

A Bat Survey Report
on behalf of

Highfield Property Group
for
28 Victoria Street
Twynroddyn
Merthyr Tydfil
Merthyr Tydfil CBC
CF47 8BW



Produced by: Little Wing Ecology CYF (A Not-for-profit Company Limited by Guarantee)
Company no: 13743223
Address: 24 Alma Street, Brynmawr, Blaenau Gwent, NP23 4DY
Email: nic@littlewingecology.cymru
Telephone: 07985 395251



Project Overview

Client	Highfield Property Group
Site / Job	28 Victoria Street, Twynyrodyn, Merthyr Tydfil, CF47 8BW
Report Type	A Breeding Season Bird Survey (Transect)
Report Reference	LT312-BAS-25
Grid Refence	SO 04861 06146
Publication Date	July 2025

Versioning and Quality Assurance

Status	Date	Author(s)	Reviewed by
Draft	22.07.2022	Nic Aldridge	Sam Harley
Version 1	23.07.2025	Nic Aldridge	Sam Harley
Version 2	21.08.2025	Nic Aldridge	Sam Harley

Limitations

Little Wing Ecology (CYF) has prepared this Report for the sole use of the above-named Client or their Agents in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This Report may not be relied upon by any other party without the prior and express written agreement of Little Wing Ecology (CYF).

The assessments made assume that the site(s) and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by Little Wing Ecology (CYF).

Executive Summary

The owner of '28 Victoria Street,' is preparing a planning application to Merthyr Tydfil County Borough Council (the local planning authority), for the conversion of a commercial unit into a mixed-use commercial unit with (x2) residential apartments above. To support the planning application process, a survey for the presence of bats and birds was undertaken between August and early-September 2025.

Following the results of a Preliminary Roost Assessment, this report contains the results from a dusk activity survey during the summer months of 2025, conducted in accordance with national survey standards. During two dusk emergence surveys conducted between June and July of 2025, no evidence was recorded of bats using Building A as a roost and bats are considered likely absent. Of the 17 recordings made, two species were identified commuting near the site. The observed behaviour was for animals commuting across the site towards the river Tâf and foraging around nearby mature trees and within a nearby carpark. The species identified during the survey effort included common pipistrelle and noctule.

As pipistrelle species are known to hibernate within buildings, a precautionary approach is recommended for any works conducted during the winter months (October to April inclusive). To mitigate the risk of impacting hibernating bats at any Potential Roost Features (PRFs) across the site, all works undertaken within this period must be directly supervised by a suitably qualified and experienced bat ecologist, operating under the direction of a site-specific method statement. Furthermore, such works should only proceed when ambient temperatures are consistently above 10°C to minimise disturbance to torpid bats.

Birds were also considered at the same time as the bat surveys. The building supports limited features that could be exploited by nesting birds, but 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 Natural Environment and Rural Communities (NERC) Act (2006) the planning authority has a statutory duty to have regard for the conservation of 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.

CONTENTS

	Page
Section One: Introduction	1
Section Two: The Survey Method	2
Section Three: Results	3
Section Four: Conclusions	8
Section Five: Recommendations	8
Section Six: Biodiversity Enhancement	9
Section Seven: Additional Information	9
References and Bibliography	11
List of Tables	
Table 3.1 Maximum Count per Species (All Visits Combined)	7
Table 3.2 Summary of Evidence	7
List of Plates	
Plate A Infrared monitoring (NVA Image Quality)	6
Appendices	
A. Site Location	
B. A Site Plan	
C. Site Photography	
D. Meet our Survey Team	
E. Species Potential	
F. Survey Plan and Bat Activity	
G. Activity Survey – Recordings (Raw Data)	
H. Bat Friendly Lighting Scheme	
I. Policy and Legislation in Wales	

SECTION ONE: INTRODUCTION

1.1 Background

- 1.1.1 Little Wing Ecology (CYF) was commissioned to undertake a Preliminary Roost Assessment and Bat Activity Survey of a site known as, '28 Victoria Street, Twynnyroddyn, Merthyr Tydfil, CF47 8BW.' 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 structure will be referred to as, 'Building A.'
- 1.1.2 The owner of '28 Victoria Street,' is preparing a planning application to Merthyr Tydfil County Borough Council (the local planning authority), for the conversion of a commercial unit into a mixed-use commercial unit with (x2) residential apartments above.
- 1.1.3 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 Building A.
 - 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.
- 1.1.4 Following the results of a Preliminary Roost Assessment, this report contains the results from a dusk activity survey during the summer months of 2025, conducted in accordance with national survey standards. The survey was carried out with the purpose of identifying the presence/likely absence of bat roosts at Building A. 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

- 1.2.1 Located at National Grid Reference (NGR) SO 04861 06146 (Appendix A), at an altitude of 176m above Ordnance, Building A is a late Victorian stone building with a traditional slate roof. A former commercial unit on the ground floor is un-occupied and the upper floors have been stripped out in preparation for renovation. A cellar is accessed from the former commercial unit. A brick-built, two-storey extension with a flat roof is attached to the northern elevation. This was formerly a separate commercial unit. Building A is located on a main service road (Victoria Street) on the western boundary of Merthyr Tydfil town centre.

1.3 Policy and Legislation

- 1.3.1 In Wales, all bat species and their roosts are legally protected, by both domestic and international 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.
- 1.3.2 The framework for this protection is provided within three pieces of legislation from the Government of Wales and the UK Government.
- 1.3.3 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.
- 1.3.4 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)

- 2.1.1 Available records for bats were provided by (SEWBRc - LERC reference: 0256-053).

2.2 Desktop Survey (Habitat)

- 2.2.1 A review of aerial photography was undertaken to assess the provision of suitable foraging and commuting habitat within proximity to Building A. This information was used in combination with a review of statutory designated sites, via the Data Map Wales website, including Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) to help in confirming the presence of bat species locally.
- 2.2.2 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

- 2.3.1 A potential nest and roost assessment survey was carried out on the interior and exterior of Building A by a suitably experienced ecologist and Natural Resources Wales (NRW) licenced bat worker. 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.

- 2.3.2 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

- 2.4.1 Whilst a full ecological appraisal was not undertaken at the site, a note was made of any additional ecological considerations identified during the survey. For ease of reference, these have been included within the results section of this report (Section 3).

2.5 Limitations of the Survey Method

- 2.5.1 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

- 2.6.1 Following the PRA and in line with guidelines set out in, 'Bat Conservation Trusts Good Practice Guidelines (Collins, J. (Ed.) (2023),' Building A will subsequently be categorised for the level of risk of supporting bats, and recommendations made as to the requirement (if any) 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 will be required to adequately cover all features identified during the PRA. Nocturnal bat surveys can be 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 C.

