



**126 and 126a High Street
Merthyr Tydfil**

Preliminary Roost Assessment

March 2023

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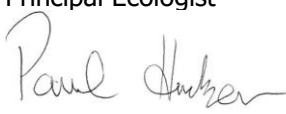
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DOCUMENT CONTROL

126 – 126a High Street, Merthyr Tydfil Preliminary Bat Roost and Nesting Bird Assessment				
Revision	Date	Prepared by	Checked by	Approved by
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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 126 – 126a High Street, Merthyr Tydfil, CF47 8BT (Ordnance Survey Grid Reference: SO 0492 0611).
Proposed Works	The development proposals involve the change of use of the first and second floors from offices and storage to five self-contained flats and storage. Additionally, alterations of the roof are planned together with other associated external alterations.
Survey Methodology	The preliminary bat roost assessment comprised a daytime internal and external inspection of the building, 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 the buildings. The building is within a low-quality area for foraging and commuting bats.
Evidence of Nesting Birds	No evidence of past or current nesting by birds was noted either within or on the building's exterior.
Requirements for Additional Survey	Further surveys are required to determine if any bats are roosting within the building. As the building has low roost suitability and current best practice guidelines (Collins, 2016) suggest that it should be subject to one additional dusk emergence or dawn re-entry survey, undertaken between May and September. Three surveyors will be required for the survey (see Plan 4: Proposed Surveyor Positions).
Predicted Impacts of Development on Bats and Nesting Birds	Full impacts on bats and birds will be considered after the further survey has been undertaken.
Mitigation and Compensation of Proposed Impacts	Mitigation and compensation measures for bats and birds will be determined after the further survey has 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 building. This will be established after the dusk emergence or dawn re-entry survey has been completed.
Required Actions	A further survey is required. Detailed recommendations are given in Section 6 of this report.

1. Introduction

1.1. Brief and Site Location

This report presents the findings of a preliminary bat roost assessment and nesting bird survey of 126 – 126a High Street, Merthyr Tydfil, CF47 8BT (Ordnance Survey Grid Reference: SO 0492 0611)¹. The building lies within the boundary of Merthyr Tydfil Council.

1.2. Site Description

The building is located in the centre of Merthyr Tydfil, 31km north-west of the city of Newport. The building comprises a three-storey commercial development, surrounded by similar commercial buildings to the north, east, south, and west. The lower floors are shop units whilst the upper floors were previously used as offices, but are not in current use. The River Taff lies 0.1km to the west of the building. The wider environment is urban in nature, however there are scattered patches of woodland, with the nearest lying 0.3km to the east of the site.

Its location is shown on Plan 1: Location Plan.

1.3. Proposed Works

The development proposals involve the change of use of the first and second floors of the building from offices and storage to five self-contained flats and storage. Additionally, alterations of the roof are planned together with other associated external alterations. A planning application has been submitted under reference P/23/0006².

Existing and proposed plans can be found in Drawings 1 and 2: Development Proposals (Planning Reference number: P/23/0006).

1.4. Legislation and Planning Policy

1.4.1. Bats

All UK bats are protected species. Their breeding sites or resting places³ (roosts) are fully protected under the Wildlife and Countryside Act 1981⁴ (as amended) and the Conservation of Habitats and Species Regulations 2017⁵ which continues to apply in UK law through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019⁶. Works affecting bats are subject to licensing

¹ Latitude and Longitude: 51.745673 , -3.3786567 / what3words: estate.posed.loaded

² <https://publicaccess.merthyr.gov.uk/online-applications/applicationDetails.do?keyVal=RR3HGBKQ00300&activeTab=summary>

³ 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.

⁴ <https://www.legislation.gov.uk/ukpga/1981/69>

⁵ <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

⁶ <https://www.legislation.gov.uk/ukdsi/2019/9780111179512>

procedures by Natural Resources Wales (NRW). The legal protection and licensing procedures are summarised in Appendix 1.

1.4.2. Nesting Birds

All wild British birds (whilst building nests, nesting, and sitting on eggs) and their nests and eggs, (with certain limited exceptions⁷) are protected by law under Section 1 of the Wildlife and Countryside Act 1981⁸ (as amended) and the Countryside and Rights of Way Act 2000⁹. 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) comprised a daytime internal and external inspection of the building, searching for signs of bats and nesting birds, and assessing the potential for bats to roost on site.

1.6. Reporting

This report aims to:

- Outline the survey methodology used;
- Present the results of the survey;
- Provide an interpretation of the survey results;
- 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.

⁷ 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>

⁸ <https://www.legislation.gov.uk/ukpga/1981/69>

⁹ <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 10km 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 the building was undertaken, looking for features that bats could use for entering/exiting and roosting¹⁰. 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 and the remains of dead bats. The survey was undertaken on 17th of March 2023 by Paul Hudson¹¹ MCIEEM (NRW Licence Number: S091671-1) and Isabel Humphries¹². A high-powered torch (Clulite), an endoscope (Ridgid Micro CA-300), binoculars and a ladder were available for use, as appropriate during the survey.

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, 2016) (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.

2.2.3. Survey for Nesting Birds

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.

¹⁰ 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).

¹¹ Paul graduated with a degree in Environmental Biology from Reading University and a Postgraduate Diploma in Conservation Management from the University of East Anglia. He has worked within ecological consultancy since 2000 and has undertaken bat work since 2001. He holds licences to disturb bats in both Wales (S091671-1) and England (2018-36707-CLS-CLS valid until 2028). Further details of his qualifications and experience can be found at <http://linkd.in/19aGTf4>.

¹² Isabel graduated in Chemistry from Cardiff University. She is currently receiving training from Acer Ecology, working as an Assistant Ecologist, gaining ecological surveying experience. Further details of Isabel's qualifications and experience can be found at: <https://www.linkedin.com/in/isabel-humphries-a182491b9>

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.

