3cm) was identified at the south-eastern corner of the front extension due to missing render at base of fascia, providing access to wall top and void.</p>	

Building Ref. No.	Photograph	Description and Potential Bat Features	Roosting Suitability
B1a		<p>Northern, Eastern and Western Elevations</p> <p>Characterised by rendered brickwork with its own hipped, slate tile roof with concrete ridge tiles, appearing separate to that of the southern elevation.</p> <p>Two flat-roof extensions were identified here. That to the right is single storey and part stone but mainly brick, with a brick parapet and inserted window. A fire escape is located on here, leading to an inserted door on the upper storey. The left-hand extension is flat roofed and wraps around the northeastern corner of the building.</p> <p>Gaps were identified between bottom of ridge tiles and roof slates on northern and eastern elevation of the building. Lifted ridge tiles were identified at the centre of the pitched roof's ridge (labelled 'a' in photographs).</p> <p>Underside of the eave on the western elevation damaged with render sagging and creating a cavity (see yellow circle). A hole within the rendered wall is also present beneath the fascia to the east.</p>	High summer roosting potential and low hibernation potential

Building Ref. No.	Photograph	Description and Potential Bat Features	Roosting Suitability
B1c	<div></div>	<p>A single storey extension, comprising a single room with access to the first floor of building via a fire escape. There was no access to this room via the single external store nor via the ground floor of the main building.</p> <p>Some damage to brickwork and rendered stone but no suitable cavities for roosting bats.</p> <p>The external steel door appears tightly sealed with no opportunities for ingress for bats. The adjacent window is, however, slightly open with a hole in one of the panes providing access for bats internally. A view of the interior room via the window indicated this is brightly lit although there is damage to the corner ceiling tiles providing potential access for bats to a small void.</p>	Low summer roosting and hibernation potential

<div>Ba/B1b</div>		<p>Internal</p> <p>The interior is arranged over two floors. The main entrance leads onto a central hall with three rooms leading off this hall. A second corridor to the rear of the building, access via the front lobby, leads to additional rooms including those associated with business areas of the former funeral home, store rooms and a WC. Internally, the majority of ground floor rooms (excluding internal corridors) have outward facing windows which are well-sealed. As such, the rooms are predominantly brightly lit during the daytime which would deter establishment of a bat roost.</p> <p>The plaster walls and ceiling are intact with no cavities or suitable roosting features.</p> <p>A fan vent was recorded within the northern wall of the mortuary located on the northern elevation of the building which may provide potential access for bats to the room interior. However, no potential roosting features were identified here with the room brightly lit during daylight hours.</p> <p>There was damage to the drop ceiling within the chapel of rest across the eastern elevation of the buildings, exposing the void between the ceiling and floor of the ground and first floor levels respectively. The room is, however, tightly sealed with no potential ingress for bats here.</p> <p>The first floor is accessed via a staircase to the rear of the building. The first floor is occupied by offices, storerooms and welfare facilities.</p> <p>Damage to the centre French door leading out onto the southern elevation balcony was noted with a wood panel popped out of its frame, providing potential access internally for bats. No potential roosting features were, however, identified here with no evidence of bats whilst the room is brightly lit during daylight hours.</p> <p>The majority of first floor rooms had external windows which were well-sealed.</p> <p>Several loft hatches were recorded on the first floor providing access to the roof void. Access to the roof void was, however, precluded due to potential presence of asbestos.</p>	
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Building Ref. No.	Photograph	Description and Potential Bat Features	Roosting Suitability
			
B2a		<p>External</p> <p>Two-storey building with rendered finish and hipped, slate tiled roof with ridge tiles. Dormer windows are present on the southern and western elevations.</p> <p>Gaps were identified between bottom of ridge tiles and roof slates on the southern and western elevations. Lifted slates present either side of the dormers located on the southern and western elevations. Slipped slates are present on the north-eastern corner of the dormer located on the southern elevation.</p> <p>Eaves sealed by wooden soffits in good condition with no obvious gaps observed,</p> <p>A wooden panel garage door and two well-sealed frosted windows are also present on the western elevation.</p>	High summer roosting and low hibernation potential
B2b		<p>A single storey, flat roof extension extends from the northern elevation of building B2. Brick-work structure in good condition. The flat roof is covered in roofing felt. Two large metal doors occupy the majority its southern elevation. A section of the wood panelling above the easternmost door is missing providing access to a potential cavity.</p>	

