



**68 High Street,
Merthyr Tydfil**

**Preliminary Roost Assessment
Version 2**

January 2025

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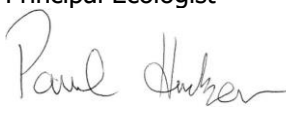
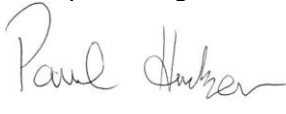
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DOCUMENT CONTROL

68 High Street, Merthyr Tydfil Preliminary Bat Roost and Nesting Bird Assessment				
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Summary

Brief and Site Location	This report presents the findings of a preliminary bat roost assessment and nesting bird survey of a commercial building (B1) and storage building (B2) at 68 High Street, Merthyr Tydfil, CF47 8AE (Ordnance Survey Grid Reference: SO 0497 0620).
Proposed Works	The development plans involve the conversion of the former offices into 12 flats and the demolition of the single-story building (B2) to the rear to facilitate the creation of additional parking spaces.
Survey Methodology	The preliminary bat roost assessment comprised a daytime internal and external inspection of the buildings, searching for signs of bats and nesting birds. The inspection provides a preliminary assessment of the potential of the site to support roosting bats.
Results of Preliminary Bat Roost Inspection	No signs of bats were found during the internal and external inspection of B1 and B2. The buildings are within a low-quality area for foraging and commuting bats.
Suitability of the buildings to Support Roosting Bats	B1 has low suitability to support roosting bats and B2 has moderate suitability to support roosting bats. Details of the features that led to this assessment are set out in Section 3.2 of this report and are shown in the corresponding photographs. Justification for this assessment is provided within Section 4.2.
Evidence of Nesting Birds	No evidence of past or current nesting by birds was noted either within or on the exterior of B1 and B2.
Requirements for Additional Survey	Further surveys are required to determine if any bats are roosting within the buildings. As B1 has low roost suitability, current best practice guidelines (Collins, 2023) suggest that it should be subject to one additional dusk emergence survey, undertaken between May and September. Three surveyors will be required for the survey (see Plan 4: Proposed Surveyor Positions). As B2 has moderate roost suitability, current best practice guidelines (Collins, 2023) suggest that it should be subject to two additional dusk emergence surveys, undertaken between May and September. Four surveyors will be required for each survey (see Plan 6: Proposed Surveyor Positions).
Predicted Impacts of Development on Bats and Nesting Birds	Full impacts on bats and birds will be considered after the further surveys have been undertaken.
Mitigation and Compensation of Proposed Impacts	Mitigation and compensation measures for bats and birds will be determined after the further surveys have been undertaken.
Licensing Requirements for Bats	It has not been possible to determine if a bat development licence will be required from Natural Resources Wales prior to works to the former offices. This will be established after the dusk emergence surveys have been completed.
Required Actions	Further surveys are required.

1. Introduction

1.1. Brief and Site Location

This report presents the findings of a preliminary bat roost assessment and nesting bird survey of a commercial building with former offices on the upper floors and shops on the ground floor (B1) and storage building to the rear (B2) at 68 High Street, Merthyr Tydfil, CF47 8AE (Ordnance Survey Grid Reference: SO 0497 0620)¹.

The commercial building and storage building are within the boundary of Merthyr Tydfil Council.

1.2. Site Description

The buildings are in central Merthyr Tydfil, surrounded by commercial buildings with no adjacent green spaces. A small park with woodland and hedgerows lies to the east, leading to more green areas to the north-east. Restored ancient woodland is located just over 1km north-west, and fields, woodlands, and shrubs surround the town within 2km to the south, east, and west.

The site's location is shown on Plan 1: Location Plan.

1.3. Proposed Works

The development plans involve the conversion of the former offices into 12 flats and the demolition of a storage building to the rear to facilitate the creation of additional parking spaces.

Existing and proposed plans can be found in Drawings 1 and 2: Development Proposals.

No planning application has been submitted, but a pre-application has. The existing and proposed architectural plans have not been finalised at the time of writing.

1.4. Legislation and Planning Policy

1.4.1. Bats

All UK bats are protected species. Their breeding sites or resting places² (roosts) are fully protected under the Wildlife and Countryside Act 1981³ (as amended) and the Conservation of Habitats and Species Regulations 2017⁴ which continues to apply in UK law through the Conservation of Habitats and Species (Amendment) (EU Exit) [CHSAEU] Regulations 2019⁵. Works affecting bats are subject to licensing procedures by Natural Resources Wales (NRW). The legal protection and licensing procedures are summarised in Appendix 1.

¹ Latitude and Longitude: 51.74643953, -3.37791873 / what3words: knee.voters.paths

² Resting places are defined as '*areas that are essential to sustain an animal or group of animals when they are not active*' (European Commission, Directorate-General for Environment, 2022). Resting places that are used regularly, either within or between years, must be protected even when not occupied.

³ <https://www.legislation.gov.uk/ukpga/1981/69>

⁴ <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

⁵ <https://www.legislation.gov.uk/ukdsi/2019/9780111179512>

1.4.2. Nesting Birds

All wild British birds (when building nests, nesting and sitting on eggs) and their nests and eggs, (with certain limited exceptions⁶) are protected by law under Section 1 of the Wildlife and Countryside Act 1981⁷ (as amended) and the Countryside and Rights of Way Act 2000⁸. Some species, such as barn owls (*Tyto alba*), are listed in Schedule 1 and have additional protection from disturbance during the breeding season, as do their nests, eggs and dependent young.

1.5. Survey Scope

The preliminary roost assessment (PRA) is Natural Resources Wales (NRW) a detailed inspection of the exterior and interior of a structure that looks for features that bats could use for entry/exit and roosting, and includes a search for signs of bats. A search for past and current evidence of nesting birds is also undertaken.

1.6. Reporting

This report aims to:

- Outline the survey methodology used;
- Present the results of the survey including determining the actual or potential presence of bats and nesting birds;
- Determine the need for further targeted surveys; and
- Provide suitable recommendations in line with planning policy and wildlife law, including potential licencing requirements, mitigation, compensation and enhancement measures.

⁶ Details of the exceptions are available at <https://naturalresources.wales/permits-and-permissions/species-licensing/list-of-protected-species/bird-licensing/bird-licences/?lang=en>

⁷ <https://www.legislation.gov.uk/ukpga/1981/69>

⁸ <https://www.legislation.gov.uk/ukpga/2000/37>

2. Methods

2.1. Desk Study

Maps and aerial photographs of the site and surrounding area, including existing habitats, were assessed. A search for statutory and non-statutory conservation designated sites for bats within a 10km radius was undertaken using NRW Geographic Information System (GIS) data. A 2km search was undertaken for all other statutory and non-statutory conservation designated sites.

A local planning portal search was undertaken. This involved looking for other sites, within the same postcode area, which have previously had bat surveys submitted as a part of their planning applications.

2.2. Field Study

2.2.1. Daytime Internal and External Inspection

A systematic search of the exterior and interior of B1 and B2 was undertaken following the methodology detailed in Section 5.2 of the Bat Survey Guidelines (Collins, 2023). The survey looked for features that bats could use as access points and roosts⁹. In addition, a search was made for the presence of bats or evidence of bat use, such as droppings, feeding remains, urine staining, scratch marks, live or the remains of dead bats and/or squeaking noises. A high-powered torch (Clulite), binoculars and a ladder were available for use, as appropriate during the survey.

The survey was undertaken on 13th June 2024 by Rebecca Corley¹⁰, with the assistance of Charlotte Ingram¹¹.

2.2.2. Assessment of Bat Roosting Suitability

The value of the site for bats (and any potential roost sites therein) was assessed, in accordance with Table 4.1 of the Bat Surveys for Professional Ecologists (Collins, 2023) (see Appendix 2). The assessment was based on the relative abundance and quality of potential roost sites, and the habitat features within both the site and the surrounding landscape suitable for roosting, foraging and commuting bats.

Assessment of 'classic' and 'non-classic' winter hibernation potential was undertaken with consideration of Section 4.3.7 and Figure 1 of the Bat Surveys for Professional Ecologists (Collins, 2023).

⁹ Bats can utilise gaps approximately 8mmx17mm in size (The Bat Conservation Trust, Cluster-flies leaflet mentions 8mm by 20mm whilst the Bats and Buildings leaflet states 9mm by 17mm).

¹⁰ Rebecca graduated with a degree in Biological Science from the University of Birmingham and an MSc in Global Ecology and Conservation from Cardiff University. Rebecca is currently in her second season of bat surveying, working as an Ecologist at Acer Ecology. She is listed as an accredited agent on Paul Hudson's bat licence (S091671-2). Further details of her qualifications and experience can be found at <https://www.linkedin.com/in/rebecca-corley-b33b61138>.

¹¹ Charlotte Ingram graduated with a degree in International Wildlife Biology from the University of South Wales. Charlotte is currently in her second season of bat surveying and works as an Assistant Ecologist for Acer Ecology.

2.2.3. Nesting Bird Survey

A visual search was undertaken for active bird nests, as well as any signs which might indicate either past or current nesting, such as guano, singing birds, birds carrying nesting material, food items, faecal sacs and calling chicks.

2.2.4. Constraints

Temporal Constraints

An ecological survey can only identify what is present on site at the time the survey is conducted. However, habitat usage by species can change over time.

Evidence of Bats

Often bats leave no visible signs of their presence even on the inside of a building, particularly where there are hidden cracks, crevices and voids. In many situations it is not possible to inspect all locations where bats may be present and therefore an absence of bat evidence does not equate to evidence of bat absence.

Restricted Access due to Health and Safety Considerations

Due to Health and Safety considerations, not all internal sections of B2 could be inspected during the preliminary roost assessment. It was not possible to access two of the four loft voids within B2 in a safe way. It was not possible to position the ladder in a safe way to access the westernmost loft void and access to the easternmost void was restricted by large metal shelving units being used for storage purposes. The survey is only slightly constrained, and this is not considered to have significantly affected the accuracy of the assessment as further dusk emergence surveys have been recommended which will further reduce the constraint of this.

Local Records Centre Data Search

A Local Records Centre (LRC) data search was not undertaken due to the low impact and small-scale nature of the development. Current proposals suggest no land will be lost or linear features severed. The overall impact on biodiversity is likely to be localised and of low significance. It is very unlikely that the development will have any impact outside the footprint of the works. The data search results are considered unlikely to impact the decision-making process, and there is limited potential for key information to have been missed.

This approach is consistent with CIEEM's Guidelines for Accessing and Using Biodiversity Data (2023anita), which states that in low impact/small-scale scenarios, such as the remodelling of a former offices and a demolition of a single-storey building, a LRC search may not be required.

3. Baseline Ecological Conditions

3.1. Desk Study

3.1.1. Bat Roosts Reported in Planning Applications Within the Same Postcode

The planning portal search¹² returned no bat roost records from a search of sites with the same postcode area as the proposed development.

