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**CARDIFF COUNCIL**

**WOLF'S CASTLE**

# PRELIMINARY ECOLOGICAL APPRAISAL REPORT

**JANUARY 2025**

wardell armstrong | PART OF SLR

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**CARDIFF COUNCIL**

**WOLF'S CASTLE**

# PRELIMINARY ECOLOGICAL APPRAISAL REPORT

**JANUARY 2025**

**PREPARED BY:**

| | | |
|---|---|---|
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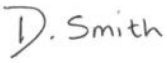
| Daisy Smith | Senior Ecologist |  |

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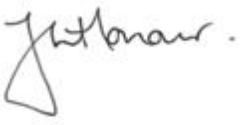
| Jo Honour | Technical Director (Ecology) |  |

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## EXECUTIVE SUMMARY

Wardell Armstrong LLP (WA) was commissioned by Cardiff Council to undertake a Preliminary Ecological Appraisal, Ground Level Tree Assessment, Preliminary Roost Assessment, and Badger Walkover Survey in connection with the proposed development at Wolf's Castle Avenue, Llanishen, Cardiff, centred on approximate National Grid Reference ST 17432 82244.

The site is split across three areas as shown on Drawing Number CA13131-001 (Site Location Plan) and is approximately 0.71 ha hectares (ha) in total. Area 1 is approximately 0.50 ha and is situated immediately south of the junction of Wolf's Castle Avenue and Templeton Avenue, Llanishen, Cardiff. Areas 2 and 3 are located immediate south of Area 1 separated by Templeton Avenue and are 0.16 and 0.05 hectares (ha) retrospectively. Areas 2 and 3 are separated from each other by Templeton Close.

**Due to this report containing sensitive information of badger records this report should not be placed into the public domain and should only be made available to *bone fide* individuals. Recommendations for badgers can be found within the separate Appendix 5 – Badger Report – Confidential.**

The following conservation sites, habitats, and species (Receptors) have been evaluated as being subject to potential adverse effects in the absence of mitigation and/or further survey or assessment:

- Statutory designated sites: Llanishen and Lisvane Reservoir Embankments Site of Special Scientific Interest (SSSI) and Lisvane Reservoir SSSI;
- Non-statutory designated sites within 1km of the site boundary: Llanishen Brook Site of Importance for Nature Conservation (SINC), Coedcochwyn SINC, Coed-y-Caeau SINC, Coed-y Felin SINC, Llwyn-Crwnganol Wood SINC;
- Mixed scrub/Line of Trees;
- Scattered trees;
- Badger;
- Bats;
- Birds;
- European hedgehog;
- Common reptiles;
- Invertebrates;
- Invasive species (buddejia and Himalayan honeysuckle).

Additional assessments, surveys, and pre-construction checks have been recommended as necessary to fully inform the planning application for any future development:

- Bat emergence surveys on Buildings B1 and B2;
- Bat hibernation surveys on B1 and B2;
- A detailed survey for badger activity on site; and
- Full Ecological Impact Assessment of any future development proposals.

Mitigation and compensation are discussed in section 4 of the report, but include the following:

- Vegetation clearance and demolition of the building to be undertaken outside of the bird nesting season or a pre-clearance inspection carried out by an appropriately qualified ecologist;
- Retention of the line of trees in the east of Area 1 of the site, and scattered trees where possible; ;
- Retention of scrub in the east of the site;
- Sensitive lighting scheme; and
- Implementation of Reasonable Avoidance Measures during vegetation clearance and the structural survey and investigative works, to be set out in a Precautionary Working Method Statements for bats and other protected/notable species.

Opportunities for ecological enhancements are set out in section 5 of this report.

In conclusion, there are likely to be ecological constraints to the development, however depending on the outcome of further surveys and assessment these impacts could be overcome through a package of mitigation and enhancement measures.

Given the identified evidence of presence and/or likely presence of important ecological receptors, further surveys and/or assessments are required to inform a full evaluation of adverse effects. The results of further protected species surveys and evaluations should be considered within an Ecological Impact Assessment (EcIA) report, in line with standard industry practice (CIEEM 2018, updated 2024). This report should include a formal assessment of impacts and will be suitable to fully inform the planning application.

***This report is valid for 12 months from the date the habitat survey, Preliminary Roost Assessment and Ground Level Tree Assessment were undertaken.***

# 1 INTRODUCTION

## 1.1 Terms of Reference

1.1.1 Wardell Armstrong LLP part of SLR, (WA) was commissioned by Cardiff Council to undertake a Preliminary Ecological Appraisal (PEA) in support of a proposed development at The Wolf's Castle Inn, Llanishen. The project is located at Wolf's Castle Avenue, Llanishen, Cardiff, CF14 5AF, centred on approximate National Grid Reference (NGR) ST 17432 82244, hereafter referred to as the 'site'. The site is separated into three boundaries: Area 1, 2 and 3.

1.1.2 This report has been produced with reference to current guidelines for UK Habitat (UKHAB) Classification V2.0 (UKHab Ltd, 2023[1]), Guidelines for Preliminary Ecological Appraisal (CIEEM 2017[2]) and Biodiversity – Code of Practice for Planning and Development (BSI 2013[3]).

## 1.2 Confidential Information

1.2.1 **Due to this report containing sensitive information regarding badger *Meles meles* records this report should not be placed into the public domain and should only be made available to *bona fide* individuals.**

## 1.3 Scope of Report

1.3.1 The purpose of the PEA report (PEAR) is in broad terms to undertake the following:

- Identify and report to the project team the likely ecological constraints associated with a project, such that the site design can adequately take account of ecological features;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy'[4];
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and

[1] UKHab Ltd (2023). *UK Habitat Classification Version 2.0 (at https://www.ukhab.org). Professional Edition.*

[2] Chartered Institute of Ecology and Environmental Management (CIEEM), Guidelines for Preliminary Ecological Appraisal, 2nd Edition, December 2017).

[3] British Standard BS 42020:2013 -2013 Biodiversity: Code of Practice for Planning and Development.

[4] As defined in BS 42020:2013.

- Identify the opportunities offered by a project to deliver ecological enhancement.

1.3.2 Certain species, habitats and nature conservation sites receive legislative protection which is detailed fully within Appendix 1 - Legislative Framework and Planning Policy. Other species/groups and habitats are notable due to their identification in national and/or local planning policy or via local records. An indicative assessment of potential adverse effects to such receptors is provided, although this is not a substitute for full EcIA (CIEEM 2018, updated 2024[5]) which may be required to fully inform any subsequent planning application along with additional surveys and assessments.

1.3.3 Provisional mitigation and enhancement opportunities are also discussed, where appropriate.

## 1.4 Site Context

1.4.1 The site is split across three areas as shown on Drawing Number CA13131-001 (Site Location Plan) and is approximately 0.71 hectares (ha) in total. Area 1 is approximately 0.50 ha and is situated immediately south of the junction of Wolf's Castle Avenue and Templeton Avenue, Llanishen, Cardiff. Areas 2 and 3 are located immediate south of Area 1 separated by Templeton Avenue and are 0.16 and 0.05 hectares (ha) retrospectively. Areas 2 and 3 are separated from each other by Templeton Close.

1.4.2 Area 1 predominantly comprises the former Wolf's Castle Inn (Building B1), an outbuilding (B2), hard standing, grassland and scrub. Areas 2 and 3 predominantly comprise grassland, scattered trees, and areas of hard standing.

1.4.3 The wider Llanishen area is predominantly suburban housing. The woodland of Coedcochwyn Site of Importance for Nature Conservation (SINC) lies approximately 300 metres (m) southwest of the site. Llanishen Reservoir Site of Special Scientific Interest (SSSI) is approximately 1 kilometre (km) southeast of the site. Areas of woodland are located to the northeast at Copperfield Park, and northwest at Mayflower Park which also supports a green belt, and Llanishen Brook. Llanishen Brook is referred to as both WB1 and WB3 in Drawing Number CA13131-002 (Waterbody Location Plan).

[5] CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

## 1.5 Description of Development

1.5.1 Development proposals are not known at the time of writing.

## 1.6 Planning Policy

1.6.1 A summary of national planning policy and relevant local planning policies are provided in Appendix 1.

# 2 METHODOLOGY

## 2.1 Desk Study

2.1.1 The desk study was informed by review of existing available information provided by South East Wales Biodiversity Records Centre (SEWBReC) and from available internet-based resources for a 2km search radius from the site boundary. Ordnance Survey (OS) and satellite mapping was also used to gain contextual habitat information and to identify aquatic features within 500 metres (m) of the site.

2.1.2 Specific information was sought for:

- Statutory designated sites;
- Locally designated sites;
- Ancient woodland[6];
- Protected and Invasive Non-Native Species (INNS);
- Section 7 (S.7) Habitats and Species of Principal Importance[7]; and
- Cardiff Local Biodiversity Action Plan (2008).

2.1.3 The ecological desk study was carried out by a competent Ecologist who is a qualified member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and has completed numerous ecological desk studies.

2.1.4 The Natural Resources Wales Site Checker[8] website was utilised to gather data on the National Site Network Sites within 10km of the application site boundary.

For brevity, of the species information extracted, nationally protected species to those of S.7 have been included from the last 10 years. Nonetheless, all records beyond this age have been considered on a species-by-species basis and included where they give context to key species that may use the application site or adjacent but could be under recorded.

[6] As defined by Natural England in their Inventory of Ancient Woodlands http://www.gis.naturalengland.org.uk/pubs/gis/tech_aw.htm

[7] Species or habitats of principal importance for the conservation of biodiversity listed on Section 7 (S.7) of the Environment Wales Act 2016.

[8] https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/find-protected-areas-of-land-and-sea/?lang=en

## 2.2 Extended UKHab Classification Survey

2.2.1 WA carried out a UK Habitat (UKHab) Classification Survey of the site on 26th November 2024. The survey was carried out by experienced WA ecologists who are qualifying members of CIEEM and have completed numerous ecological habitat surveys.

2.2.2 The survey followed the 'UK Habitat Classification Version 2.0' (UKHab Ltd 2023)[1] methodology with each of the main habitats classified according to the relevant criteria including vegetation composition expressed according to the DAFOR[9] system.

2.2.3 In addition to the mapping and description of habitats, the survey was 'extended' to include the incidental observations of protected and/or notable species and the potential for such species to occur on the site (and in the surrounding landscape where relevant) were also recorded onto secure digital media for mapping and data collection. The extended element of the survey was based on professional judgement.

2.2.4 Specific habitat features are mapped on Drawing Number CA13131-003 (UKHabs Survey Results) with appropriate reference numbers (Target Notes (TN)) identifying features of note.

## 2.3 Badger Walkover Survey

2.3.1 In conjunction with the UKHab Survey, a search for signs of badger activity including setts, tracks, badger hair, snuffle holes and latrines (both within the site and within a zone of 30m from the site boundary, where possible) was undertaken. The information received from enquiries and the results of the UKHab Survey are used to inform the need for further badger surveys.

## 2.4 Bats: Ground Level Tree Assessment

2.4.1 In conjunction with the UKHab Survey undertaken on 26th November 2024, a Ground Level Tree Assessment (GLTA) of the trees on site was also carried out by ecologists from WA following guidance within the Bat Conservation Trust (BCT) Guidelines (Collins, 2023[10]). The individual trees included within the site boundary are shown on Drawing Number CA13131-004 GLTA Survey Results. ***The tree reference numbers***

[9] D = dominant (>50%), A = abundant (30-50%), F = frequent (Many Individuals), O = occasional (Few Individuals), R = Rare (Isolated Individuals)

[10] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London.

***assigned relate to this report only and do not correspond to any separate Arboricultural Report References.***

2.4.2 The aim of the GLTA survey was to assess the potential of the trees to support roosting bats, identify any evidence of roosting bats and if there is a requirement for further surveys.

2.4.3 A GLTA of trees included a search for the following features:

- Suitable roosting features: natural holes, woodpecker holes, cracks/splits in major limbs and the trunk, holes/cavities, dense ivy growth, dense epicormic growth, bird, and bat boxes; and
- Signs indicating possible bat use: scratches and/or staining at entrance points, bat droppings, distinctive smell of bats and smoothing of the surface around a cavity.

