



**Former Davies Transport Depot,  
Abercanaid Industrial Estate, Merthyr Tydfil**

**Preliminary Roost Assessment**

**April 2023**

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APPENDIX 3: GUIDELINES FOR ASSESSING BAT HABITAT SUITABILITY

## DOCUMENT CONTROL

| Former Davies Transport, Abercanaid Industrial Estate, Merthyr Tydfil<br>Preliminary Bat Roost and Nesting Bird Assessment |               |                                                                                                                                |                                                                                                                               |                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Revision                                                                                                                   | Date          | Prepared by                                                                                                                    | Checked by                                                                                                                    | Approved by                                                                                                                        |
| 1.0                                                                                                                        | 13 April 2023 | Isabel Humphries<br>Assistant Ecologist<br> | Rebecca Corley<br>Assistant Ecologist<br> | Paul Hudson MCIEEM<br>Principal Ecologist<br> |

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# Acer Ecology

## Summary

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brief and Site Location                                    | This report presents the findings of a preliminary bat roost assessment and nesting bird survey of the Former Davies Transport Depot, located at the Willows, Abercanaid Industrial Estate, Abercanaid, Merthyr Tydfil, CF48 1YF. (Ordnance Survey Grid Reference: SO 0524 0491).                                                                                                                                                                                        |
| Proposed Works                                             | Development proposals include the alterations to the existing workshop to allow for the subdivision into four separate units. External alterations are also proposed, comprising a new covering to the roof and partial cladding to one side elevation. The windows are set to be sealed alongside the door entrance to side elevation. Four roller shutter doors are proposed on the northern elevation alongside the full render and repainting of all external walls. |
| Survey Methodology                                         | The preliminary bat roost assessment comprised a daytime internal and external inspection of the workshop, 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 workshop.<br>The workshop is within a moderate-quality area for foraging and commuting bats.                                                                                                                                                                                                                                                                                              |
| Suitability of the Building to Support Roosting Bats       | The workshop has an overall 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 building's exterior.                                                                                                                                                                                                                                                                                                                                                                   |
| Requirements for Additional Survey                         | Further surveys are required to determine if any bats are roosting within the workshop.<br>As the workshop has moderate roost suitability and current best practice guidelines (Collins, 2016) suggest that it should be subject to two additional dusk emergence or dawn re-entry surveys, undertaken between May and September. Four surveyors will be required for both surveys (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 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 workshop. This will be established after the dusk emergence and/or dawn re-entry 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 the Former Davies Transport Depot, located at The Willows, Abercanaid Industrial Estate, Abercanaid, Merthyr Tydfil, CF48 1YF (Ordnance Survey Grid Reference: SO 0524 0491)<sup>1</sup>. The Former Davies Transport Depot will be referred to as the 'workshop' for the remainder of this report.

The workshop is within the boundary of Merthyr Tydfil County Borough Council.

### 1.2. Site Description

The workshop is located in Abercanaid Industrial Estate, 1.5km south of the town of Merthyr Tydfil. It is surrounded by similar industrial buildings, which are each lined with trees and hedgerows, connecting the site to the wider surroundings. The wider landscape comprises ancient woodland and large agricultural fields, and the River Taff which lies 0.1km to the east of the site.

Its location is shown on Plan 1: Location Plan.

### 1.3. Proposed Works

The development proposals involve the alteration of the workshop into four separate units. External alterations to the building comprise a new covering to the roof and partial cladding to a side elevation. The existing windows are set to be sealed alongside the door entrance on the western elevation. Four roller shutter doors will be installed on the northern front with the render and repainting of all remaining external walls. A planning application has been submitted under reference P/22/0328<sup>2</sup>.

Existing and proposed plans can be found in Drawings 1 and 2: Development Proposals (Planning Reference number: P/22/0328).