2.7 Equipment (Activity Surveys)

- 2.7.1 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

- 3.1.1 The survey location was examined by consulting Data Map Wales and other available resources. No part of the site contains, or is within, any statutory sites of nature conservation interest, such as a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), National Nature Reserves (NNRs) or Local Nature Reserves (LNRs). There are no Sites of Special Scientific Interest (SSSIs) on, or adjacent to Building A. The nearest sites of interest are Cwm Glo a Glyndyrys (SSSI) 780m to the west, and Cwm Taf Fechan Woodlands (SSSI, LNR) 1.8km to the north.

3.2 Local Biological Records

3.2.1 A SEWBRc record search (LERC reference: 0256-053) reported 274 species records for bats (2km) and birds (150m). No records were documented on or directly adjacent to this site. Records are briefly summarised in the bullet list below:

- Bats accounted for 242 species records (i.e., 88% of all species records), including 71 roost records, the nearest which are for a brown long-eared bat day roost and maternity roost (at 195m and 304m respectively), a day roosts for soprano pipistrelle day at 255m an unidentified (possibly) pipistrelle roost at 197m. Several other bat species are recorded locally including brown long-eared bat (202m), Lesser horseshoe bat (387), Noctule (427m).
- Birds accounted for 32 species records (i.e., 11.7% of species records), 40.6% of which were for CAT1 species including the nearest: house sparrow and herring gull at 134m.

3.3 Preliminary Roost Assessment (PRA)

3.3.1 A Preliminary Roost Assessment was conducted on 13th May 2025 by the author. Weather conditions during the survey were recorded and are presented below. Details of the surveyor's experience are presented in the Appendix.

3.3.2 The subject structure is a two-storey, terraced commercial property of traditional stone and lime-built construction, featuring a pitched roof predominantly covered with natural slate. Access to the property is via Victoria Street, a main service road. The roof incorporates cement-based ridge and/or verge tiles, and timber bargeboards. At the time of the assessment, the building was unoccupied. The overall fabric of the building was observed to be in generally poor condition, with visible signs of disrepair.

3.3.3 During the Preliminary Roost Assessment, several features offering potential roosting opportunities for bats were identified within the building fabric:

- **Roof Structure:**
 - **Roof Membrane:** A bitumen-based roofing felt was present beneath the slates on the main roof.
 - **Ridge Tiles:** Raised ridge tiles, located centrally on the roof, provided small gaps suitable for bats to access a cavity between the intact bitumen membrane and the underside of the slates.
 - **Slates:** A small number of raised or slipped slates were recorded centrally between the eaves and ridge on the northern elevation. Additionally, areas where slates had been replaced around a chimney on the western elevation presented potential crevices.
 - **Leadwork:** Raised leadwork was observed at the interface between the subject building and the adjoining property to the east, creating small gaps.
- **Gables and Eaves:**
 - **Bargeboards:** A notable gap was identified behind the timber bargeboards at the northern elevation.
 - **Gable:** The western gable was finished in slate. The was well-maintained and in good condition.
- **Cellar:**
 - A cellar was present, accessed via a door from the ground floor commercial unit. Within the cellar, several cavities were noted, including gaps between stonework and timber elements. While the structural characteristics of this space offer many of the attributes associated with a classic bat hibernation site (e.g., stable temperature, high humidity), no direct external access points (e.g., open flues, windows, or significant gaps) that could provide entry for bats were identified during the assessment and bats are considered likely absent.
- **Evidence of Bats:**
 - No direct evidence of bats (e.g., droppings, staining, or feeding remains) was identified during the internal or external inspection.

3.3.4 Collectively, these features present opportunities for a diverse range of bat species, including crevice-dwelling species like pipistrelles, but not those requiring direct flight paths into a roost, such as lesser horseshoe bats.

3.3.5 Photographic evidence supporting the PRA is presented in the Appendix.

3.4 Habitat and Satellite Imagery - Suitability for Commuting and Foraging

3.4.1 The immediate vicinity of the survey plot is situated within an urban environment, on the edge of Merthyr Tydfil town centre. This area is predominantly characterised by a mix of traditional terraced residential units and mid-century commercial properties. To the west of Building A, several mature deciduous trees are present - street trees. Directly to the north, an open area containing small amenity green spaces is located.

3.4.2 Approximately 100m to the north, a more substantial linear feature of large, mature deciduous trees, aligned east-west, forms a notable green corridor providing connectivity towards the River Tâf. The River Tâf, a significant local landscape feature and designated Site of Importance for Nature Conservation (SINC), is located approximately 130m to the west of the survey plot. Much of this river system is extensively wooded, particularly to the north and south, representing a high-quality riparian habitat. This provides excellent foraging opportunities for bats and facilitates significant ecological connectivity to the wider landscape.

3.4.3 Further afield, the Cwm Taf Fechan Woodlands (a Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR) is located approximately 1.8km to the north. Collectively, the interconnected network of woodlands and riparian corridors, near the site and extending north and south of this location, provides excellent connectivity to the wider landscape for bats, offering extensive commuting routes and diverse foraging opportunities.

3.5 Evidence of Protected Species

3.5.1 During the PRA, no protected species were directly observed. While no active roost was confirmed during this initial assessment, the presence of several PRFs necessitates further investigation and/or mitigation measures in accordance with national guidelines and protected species legislation.

3.6 Suitability for Hibernating Bats

3.6.1 An internal inspection of the cellar was undertaken. While this subterranean feature presents characteristics often associated with bat hibernation sites, such as potentially stable temperatures and high humidity, no direct external access points for bats were identified. The cellar is only accessible via a doorway located within the ground floor commercial unit.

3.6.2 As pipistrelle species are known to hibernate in the roof structure of buildings, a precautionary approach will be recommended.

3.7 Evidence of Nesting Birds

3.7.1 The features identified during the PRA also provide opportunities for roosting birds and in particular, house sparrows (a CAT1 species).

3.8 Bats - Results of a Preliminary Roost Assessment

3.8.1 Building A has been identified as a structure exhibiting multiple potential roosting features (PRFs) that could offer suitable roost sites based on their size, shelter, protection, internal conditions, and the surrounding

habitat. While these features are assessed as unlikely to support roosts of high conservation significance (specifically in terms of roost type, such as large maternity or hibernation roosts). 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.

- 3.8.2 Following guidelines set out in 'Bat Conservation Trusts Good Practice Guidelines (Collins, J. (Ed.) (2023)', Building A was categorised as being of moderate risk (with breeding bats not a concern), requiring a dusk survey for bats on two occasions. This survey represented the minimum recommended number of visits to give confidence in a negative result for structures. Should higher than expected activity be recorded, then additional survey effort will be required.