2.4.4 Equipment used for the GLTA included binoculars.

2.4.5 The trees were categorised using the assessment criteria in Table 4.2 of the 4th ed. of the BCT Guidelines (Collins, 2023) as set out below:

- **None**: Either no Potential Roost Features (PRFs) in the tree or highly unlikely to be any;
- **FAR**: Further assessment required to establish if PRFs are present in the tree; and
- **PRF**: A tree with at least one PRF present.

2.4.6 Trees categorised as PRF were also assessed for the potential suitability of the PRFs for roosts using the assessment criteria in Table 6.2 of the BCT Guidelines 2023 as set out below:

- **PRF-I:** PRF is only suitable for individual bats or very small numbers of bats either due to size of lack of suitable surrounding habitats;
- **PRF-M:** PRF is suitable for multiple bats and may therefore be used by a maternity colony.

### 2.5 Bats: Daytime Bat Walkover

2.5.1 A Daytime Bat Walkover (DBW) survey of the surrounding habitat both within and adjacent to the site was also carried out, to assess its potential to be used by foraging and commuting bats. This information was combined with a review of aerial

photography and OS data to provide contextual information about the local habitat and its likely use by bats.

## 2.6 Bats: Preliminary Roost Assessment (PRA)

2.6.1 An external PRA was undertaken on the two buildings on site known as the former Wolf's Castle Inn (B1) and the outbuilding (B2) on 26th November 2024. The survey was carried out by experienced WA ecologists who are qualifying members of CIEEM and have completed numerous preliminary roost assessments.

2.6.2 The aim of the PRA was to assess the suitability of the buildings to support roosting bats, identify any evidence of roosting bats and establish the requirement for further surveys.

2.6.3 A detailed external inspection was undertaken, which included a search for Potential Roost Features (PRFs) i.e., gaps in the fabric of the building (whether lifted tiles or gaps under fascia's). Field signs such as droppings, feeding remains and dead or living bats were also recorded.

2.6.4 Equipment used for the PRA included binoculars.

2.6.5 Any PRFs determined to be suitable for roosting bats and the overall condition of the building were noted to aid further surveys.

2.6.6 The locality of the buildings was also considered when making the assessment i.e. how bats would interact with a building and other landscape features such as tree lines.

2.6.7 The buildings were categorised using the assessment criteria in Table 4.1 of the 4th ed. of the Bat Conservation Trust (BCT) Guidelines (Collins, 2023) as set out below:

- **High**: 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 habitats;
- **Moderate**: Structure with one or more potential roost sites that could be used by numbers of bats due to their size, shelter, protection, conditions and surrounding habitats, but unlikely to support a roost of high conservation concern;
- **Low**: Structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or

suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation); and

- **Negligible**: Structure with no potential to support bats.

## 2.7 Evaluation and Assessment of Features

2.7.1 Evaluation of the importance / likely importance of ecological features and the likelihood of impacts affecting important features was made, where possible, using professional judgement in accordance with published guidance (CIEEM 2017).

2.7.2 Protected and S.7 species were evaluated in order to identify potential adverse effects in Table 2, based on the following criteria:

- Desk study records;
- Evidence found during the survey;
- Presence, extent, quality and viability of suitable on-site habitat;
- Ecological connectivity to viable off-site habitats; and
- Perceived impacts of habitat loss/impact to individuals in relation to proposals.

2.7.3 A 'traffic light' system is used in Tables 1, 2 and 3 to highlight potential constraints and opportunities whereby:

- Green: No constraint or limited constraint unlikely to be of planning and/or legal significance.
- Amber: Potential constraints which require further survey and/or mitigation and may be of planning and/or legal significance depending on the outcome of further survey/assessment.
- Red: Constraints which have already been identified by the PEA survey/desk-based assessment and are likely to be of planning and/or legal significance.

## 2.8 Nomenclature

2.8.1 Vascular plant names follow '*New Flora of the British Isles'* (Stace 2019) with vernacular names as provided in the Botanical Society of the British Isles website (BSBI, 2013)[11]. All other flora and fauna names following the National Biodiversity Network (NBN) Atlas[12]). The common and scientific name of species/taxa is provided (if

[11] http://rbg-web2.rbge.org.uk/BSBI/intro.php

[12] https://nbn.org.uk/

available) when first mentioned in the text, with only the vernacular name referred to thereafter.

## 2.9 Limitations / Deviations

2.9.1 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns, and behaviour. The survey was undertaken in November and was therefore undertaken outside of the optimum recommended survey period for habitat surveys (April to August), and therefore survey data may not be representative of other times of year. However, a UKHab Survey at this time can still provide useful data on broad habitat types and highlight potential constraints. The report is not designed, nor is it required to present a complete inventory of flora/fauna.

2.9.2 The absence of desk study records is not relied upon to determine absence of a particular species/habitat. Often, the absence of records is a result of under-recording within the given search area and as such the experience of the ecologist concerned together with a range of additional factors, in particular the presence/absence of potentially supporting habitat; is used to infer likely presence/absence of ecological receptors.

2.9.3 Access could not be gained to the courtyard areas including the area east of B2 and north of B1, and the northeast areas of B1, due to the fence and locked gate. Therefore, assumptions were made to the habitat during the site visit, and the condition of the southern aspect of B2, based on aerial imagery, and what could be viewed from outside this area. This was not thought to significantly limit the preliminary assessment.

## 2.10 Quality Assurance & Environmental Management

2.10.1 The surveys and assessments have been overseen by and the report checked and verified by a full member of CIEEM, who is bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in BS 42020, and as stated within specialist guidance, as appropriate and referenced separately.

# 3 RESULTS AND EVALUATION

## 3.1 Statutory and Non-Statutory Designated Sites

3.1.1 Desk study results for designated sites are evaluated in Table 1, below.

3.1.2 Designated sites which are considered potentially sensitive to the development proposals by virtue of their supported species or habitat assemblages, the distance/ecological connectivity to the site and the nature of the perceived impacts are discussed in detail in the final sections of the report.

3.1.3 Designations for which potential adverse effects are not anticipated are excluded from further assessment.

3.1.4 The desk study returned a total of 33 SINCs within 2km of the site. Table 1 discusses those within 1km. A further 28 are located between 1 and 2km of the site boundary.

| *Table 1: Designated Sites Evaluation* | | | |
|---|---|---|---|
| **Site Name and Status[13]** | **Distance and direction from Site** | **Reason for Designation/identification** | **Potential Constraints** |
| **Statutory Designated Sites** | | | |
| Llanishen and Lisvane Reservoir Embankments SSSI | Approximately 1km east | A variety of grassland types are present on this site due a variety of conditions within the embankments. This has resulted in a rich grassland fungal community including grazed cap *Dermoloma cuneifolium*, smoky spindles *Clavaria fumosa*, the earth tongue *Geoglossum fallax,* and more than 25 species of waxcap. | Possibly - The site is disconnected from the designation by residential housing. As the development proposal are unknown at the time of writing, there may be potential adverse effects indirectly, on the qualifying features of this designation. |
| Lisvane Reservoir SSSI | Approximately 1.3km east | This site acts as a refuge within Cardiff for many birds, including over-wintering birds such as mallard *Anas platyrhynchos*, teal *Anas crecca*, tufted duck *Aythya fuligula*, pochard *Aythya farina*, and coot *Fulica spp*. | |
| **Non-Statutory Designations - within 1km of the site boundary** | | | |
| Llanishen Brook SINC | Approximately 224m northwest from site (referred to as WB1 and WB3 in Drawing Number CA13131-002 | Designated as a small watercourse which is comparatively unmodified, supports good aquatic, emergent or bankside plant communities, including ancient semi-natural woodland indicator species such as yellow archangel *Lamium galeobdolon*, bluebell *Hyacinthoides spp*. and wood-sorrel *Oxalis spp*. Eel and trout have been recorded in Llanishen Brook | Possibly - The site is disconnected from the designation by residential housing. As the development proposal are unknown at the time of writing, there may be potential adverse effects indirectly, on the qualifying features of this designation. |

[13] **SPA** – Specially Protected Area, **SAC** – Special Area for Conservation, **Ramsar** – site designated under the Ramsar Convention, **SSSI** – Site of Special Scientific Interest, **NNR** – National Nature Reserve, **LNR** – Local Nature Reserve, **SINC –** Site of Importance for Nature Conservation.

| *Table 1: Designated Sites Evaluation* | | | |
|---|---|---|---|
| **Site Name and Status[13]** | **Distance and direction from Site** | **Reason for Designation/identification** | **Potential Constraints** |
| | (Waterbody Location Plan)). | | |
| Coedcochwyn SINC | Approximately 225m southwest | Woodland supporting ancient semi-natural woodland indicators including red currant *Ribes rubrum*, scaly male fern *Dryopteris affinis*, and Wood-sedge *Carex sylvatica*. Two ponds on site support breeding common frogs *Rana temporaria*, smooth newts *Lissotriton vulgaris*, and palmate newts *Lissotriton helveticus*. | |
| Coed-y-Caeau SINC | 644m south | Semi-natural streamside woodland supporting diverse flora including species such as with monk's-hood *Aconitum spp*., marsh orchid *Dactylorhiza spp*., panicled sedge *Carex paniculata*, and drooping sedge *Carex pendula*, marsh valerian *Valeriana dioica*, and lousewort *Pedicularis sylvatica*. | |
| Coed-y-Felin SINC | Approximately 801m northeast | Semi-natural oak/ash woodland on the banks of Nant Fawr, with ancient woodland indicator flora including thin-spined wood-rush *Luzula spicata*, wood millet *Milium effusum*, and yellow pimpernel *Lysimachia nemorum*. The site supports barn owl *Tyto alba*, common frog, common toad *Bufo bufo*, trout, and merlin *Falco columbarius*. | |
| Llwyn-crwnganol wood SINC | **826m north** | **Wet woodland supporting secondary Alder carr *Alnus spp.*, oak Quercus *spp*., ash *Fraxinus excelsior*, and sycamore *Acer pseudoplatanus*, supporting feeding bats and a number of rare insect species including the fly *Nephrocerus flabicornis*, and the** | |

| *Table 1: Designated Sites Evaluation* | | | |
|---|---|---|---|
| **Site Name and Status[13]** | **Distance and direction from Site** | **Reason for Designation/identification** | **Potential Constraints** |
| | | **wasps *Lissonota coracinus* and *Dolichonbis limbatus*. The site supports ancient woodland indicator species such as bluebell, opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium*, wood meadow-grass *Poa nemoralis*, wood sorrel, and yellow archangel.** | |

## 3.2 Habitats

3.2.1 All habitats within the site are described in Table 2, overleaf, together with an indication of their S.7 status and status and reference within the Cardiff Local BAP[14].

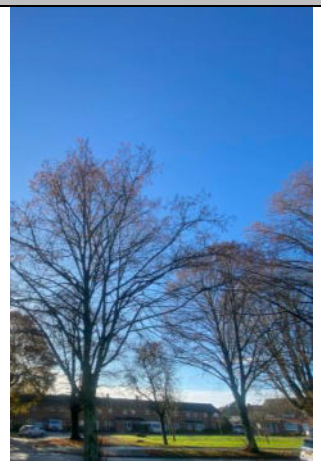
3.2.2 Habitats which could be subject to adverse effects (amber or red) are discussed in the latter sections of the report. Habitats for which potential adverse effects are not anticipated are excluded from further assessment. The location and extent of habitats are shown on Drawing Number CA13131-003 (UKHabs Survey Results).

3.2.3 Target note descriptions and photographs are provided in Appendix 2 - Target Notes.

3.2.4 A review of OS data has identified three waterbodies within 500m of the site, as shown on Drawing Number CA13131-002 (Waterbody Location Plan). Llanishen Brook is referred to as both WB1 and WB3 on Drawing Number CA13131-002 (Waterbody Location Plan). WB1 is located approximately 280m north of the site in Mayflower Park. WB3 is located approximately 420m south of the site, flowing adjacent to Kimberley Terrace. One further waterbody labelled WB2 is located approximately 330m southeast of the site, within the grounds of Llanishen High School.

