

Bat Activity Survey (BAS)
on behalf of

Jason Cox
For

Land Off Elwyn Drive
Twynyrodyn
Merthyr Tydfil
Merthyr Tydfil County Borough Council
CF47 0LT



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Project Overview

Client	Jason Cox
Site / Job	Land Off Elwyn Drive, Twynnyrodyn, Merthyr Tydfil, CF47 0LT
Report Type	Bat Activity Survey (BAS)
Report Reference	LT444a
Grid Refence	SO 05575 05964

Versioning and Quality Assurance

Status	Date	Author(s)	Reviewed by
Draft	09.09.2026	Nic Aldridge	Sam Haycock
Version 1	14.09.2026	Nic Aldridge	Sam Haycock
Version 2	22.09.2026	Nic Aldridge	Sam Haycock

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Executive Summary

The owners of the site are preparing a planning application to Merthyr Tydfil County Borough Council (the local planning authority) for the complete demolition of the existing buildings and construction of residential units, alongside associated landscaping works. To support the planning application process, a survey for the presence of bats (and birds) was undertaken at Buildings A, B, C and D.

Following the results of a Preliminary Roost Assessment, this report contains the results from one dusk activity survey and an internal static survey, conducted in accordance with national survey standards.

No bat roosts were recorded during the survey programme. During the survey visit, bats were observed commuting and foraging around Buildings A, B, C and D and the surrounding gardens and urban spaces; however, no emergences from the structures were recorded, and no evidence of roosting bats was identified within the fabric of Buildings A, B, C or D. An internal static presence/absence survey undertaken at Building A between 12.08.2026 and 26.08.2026 also returned no evidence of bat occupation.

Of the 46 recordings made during the dusk emergence survey, three species were identified commuting and foraging around the site: Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, and Noctule *Nyctalus noctula*. When the conservation significance of the site is considered, the impact is negligible, as no roost was confirmed at Buildings A, B, C or D. The site nonetheless supports commuting and foraging habitat of value to local bat populations, with activity concentrated within the site interior and adjacent linked gardens, reflecting the limited connectivity provided by the wider townscape (Collins, J. (Ed.) (2023)).

All bat species and their places of rest are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The legal protection for bats concerns impacts from disturbance, loss of roost locations, modifications to roosts and loss of access or obstruction to roost locations. No evidence of a bat roost was identified within the survey area during the current assessment; therefore, the aspects of legal protection pertaining to the loss, modification, or obstruction of a roost are not considered directly applicable at this site. However, the potential for bats to utilise the site for foraging or commuting activity remains, and the legal protection afforded against disturbance continues to apply.

Birds were also considered at the same time as the bat surveys. The buildings support features that could be exploited by nesting birds, particularly house sparrows (a CAT1 species), and no active nest was identified during the survey visits. All nesting birds, their chicks' eggs and active nests are protected under the Wildlife and Countryside Act 1981 (as amended). As nesting opportunities have been identified, a precautionary approach will be required. Therefore, mitigation for bird species and general advice on the legal status of breeding birds is given in this report.

Recommendations are presented in Section Five.

Under the Environment (Wales) Act 2016 the planning authority has a statutory duty to maintain and enhance biodiversity. Details of planned site enhancements are also made in this report.

This Executive Summary is intended to provide an overview of the assessment of the proposed development site based on information received by Little Wing Ecology (CYF) at the time of production. This Executive Summary should be read in conjunction with the full report.

SECTION ONE: INTRODUCTION

1.1 Background

Little Wing Ecology (CYF) was commissioned to undertake a Preliminary Roost Assessment and Bat Activity Survey of a site known as 'Elwyn Drive, Twynyrodyn, Merthyr Tydfil.' The survey was undertaken to inform the client of any constraints and associated planning requirements with regards to protected species, and to inform a planning application. For the purposes of this report, the structures will be referred to as 'Buildings A, B, C and D.'

The owners of the site are preparing a planning application to Merthyr Tydfil County Borough Council (the local planning authority) for the complete demolition of the existing buildings and construction of residential units, alongside associated landscaping works.

Bats were identified as the group of animals with the potential to be affected by the planning proposal, and in this regard the objectives of the survey were:

- Determine the presence/likely absence of bat roost(s) at Buildings A, B, C and D.
- Determine the species of bat present.
- Determine the type of roost present (maternity, day roost etc).
- Identify any bat foraging or commuting behaviour in relation to the location.
- Consider if there will be impacts on bats from the proposed works.
- Consider if nesting birds are present which might be affected by the development proposals.
- Gather sufficient information to enable appropriate recommendations, inform mitigation and licencing.

Following the results of a Preliminary Roost Assessment, this report contains the results from one dusk activity survey, conducted during the summer months of 2026, in accordance with national survey standards. The survey was carried out with the purpose of identifying the presence/likely absence of bat roosts at Buildings A, B, C and D. Following survey, an assessment of the likely impact that the proposed works will have on bat interest at the site was carried out. This report has been prepared with recommendations for enhancement features, to improve opportunities for local species post-development.

1.2 Site Description

Located at National Grid Reference (NGR) SO 05575 05964 (Appendix A), at an altitude of 221m above Ordnance Datum (OD), the site is situated off Elwyn Drive, the main service road, within Twynyrodyn, Merthyr Tydfil County Borough. The total site area is approximately 820m². The site comprises a commercial yard containing four principal structures alongside associated external storage areas. Building A is a two-storey, detached commercial/industrial building of rendered masonry construction, with a curved, corrugated sheet roof of barrel-vaulted profile, uPVC casement windows to the first floor, and ground-floor vehicular and personnel access doors, including a roller-shutter door and timber-boarded doors; access to the first floor is via an external metal staircase, and single-storey, block-built flat-roofed extensions adjoin the main structure to either side. Building B is a small, detached, single-storey garage of blockwork construction with a pitched roof, clad in concrete tiles and ridge tiles, set within an area of disturbed ground. Buildings C and D comprise two steel shipping containers of corrugated steel construction, standing on hardstanding and used for the storage. The surrounding yard is bounded to the rear by a low concrete-block retaining wall surmounted by close-boarded timber fencing, and comprises a mixture of tarmac hardstanding and disturbed, bare, and rubble-strewn ground colonised by ephemeral vegetation, including patches of bramble scrub along the boundary margins, together with a mound of disturbed soil and spoil. The yard is used extensively for the storage of stacked timber, scaffold poles, coiled piping, and other construction materials, alongside a waste skip and scattered general refuse, and adjoins residential properties.

1.3 Policy and Legislation

In Wales, all bat species and their roosts are legally protected, by domestic legislation. This means you may be committing a criminal offence if you:

- Deliberately take, injure, or kill a wild bat.
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time).
- Possess, advertise, sell or exchange a bat, or part of a bat species found in the wild in the EU (dead or alive).
- Intentionally or recklessly obstruct access to a bat roost.

The framework for this protection is provided within three pieces of legislation from the Government of Wales and the UK Government.

These are:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
- The Environment (Wales) Act 2016.
- The Wildlife and Countryside Act (1981) – as amended.

Additional information on the legal scope of these acts can be found in the Appendix, and a link to the full documentation can be found in 'References and Bibliography.'

SECTION TWO: THE SURVEY METHOD

2.1 Desktop Survey (Bats)

Available records for bats were provided by the South East Wales Biodiversity Records Centre (SEWBRc).

2.2 Desktop Survey (Habitat)

A review of aerial photography was undertaken to assess the availability of suitable foraging and commuting habitat within the vicinity of Buildings A, B, C and D. This was considered alongside a review of statutory designated sites via the DataMapWales website, including Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs), to inform the likely use of the site by bat species locally.

Bats are considered cryptic species and therefore it can be difficult to confirm whether they are present or not. Although the provision of local biological records would provide a range of information; such records can only be relied upon as relative where they are reasonably recent and when supplied by an experienced bat surveyor. It was therefore considered necessary to undertake a detailed survey regardless of the data search results, as this is most likely to be beyond the acceptability of current data as defined in BS 42020:2013 Biodiversity: Code of practice for planning and development and will not be as effective as spending time examining and/or monitoring the buildings for the presence of bats.

2.3 Preliminary Roost Assessment

A potential nest and roost assessment survey was carried out on the interior and exterior of Buildings A, B, C and D by an experienced ecologist and Natural Resources Wales (NRW) licenced bat worker (N. S. Aldridge - NRW Licence – S097003/1). The external fabric of the structure was methodically inspected using close-focusing binoculars and a high-powered torch for potential access points such as gaps in the fabric of the building, beneath lifted roof materials or other gaps in the roof. Loose flashing, smudge marks and droppings on walls directly below eaves and gables etc were also searched for. A description of the building, including construction material and current condition was recorded. Internally, the building was searched using a high-powered torch to identify possible links to exterior roost entrances and clear signs of presence via urine staining, feeding remains, odour, piles of droppings, live bats, and bat

carcasses. The space was also examined in the dark to identify areas where the presence of light would identify potential entry points for birds and bats. The aim of this survey was to determine the actual or potential presence of bats and the need for further survey and/or mitigation. During the field survey, an assessment of the habitats on-site and beyond the site boundary was undertaken. The aim of this was to identify potential commuting and foraging corridors, and suitable foraging sites. This enabled the suitability of the location for bats to be determined.

Nesting birds were also considered at the time of the survey, with the surveyor looking for signs of bird activity, nests, nest building, feeding at nest sites, and evidence of collections of bird droppings, feathers, or any other indications of use by birds.