Building Ref. No.	Photograph	Description and Potential Bat Features	Roosting Suitability
B2a/B2b		<p>Internal</p> <p>The interior is arranged over two floors. The ground floor is occupied by two storage rooms, a kitchen and WC. A stairwell to the right of the main lobby leads to the first floor, the vast majority of which is occupied by a single room, previously used for training, with small kitchen facility and WC. The rooms associated with the single storey extension are, internally, open plan with the storeroom associated with building B2b.</p> <p>The majority of rooms on the ground and first floors have external facing windows which are well sealed with no potential roosting features and brightly lit during daytime hours.</p> <p>A small gap around the frame of the casement window in the southernmost coffin storage area of B2a provides potential access internally for bats, although this area is well lit with no suitable cavities/potential roosting features identified.</p> <p>The rear coffin store area within building B2a is, in contrast, relatively dark with a concrete ceiling and brick walls. No damage to the walls/ceiling were recorded here with an absence of cavities of potential suitability for roosting.</p> <p>Access to the outside is via a set of wood doors with multiple gaps around the frame providing potential access to bats. This area is contiguous with the ground floor coffin stores associated with extension B2b. Here, the ceiling is constructed from wood panels with supporting wood beams, providing potential hanging up opportunities for non-crevice dwelling bats.</p> <p>Gaps were identified between the northern elevation brick wall and end rafter, suitable for crevice dwelling bats. This feature was fully inspected with a torch with no evidence of roosting bats identified.</p> <p>A damaged brick within the far north-west corner of the room provides potential access to internal wall cavities.</p> <p>Access to the outside is via two large, steel doors with several gaps around the frame providing potential access to bats.</p> <p>No evidence of roosting bats (droppings, feeding remains, etc were identified during the internal inspection.</p>	

Dusk Emergence/Dawn Re-entry Surveys

- A3.35 During the dusk emergence survey on 01 August 2023, a single soprano pipistrelle bat emerged from the north-eastern corner of building **B1**, from behind a gutter dropping down from the eaves of the building. During the dawn re-entry survey on 18 August 2023, a single soprano pipistrelle was recorded entering a cavity behind the far eastern end of a fascia barge on the southern elevation of building **B1b** extension.
- A3.36 No bats were recorded emerging from building **B1** during the second dusk emergence survey on 31 August 2023. No bats were recorded emerging from/re-entering building B2 during any of the three survey visits. The roost locations are also shown on **Plans EDP 4-6**.
- A3.37 Based on the survey results, it is considered that building **B1** supports a summer day roost for low numbers of non-breeding soprano pipistrelle bat. Soprano pipistrelle bat is widely distributed across the UK, and whilst populations declined dramatically in the twentieth century, field survey data show statistically significant population increases²⁵. With reference to Table 3.2: Assessing Importance of Roosts in the Bat Mitigation Guidelines²⁶, a non-breeding soprano pipistrelle roost is considered to be of Site level importance.
- A3.38 More generally, low levels of common pipistrelle and soprano pipistrelle bats were recorded commuting across the Site, typically in an east-west direction during the dusk emergence surveys with bats presumably dispersing to foraging grounds within Bute Park. Low levels of foraging activity were recorded within the Site. The Site is dominated by hardstanding and the footprint of two buildings. Semi-natural habitat is limited to non-native/shrubs/trees and small, former amenity grassland areas. The Site is thus considered of limited/negligible importance for a foraging bat assemblage. A coniferous tree line does, however, delineate the eastern boundary of the Site and provides a potential liner feature for the dispersal of bats across the wider landscape, whilst the edges of onsite buildings may provide some cover and flight lines for commuting bats. Overall, a foraging/commuting bat assemblage is considered to be of Site level importance only.