Timing

The time of year when the preliminary roost assessment was carried out coincides with the period when most bats have retreated to winter hibernation sites and are most difficult to detect. Bats may begin to emerge and signs of limited activity can be seen. In warmer weather, small numbers of bats leave hibernation roosts, feeding as it gets warmer. In bad weather, they may become torpid.

However, signs of roosting activity from previous summers may still be identified inside loft spaces and the potential of a building can be assessed outside the active season. Therefore, the timing of the inspection is unlikely to have significantly constrained the survey.

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.

Restricted View of External Parts of the Building

Not all of the external parts of the building could be inspected during the preliminary roost assessment. As the building is of considerable height, a close-up inspection of the roof was not possible and instead, observations were made at a distance using binoculars. However, this is not considered a significant constraint.

Restricted Access Due to Presence of Suspended Ceiling

Due to the presence of a suspended ceiling, the loft void located near the eastern elevation is located above a suspended ceiling. Therefore, a search for evidence of bats was constrained to areas near the loose tiles of the suspended ceiling only. However, a visual search was still conducted. Therefore, this restricted access is not considered a significant constraint.

Local Records Centre Data Search

A Local Records Centre (LRC) data search has not been undertaken to date but has been stated as being required by the county ecologist, and is recommended prior to the final bat report being completed.

3. Baseline Ecological Conditions

3.1 Desk Study

3.1.1 Bat Roosts Reported in Planning Applications Within the Same Postcode

The planning portal search¹³ 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 are shown in Plan 2: Protected Sites within 2km.

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

There are no SACs or SSSIs designated for bats within 10km of the building.

Other Protected Sites Within 2km

There are two additional SSSIs within 2km of the building:

Table 1: Statutory Sites Within 2km

Site Name	Description	Distance and Direction from Development Site	Development Impacts
Cwm Glo A Glyndyrys SSSI ¹⁴	Consisting of marshy grassland, species-rich neutral grassland, and lowland acid grassland, Cwm Glo A Glyndyrys hosts an important population of grassland fungi. The site encompasses a series of small enclosures surrounded by woodland, and extensive areas of open land with mature trees and scrub and woodland. Drainage is impeded in the small enclosures- supporting base-rich fen- meadow communities.	0.8km to the south-west.	There are no anticipated impacts on this protected site during development.
Cwm Taf Fechan Woodlands SSSI ¹⁵ and LNR	Consisting of semi-natural broadleaved woodland, Cwm Taf Fechan Woodland hosts a wide variety of plants including several rare species. The Taf Fechan crosses the north crop of Carboniferous Limestone. The humid conditions in the wooded ravine allow a particularly rich moss and liverwort flora to grow, with over a hundred species recorded. There are a number of scarce plant	1.9km to the north-west.	There are no anticipated impacts on this protected site during development.

¹³ <https://publicaccess.merthyr.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>

¹⁴ https://naturalresources.wales/media/665303/SSSI_1597_Citation_EN0015616.pdf

¹⁵ https://naturalresources.wales/media/642350/SSSI_0404_Citation_EN001d5eb.pdf

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	species, such as limestone fern. There are also areas of acid grassland, limestone grassland and dry heath.		
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There is no mention of bats in either of the SSSI citations, however, the sites are likely to be used by several bat species for foraging, commuting, and roosting.

Non-statutory Protected Sites

Sites of Importance for Nature Conservation (SINCs)

The Afon Taff SINC¹⁶ lies 0.1km from the building. It is designated as the major river in the County Borough. It includes areas of bankside habitats, particularly towards the south where the river corridor is less industrialised than further north. Associated habitats are chiefly semi-natural woodland, including areas of ancient semi-natural woodland and linear wet woodlands. There are also numerous neutral grasslands, scrub patches and bracken stands, as well as small areas of marshy grassland and tall herb vegetation. Notable features of the river course include cobble banks which support localised plants. Otter occurs throughout the length of the river which is known to be of value to a wide variety of birds, fish, bats and reptiles.

Ancient Woodland Sites

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

Table 2: Ancient Woodland Sites Within 2km

Ancient Woodland Site	Number within 2km of Site
Ancient Semi-Natural Woodland (ASNW) ¹⁷	Nine
Restored Ancient Woodland Sites (RAWS) ¹⁸	Three
Nearest Area of Ancient Woodland	An unnamed area of RAWS located 1.1km to the north of the site

Protected Sites Summary

Given the and localised nature of the proposed development, the limited ecological connectivity around the site and the distance between the proposed development and any designated or non-designated sites, as well as the limited scope for impacts outside of the footprint of the proposed works, no adverse impacts to the protected sites are likely to occur. These sites are not mentioned further in this report.

¹⁶ http://citations.lercwales.org.uk/sinc/mtr/Afon_Taf.pdf

¹⁷ 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.

¹⁸ 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.

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). Several streetlights are present on High Street, that the building is situated on which generate extensive artificial lighting, decreasing the quality of foraging and commuting bat habitat¹⁹.

Ecological Context

The habitats surrounding the building largely comprise other commercial buildings, with the exception of patches of woodland located to the north-west, and the River Taff 0.1km to the west. However, the building is ecologically isolated from these features, and there are no suitable continuous habitat corridors connecting the building and these habitats. Consequently, the site surrounding the building provides low-quality foraging and commuting bat habitat.