3.9 Activity Survey Recordings

- 3.9.1 On 10.06.2025, no bats were recorded as roosting at Building A. In total, 2 recordings were made, both for common pipistrelle. Bat interest around Building A consisted predominantly of a small number of animals foraging within an urban carpark, south of the structure.
- 3.9.2 On 13.07.2025, no bats were recorded as roosting at Building A. In total, 15 recordings were made, including for common pipistrelle (13), and noctule (2). Bat interest around Building A consisted predominantly of commuting for a small number of bats and foraging along the adjacent mature trees and within an urban carpark, south of the structure.
- 3.9.3 A bat activity plan is presented in Appendix D and raw data for observations is presented in Appendix E.

3.10 Roost Characterisation

- 3.10.1 During dusk observations no bats were recorded emerging from Building A and roosting bats are likely absent from the structure.

3.11 Infrared Video Survey

- 3.11.1 In addition to active monitoring using bat detectors, an infrared camera was deployed on the dusk activity surveys as a night vision aid (NVA).



Plate A: Infrared Monitoring (NVA - Image quality)

3.12 Field Survey Details & Weather Conditions

Date	Timings (BST)		Notes, Sunset Times	Weather Conditions		
	Start	End		Variable	Start	End
13.05.2025	10.30	11.45	Preliminary Assessment Roost	Temp (°C)	20.3	24.0
				Cloud Cover (Oktas)	3	4
				Precipitation	Nil	Nil
				Beaufort Scale	F2	F2
10.06.2025	20.55	23.00	Dusk Activity Survey Sunset: 21.30	Temp (°C)	17.7	12.3
				Cloud Cover (Oktas)	1	1
				Precipitation	Nil	Nil
				Beaufort Scale	F1	F1
13.07.2025	21.05	23.00	Dusk Activity Survey Sunset: 21.28	Temp (°C)	24.3	21.2
				Cloud Cover (Oktas)	4	6
				Precipitation	Nil	Nil
				Beaufort Scale	F0	F1

Table 3.3: Field Survey Details and Weather Conditions

3.13 Additional Ecological Constraints (Results)

- 3.13.1 The preliminary demolition works undertaken to the interior of the structure presented a potential limitation to the survey effort. Specifically, the removal of upper floors and ceilings prior to inspection may have inadvertently removed evidence of bat roosting within those areas. This risk of pre-existing works obscuring or removing roosting evidence was mitigated through a robust approach to assessing the remaining potential of the structure, adhering strictly to national guidelines. Furthermore, the subsequent undertaking of dusk emergence surveys was specifically designed to address this potential limitation by directly observing bat activity around the building. Full internal and external access was available to all remaining areas within Building A during the assessment.

3.14 A Summary of Evidence

Survey Location	Species (Recorded)	Notes
Building A	Common pipistrelle Noctule	Droppings: Nil. Live sightings: During two dusk observations, no bats were recorded emerging from Building A. All the observations and recordings made were of bats commuting/foraging. Roost Type: Roosts are likely absent from Building A.

Table 3.4: Summary of Evidence

3.15 Impact Assessment

- 3.16.1 Based on current known plans for Building A, and considering the results from the desktop survey, field survey and other available data, the following will likely apply (impacts are assessed in absence of mitigation):
- No evidence was recorded for protected or priority species on-site during the survey and bats are likely absent from the structure.

SECTION FOUR: CONCLUSIONS

- 4.1 During two dusk emergence surveys conducted between June and July of 2025, no evidence was recorded of bats using Building A as a roost and bats are considered likely absent. Of the 17 recordings made, two species were identified commuting near the site. The observed behaviour was for animals commuting across the site towards the river Tâf and foraging around nearby mature trees and within a nearby carpark. The species identified during the survey effort included common pipistrelle and noctule.
- 4.2 The current proposals involve a complete renovation of the roof and the application of new rendering materials to the eaves. Given that crevice-dwelling bat species, particularly pipistrelles (*Pipistrellus* spp.), are known to utilise various building structures, including roof spaces, wall-plates, lintels, window frames, and other exposed cavities for hibernation, the structure presents a potential risk of supporting hibernating bats. Bats are opportunistic and will exploit any suitable roosting opportunity when conditions are favourable.
- 4.3 All bat species and their places of rest are afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This legal framework prohibits impacts from disturbance, loss of roost locations, modifications to roosts, and loss of access or obstruction to roost locations.
- 4.4 As pipistrelle species are known to hibernate within buildings, a precautionary approach is recommended for any works conducted during the winter months (October to April inclusive). To mitigate the risk of impacting hibernating bats at any Potential Roost Features (PRFs) across the site, all works undertaken within this period must be directly supervised by a suitably qualified and experienced bat ecologist, operating under the direction of a site-specific method statement. Furthermore, such works should only proceed when ambient temperatures are consistently above 10°C to minimise disturbance to torpid bats.
- 4.5 The implementation of this cautionary approach is designed to mitigate risks associated with hibernating bats. It is critical to note that all bat roosts, including hibernation roosts, are protected by law, and the disturbance or destruction of such a roost constitutes a criminal offence. If a bat is discovered at any point during works, all activity must cease immediately, and a suitably experienced ecologist must be contacted for advice. Should works affect a confirmed roost or bat entry/exit points, a European Protected Species (EPS) licence from Natural Resources Wales (NRW) will be required before any further work can commence.
- 4.6 Building A supports features that could be exploited by nesting birds. A cautionary approach is recommended with reference to the eaves along the northern elevation.

SECTION FIVE: RECOMMENDATIONS

- 5.1 Based on the results of this report, it is recommended that the following conditions be included in the plans:
- 5.2 **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., July 2027), 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.
- 5.3 **Recommendation 2 (Hibernation potential):** As pipistrelle species are known to hibernate in buildings, a precautionary approach will be followed with reference to the wall plate, lintels, window frames and any exposed cavities for any works conducted during the winter months (October to April inclusive). Work will either be avoided during the winter months (October to April inclusive) or will be conducted in line with a method statement under direct supervision by a suitable experienced and licenced person.

- 5.4 **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.
- 5.5 These measures will allow the development to conform to current protective legislation as laid out in the Wildlife and Countryside Act 1981 (plus amendments)¹.
- 5.6 **Recommendation 4 (Enhancement features)** Implementation of the enhancement features for net-gain biodiversity as outlined in Section 6 (below).

