



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

Bat and Nesting Bird Survey Report

September 2023

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DOCUMENT CONTROL

Former Davies Transport, Abercanaid Industrial Estate, Merthyr Tydfil Preliminary Bat Roost and Nesting Bird Assessment				
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Bat and Nesting Bird Survey				
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Summary

Brief and Site Location	This report presents the findings of a bat 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 survey comprised the following: • A preliminary bat roost assessment of the workshop, searching for signs of bats and nesting birds; and • Two dusk emergence surveys of the workshop.
Results of Surveys	No signs of bats were found during the internal and external inspection of the workshop. The workshop is within a moderate-quality area for foraging and commuting bats.
Evidence of Nesting Birds	No evidence of past or current nesting by birds was recorded either within or on the workshop's exterior.
Predicted Impacts of Development on Bats and Nesting Birds	Based on the conclusion that bats are unlikely to be using the workshop as a roost site, no negative impacts on bats and nesting birds are anticipated.
Mitigation and Compensation of Proposed Impacts	None required.
Licensing Requirements for Bats	A protected species licence from NRW is not required as the bat survey results indicate a likely absence of roosting bats in the workshop.
Required Actions	Detailed recommendations are given in Section 6 of this report. These include precautionary methods and guidance for action to take if bats are found during the works.

1. Introduction

1.1. Brief and Site Location

This report presents the findings of a bat and nesting bird survey of a workshop within Former Davies Transport Depot, located at The Willows, Abercanaid Industrial Estate, Abercanaid, Merthyr Tydfil, CF48 1YF (Ordnance Survey Grid Reference: SO 0524 0491)¹. 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 workshop 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/22/0328².

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 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

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

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

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>

(Amendment) (EU Exit) [‘CHSAEU’] Regulations 2019⁶. 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 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 survey comprised the following:

- A preliminary roost assessment of the workshop, searching for signs of bats and nesting birds
- A desk study to identify existing information on statutory and non-statutory sites of nature conservation interest, and records of notable or protected habitats or species within the site and its surrounding area; ; and
- Two dusk emergence surveys of the workshop.

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.

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

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 workshop 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 4th April 2023 by Daisy Smith¹¹ with the assistance of Isabel Humphries¹² and Evan Sutcliffe¹³.

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. Dusk Emergence Surveys

Four surveyors: Alice Thorne, Nikita Battersby, Ellen Medway and Aiden Gibson undertook the dusk emergence survey on the 29th of July 2023. Four surveyors: Rebecca Corley, Isabel Humphries, Rebecca Jones and Maiya Evans undertook the dusk emergence survey on the 30th August 2023. Surveyor details can be found in Appendix 5. The surveyors were all equipped with Elekon Batlogger M bat detectors,

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 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.

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>

¹³ 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.

Echometer EM3+ bat detectors, or Anabat Scout bat detectors. The whole of the warehouse was kept in view of the surveyors at all times. Each surveyor was also equipped with a Nightfox red infrared camera each supplemented with a Nightfox XB5 850nm Infrared LED flashlight. Infrared cameras have the advantage that they are always on and not prone to distraction and they particularly aid the detection of bats in low light levels from 45-90 minutes after sunset. Video footage was subsequently viewed using VLC media viewer.

The evening dusk emergence surveys commenced 15 minutes prior to sunset, and continued until 90 minutes after sunset. Surveyors were positioned at viewpoints where they had good sight of all elevations of the workshop, so that all potential roosting features could be observed to detect any bat emerging from, or re-entering, the workshop. Bat activity near the workshop was recorded to help ascertain flight lines. In accordance with Section 2.6.1 of the Bat Conservation Trust's Bat Surveys for Professional Ecologists (Collins, 2016) surveys were undertaken during nights with temperatures above 10°C at sunset and during mornings where the previous sunset temperature was above 10°C. The surveys were also undertaken in the absence of rain and strong wind (5.4 m/s or greater, which is equivalent to 13 mph or Beaufort 4).

2.2.4. 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.

2.2.5. 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.

3. Results

3.1. Desk Study

3.1.1. Bats

SEWBRc returned a total of 7 records of bat roosts within 1km of the site. The roost records are summarised in the table below.

Table 1: Bat Roost Records

Species	Total Number of Records	Distance to Nearest Record	Most Recent Record	Maximum Count
Pipistrelle bat species (<i>Pipistrellus sp.</i>)	Two	0.36km	26/05/2005	1
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	Two	0.55km	17/05/2022	1
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Three	0.55km	17/05/2022	1

In addition to the roost records, SEWBRc returned many records of bats foraging or commuting within 1km of the site. These included: common pipistrelle, soprano pipistrelle, noctule (*Nyctalus noctule*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and myotis species.

There were no records of bat surveys having been previously undertaken on the workshop on the Local Authority planning portal.

The local bat group held no records of bats surveys having previously been undertaken of the workshop.