### 1.4. Legislation and Planning Policy

#### 1.4.1. Bats

All UK bats are protected species. Their breeding sites or resting places<sup>3</sup> (roosts) are fully protected under the Wildlife and Countryside Act 1981<sup>4</sup> (as amended) and the Conservation of Habitats and Species Regulations 2017<sup>5</sup> which continues to apply in UK law through the Conservation of Habitats and Species

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<sup>1</sup> Latitude and Longitude: 51.734932 , -3.3736181 / what3words: clouds.breath.winter

<sup>2</sup><https://publicaccess.merthyr.gov.uk/online-applications/applicationDetails.do?activeTab=externalDocuments&keyVal=RK00T6KQIWP00>

<sup>3</sup> 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.

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

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

(Amendment) (EU Exit) [CHSAEU] Regulations 2019<sup>6</sup>. Works affecting bats are subject to licensing procedures by Natural Resources Wales (NRW). The legal protection and licensing procedures are summarised in Appendix 1.

## 1.4.2. Nesting Birds

All wild British birds (whilst building nests, nesting and sitting on eggs) and their nests and eggs, (with certain limited exceptions<sup>7</sup>) are protected by law under Section 1 of the Wildlife and Countryside Act 1981<sup>8</sup> (as amended) and the Countryside and Rights of Way Act 2000<sup>9</sup>. 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 workshop, 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.

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

<sup>7</sup> 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>

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

<sup>9</sup> <https://www.legislation.gov.uk/ukpga/2000/37>

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## 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 workshop was undertaken, looking for features that bats could use for entering/exiting and roosting<sup>10</sup>. 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 4<sup>th</sup> April 2023 by Daisy Smith<sup>11</sup> with the assistance of Isabel Humphries<sup>12</sup> and Evan Sutcliffe<sup>13</sup>.

A high-powered torch (Clulite), 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.

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<sup>10</sup> 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).

<sup>11</sup> Daisy graduated with a degree in Zoology from the University of Southampton. She is an Assistant Ecologist with Acer Ecology and has undergone training in botanical, habitat, and protected species surveys.

<sup>12</sup> 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>

<sup>13</sup> Evan graduated from the University of South Wales with a degree in International Wildlife Biology. He is currently working as an Assistant Ecologist at Acer Ecology and is looking to further his skills in report writing, reptile surveys and eDNA methods.

## **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.

### Restricted Access

Not all parts of the workshop could be inspected during the preliminary roost assessment. One of the storage rooms could not be accessed due to a sealed door. Additionally, the interior of the eastern extension could not be accessed. However, the survey is only slightly constrained, and this is not considered to have significantly affected the accuracy of the roost assessment as further surveys have been recommended.

### 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 search<sup>14</sup> 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 Within 2km.

##### 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 workshop.

##### Other Protected Sites Within 2km

Cwm Glo a Glyndyrys SSSI<sup>15</sup> is the only SSSI located within 2km of the workshop. It is located 0.2km west of the site and is designated for its marshy grassland, species-rich neutral grassland, lowland acid grassland and 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.

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

##### Non-statutory Protected Sites

##### Ancient Woodland Sites

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

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<sup>14</sup> <https://publicaccess.merthyr.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>

<sup>15</sup> [https://naturalresources.wales/media/665303/SSSI\\_1597\\_Citation\\_EN0015616.pdf](https://naturalresources.wales/media/665303/SSSI_1597_Citation_EN0015616.pdf)

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Table 1: Ancient Woodland Sites Within 2km

| Ancient Woodland Site                                      | Number within 2km of Site                                     |
|------------------------------------------------------------|---------------------------------------------------------------|
| Ancient Semi-Natural Woodland (ASNW) <sup>16</sup>         | 29                                                            |
| Restored Ancient Woodland Sites (RAWS) <sup>17</sup>       | Six                                                           |
| Plantations on Ancient Woodland Sites (PAWS) <sup>18</sup> | Seven                                                         |
| Ancient Woodland Sites of Unknown Category <sup>19</sup>   | Four                                                          |
| Nearest Area of Ancient Woodland                           | An unnamed area of ASNW located 0.1km to the west of the site |

## Protected Sites Summary

Given the small scale and localised nature of the proposed development, 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.