SECTION SIX: BIODIVERSITY ENHANCEMENT

- 6.1 In accordance with the provision of Chapter 6 of Planning Policy Wales (Distinctive and Natural Places) and Local Planning Policy; biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed works to maximise the ecological value of the site (Appendix G).
- 6.2 **Enhancements 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.'
- 6.3 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 and, therefore, we recommend the following principles of design should be followed.
- 6.4 **Enhancement for Bats:** In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. One artificial roost should be installed as high as possible on the southern elevation; for the purpose of providing a roosting habitat for crevice dwelling species such as pipistrelle bat (e.g., Beaumaris Bat Box² – or similar).
- 6.5 **Enhancement for Birds:** This area is to be enhanced to provide additional opportunities for breeding birds. One 1SP Schwegler Sparrow Terrace³ (or similar) be attached to the northern elevation of Building A, as high as possible, facing north. The nesting boxes must be of a woodcrete construction to ensure longevity.
- 6.6 **Implementation and Maintenance:** Highfield Property Group will be responsible for the implementation of these enhancements and the ongoing maintenance of the enhancement features in perpetuity. Should any feature fail or become damaged, it will be promptly replaced.

SECTION SEVEN: ADDITIONAL INFORMATION

¹ <https://www.legislation.gov.uk/ukpga/1981/69>

² https://www.wildcare.co.uk/beaumaris-bat-box.html?gad_source=1&gclid=CiwKCAiw65-zBhBKEiwAjrRMLWbfTavFjgGTv2ry0OGQEWnqN0eVseleG460NUFFHmj6NAF2TcGZhoCsKEQAvD_BwE

³ <https://www.nhbs.com/low-visibility-woodstone-nest->

https://www.nhbs.com/low-visibility-woodstone-nest-box?bknfno=266260&ca_id=1495&adlocale=uk&gad_source=1&gclid=Cj0KCQjAs5i8BhDmARIsAGE4xHwiHLu8WP7vkUqfAZoKOG_cA9fl_vad1olk8Zvxt7bVFKn3txQfYl8aAu4AEALw_wcB

7.1 ENCOUNTERING A PROTECTED SPECIES DURING WORKS

- 7.1.1 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.

7.2 EXPIRATION OF THIS REPORT

- 7.2.1 This report is valid for two years. In the event that works do not start within two years of the survey date (i.e., July 2027) 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.

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/ukxi/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.

Natural Resources Wales. (2025). **Bat Licensing.** Relevant guidance on the legal process for undertaking activities that may impact bats or their roosts in Wales.

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.

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>.