3.1.2. Protected Sites

The location of protected sites is shown in Plan 2: Protected Sites.

Statutory Sites Notified for Bats (Special Areas of Conservation (SACs)) or Sites of Special Scientific Interest (SSSIs) Within 10km

No SACs or SSSIs that have been specially designated for bats lie within 10km of the former offices.

Other Protected Sites Within 2km

There are two additional SSSIs within 2km of the former offices:

Table 1: Statutory Sites Within 2km

Site Name	Description	Distance and Direction from Development Site
Cwm Glo A Glyndyrys SSSI ¹³	Cwm Glo a Glyndyrys is of special interest for its extensive areas of marshy grassland, species-rich neutral grassland and acid grassland, and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap (<i>Hygrocybe</i> spp), making it one of the best sites in Britain.	0.94km to the south-west of the site.
Cwm Taf Fechan Woodlands SSSI ¹⁴ and LNR ¹⁵	Where the partially wooded valley of the Taf Fechan crosses the north crop Carboniferous Limestone. Mixed deciduous woodlands cover steep slopes and spoil from quarries with one of the few Glamorgan stations for <i>Gymnocarpium robertianum</i> . There are interesting plant communities in flushes around tufa springs and luxuriant growths of bryophytes in the splash zone of the river.	1.91km to the north-west of the site.

There is no mention of bats in either of the SSSI citations, however, the SSSIs are likely to be used by several bat species for foraging, commuting and roosting.

¹² [Search Results \(merthyr.gov.uk\)](https://search.results.merthyr.gov.uk/)

¹³ https://naturalresources.wales/media/665303/SSSI_1597_Citation_EN0015616.pdf

¹⁴ https://naturalresources.wales/media/642350/SSSI_0404_Citation_EN001d5eb.pdf

¹⁵ <https://www.welshwildlife.org/nature-reserves/taf-fechan-merthyr-tydfil>

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Non-statutory Protected Sites

Sites of Importance for Nature Conservation (SINCs)

There are 11 SINCs within 2km of the site:

Table 2: SINCs Within 2km

Site Name	Description	Distance and Direction from Development Site
Afon Taf ¹⁶	The major river in the county borough. SINC includes areas of bankside habitats, particularly towards the south of the county borough where the river corridor is less industrialised than further north. Associated habitats are chiefly semi-natural woodland, including areas of ancient semi-natural oak (<i>Quercus</i> spp) and beech (<i>Fagus sylvatica</i>) woodland, and linear wet woodlands dominated by alder (<i>Alnus glutinosa</i>). There are also numerous neutral grasslands, scrub patches and bracken (<i>Pteridium aquilinum</i>) stands, as well as small areas of marshy grassland and tall herb vegetation.	0.23km to the west of the site.
Blaen Canaid ¹⁶	Series of species-rich semi-improved neutral grassland enclosures within large conifer plantation. Also contains small areas of acid and marshy grassland and some scattered scrub and hedges. Species of interest include wood horsetail (<i>Equisetum sylvaticum</i>), meadow thistle (<i>Cirsium dissectum</i>), saw-wort (<i>Serratula tinctoria</i>), great burnet (<i>Sanguisorba officinalis</i>), eyebright (<i>Euphrasia</i> sp.) and marsh violet (<i>Viola palustris</i>).	1.67km to the south-west of the site.
Cwm Glo ¹⁶	The SINC contains the Cwm-glo SSSI. Extensive mosaic of 'ffridd' (valleyside) habitats supporting a complex of semi-upland and lowland vegetation, in large part developed on old spoil heaps and colliery tips. Mainly unimproved acid grasslands but with extensive areas of wet and dry heathland. Also contains areas of grass-heath, marshy grassland and acid flush, semi-improved neutral grasslands, semi improved acid grasslands, bracken slopes, small ponds and streams, the latter typically lined by semi-natural broadleaved woodlands mostly of oak (<i>Quercus</i> spp) or alder (<i>Alnus glutinosa</i>). The habitats intergrade to form a complex mosaic. Great crested newt occurs in small ponds, especially to the north-west, together with a range	0.89km to the west of the site.

¹⁶ [Sites of Importance for Nature Conservation \(SINCs\)](#)

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	of other common amphibians and reptiles. Otter is believed to occur along the watercourses, and water vole has been recorded in the past. The site contains at least one known bat roost, and there are probably others. There is a good nesting bird fauna which includes at least four UK BAP Priority Species, comprising bullfinch, reed bunting, linnet and song thrush, as well as other species of interest such as redstart and wood warbler. Marsh fritillary (<i>Eurodryas aurinia</i>) occurs in the SSSI and is very likely to use other suitable habitats in the adjacent SINC. Up to 11 species of Nationally Scarce invertebrates have been recorded in the area, mainly associated with wetlands, and other local species such as grayling (<i>Hipparchia semele</i>) and dingy skipper (<i>Erynnis tages</i>) butterflies are also present. Plant species of interest include regionally scarce species such as fen bedstraw (<i>Galium uliginosum</i>), soft-leaved sedge (<i>Carex montana</i>), intermediate lady's-mantle (<i>Alchemilla xanthochlora</i>), alternate-leaved water milfoil (<i>Myriophyllum alternifolium</i>), moonwort (<i>Botrichium lunaria</i>) and dwarf elder (<i>Sambucus ebulus</i>), as well as local species such as devil's bit scabious (<i>Succisa pratensis</i>), meadow thistle (<i>Cirsium dissectum</i>), wavy hair-grass (<i>Deschampsia flexuosa</i>), whorled caraway (<i>Carum verticillatum</i>), saw-wort (<i>Serratula tinctoria</i>), petty whin (<i>Genista anglica</i>), greater burnet (<i>Sanguisorba officinalis</i>), marsh arrow-grass (<i>Triglochin palustris</i>) and southern marsh-orchid (<i>Dactylorhiza praetermissa</i>). The nationally scarce moss <i>Ephemerum serratum</i> var <i>serratum</i> also occurs. The species of interest are distributed throughout the site.	
Cwm Taf Fawr ¹⁶	Section of major river tributary of the Afon Taf. The river extends into Brecon Beacons National Park to the north. SINC includes adjacent woodlands, which are relatively undisturbed in the upper reaches and more urban in character further downstream. The upper reaches in particular are of high ecological value, comprising limestone gorge woodland dominated by sessile oak (<i>Quercus petraea</i>) and ash (<i>Fraxinus excelsior</i>), with a rich ground flora including abundant wood anemone (<i>Anemone nemorosa</i>) and bluebell (<i>Hyacinthoides non-scripta</i>). Numerous rare plant species occur here, including the grasses lesser hairy-brome (<i>Bromopsis benekenii</i>) and mountain melick (<i>Melica nutans</i>), and the regionally scarce herb-Paris (<i>Paris quadrifolia</i>) and water avens (<i>Geum rivale</i>). Other localised species include common twayblade (<i>Listetra ovata</i>) and bearded couch (<i>Elytrigia canina</i>). Further south the riverside	1.60km to the north-west of the site.

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	woodland is more acid in character but nevertheless supports a relatively diverse ground flora including localised species such as common cow-wheat (<i>Melampyrum pratense</i>) and bitter vetch (<i>Lathyrus linifolius</i>). The site also includes some adjacent areas of species-rich calcareous, neutral and acid grasslands. The calcareous grasslands in particular support numerous species which are scarce in the county borough, including salad burnet (<i>Sanguisorba minor</i> ssp <i>minor</i>), common restharrow (<i>Ononis repens</i>) and field scabious (<i>Knautia arvensis</i>). Otter ranges along the Afon Taf Fawr, which is also important for native fish species, including brown trout (<i>Salmo trutta fario</i>), Atlantic salmon (<i>Salmo salar</i>) and bullhead (<i>Cottus gobio</i>). Small pearl-bordered fritillary butterfly (<i>Boloria selene</i>) occurs in the grasslands.	
Cwm Taf Fechan ¹⁶	A long linear site based on the valley of the Afon Taf Fechan and containing the Cwm Taf Fechan Woodlands SSSI. The cSINC covers a more extensive area of adjacent habitats supplementary to those of the SSSI. The valley of the Afon Taf Fechan passes through limestone geology, giving rise to habitats on the steep valley slopes which are either not or only poorly represented elsewhere in the county borough. These include limestone woodlands, species-rich calcareous grasslands, species-rich neutral grasslands and calcareous scrub. It is probably the single most important biodiversity resource in the county borough. Much of the woodland is ancient semi-natural ash (<i>Fraxinus excelsior</i>), with some oak (<i>Quercus</i> spp) locally. This is of an upland character on the highest slopes to the north. Alder (<i>Alnus glutinosa</i>) dominated wet woodlands occur on the valley floor. Many species of interest have been recorded from the woodlands, including broad-leaved helleborine (<i>Epipactis helleborine</i>), water avens (<i>Geum rivale</i>) and mountain melick (<i>Melica nutans</i>). The neutral and calcareous grasslands of the valley slopes and bottom are typically species-rich and support species such as common restharrow (<i>Ononis repens</i>), quaking grass (<i>Briza media</i>), wild thyme (<i>Thymus polytrichus</i>), field scabious (<i>Knautia arvensis</i>), kidney vetch (<i>Anthyllis vulneraria</i>) and salad burnet (<i>Sanguisorba minor</i> ssp <i>minor</i>). The cSINC additionally includes bracken (<i>Pteridium aquilinum</i>) slopes, calcareous flushes and	0.99km to the north-west of the site.

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	calcareous scrub woodland habitats. Many regionally rare and scarce plant species occur in these habitats, including soft leaved sedge (<i>Carex montana</i>), limestone fern (<i>Gymnocarpium robertianum</i>), brittle bladder-fern (<i>Cystopteris fragilis</i>), intermediate lady's-mantle (<i>Alchemilla xanthochlora</i>), upright brome (<i>Bromopsis erecta</i>), butterwort (<i>Pinguicula vulgaris</i>), limestone bedstraw (<i>Galium sternerii</i>), dwarf thistle (<i>Cirsium acaule</i>) and common rock-rose (<i>Helianthemum nummularium</i>). Otter ranges along the Afon Taf Fechan, which also supports a range of native fish species. Birds of interest on the river include kingfisher (<i>Alcedo atthis</i>) and dipper (<i>Cinclus cinclus</i>). Many rare and scarce invertebrate species have been recorded from the SSSI, including small pearl bordered (<i>Boloria selene</i>) and silver-washed fritillary (<i>Argynnis paphia</i>) butterflies, and many of these are likely to occur in the habitats outside the SSSI. The site is also important for a number of localised moth species.	
Cwm Taf Field and Cefn Coed Tip ¹⁶	Linear series of fields between the Afon Taf Fawr and the A470, also containing areas of semi natural woodland and a revegetated limestone slag tip (Cefn Coed Tip), as well as smaller areas of semi-improved acid grassland, scrub, bracken (<i>Pteridium aquilinum</i>) slopes and dry heathland. The fields are a mosaic of damp and dry neutral grasslands with species-rich areas which support many plant species of interest including devil's-bit scabious (<i>Succisa pratensis</i>), bitter vetch (<i>Lathyrus linifolius</i>), quaking grass (<i>Briza media</i>), southern marsh orchid (<i>Dactylorhiza praetermissa</i>), common restharrow (<i>Ononis repens</i>) and pignut (<i>Conopodium majus</i>). The woodlands are variable in character, including areas of wet willow (<i>Salix cinerea</i>) woodland, acid oak (<i>Quercus</i> spp) woodland and some base-rich ash (<i>Fraxinus excelsior</i>) woodland near the calcareous tip. The latter type supports brittle bladder-fern (<i>Cystopteris fragilis</i>), a regionally scarce plant, and a diverse range of ancient woodland indicator species are present in the woodlands as a whole, including common cow-wheat (<i>Melampyrum pratense</i>), wood anemone (<i>Anemone nemorosa</i>) and yellow archangel (<i>Lamiasstrum galeobdolon</i>). The tip itself consists of consolidated limestone slag from the former Cyfarthfa Ironworks, and overhangs the adjacent Afon Taf in places. The thin soils on the tip plateau support an unusual type of calcareous grassland, the vegetation being	1.28km to the north-west of the site.