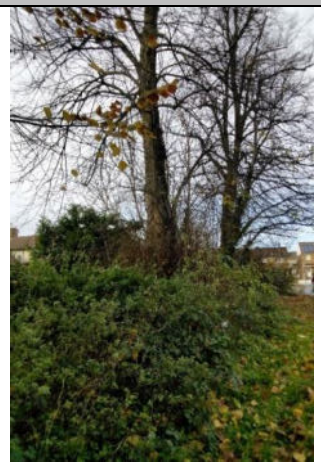
[14] Cardiff Biodiversity Action Plan (2008) Available at: Cardiff-LBAP-2008.pdf (outdoorcardiff.com)

| *Table 2: Habitat Descriptions and Evaluation* | | | | |
|---|---|---|---|---|
| **Habitat Description** | **UK Hab Classification** | **Photograph** | **Local BAP/S.7** | **Potential Constraints** |
| Modified grassland<br>Modified grassland is present in all three areas. Areas 2 and 3 comprises mostly modified grassland, which is also present on Area 1. The modified grassland is species poor, heavily managed, and mostly mown short. There is some sward height variation in the grassland in the northeast of Area 1. Species present include annual meadow grass *Poa annua* (D), creeping buttercup *Ranunculus repens* (A), ribwort plantain *Plantago lanceolata* (O), perennial rye-grass *Lolium perenne* (O), dandelion *Taraxacum officinale agg.* (O), common cat's-ear *Hypochaeris radicata* (O), daisy *Bellis perennis* (O), clover *Trifolium sp.* (O), cock's-foot *Dactylis glomerata* (O), yarrow *Achillea millefolium* (O) oak saplings *Quercus sp.* (R), teasel *Dipsacus fullonum.* | Primary code<br>g4 - Modified grassland<br>Secondary codes<br>32 – scattered trees |  <br>  | X | No – Modified grassland is a common and widespread habitat, and is not considered to be of conservation value, however the trees provide ecological benefits including foraging and commuting habitat for bats, and refuge habitat for a variety of fauna species (see Table 3).<br><br>**It will be necessary to undertake a BS5837 Tree Survey in the event that their removal, damage, or incursion into root zone is unavoidable.** |

| *Table 2: Habitat Descriptions and Evaluation* | | | | |
|---|---|---|---|---|
| **Habitat Description** | **UK Hab Classification** | **Photograph** | **Local BAP/S.7** | **Potential Constraints** |
| (R), and bramble agg. *Rubus fruticosus agg.*(R).<br><br>There are several scattered trees within the areas of modified grassland in all three areas. Tree species include oak (O), hawthorn *Crataegus monogyna* (O), and black alder *Alnus glutinosa* (O). There is some age variation amongst the trees including recently planted trees, and a mature oak in the southeast of Area 3. Some trees, such as the mature oak, are host to some common species of fungi including wood ear/jelly ear *Auricularia auricula-judae*, and bonnet fungi sp, *Mycena sp.*<br>Detailed descriptions of the mature and semi-mature trees on and adjacent to the site boundary are provided in Appendix 3. | |  | | |

| *Table 2: Habitat Descriptions and Evaluation* | | | | |
|---|---|---|---|---|
| **Habitat Description** | **UK Hab Classification** | **Photograph** | **Local BAP/S.7** | **Potential Constraints** |
| <u>Buildings</u><br>Buildings B1 and B2 are located in Area 1. Both buildings are in a state of disrepair.<br><br>Further detail of features of the building pertaining to bats are detailed in Appendix 4 – Preliminary Roost Assessment (PRA) Survey Results. | <u>Primary code</u><br>u1b5 – Buildings |  | x | No – this habitat is not considered to be of any conservation concern**. However, please see Table 3 re roosting bats.** |
| Within Area 1 there is a stone and mortar wall connecting to B1.<br><br>In Area 1, a wooden fence connects the east extension of B1 to the mortared wall, blocking access to this area.<br>A steel security fence connects the north extension of B1 to B2, and the west gable end of B2 to the westernmost extension of B1, blocking access to this area. | <u>Primary code</u><br>U1e – built linear features<br><u>Secondary codes</u><br>853 – Mortared wall<br>612 – Fence<br>82 – Vacant or derelict land |  | X | No – this habitat is not considered to be of any conservation concern**.** |

| *Table 2: Habitat Descriptions and Evaluation* | | | | |
|---|---|---|---|---|
| **Habitat Description** | **UK Hab Classification** | **Photograph** | **Local BAP/S.7** | **Potential Constraints** |
| U1b – developed land; sealed surface<br>Areas of hard standing are present in all three areas, including pavements, car park, and a bus stop.<br>Hard standing around the buildings of Area 1 have been colonised by vegetation due to its disuse. Vegetation is mainly growing around building edges.<br>Species present include annual meadow grass (F), buddleja *Buddleja sp*. (O), dandelion (O), mosses, hedge mustard *Sisymbrium officinale* (O), daisy (O), willowherb *Epilobium sp*. (O), teasel (O), fleabane *Erigeron sp.* (O). | Primary code<br>u1b - developed land; sealed surface<br>Secondary code<br>804 – car park |  | X | No – this habitat is not considered to be of any conservation concern. |

| *Table 2: Habitat Descriptions and Evaluation* | | | | |
|---|---|---|---|---|
| **Habitat Description** | **UK Hab Classification** | **Photograph** | **Local BAP/S.7** | **Potential Constraints** |
| Mixed scrub/Line of Trees<br>Mixed scrub was present in Area 1. Species in this habitat include bramble (D), nettle *Urtica sp.* (A), ivy *Hedera sp.* (F), broadleaf dock *Rumex obtusifolius* (F), Himalayan honeysuckle *Leycesteria Formosa* (O), oak saplings (O), ground ivy *Glechoma hederacea* (O), elder (O), sedge sp. *Cyperaceae sp.* (R).<br><br>A line of trees is present within this habitat, some of which have been coppiced. Many trees within this line are host to ivy, and multiple trees have a number of basal shoots growing from the trunk.<br>The line of trees was subject to a GLTA. Further details can be found in Appendix 3. | Primary code<br>h3h – mixed scrub<br>Secondary codes<br>33 – line of trees |  | X | **Possibly - Further, it would be necessary to undertake a BS5837 Tree Survey in the event that their removal, damage, or incursion into root zone is unavoidable.**<br>**Scrub habitat is usually considered common and widespread, see Table 3 re bats, breeding birds, and common reptiles.**<br>**Himalayan honeysuckle is planted within gardens. It is recommended this is removed as it is invasive, outcompeting native species but not listed as an Invasive Non-Native Species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).** |

## 3.3 Species

3.3.1 Protected and S.7 species are evaluated in order to identify potential adverse effects in Table 3 below, based on the following criteria:

- Desk study records;
- Evidence found during the survey;
- Presence, extent, quality, and viability of supporting on-site habitat;
- Ecological connectivity to viable off-site habitats; and
- Perceived impacts of habitat loss/impact to individuals in relation to proposals.

3.3.2 Species for which adverse effects are predicted (amber or red) are discussed in more detail in the Discussion and Recommendations section. Species/taxa for which potential adverse effects are not anticipated (green) are excluded from further assessment.

| Table 3: Protected Species Evaluation | | | | |
|---|---|---|---|---|
| **Receptor (species/taxa)** | **Desk Study records** | **Status** [15] | **Supporting Habitat(s)Present** | **Potential Constraints** |
| **Badger** ***Meles meles*** | There are nine records of badger within 2km of the site in the last 10 years. The closest is approximately 800m from site, in 2020. ✓[16] | BA | Yes – the scrub and grassland present on site could provide foraging and sett building opportunities for badgers. | **Possibly – there is a potential risk to the direct harm of badgers, depending on development proposals. See Appendix 5 - Badger Report – Confidential.** |
| **Bats** ***Chiroptera*** | There are 86 records of bats within 2km of site, in the last 10 years. Species include but are not limited to:<br>- common pipistrelle *Pipistrellus pipistrellus;*<br>- soprano pipistrelle *Pipistrellus pipistrellus;*<br>- Nathusius' pipistrelle *Pipistrellus nathusii;*<br>- pipistrelle species *Pipistrellus spp.;*<br>- noctule *Nyctalus noctule;*<br>- Daubenton's *Myotis daubentonii;* | EPS, WCA, S.7, | Yes – the scattered trees and buildings on site offer potential roosting locations for bats (see Appendix 3 and 4). The grassland and scrub onsite likely support a range of invertebrates providing bats with foraging opportunities. Furthermore, the line of trees could provide bats with a linear commuting route through site, albeit lacking connectivity with the wider landscape. | **Possibly – there is the potential for fragmentation of bat commuting routes if the line of trees is removed. Furthermore, removal of the grassland and scrub onsite may reduce bat foraging habitat.**<br><br>**See Appendix 3 - Ground Level Tree Assessment (GLTA) Survey Results, and Appendix 4 – Preliminary Roost Assessment (PRA) Survey Results for constraints regarding possible suitable bat roosting locations.** |

[15] **EPS** – European Protected Species, **WCA** – Wildlife and Countryside Act, **WCA (9)** – species listed under Schedule 9, **A1** – Annex 1 (Birds Directive), **BA** – Protection of Badgers Act, **S.7** – species listed under section 7 of the Environment (Wales) Act as species of principal importance, **BoCC** – Birds of Conservation Concern.

[16] Locations of badger activity are confidential due to the sensitivity of this species

| Table 3: Protected Species Evaluation | | | | |
|---|---|---|---|---|
| **Receptor (species/taxa)** | **Desk Study records** | **Status** [15] | **Supporting Habitat(s)Present** | **Potential Constraints** |
| | - *Myotis spp.;*<br>- greater horseshoe *Rhinolophus ferrumequinum;* and<br>- brown long-eared bat *Plecotus auritus.*<br><br>The closest roost record is a common pipistrelle roost, approximately 150m from site, from 2021. | | | |
| **Birds** | There are approximately 467 records of birds within 2km of the site, in the last 10 years. Species include but are not limited to:<br>- redwing *Turdus iliacus*<br>- song thrush *Turdus philomelos*<br>- house sparrow *Passer domesticus*<br>- dunnock *Prunella modularis*<br>- starling *Sturnus vulgaris*<br>- peregrine *Falco peregrinus*<br>- barn owl *Tyto alba*<br>- bullfinch *Pyrrhula pyrrhula* | S.7, WCA BoCC | Yes – The line of trees, scattered trees and scrub offer potential foraging and breeding habitat to birds. Starling, coal tit, magpie (*Pica pica*), jackdaw (*Corvus monedula*), and wood pigeon (*Columba polumbus*) were observed across the site. | **Yes – Potential breeding and foraging habitat may be lost/disturbed by proposals.** |

| Table 3: Protected Species Evaluation | | | | |
|---|---|---|---|---|
| **Receptor (species/taxa)** | **Desk Study records** | **Status** [15] | **Supporting Habitat(s)Present** | **Potential Constraints** |
| | - | | | |
| Brown hare *Lepus europaeus* | There are no records of brown hare within 2km of site, in the last 10 years. | S.7 | None. | None – habitats on site not suitable for use by hares. |
| European hedgehog *Erinaceus europaeus* | There are 122 records of hedgehog within 2km of the site, in the last 10 years. One record is within the site, from 2021. | S.7 | Modified grassland and scrub. | **Possibly habitats suitable for use by hedgehog. Recommendations are made in the following section.** |
| Great crested newt *Triturus cristatus* | There are no records of GCN within 2km of the site, in the last 10 years. However, there are seven historical records within 2km of the site. | EPS, WCA, S.7 | No waterbodies are present on site.<br><br>Scrub and vegetated areas on-site may provide suitable terrestrial habitat for this species. | None – species are likely to be absent due to the heavily managed habitats on site, lack of connectivity between suitable habitats and considering with the lack of records for this species. |
| Common toad *Bufo bufo* | There are 24 records of common toad within 2km of the site, in the last 10 years. The closest record is 0.7km from site, in 2021. | S.7 | None | None – no waterbodies on or near site. |
| Common reptiles | There are 50 records of reptiles within 2km of the site, in the last 10 years. Species include, but are not limited to:<br>- slow-worm *Anguis fragilis;*<br>- grass snake *Natrix Helvetica; and* | WCA, S.7 | The modified grassland, scrub and partially vegetated hard standing could provide supporting habitat to reptiles. However, considering the lack of connectivity to the wider landscape this is considered unlikely. | **Possibly – The site is considered unlikely to support reptiles. However, their presence cannot be entirely ruled out. Recommendations are made in the following section.** |