Appendix A: Site Location

Date: July 2025

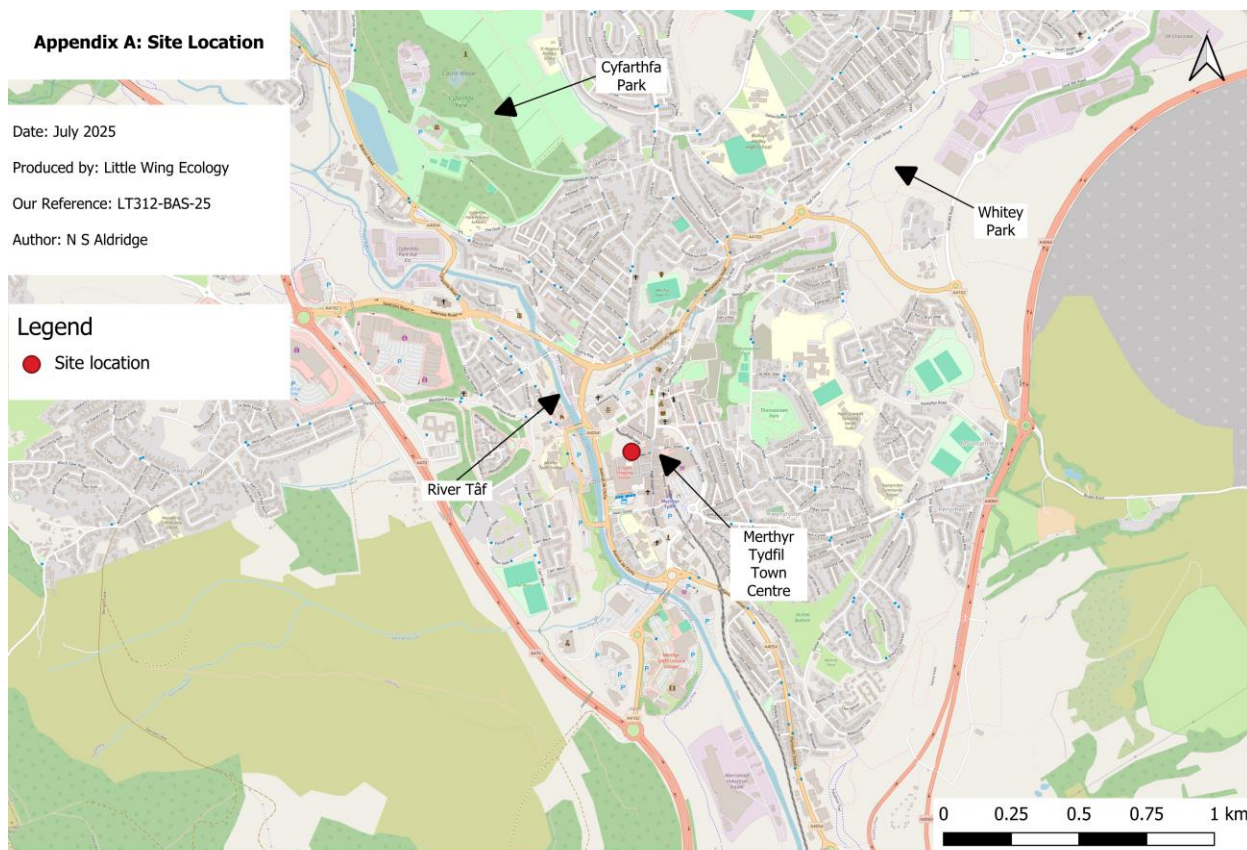
Produced by: Little Wing Ecology

Our Reference: LT312-BAS-25

Author: N S Aldridge

Legend

● Site location



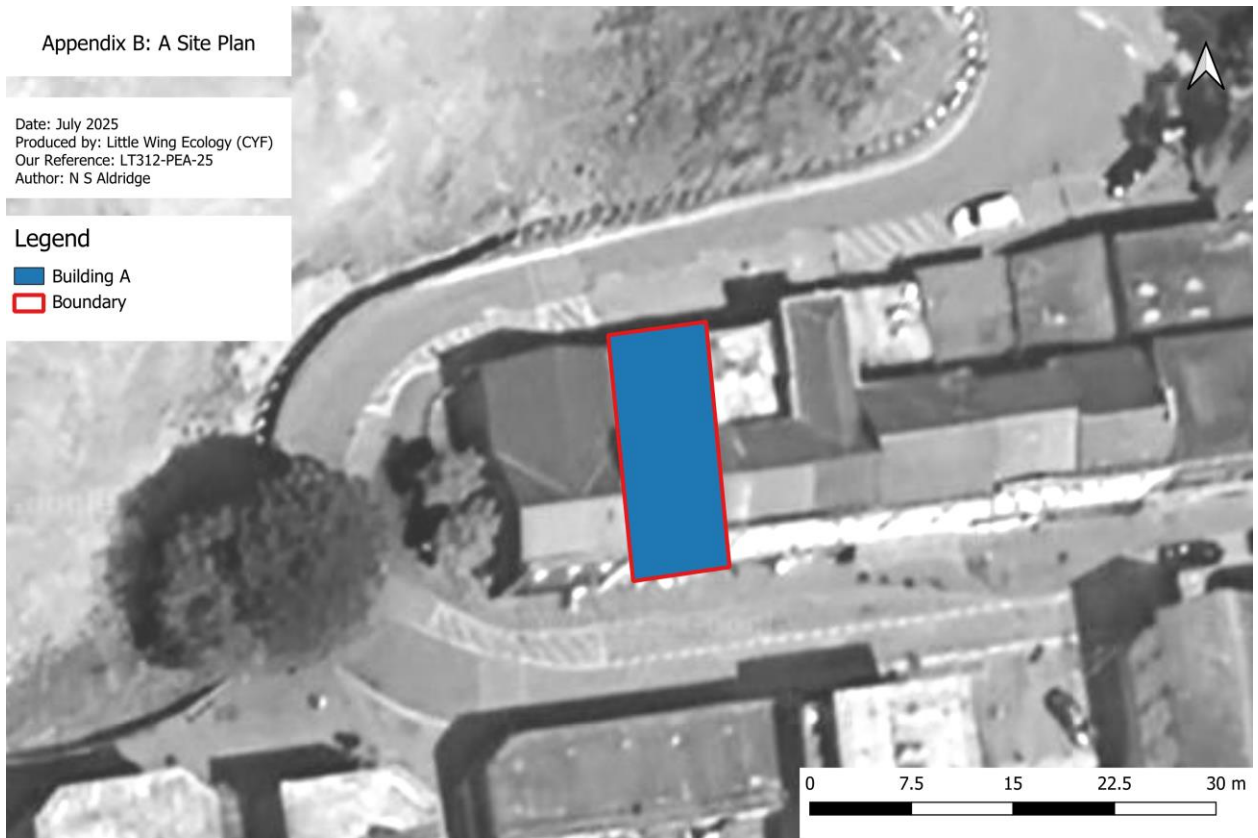
QGIS Development Team, <2025>. QGIS Geographic Information System. Open-Source Geospatial Foundation Project.

Appendix B: A Site Plan

Date: July 2025
Produced by: Little Wing Ecology (CYF)
Our Reference: LT312-PEA-25
Author: N S Aldridge

Legend

- Building A
- Boundary

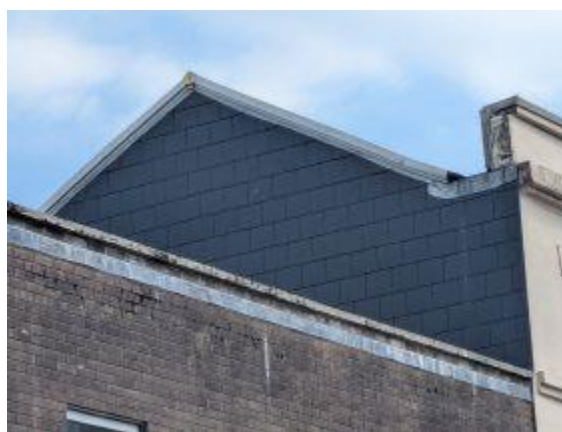


QGIS Development Team, <2025>. QGIS Geographic System. Open-Source eospatal Foundation Project.

Appendix C: PRA & Daytime Bat Walkover (Photography)



Southern elevation.



Western elevation.



Northern elevation.



PRF – Internal, upper-floors. Bitumen membrane.



PRF – Internal, upper-floors. Cavities in stonework.



Lower floor – utilised as storage.



Basement room present. Cavities identified in stonework and woodwork, but no access identified to the upper floors or exterior of the building. All flues are blocked off.



Basement room present. Cavities identified in stonework and woodwork, but no access identified to the upper floors or exterior of the building. All flues are blocked off.

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 writing ecological 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.
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: Species potential defined by integrating national guidelines e.g. Hundt 2012

Confirmed Presence	Species recorded to be present during the survey. Evidence of species is recorded during the survey.
High	Buildings, trees or other structures with features of interest for use by protected species are recorded e.g. nesting habitat, roosting opportunities and/or ponds. Habitat with high quality foraging opportunities e.g. broadleaved woodland, tree-lined watercourses and grazed grassland. The site is connected to the wider landscape by strong linear features that have the potential to be used by commuting species e.g. a river, stream and/or hedgerows. The site is close to known locations of recorded protected species.
Medium	Several potential habitat opportunities in buildings, trees or other structures recorded during the survey. Habitat could be used for foraging e.g. trees, shrubs, grassland and/or water. The site is connected to the wider landscape by linear features that could be used by commuting species e.g. lines of trees, scrubs or linked back gardens.
Low	A small number of less significant features are recorded. Isolated habitat suitable for foraging e.g. a lone tree or patch of scrub. An isolated site which is not connected by significant linear features in the landscape.
Negligible	No suitable habitats observed.

Appendix F: A Survey Plan
and Bat Activity

Date: July 2025
Produced by: Little Wing Ecology (CYF)
Our Reference: LT312-PEA-25
Author: N S Aldridge

Legend

- Location of surveyors (10.06.2025)
- Location of surveyors (13.07.2025)
- Building A
- Boundary
- Bat activity