2.4 Additional Ecological Considerations

This report follows on from two earlier assessments undertaken for the site by Little Wing Ecology (CYF): a Preliminary Ecological Appraisal and Bat Activity Survey Report in 2023 (Little Wing Ecology (CYF), 2023), and a subsequent Preliminary Ecological Appraisal in 2026 (Little Wing Ecology (CYF), 2026). Together, these identified the habitats present and highlighted the potential for protected and notable species to occur. The current survey work constitutes a top-up to these original reports, updating the baseline ecological information and reassessing that potential in light of current site conditions. The findings and recommendations of the earlier reports have informed the scope of this update and are referenced throughout where relevant.

2.5 Limitations of the Survey Method

A record was made of any constraints that limited the results of this survey report and is presented in Section 3.

2.6 Activity Surveys

Following a PRA and in line with guidelines set out in 'Bat Conservation Trusts Good Practice Guidelines (Collins, J. (Ed.) (2023),' Buildings A, B, C and D were subsequently categorised for the level of risk of supporting bats, and recommendations made as to the requirement for dusk activity surveys to determine the presence/likely absence of roosting bats, species identification, population size, roost type, and the requirement for any associated mitigation. If required, dusk survey(s) for bats will be conducted no less than 21 days apart. During any subsequent activity surveys, sufficient surveyors were required to adequately cover all features identified during the PRA. Nocturnal bat surveys are undertaken May to mid-September, inclusive. Taking a precautionary approach, and dependent on the outcome of these surveys, additional survey work may be required; but only if higher than expected activity is recorded. Details of our surveyors and their experience is recorded in Appendix D.

2.7 Equipment (Activity Surveys)

The equipment used for dusk activity surveys provides high quality recordings of bat calls, which are analysed using BatSound and AnalookW software. Recordings are annotated by the surveyors to provide contextual information on bat behaviour and flight patterns. At Little Wing Ecology (CYF) we use Pettersson D240x time expansion bat detector and Tascam DR-05X Portable Digital Recorder, Peersonic RPA3B full spectrum recorders and Anabat SD2 Frequency Division detectors. As night vision aids (NVA) we use a MELCAM Video Camera Camcorder 1080P IR Night Vision Digital Camera and Nightfox Swift 2 Pro. Audio for the NVAs is supplemented by an Anabat SD2. In addition, we use Audiomoth – a full-spectrum acoustic logger, based on the Gecko processor range from Silicon Labs.

SECTION THREE: RESULTS

3.1 Desktop Survey Results

The survey location was examined by consulting Data Map Wales and other available resources. No part of the site falls within, or is adjacent to, a statutory site of nature conservation interest, such as a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), National Nature Reserve (NNR) or Local Nature Reserve (LNR). The site does not fall within a National Park, although Bannau Brycheiniog National Park lies approximately 3.9km to the north. Non-statutory designations are also recorded within the search area, comprising two areas of Ancient Semi-Natural Woodland, the nearest at approximately 720m to the south-east. The nearest statutory designated sites are listed in Table 3.1 below.

Table 3.1: Local statutory sites of nature conservation interest

Site Name	Designation	Distance from Site
Cwm Glo a Glyndyrys	SSSI	≈1.1 km
Cwm Taf Fechan Woodlands	SSSI	≈2.4 km
Mynyddoedd Llangynidr a Llangatwg, Cefn yr Ystrad a Chomin Merthyr	SSSI	≈3.6 km
Nant Glais Caves	SSSI	≈4.4 km
Blaen Cynon	SAC	≈9.1 km
Cwm Cadlan	SAC	≈9.5 km
Usk Bat Sites / Safleoedd Ystlumod Wysg	SAC	≈13.5 km

3.1.1 Local Biological Records

A local biological records search was undertaken via SEWBReC (Aderyn, LERC Wales, Reference 0267-401), returning 526 species records for Chiroptera (bats) and birds combined within the search area (bats to 2km, roof-nesting birds to 150m, and SSSIs and SACs designated for bat features to 10km). No records were returned on or directly adjacent to the site (i.e., within 0–20m); the nearest record was at 186m.

Chiroptera (bats) accounted for 95 species records (18.06% of bat and bird records combined), all of which are CAT1 Priority Species. Records were returned for ten bat taxa at distances between 291m and 2,908m. The nearest three records were Common Pipistrelle *Pipistrellus pipistrellus* at 291m; Pipistrelle Bat species *Pipistrellus* at 416m; and Soprano Pipistrelle *Pipistrellus pygmaeus* at 471m. Species recorded comprised Lesser Horseshoe Bat *Rhinolophus hipposideros* (22 records, 645–2,908m), Common Pipistrelle (21 records, 291–1,467m), Soprano Pipistrelle (13 records, 471–1,467m), unidentified Bat *Chiroptera* spp. (11 records, 481–1,201m), Greater Horseshoe Bat *Rhinolophus ferrumequinum* (10 records, 1,874–2,667m), Pipistrelle Bat species (7 records, 416–1,223m), Brown Long-eared Bat *Plecotus auritus* (6 records, 512–908m), Pipistrelle *Pipistrellus pipistrellus* agg. (2 records, 665–844m), Noctule *Nyctalus noctula* (2 records, 844–927m), and Long-eared Bat species *Plecotus* spp. (1 record, at 574m).

Birds accounted for 431 species records (81.94% of bat and bird records combined), 79.35% of which were for CAT1 species. All bird records were returned at distances between 186m and 2,987m. The nearest three records were Swift *Apus apus* at 186m; House Sparrow *Passer domesticus* at 323m; and Grey Wagtail *Motacilla cinerea*, also at 323m. CAT1 species (342 records across 50 taxa) were dominated by common garden, farmland and woodland birds, led by Magpie *Pica pica* (23 records), House Sparrow (21 records), Herring Gull *Larus argentatus* (18 records), Chaffinch *Fringilla coelebs* (17 records) and Grey Wagtail (15 records); notable CAT1 raptors included Red Kite *Milvus milvus* (9 records), Barn Owl *Tyto alba* (8 records), Peregrine *Falco peregrinus* (5 records) and Hobby *Falco subbuteo* (1 record). The 89 non-CAT1 records (84 CAT2, 1 CAT3 and 4 CAT4, across 13 taxa) related chiefly to Song Thrush *Turdus philomelos* (16 records), Swallow *Hirundo rustica* (13 records), Dipper *Cinclus cinclus* (13 records), Long-tailed Tit *Aegithalos caudatus* (12 records) and Mallard *Anas platyrhynchos* (12 records); the sole non-CAT1 invasive/non-native (CAT4) species was Canada Goose *Branta canadensis* (4 records).

3.2 Preliminary Roost Assessment (PRA)

A Preliminary Roost Assessment was conducted on 15.06.2026 by the author, with weather conditions recorded during the subsequent dusk activity survey presented in Table 3.2 below. Details of the surveyor's experience are presented in the Appendix.

Four structures were present on the site at the time of the survey: Building A (an industrial unit), Building B (a garage), and Buildings C and D (steel storage containers).

Construction and Condition:

- Building A is a late 20th-century, block-built industrial unit comprising a main structure and single-storey extensions to the southern and western elevations. The roof is of sheet metal construction. Bargeboards and rainwater goods are of uPVC, and masonry sections are finished in pebbledash. The building is well maintained, with materials recorded to be in good condition. Building B is a block-built single garage with a concrete roof incorporating ridge tiles and a bitumen membrane, and timber bargeboards. Buildings C and D are steel storage containers.

Potential Roost Features (PRFs) identified:

- PRFs were identified at Building A, spanning the following categories: gaps beneath sections of sheet metal cladding on the southern elevation, providing access to an interior space of unknown proportions; minor gaps recorded along the door frames of the main structure and the western extension; minor gaps recorded behind the uPVC bargeboards, the majority considered too small to offer bat interest, with a small number of areas assessed as offering greater potential; internal gaps within the fabric of the main structure (ground floor) and the western extension; and a narrow passageway along the rear (western) elevation, with an opening to the adjacent gardens, identified as offering potential access for use by roosting bats as a night roost. The sheet metal roof covering of Building A was assessed as offering negligible bat interest. At Building B, PRFs identified include the ridge tiles and bitumen membrane, and minor cavities recorded within the timber bargeboards. No PRFs were identified at Buildings C and D, and no features capable of supporting roosting bats were recorded.

Evidence of Bats found:

- No evidence of bat occupation (droppings) was recorded at any of the PRFs identified at Building A, including within the accessible ground-floor interior, nor from the external inspection of Building B. No evidence to suggest use by a maternity roost was encountered at any structure. No evidence of bat occupation was recorded at Buildings C and D.

Roof Space:

- The void space behind sections of sheet metal cladding at Building A was not accessible for direct inspection. Internal access to Building B was not available, and the interior roof space could not be inspected directly.

Cellar(s):

- No cellars or underground spaces were identified at any of the structures.

Evidence of Bats:

- No bat droppings, urine staining, feeding remains, live bats, or other direct evidence of bat use was identified during the inspection of Buildings A, B, C or D.

Mature Trees:

- No large, mature trees were recorded within the curtilage of the site.

Taking into account the findings of the previous bat activity survey (Little Wing Ecology, 2023), in which no evidence of bat roosting was recorded at any of the surveyed structures, the site as a whole was assessed as being of overall low roosting risk. On this basis, a minimum of one further survey visit was considered to represent an adequate level of survey effort, sufficient to account for any potential change of use at the structures occurring since the previous survey. No maternity roost was suspected at the site.