²⁵ Bat Conservation Trust, 2018. The National Bat Monitoring Programme. Annual Report 2019.

²⁶ Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

Appendix EDP 4 Illustrative Photographs



Image EDP A4.1: Shrub planting along western site boundary view from adjacent North Road.



Image EDP A4.2: Coniferous tree line along eastern boundary looking north.



Image EDP A4.3: Broadleaved tree planting and poor semi-improved grassland.



Image EDP A4.4: Non-native shrubs and trees.



Image EDP A4.5: Scattered scrub and low-level brick walls to north of Site.



Image EDP A4.6: Building **B1** and hardstanding.

Plans

Plan EDP 1: Statutory Designations

(edp7987_d005 13 October 2023 GYo/EWi)

Plan EDP 2: Non-statutory Designations

(edp7987_r006 13 October 2023 GYo/EWi)

Plan EDP 3: Phase 1 Habitat Plan

(edp7987_r007 13 October 2023 GYo/EWi)

Plan EDP 4: Bat Dusk Emergence Survey Results – 01 August 2023

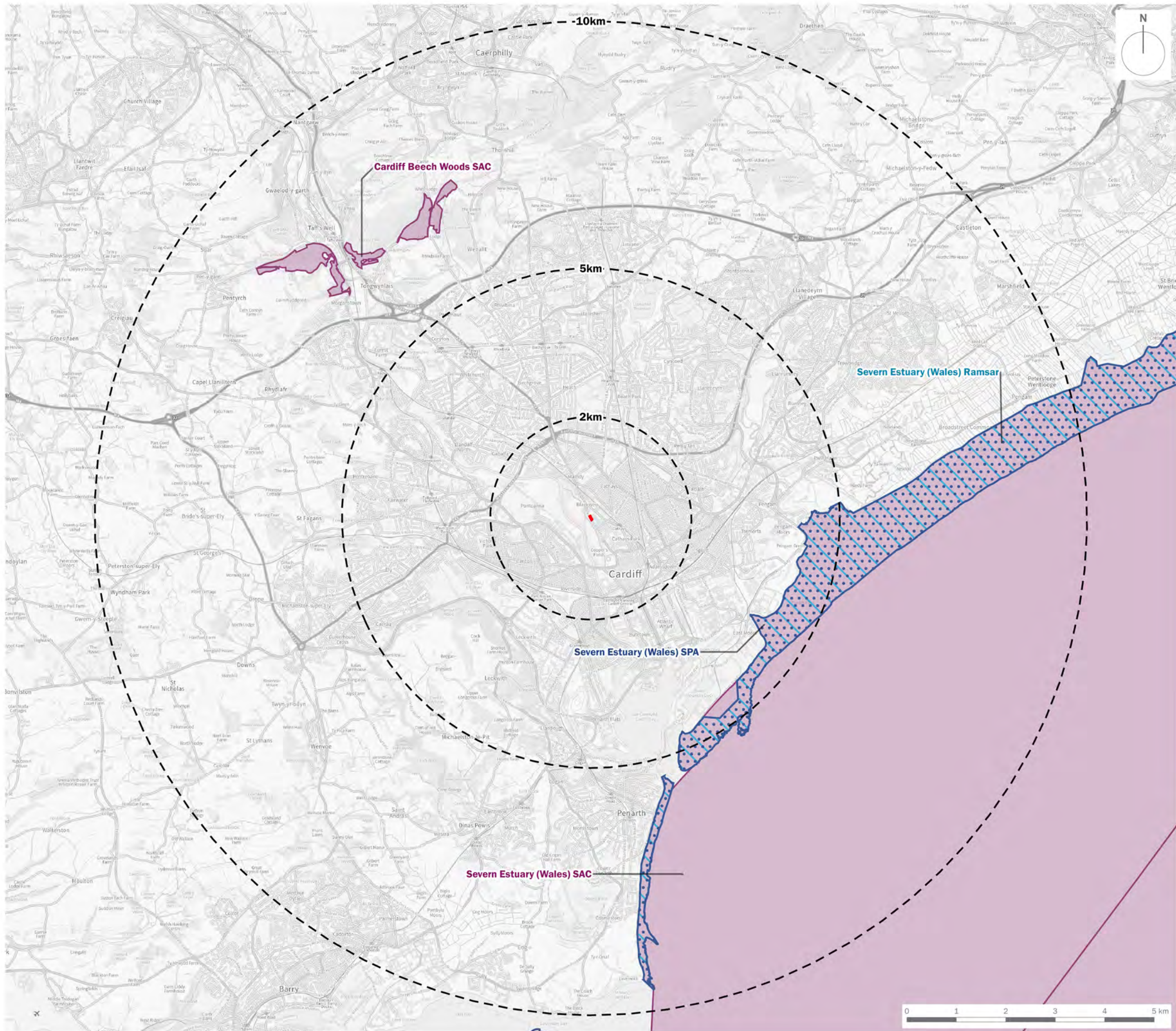
(edp7987_r008 13 October 2023 GYo/EWi)