QGIS Development Team, <2025>. QGIS Geographic System. Open-Source eospacial 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
01.07.2025	20.26	20.26	Noctule	1	East	George Harley	Digital recording	Likely commuting/foraging
03.09.2025	20.30	20.30	Chiroptera	1	East	George Harley	Live sighting and recording	Commuting
03.09.2025	20.33	20.33	Soprano pipistrelle	1	East	George Harley	Live sighting and recording	Commuting
03.09.2025	20.07	20.26	Noctule	2	West	Nic Aldridge	Live sighting and recording	Foraging
03.09.2025	20.14	20.43	Noctule	3	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	20.28.00	20.52	Soprano pipistrelle	6	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	20.30	20.30	Natterer's bat	2	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	20.33	20.33	Common pipistrelle	1	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	20.38	20.38	Brown long-eared	2	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	20.47	20.47	Lesser horseshoe	3	West	Nic Aldridge	Live sighting and recording	Foraging
03.09.2025	20.43	21.05	Lesser horseshoe	1	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	20.56	20.56	Daubenton's bat	1	West	Nic Aldridge	Digital recording	Likely commuting/foraging
03.09.2025	19.00	19.00	Chiroptera	1	West	Nic Aldridge	1x dropping in shelf, likely from foraging but roosting cannot be ruled out.	Likely foraging but roosting cannot be ruled out.
03.09.2025	19.00	19.00	Lesser horseshoe	1	West	Nic Aldridge	1x dropping in cupboard, likely from night roosting.	Night Roost
21.09.2025			Common pipistrelle	1	Internal	Passive survey	Passive survey - presence of a night roost cannot be ruled out.	Night Roost
21.09.2025			Common pipistrelle	1	Internal	Passive survey	Passive survey - presence of a night roost cannot be ruled out.	Night Roost

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: Policy and Legislation in Wales

Under Regulations 9 (1 & 5) of the Habitat Regulations, local authorities have a duty to have regard for the requirements of the Habitats Directive. This includes maintaining populations of European Protected Species in “favourable conservation status”, and potential for such protected species (for example, bats) should be considered when carrying out a preliminary assessment.

The framework for this protection is provided within several pieces of legislation from the Government of Wales and the UK Government. Furthermore, several pieces of legislation exist that are specifically relevant to individual species. These include:

- Conservation of Habitats and Species Regulations 2010.
- The Conservation of Habitats and Species Regulations (2017) - as amended.
- The Environment (Wales) Act 2016.
- The Wildlife and Countryside Act (1981) - as amended.
- Natural Environment and Rural Communities Act 2006.
- Conservation of Habitats and Species Regulations 2017.

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 the references and bibliography section, and the Appendix.

Policy	Description
The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	Bats are specifically protected by (The Habitat Regulations). The Habitat Regulations are the way in which EU legislation is transposed into UK law. All species protected via this legislation are defined as ‘European Protected Species.’ The Habitat Regulations make it an offence to deliberately capture, kill, disturb, or trade in European Protected Species (i.e., those listed in Schedule 2), of which all UK bats are included. However, these actions can be made lawful through the granting of a license by Natural Resources Wales (NRW). Licenses may be granted for a number of purposes, but only after the LPA and NRW is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on the wild populations of bats.
The Environment (Wales) Act 2016	Section 7 of the Environment (Wales) Act 2016 requires all statutory authorities including Local Planning Authorities (LPA) to have due regard for living organisms and types of habitats that are of key significance to sustain and improve biodiversity in relation to Wales. Furthermore, the LPA have a duty under the Act to take all reasonable steps to maintain and enhance the living organisms and types of habitats included on any list published under Section 7 and to encourage others to take such steps.
Wildlife and Countryside Act 1981 (as amended)	The Wildlife and Countryside Act 1981 (as amended) (The WCA 1981) is the principal legislation by which most species are protected in Wales. Bats are protected under Schedule 5 of the WCA 1981, which makes it an offence to damage or destroy a bat roost; intentionally or recklessly disturb a bat or a roost, or intentionally or recklessly obstruct access to a roost. The interpretation of a bat roost is “any structure or place which any wild [bat]...uses for shelter or protection”. Because bats tend to reuse the same roosts, the legal opinion is that the roost is protected whether or not the bats are present at the time. In relation to birds, the WCA 1981 makes it an offence to intentionally kill, injure or take any wild bird; take, damage, or destroy the nest of any wild bird while that nest is in use or being built. Schedule 1 of the WCA Act 1981 includes bird species for which there is an additional offence of disturbing these species at their nests, or their dependent young.

Bats and the Law

All species of bats are protected throughout the UK. However, there are differences in approach to the protection of bats taken by the different devolved administrations. This means that bat mitigation strategies will need to take due account of the relevant legislation and licensing system that apply in each. In this section, the legal framework underpinning these protections is outlined (CIEEM 2023).

The UK is a contracting party to the 1979 Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the Bern Convention). The Bern Convention has been described as the “European treaty for the conservation of nature.” Its provisions with regards to bats are transposed into law in England and Wales via the Conservation of Habitats and Species Regulations 2019 (the England and Wales Habitats Regulations), and the Wildlife and Countryside Act 1981 (as amended) (the W&CA);

All species of bat, their breeding sites and their resting places in England and Wales are protected through a ‘dual’ system of protection, under the England and Wales Habitats Regulations and W&CA. Because two regimes give legal protection to bats, the implications of both regimes must be fully understood.

Regulation (Reg.) 43 of the England and Wales Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat.

Under Section 9 of the W&CA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;
- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection; or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

The government’s statutory conservation advisory organisation, Natural Resources Wales, is responsible for administering European Protected Species (EPS) licences that permit activities that would otherwise lead to an offence.

A licence can be obtained if the following three conditions have been met:

- Regulation 53(9)(a) - there is, “no satisfactory alternative,” to the derogation, and;
- Regulation 53(9)(b) - the derogation, “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range,” and;
- Regulation 53(2)(e) - the derogation is for the purposes of, “preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.”

Planning Policy

Where relevant, the ecological assessment takes account of the legislative protection afforded to specific habitats and species where applicable. 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.’

The Environment (Wales) Act 2016, provides a context for the delivery of multi-functional green infrastructure as documented within the Planning Policy Wales (Edition 11) and the Annex to Heads of Planning Letter Dated 11 October 2023: Addressing the Nature Emergency through the Planning System: Updated National Planning Policy for Chapter 6 of Planning Policy Wales.

Its protection and provision can make a significant contribution to the sustainable management of natural resources, and in particular to protecting, maintaining and enhancing biodiversity and the resilience of ecosystems in terms of the diversity within and connections between ecosystems and the extent and condition of these ecosystems, so that they are better able to resist, recover from and adapt to pressures. This means that the development of green infrastructure is an important way for local authorities to deliver their Section 6 duty¹¹³.