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	dominated by heath-grass (<i>Danthonia decumbens</i>) and supporting many localised plant species including moonwort (<i>Botrychium lunaria</i>), blue fleabane (<i>Erigeron acer</i>), small cudweed (<i>Filago minima</i>), hairy rock-cress (<i>Arabis hirsuta</i>), wild thyme (<i>Thymus praecox</i>) and field madder (<i>Sherardia arvensis</i>). Small patches of limestone heath and lichen heath are also present on the tip plateau. Dark green fritillary butterfly (<i>Argynnis aglaja</i>) occurs on the site.	
Cyfartha Park ¹⁶	Area of ornamental parkland within Merthyr Tydfil. The SINC includes an area of semi-natural woodland and several enclosures of neutral grassland in the eastern half of the park. Also includes small areas of plantation woodland and scrub and several woodland ponds. The woodlands are of mixed composition; mainly pedunculate oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>), beech (<i>Fagus sylvatica</i>) and alder (<i>Alnus glutinosa</i>), with a ground flora including bluebell (<i>Hyacinthoides non-scripta</i>), giant fescue (<i>Festuca gigantea</i>), bearded couch (<i>Elytrigia canina</i>) and yellow archangel (<i>Lamium galeobdolon</i>). The majority of the grassland enclosures support species-rich flowery grassland with common knapweed (<i>Centaurea nigra</i>), red clover (<i>Trifolium pratense</i>), yellow rattle (<i>Rhinanthus minor</i>), eyebright (<i>Euphrasia officinalis agg</i>) and common spotted orchid (<i>Dactylorhiza fuchsii</i>). Great crested newt (<i>Triturus cristatus</i>) has been translocated into the ponds of the site.	1.09km to the north of the site.
Glynmil ¹⁶	Mosaic of semi-upland 'ffridd' (valley side) habitats at the western edge of Merthyr Common, partly on old colliery spoil tips. Comprises mainly unimproved and semi-improved acid grasslands, with smaller areas of marshy grassland, acid flush, dry acidic heath, bracken slopes and scrub. Also includes an area of ancient semi-natural oak (<i>Quercus petraea</i> and <i>Q. robur</i>) woodland, and numerous smaller areas of wet woodland dominated by alder (<i>Alnus glutinosa</i>). Glynmil Marsh is mainly purple moor-grass pasture with areas of acid flush, whilst Cuckoo Field is mainly unimproved acid grassland. Several ponds are present, and numerous small streams run through the wooded areas. Species of interest include devil's-bit scabious (<i>Succisa pratensis</i>), bog asphodel (<i>Narthecium ossifragum</i>), bog pimpernel (<i>Anagallis tenella</i>), musk thistle (<i>Carduus nutans</i>), carline thistle (<i>Carlina vulgaris</i>), lemon-scented fern (<i>Oreopteris limbosperma</i>) and bluebell (<i>Hyacinthoides non-scripta</i>).	1.56km to the south-east of the site.

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Merthyr Central ¹⁶	Common	Large area of upland common land comprising a range of habitats, mainly marshy grassland, acid grassland and wet heath. There are also areas of dry dwarf shrub heath, acid flush, and western gorse scrub. The westernmost area (Dowlais) comprises revegetated former colliery tips which are developing mainly unimproved acid grassland. Also includes numerous large and small ponds, one of which (Isaac Morgan's Pond) supports a diverse range of aquatic plant species and a good dragonfly fauna. Numerous streams and drainage ditches run through the wetter areas. Great crested newt (<i>Triturus cristatus</i>) occurs in at least one of the ponds. Other species of interest include floating bur-reed (<i>Sparganium angustifolium</i>), shoreweed (<i>Littorella uniflora</i>), grayling butterfly (<i>Hipparchia semele</i>), scarce blue-tailed damselfly (<i>Ischnura pumilio</i>), and a range of breeding birds including snipe (<i>Gallinago gallinago</i>) and curlew (<i>Neminius arquata</i>).	1.82km to the east of the site.
Merthyr South ¹⁶	Common	Large upland/semi-upland common along hill ridge between two major rivers. Comprises extensive unimproved and semi-improved acid grasslands, dry heathlands and bracken slopes, together with acid flushes, marshy grasslands, wet heathlands, grass-heath and gorse scrub, forming a complex mosaic. Small pockets of silver birch woodland and scattered trees occur on 'fridd' slopes in the south-west. Valuable because of its large size, especially the extent of the heathland habitats. Includes numerous ponds and streams (including a section of the Nant Bargod), extensive outcrops of rock and some disused quarries. Parts of the site are situated on old colliery spoil; these have largely revegetated with acid grasslands and heathlands, but calcareous influences also occur locally. Species of interest include floating bur-reed (<i>Sparganium angustifolium</i>), knotted pearlwort (<i>Sagina nodosa</i>), scarce blue-tailed damselfly (<i>Ischnura pumilio</i>), and a range of breeding birds including peregrine falcon (<i>Falco peregrinus</i>).	1.88km to the south-west of the site.
Rhydicar West ¹⁶		Very extensive mosaic of 'ffridd' (valleyside) enclosures supporting complex of semi-upland and lowland habitats, partly contained within conifer plantation. Main components are ancient semi-natural woodland fragments, other semi-natural woodlands (mainly oak, <i>Quercus sp</i>) together with wet woodlands of alder (<i>Alnus glutinosa</i>), wet heathland, dry heathland, marshy grassland and semi-improved neutral grasslands. Also there are some bracken slopes, scrub, small ponds, streams and sections of dismantled railway. There are areas of semi-improved acid grasslands to the south especially. The habitats intergrade to form a complex mosaic, and may therefore also include	1.12km to the south of the site

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	some small areas of improved or low diversity semi-improved grassland, but any such areas are a very minor component. Great crested newt occurs in small pools within the SINC, and noctule and pipistrelle bats have both been recorded. Water vole may occur and a small badger sett is present. Marsh fritillary (<i>Eurodryas aurinia</i>) is likely to occur in marshy grassland areas in the SINC, since it occurs in similar habitats in nearby areas. Other nationally rare and scarce invertebrates include the wetland weevil <i>Gymnetron beccabungae</i> (Nationally Scarce: Na), the wetland weevils <i>Bagous lutulentus</i> and <i>Gymnetron veronicae</i>, the waterbeetles <i>Chaetarthria seminulum</i> and <i>Helochares punctatus</i>, the weevil <i>Magdalis carbonaria</i>, the beetles <i>Eledona agricola</i> and <i>Gabrus keysianus</i>, the crane fly <i>Molophilus propinquus</i>, the opomyzid fly <i>Opomyza lineatopunctata</i> and the snail killing fly <i>Psacadina verbeckei</i> (all Nationally Scarce: Nb). Local butterflies include dark green fritillary (<i>Argynnis aglaja</i>), small pearl-bordered fritillary (<i>Boloria selene</i>) and grayling (<i>Hipparchia semele</i>). Plant species of interest include fen bedstraw (<i>Galium uliginosum</i>), moonwort (<i>Botrychium lunaria</i>), bladder sedge (<i>Carex vesicaria</i>), soft-leaved sedge (<i>Carex montana</i>), saw-wort (<i>Serratula tinctoria</i>), deer-grass (<i>Trichophorum cespitosum</i>), petty whin (<i>Genista anglica</i>), intermediate lady's-mantle (<i>Alchemilla xanthochlora</i>), devil's-bit scabious (<i>Succisa pratensis</i>), meadow thistle (<i>Cirsium dissectum</i>), whorled caraway (<i>Carum verticillatum</i>) and the lower plant <i>Ephemerum serratum</i> var <i>serratum</i>. Nesting birds include redstart, garden warbler, blackcap, wood warbler, pied flycatcher, marsh tit and reed bunting. The species of interest are distributed throughout the site.	
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Buglife B-Lines Area

The nearest Buglife B-Line Area is 0.09km to the north of the site.

Buglife B-Line area¹⁷ is a stronghold for rare species such as the Shrill carder bee which can be found from Monmouthshire through to Pembrokeshire, with the largest populations being found on the Gwent Levels. Interestingly, some species typically associated with coastal habitats such as the Long-horned bee are also utilising habitats further inland to forage and nest. This emphasises the importance of managing our coastal habitats as well as ensuring a connected landscape to aid species dispersal.

¹⁷ [B-Lines Wales - Buglife](#)

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The rich industrial past and present of South and West Wales has given rise to a range of brownfield sites such as spoil tips, oil refineries, docks, and steel works. Brownfield sites often support mosaics of habitats and are flower rich – perfect for our pollinators. These types of sites play an important role within the B-Lines of South and West Wales.

Ancient Woodland Sites

The following table shows the ancient woodland sites within 2km of the site:

Table 3: Ancient Woodland Sites Within 2km

Ancient Woodland Site	Number within 2km of Site
Ancient Semi-Natural Woodland (ASNW) ¹⁸	10
Restored Ancient Woodland Sites (RAWS) ¹⁹	Three
Nearest Area of Ancient Woodland	An unnamed area of ASNW located 1.29km to the south of the site.

Protected Sites Summary

Given the small scale and localised nature of the proposed development, no adverse impacts to the SSSIs, SINCs or ancient woodland sites are likely to occur. These sites are not mentioned further in this report.

3.2. Field Study

3.2.1. Lighting and Ecological Context

Lighting

The site is within an E4: Urban lighting zone, with high district brightness (Institute of Lighting Professionals, 2012).

It lies within an urban area with extensive street lighting and residential and commercial properties in all directions. As such, it will experience high levels of artificial lighting from the streetlighting and buildings in all directions. This will decrease the quality of foraging and commuting bat habitat²⁰.