3.2.2 Building Description from the Perspective of Bat Habitat

The table below summarises the key features of the building:

Table 3: Key Features of the Building

Building Type	The building is a three-storey rendered brick and stone cladding structure (Photos 1 – 4).
Roof	The roof is pitched in parts and flat in others, and is constructed from concrete roof tiles. The roof tiles are generally well aligned and in good condition, and the edge tiles at the eaves are impeded by close-fitting guttering on all visible elevations. Edge tiles at the gable ends are not capped, but appears to be well sealed. Photos could not be obtained due to the distance to the roof tiles.
Lead Flashing	There is lead flashing at the south-east and western elevations which show lifting, exposing large gaps that may be used by roosting, crevice dwelling bats (Photos 5 – 6).
Soffits, Fascias and Bargeboards	The wooden soffits are well sealed in places. However, at the eastern elevation, the vent slat of one of the soffit boxes has fallen out leaving a large access point for roosting bats (Photo 7). Similarly, on the southern elevation at the gable, damage can be seen in the soffit which may provide access for bats (Photo 8).
Vents	There is one small vent found on the southern elevation at the ground floor and another at the western elevation, however due to their low positioning next to the high street, they are likely to be subject to high levels of noise and disturbance. Therefore, they are unlikely to be used by roosting bats (Photos 9 - 10).
Render	Sections of the building are concrete rendered, whilst others are stone clad (Photos 1 – 4). It is in very good condition across the building.
Windows	The windows have wooden frames and are tightly sealed with no gaps (Photos 1 - 4).
Roof Void	There are three roof voids in the building. All are in good condition and largely uncluttered, with no obvious access points or signs of recent use. The first lies near the northern elevation and encompasses a large space with two windows (Photos 11 - 12). The second lies towards the eastern elevation and could not be accessed

¹⁹ Lighting can impact on bats' roosting sites, commuting routes, and foraging areas.

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	safely due to its flooring being suspended ceiling (Photos 13 - 14). The third is found at the rear, at the western elevation, containing no obvious entry points for roosting bats (Photos 15 - 16).
Roof Lining	All sections of the pitched roof are lined with bitumen felt which is in good condition (Photos 11 & 15). No evident gaps were seen in the lining across the voids.
Roof Construction	All sections of the roof are supported on traditional rough sawn timbers with metal plates at the joints. The timbers in all roof voids are close-fitting, with no gaps, cavities, or crevices (Photos 11 & 15).
Insulation of Void	Some yellow fibreglass insulation is present in roof voids one and three on the floor (Photo 12 & 14).
Security Lighting	Lights are found along the eastern and southern elevation of the building as the ground floors are used for shopfronts (Photo 16).

Photos Showing the Building and its Features

Photo 1: South-East Elevation



Photo 2: Southern Elevation



Photo 3: South-West Elevation



Photo 4: North-West Elevation



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Photo 5: Lifted Lead Flashing South-East Elevation



Photo 6: Lifted Lead Flashing Western Elevation



Photo 7: Soffit Vent Gap Eastern Elevation, Circled



Photo 8: Hole in Soffit Southern Elevation, Circled



Photo 9: Southern Elevation Vent, Circled



Photo 10: Western Elevation Vent, Circled



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Photo 11: Roof Void One



Photo 12: Roof Void One



Photo 13: Roof Void Two



Photo 13: Roof Void Two



Photo 14: Roof Void Three



Photo 15: Roof Void Three

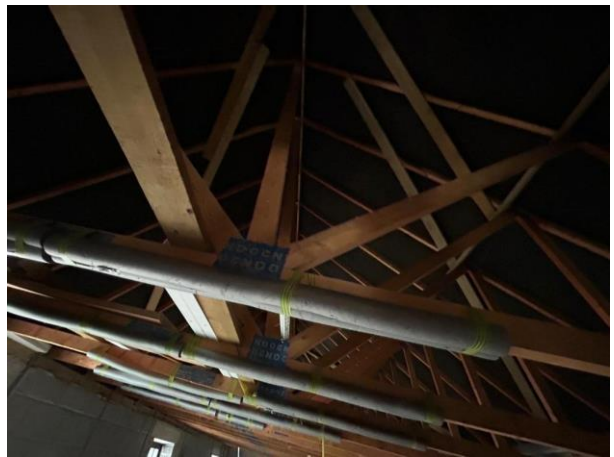


Photo 16: Shop Lighting Southern Elevation



3.2.3 Nesting Bird Survey

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

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 building.

4.2. Suitability of Summer Roosts

The building is assessed as having:

- Low suitability for use for crevice dwelling bats (Pipistrellus species and smaller Myotis species such as Brandt's (*Myotis brandtii*) and whiskered bats (*Myotis mystacinus*)). This is due to the presence of some access points and roost features, including under the lifted lead flashing, and the gaps in soffit boxes.
- Low suitability for use by roof-dwelling bats²⁰ (long-eared species (*Plecotus species*) and large Myotis bats, such as Natterer's bat (*Myotis nattereri*) and serotine bats (*Eptesicus seotinus*)). This is due to the presence of several potential access points and roost features. It is possible that the roof voids may be used by bats via the lifted lead flashing.. However, no evidence of bat roosts were located in the roof void which is generally conspicuous if bats are roosting within the void; and
- Negligible suitability for use by direct-access species requiring a large access point and large roost space (lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe (*Rhinolophus ferrumequium*) bats) as there are no sufficiently large access points for these species to gain entry.

The building 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).

4.3. Potential Winter Roosts

A full assessment of the potential for winter use (i.e., hibernation) will be undertaken after the completion of further dusk emergence and dawn re-entry 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 and dawn re-entry survey, and the assessment of its importance subsequently updated.

²⁰ 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.

5. Required Actions

5.1. Further Work

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, whether 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, 2016) state that one dusk emergence or dawn re-entry survey should be undertaken on a building with low roost suitability. The survey should be undertaken from May to August and will be supplemented by use of night-vision aids. To ensure that potential bat access/roosting features are covered, the survey will require three surveyors to be present (See Plan 3: Proposed Surveyor Positions).

5.2. Local Records Centre Search

A BARB+ data search was stated as being required by the County Ecologist in their memo²¹ provided as part of the application. This will be completed after the dusk emergence or dawn re-entry survey has been undertaken.