GREEN INFRASTRUCTURE DEFINITION AND TERMINOLOGY

Green Infrastructure (GI) has been defined by the Landscape Institute in their publication; Green Infrastructure: An integrated approach to land use (2013), as *“the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. Individually, these elements are GI assets, and the roles that these assets play are GI functions. When appropriately planned, designed and managed, the assets and functions have the potential to deliver a wide range of benefits – from providing sustainable transport links to mitigating and adapting the effects of climate change.”*

Natural Resource Wales (NRW) defines Green Infrastructure as *“a term that’s sometimes used to describe a wide range of natural and semi-natural features, spaces, rivers and lakes including parks, fields, allotments, hedgerows, roadside verges and gardens, not to mention entire ecosystems such as wetlands, waterways and mountain ranges.”*

Green infrastructure is broadly analogous to ‘Natural Capital’, which can be defined as ‘...the elements of nature that produce value (directly and indirectly) to people, such as the stock of forests, rivers, land, minerals and oceans. It includes the living aspects of nature (such as fish stocks) as well as the non-living aspects (such as minerals and energy resources). Natural capital underpins all other types of capital... and is the foundation on which our economy, society and prosperity is built.’ (The Natural Capital Committee 2017).

The Landscape Institute position statement “Green infrastructure: connected and multifunctional landscapes” provides the following definitions for Green Infrastructure terminology:

- **Green Infrastructure Assets:** GI assets include the natural elements which provide social, environmental or economic benefit. They can be specific sites or broader environmental features within and between rural and urban areas. A useful approach to outlining the different types of GI asset is to classify them according to the spatial scale at which each would typically be found.
- **Connectivity:** Connectivity between different GI assets will help maximise the benefits that they generate. This connectivity can be visual or notional; however, physical connections make the most impact. This connectivity can enhance public engagement with the natural environment, improve opportunities for biodiversity migration and assist in encouraging sustainable forms of travel.
- **Green Infrastructure Functions:** GI functions are the roles that assets can play if planned, designed and managed in a way that is sensitive to, and includes provision for, natural features and systems. Each asset can perform different functions, a concept known as multifunctionality.
- **Multifunctionality:** Understanding multifunctionality is central to the GI approach to land use planning. Where land performs a range of functions it affords a far greater range of social, environmental and economic benefits than might otherwise be delivered. Ecosystem services underpinning the multiple functions that GI assets perform is the concept of ecosystem services. Health and wellbeing depends on the range of services provided by 6 ecosystems and their constituent parts: water, soils, nutrients and organisms. These services include:
 - Support: necessary for all other ecosystem services, e.g. soil formation and photosynthesis; — provision: food, fibre, fuel;
 - Regulation: air quality, climate control, erosion control; and,
 - Culture: non-material benefits for people, including aesthetic qualities and recreational experiences.
- **GI approach:** GI approaches to land-use planning promote the widest range of functions which can be performed by the same asset, unlocking the greatest number of benefits. Such an approach enables us to demand more from the land in a sustainable way; by helping to identify when it can provide multiple benefits and to manage

the many, often conflicting, pressures for housing, industry, transport, energy, agriculture, nature conservation, recreation and aesthetics. It also highlights where it is important to retain single or limited land use functions.”

NATIONAL PLANNING POLICY

Future Wales - The National Plan 2040 (Welsh Government 2021)

Policy 9 Resilient Ecological Networks and Green Infrastructure of the Future Wales - The National Plan 2040 states the following with regard to green infrastructure:

“To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:

- *identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and*
- *identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being.*

Planning Policy Wales sets out a range of policies to maintain and enhance biodiversity, promote the resilience of ecosystems, including the stepwise approach, and to maximise the provision of green infrastructure. The strategic focus of Future Wales on urban growth requires an increased emphasis on biodiversity enhancement (net benefit) in order to ensure that growth is sustainable.

As the population of Wales becomes increasingly urban, the opportunity to optimise well-being benefits from green infrastructure will be greatest in and around these areas. Innovative use of nature-based solutions and integrating green infrastructure in and around urban areas can help restore natural features and processes into cities and landscapes. Providing locally accessible, high quality green spaces and corridors helps to maintain and enhance the strategic functioning of 8 of our natural resources and ecological networks and address physical and mental well-being. Local green infrastructure assets such as public rights of way, common land, parks, village greens and allotments can all make a cumulative contribution towards wider national scale ecological connectivity. The real-life importance of urban green spaces was demonstrated when people were restricted to taking exercise in immediately local green spaces during the COVID-19 lockdown.”

Planning Policy Wales - Edition 11 (Welsh Government 2021)

Planning Policy Wales - Edition 11 states the following with regard to green infrastructure; “Integrating Green Infrastructure and Development: Green infrastructure plays a fundamental role in shaping places and our sense of well-being, and are intrinsic to the quality of the spaces we live, work and play in. The planning system should protect and enhance green infrastructure assets and networks because of these multi-functional roles. The protection and enhancement of biodiversity must be carefully considered as part of green infrastructure provision alongside the need to meet society’s wider social and economic objectives and the needs of local communities. The multiple benefits that resilient ecosystems and green infrastructure offer to society, including the economic and social contribution they make to local areas, should be taken into account when balancing and improving these needs.

The quality of the built environment should be enhanced by integrating green infrastructure into development through appropriate site selection and use of creative design. With careful planning and design, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, helping to overcome the potential for conflicting objectives, and contributing towards health and well-being outcomes. There are multiple ways of incorporating green infrastructure, dependent on the needs and opportunities a site presents. Landscaping, green roofs, grass verges, sustainable urban drainage and gardens are examples of individual measures that can have wider cumulative benefits, particularly in relation to biodiversity and the resilience of ecosystems as well as in securing the other desired environmental qualities of places.”

Update to Chapter 6 of Planning Policy Wales: Welsh Government recently made changes to Planning Policy Wales Edition 11 to address the nature emergency by publishing a revised Chapter 6 ‘Distinctive and Natural Placemaking and Well-Being’. The policy changes came into immediate affect in October 2023 and impacts on all planning

applications. There is a great deal to consider in the revised Chapter 6, however the main policy changes relate to:

- Green Infrastructure
- Net Benefit for Biodiversity and the Step Wise Approach
- Protection for Sites of Special Scientific Interest
- Trees and Woodlands

One key change is the requirement for all planning applications to be submitted with a 'Green Infrastructure Statement' (para 6.2.5). A 'Green Infrastructure Statement' is now required with all new applications and should describe how green infrastructure has been incorporated into the proposal.

The statement should be proportionate to the scale and nature of the proposed development, for example on householder and minor developments this would normally be a short description.

The Green Infrastructure statement will be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question and must be used for demonstrating how the 'Step-wise Approach' (Paragraph 6.4.21) has been applied.