Ecological Context

The surrounding environs of residential and commercial buildings provide few suitable habitat features for bats and consequently provides negligible-quality bat foraging and commuting habitat.

¹⁸ Ancient Semi-Natural Woodland (ASNW) – broadleaf woodlands comprising mainly native tree and shrub species which are believed to have been in existence for over 400 years.

¹⁹ Restored Ancient Woodland Sites (RAWS) – woodlands which are predominately broadleaved now and are believed to have been continually wooded for over 400 years. These woodlands will have gone through a phase when canopy cover was more than 50% non-native conifer tree species and now have a canopy cover of more than 50 percent broadleaf.

²⁰ Lighting can impact on bats' roosting sites, commuting routes and foraging areas.

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3.2.2. Building Description from the Perspective of Bat Habitat

The table below summarises the key features of the former offices.

Table 4: Key Features of B1

Building Type	B1 comprises a three-storey brick and mortar structure with multiple single-storey extensions to the rear (Photos 1-3).
Roof	The main three-storey section of B1 and the single-storey extension which adjoins the eastern rear have flat, concrete roofs with a metal trim around the edge (Photo 4). An additional single-storey extension exists on the northernmost side of the rear. The roof of this extension is comprised of bitumen felt (Photo 6). There are no obvious gaps or holes within any of the roof areas which could be utilised by roosting bats.
Soffits, Fascias and Bargeboards	The metal trim on all elevations is generally in good condition, however, it is lifted in some areas (Photos 2, 4 & 13). There is a gap in the soffit on the eastern rear of the main section of B1 (Photo 7). Additionally, there is a large area of lifted trim on the ground floor of the rear (Photo 13). However, this not considered suitable for roosting bats due to its open nature and lack of protection from the elements.
Vents	Vents are present on the eastern and southern elevations of the single-storey extensions (Photos 6 & 8). These gaps could be utilised by roosting bats. There is a broken vent guard revealing a deep hole on the eastern rear (Photo 13).
External Walls	The external walls are in good condition and are free of cracks or crevices that could be utilised by roosting bats (Photo 2).
Windows	The windows have timber frames, are well-sealed and tight to the external wall on all elevations (Photo 9). Some of the window frames are damaged where the timber has rotted away (Photo 10), however, there are no gaps that are suitable for use by bats for roosting. The doors have metal frames, these are in good condition and well-sealed (Photo 11). The metal trim above the door on the eastern rear is damaged with a large open gap (Photo 11) this could potentially be used by bats for roosting, however, it is considered to be a sub-optimal feature.
Roof Void	There is no roof void present. The upper floor is open to the ceiling (Photo 5).
Roof Lining	There is no lining present (Photo 5).
Security Lighting	There is one security light present above the door on the eastern rear of the main building (Photo 12). This light was on and working at the time of the survey.

Table 4: Key Features of B2

Building Type	B2 comprises a single-storey brick and mortar storage building that is attached to B1 by an extension between the two buildings (Photos 14-17). Sections of the eastern elevation are of breezeblock construction (Photo 16) and a section of the western elevation that encompasses the extension joining B1 and B2 together is rendered (Photo 17).
Roof	B2 has a dual-pitched roof, with the central ridge running along an east to west axis, and is constructed from concrete roof tiles with concrete ridge tiles (Photo 17). The roof is in good condition, with well aligned tiles absent of gaps. The edge tiles at the gable ends are capped with a uPVC trim (Photo 14 & 17). The uPVC trim is broken on the northeastern and southeastern corners of B2 exposing gaps that could potentially be used by bats to gain entry into the interior of the building (Photo 18).
Soffits, Fascias and Bargeboards	The uPVC bargeboard on the eastern elevation is in poor condition with large gaps on the eastern end and is lifted from the external wall in its entirety

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	creating gaps that could be used by bats to gain entry into the interior of B2 (Photo 18). The uPVC plastic fascia on the northern elevation is also lifted from the external wall along much of the length of the building, creating large gaps that could be used by bats to gain entry into the voids within B2 (Photo 20).
Vents	There are vents present within the external walls on the northern and southern elevations (Photo 20). These gaps could be utilised by roosting bats.
External Walls	The external walls are generally in good condition (Photo 14-17), however, there is a large crack in the breezeblock section on the northern elevation (Photo 21).
Windows and Doors	No windows are present on B2. There is a door on the northern elevation, it is well sealed and sits tight to its frame (Photo 22). There are roller shutter doors to the front, these are well sealed and tight to their frames.
Roof Void	There are four voids present in B2 separated by three dividing walls (Photo 23). Light was emanating from the eaves on the northern side of both loft voids (Photo 24), this correlated with the lifted fascia seen externally on the northern elevation and it is assumed that this would be consistent through the easternmost loft void that could not be inspected due to restricted access. These gaps could potentially be used by bats to gain entry into the void. The easternmost section of the building does not have a void, with the single-storey structure open to the roof (Photo 25).
Roof Lining	The western and middle voids are boarded with ply board (Photo 23 & 24). The open eastern section of the roof area is also boarded with ply board (Photo 25). There are large gaps in this section, where the top of the wall meets the roof on all sides. These gaps could be used by bats to gain entry into the interior of the building (Photo 26). Vegetation can be seen growing through these gaps into the interior.
Roof Construction	The roof is supported on traditional, rough sawn timbers with associated timber purlins and rafters (Photo 24 & 25).

Photos Showing B1 and its Features

Photo 1: Western Front



Photo 2: Eastern Rear Showing Single-storey Extensions



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Photo 3: Additional Single-storey Extension to the Rear



Photo 4: Aerial View of the Extension Roofs



Photo 5: Internal View Showing Stairwell Open to the Ceiling



Photo 6: Easternmost Single-storey Extension Showing Vent and Bitumen Felt Roof



Photo 7: Gap in the Soffit on the Eastern Rear of the Main Section of B1 (Circled)

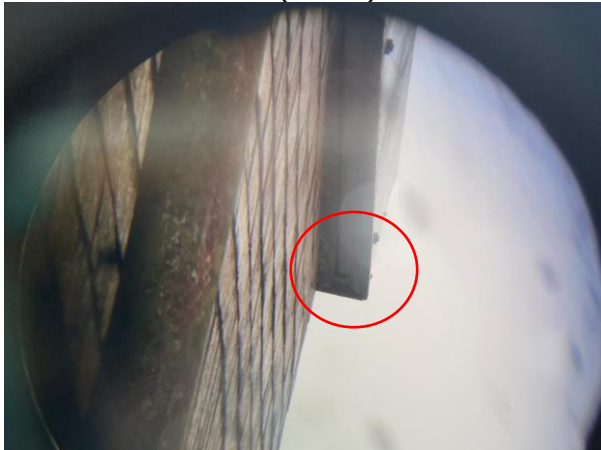


Photo 8: Example of Vents on the Single-storey Extensions



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Photo 9: Example of Windows With Timber Frames Tight to the Exterior Wall



Photo 10: Rotten Window Frame (Circled) on Southern Elevation of Single-storey Extension



Photo 11: Roller Shutter Door With Metal Frame Showing Large Gap (Circled)



Photo 12: Security Light at the Rear (Circled)



Photo 13: Lifted Metal Trim and Broken Vent Guard on Eastern Rear of Main Section of B1



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Photos Showing B2 and its Features

Photo 14: Eastern Elevation



Photo 15: Southern Elevation



Photo 16: Northern Elevation



Photo 17: Western Elevation and View of the Roof



Photo 18: Broken uPVC Plastic Trim on the Eastern Elevation



Photo 19: Lifted Upvc Bargeboard on the Eastern Elevation of the Building



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Photo 20: Lifted Fascia on Northern Elevation Showing Example of Vents (Circled)



Photo 21: Large Crack in Breezeblock Section on Northern Elevation



Photo 22: Door on Northern Elevation



Photo 23: Internal View of Void Showing Dividing Wall



Photo 24: Light Ingress



Photo 25: Easternmost Section



Photo 26: Example of Large Gaps With Vegetation



3.2.3. Potential Bat Access Points and Bat Roosting Locations

Potential Access Points for Bats in B1

No potential access points for bats were recorded during the survey. The metal trim is lifted in some areas, however, they are not considered suitable for roosting bats due to its open nature and lack of protection from the elements. The windows and doors are fitted tightly to their frames which in turn fit tightly to their respective apertures, and the flat roofs are absent of gaps. This has resulted in there being no gaps of sufficient size to permit bats to access to potential roost sites.

Potential Roosting Features for Bats in B1

The following potential roost features were recorded:

- PRF 1 – A gap in the soffit on the eastern rear of the main section of B1 (Photo 7); and
- PRF 2 – The vents on the eastern and southern elevations of the extensions (Photo 8).

Potential Access Points for Bats in B2

There are numerous potential access points for bats to gain entry into the interior of B2. Bats could gain entry through the raised fascia on the northern elevation, the broken uPVC plastic trim on the eastern elevation (Photo 18), the lifted uPVC bargeboard on the eastern elevation (Photo 19), and the vents on the northern and southern elevations (Photo 20).

Potential Roosting Features for Bats in B2

The following potential roost features were recorded:

- PRF 1 – The large crack in the breezeblock section of the northern elevation (Photo 21);
- PRF 2 – The eastern interior section of the building (Photos 25 & 26); and
- PRF 3 – Within the voids.

Plan 7 illustrates the locations of all PRFs and access points detailed above.

3.2.4. Nesting Bird Survey

No signs of recent nests were found within or on the exterior of the buildings.

4. Evaluation

4.1. Summary of Preliminary Roost Assessment

The preliminary roost assessment found no evidence of bats roosting within or on the external parts of the former offices.

4.2. Suitability of Summer Roosts

Suitability of Summer Roosts: B1

- Low suitability for use by crevice-dwelling bats (*Pipistrellus* species and smaller *Myotis* species such as Brandt's (*Myotis brandtii*) and whiskered bats (*Myotis mystacinus*)). The building has a low number of potential roosting features which could be used by crevice-dwelling bats including the gap in the soffit on the eastern rear of the main section of B1 (Photo 7) and the vents on the eastern, southern and western elevations the single-storey extensions (Photo 8). Therefore, it is considered to be a structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year;
- Negligible suitability for use by roof-void-dwelling bats²¹ (long-eared species (*Plecotus* species) and large *Myotis* bats, such as Natterer's bat (*Myotis nattereri*) and serotine bats (*Eptesicus serotinus*)), due to the lack of a roof void; and
- Negligible suitability for use by direct-access species requiring a large access point²² and large roost space (lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe (*Rhinolophus ferrumequinum*) bats)), due to the lack of large access points into the interior.

B1 has an overall low bat roosting suitability due to the reasons stated above. This assessment will be used to determine the level of further survey effort required (see Appendix 2).