Plan EDP 5: Bat Dawn Re-entry Survey Results – 18 August 2023

(edp7987_r009 13 October 2023 GYo/EWi)

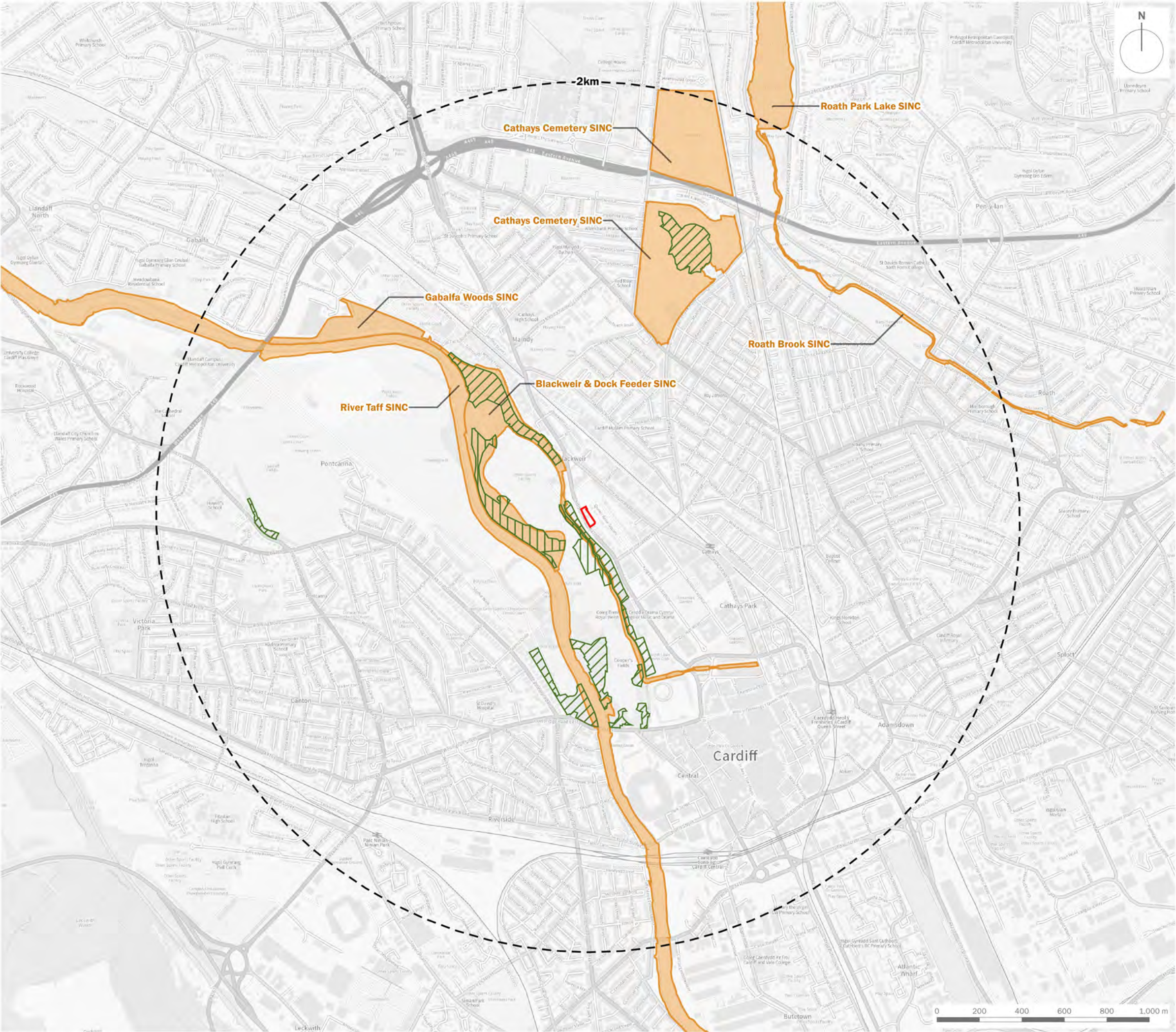
Plan EDP 6: Bat Dusk Emergence Survey Results – 01 August 2023