| Table 3: Protected Species Evaluation | | | | |
|---|---|---|---|---|
| **Receptor (species/taxa)** | **Desk Study records** | **Status** [15] | **Supporting Habitat(s)Present** | **Potential Constraints** |
| | - common lizard *Zootoca vivipara*.<br>The closest record is of a grass snake approximately 1km from site, from 2022. | | | |
| Hazel dormouse *Muscardinus avellanarius* | There are 44 records of hazel dormouse within 2km of the site, in the last 10 years. The closest record is 0.6km from site, from 2021. | EPS, WCA, S.7 | No – the scrub within area 1 is considered to lack a suitable species composition to support dormice. Furthermore, considering the lack of connectivity of the site to the wider landscape, it is considered unlikely the site supports a population of this species. | None – species is likely to be absent from the site. |
| Invertebrates (Protected and notable species) | There are many records of invertebrates within 2km of the site, in the last 10 years. Species include but are not limited to:<br>- cinnabar moth *Tyria jacobaeae;*<br>- ghost moth *Hepialus humuli;*<br>- wall butterfly *Lasiommata megera;* and<br>- marsh fritillary *Euphydryas aurinia.* | LBAP, S.7 | The grassland and scrub onsite are likely to support an invertebrate population.<br>Cinnabar moth and ghost moths are only UKBAP species for research only. No food plants for marsh fritillary were recorded on site. | **Possibly – adverse effects through possible minor habitat losses are unlikely to be significant to the wider invertebrate population. However, recommendations are made in the following section.** |

| Table 3: Protected Species Evaluation | | | | |
|---|---|---|---|---|
| **Receptor (species/taxa)** | **Desk Study records** | **Status** [15] | **Supporting Habitat(s)Present** | **Potential Constraints** |
| Otter *Lutra lutra* | There are eight records of otter within 2km of the site, in the last 10 years. The closest record is 1km from site, from 2018. | EPS, WCA, S.7 | No habitats within the site are considered suitable to support otters. | None – species is unlikely to use the site. |
| Water vole *Arvicola amphibia* | There is one record of water vole approximately 1.5km from site, from 2015. | WCA, S.7 | No habitats within the site are considered suitable to support water voles. | None – species is unlikely to use the site. |
| White-clawed crayfish *Austropotamobius pallipes* | There are no records of white-clawed crayfish within 2km of the site, from the last 10 years. | EPS, WCA, S.7 | No habitats within the site are considered suitable to support white-clawed crayfish. | None – species is unlikely to use the site. |
| Protected and notable plant species | There are many vascular plant species recorded within 2km of the site in the last 10 years, including but not limited to:<br>• bluebell *Hyacinthoides non-scripta;*<br>• cornflower *Centaurea cyanus;*<br>• fritillary *Fritillaria meleagris;* and<br>• Welsh poppy *Meconopsis cambrica.* | WCA, S.7 | No notable plant species were recorded on site. Furthermore, the habitats present in all areas are considered unlikely to support notable species. | None. |

| Table 3: Protected Species Evaluation | | | | |
|---|---|---|---|---|
| **Receptor (species/taxa)** | **Desk Study records** | **Status** [15] | **Supporting Habitat(s)Present** | **Potential Constraints** |
| Non-native invasive species (INNS) | There are 74 records of INNS (plants) from within 2km of the site, in the last 10 years. Including but not limited to:<br>- Japanese knotweed *Reynoutria japonica;*<br>- Montbretia *Crocosmia pottsii x aurea = C. x crocosmiiflora;*<br>- Himalayan balsam *Leycesteria Formosa;* and<br>- Butterfly-bush *Buddleja davidii.* | WCA (9) | **B**uddleja was recorded within the hard standing of Area 1. However, buddleia is often planting in ornamental gardens. Himalayan honeysuckle was also recorded within the mixed scrub within the eastern part of Area 1 of the site. | **Possibly – No species listed under Schedule 9 of the WCA, however, there are invasive species on site. Recommendations are made in the following section.** |

# 4 DISCUSSION AND RECOMMENDATIONS

## 4.1 Sensitive Receptors

4.1.1 The following conservation sites, habitats, and species (receptors) have been evaluated as being subject to potential adverse effects and hence can be constraints to the proposals:

- Statutory designated sites: Llanishen and Lisvane Reservoir Embankments SSSI and Lisvane Reservoir SSSI;
- Non-Statutory designations within 1km of the site boundary: Llanishen Brook SINC, Coedcochwyn SINC, Coed-y-Caeau SINC, Coed-y Felin SINC, Llwyn-Crwnganol Wood SINC;
- Mixed scrub/Line of Trees;
- Scattered trees;
- Badger;
- Bats;
- Birds;
- European hedgehog;
- Invertebrates;
- Common reptiles;
- European hedgehog; and
- Invasive species (buddejia and Himalayan honeysuckle).

4.1.2 The nature of potential effects, requirements for further surveys and proposed mitigation/compensation are discussed below for each of the identified receptors.

## 4.2 Statutory and Non-Statutory Designated Sites

4.2.1 The following statutory (within 2km) and non-statutory designated sites (within 1km) are within proximity to the site: Llanishen and Lisvane Reservoir Embankments SSSI, Lisvane Reservoir SSSI Llanishen Brook SINC, Coedcochwyn SINC, Coed-y-Caeau SINC, Coed-y Felin SINC and Llwyn-Crwnganol Wood SINC. A futher 28 SINCs are located between 1km and 2km of the site. These sites have the potential to be impacted by the development dependent on the proposals.

4.2.2 It is recommended that further assessments are undertaken to assess the potential adverse effects on the designations arising the development once proposals are known.

## 4.3 Habitats

*Mixed Scrub/Line of Trees*

4.3.1 It is recommended that the mixed scrub and line of trees present to the east of area 1 is retained and protected in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction and in accordance with any Tree Protection Plans approved by the Local Authority. If this is not possible, any losses of mixed scrub should be compensated for in the landscape design. See sections 4.2.2 and 4.3 for recommendations regarding trees and bats respectively.

*Scattered trees*

4.3.2 It is recommended that where possible, the development is to be designed to enable the retention of trees on site, particularly mature specimens, the scattered trees in the smaller parcels of land, the line of trees in the scrub, and the line of trees south of the main site.

4.3.3 Retained trees should be protected in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction and in accordance with any Tree Protection Plans approved by the Local Authority. An Arboricultural Method Statement and Tree Protection plan should be provided and Construction Exclusion Zones identified on the site layout plan. Any specified works to trees etc. should conform to BS 3998: Recommendations for Tree Work.

4.3.4 If removal of trees cannot be avoided, any losses should be replaced or compensated for by the provision of new suitably aged planting within the development design scheme, following a 3:1 ratio (i.e., 3 trees planted for every one lost). Species used should be of local provenance and ideally be positioned to strengthen/create connectivity with the wider landscape (Planning Policy Wales, 2024[17]).

## 4.4 Protected Species

*Badger*

[17] Planning Policy Wales, (2024). Edition 12. Welsh Government.

4.4.1 Full details of the results, discussions, and recommendations following the Badger Walkover Survey are available in Appendix 5 – Badger Report **(Confidential)**.

*Bats – Trees*

4.4.2 There are seven trees that have been assessed as PRF-I. These do not require further surveys, but it is recommended that soft felling is used to perform any works on these trees, under the supervision of a suitably qualified bat licensed ecologist.

4.4.3 It is recommended these trees are soft felled when bats are considered not to be hibernating i.e., between the months of April to September. The sections of the trees with PRFs will be removed, cutting above/below the feature being careful not to damage the feature itself, and left on the ground for a period of 24 hours to allow, in the unlikely event, any missed animals the opportunity to escape. If bats are found, work will stop immediately, and advice sought from the Ecological Clerk of Works or Natural Resources Wales (NRW).

4.4.4 If trees are to be removed during the winter months, when bats are considered to be entering into or leaving hibernation (i.e., October to April) then it is recommended that an Aerial Inspection (e.g. tree-climb/ladder or mobile elevated working platform (MEWPs) survey is carried out prior to removal to check for hibernating bats. As above, if bats are found, work will stop immediately, and advice sought from the Ecological Clerk of Works or NRW. Further details on the methodology of the soft felling will be outlined in the Ecological Impact Assessment (EcIA).

4.4.5 A 'roost resource' approach (i.e compensation either through provision of bat boxes or retention of the roosting feature from the tree felled and strapped to a retained tree/creation of new roosting features in retained trees) will be undertaken to provide compensation for all trees categorised as PRF-I in advance of impacts and a pre-working method statement (PWMS) for proposed works to these trees.

4.4.6 There are six trees (tree reference T9, T10, T11, T19 and T18 in total that have been assessed as PRF-M. It is recommended that PRF inspection surveys are carried out on these trees that will be impacted by the proposed development, with the aim of reassessing PRFs and determining likely presence/absence of bats at the time of survey and the requirement for further survey and/or mitigation.

4.4.7 This involves the use of tree-climbing/access equipment (e.g., ladders, Mobile Elevated Working Platforms (MEWPs)) to gain access to PRFs, if they are inaccessible from ground level. This allows a more detailed assessment of their likely suitability for

bats and a search for conclusive evidence such as live/dead individuals, droppings, scratch marks, and staining by grease/urine/faeces.

4.4.8 The detailed inspection should be carried out using torches, mirrors, and endoscopes, during daylight hours. The inspection can be carried out at any time of the year, but the timing can be organised to reflect the suitability of the PRF and the predicted seasonal use by bats.

4.4.9 The PRF inspection survey will be undertaken by persons trained, qualified, and experienced in tree climbing and aerial rescue, and will be conducted in pairs. Ecologists undertaking this survey will hold a survey licence covering the activities executed.

4.4.10 If bats or evidence of roosting bats is found within the trees, then a disturbance licence from NRW will be required to undertake any tree surgery works or removal of the tree.

4.4.11 Where evidence of a bat roost is observed, a tree cannot be climbed due to health and safety, or a feature cannot be adequately inspected, further ground-based dusk emergence surveys may still be recommended to determine presence/likely absence of roosting bats. These surveys can usually be targeted far more effectively based on the results of the PRF inspection survey.

4.4.12 Three trees were assessed as 'FAR' could not be surveyed due to the height of features. Further assessment may be required in line with current best practice guidelines, if these trees are proposed to be lost to the proposed development. Alternatively, these trees could be subject to an Aerial Inspection survey at the same time as those classified as PRF-M.

4.4.13 All trees on site assessed during the GLTA should be reassessed in 12 months' time from the date of survey if such time elapses before development. Full details are provided in Appendix 3 (Ground Level Tree Assessment (GLTA) Survey Results).

*Bats - Buildings*

4.4.14 B1 and B2 were assessed as having high potential to support roosting bats. The buildings are suitable to support crevice dwelling bats in features such as raised roof and ridge tiles, lead flashing, bargeboards and fascias. Furthermore, there are numerous potential access points for void-dwelling species to gain entry to the interior including underneath raised and broken roof tiles, soffits, bargeboards. The open door on the northern aspect of the building could potentially provide access to the interior

for species requiring flight access to roosts such as horseshoe species. However, it is not known whether this door is permanently left open.

4.4.15 Both buildings were considered to have the potential to support high conservation status roosts e.g. maternity or hibernation. Full details results are provided in Appendix 4 (Preliminary Roost Assessment (PRA) Survey Results), and the locations of the buildings and trees on site are provided in Drawing Number CA13131-003 (UKHab Survey Results).