## 3.2. Field Study

### 3.2.1. Lighting and Ecological Context

#### Lighting

The site is within an E4: Urban lighting zone, with medium district brightness (Institute of Lighting Professionals, 2012). Some streetlights are present in Abercanaid Industrial Estate, where the workshop is situated on, which generate extensive artificial lighting, decreasing the quality of foraging and commuting bat habitat<sup>20</sup>.

#### Ecological Context

The habitats surrounding the workshop includes a hedgerow and tree-lined industrial estate. The lines of hedgerows and trees form a continuous habitat corridor between the workshop and the surrounding landscape, which comprises ancient woodland 0.1km to the west with tree-lined agricultural fields lying further west. Additionally, the River Taff can be found 0.1km to the east of the site. These habitats provide high-quality foraging and commuting opportunities for bats. However, due to the workshop's close proximity to the A470 (0.2km to the west) and the limited ecological connectivity between the workshop

<sup>16</sup> 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.

<sup>17</sup> 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.

<sup>18</sup> Plantation on Ancient Woodland Sites (PAWS) – sites which are believed to have been continuously wooded for over 400 years and currently have a canopy cover of more than 50 percent non-native conifer tree species.

<sup>19</sup> Ancient Woodland Site of Unknown Category (AWSU) – woodlands which may be ASNW, RAWS or PAWS. These areas are predominantly in transition and existing tree cover is described as 'shrubs', 'young trees', 'felled' or 'ground prepared for planting'.

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

and the river, the site cannot be considered of high-quality for bats. Consequently, the site provides moderate-quality bat foraging and commuting habitat.

## 3.2.2. Building Description from the Perspective of Bat Habitat

The table overleaf summarises the key features of the workshop.

Table 2: Key Features of the Workshop

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Building Type                     | The workshop is a two-storey structure comprised of brick, mortar and breezeblocks (Photos 1 - 4). A one-storey extension is located on the eastern front of the workshop.                                                                                                                                                                                                                                                                                                                                           |
| Roof                              | The roof of the workshop is dual pitched and constructed from corrugated metal sheets, with translucent plastic corrugated sheets acting as windows. There is a dormer-style section of the roof located on the northern front near the large metal doors (Photo 5). The ridge tiles are constructed of corrugated sheets (Photos 1 - 2). The corrugated sheets are generally well aligned, with small gaps noted where the sheets overlap one another (Photo 6). These small gaps may be utilised by roosting bats. |
| Soffits, Fascias, and Bargeboards | The timber bargeboards located on the northern and eastern front of the workshop are noted to have gaps that could feasibly be utilised by roosting bats. On the eastern front of the extension, the timber bargeboards sit proud of the wall (Photo 7). The timber fascia located on the extension is broken where the extension adjoins the main workshop (Photo 8). These features can be utilised by crevice dwelling bats.                                                                                      |
| External Walls                    | The external walls on all elevations are noted to be damaged with cracks that could be utilised by crevice dwelling bats (Photo 9).                                                                                                                                                                                                                                                                                                                                                                                  |
| Render                            | Sections of the workshop are rendered, whilst others have exposed breezeblock and brick work (Photos 1 - 4).                                                                                                                                                                                                                                                                                                                                                                                                         |
| Windows and Doors                 | There are disused windows on the southern face of the workshop. These windows do not sit entirely flush to the corrugated sheets, creating gaps which may be used by crevice dwelling bats (Photo 10). The doors are constructed from timber plywood and metal. None of the doors sit flush to the adjoining walls providing access into the workshop's interior (Photo 11).                                                                                                                                         |
| Vents                             | One large ventilation hole is noted in the interior of the workshop which provides access into the interior (Photo 12).                                                                                                                                                                                                                                                                                                                                                                                              |
| Void                              | There is no dedicated roof void inside the workshop (Photos 13 - 14).                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Extension                         | There is a single-storey extension on the eastern front of the workshop. It is constructed from breezeblocks and brick and mortar with concrete rendering (Photo 2). The roof is mono-pitched and constructed from corrugated metal and translucent plastic sheets. The exterior has cracks and holes noted on the concrete render on the northern front which may be utilised by roosting bats (Photo 15).                                                                                                          |
| Security Lighting                 | Security lights are present on the northern front. However, they are not in use.                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Photos Showing the Workshop and its Features