(edp7987_r010 13 October 2023 GYo/EWi)



- Site Boundary
- Range Rings (at 2km, 5km and 10km)
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar Site





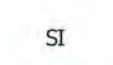
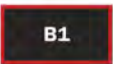

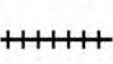



client	Stone Property Services		
project title	Former Co Op Funeral Directors and Land to the Rear of 14 Queen Anne Square, North Road, Cardiff		
drawing title	Statutory Designations		
date	13 OCTOBER 2023	drawn by	GYo
drawing number	edp7987_d005	checked	EWI
scale	1:75,000 @ A3	QA	JFr



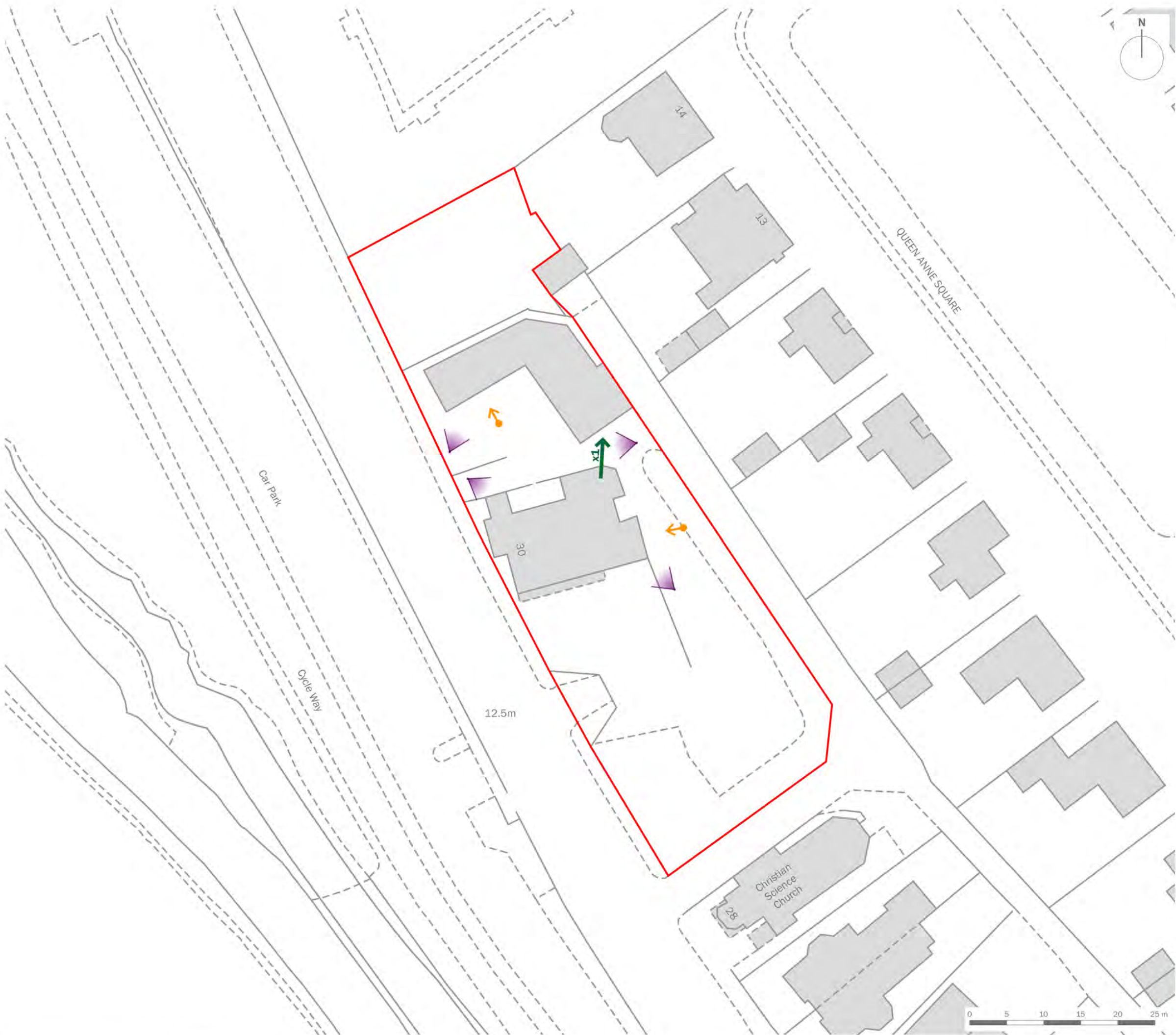
- Site Boundary
- 2km Range Ring
- Wildlife Site/SINC (Adopted)
- Ancient Semi Natural Woodland
- Restored Ancient Woodland Site