4.4.16 As both B1 and B2 have the potential to support hibernating bats, **it is recommended that a hibernation survey is undertaken on both B1 and B2.** This survey should be undertaken during December-March.

4.4.17 **It is recommended that three dusk emergence surveys are undertaken on each building between May and September**, with at least two surveys between May and August and spaced at least three weeks apart, following current best practice guidelines (Collins, 2023). The dusk emergence surveys should be undertaken from 15 minutes before sunset until two hours after sunset.

*Bat Activity (Foraging and Commuting)*

4.4.18 Bats may potentially forage / commute along the line of trees, scrub and grassland across the site. It is therefore recommended that these habitats are retained where possible within the development proposals.

4.4.19 Any lighting introduced permanently as part of the development should be designed with input from an ecologist and with reference to the Institute of Lighting Professional (ILP) and BCT Guidelines on Bats and Artificial Lighting at Night (ILP& BCT, 2023)[18]. A sensitive lighting scheme will be required to ensure habitats created/retained from biodiversity are not indirectly impacted by light pollution and maintain dark foraging/commuting corridors for wildlife including bat species sensitive to artificial light.

4.4.20 Any temporary lighting installed during the construction phase should also avoid lighting key habitats such as scattered trees, lines of trees, and scrub, if works are to be undertaken under darkness, but this should be avoided wherever possible.

*Breeding birds*

[18] ILP/BCT – Guidance Note GN08/23 – Bat and Artificial Lighting at Night 2023.

4.4.21 It is recommended vegetation clearance and demolition of buildings are not undertaken during main bird breeding season (March to August inclusive), where possible.

4.4.22 If unavoidable, then prior to any vegetation removal /building demolition during the breeding bird seasons, suitable habitats should be checked by a suitably qualified ecologist no more than 48 hours in advance of any works, for the presence of occupied nests. If active nests are found, then works would need to stop and an appropriate buffer put in place as advised by the ecologist and works in the vicinity avoided until the young have fledged.

*European hedgehog*

4.4.23 European hedgehogs are now considered to be 'Vulnerable' and are included on the red List for British mammals (IUCN, 2020[19]). The key habitats within the site that could support hedgehog include scrub and modified grassland. Surrounding habitats provide good connectivity to the site, including woodland, parks, recreational fields, and gardens.

4.4.24 Reasonable Avoidance Measures should be implemented as necessary to avoid harm/disturbance to hedgehog and be set out in a PWMS for Protected/Notable Species.

*Common reptiles*

4.4.25 Area 1 is considered to have limited potential for reptiles, within the modified grassland and, mixed scrub but there are records of slow-worm and grass snake within 2km of the site. If present, the number of reptiles present is likely to be low, and there is potential for a low number of individual common reptiles to be harmed/disturbed by construction works.

4.4.26 The risk of harm to common reptiles can be reduced by the implementation of suitable reasonable avoidance measures, under a Precautionary Working Method Statement (PWMS). This PWMS would detail measures that can be undertaken during the construction works which will minimise and prevent harm to any common reptiles

[19] IUCN (2020). Compliant Red List for Britain's Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough.

that might be present at the time of the construction works. Any common amphibians may also be protected under this PWMS.

*Invertebrates*

4.4.27 The habitats within the survey area could potentially support a range of invertebrate species.

4.4.28 It is recommended that new planting comprises a diverse range of native species which will benefit insect pollinator species.

*Invasive plant species*

4.4.29 It is also recommended that buddleja and Himalayan honeysuckle present within the site, are removed from site for the benefit of local biodiversity.

## 4.5 General Recommendations

4.5.1 If the site boundary alters and any other habitats are identified to be lost or affected by the development, then further surveys for habitats and protected species may be required. It is recommended that an EcIA is prepared once the development proposals are known (refer to Section 6 - Conclusions).

4.5.2 Night-time work should be avoided whenever possible to limit the potential for disturbance to nocturnal animals.

4.5.3 It is recommended that an update walkover is undertaken if 12 months has elapsed since this report is issued to see if there have been any substantial changes to the habitats present within the survey area.

# 5 NET BENEFITS FOR BIODIVERSITY

## 5.1 Biodiversity Enhancement

5.1.1 In accordance with the requirements of the Planning Policy Wales (PPW) Edition 12 (2024) and BSI 42020:2013, ecological enhancements should be proposed which will result in a net benefit for biodiversity.

5.1.2 A planning application will need to be accompanied by a Green Infrastructure Statement as per the requirement under PPW 12. The design of GI should consider: the key priorities identified within the local authority Green Infrastructure Assessment, how the Stepwise approach[20] has been followed (i.e. how the role of GI within the development has been guided by the results within the PEA) and should set out how net benefits for biodiversity will be delivered. Design of high-quality GI should consider information contained within 'Building with Nature Standards in Wales[21]'.

## 5.2 Habitats

5.2.1 The development masterplan should be designed to include a diversity of habitats that create a mosaic to benefit wildlife, such as:

- Grassland – to include areas sown with an appropriate native wildflower mix reflecting a species profile of local provenance suitable for supporting pollinators of regional importance.
- Tree lines and hedgerows – to include native species of local provenance and be planted strategically to maintain/create connectivity with natural features in the wider landscape, if present.
- Scrub – to include species of native local provenance and be strategically planted giving thought to where this might provide best refuge for species and/or connectivity within the site and/or wider landscape.
- Biodiverse sustainable urban drainage (SUDS) creation.

[20] The Stepwise approach considers how biodiversity has been considered within each stage of the development process.

[21] Delivering High Quality Green Infrastructure in Wales, a briefing for developers, planners and placemakers — Building with Nature

5.2.2 To compensate for loss of grassland within an urban environment, consideration should be given to incorporating green infrastructure such as biodiverse green roofs and walls wherever possible.

5.2.3 Thought should be given to the boundary features around/within the development site. The planting of species-rich hedgerows would add biodiversity value. Native species and/or species with a known attraction to wildlife should be included in the planting schedule of any landscape scheme. This can include berry and nut bearing trees and shrubs.

5.2.4 Inclusion of nectar-rich plant species, in any landscaping areas, will benefit insects which in turn could benefit other species. Bulb planting of daffodils *Narcissus* sp., snowdrop *Galanthus nivalis* and crocuses Crocus sp. will also provide an early nectar source for insects.

5.2.5 Any grassland areas on the development site avoids the use of fertilisers as artificial chemicals are known to decrease biodiversity.

### 5.3 Species

5.3.1 There are a variety of simple and cost-effective measures that could be implemented as part of the development proposals to enhance the site for a range of wildlife including bats, reptiles and breeding birds, including species which are UK BAP and Welsh S.7 Priority listed species. These include, but are not limited to, the following:

- Bird boxes, including a variety of designs, such as 45mm entrance boxes, 32mm entrance boxes, and the installation of integrated bird bricks directly into the brickwork (e.g. sparrow terraces /swift /house martin bricks) of new buildings/structures;
- Bat boxes including for a variety of species and for a variety of seasons, to be installed on retained mature trees and use of integrated bat bricks directly into the brickwork of new buildings and structures;
- Sowing of areas of open space with a diverse native wildflower seed mix would provide a foraging resource for a range of species including invertebrates and birds;
- Provision of a hibernaculum for the benefit of reptiles;
- Provision of insect/invertebrate houses/hotels, and/or management of retained standing/fallen deadwood;

- Use of hedgehog houses would enhance the scheme for this species; Other enhancement measures include a minimum 10-centimetre (cm) gap under all fences for hedgehogs or provision of hedgehog highway gaps (13cm x 13cm holes) in boundary fencing; and
- New biodiversity friendly SUDs drainage.

# 6 CONCLUSIONS

6.1.1 Given the identified evidence of presence and/or likely presence of ecological receptors which may be adversely impacted by the development scheme, further surveys and/or assessments have been recommended to inform a full evaluation of adverse effects.

6.1.2 Consequently, additional protected species surveys and assessment reports will be required to compliment the planning application, including:

- Bat hibernation surveys on B1 and B2 (winter months);
- Bat emergence surveys on B1 and B2 Between May and August); and
- A detailed survey for badger activity on site.

6.1.3 The implementation of Reasonable Avoidance Measures during vegetation clearance and the structural survey and investigative works, to be set out in a Precautionary Working Method Statements hedgehogs and common reptiles.

6.1.4 All trees on the site should also be retained alongside the area of scrub, and any vegetation clearance /building demolition should be undertaken outside of breeding bird season (where possible), or subject to a pre-clearance inspection by an appropriately qualified ecologist.

6.1.5 A sensitive lighting scheme should be considered, due to the potential utilisation of this site by bats. Due to the connectivity of this site to green corridors, it would be in the interest of bats to limit the lighting during construction, and by the development.

6.1.6 Additionally, the results of further protected species surveys and evaluations should be considered within an Ecological Impact Assessment (EcIA) report, in line with standard industry practice (CIEEM 2018 updated 2024). This report should include a formal assessment of impacts and will be suitable to fully inform the planning application.

## 6.2 Report Validity

6.2.1 This report is valid for 12 months from the date the habitat survey, Preliminary Roost Assessment and Ground Level Tree Assessment was undertaken.

6.2.2 If the site boundary or layout is subsequently modified and any other habitats are identified to be lost or affected by the development, then further surveys for habitats and protected species may be required.

# 7 REFERENCES

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11. Natural Resources Wales (2023). Badgers – A Guide for Developers.
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# APPENDICES

# Appendix 1:
# Legislative Framework and Planning Policy

## Appendix 1: Summary of Legislative Framework and Planning Policy

### *Summary of Legislation*

| | | |
|---|---|---|
| ***Protection for animals included on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended)*** | | |
| ***A person commits an offence if they:*** | | |
| Regulation 43 | Part 1(a) | Deliberately captures, injures or kills any wild animal of a European protected species |
| | Part 1(b) | Deliberately disturbs wild animals of any such species.<br>(1A) For the purpose of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely<br>a) to impair their ability<br>i. to survive, breed or reproduce or to rear or nurture their young; or<br>ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate.<br>b) to affect significantly the local distribution or abundance of the species to which they belong |
| | Part 1(c) | Deliberately take or destroy the eggs of such an animal |
| | Part 1(d) | Damage or destroy a breeding site or resting place of such an animal |
| | Part 3 | To:<br>a) be in possession of, or to control,<br>b) transport,<br>c) sell or exchange, or<br>d) to offer for sale or exchange.<br>(4) For the purpose of (3) this applies to:<br>a) any live or dead animal or part of animal<br>i) which has been taken from the wild, and<br>ii) which is a species or subspecies listed in Annex IV(a) to the Habitats Directive; and<br>b) anything derived from such an animal or any part of such an animal. |
| ***Protection for animals included on Schedule 5 of the Wildlife and Countryside Act 1981 (As Amended)*** | | |
| Section 9 | Part 1 | Intentionally kill, injure, take a scheduled animal |
| | Part 2 | Possess or control (live or dead animal, part or derivative) |
| | Part 4 (a) | Intentionally or recklessly damage, destroy or obstruct access to any structure or place used by a scheduled animal for shelter or protection |
| | Part 4 (b) | Intentionally or recklessly disturb an animal occupying such a structure or place |
| | Part 5 (a) | Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) |
| | Part 5 (b) | Advertise for buying or selling such things |

A large number of species are also included under Section 7 of the Environment (Wales) Act 2016 as Species of Principal Importance which places the "biodiversity

duty" on the Welsh Government (and therefore public authorities) for the purpose of maintaining and enhancing biodiversity in relation to Wales. This stems from a review of the now superseded UK Biodiversity Action Plan and the continued need for global action on conserving biodiversity as result of the Convention on Biological Diversity.

***Bats***

All UK bat species are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), noctule (*Nyctalus noctula),* common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*) bats are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be "of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales".