5.3. Licensing Requirements for Bats

It has not been possible to determine whether a Natural Resources Wales bat development licence will be required. This will be determined after the emergence/re-entry surveys have been completed.

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

These measures will be formulated after the completion of dawn re-entry and dusk emergence surveys.

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

These measures will be formulated after the completion of dawn re-entry and dusk emergence surveys.

5.6. Longevity of Report

Survey data should ideally be from the last survey season before a planning or licence application is submitted, although the length of time that survey data remains valid should be decided on a case-by-case basis and is dependent upon several factors²² (Collins, 2016). If development works do not begin within eighteen months to two years of the date of this report, an updated survey may be required in accordance

²¹ https://enterprise.merthyr.gov.uk/PublicAccess_LIVE/Document/ViewDocument?id=F7F138901473479B816E70444DA812A7

²² The factors identified are as follows: Were the original surveys carried out according to good practice guidelines?; Were the original surveys constrained in any way?; Do the results of the original surveys support the original conclusions and are these still relevant?; Has the nature of the site or the surrounding area changed since the original surveys were undertaken; and are additional surveys likely to provide information that is material to a decision, the design of mitigation measures, or specific advice relating to a proposed activity.

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with guidance in BS 42020:2013²³ and CIEEM (2019), to determine if conditions and bat usage has changed since described in the current report.

²³ As set out in Section 6.2.1, Point 7 which states that ecological information should not normally be more than two/three years old, or as stipulated in good practice guidance.

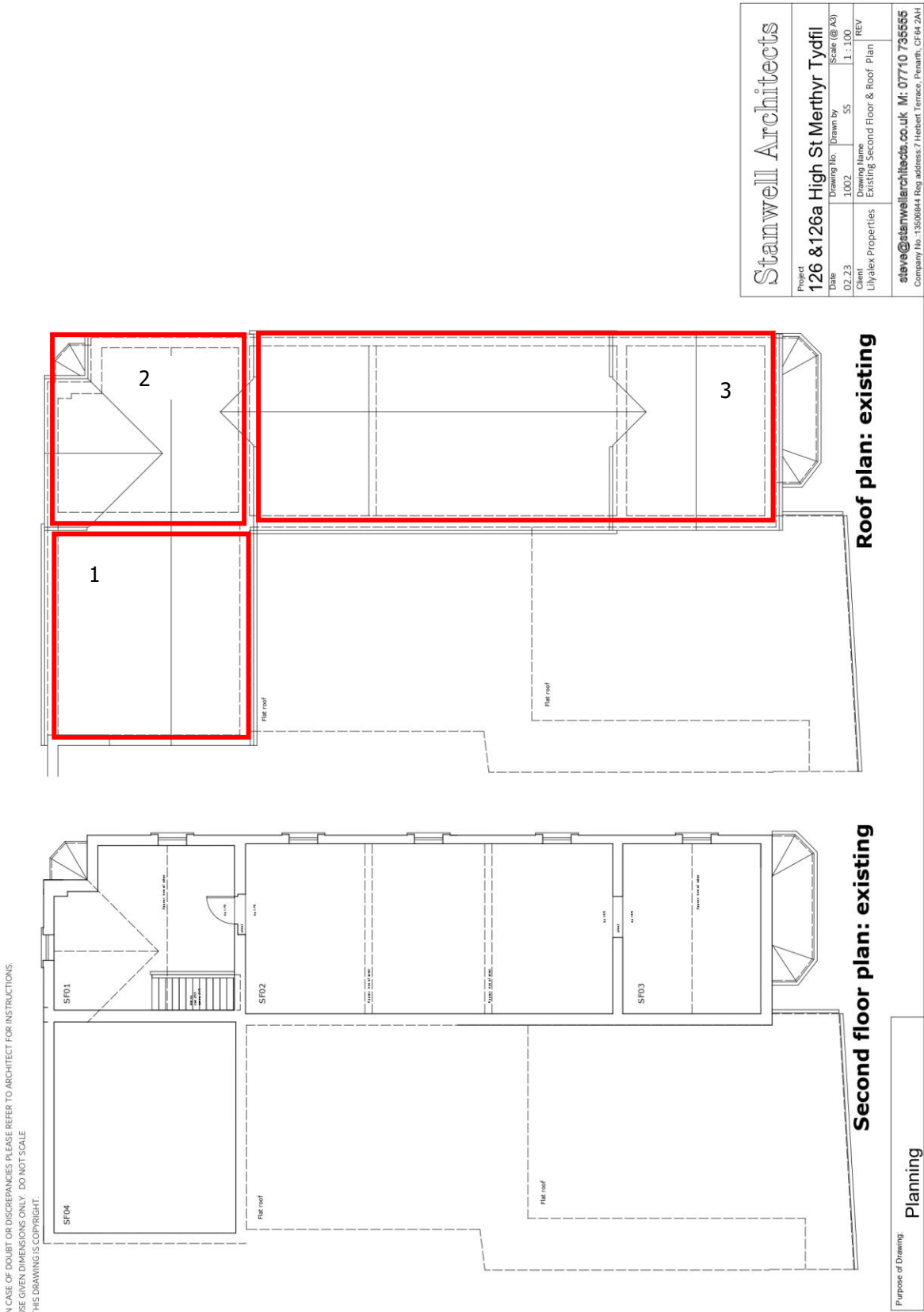
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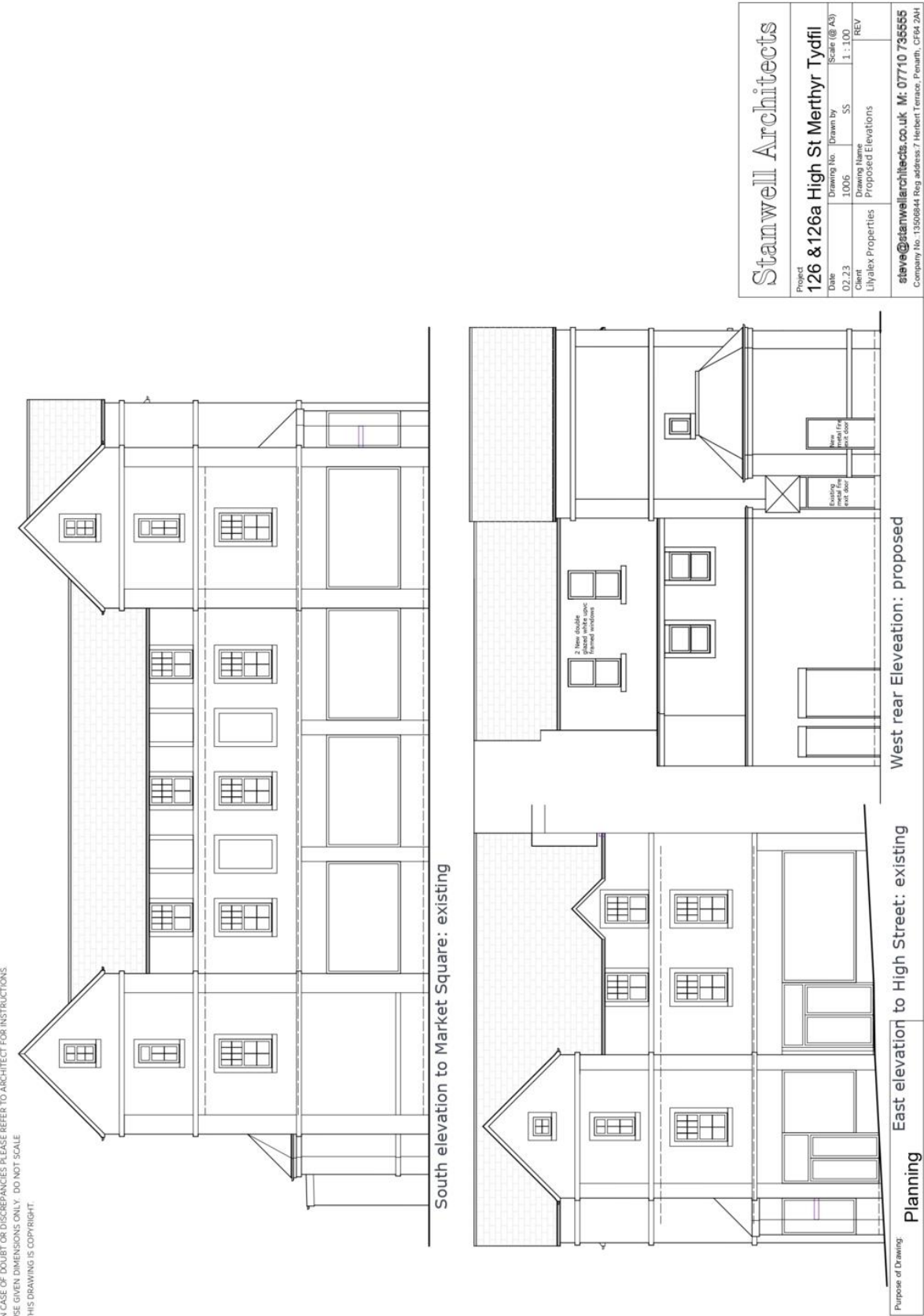
Drawing 1: Existing Site Plans