Photo 1: Northern Elevation of Workshop



Photo 2: Eastern Elevation of Workshop



Photo 3: Southern Elevation of Workshop



Photo 4: Western Elevation of Workshop



Photo 5: Dormer Roof Northern Front



Photo 6: Overlapping Corrugated Sheets



Photo 7: Lifted Bargeboards Eastern Extension, Circled



Photo 8: Eastern Extension Broken Timber Fascia



Photo 9: Cavity in External Wall Northern Front



Photo 10: Southern Elevation Window Gaps



Photo 11: Northern Front Doors



Photo 12: Large Interior Vent



Photo 13: Workshop Interior

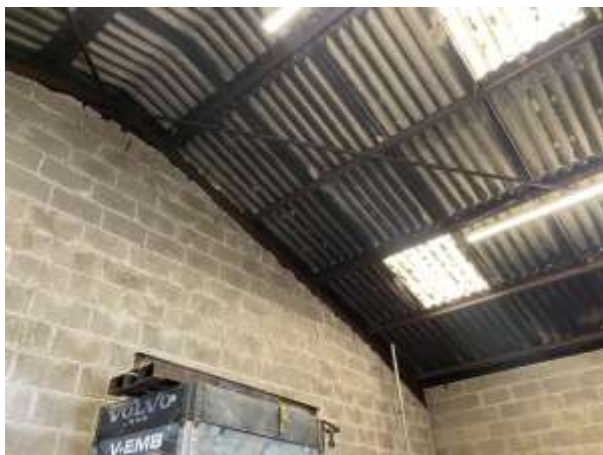


Photo 14: Workshop Interior



Photo 15: Brickwork on Northern Face of Extension



### 3.2.3. Nesting Bird Survey

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

## 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 workshop.

### 4.2. Suitability of Summer Roosts

The building is assessed as having:

- Moderate 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 the cracks in the exterior walls, and the gaps beneath the timber bargeboards and fascia;
- Low suitability for use by roof-dwelling bats<sup>21</sup> (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 potential access points into the interior and roost features. Although there is no dedicated roof void, void-dwelling species can also exploit crevice-like features; and
- Low 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 the large vent in storage room 2 is the only large access point which is suitable for use by these species. However, the surrounding landscape is urban in nature with moderate levels of lighting.

The workshop 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

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 surveys, and the assessment of its importance subsequently updated.

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<sup>21</sup> 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 two separate survey visits should be undertaken on a building with moderate roost suitability comprising one dusk emergence and a separate dawn re-entry survey. 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, both surveys will require four surveyors to be present (see Plan 4: Proposed Surveyor Positions).

Surveys should be timed to sample as much of the survey period as possible, undertaken at intervals of at least two weeks apart, or preferably more (Collins, 2016). 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.

### **5.2. Local Records Centre Search**

A BARB+ data search was stated as being required by the County Ecologist in their memo provided as part of the application. This will be completed after the dusk emergence and dawn re-entry surveys have 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 factors<sup>22</sup> (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 with guidance in BS 42020:2013<sup>23</sup> and CIEEM (2019), to determine if conditions and bat usage has changed since described in the current report.

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<sup>22</sup> 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.

<sup>23</sup> 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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## 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) (2016)** *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