client			
Stone Property Services			
project title			
Former Co Op Funeral Directors and Land to the Rear of 14 Queen Anne Square, North Road, Cardiff			
drawing title			
Non-statutory Designations			
date	13 OCTOBER 2023	drawn by	GYo
drawing number	edp7987_d006	checked	EWI
scale	1:17,500 @ A3	QA	JFr



-  Site Boundary
-  Non-native Line of Trees
-  Dense Continuous Scrub
-  Introduced Shrub
-  SI Poor Semi-improved Grassland
-  B1 Building with High Bat Roost Potential
-  Hardstanding
-  Fence/Gate
-  Wall
-  Scattered Trees
-  Scattered Scrub

client			
Stone Property Services			
project title			
Former Co Op Funeral Directors and Land to the Rear of 14 Queen Anne Square, North Road, Cardiff			
drawing title			
Phase 1 Habitat Plan			
date	13 OCTOBER 2023	drawn by	GYo
drawing number	edp7987_d007	checked	EWI
scale	1:500 @ A3	QA	JFr



-  Site Boundary
-  Surveyor Position
-  IR Camera Position
-  Soprano Pipistrelle Emergence

client
Stone Property Services

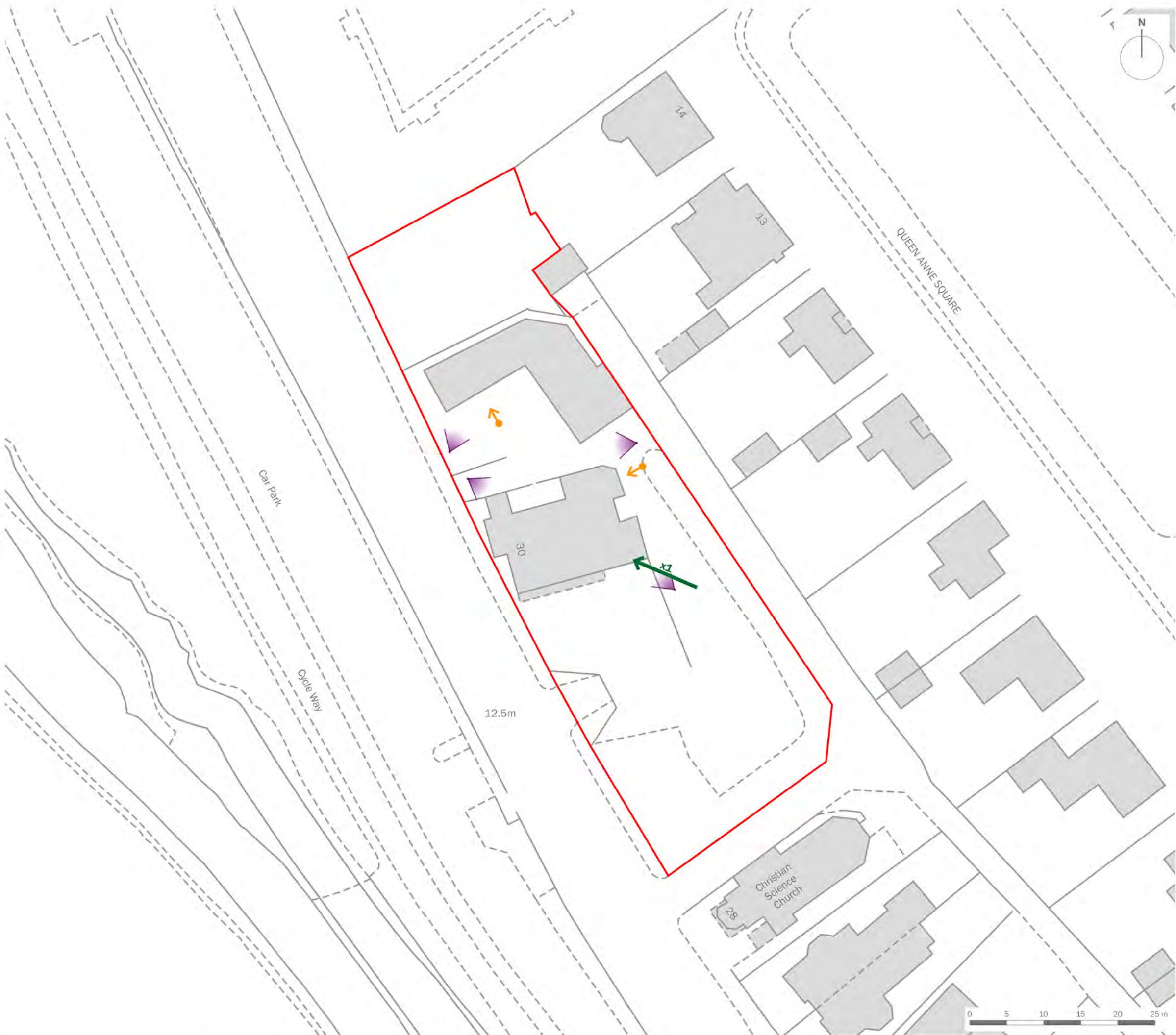
project title
Former Co Op Funeral Directors and Land to the Rear of 14 Queen Anne Square, North Road, Cardiff

drawing title
Bat Dusk Emergence Survey Results – 01 August 2023

date	13 OCTOBER 2023	drawn by	GYo
drawing number	edp7987_d008	checked	EWI
scale	1:500 @ A3	QA	JFr



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- Site Boundary
- Surveyor Position
- IR Camera Position
- Soprano Pipistrelle Re-entry