Suitability of Summer Roosts: B2

- Moderate suitability for use by crevice-dwelling bats (*Pipistrellus* species and smaller *Myotis* species such as Brandt's and whiskered bats). The building has multiple possible access points and roosting features which could feasibly be used by crevice-dwelling bats including gaps behind the lifted uPVC bargeboard on the eastern elevation (Photo 19), the vents on the northern and southern elevations (Photo 20), the large crack in the breezeblock section of the northern elevation (Photo

²¹ Roof-void dwelling bats may be visible on roof timbers but need flight space in certain types of roost. In non-maternity roosts, long-eared bats can make use of crevice features without gaining access into a roof void.

²² Lesser horseshoes are able to fly into spaces with much smaller accesses (e.g. they have been filmed pushing through mist net holes of <2cm square), though typically larger accesses are favoured, with mitigation guidelines requiring 30cm x 20cm as appropriate access.

21), gaps behind the lifted fascia on the northern elevation (Photo 20), the broken uPVC plastic trim on the eastern elevation, and the lifted bargeboard and fascia providing access to the multiple voids;

- Moderate suitability for use by roof-void-dwelling bats (long-eared species) and large *Myotis* bats, such as Natterer's bat and serotine bats. The building has multiple potential access points which allow access into the building's interior including the gaps behind the lifted fascia on the northern elevation, broken uPVC plastic trim on the eastern elevation, and the lifted bargeboard on the eastern elevation. These access points provide access into the interior of the multiple voids and open section within B2 which have exposed rough-sawn timber beams that would be suitable for roosting; and
- Negligible suitability for use by direct-access species requiring a large access point and large roost space (lesser horseshoe and greater horseshoe bats), as there are no suitable access points.

B2 has an overall moderate bat roosting suitability due to the reasons stated above. This assessment will be used to determine the level of further survey effort required (see Appendix 2).

4.3. Potential Winter Roosts

'Classic' Hibernation Potential

The site does not contain any classic hibernation sites such as underground features such as a cellars or basements.

'Non-classic' Hibernation Potential

The large crack in the breezeblock section of the northern elevation of B2 creates a crevice that could potentially provide a hibernation site for bats. However, a full assessment of the potential for winter use (i.e. hibernation) will be undertaken after the completion of further dusk emergence surveys.

4.4. Birds – Interpretation of Nesting Bird Survey

No evidence of past or current nesting by birds was observed during the survey.

Further surveys for nesting birds will be undertaken at the same time as the dusk emergence surveys, and the assessment of its importance subsequently updated.

5. Required Actions

5.1. Licensing Requirements for Bats

It has not been possible to determine whether a NRW bat development licence will be required. This will be determined after the emergence surveys have been completed.

5.2. Further Work

The following work could have an impact on bats and should not take place until the surveys recommended above have been completed and/or an ecologist has been consulted: The demolition of B2 and any works affecting the PRFs identified on B1.

Works should not commence until further surveys have been carried out. This will enable the likely impacts of the proposals on bats to be assessed, determine if a NRW bat development licence will be required, inform the avoidance measures (timing of works), and determine the requirement for mitigation (retention of roosts and access points) and/or compensation measures (creation of new replacement/additional bat roosts).

Current best practice guidelines (Collins, 2023) state that one dusk emergence survey should be undertaken on a building with low roost suitability (B1) and two separate dusk emergence surveys should be undertaken on a building with moderate roost suitability (B2). The surveys should be undertaken from May to September, with at least one of the surveys between May and August and will be supplemented by use of night vision aids.

To ensure that all potential bat access/roosting features are covered, the survey of B1 will require three surveyors or night vision aids to be present and both surveys of B2 will require four surveyors or night vision aids to be present (see Plan number 5: Proposed Surveyor Positions).

Surveys should be timed to sample as much of the survey period as possible²³, undertaken at intervals of at least three weeks apart, or preferably more (Collins, 2023). This increases the possibility of encountering bats that may only use the building for short periods throughout the summer. Ideally, at least one survey should be undertaken in the core maternity period of mid-June to mid-July.

5.3. Avoidance, Mitigation, Compensation and Enhancement Measures for Bats

These measures will be formulated after the completion of dusk emergence surveys.

5.4. Avoidance, Mitigation, Compensation and Enhancement Measures for Birds

These measures will be formulated after the completion of dusk emergence surveys.

²³ Collins (2023) states that Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more. Survey timings should consider the prevailing conditions in the year of survey, which will vary geographically. In years with a cold spring, the surveys should not be started in early May, or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the optimum coverage includes the pre-parturition, post-parturition and mating periods.

5.5. Longevity of Report

If development works do not begin within twelve to eighteen months of the date of this report, an updated survey may be required to determine if conditions and bat usage has changed since described in the current report.

Bat Surveys for Professional Ecologists (Collins, 2023) states that survey data should ideally be from the most recent optimal survey season before a planning or licence application is submitted. This is because bats are highly mobile and so the numbers of bats present may have increased or decreased in numbers since the survey was undertaken.

CIEEM have issued an Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), which states that a survey report that is less than 12 months old is likely to be valid in most cases; reports 12-18 months old are likely to be valid with some exceptions; reports 18 months to 3 years old require a site visit plus consideration of repeating the surveys (depending on the circumstances) and reports older than this are likely to require most of the surveys to be repeated.

6. References

Bat Conservation Trust (2022) *Interim Guidance Note: Use of Night Vision Aids for Bat Emergence Surveys and Further Comment on Dawn Surveys*. Available online at <https://cdn.bats.org.uk/uploads/pdf/Interim-guidance-note-on-NVAs-May-2022-FINAL.pdf?v=1653399882>

BSI (2013) *BS 42020:2013 Biodiversity – Code of practice for planning and development*. British Standards Institution, London.

CIEEM (2019) *Advice Note on the Lifespan of Ecological Reports and Surveys* Available online at <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

CIEEM (2020) *Guidelines for Accessing, Using and Sharing Biodiversity data in the UK*. <https://cieem.net/wp-content/uploads/2016/03/Guidelines-for-Accessing-and-Using-Biodiversity-Data-March-2020.pdf>

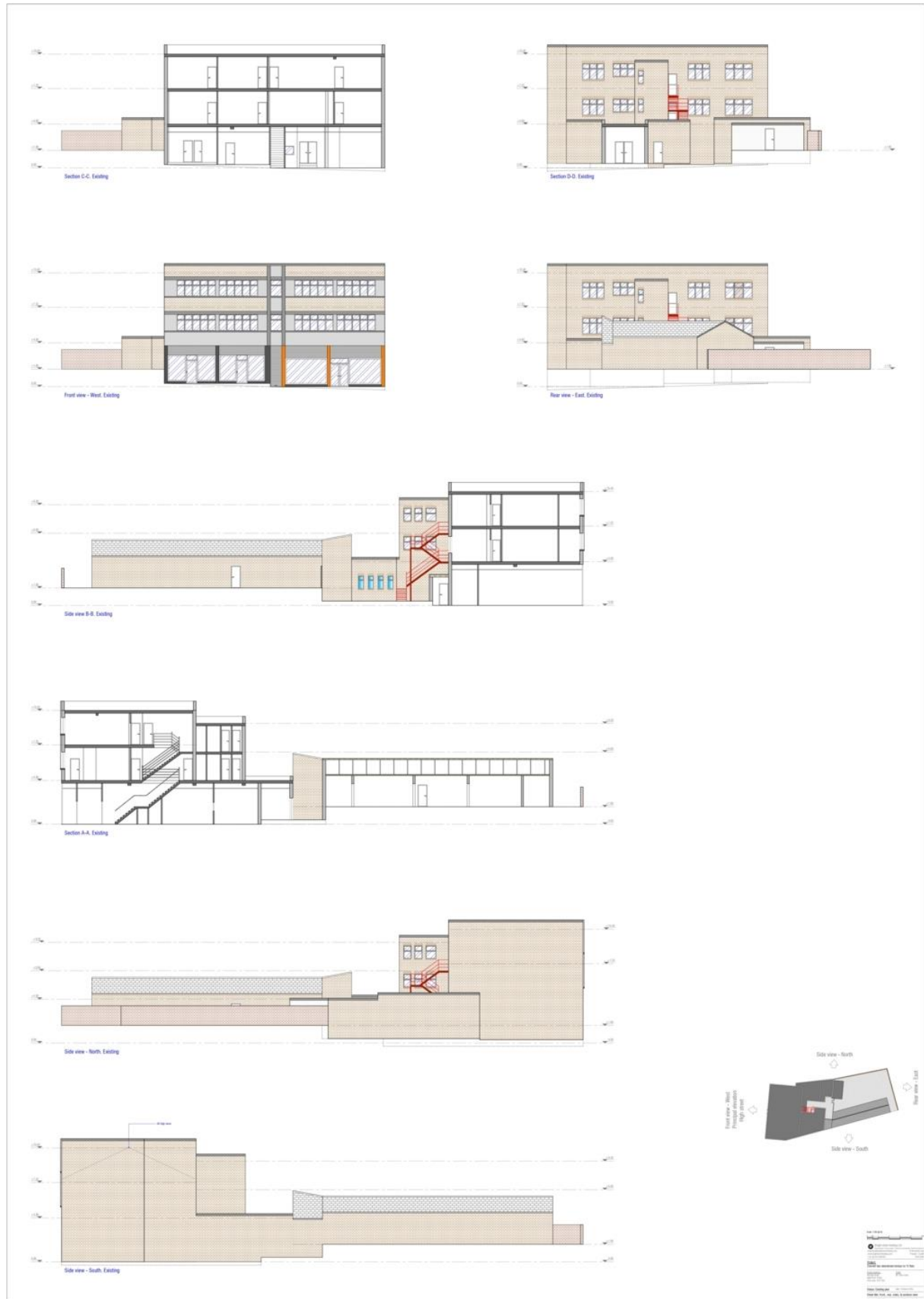
Collins, J (ed) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4rd edn)*. The Bat Conservation Trust, London.

Eaton, M, Aebischer, N, Brown, A, Hearn, R Lock, L, Musgrove, A, Stroud, D and Gregory, R (2014) *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. *British Birds* 108. December 2015. 708-746. Available online at <http://bit.ly/2h23DqV>.