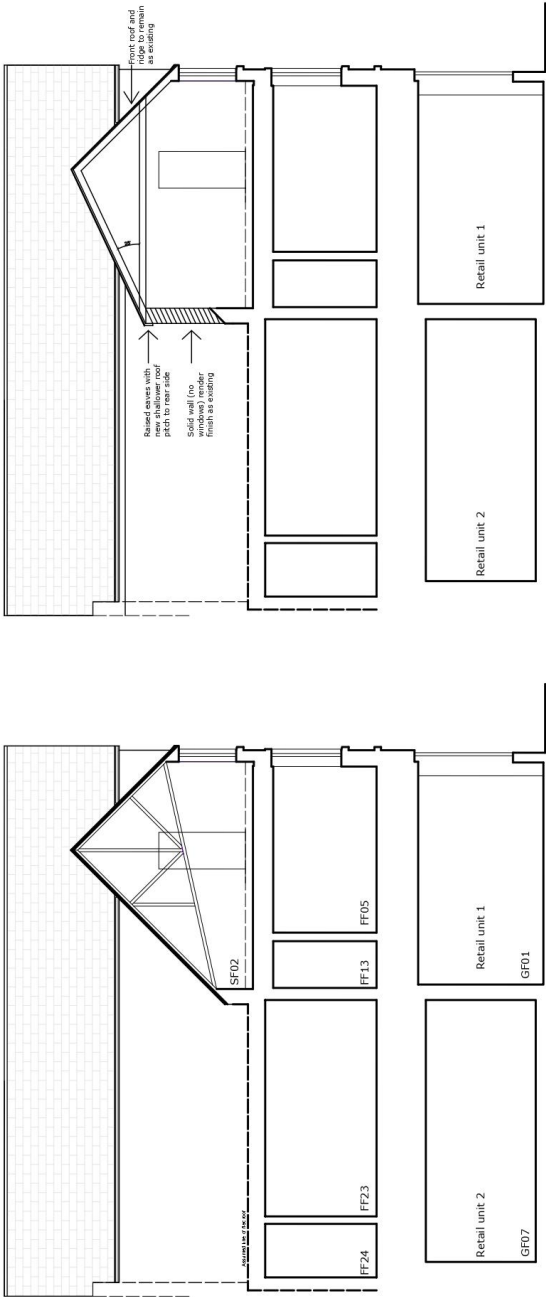
Roof voids are shown on the plan below:



Drawing 2: Proposed Development



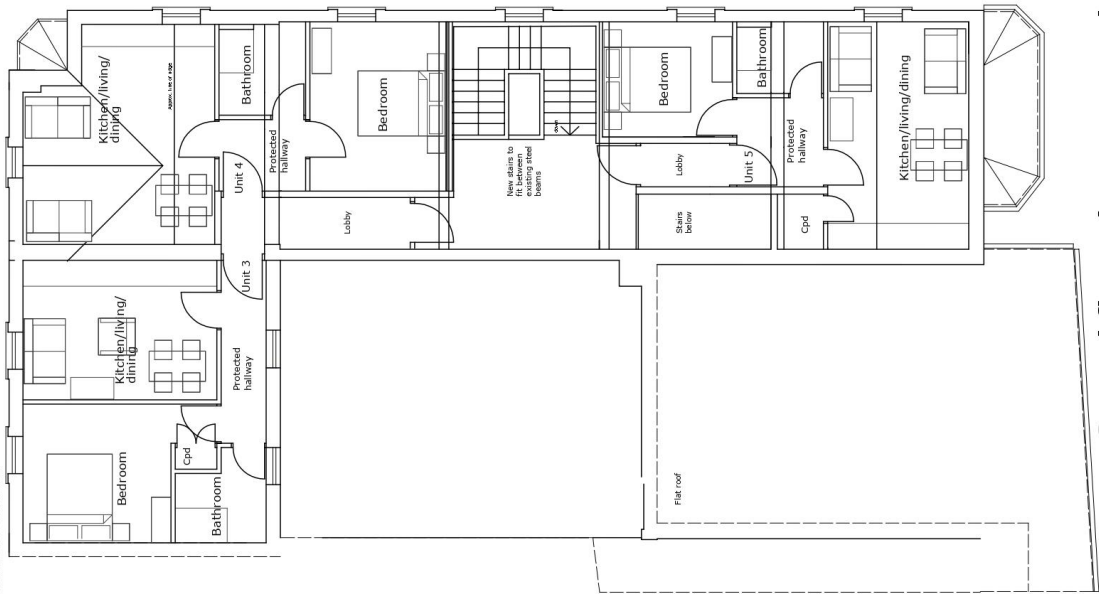
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Stanwell Architects			
Project	126 & 126a High St Merthyr Tydfil		
Date	Drawing No.	Drawn by	Scale (@ A3)
02.23	1007	SS	1 : 100
Client	Drawing Name		REV
Lilyalex Properties	Existing & Proposed Section AA		
steve@stanwellarchitects.co.uk			M: 07710 735555
Company No. 13508844 Reg address: 7 Herbert Terrace, Penarth, CF64 2AH			

Purpose of Drawing: Planning

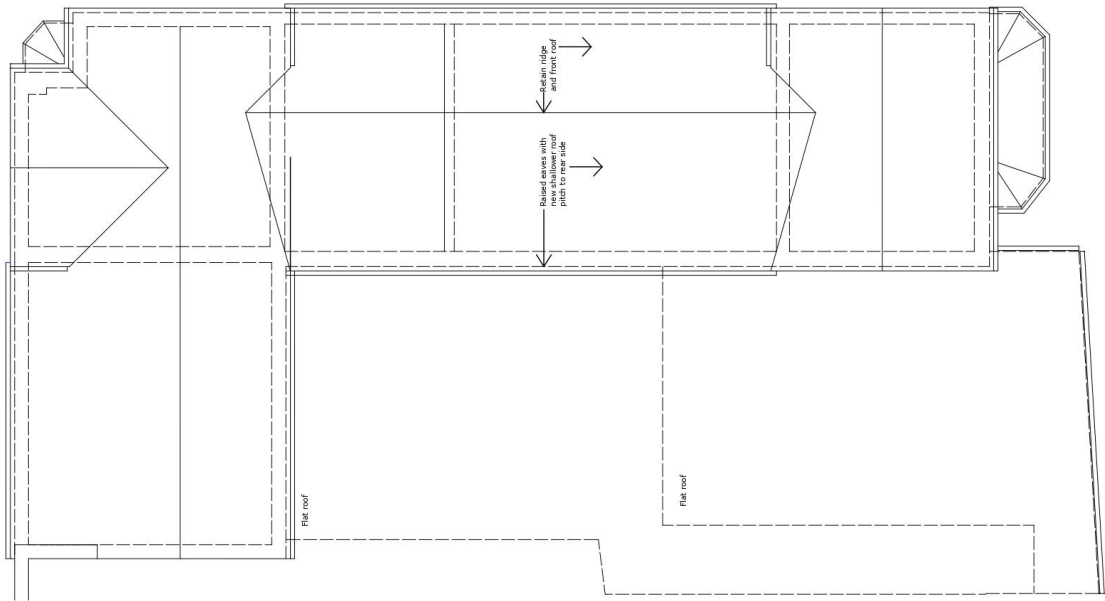
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Second floor plan: proposed

Purpose of Drawing:

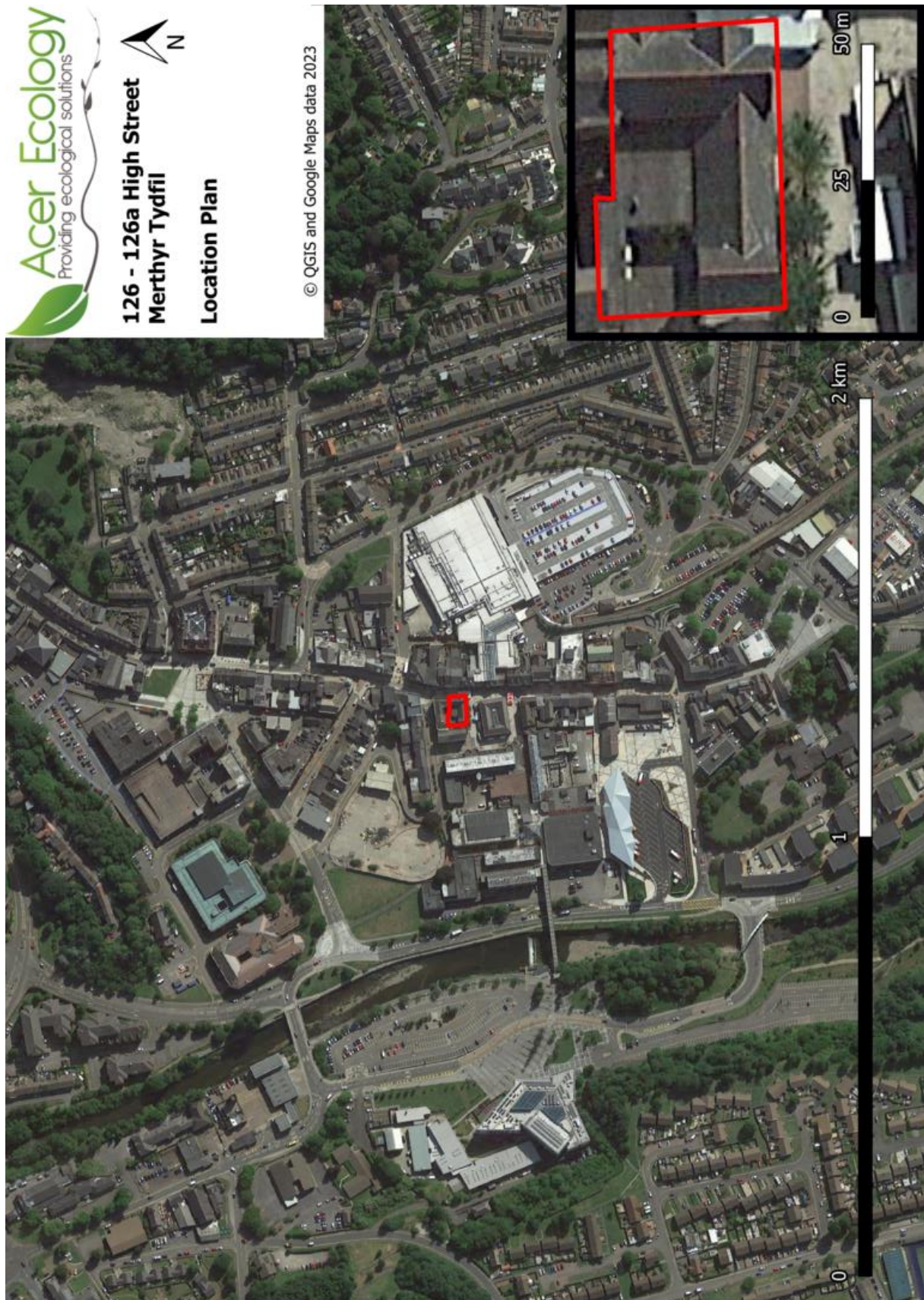
Planning



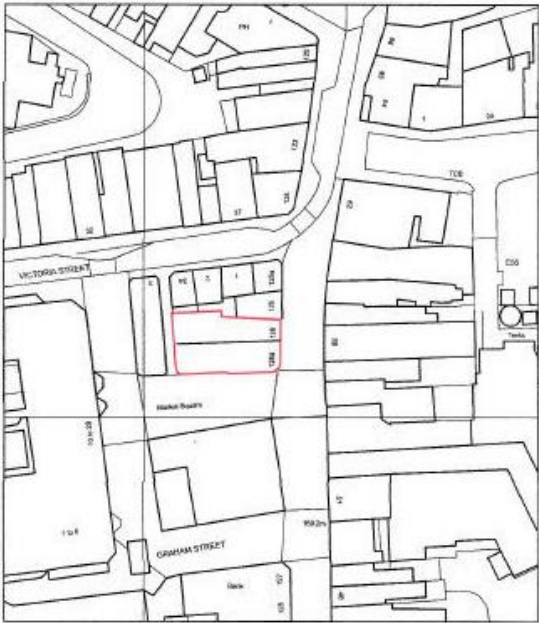
Roof plan: proposed

Stanwell Architects			
Project	126 & 126a High St Merthyr Tydfil		
Date	Drawing No.	Drawn by	Scale (@ A3)
02.23	1005	SS	1 : 100
Client	Drawing Name		
Llyvalex Properties	Proposed First Floor & Roof Plans		
			REV
stanwellarchitects.co.uk M: 07710 735555			
Company No: 13506844 Reg address: 7 Herbert Terrace, Penarth, CF64 2AH			