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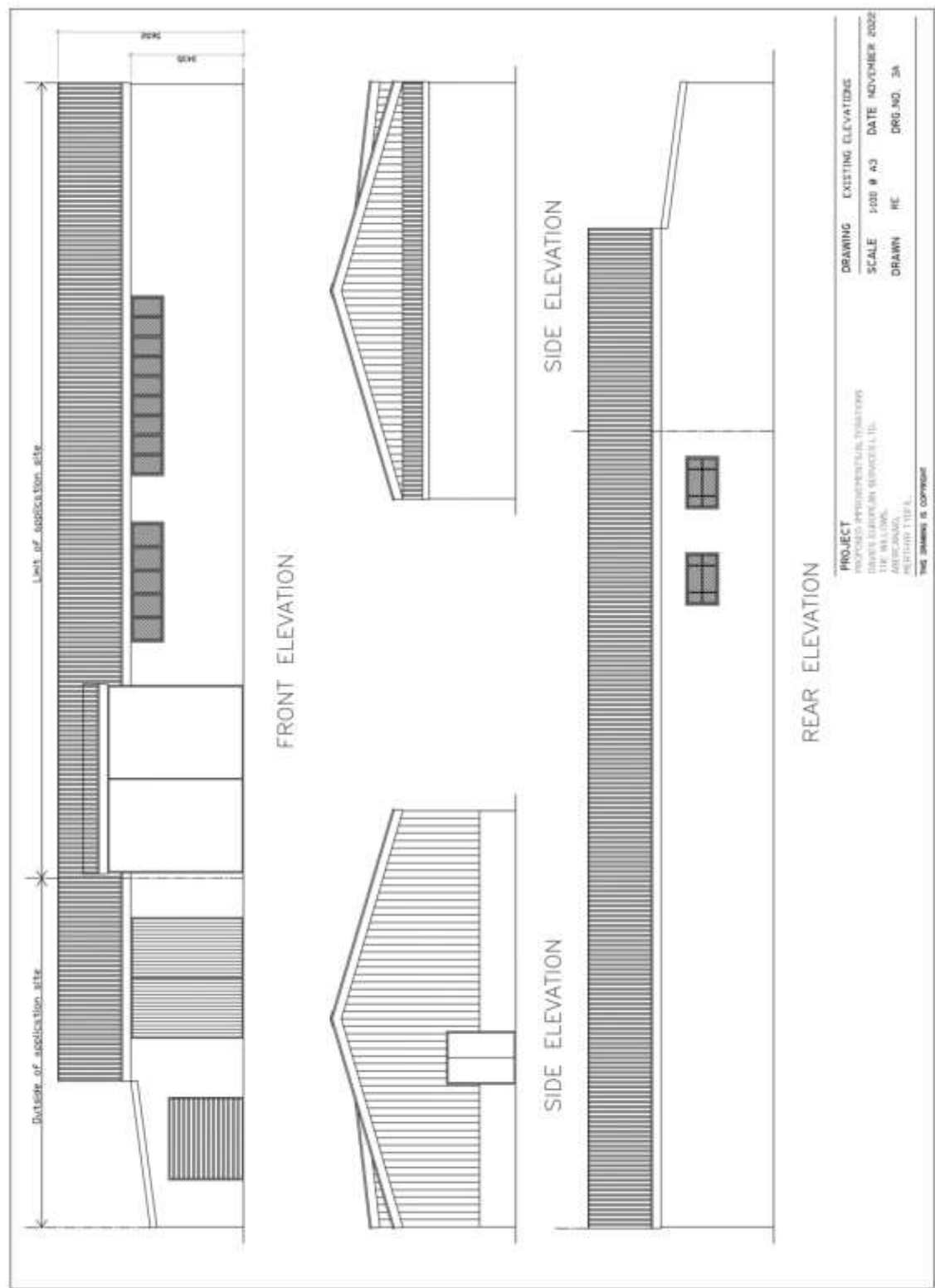
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