client
Stone Property Services

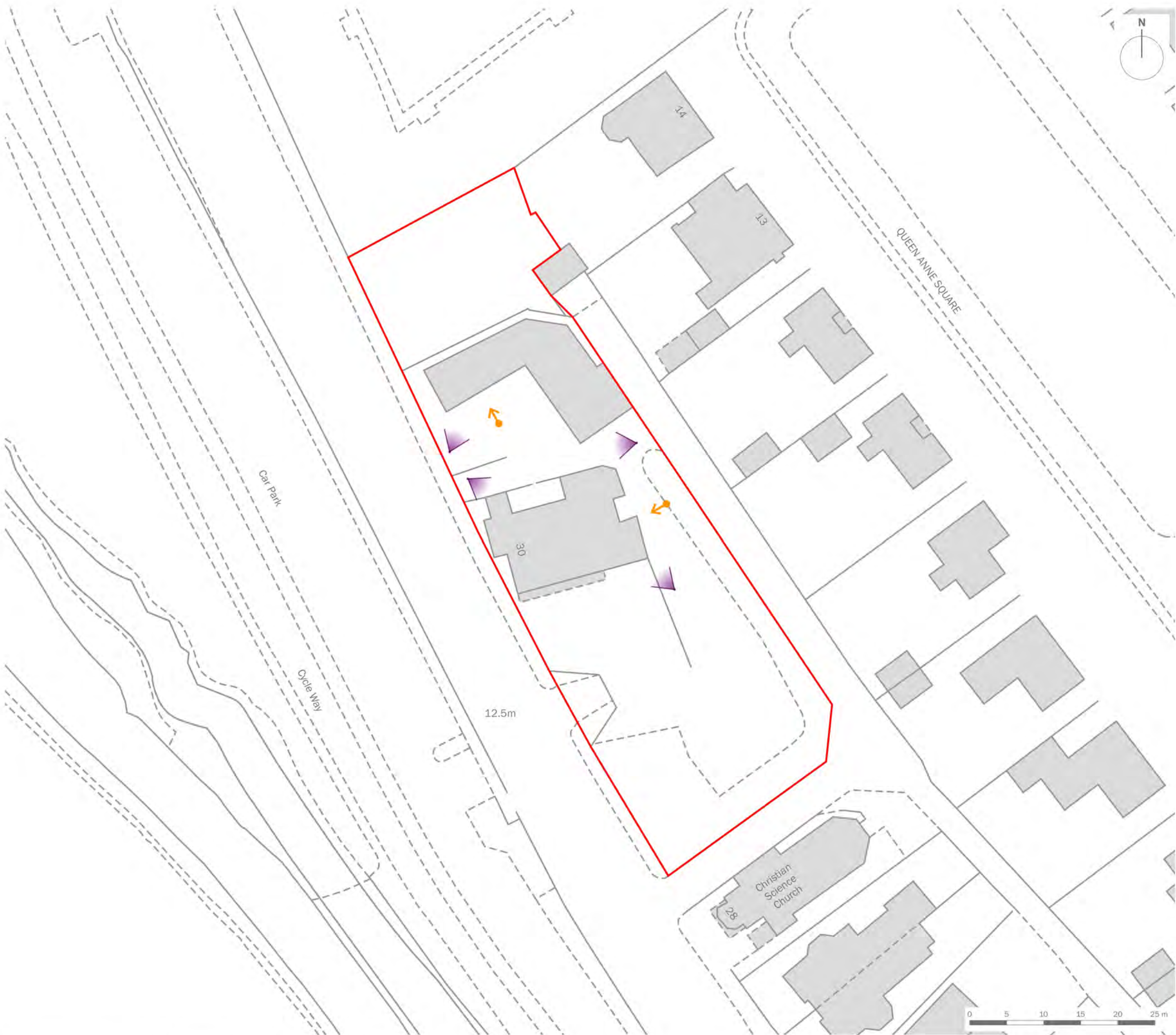
project title
Former Co Op Funeral Directors and Land to the Rear of 14 Queen Anne Square, North Road, Cardiff

drawing title
Bat Dawn Re-entry Survey Results – 18 August 2023

date	13 OCTOBER 2023	drawn by	GYo
drawing number	edp7987_d009	checked	EWI
scale	1:500 @ A3	QA	JFr



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-  Site Boundary
-  Surveyor Position
-  IR Camera Position

client			
Stone Property Services			
project title			
Former Co Op Funeral Directors and Land to the Rear of 14 Queen Anne Square, North Road, Cardiff			
drawing title			
Bat Dusk Emergence Survey Results – 31 August 2023			
date	13 OCTOBER 2023	drawn by	GYo
drawing number	edp7987_d010	checked	EWI
scale	1:500 @ A3	QA	JFr



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