***Badgers***

Badgers are afforded full protection under the Protection of Badgers Act 1992, which makes it an offence to:

- Wilfully kill, injure or take a badger;
- Possess or control any live or dead badger or any part, or anything derived from, a dead badger;
- Cruelly ill-treat a badger, or attempt to do so;
- To interfere with a sett by:
- Damaging or destroying it;
- Obstructing access to, or any entrance of, a badger sett;

- Causing a dog to enter a badger sett;
- Disturbing a badger when it is occupying a sett;
- Sell a live badger or offer one for sale.

It is also an offence to mark, attach any ring, tag or other marking device to a badger unless authorised under licence.

**Hedgehog**

Hedgehogs are protected under Section 1 of the Wild Mammals (Protection) Act 1996, which makes it an offence too mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering to this species. Hedgehog is listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be "of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales".

***Reptiles***

Six native reptiles occur in Britain: the adder (*Vipera berus*), the grass snake (*Natrix natrix helvetica*), the smooth snake (*Coronella austriaca*), the sand lizard (*Lacerta agilis*), the common lizard (*Zootoca vivipara*) and the slow worm (*Anguis fragilis*).

The smooth snake and sand lizard are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and Species regulations 2017 (as amended) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Five of the six native reptile species (excluding smooth snake) are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be "of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales".

***Birds***

All wild birds, their nests and eggs are protected under Part 1 Section 1 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence (with certain limited exceptions and in the absence of a licence) to:

- Kill or injure any wild bird;
- Take, damage or destroy the nest of any wild bird whilst it is in use or being built (this includes several species of birds whose nests are reused under Schedule ZA1);
- Take or destroy the egg or any wild bird.

It is also an offence to possess any live or dead wild bird or egg, or anything derived from a wild bird or egg. Restrictions on trade and advertising also apply.

Bird species listed on Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended) are afforded additional protection against intentional or reckless disturbance whilst it is building a nest, or at a nest containing eggs, young or disturbance to the young.

Further a number of bird species are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be "of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales" within Section 7 of The Environmental (Wales) Act 2016.

In addition to this legal protection, leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of the birds regularly found here and produced a list of Birds of Conservation Concern. Of the 245 species assessed, 70 were placed on the red list of high conservation concern, 103 on the amber list of medium conservation concern and 72 on the green list of low conservation concern. Consideration is therefore given to those species listed as being of conservation concern although they have no greater legislative protection.

***Planning policy***

***Planning Policy Wales (PPW) Edition 12 (February 2024)***

Planning Policy Wales (PPW) is a material consideration for the purposes of planning decision making. PPW translates the principles of Sustainable Management of Natural Resources (SMNR) into use for the planning system.

Edition 12 of PPW puts stronger emphasis on taking a proactive approach to green infrastructure covering cross boundary considerations, identifying key outputs of green infrastructure assessments, the submission of proportionate green infrastructure statements with planning applications and signposting Building with Nature standards. Further clarity is provided on securing net benefit for biodiversity through the application of the stepwise approach, including the acknowledgement of off-site compensation measures as a last resort, and the need to consider enhancement and long-term management at each step. A strengthened approach to the protection of SSSIs, with increased clarity on the position for site management and exemptions for minor development necessary to maintain a 'living landscape' and a closer alignment with the stepwise approach, along with promoting new planting as part of development based on securing the right tree in the right place.

The Environment (Wales) Act 2016 introduces the SMNR and sets out a framework to achieve this as part decision-making. The objective of the SMNR is to maintain and enhance the resilience of ecosystems and the benefits they provide.

Relevant key features of the SMNR relating to biodiversity include:

- improving the resilience of ecosystems and ecological networks;
- halting and reversing the loss of biodiversity; and
- maintaining and enhancing green infrastructure based on seeking multiple ecosystem benefits and solutions

PPW states *"The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement."*

Extract from PPW:

*Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty)*

*"6.4.5 Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity.*

*In doing so planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:*

- *diversity between and within ecosystems;*
- *the connections between and within ecosystems;*
- *the scale of ecosystems;*
- *the condition of ecosystems including their structure and functioning; and*
- *the adaptability of ecosystems."*

Extract from PPW:

*"When all other options have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes, offsite compensation for unavoidable damage must be sought:*

a. *This should normally take the form of habitat creation, or the provision of long-term management arrangements to enhance existing habitats and deliver a net benefit for biodiversity. It should also be informed by a full ecological assessment before habitat creation or restoration starts.*
b. *The Green Infrastructure Assessment should be used to identify suitable locations for securing offsite compensation. Where possible, a landscape–scale approach, focusing on promoting wider ecosystem resilience, should help guide locations for compensation. This exercise will determine whether locations for habitat compensation should be placed close to the development site, or whether new habitat or additional management located further away from the site would best support biodiversity and ecosystem resilience at a wider scale.*
c. *Where compensation for specific species is being sought, the focus should be on maintaining or enhancing the population of the species within its natural range. This approach might also identify locations for providing species-*

*specific compensation further away from the site. Where they exist, Spatial Species Action Plans should be used to help identify suitable locations.*

d. *Any proposed compensation should take account of the Section 6 Duty (Biodiversity and Resilience of Ecosystems Duty), and the five key ecosystem resilience attributes that it outlines. It should also be accompanied by a long term management plan of agreed and appropriate mitigation and compensation measures."*

Extract from PPW:

*Protected Species*

*"6.4.35 The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained."*

***Section 7 of the Environment (Wales) Act 2016***

Section 7 (S7) of the Environment (Wales) Act 2016 affords protection to priority species listed, by requiring that the local authority *'take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.'*

***Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)***

Extract from TAN:

*"1.4.4 Section 40(1)) of Natural Environment and Rural Communities Act 2006 (NERC) places a duty on every public authority, in exercising its functions, to "have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". This TAN sets out the manner in which planning authorities should comply with this duty.".* This is replaced by the duty in the Environment (Wales) Act 2016.

**Local Planning Policy**

Relevant current and emerging policies from the Cardiff Local Development Plan 2006-2026 (Adopted Plan January 2016) are summarised in Box 1, below.

| **Policy Reference** | **Policy Summary** |
|---|---|
| Policy KP16: Green Infrastructure | 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.<br><br>Natural heritage assets are key to Cardiff's character, value, distinctiveness and sense of place. They include the City's:<br><br>i. Undeveloped countryside and coastline (EN1 and EN2);<br><br>ii. Landscape, geological and heritage features which contribute to the City's setting (EN3);<br><br>iii. Strategically important river valleys of the Ely, Taff, Nant Fawr and Rhymney (EN4);<br><br>iv. Biodiversity interests including designated sites and the connectivity of priority habitats and species (EN5, EN6 and EN7);<br><br>v. Trees (including street trees), woodlands and hedgerows (EN8);<br><br>vi. Strategic recreational routes, cycleways and the public rights of way network (T5, T6 and T8);<br><br>vii. Parks, playing fields, green play areas and open spaces (C4 and C5); and<br><br>viii. Growing spaces including allotments, community orchards and larger gardens; and<br><br>ix. Holistic integrated surface water management systems (EN10). |
| Policy EN5: Designated Sites | Development will not be permitted that would cause unacceptable harm to sites of international or national nature conservation |

| | |
|---|---|
| | importance.<br><br>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. |
| Policy EN6: Ecological Networks and Features of Importance for Biodiversity | Development will only be permitted if it does not cause unacceptable harm to:<br><br>x. 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;<br><br>xi. Networks of importance for landscape or nature conservation.<br><br>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. |
| Policy 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:<br><br>xii. The need for development outweighs the nature conservation importance of the site;<br><br>xiii. The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts; and<br><br>xiv. Effective mitigation measures are provided by the developer.<br><br>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. |
| Policy EN8: Trees, Woodlands 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. |

# Appendix 2:
# Target Notes

## Appendix 2: Target Notes

The target notes (TN) are shown on the UKHab Survey Results (CA13131-003).

**TN1**

Ornamental shrub present in the mixed scrub within the main site.

a. Himalayan honeysuckle *Leycesteria formosa* present.

**TN2**

Spoil heap – not pictured.

**Appendix 3:**

**Ground Level Tree Assessment (GLTA) Survey Results**

# Ground Level Tree Inspection (GLTA) Record

| Site Survey Details | |
|---|---|
| **Site name:** | Wolf's Castle |
| **WA project number:** | CA13131 |
| **Inspection date(s) and time(s):** | 26/11/2024 |
| **Number of trees inspected:** | 24 |
| **Inspected by:** | Daisy Smith and Georgia Morris |

| Tree suitability Summary Counts | |
|---|---|
| **PRF** | 13 |
| **FAR** | 3 |
| **None** | 8 |

| PRF Suitability Counts | |
|---|---|
| **PRF-1** | 7 |
| **PRF-M** | 6 |

# Ground Level Tree Inspection (GLTA) Record

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T23 | **Inspected by:** | Gm |
| **Approximate tree height (m):** | 5 | **Diameter at Breast Height (cm):** | 30 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | None | | |
| **Additional notes:** | Nest in tree - survey in late November. Loose bark on north facing branch but not enough to support a bat. | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T20 | **Inspected by:** | Gm |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 50 |
| **Age of tree:** | Mature | **Safe to climb:** | Yes |
| **Tree suitability:** | None | | |
| **Additional notes:** | One knot hole facing north but backed | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T19 - oal | **Inspected by:** | Gm |
| **Approximate tree height (m):** | 10 | **Diameter at Breast Height (cm):** | 70 |
| **Age of tree:** | Mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-M | **Number of PRFs:** | 2 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | PRF 1 – Knot hole, 3m high, 20cm diameter, 15cm height, clean dry internal.<br><br>PRF 2 – Fissure facing north, starting approx 5m up until 7m. Approx 2m tall, approx 10cm gap at widest places | | |
| **Photograph(s)** | 4 photograph(s) taken, which are provided below. | | |




| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T7 | **Inspected by:** | Gm |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 40 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | FAR | **Number of PRFs:** | 0 |
| **Any evidence of bats:** | No | | |
| **Any evidence of other animals:** | Starlings in tree | | |
| **Additional notes:** | Open tear out facing south at approx 3m but too open to elements on some branch approx 1m lower | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T5 | **Inspected by:** | Gm |
| **Approximate tree height (m):** | 5 | **Diameter at Breast Height (cm):** | 40 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | None | | |
| **Photograph(s)** | 4 photograph(s) taken, which are provided below. | | |




| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T24 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 14 | **Diameter at Breast Height (cm):** | 120 |
| **Age of tree:** | Mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 2 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | 2 PRF-I identified, 1 is an area of lifted bark on the trunk 2-3m high and south facing. 2 is lifted bark 6m high and on a branch south west facing. | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T22 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 10 | **Diameter at Breast Height (cm):** | 50 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | FAR | **Number of PRFs:** | 2 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | Two potential PRFs, FAR as can't fully inspect from ground. On main trunk, 3.5m west facing | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T21 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 6 | **Diameter at Breast Height (cm):** | 25 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 1 |
| **PRF number:** | 1 | **PRF type:** | Woodpecker hole |
| **PRF height (m):** | 3 | **PRF suitability:** | PRF-I |
| **Direction of PRF:** | South | | |
| **Location of PRF:** | On branch coming off main trunk | | |
| **PRF entrance description:** | Approx 4cm | | |
| **PRF internal description:** | Dark and dry | | |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