Building A was assessed as offering low roost potential, reflecting the presence of a rear passageway feature together with a number of minor potential roost features (PRFs); breeding bats were not identified as a concern on the basis of the evidence recorded. Building B was similarly assessed as offering low roost potential, with breeding bats not identified as a concern. Buildings C and D were assessed as offering no roost potential.

Given the roost potential associated with the rear passageway feature at Building A, a static detector survey was recommended, comprising the deployment of one static detector unit within the covered passageway to the rear of the building for a minimum period of 14 days, in order to establish whether the feature was used by roosting or transiting bats.

Photographic evidence supporting the preliminary roost assessment (PRA) is presented in the Appendix.

Table 3.2: Field Survey Details and Weather Conditions

Date	Timings (BST)		Notes, Sunset Times	Weather Conditions		
	Start	End		Variable	Start	End
15.06.2026	10.00	11.30	PRA	Temp (°C)	24.9	25.4
				Cloud Cover (Oktas)	2	2
				Precipitation	Nil	Nil
				Beaufort Scale	F2	F2
11.08.2026	20.30	22.15	Dusk Activity Survey	Temp (°C)	23.4	18.9
			Sunset: 20.45	Cloud Cover (Oktas)	4	0
				Precipitation	Nil	Nil
				Beaufort Scale	F1	F0

3.3 Habitat and Satellite Imagery — Suitability for Commuting and Foraging

The on-site Phase 1 Habitat Survey identified no vegetated linear features within the site boundary capable of supporting commuting bats. The site is dominated by disturbed land (J1.3) and buildings (J3.6), with areas of other habitat (J5) present to the east, and is enclosed by close-boarded fencing (J2.4) and boundary walling (J2.5). In the absence of hedgerows, treelines or other continuous, structurally-linked vegetation, the site boundary is considered to offer negligible to low suitability for commuting bats. Fence lines and walls are considered to form fragmented, unvegetated edges rather than functional flight lines, and are not considered likely to be used preferentially by light-averse or edge-dependent species such as horseshoe bats *Rhinolophus* spp. Common Pipistrelle and Soprano Pipistrelle, being more tolerant of built environments and habitat gaps, may make incidental, low-value use of the boundary treatments when transiting the wider townscape, although the site itself is not considered to form part of

an identifiable commuting corridor. Functional connectivity for commuting bats is considered to derive from watercourse corridors within the wider landscape, rather than from any on-site feature.

Habitats present on-site — disturbed land (J1.3), other habitat (J5, comprising tarmac hardstanding) and buildings (J3.6) — are considered to lack flowering or scrub vegetation, standing water, or other features typically associated with abundant invertebrate prey. These habitats are therefore considered to offer negligible to low suitability for foraging bats. The buildings on-site are considered to retain limited, incidental value where security or amenity lighting is present and attracts aerial insects, although this is not considered a significant foraging resource. No features of higher intrinsic value to foraging bats, such as mature trees, scrub, wetland or watercourse habitat, are present within the site boundary.

The survey site is situated within the settlement of Twynnyrodyn, Merthyr Tydfil. The site is embedded within a dense residential and commercial townscape, characterised predominantly by terraced housing, hardstanding and associated built infrastructure. Localised areas of incidental and amenity greenspace are present within the surrounding streets, providing limited semi-natural habitat within an otherwise urbanised setting. Playing fields and areas of amenity grassland lie to the north of the site, associated with Thomastown Park, while a graveyard, supporting semi-natural grassland and mature trees, lies approximately 160m to the east. The wider landscape is characteristic of a South Wales valley, with the River Tâf located approximately 830m west and the Nant Morlais approximately 775m north-west, both representing significant linear watercourse features. Habitat exhibiting upland characteristics lies approximately 630m east, while Bannau Brycheiniog National Park lies approximately 3.9km to the north, encompassing extensive areas of semi-natural and upland habitat. These features, together with the Tâf Fechan situated approximately 3.1km north-west, form a network of ecological corridors providing foraging and commuting opportunities for bats, small mammals and amphibians, and facilitating connectivity across the wider landscape.

3.4 Evidence of Protected Species

No evidence of roosting bats was recorded during the PRA or during the subsequent dusk activity survey. No roost was confirmed at Buildings A, B, C or D.

3.5 Suitability for Hibernating Bats

No cellars or underground spaces were identified at Buildings A, B, C or D. As pipistrelle species are known to hibernate in buildings, a precautionary approach will be applied for any works conducted during the hibernation period (October to April inclusive).

3.6 Evidence of Nesting Birds

The features identified during the PRA, including gaps within the fabric of Buildings A and B and behind bargeboards, provide opportunities for nesting birds, and in particular house sparrows (a CAT1 species). The biological records search returned records for a number of CAT1 bird species within the wider search area, including House Sparrow, Swift, and Grey Wagtail. No active nest was identified during the survey visits.

3.7 Bats — Results of a Preliminary Roost Assessment

Building A has been identified as a structure offering one or more potential roost sites, owing to its size, shelter, protection and surrounding conditions. Buildings B, C and D are considered to offer low to negligible roost potential by comparison.

The site is enclosed within a townscape setting on made surfaces, and no continuous, high-quality habitat is present in the immediate local landscape. Opportunities for foraging and commuting bats are correspondingly limited, being restricted to fragmented, linked garden habitat. This offers only restricted connectivity to the wider landscape, in contrast to typical bat flight-line features such as river valleys, streams, hedgerows, lines of trees and woodland edges, which are absent from the immediate vicinity.

The initial categorisation of roost potential is made irrespective of species conservation status, which will be fully evaluated if presence is confirmed through further survey effort. Should subsequent bat activity surveys reveal higher levels of bat activity or confirm a roost of greater significance, this initial assessment will require reassessment and potential re-categorisation in accordance with current guidelines.

Following guidelines set out in 'Bat Conservation Trusts Good Practice Guidelines (Collins, J. (Ed.) (2023),' the site as a whole was categorised as being of low risk, with breeding bats not identified as a concern, requiring a minimum of one dusk survey for bats. This survey represented the minimum recommended number of visits to give confidence in a negative result for structures of this risk categorisation. Should higher than expected activity be recorded, then additional survey effort will be required. This minimum recommended survey number was met.

3.8 Activity Survey Recordings

On 11.08.2026, 46 recordings were made of bats on and in close proximity to the site. No bats were recorded roosting at Buildings A, B, C or D during this visit. Bat interest around Buildings A, B, C and D consisted predominantly of commuting and foraging for a small number of bats, with activity recorded within the site interior, along the adjacent linked gardens, and within the adjacent street. A minimum of three different species were recorded, comprising Common Pipistrelle (42 recordings), Soprano Pipistrelle (3 recordings), and Noctule (1 recording).

Between 12.08.2026 and 26.08.2026, an internal static presence/absence survey was conducted within a storage area to the rear of Building A. This returned no evidence of bat occupation, providing no evidence for occupation by bats.

A bat activity plan is presented in Appendix F and raw data for observations is presented in Appendix G.

3.9 Roost Characterisation

During the single dusk activity survey and associated inspections conducted at Buildings A, B, C and D, no roosting bats were recorded. A total of 46 bat recordings were made, comprising three species: Common Pipistrelle (42 recordings), Soprano Pipistrelle (3 recordings), and Noctule (1 recording). All activity recorded was consistent with commuting and foraging behaviour across the adjacent linked gardens, street, and within the site interior, rather than roost emergence or re-entry. The internal static presence/absence survey undertaken at Building A between 12.08.2026 and 26.08.2026 returned no evidence of bat occupation, providing no evidence for the use of this structure as a day roost. Given the range of bat taxa recorded in the local biological records within the wider search area, the presence of additional species using the surrounding landscape cannot be entirely ruled out.

3.10 Infrared Video Survey

In addition to active monitoring using bat detectors, infrared equipment was deployed on the dusk activity survey to provide night vision aids (NVA) for all surveyors. Infrared monitoring supported the visual assessment of bat activity in the vicinity of Buildings A, B, C and D and aided assessment of emergence behaviour at potential roost features during the survey visit, as presented in Appendix E.

3.11 Additional Ecological Constraints (Results)

Minor constraints were encountered during the Preliminary Roost Assessment; these are not considered to have compromised the overall robustness of the conclusions presented in this report. Access was available to the majority of the site, allowing a thorough inspection of most potential roosting features.

Complete internal inspection of the void space behind sections of sheet metal cladding on the southern elevation of Building A could not be undertaken due to poor access. This constraint was mitigated through the undertaking of a dusk emergence survey of Building A, which returned no evidence of bat emergence, providing a robust baseline for the conclusions presented in this report.

Internal inspection of Building B could not be undertaken, as the building was found to be locked at the time of the PRA. This constraint was mitigated through the undertaking of a dusk emergence survey of Building B, which returned no evidence of bat emergence, providing a robust baseline for the conclusions presented in this report.

3.12 A Summary of Evidence

Table 3.3: Summary of Evidence

Survey Location	Species (Recorded)	Notes
Buildings A, B, C and D	Common Pipistrelle, Soprano Pipistrelle, Noctule	Droppings: No bat droppings were identified during the PRA or during the dusk activity survey at any of the four structures. Live sightings: During the single dusk activity survey, 46 recordings were made of bats in the vicinity of Buildings A, B, C and D, comprising Common Pipistrelle (42), Soprano Pipistrelle (3), and Noctule (1). No emergences from any of the four structures were recorded, and all activity was consistent with commuting and foraging behaviour. An internal static presence/absence survey at Building A (12.08.2026–26.08.2026) returned no evidence of bat occupation. Roost Type: No roost was confirmed at Buildings A, B, C or D.