Plan 1: Location Plan



Plan 2: Location/Block Plan



Key
 Site boundary



Revisions

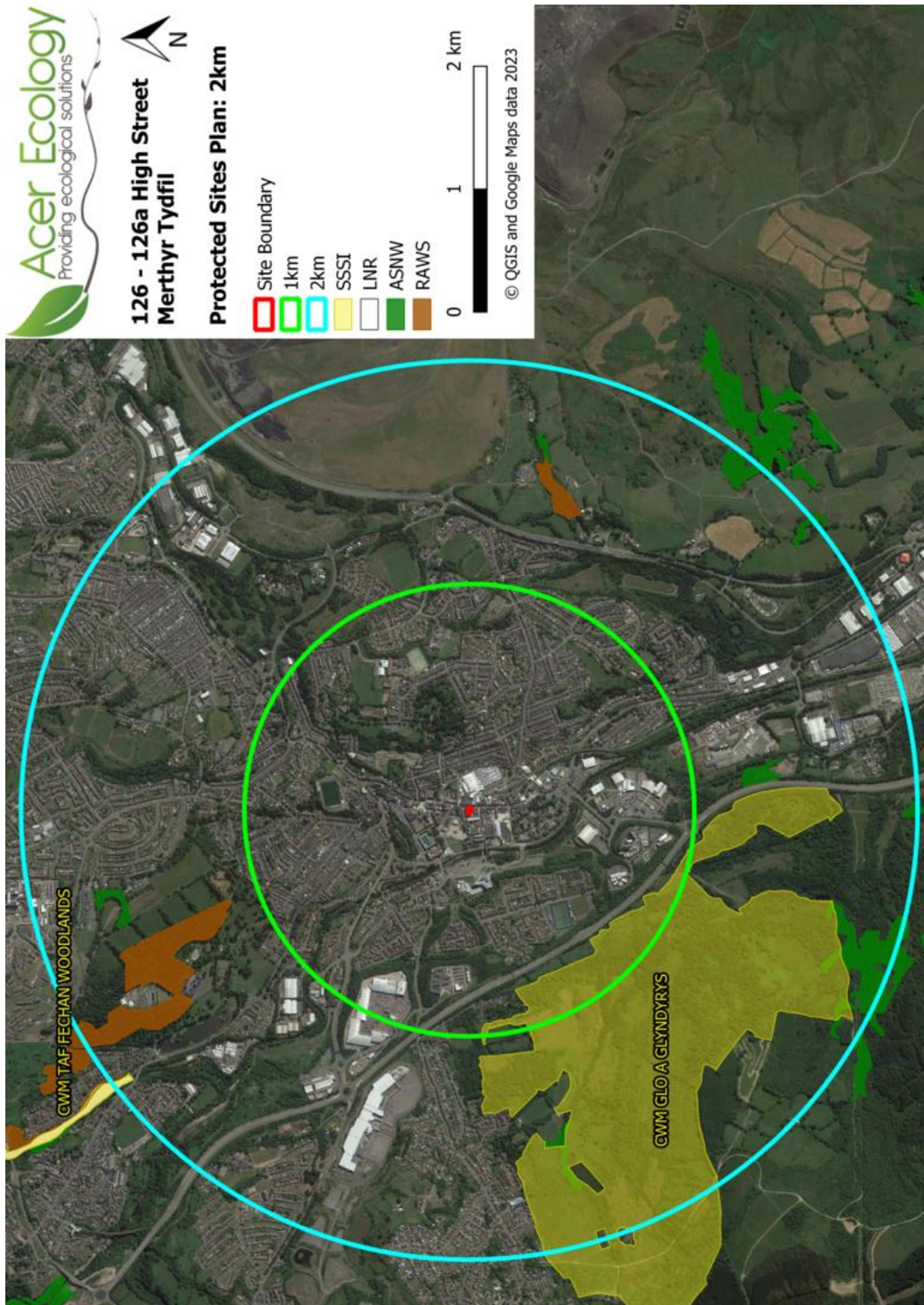
Stanwell Architects

Project
126 &126a High St Merthyr Tydfil

Date 02.23	Drawing No. 1000	Drawn by SS	Scale (@ A4) 1 : 1250
Client Lilyalex Properties	Drawing Name Site Location Plan		REV

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Plan 3: Protected Sites Within 2km



Plan 4: Proposed Surveyor Positions for Dusk Emergence or Dawn Re-entry Survey



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 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 amended Wildlife and Countryside Act 1981 through inclusion in Schedule 5. The roosts are protected irrespective of whether bats are present at the time. All bats fully protected under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) [‘CHSAEU’] Regulations 2019. 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 derogation 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 11 (2021) 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, TAN 5 and Section 40(1) of the Natural Environment and Rural Communities Act (NERC) 2006 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 and greater horseshoe bats).

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

Appendix 2: Guidelines for Assessing Potential Bat Roosting Suitability and Determining Required Number of Dusk/Dawn Surveys

Suitability	Description of Roosting Habitat	Minimum Number of Dusk/Dawn Surveys Required ²⁵
Negligible	Negligible habitat features on site likely to be used by roosting bats.	None.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection appropriate conditions ²⁶ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity) or hibernation ²⁷ .	One survey visit. One dusk emergence or dawn re-entry survey (Survey period from May to August) (Collins 2016).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status ²⁸ (with respect to roost type only) the assessments in this table are made irrespective of conservation status, which is established after presence is confirmed.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey ²⁹ . Surveys should be undertaken from May to September, with at least one of the survey between May and August (Collins 2016).
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 long periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. Surveys should be undertaken from May to September, with at least two of the surveys from May to August (Collins 2016).
Confirmed Roost	Evidence of bats or use of bats found.	Three separate surveys recommended to characterise the roost and support an NE licence application. If no evidence of bat roosting is detected during the dusk and dawn surveys, DNA analysis of the droppings may be required.

²⁵ Adapted from Tables 4.1 and 7.3 of the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).

²⁶ For example, in terms of temperature, humidity, height above ground levels, light levels or levels of disturbance.

²⁷ 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.*, 2015). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for large numbers of this species to be present during the autumn and winter in large buildings in highly urbanized environments.

²⁸ 'High roost status' is not defined within Collins, 2016. Acer Ecology Ltd. interpret maternity, hibernation, swarming sites, mating sites, and satellite roosts as being of 'high roost status' and exclude day roosts, night roosts, feeding roosts, transitional/occasional roosts from this definition. Pre-maternity/collecting roosts are not included within Collins, 2016 and will be assessed on an individual basis.

²⁹ Multiple surveys should be spread out to sample as much of the survey period as possible. It is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk survey is considered only one visit.

Acer Ecology

Appendix 3: Guidelines for Assessing Bat Habitat Suitability

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.