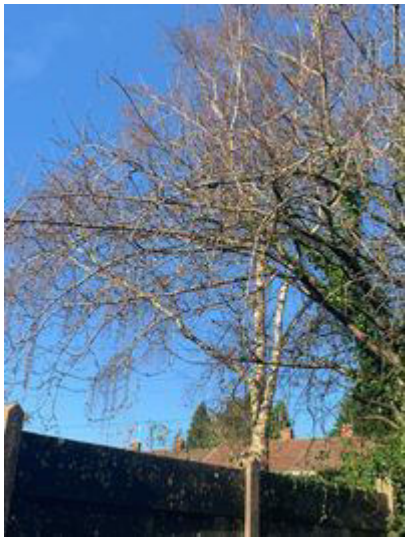
| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T18 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 50 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-M | **Number of PRFs:** | 1 |
| **PRF number:** | 1 | **PRF type:** | Tear out |
| **PRF height (m):** | 1 | **PRF suitability:** | PRF-M |
| **Direction of PRF:** | North | | |
| **Location of PRF:** | Trunk | | |
| **PRF entrance description:** | Dry cavity | | |
| **PRF internal description:** | Dry | | |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T17 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 9 | **Diameter at Breast Height (cm):** | 40 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | None | | |
| **Photograph(s)** | 1 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T16 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 5 | **Diameter at Breast Height (cm):** | 20 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | No |
| **Tree suitability:** | FAR | **Number of PRFs:** | 1 |
| **Additional notes:** | 1 PRF. Wound at 3.5m high. South facing. Looks dry, upward facing so can't see the full extent of it. | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T15 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 9 | **Diameter at Breast Height (cm):** | 40 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 1 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | One PRF, 2m high. Facing west. Looks quite backed but some small gaps. On main tree trunk. | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T14 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 25 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | No |
| **Tree suitability:** | None | | |
| **Photograph(s)** | 1 photograph(s) taken, which are provided below. | | |



| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T13? | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 7 | **Diameter at Breast Height (cm):** | 30 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | No |
| **Tree suitability:** | None | | |
| **Photograph(s)** | 1 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T12 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 14 | **Diameter at Breast Height (cm):** | 100 |
| **Age of tree:** | Mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-M | **Number of PRFs:** | 3 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | Three knot holes, approximately 4-7m high. Facing north and east. Large dry dark openings. FAR required higher up if impacts. | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T11 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 20 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-M | **Number of PRFs:** | 4 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | Multiple areas of lifted bark. At all heights on the tree. PRFs face all directions. The extent of lifted bark varies for each PRF but bark lifted covers the majority of the tree. | | |
| **Photograph(s)** | 5 photograph(s) taken, which are provided below. | | |



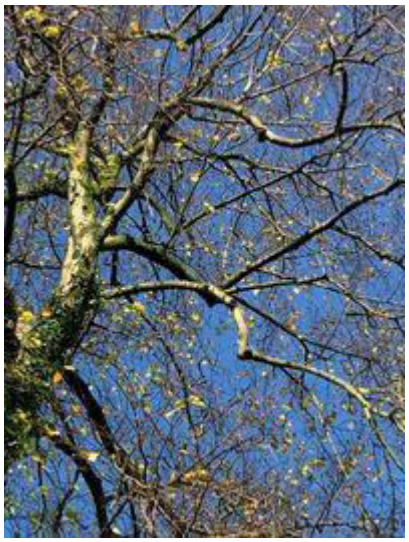
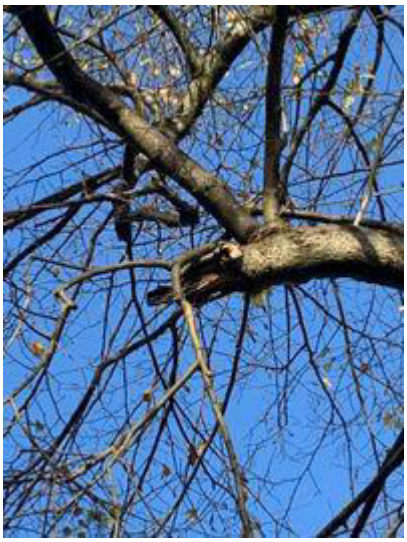


| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T10 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 14 | **Diameter at Breast Height (cm):** | 100 |
| **Age of tree:** | Mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-M | **Number of PRFs:** | 0 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | Multiple large knot holes. 4 PRFs identified from ground level. FAR if impacts to the tree. PRFs facing all directions. | | |
| **Photograph(s)** | 4 photograph(s) taken, which are provided below. | | |




| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T9 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 12 | **Diameter at Breast Height (cm):** | 90 |
| **Age of tree:** | Mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-M | **Number of PRFs:** | 0 |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | >7 PRFs seen from ground level. FAR if impacted to assess full extent. Multiple knot holes, broken branches, lifted bark. PRFs facing all directions and varying height on the tree. Main stem is covered in thick Ivy, with overlapping stems. | | |
| **Photograph(s)** | 5 photograph(s) taken, which are provided below. | | |




| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T8 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 45 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 1 |
| **PRF number:** | 1 | **PRF type:** | Knot hole |
| **PRF height (m):** | 3 | **PRF suitability:** | PRF-I |
| **Direction of PRF:** | East | | |
| **Location of PRF:** | 3m high | | |
| **PRF entrance description:** | 5cm wide | | |
| **PRF internal description:** | Dry | | |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | 1 PRF, 3m high, knothole, east facing, on main trunk | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T6 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 8 | **Diameter at Breast Height (cm):** | 50 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 2 |
| **PRF number:** | 1 | **PRF type:** | Knot hole |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | 2 PRFs, both knotholes. 1 - east facing on stem, 2.5m high. Possibly lead further into the trunk. 2 - north facing on branch, 3m high. | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T4 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 7 | **Diameter at Breast Height (cm):** | 50 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | None | | |
| **Photograph(s)** | 1 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T3 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 4 | **Diameter at Breast Height (cm):** | 30 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | No |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 1 |
| **PRF number:** | 1 | **PRF type:** | Compression forks |
| **PRF height (m):** | 2 | **PRF suitability:** | PRF-I |
| **Direction of PRF:** | South | | |
| **Location of PRF:** | On main trunk | | |
| **PRF entrance description:** | 0 | | |
| **PRF internal description:** | 0 | | |
| **Any evidence of bats:** | None | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | 1 PRF, formed as a result of two stems joining. 10cm entrance, may lead further into stem. Entrance relatively wet. Could do FAR | | |
| **Photograph(s)** | 2 photograph(s) taken, which are provided below. | | |

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T2 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 7 | **Diameter at Breast Height (cm):** | 40 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | PRF-I | **Number of PRFs:** | 3 |
| **Any evidence of bats:** | Not Inspected | | |
| **Any evidence of other animals:** | None | | |
| **Additional notes:** | Three PRFS. 1 and 2 are knotholes at 2.5m and 2.75m respectively. Entrances are wet at this time of the year. Unable to describe internally from ground level. PRF 3 is a broken limb, unable to determine suitability from ground level. | | |
| **Photograph(s)** | 3 photograph(s) taken, which are provided below. | | |

0.

| Survey Responses | | | |
|---|---|---|---|
| **Tree type / tree tag:** | T1 | **Inspected by:** | Daisy Smith |
| **Approximate tree height (m):** | 7 | **Diameter at Breast Height (cm):** | 40 |
| **Age of tree:** | Semi-mature | **Safe to climb:** | Yes |
| **Tree suitability:** | None | | |
| **Photograph(s)** | 1 photograph(s) taken, which are provided below. | | |

# Appendix 4:
# Preliminary Roost Assessment (PRA) Survey Results

## Appendix 4: Preliminary Roost Assessment (PRA) Survey Results

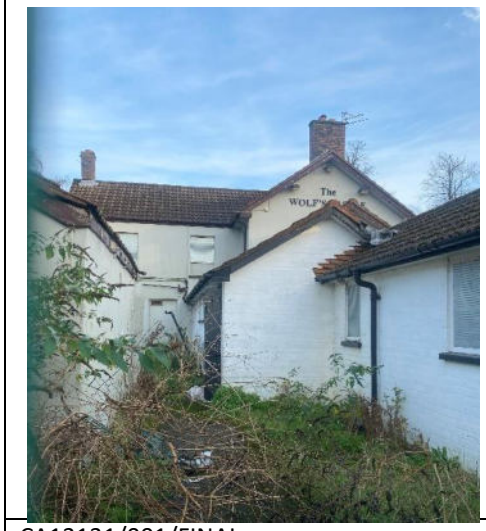
Due to the number of potential roosting features (PRFs) recorded during the PRA, multiple PRFs of the same category exist, e.g., broken bargeboard, in multiple locations. Whilst Table 1 describes every category of PRF present, it does not provide an exhaustive list of the numbers and locations of each PRF category present, due to the high frequency of PRFs at this site.

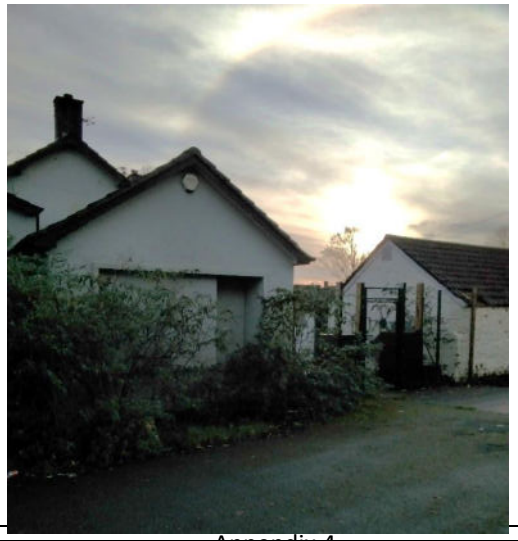
| **Table 1 – Preliminary Roost Assessment (PRA) conducted 26th November 2024** |
|---|
| **Building 1 (B1) – Wolf's Castle Inn** |
| The largest building on site, known as the former Wolf's Castle Inn, or B1, was surveyed. The building is a complex structure, likely having been extended multiple times in each cardinal direction and is derelict. B1 is a two storey, constructed of brick and mortar, with some wooden clad areas both painted white, and some rendered areas. The roof structure is complex, consisting of eight dual pitched roofs, four chimneys, and a glass porch. The roof is constructed of interlocking concrete tiles, concrete ridge tiles and end tiles, with clay hanging tiles on the gable ends. The soffits, bargeboards, and fascia are wooden. The windows and their associated lintel sit in wooden frames, currently covered in metal sheeting. Two mesh covered vents are present on the east gable end.<br><br>Due to its derelict nature numerous soffits, bargeboards, and fascia are broken, missing, or have deteriorated. Multiple end tiles are broken or have notable gaps between them, and many roof tiles are broken or raised. Some ridge tiles are also broken or missing. Lead flashing is also missing or raised in places. The 'The Wolf's Castle' sign is also lifted in places, and a wooden clad area is broken. These PRFs may all be utilised by bats to gain entry to the building including roof void dwelling bats or provide crevices for crevice dwelling bats. Additionally, there is a door on the north aspect of the building which is being held open by a bag. This may allow for bats that require flight access to their roosts, to access B1. The building may be utilised by a number of bats and may be suitable for roosting for multiple species of bats.<br><br>An internal survey could not be safely carried out due to the derelict nature of the building. Additionally, no access to the courtyard between B1 and B2 could not be gained due to a locked gate.<br><br>The building is situated on an area of hard standing used as a car park, with areas of modified grassland, scrub, a line of trees, and scattered trees. Security lighting is present on the building, but likely not in use. Streetlights are scattered along the boundary of the site, with approximately 10 encircling the site. The site sits in a residential area, with two schools and associated recreational fields to the east and west, multiple parks, and one green corridor sitting in |

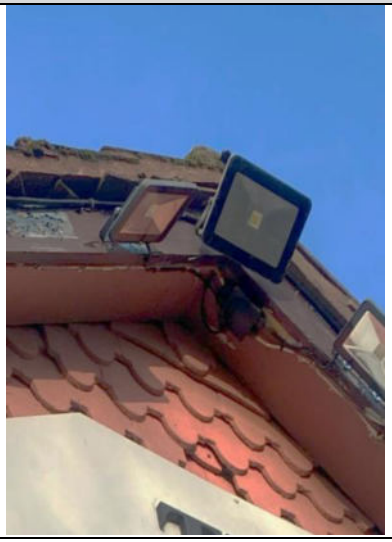
the wider area. Trees on site may provide foraging and commuting habitat. Residential gardens, the woodland of the parks and recreational fields, and green corridor may also provide foraging and commuting habitat.