3.13 Impact Assessment

Evidence was recorded for bats commuting and foraging around Buildings A, B, C and D during the survey, although no roosting bats were confirmed at any of the four structures. Based upon the results of the desktop survey and field survey, the uncompensated re-development potential impacts have been summarised as follows:

- Direct injury or killing of bats during demolition or construction works;
- Disturbance of commuting and foraging bats confirmed to be using the site, arising from habitat loss, lighting, or noise and vibration during works;
- A reduction in the Favourable Conservation Status (FCS) of bats in the local area, principally through the loss of commuting and foraging habitat rather than roost loss; and
- An offence under relevant UK wildlife legislation, should injury, killing or disturbance of bats occur during works.

As no roost was confirmed during the survey programme, the loss of a bat roost is not considered a current impact pathway for this site. However, it is noted that bat survey results are considered valid for a limited period only (typically up to 24 months, subject to no material change in site conditions). Should works not commence within this

period, or should site conditions change in the interim (for example, structural deterioration or scaffolding erection creating new roosting opportunities), a precautionary re-inspection prior to demolition is recommended to confirm the continued absence of roosting bats.

When the nature conservation significance of the site is considered against recognised criteria ('Bat Mitigation Guidelines' (current edition), 'Good Practice Guide: NRW Approach to Bats and Planning October 2015' and 'IUCN Red List of Threatened Species'), the nature conservation status of the site is assessed to be negligible with respect to roosting bat interest, as no roost was confirmed during the survey programme. The surrounding townscape and wider landscape provide commuting and foraging habitat of value to local bat populations, including the three species confirmed during the survey, all of which are assessed as Least Concern on the IUCN Red List. No Annex II or conservation-priority species were confirmed at the site, notwithstanding their presence within the wider local biological records.

SECTION FOUR: CONCLUSIONS

Summary of Findings

The bat survey of Buildings A, B, C and D, comprising an industrial unit, a garage and two steel storage containers within a commercial yard in Twynrodyn, Merthyr Tydfil, has not confirmed the presence of active bat roosts. The survey programme comprised a Preliminary Roost Assessment conducted on 15.06.2026 and one dusk activity survey conducted on 11.08.2026, and a static survey conducted between 12.08.2026 and 26.08.2026, representing the minimum recommended survey effort for a site of this risk categorisation, in accordance with national survey standards.

No roosting bats were recorded at Buildings A, B, C or D during the survey programme. A total of 46 bat recordings were made across the single dusk survey visit, comprising Common Pipistrelle (42 recordings), Soprano Pipistrelle (3 recordings), and Noctule (1 recording). All activity recorded was consistent with commuting and foraging behaviour within the site interior, along the linked gardens, and within an adjacent street. An internal static presence/absence survey undertaken at Building A between 12.08.2026 and 26.08.2026 returned no evidence of bat occupation.

Three bat species were recorded utilising the immediate area for commuting and foraging activities, reflecting a moderate degree of species diversity for an urban commercial yard setting. Whilst the on-site habitat itself is considered of negligible to low suitability for commuting and foraging bats, and links to the wider landscape are poor, the site benefits from proximity to the wider townscape and watercourse network, including the River Tâf and Nant Morlais, which provide the principal ecological corridors supporting the bat activity recorded in the vicinity.

Conservation Significance

The nature conservation significance of Buildings A, B, C and D with respect to roosting bat interest is assessed as negligible under current guidance criteria ('Bat Mitigation Guidelines' (Reason *et al.*, 2025), 'Good Practice Guide: NRW Approach to Bats and Planning October 2015', and 'IUCN Red List of Threatened Species'). No roost was confirmed during the survey programme, and no evidence of roosting bats was identified within the fabric of any of the four structures. Common Pipistrelle, Soprano Pipistrelle and Noctule are all assessed as Least Concern on the IUCN Red List, and no Annex II or conservation-priority species were confirmed roosting at the site.

The wider landscape, including the River Tâf and Nant Morlais watercourse corridors, the upland habitat to the east, and Bannau Brycheiniog National Park approximately 3.9km to the north, provides foraging and commuting habitat of broader ecological value to local bat populations. The local biological records confirm the presence of a diverse bat fauna within the wider area, including Lesser Horseshoe Bat and Greater Horseshoe Bat, both Annex II species and conservation priorities in Wales. Whilst these species were not confirmed during the activity survey, the quality of

the surrounding landscape underlines the importance of sensitive design and the implementation of appropriate enhancement and lighting mitigation measures as part of any proposed development.

Legal Implications

The confirmed presence of bats commuting and foraging around Buildings A, B, C and D engages statutory protection under UK wildlife legislation, specifically the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. Although no roost was confirmed, any proposed development activities affecting the site will require appropriate precautionary mitigation measures to ensure compliance with legal obligations and to prevent the incidental disturbance of any bats that may be present during works.

SECTION FIVE: RECOMMENDATIONS

Based on the results of this report, it is recommended that the following conditions be included in the plans:

No Roost Identified Recommendation 1 (Additional Survey Work): No further survey is recommended at this time. In the event that works do not start within two years of the survey date (i.e., August 2028), further survey may be necessary to qualify the roost status and recommended adaptations (if required) to the mitigation measures detailed below. If at any point during works a protected species is encountered on-site, it is essential that all work is to cease and that a suitably experienced ecologist is contacted for advice.

Recommendation 2: A Sensitive Lighting Scheme: To prevent any adverse impact on potential commuting and foraging habitats for bats, with specific reference to the adjacent treelines to the north post-development, the provision of any permanent lighting on-site will require a sensitive lighting scheme. A lighting plan for the site must be functional and directional only, kept to a minimum, and service only the public areas of the proposed development as required for safety and security purposes. Lighting must be achieved using baffles and screens if necessary to ensure no light spill on any retained or planted vegetation, including off-site vegetation where there is potential to impact animals using nearby habitat features. No external lighting is to be installed along the northern boundary of the site to prevent adverse impacts on the adjacent habitat features. The sensitive lighting scheme must follow advice detailed in 'Bats and Artificial Lighting in the UK: Technical Guidance Note 08/23' (2023).

Recommendation 3 (Nesting Birds): All nesting birds, their chicks' eggs and active nests are protected under the Wildlife and Countryside Act 1981 (as amended). If a nest is discovered during works and is active, it must be left undisturbed until all the chicks have fledged. If any features associated with nesting birds are required to be altered during the bird breeding season, then a further inspection by a suitably qualified ecologist is required no more than 24 hours before this process commences. If an active nest is found by a site inspection, an exclusion zone around the nest will be necessary to preserve this feature until the chicks have fledged the nest.

Recommendation 4 (Enhancement features): Implementation of the enhancement features for net-gain biodiversity as outlined in the green infrastructure statement.

Recommendation 5 (A Precautionary Approach): A stop-work protocol is recommended as a general precaution. Should bats or evidence of bats be discovered during works, all work must stop immediately, and a licensed ecologist consulted.

SECTION SIX: BIODIVERSITY ENHANCEMENT

In accordance with the provisions of Chapter 6 of 'Planning Policy Wales' (Distinctive and Natural Places) and 'Local Planning Policy,' biodiversity enhancement measures will be incorporated into the landscaping scheme of the proposed works to maximise the ecological value of the site.

Enhancement Features: Under the Environment (Wales) Act 2016, public authorities (including local councils and the National Parks), 'must seek to maintain and enhance biodiversity in the exercise of functions; in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.' This replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, which states that 'all public authorities have a statutory duty to conserve biodiversity in all of their functions.'

Local authorities are legally required to make efforts to protect and enhance wildlife and its habitat, and this is executed, in part, through the requirement of an ecological assessment for planned development sites; therefore, the following principles of design should be followed.

Enhancement for Bats: In line with the National Planning Policy Framework, the development should aim to enhance the Site for bats. One Integrated Eco Bat Box, or similar artificial roost(s), should be installed on the southern or western aspect of each proposed new residential unit with the purpose of providing roosting habitat for species such as pipistrelle. In general, bats seek warm places, and for this reason boxes should be located where they will receive full/partial sun, although installing features in a variety of orientations will provide a range of climatic conditions. Position boxes at least 3m (ideally 6m) above ground to prevent disturbance from people and/or predators. The most suitable location is at the southern elevation, directly below the eaves.

Enhancement for Birds: This area is to be enhanced to provide additional opportunities for breeding birds. One Pino Build-in Swift Box (or similar) should be attached to the northern/eastern aspect of each proposed new residential unit. The nesting box must be of a woodcrete construction to ensure longevity.

Enhancement for Hedgehogs: To maintain and enhance connectivity for hedgehogs, one hedgehog access hole (approximately 13cm×13cm) will be incorporated at the base of each new boundary fence.

Botanical Enhancements (Planting and Landscaping)

To mitigate for the potential loss of botanicals, maintain connectivity, and increase biodiversity, native trees or shrubs should be incorporated into the landscaping scheme, including Downy Birch *Betula pubescens*, Rowan *Sorbus aucuparia*, and Hazel *Corylus avellana*.