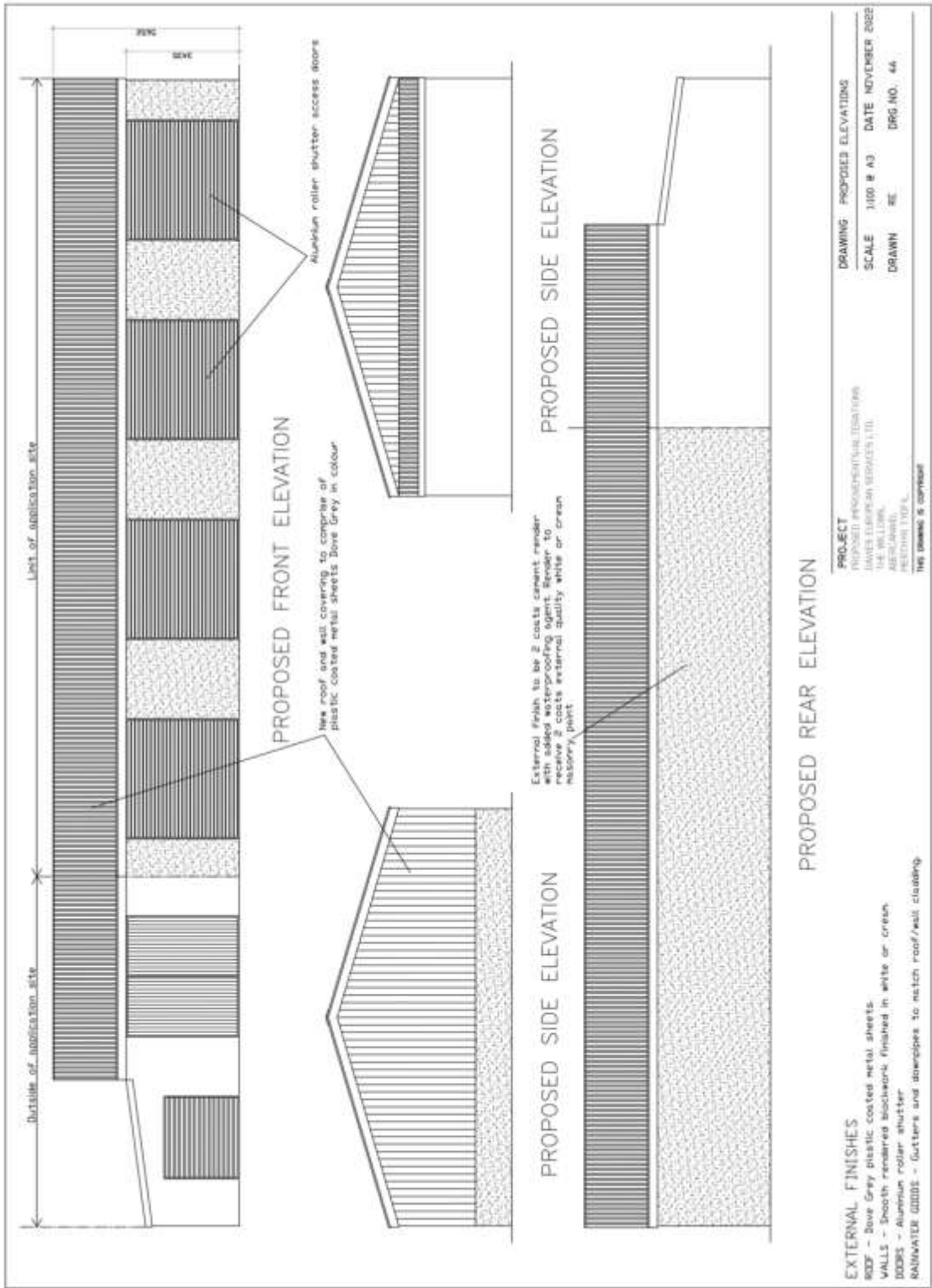
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Drawing 1: Existing Site Plans