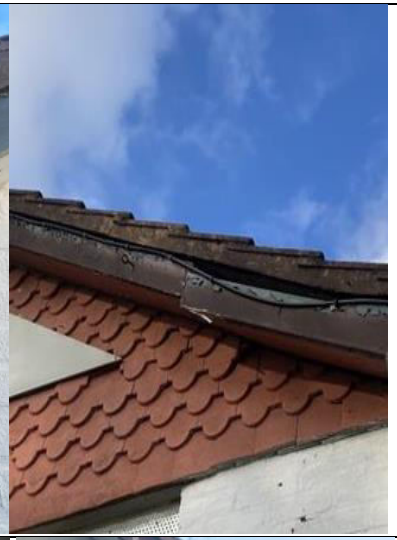
B1 is considered to have **high suitability** to support roosting bats. Due to the construction of the building, it has the potential to offer a constant cool temperature suitable to **support species of hibernating bats** including Leisler's *Nyctalus leisleri,* Pipistrellus sp. and brown long-eared bat Plecotus euritus, in features such as the roof void and broken window frames.

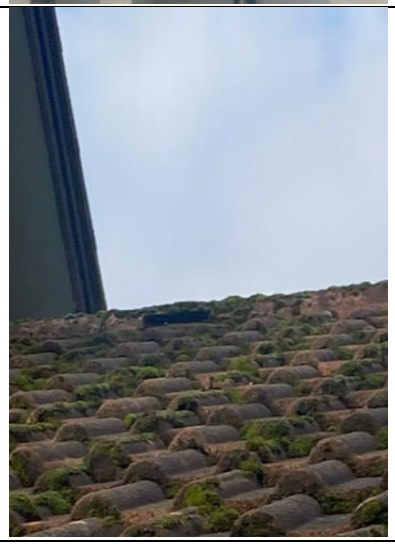

The
WOLF S CASTL

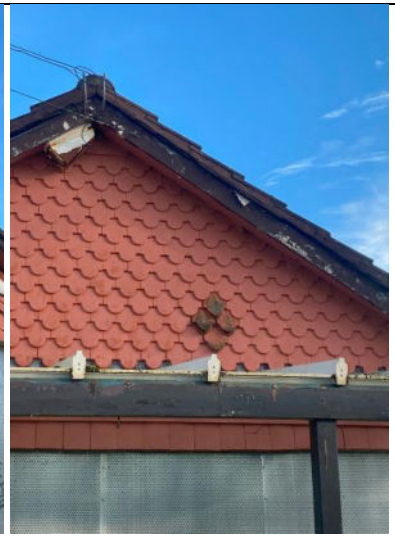


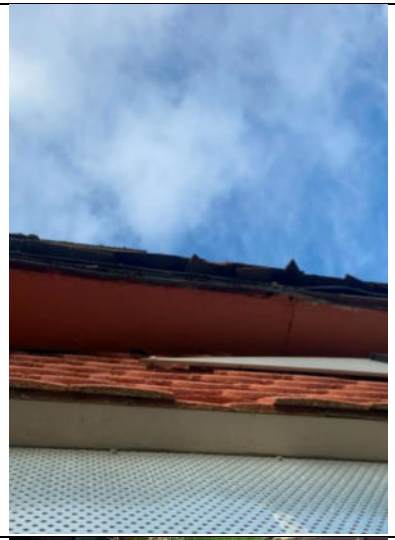


| Feature | Feature description and suitability | Image |
|---|---|---|
| Broken soffit | There are numerous broken soffit boxes on all sides of the building, potentially providing bats with an access points interior the interior. Bats may also utilised the interior of the soffit to roost. |    |

| | | |
|---|---|---|
| Broken bargeboard | This feature is present on most sides of the buildings and may provide bats with entry to the interior of the building or to roosting underneath. |   |
| Raised and missing lead flashing | Missing lead flashing could provide bats with direct access into the interior of the building. Raised lead flashing could provide a suitable roosting place for crevice dwelling bats. |    |

| | | | |
|---|---|---|---|
| Broken/raised roof tiles | This feature could provide access to the interior for roof void dwelling bats, as well as suitable roosting places for crevice dwellers. |  |  |
| Broken/raised ridge tiles | This may allow bats to enter the building – suitable for roof void and crevice dwelling bats. |  | |

| | | |
|---|---|---|
| Raised, broken, and missing hanging tiles | Locations include the gable end of the south extension, and the gable end of the west extension with the glass porch. Some hanging tiles are missing and may allow roof void bats to enter the building. Where the hanging tiles are lifted and do not allow access to the building, it may still be suitable for crevice dwelling bats. |   |

| | | |
|---|---|---|
| Raised Wolf's Castle sign | The sign reading 'The Wolf's Castle' is raised from the hanging tiles. The gap between the hanging tiles and sign may form a form of cavity wall - may be suitable for crevice dwelling bats. |  |
| Broken Wooden Cladding | The broken cladding may be suitable roosting place for crevice dwelling bats. |  |

| | | |
|---|---|---|
| Door left open | Door on the north aspect of the building being held ajar by a bag. This may allow for bats that require flight access to their roosts to roost within B1. It may also be suitable for roof and crevice dwelling bats. |  |

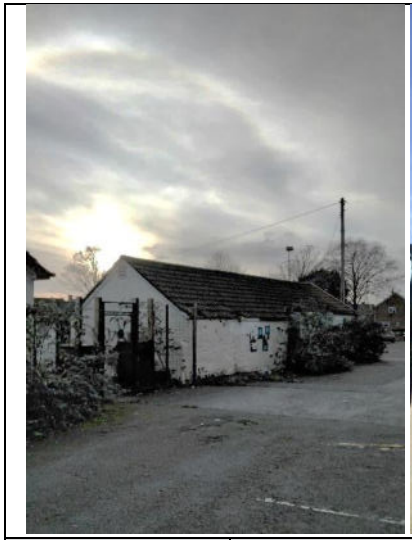
**Building 2 (B2)**

The smallest building on site, a former outbuilding known as B2, was surveyed. The building is a single storey structure, comprised of brick, stone, and mortar. There are two extensions, one to the north with a flat bitumen felt roof, and one to the south and has a dual pitched roof. The building is generally in poor condition. The bargeboards and fascias are wooden. The roof is dual pitched composed of interlocking clay roof and ridge tiles. The western end of the building and south extension is rendered, which is in good condition. There is a tall security light in the west gable end, although it is likely not in use.

The fungus *Deconica horizontalis* is growing on the north extension's wooden fascia, indicating its deterioration.

.

B2 is considered to have **high suitability** to support roosting bats. Due to the construction of the building, the interior has the potential to offer a constant cool temperature suitable to **support species of hibernating bats** including Leisler's *Nyctalus leisleri,* Pipistrellus sp. and brown long-eared bat Plecotus euritus.

| | | |
|---|---|---|
| | |     |
| **Feature** | **Feature Description and Suitability** | **Image** |

| | | |
|---|---|---|
| Missing/Broken roof tiles | A large section of the roof on the north aspect is missing. This could provide bats with direct access into the interior.<br><br>There are numerous roof tiles across the building which could provide bats with roosting opportunities. |   |
| Broken bargeboards | Located at the west gable end of B2. The metal bargeboard marking the building's apex is lifted, and the wooden bargeboard beneath is lifted. This may allow bats to access the building – suitable for roost void dwelling bats. If access cannot be |  |

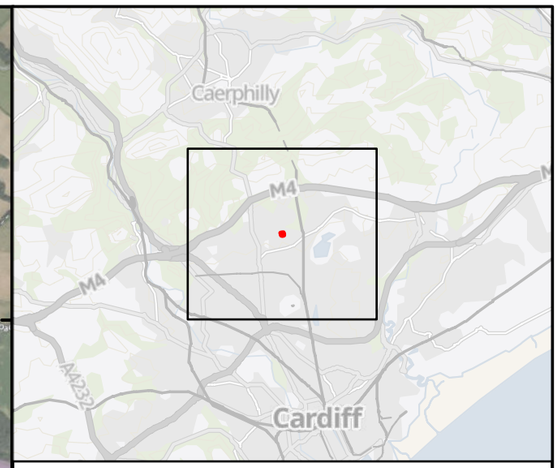
| | | |
|---|---|---|
| | obtained - suitable for crevice dwelling bats. | |
| Missing bargeboard | The bargeboard is missing from the west gable end, and tiles missing from the south aspect of the main building of B2, creating a large gap. There is clear access to the building – suitable for roof void and crevice dwelling bats. |  |

| | | |
|---|---|---|
| Raised fascia | Located on the south aspect extension, along the south aspect. The raised fascia may allow access to the building. If access cannot be obtained - suitable for crevice dwelling bats. |  |

**Appendix 5:**

**Badger Report – Confidential (provided separately)**

# DRAWINGS


KEY

Approximate Site Boundary

2km Search Radius

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

Approximate Site Boundary digitised from georeferenced file 'Redline boundary and blue POS x4.jpg' received from client.



| REVISION | DETAILS | DATE | DRAWN | CHKD | APP'D |
|---|---|---|---|---|---|
| | | | | | |

CLIENT

CARDIFF COUNCIL

PROJECT

WOLF'S CASTLE

DRAWING TITLE

SITE LOCATION PLAN

| DRG No. | REV | SUIT. CODE |
|---|---|---|
| CA13131-001 | A | -- |

| DRG SIZE | SCALE | DATE |
|---|---|---|
| A3 | 1:20,000 | 15/01/2025 |

| DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|
| CP | DS | -- |

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PART OF SLR


KEY

- Approximate Site Boundary
- 500m Search Radius
- Waterbodies (WB)

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

Approximate Site Boundary digitised from georeferenced file 'Redline boundary and blue POS x4.jpg' received from client.

Waterbodies taken from OS Open Vector Map Local and may not be definitive.

| REVISION | DETAILS | DATE | DRAWN | CHK'D | APP'D |
|---|---|---|---|---|---|
| | | | | | |

CLIENT

CARDIFF COUNCIL

PROJECT

WOLF'S CASTLE

DRAWING TITLE

WATERBODY LOCATION PLAN

| DRG No. | REV | SUIT. CODE |
|---|---|---|
| CA13131-002 | A | -- |

| DRG SIZE | SCALE | DATE |
|---|---|---|
| A3 | 1:5,000 | 15/01/2025 |

| DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|
| CP | DS | JH |

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KEY

- Approximate Site Boundary - Area 1 (0.50 ha)
- Approximate Site Boundary - Area 2 (0.14 ha)
- Approximate Site Boundary - Area 3 (0.04 ha)
- g4 - Modified grassland
- h3h - Mixed scrub
- u1b - Developed land; sealed surface
- u1b5 - Buildings
- u1e - Built linear feature
- w1g6 - Line of trees (V1 UKHab)
- Target note
- A3.1 Broadleaved Parkland/scattered trees

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.



| REVISION | DETAILS | DATE | DRAWN | CHK'D | APP'D |
|---|---|---|---|---|---|
| | | | | | |

CLIENT

CARDIFF COUNCIL

PROJECT

WOLF'S CASTLE

DRAWING TITLE

UKHABS SURVEY RESULTS

| DRG No. | REV | SUIT. CODE |
|---|---|---|
| CA13131-003 | A | -- |

| DRG SIZE | SCALE | DATE |
|---|---|---|
| A3 | 1:500 | 15/01/2025 |

| DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|
| BL | DS | J H |

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KEY

Approximate Site Boundary

Tree Suitability

- PRF-I - Tree with individual bat roost suitability
- PRF-M - Tree with multiple bat roost suitability
- FAR - Further assessment required
- None

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

Approximate Site Boundary digitised from georeferenced file "Redline boundary and blue POS x4.jpg" received from client.

T = Tree Reference Number
Tree numbers do not relate to an Arb report.

| REVISION | DETAILS | DATE | DRAWN | CHK'D | APP'D |
|---|---|---|---|---|---|
| | | | | | |

CLIENT

CARDIFF COUNCIL

PROJECT

WOLF'S CASTLE

DRAWING TITLE

GROUND LEVEL TREE ASSESSMENT SURVEY

| DRG No. | REV | SUIT. CODE |
|---|---|---|
| CA13131-004 | A | -- |

| DRG SIZE | SCALE | DATE |
|---|---|---|
| A3 | 1:500 | 15/01/2025 |

| DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|
| BL | DS | J H |

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