Night-scented, nectar-rich planting should be incorporated to support foraging invertebrates and, in turn, foraging bats. Recommended species include Common Evening Primrose *Oenothera biennis*, a hardy biennial with yellow flowers that open at sunset, releasing a sweet fragrance that acts as a beacon for moths; Night-Scented Stock *Matthiola longipetala*, a traditional British cottage garden species releasing an evening aroma; and Nicotiana *Nicotiana alata*, a jasmine-scented ornamental tobacco species with pale flowers that stand out under moonlight.

Where any new planting is introduced, vigilance should be maintained for the introduction or spread of invasive non-native species, and any such occurrences should be reported and managed appropriately.

SECTION SEVEN: ADDITIONAL INFORMATION

Encountering a Protected Species During Works

If at any point during works a protected species is encountered on-site, it is essential that all work is to cease and that a suitably experienced ecologist is contacted for advice.

Expiration of This Report

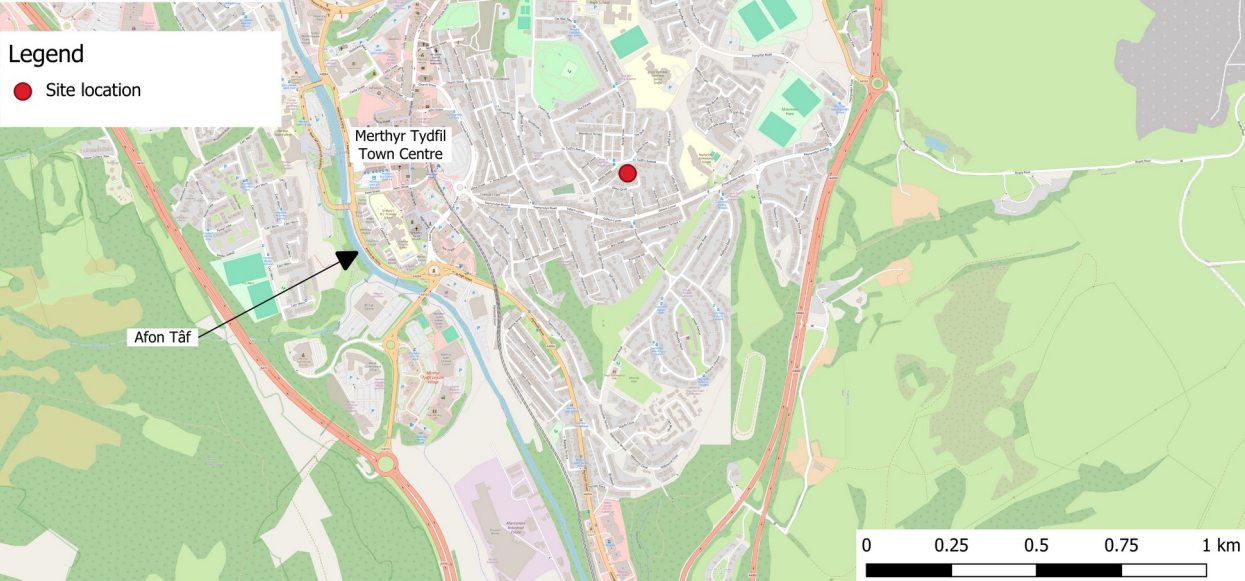
This report is valid for two years. In the event that works do not start within two years of the survey date (i.e., August 2028) further survey and assessment will be necessary to qualify the results of this report and its recommendations.

REFERENCES

- Bat Conservation Trust. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. London: Bat Conservation Trust.
- Natural Resources Wales. (2025). *Bat Licensing*. Relevant guidance on the legal process for undertaking activities that may impact bats or their roosts in Wales.
- Reason, P.F. and Wray, S. (2025). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.2*. Chartered Institute of Ecology and Environmental Management, Ampfield.
- The Conservation of Habitats and Species Regulations. (2017, as amended). The key UK legislation protecting bat species and their roosts, which was updated by *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. This ensures the continued protection of species and habitats post-Brexit. Available at: <https://www.legislation.gov.uk/uksi/2017/1012/contents>.
- The Environment (Wales) Act. (2016). This act places a duty on public authorities to maintain and enhance biodiversity and promote the resilience of ecosystems.
- The Wildlife and Countryside Act. (1981). The primary legislation protecting wildlife in Great Britain. Available at: <https://www.legislation.gov.uk/ukpga/1981/69/contents>.
- Welsh Government. (2024). *Planning Policy Wales, Edition 12*. The national planning policy document that provides the framework for development in Wales and the consideration of protected species.

Appendix A: Site Location

Date: September 2026
Produced by: Little Wing Ecology
Our Reference: LT444
Author: N S Aldridge



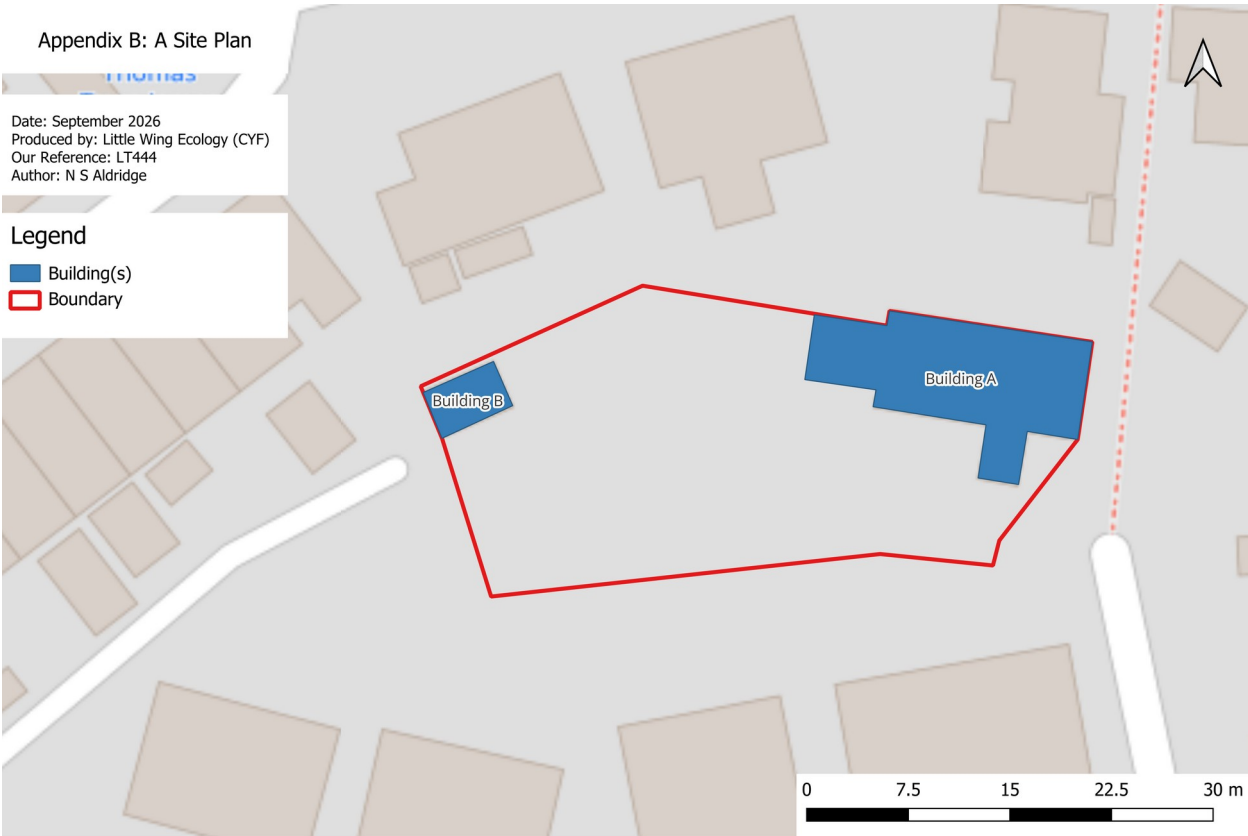
QGIS Development Team, <2026>. QGIS Geographic Information System. Open-Source Geospatial Foundation Project.

Appendix B: A Site Plan

Date: September 2026
Produced by: Little Wing Ecology (CYF)
Our Reference: LT444
Author: N S Aldridge

Legend

- Building(s)
- Boundary



QGIS Development Team, <2026>. QGIS Geographic System. Open-Source eospatal Foundation Project.

Appendix C: Site Photography



Building A (Industrial Unit – Western portion): Exterior - Main structure – Southern elevation – Late 20thC block-built industrial unit with a sheet metal roof construction. Bargeboards are uPVC and uPVC rainwater goods are present throughout. The building is well maintained, and materials are in a good condition. Masonry sections are finished in pebbledash.



Building A (Industrial Unit – Eastern portion): Exterior - Main structure – Southern elevation - Late 20thC block-built industrial unit with a sheet metal roof construction. Bargeboards are uPVC and uPVC rainwater goods are present throughout. The building is well maintained, and materials are in a good condition. Masonry sections are finished in pebbledash.



Building A (Industrial Unit): Exterior – Single storey extension to the southern elevation – Late 20thC block-built industrial unit with a sheet metal roof construction. Masonry sections are finished in pebbledash.



Building A (Industrial Unit): Exterior – Single storey extension to the western elevation – Late 20thC block-built industrial unit with a sheet metal roof construction.



Building A (Industrial Unit): Interior (ground floor) – PRF: Internal gaps present in the fabric of the building. No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.	Building A (Industrial Unit): Exterior - Southern elevation – PRFs: gaps under sheet metal cladding providing access to an interior space of unknown proportions. No evidence of occupation by bats. No droppings.
	