Drawing 2: Proposed Development



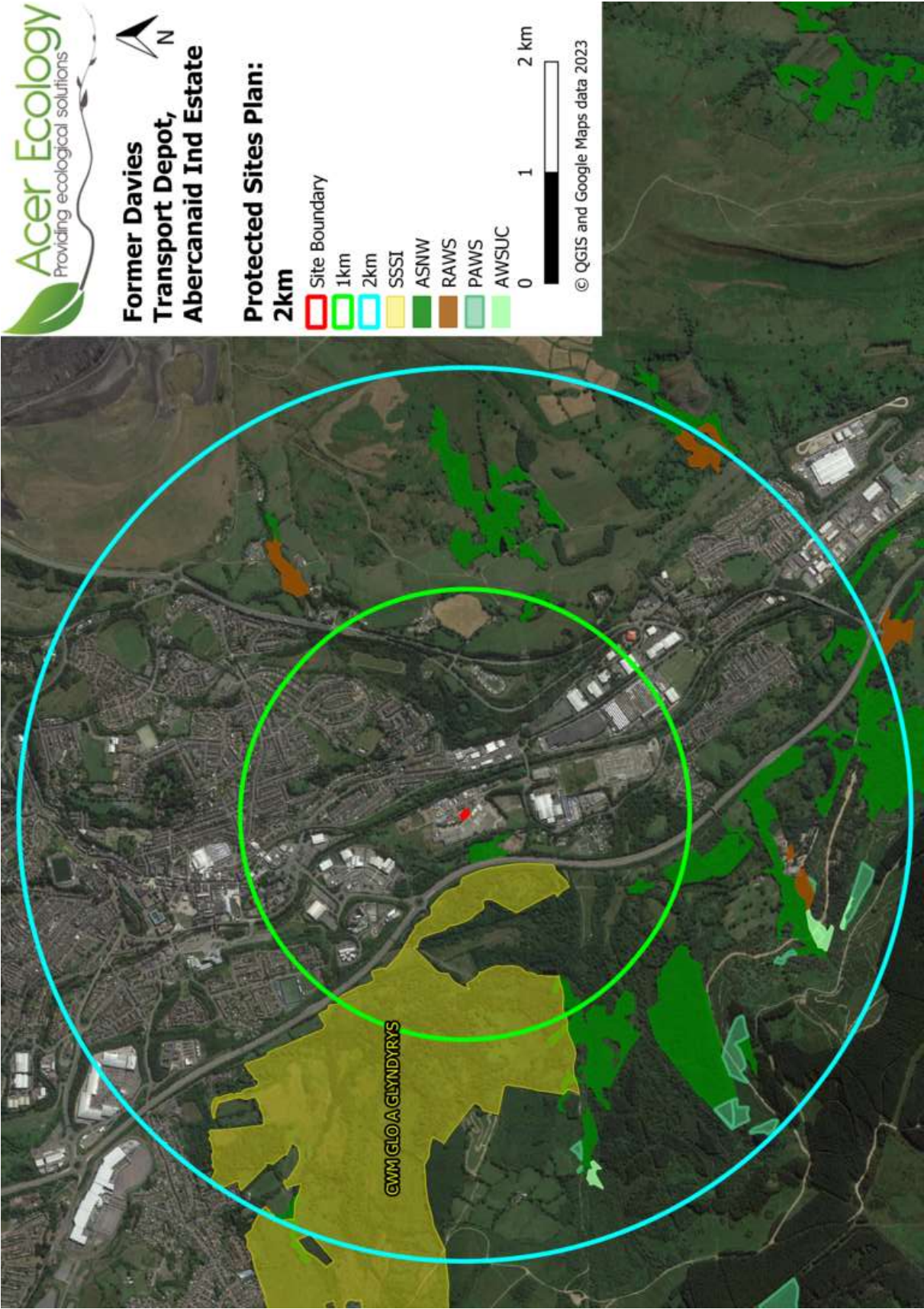
**Plan 1: Location Plan**



**Plan 2: Location/Block Plan**



Plan 3: Protected Sites Within 2km



Plan 4: Proposed Surveyor Positions for Dusk Emergence and Dawn Re-entry Surveys



## 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 2016<sup>24</sup> 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).

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<sup>24</sup> <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 <sup>25</sup>                                                                                                                                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 <sup>26</sup> 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 <sup>27</sup> . | 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 <sup>28</sup> (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 <sup>29</sup> . 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.                                      |

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

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

<sup>27</sup> 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.

<sup>28</sup> '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.

<sup>29</sup> 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.

## 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         | <p><u>Commuting Habitat</u><br/>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.</p> <p><u>Foraging Habitat</u><br/>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.</p>                                                                                                                                                                        |
| Moderate    | <p><u>Commuting Habitat</u><br/>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.</p> <p><u>Foraging Habitat</u><br/>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>                                                                                                                                                                                                                                |
| High        | <p><u>Commuting Habitat</u><br/>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.</p> <p><u>Foraging Habitat</u><br/>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.</p> <p><u>Proximity to Known Bat Roosts</u><br/>The site is close to and connected to known roosts.</p> |