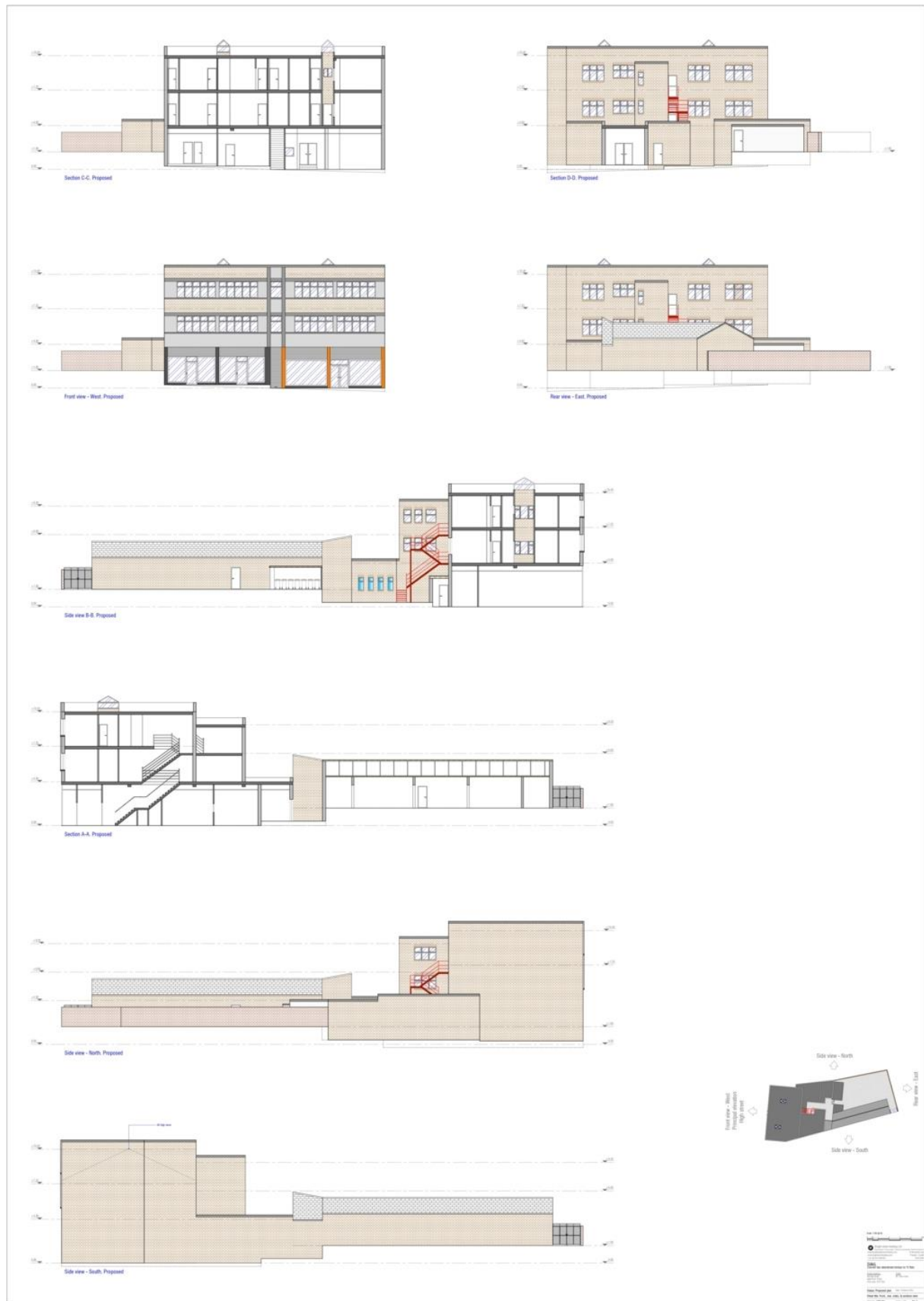
European Commission, Directorate-General for Environment (2011) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC: final version*, February 2007. European Commission.

Institution of Lighting Professionals & Bat Conservation Trust (2023) *Bats and Artificial Lighting in the UK*. Guidance Note (GN08/23). Available online at <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>.