Building Better Places, The Planning System Delivering Resilient and Brighter Futures Placemaking and the Covid-19 recovery (Welsh Government 2020)

Within the above document under 'Green infrastructure, health and well-being and ecological resilience' it states the following regarding green infrastructure: "Resilient ecological networks, whilst vital for nature recovery, are also integral to our health and well-being and form part of our response to climate change. The crisis has highlighted the importance of access to green spaces and opportunities to connect with the natural and historic environment. It has highlighted that easy access and proximity to quality greenspace is severely lacking in some areas and to some sections of our communities, and actions to reduce such inequalities should be prioritised as part of wider regeneration and improvement activities as a matter of social and environmental justice. At the same time it is notable how, with the advent of fewer unnecessary journeys and increased walking and cycling, biodiversity has the opportunity to thrive.

We must reverse biodiversity decline and enhance the resilience of ecosystems, as well as enable opportunities for social and economic activity based on valuing and enabling access to the natural and historic environment. The planning system has a key responsibility in securing green infrastructure, which plays a fundamental role in shaping places and our sense of well-being and is intrinsic to the quality of spaces in which we live, work and play."

Active Travel (Wales) Act (2015) The Active Travel (Wales) Act (2015)

This Act set out that Welsh ministers must publish annual reports on the amount of active travel journeys made in Wales. There is also a requirement for Local Authorities to identify and plan for active travel routes and increase the provision for walking and cycling, and encourage users to rely less on cars. Local highway authorities are required to give greater consideration to the requirements of walkers and cyclists and provide greater infrastructure provision to them. The act also highlights the need to build connections between key sites such as workplaces, hospitals, schools and shopping areas with active travel routes.

The Well-being of Future Generations Act (2015)

The Well-being of Future Generations Act requires public bodies in Wales to consider the longterm impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

The Planning Act (Wales) 2015 states that Local Planning Authorities must exercise their function in relation to the determination of planning applications "...as part of carrying out sustainable development in accordance with the Well-being of Future Generations (Wales) Act 2015 (annex 2), for the purpose of ensuring that the development and use of land contribute to improving the economic, social, environmental and cultural well-being of Wales." (PA(W), Sec.2(2)).

Technical Advice Notes (TANs)

Technical Advice Notes should be read in conjunction with Planning Policy Wales (PPW). TANs should be taken into

account by the local planning authorities in the preparation of Development Plans. They may be material to decisions on individual planning applications and will be taken into account by inspectors and the Welsh Government in the determination of appeals and called-in planning applications. The following TANs are relevant to green infrastructure:

TAN 5: Nature Conservation and Planning (2009): This Technical Advice Note provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. It brings together advice on sources of legislation relevant to various nature conservation topics which may be encountered by local planning authorities. The key principles of planning for nature conservation are set out followed by advice about the preparation and review of development plans, including the relevant statutory requirements.

TAN 12: Design (2016): The revised Technical Advice Notes (TAN) aims to equip all those that are involved in the design of development with advice on how sustainability, through good design, may be facilitated through the planning system. It sets out the core design principles that any development proposal must follow to help create a sustainable environment and exhibit a high level of design quality. These are structured via five the following key objectives of good design:

- Access - Ensuring ease of access for all;
- Character - Sustaining or enhancing local character; promoting legible development; promoting a successful relationship between public and private space; promoting quality, choice and variety; and promoting innovative design;
- Community Safety - Ensuring attractive, safe public spaces and security through natural surveillance;
- Environmental Sustainability - Achieving efficient use and protection of natural resources and enhancing biodiversity; and,
- Movement - Promoting sustainable means of travel.

TAN 16: Sport, Recreation and Open Space (2009): This Technical Advice Note provides advice on the role of the planning system in making provision for sport and recreational facilities and informal open spaces, as well as protecting existing facilities and open spaces in urban and rural areas in Wales. The guidance includes advice on Open Space Strategies and Open Space Assessments and outlines the need to consider green corridors, as well as natural and semi-natural greenspaces when forming development proposals.

Assessment of Existing Green Infrastructure

For all major developments, the existing green infrastructure resource in and around the site must be described and assessed. A thorough contextual analysis of the role of existing green infrastructure in and around the site (e.g. hydrology, habitats, public rights of way and parks) should be provided, appropriate to the scale of the proposed development. This should include a large-scale map identifying the role of existing green infrastructure in the connecting wider landscape and neighbourhood context. Evidence used to describe this resource can include novel approaches such as mapping of ecosystems and ecosystem services, and GIS network and opportunity analysis, as these and other resources become available.

An Ecological Assessment, proportionate to the size of the development is required to identify existing Green Infrastructure features such as;

- Streams/ivers;
- Woodland, hedgerows and scrub;
- Roadside verges and street trees;
- Footpaths; and
- Open mosaic habitat/previously developed land (Brownfield sites), etc.



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:

Rhif cwmni:

Cyfeiriad:

E-bost:

Ffôn:

Little Wing Ecology (CYF) (Cwmni Di-elw Cyfyngedig trwy Warant)

13743223

24 Stryd Alma, Bryn-mawr, Blaenau Gwent, NP23 4DY

nic@littlewingecology.cymru

07985 395251



About Us

Little Wing Ecology is a not-for-profit ecological consultancy based in the South Wales Valleys. Specialising in bat surveys for housing developments, and providing a wide range of ecological services, it provides appropriate expertise on behalf of a range of clients.

We are a small ecological consultancy dedicated to providing an easy-to-use and jargon-free service.

We produce the following products:

- Preliminary Ecological Appraisal
- Preliminary Roost Assessment
- Bat Surveys
- Mitigation Planning
- Green Infrastructure Statements
- European Protected Species License Applications
- On-site Services to Support Planning Applications and Development
- eDNA Reports
- Reptile Surveys

As a Consultancy, we use our experience, expertise, and love of wildlife to provide an easy to access and pragmatic service, that upholds the highest standards of conservation.

As a Not-for-Profit Social Enterprise, we reinvest our profits. We work with valleys communities, conservation groups, local authorities, and other groups to support these three key areas:

A. Helping Nature

Developing and supporting habitat gain in the valleys through:

- Habitat improvement.
- Developing the built environment for the benefit of wildlife.
- Long-term monitoring projects for wildlife populations in the valleys.

B. Working with People

- Providing employment, training and voluntary opportunities for the local community and young people, to help them build their skills, develop a stronger relationship with nature and build confidence in themselves.

C. Supporting Communities

- Reinvesting in nature and people, locally.
- Supporting education within communities to promote a positive relationship between people and wildlife.
- Providing pro-bono surveys for worthwhile causes.

Adroddiad Arolwg gan



Cynhyrchwyd gan:
Rhif Cwmni:
Address:
e-bost:
Ffon:

Little Wing Ecology (CYF) (di-elw wedi'i gyfyngu gan warant)
13743223
24 Stryd Alma, Brynmawr, Blaenau Gwent, NP234 DY
nic@littlewingecology.cymru
07985395251