Building A (Industrial Unit): Exterior – PRF: Minor gap along door frame providing a potential access point to the interior. No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.	Building A (Industrial Unit): Exterior – PRF: Minor gaps recorded behind uPVC bargeboards. Mostly too small to offer bat interest with a small number of areas offering more potential. No evidence of occupation by bats. No droppings.
	
Building A (Industrial Unit): Exterior – Sheet metal roof with negligible bat interest.	Building A (Industrial Unit): Interior – PRF: A narrow passageway along the rear of the building (facing west) with an opening to the adjacent gardens offering potential access for roosting bats (i.e., as a night roost) - No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.



Building A (Industrial Unit): Interior – A narrow passageway along the rear of the building (facing east) with an opening to the adjacent gardens offering potential access for roosting bats (i.e., as a night roost) – No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.



Building A (Industrial Unit): Interior – No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.



Building A (Industrial Unit): Exterior – Single storey extension to the western elevation – PRF: Internal gaps present in the fabric of the building. No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.



Building A (Industrial Unit): Exterior – Single storey extension to the western elevation – PRF: gap along door frame providing a potential access point to the interior. No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.



Building C (Garage): Exterior – Block-built single garage with concrete roof and ridge tiles, bitumen membrane



Buildings C and D (Storage units): Exterior – Steel storage containers. No PRFs. No bat interest recorded.

and timber bargeboards with minor cavities. No access available to the interior. No evidence of occupation by bats. No droppings. No evidence to suggest occupation by maternity roost was encountered.	
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Appendix D: Meet our Survey Team

Nic Aldridge (NA) is an ecologist with Little Wing Ecology and the author of this report. He is a licensed bat worker (S091427/1) with over 20 years' experience in education and conservation and over eight years' experience surveying built-structures, open habitats, and woodlands for bats. Following a degree in Botany and Zoology, Nic completed an MSc in Wildlife Management, Conservation and Control at the University of Reading. He has practical experience in field-based research with a focus on invertebrate and vegetation diversity and producing phase 1 habitat surveys and habitat management plans. He is experienced in hand netting common pipistrelle and soprano pipistrelle from maternity roosts, has carried out the ringing of Daubenton's bats as part of a multi-year project on the species and has undertaken monitoring work on several important lesser horseshoe bat roosts. Nic writes EPS licence applications, ecological reports and provides Ecological Clerk of Works services. He has attended courses with the Bat Conservation Trust to improve his knowledge and skills and has led voluntary projects to develop habitats and collect species data. Nic founded Little Wing Ecology in 2021 as a not-for-profit, to use the skills and expertise of an ecological consultancy to work with the local community, support local conservation projects and provide training and education for the next generation of ecologists.

Elizabeth Winstanley (LW) is a Nature Recovery Officer with a large Conservation Organisation, and a wildlife surveyor with Little Wing Ecology. She has over ten years' experience working in practical conservation. Following a degree in Outdoor Education, Liz volunteered with The Wildlife Trust before taking on her current responsibilities. She has held her current position since 2015. During this time, Liz has undertaken numerous surveys and monitoring projects, including work on butterfly transects, phase 1 habitat surveys, reptile and amphibian surveys, upland monitoring, BTO bird box round, intermediate tree survey and inspection, dormouse training and recording, bumblebee conservation – bee walks and many more. Currently Liz is responsible for the management of seven Nature Reserves including four SSSIs. Liz has also attended several training sessions to develop her knowledge, understanding and practical skills in bat monitoring and bat ecology.

Tracey Cotterell (TC) is employed by the NHS as a Porter and a wildlife surveyor with Little Wing Ecology. Tracey has a lifelong love of nature and enjoys spending her spare time volunteering with organisations such as The Welsh Wildlife Trusts, Blaenavon Heritage and the TRF (Trail Riders Fellowship). She enjoys being outdoors, whether in a working capacity or for personal interest such as running, riding, or surfing. She has volunteered throughout her life in roles as varied as an NHS First Responder, to working for the Wildlife Trust. During this time, she has gained skills in volunteering with environmental conservation matters, and through being a signaller in a search and rescue team. Tracey enjoys the responsibility of conserving the surrounding environment, learning, and helping to regulate human activities to minimise direct and indirect negative impacts on both flora and fauna. Tracey has also attended several training sessions to develop her knowledge, understanding and practical skills in bat monitoring and bat ecology.

Yvette Amos (YA) is a wildlife surveyor with Little Wing Ecology. She has a lifelong love of nature and enjoys spending her spare time and vacations centred around nature and wildlife focused destinations. Yvette enjoys being outdoors, where she expresses her love of photography along with her interest in the natural world. She is experienced in data collection at a high level, having formerly worked for Cardiff University, School of Social Sciences and Computer Science. Yvette has attended several training sessions to develop her knowledge, understanding and practical skills in bat monitoring and bat ecology and is dedicated to gaining experience in nature conservation, wildlife management and ecology.

Richard Farr (RF) is a wildlife surveyor with Little Wing Ecology. Richard has a life-long love of nature and has previously worked with the Gwent Wildlife Trust, where he gained a wide set of practical skills and experiences which have developed his knowledge and understanding of ecology and conservation at a range of the Trust's Local Nature Reserves. He has recently completed his bachelor's degree in ecology and conservation science at the University of the West of England (UWE), which has allowed him to develop knowledge and skills in numerous areas including field/survey techniques, geographical information systems, consultancy, habitat management/identification, data collection, data analysis using software such as RStudio. He has attended multiple training sessions to further develop skills and knowledge in bat monitoring, bat ecology, conducting surveys and associated reports.

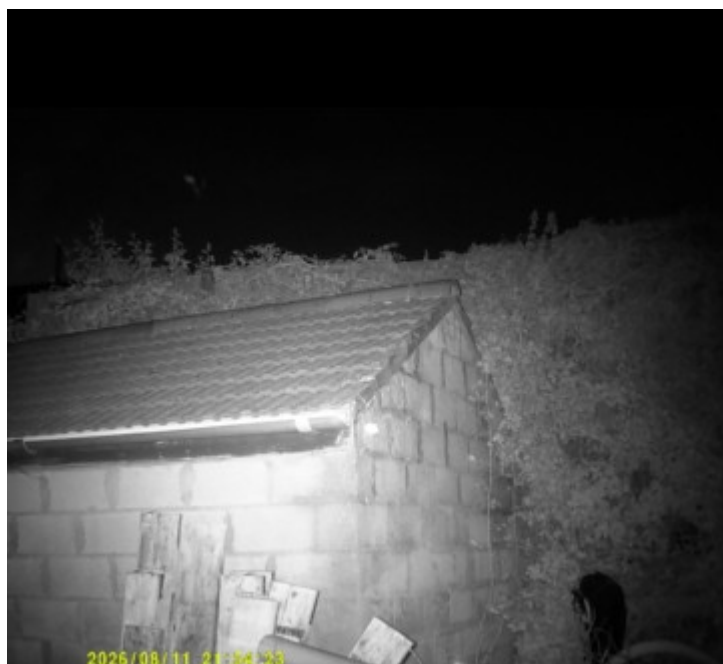
Libby Cotterell (LC) is a full-time student and a wildlife surveyor with Little Wing Ecology. She has a lifelong love of nature and the outdoors and enjoys learning new skills and engaging in practical work, in order to have a positive impact on local conservation issues. Libby has attended several training sessions with Little Wing Ecology to develop her knowledge, understanding and practical skills in bat monitoring and bat ecology.

Elise Winstanley (ELW) is a full-time student and a wildlife surveyor with Little Wing Ecology. She previously ran a college newspaper and is committed to community engagement – both in her academic life and in the local community, as shown by her willingness to integrate herself into the towns of both Ebbw Vale and Lampeter. Elise is currently studying creative writing and has a keen interest in nature and habitat preservation. She has attended several training sessions with Little Wing Ecology to develop her knowledge, understanding and practical skills in bat monitoring and bat ecology.

Nadine Morgan (NM) is a County Ecologist with a Local Authority and wildlife surveyor with Little Wing Ecology, with over 15 years' experience of working in conservation. Following a degree in Physical Geography, Nadine volunteered with a Wildlife Trust and with the Countryside Team in a Local Authority before becoming employed in a Local Authority as a Biodiversity Officer. She held this position since 2010 before taking on the role of County Ecologist in 2020 and has held this position since. She has been a Full member of CIEEM since 2022. During this time responsibilities have included, delivering environmental education, working with community groups, carrying out practical conservation on several Local Nature Reserves, conducting ecological surveys on Phase 1 Habitats, reptile & amphibian, curlew monitoring and also bat surveys. The results of surveys have been used to inform the writing of ecological management plans for several sites. Nadine has attended many ecological training sessions to enhance her knowledge and skills.

Sam Haycock (SH) is a founding director of Little Wing Ecology and a commercial assurance executive with a national company. Sam has over 20 years' experience in the education sector and four years' experience managing two rural enterprise companies, of which she was a director for three years. She brings a broad range of interdisciplinary skills to her role at Little Wing Ecology where she has responsibility for editing, reviewing, data management and finances. In 2021, Sam became a founding director of Little Wing Ecology, as a social enterprise, that aims to use the skills and expertise of an ecological consultancy, to work with the local community, support local conservation projects and provide training and education for the next generation of ecologists and conservationists.