Drawing 1: Existing Site Plans



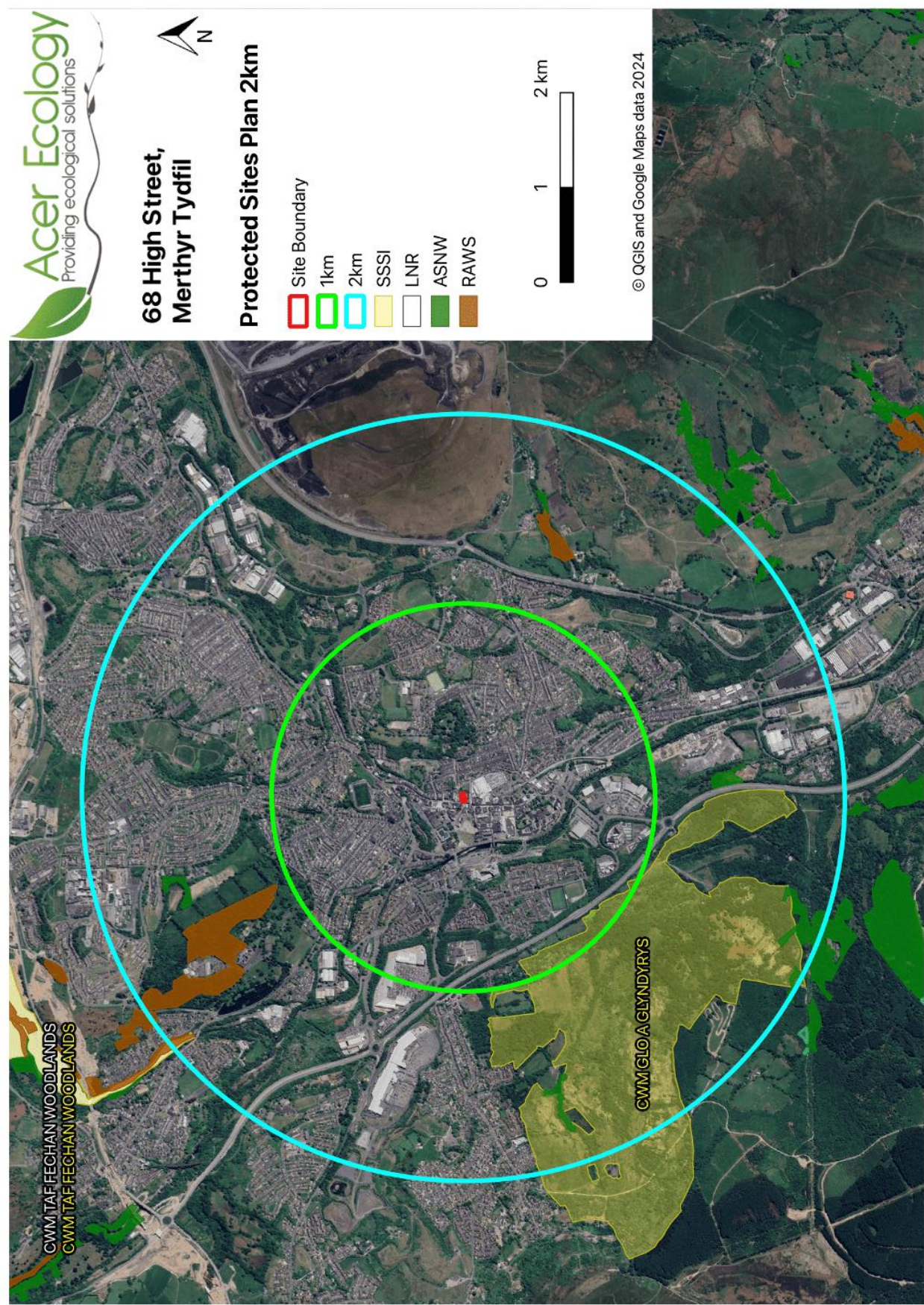
Drawing 2: Proposed Development



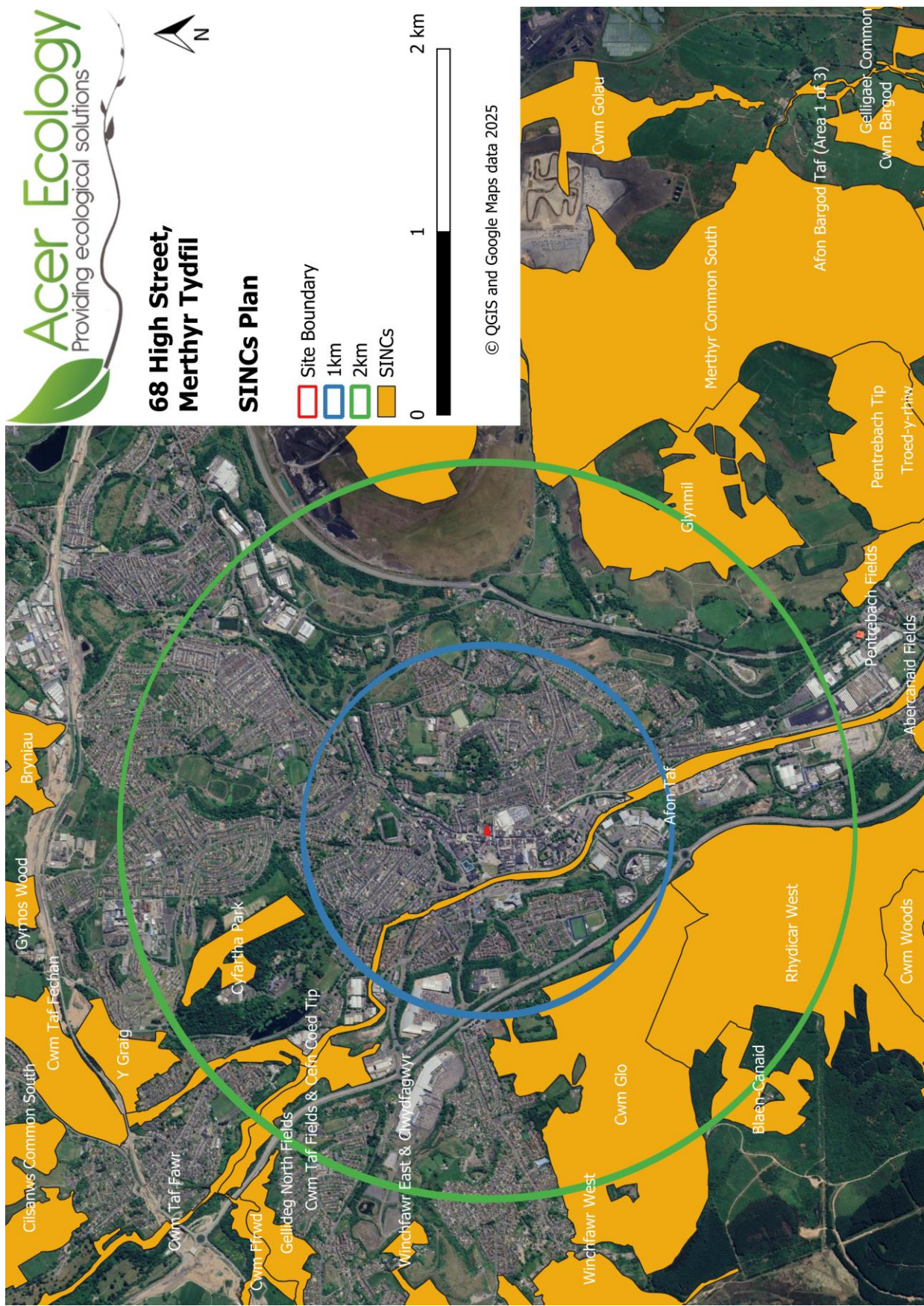
Plan 1: Location Plan



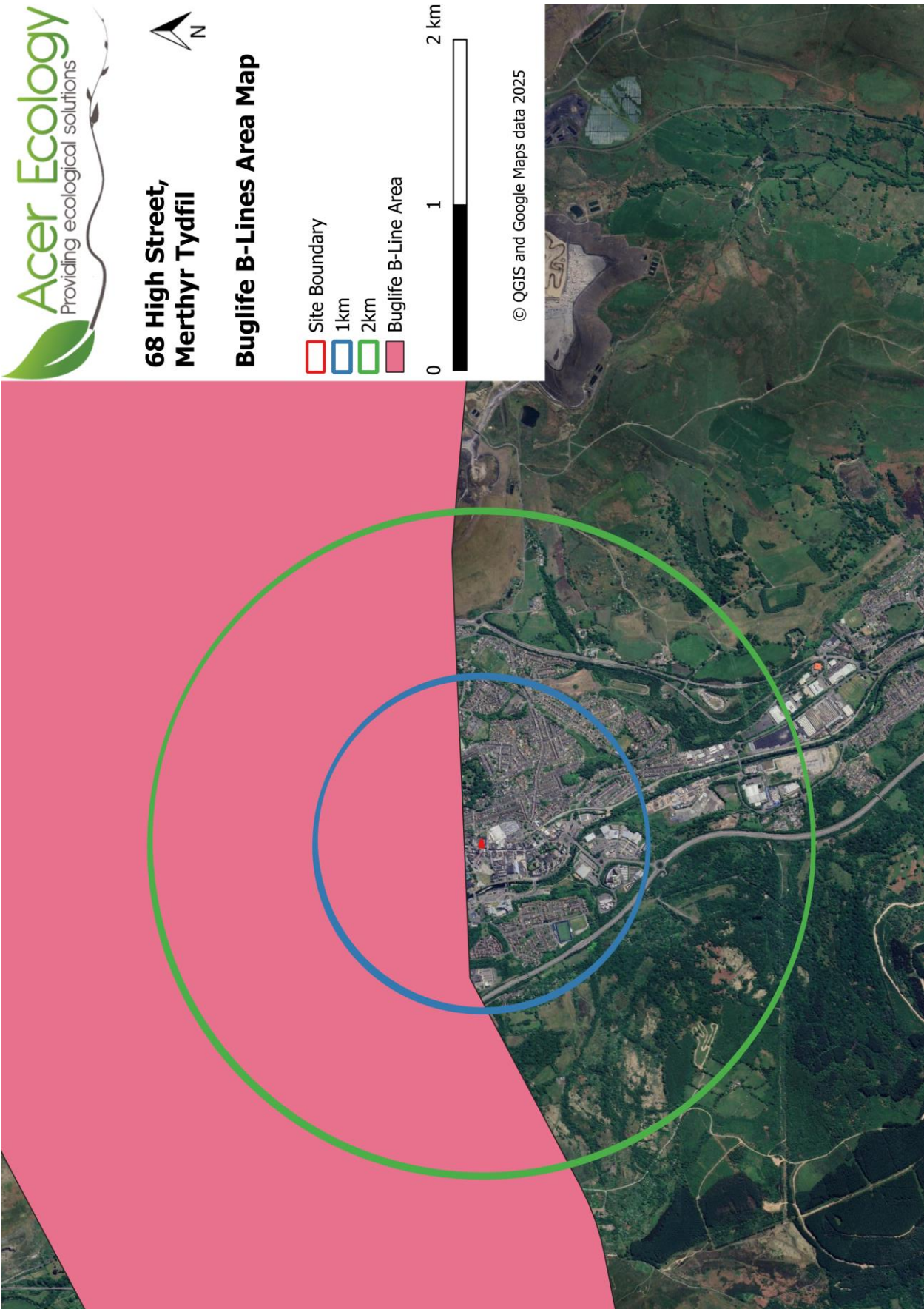
Plan 2: Protected Sites Within 2km



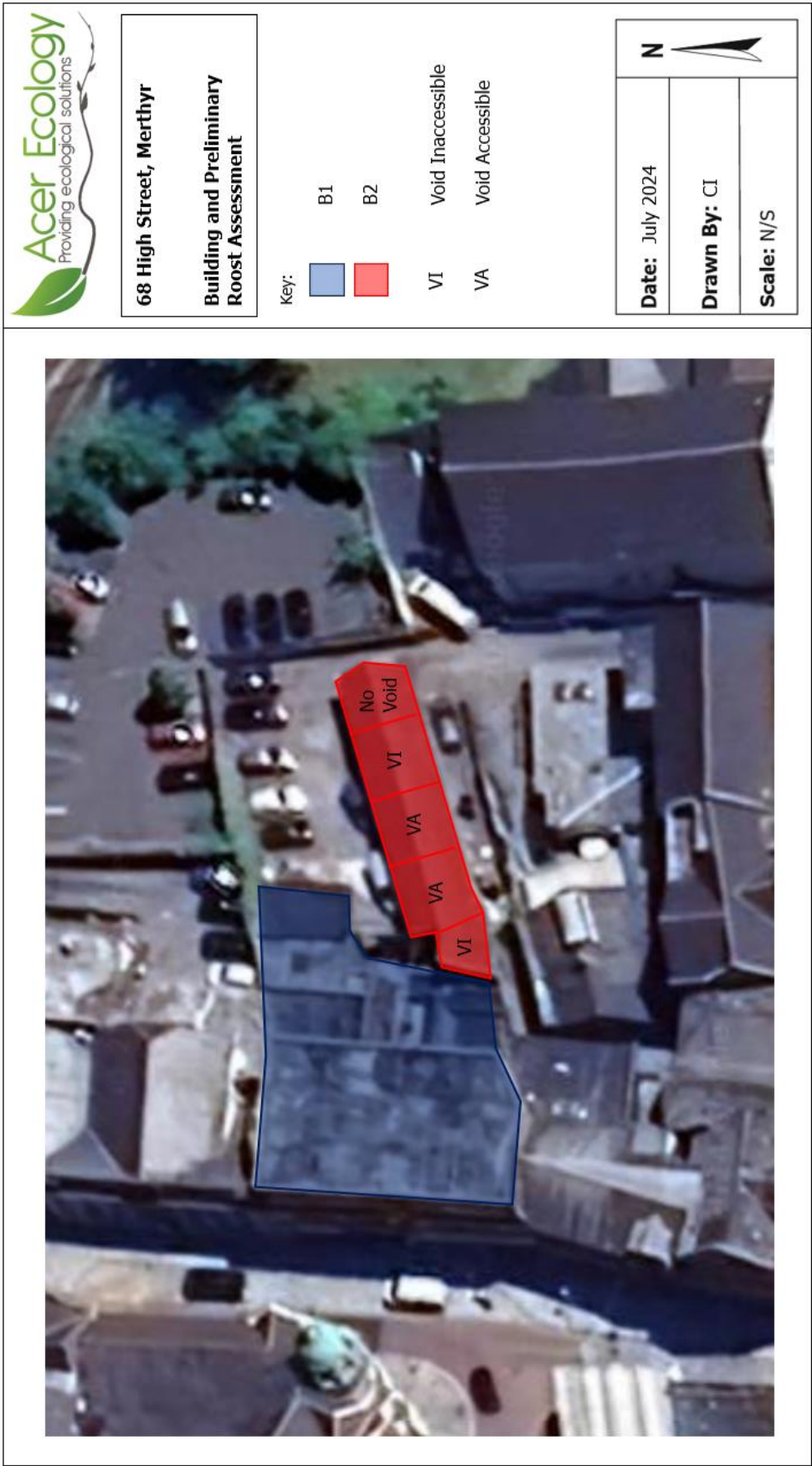
Plan 3: SINC's Plan



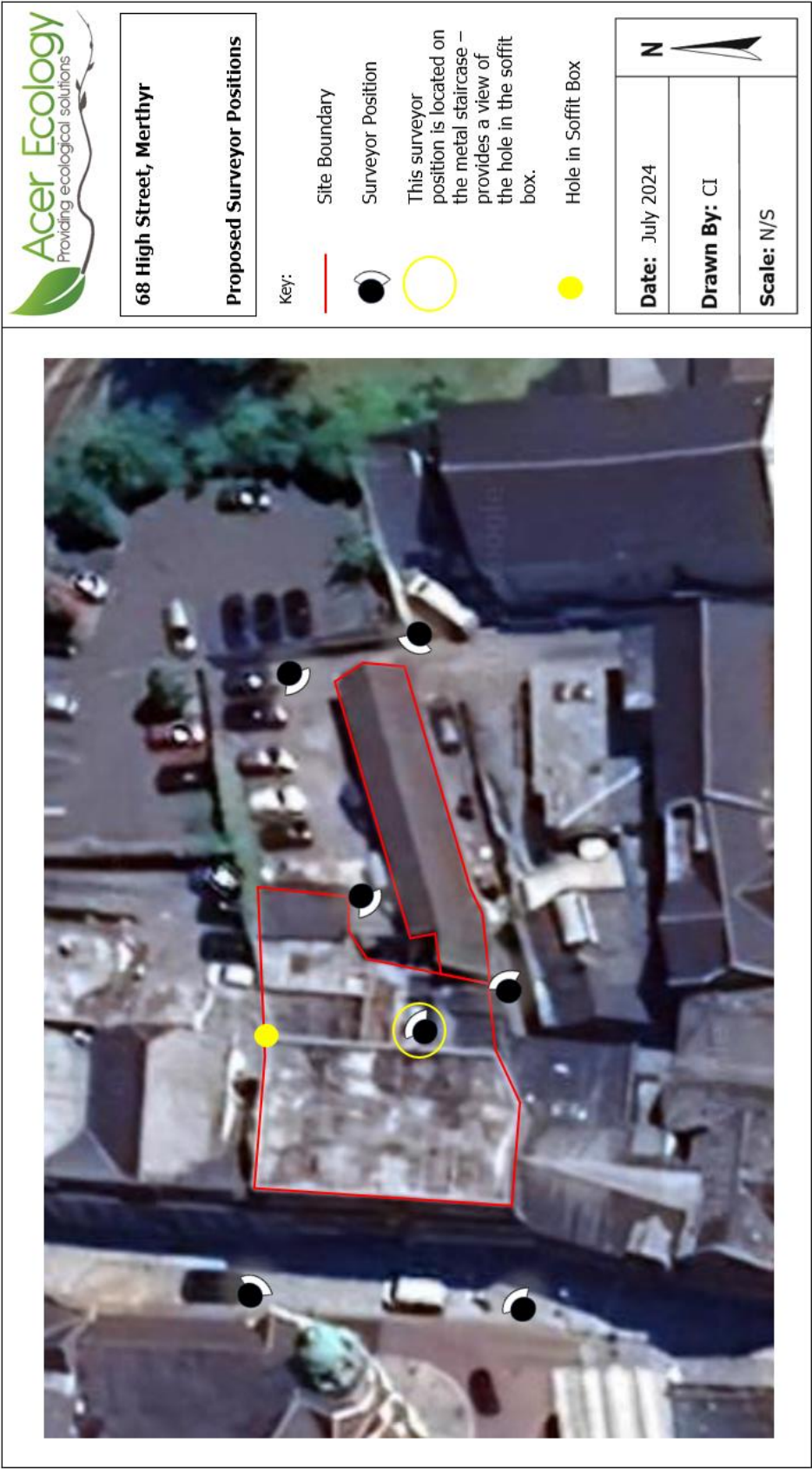
Plan 4: Buglife B-Lines Plan



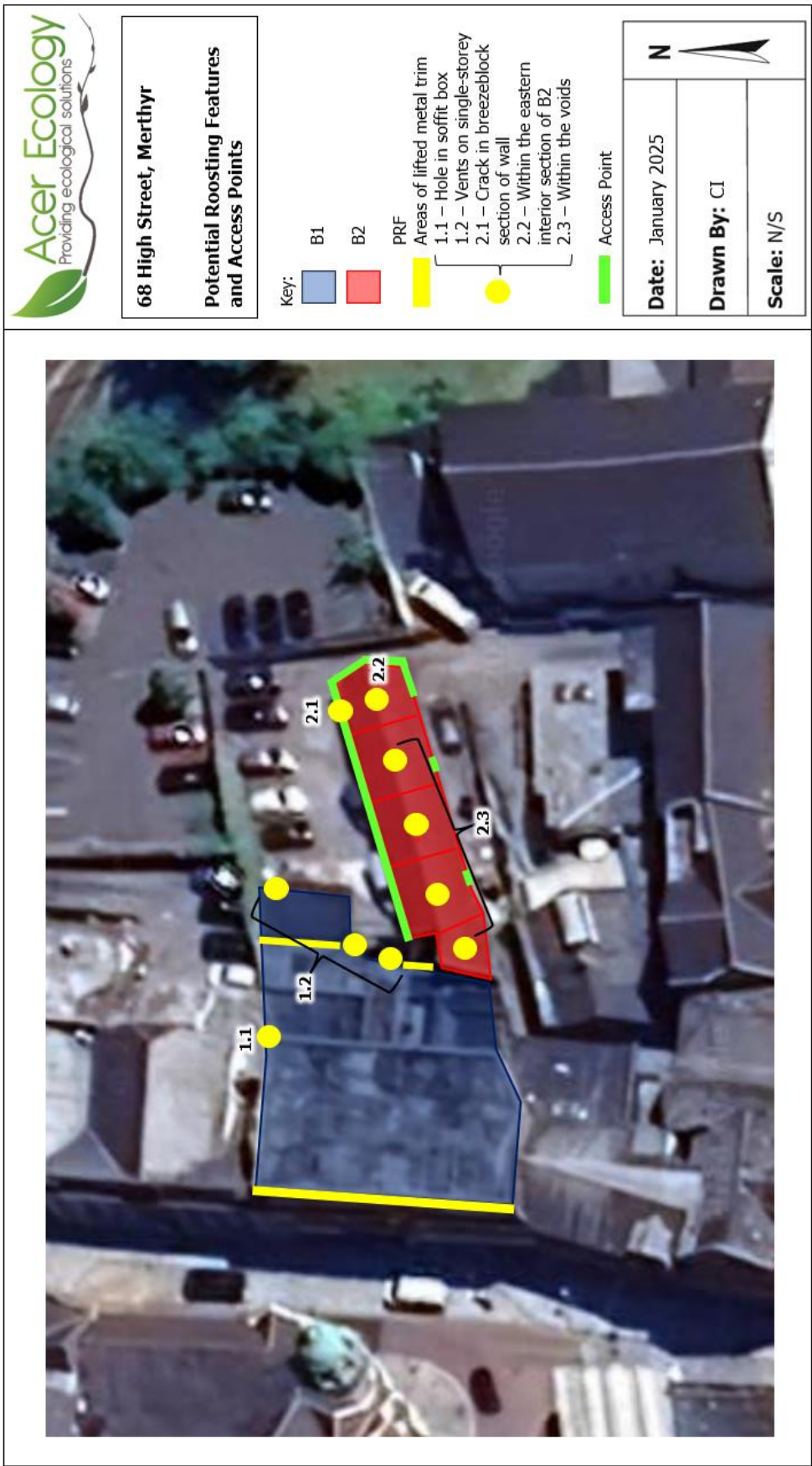
Plan 5: Building and Preliminary Roost Inspection



Plan 6: Proposed Surveyor Positions for Dusk Emergence Surveys



Plan 7: Potential Roosting Features and Access Points



Appendix 1: Bat Ecology and Legislation Protecting Bats and Their Roosts

Bat Ecology

There are 17 known breeding species of bat found in the UK, with additional species recorded as migrants or vagrants. They are all small, nocturnal, flying, insectivorous mammals that are under conservation threat with many having undergone massive population declines over the last century. Some species, such as common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are relatively common and widespread in the UK, while others, such as greater horseshoe (*Rhinolophus ferrumequinum*) bats, have an extremely restricted distribution.

Most bats will use a variety of roosts of different types throughout the year. The winter hibernation sites typically have cool, humid conditions with a stable microclimate and low levels of disturbance. Most British bats hibernate in caves or artificial structures that fulfil these requirements, such as mines, tunnels and cellars. Bats emerge from hibernation around late March or early April and move into transition or intermediary roosts. Around early May, female bats gather in colonies to form summer or maternity roosts, and it is here where they will give birth between late May and early July. A colony may consist of many individuals (sometimes hundreds of bats) of mixed age and sex. Roosts occur in a variety of habitat types, including tree-holes, caves, buildings and other secure crevices or internal spaces with appropriate stable temperatures and humidity. Bats may change roost locations many times during a year, and colonies may split up and reform during this period. Males occupy solitary roosts in autumn, to which they attract females for mating.

Legislation

All British bat species and any place used for shelter or protection, or as a breeding site or resting place (their roosts) are fully protected under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) [‘CHSAEU’] Regulations 2019. The roosts are protected irrespective of whether bats are present at the time. The aforementioned legislation make it illegal to deliberately or recklessly:

- Kill, injure or capture bats;
- Disturb bats;
- Damage, destroy, or obstruct access to bat roosts (including sites that are currently unoccupied);
- Possess or transport a bat or any part of a bat unless acquired legally; or
- Sell, barter or exchange bats or parts of bats.

Disturbance is defined as that which is likely to impair bats ability:

- To survive, to breed or reproduce, or to rear or nurture their young;
- To hibernate or migrate; or
- To significantly affect the local distribution or abundance of the species to which they belong.

Habitats Regulations Licensing

If a European Protected Species will be affected by a development, Natural Resources Wales (NRW) can issue licences under the Habitats Regulations to permit otherwise prohibited acts. Licences for certain activities can be granted providing “three tests” are satisfied, that is:

1. the purposes of “preserving public health or safety, or for reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”;
2. there must be “no satisfactory alternative”; and,
3. the action is “not detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

Where planning regulations apply, NRW will only issue a licence after planning consent has been granted. The licence application will require the production of a detailed method statement, which sets out the activities to be carried out under the licence to minimise the risk of bats being harmed during construction works and ensure that bats will be conserved during the development of the site. This will need to detail the mitigation proposed (such as the replacement or compensation roost); the timescale and schedule of works, the number, size and locations of bat access points to be provided; the type of materials to be used (roofing material, roof lining, fascias, soffits, and bargeboards etc.); lighting proposals; action to be taken in the event bats are found during works; and a post-development monitoring programme. The method statement will need to be accompanied by scaled plans and maps detailing the bat mitigation features. A cross-section of the access points and roost space is often required. The method statement must ensure that provision is made for new or continued roosting opportunities after the completion of development works. In some instances, a method statement is requested by the Local Planning Authority or Natural Resources Wales before the planning application is determined.