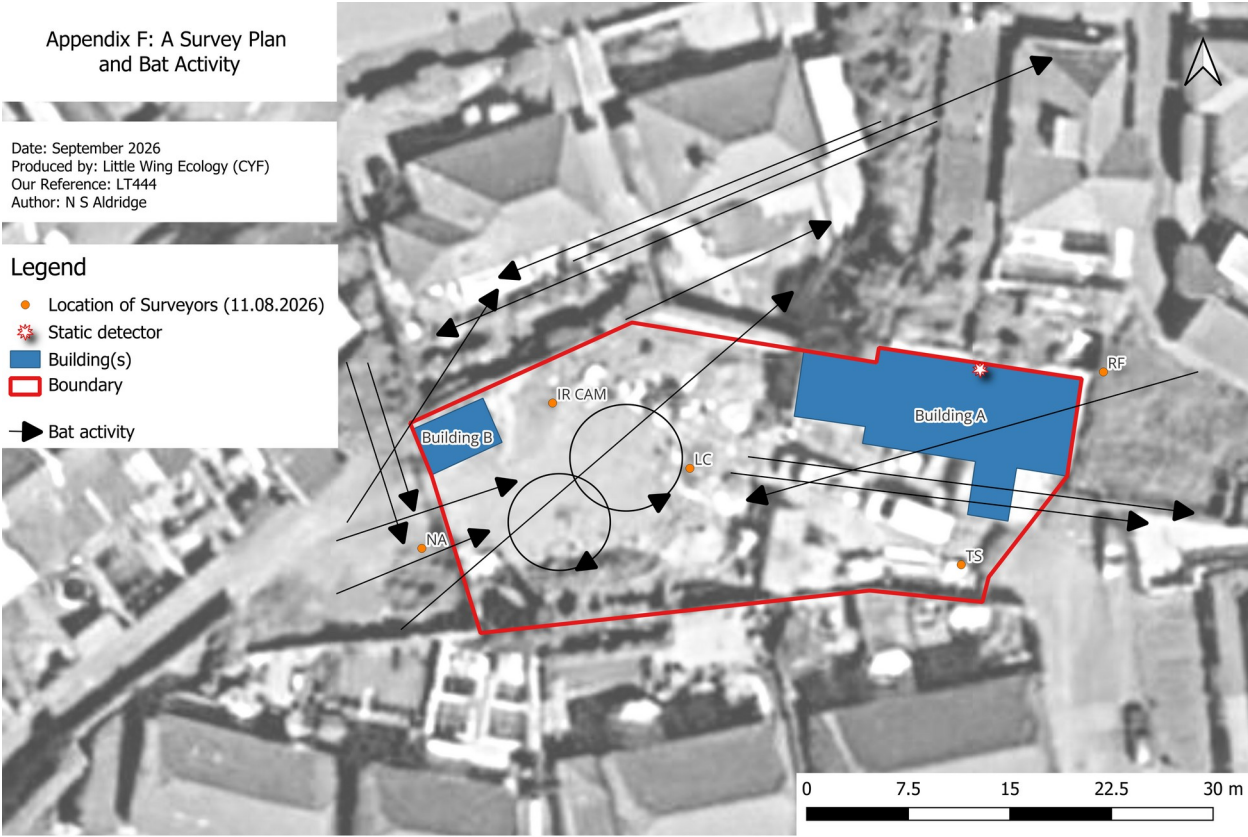
Appendix E: Infrared Monitoring (NVA Image Quality)



Appendix F: A Survey Plan
and Bat Activity

Date: September 2026
Produced by: Little Wing Ecology (CYF)
Our Reference: LT444
Author: N S Aldridge

- Legend
- Location of Surveyors (11.08.2026)
 - ✱ Static detector
 - Building(s)
 - Boundary
 - ➔ Bat activity



QGIS Development Team, <2026>. QGIS Geographic System. Open-Source eospatal Foundation Project.

Appendix G: Activity Survey – Recordings (Raw data)

DATE	Time (start)	Time (end)	SPECIES (COMMON)	No	Surveyor's Position	OBSERVER'S NAME	COMMENT	CLASS OF SITE
11.08.2026	21.19	22.11	Common pipistrelle	4	NE	Richard Farr	Foraging across linked gardens to east and along the street	Foraging
11.08.2026	21.06	21.22	Common pipistrelle	2	NE	Richard Farr	Commuting across linked gardens	Commuting
11.08.2026	22.01	22.01	Common pipistrelle	1	NE	Richard Farr	Recorded - not observed	
11.08.2026	21.19	21.24	Soprano pipistrelle	2	NE	Richard Farr	Foraging across linked gardens to east and along the street	Foraging
11.08.2026	21.11	21.40	Common pipistrelle	6	SW	Tracey Cotterell	Foraging within the site boundaries	Foraging
11.08.2026	21.17	21.17	Common pipistrelle	1	SW	Tracey Cotterell	Commuting across the yard	Commuting
11.08.2026	21.1	22.04	Common pipistrelle	8	SW	Tracey Cotterell	Recorded - not observed	
11.08.2026	21.14	21.43	Common pipistrelle	3	SE	Tanith Stephens	Foraging within the site boundaries	Foraging
11.08.2026	21.11	22.15	Common pipistrelle	5	SE	Tanith Stephens	Commuting across the yard	Commuting
11.08.2026	21.05	21.05	Noctule	1	West	Nic Aldridge	Commuting across the yard	Commuting
11.08.2026	21.07	21.58	Common pipistrelle	12	West	Nic Aldridge	Foraging up the adjacent lane and within the site boundaries	Foraging
11.08.2026	21.32	21.32	Soprano pipistrelle	1	West	Nic Aldridge	Foraging up the adjacent lane and within the site boundaries	Foraging

Appendix H: Bat Friendly Lighting Scheme

Bat sensitive lighting schemes must follow advice details in 'Bats and Artificial Lighting in the UK: Technical Guidance Note 08/23' (2023), available here: <https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released>

A lighting plan is required to prevent any adverse impact upon the potential roosting, commuting and foraging habitats of bats adjacent to the Site (post development), specifically on the nearby mature trees. Lighting for the site must be functional and directional only and kept to a minimum, servicing the public areas of the proposed development (as required for safety and security). It must be achieved using baffles and screens, if necessary, to ensure no light spill on any retained or planted vegetation (including off-site vegetation - where there is a potential to impact animals using the nearby habitat features).

- A sensitive lighting scheme is recommended and must be created. The sensitive lighting scheme must follow advice detailed in 'Bats and Artificial Lighting in the UK: Technical Guidance Note 08/23' (2023) and comprise of:
- Light fixtures, filaments, light spill and artificial light must be directed away from bat roost entrances, both existing and those to be created as part of the mitigation;
- Luminaries are to be LED only, due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. Luminaires must have a warm white spectrum (ideally <2700 Kelvins), reducing the blue light component and increasing the red-light component;
- Luminaries must feature peak wavelength highs of 550nm to avoid the component of light most disturbing to bats;
- Heights of fixtures must be carefully considered to minimise light spill. Only luminaries with an upward light ratio of 0% and with good optical control must be used;
- Luminaries must always be mounted on the horizontal, i.e., no upward tilt;
- Any external security lighting must be set on motion sensors and short (15 second) timers;
- As a last resort, accessories such as baffles, hoods or louvres must also be used, with light directed away from any natural features and must not encroach outside the Site boundaries, particularly the surrounding trees, hedgerows, and other vegetation in the landscape.