Planning Policy Wales

Section 6.4 Paragraph 6.4.5 of Planning Policy Wales Edition 12 (2024) that focuses on Biodiversity and Ecological Networks, Section 6 of The Environment (Wales) Act 2016²⁴ that details the requirement for enhanced biodiversity and resilience of ecosystems, and TAN 5 all encourage developments in Wales to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally.

Part 1, Section 7 of the Environment (Wales) Act 2016 provides a list of the ‘*living organisms of principal importance for maintaining and enhancing biodiversity in relation to Wales*’. This includes seven bat species (soprano pipistrelle, barbastelle (*Barbastella barbastellus*), Bechstein’s (*Myotis bechsteini*), noctule (*Nyctalus noctula*), brown long-eared (*Plecotus auritus*), lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe bats).

²⁴ <http://www.legislation.gov.uk/anaw/2016/3/contents>

Appendix 2: Guidelines for Assessing Potential Bat Roosting Suitability²⁵

Protentional Suitability	Roosting Habitats in Structures
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels)
Negligible ²⁶	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ²⁷ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ²⁸).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions (see footnote from low suitability) and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions (see footnote from low suitability) and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
Confirmed Roost	Evidence of bats or use of bats found.

²⁵ Taken from Table 4.1 of the Bat Survey Guidelines (2023) 4th edition.

²⁶ Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

²⁷ For example, in terms of temperature, humidity, height above ground levels, light levels or levels of disturbance.

²⁸ Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2016 and Jansen *et al.*, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

Appendix 3: Guidelines for Determining Required Number of Dusk Surveys

Roost Suitability	Minimum Number of Dusk Surveys Required ²⁹
Negligible	None.
None	None.
Low	One survey visit comprising of a dusk emergence survey ³⁰ between May and August for structures.
Moderate	Two separate dusk emergence survey visits ³¹ . Surveys must occur between May and September ³² , with at least one survey between May and August ³³ .
High	Three separate dusk emergence survey visits. Surveys must occur between May to September, with at least two surveys between May and August.

²⁹ Adapted from Tables 7.1 and 7.2 of the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023).

³⁰ Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see para 5.2.44). In some cases, more than one survey may be needed, particularly where there are several buildings in this category.

³¹ Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more.

³² September surveys are both weather- and location-dependant. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may still pick up mating roosts.

³³ Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more. Survey timings should consider the prevailing conditions in the year of survey, which will vary geographically. In years with a cold spring, the surveys should not be started in early May or all be completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the optimum coverage includes the pre-parturition, post-parturition, and mating periods.

Acer Ecology

Appendix 4: Guidelines for Assessing Bat Habitat Suitability³⁴

Suitability	Commuting and Foraging Habitat
Negligible	Negligible habitat features on-site likely to be used by commuting and foraging bats.
Low	<u>Commuting Habitat</u> Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape. <u>Foraging Habitat</u> Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	<u>Commuting Habitat</u> Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. <u>Foraging Habitat</u> Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	<u>Commuting Habitat</u> Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. <u>Foraging Habitat</u> High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. <u>Proximity to Known Bat Roosts</u> The site is close to and connected to known roosts.

³⁴ Taken from Table 4.1 of the Bat Survey Guidelines (2023) 4th edition.