Appendix I: Biodiversity Enhancement Features

Category	Product / Feature / Information	Availability
Bats	Integrated Eco Bat Box	https://www.nestbox.co.uk/products/integrated-eco-bat-box
Bats	Beaumaris Bat Box	https://www.wildcare.co.uk/beaumaris-bat-box.html?gad_source=1&gclid=CjwKCAjw65-zBhBkEiwAjrQMLWbfTavFlgGTv2ry0OGQEWnqN0eVseleG460NUffHmj6NAF2TcGZhoCsKEQAvD_BwE
Bats	Bat Access Tiles: Slate	https://beddoesproducts.com/
Bats	Bat Access Tiles: Terracotta	https://spicertiles.co.uk/product/bat-access-tiles/
Bats	F2 Schwegler Bat Box	https://www.wildcare.co.uk/bat-box-45.html
Bats	2FN Schwegler Bat Box	https://www.wildcare.co.uk/bat-box-55.html
Bats	Eco Rocket Bat Box (Pole mounted)	https://www.nestbox.co.uk/products/eco-rocket-bat-box
Bats	Eco Kent Bat Box	https://www.nhbs.com/eco-kent-bat-box
Birds	1SP Schwegler Sparrow Terrace	https://www.nhbs.com/1sp-schwegler-sparrow-terrace
Birds	No10 Schwegler Swallow Nest	https://www.nhbs.com/no-10-schwegler-swallow-nest?bkfno=174809&ca_id=1495&adlocale=uk&gad_source=1&gclid=Cj0KCQjw8MG1BhCoARIsAHxSiQn8rz11Yabug80zjBuXHmQn9XgWQdwdqh6TCQceJk6cZwCXJiN-ezAaAnb9EALw_wcB
Birds	Schwegler 2m nest box 32mm red	https://www.wildcare.co.uk/schwegler-2m-nest-box-32mm-red.html
Birds	Vivara Pro Seville 32mm WoodStone Nest Box	https://www.nhbs.com/vivara-pro-seville-32mm-woodstone-nest-box?bkfno=234956&ca_id=1495&adlocale=uk&gad_source=1&gclid=CjwKCAjw1emzBhB8EiwAHwZZxQ3ycKKX1WfX_vPwy4H0tmx0d8U47PSFg_oR_KWOui01vGrNPv2budhoC43AQAvD_BwE
Birds	B1 Schwegler Nest Box	www.nhbs.com
Birds	2H Schwegler Open-fronted Boxes	https://www.wildcare.co.uk/wildlife-nest-boxes/bat-boxes/open-front-bird-box.html?gad_source=1&gclid=Cj0KCQIAvP-6BhDyARIsAJ3uv7aypY-bcsAx5YH2rJcAcIpCz_NWr9076Gf_H17_TlvvuoRxUQ51BEwaAk_WaEALw_wcB
Birds	Bilbao Nest Box	www.wildcare.co.uk
Botany: Seeds	Species-rich Neutral Grassland (Lawn)	https://www.cumbriawildflowers.co.uk/habitats/neutralhaymeadowmix
Botany: Seeds	Native Woodland Under-canopy Mix: Wildflowers and Native Woodland Under-canopy Mix: Grasses	https://www.pitchcare.com/products/shade-hedgerow-woodland-wildflower?gad_source=1&gclid=CjwKCAiA3JcVbA8EiwA4kuiZoajG-WP6tDAjs71P4QXzKHYZzOnsDjaD0cfR0j9fWOW1kwRX0LdLxocq8QAvD_BwE
Botany: Seeds	Seed Mix: Pond Edge	https://britishpondplants.co.uk/products/pond-edge-seed-mix#:~:text=Pond%20Edge%20Seed%20Mix&text=The%20first%20consists%20of%2030,the%20wildflowers%20at%20only%201g.
Botany: Saplings	Traditional hedgerow mix	https://hedgelink.org.uk/hedgerows/hedgerow-biodiversity/
Botany: Trees	Standard Downy Birch Tree	https://www.tree-shop.co.uk/product/downy-birch-betula-pubescens/
Botany: Trees	Standard Rowan	https://www.ashridgetrees.co.uk/p/garden-trees/sorbus/aucuparia-mountain-ash-rowan
Botany: Trees	Standard Hazel	https://shop.woodlandtrust.org.uk/hazel
Botany: Trees	Standard Sessile Oak	https://www.ashridgetrees.co.uk/p/garden-trees/oak-quercus/petraea-sessile?utm_campaign=20731047289&utm_medium=cpc&utm_source=google&utm_content=&utm_term=&utm_marketing_tactic=20731047289&utm_creative_format=&utm_source_platform=g_x&gad_source=1&gclid=CjwKCAiA8Lu9BhA8EiwAag16bwJycGfDm5rQcfcfzRTVAgPmF9yIL1YwpnQZDmt8OCfXJV0frx8qoBoCX18QAvD_BwE
Ponds	Froglife: Just Add Water: How to Build a Wildlife Pond	https://www.froglife.org/wp-content/uploads/2013/07/JAW2014-for-printing-HLF1.pdf
Invertebrates	RSPB: Wildlife Friendly Compost Heap	https://www.rspb.org.uk/get-involved/activities/nature-on-your-

		doorstep/garden-activities/how-to-start-composting/?channel=paidsearch&gclid=Cj0KCOjwwiSIBhD6ARIsAESamp6-9xxJryl2FHYIveETaKoRcR-IXASZkFv6N749eOOlwGZ4ix6F7-caAickEALw_wcB&gclidsrc=aw.ds
Invertebrates	Bee Bricks	https://www.wildcare.co.uk/wildlife-nest-boxes/insect-habitat/solitary-insects/greenblue-bee-brick.html?gad_source=1&gclid=CjwKCAjw1emzBhB8EiwAHwZZxQhTPLq1vLIUmTcv0q5w_jD941qKkCx5Nsnlh4NVwijJe7wxAnkazhoCggUQAyD_BwE
Invertebrates	Schwegler Clay and Reed Insect Nest	www.nhbs.com
Habitat management	Plantlife: Managing a Small Meadow for Wildlife	https://meadows.plantlife.org.uk/3-maintaining-meadows/managing-meadows-of-all-sizes-with-mowing/
Habitat management	Woodland Trust: How to Plant a Tree	https://www.woodlandtrust.org.uk/plant-trees/advice/how-to-plant/
Hedgehogs	Vivara Pro WoodStone Hedgehog House	https://www.wildcare.co.uk/wildlife-nest-boxes/other-mammal-nest-boxes/hedgehogs/woodstone-hedgehog-house-10506.html?gad_source=1&gclid=CjwKCAiA9bq6BhAKEiwAH6bqoG61jaD7qZxLkHiCns8zdc5xCwnaFe-yOFvsp_pt2WZgavkUqzftthoCJdMQAvD_BwE
Hedgehogs	Eco Hedgehog Hole Plate	https://www.nestbox.co.uk/products/eco-hedgehog-hole-plate?_pos=2&_sid=cfc475fd2&_ss=r
Amphibians	An Amphibian Hibernacula: English Nature: Great Crested Newt Mitigation Guidelines.	https://www.froglife.org/
Planting for bats	Common Evening Primrose (<i>Oenothera biennis</i>): A hardy biennial with yellow flowers that pop open at sunset, letting off a sweet fragrance that acts as a beacon for moths.	https://www.naturescape.co.uk/product/evening-primrose/
Planting for bats	Night-Scented Stock (<i>Matthiola longipetala</i>): An absolute classic for the traditional British cottage garden, releasing an incredible evening aroma.	https://www.chilternseeds.co.uk/item/848/matthiola-longipetala-seeds?srsltid=AfmBOorMGfMJJafo-0gkxFj5a_sjP03rXaWl2T6z3w2tX_BLi1_1xj3h
Planting for bats	Nicotiana (<i>Nicotiana glauca</i>): Jasmine-scented ornamental tobacco plants with pale flowers that stand out under pale moonlight.	https://www.chilternseeds.co.uk/item/898/nicotiana-glauca-sensation-mixed-colours-seeds?srsltid=AfmBOorFZSz-EB2T8fOUaLsT1qFrW1kmcc01PzWOfIF3cNKGXdBdBC3W



CYFYNGIADAU

Mae Little Wing Ecology (CYF) wedi paratoi'r Adroddiad hwn at ddefnydd y Cleient neu ei Asiantau uchod yn unig yn unol â'n telerau busnes, y cyflawnwyd ein gwasanaethau oddi tanynt. Ni roddir unrhyw warant arall, wedi'i mynegi neu ei hawgrymu, ynghylch y cyngor proffesiynol sydd wedi'i gynnwys yn yr Adroddiad hwn nac unrhyw wasanaethau eraill a ddarperir gennym ni. Ni all unrhyw barti arall ddibynnu ar yr Adroddiad hwn heb gytundeb ysgrifenedig penodol ymlaen llaw gan Little Wing Ecology (CYF).

Mae'r asesiadau a wnaed yn rhagdybio y bydd y safle(oedd) a'r cyfleusterau yn parhau i gael eu defnyddio i'w pwrpas presennol heb newid sylweddol. Mae'r casgliadau a'r argymhellion yn yr Adroddiad hwn yn seiliedig ar wybodaeth a ddarparwyd gan eraill ac ar y dybiaeth bod yr holl wybodaeth berthnasol wedi'i darparu gan y partïon hynny y gofynnwyd amdani. Nid yw gwybodaeth a gafwyd gan drydydd partïon wedi'i dilysu'n annibynnol gan Little Wing Ecology (CYF).

Cynhyrchwyd gan:	Little Wing Ecology (CYF) (Cwmni Di-elw Cyfyngedig trwy Warant)
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E-bost:	nic@littlewingecology.cymru
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About Us

Little Wing Ecology is a not-for-profit ecological consultancy serving the South Wales Valleys and beyond. We combine professional expertise with community impact, delivering high-quality ecological services while reinvesting in local nature and people.

We are a small ecological consultancy dedicated to providing accessible and pragmatic services that uphold the highest standards of conservation.

Our Services

Survey and Assessment Services:

- Preliminary Ecological Appraisals and Roost Assessments
- Comprehensive bat, reptile, and eDNA surveys
- European Protected Species License Applications

Planning and Implementation Support:

- Mitigation planning and Green Infrastructure Statements
- On-site development support services

Our Mission

As a Consultancy, we use our experience, expertise, and commitment to conservation to provide an accessible and pragmatic service that upholds the highest standards of environmental protection.

As a Not-for-Profit Social Enterprise, we reinvest our profits to create lasting positive change. We collaborate with valleys communities, conservation groups, local authorities, and partners to advance our three core commitments:

A. Helping Nature

We champion biodiversity recovery and resilience through:

- Habitat restoration and enhancement initiatives
- Designing built environments that work with wildlife
- Supporting long-term conservation monitoring that informs future protection efforts

B. Working with People

We believe in empowering communities through meaningful engagement with nature:

- Creating employment, training and volunteer pathways that build ecological skills and confidence
- Fostering the next generation of conservation champions
- Strengthening the connection between people and their natural environment

C. Supporting Communities

We invest in the places and people we serve:

- Reinvesting locally in nature-positive projects and community development
- Promoting environmental education that builds understanding and stewardship
- Providing expertise to support worthwhile causes and community-led initiatives

Our Vision: A thriving South Wales Valleys where nature and communities flourish together, supported by practical conservation action and shared environmental stewardship.

Adroddiad Arolwg gan



GOFALU

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ECOLOGY

NATUR

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