3.1.2. Notable Plant Species

SEWBRc returned records of 20 rare and/or 'notable' plants (including species regarded as 'Locally Important', LBAP species and UK Red Data Book-listed species).

One priority plant species were recorded within 1km of the site, namely: bluebell (*Hyacinthoides non-scripta*).

Two plants listed as species of conservation concern were recorded within 1km of the site, namely: soft-leaved sedge (*Carex montana*), and tall hawkweed (*Hieracium acuminatum*).

11 plant listed as locally important species were recorded within 1km of the site, namely: bee orchid (*Ophrys apifera*), fragrant agrimony (*Agrimonia procera*), nodding bur-marigold (*Bidens cernua*), greater pond-sedge (*Carex riparia*), bladder-sedge (*Carex vesicaria*), alder buckthorn (*Frangula alnus*), grass vetchling (*Lathyrus nissolia*), smith's pepperwort (*Lepidium heterophyllum*), myosotis laxa subsp. caespitosa (*Myosotis laxa subsp. caespitosa*), dwarf elder (*Sambucus ebulus*), and unbranched bur-reed (*Sparganium emersum*).

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Six species were listed as other notable plant species (i.e. invasive species) recorded within 1km of the site, namely: hollyberry cotoneaster (*Cotoneaster bullatus*), japanese knotweed (*Fallopia japonica*), himalayan balsam (*Impatiens glandulifera*), least duckweed (*Lemna minuta*), snowberry (*Symphoricarpos albus*), and greater periwinkle (*Vinca major*).

3.1.3. Birds

SEWBRc returned records of 29 priority bird species within 1km of the site, namely: goshawk (*Accipiter gentilis*), skylark (*Alauda arvensis*), kingfisher (*Alcedo atthis*), tree pipit (*Anthus trivialis*), black-headed gull (*Chroicocephalus ridibundus*), cuckoo (*Cuculus canorus*), reed bunting (*Emberiza schoeniclus*), peregrine (*Falco peregrinus*), kestrel (*Falco tinnunculus*), pied flycatcher (*Ficedula hypoleuca*), brambling (*Fringilla montifringilla*), herring gull (*Larus argentatus*), linnet (*Linaria cannabina*), red kite (*Milvus milvus*), curlew (*Numenius arquata*), house sparrow (*Passer domesticus*), marsh tit (*Poecile palustris*), dunnoek (*Prunella modularis*), bullfinch (*Pyrrhula pyrrhula*), starling (*Sturnus vulgaris*), redwing (*Turdus iliacus*), song thrush (*Turdus philomelos*), fieldfare (*Turdus pilaris*), barn owl (*Tyto alba*), lesser redpoll (*Acanthis cabaret*), crossbill (*Loxia curvirostra*), spotted flycatcher (*Muscicapa striata*), wood warbler (*Phylloscopus sibilatrix*), and willow tit (*Poecile montanus*).

24 birds listed as species of conservation concern were recorded within 1km of the site, namely: common sandpiper (*Actitis hypoleucos*), long-tailed tit (*Aegithalos caudatus*), teal (*Anas crecca*), mallard (*Anas platyrhynchos*), meadow pipit (*Anthus pratensis*), swift (*Apus apus*), grey heron (*Ardea cinerea*), greenfinch (*Chloris chloris*), dipper (*Cinclus cinclus*), snipe (*Gallinago gallinago*), swallow (*Hirundo rustica*), lesser black-backed gull (*Larus fuscus*), grey wagtail (*Motacilla cinerea*), wheatear (*Oenanthe oenanthe*), cormorant (*Phalacrocorax carbo*), willow warbler (*Phylloscopus trochilus*), green woodpecker (*Picus viridis*), goldcrest (*Regulus regulus*), whinchat (*Saxicola rubetra*), woodcock (*Scolopax rusticola*), mistle thrush (*Turdus viscivorus*), coot (*Fulica atra*), redstart (*Phoenicurus phoenicurus*), and sand martin (*Riparia riparia*).

SEWBRc also returned one bird listed as locally important species within 1km of the site, namely: nightingale (*Luscinia megarhynchos*).

There were no birds listed as other bird species (i.e. invasive species) recorded within 1km of the site.

3.1.4. Dormice

SEWBRc did not return any records of dormice from within 1km of the site.

3.1.5. Badgers/ Otters / White-Clawed Crayfish

SEWBRc did not return any records of badger, otter and white-clawed crayfish from within 1km of the site.

3.1.6. Reptiles

SEWBrEC returned six records of reptiles within 1km of the site. These included: one record of slow-worm (*Anguis fragilis*), one common lizard (*Zootoca vivipara*), one grass snake (*Natrix Helvetica*), and two great crested newt (*Triturus cristatus*) records.

3.1.7. Other Mammals

SEWBrEC returned three records of other mammals within 1km of the site, comprising: three common hedgehog (*Erinaceus europaeus*), one weasel (*Mustella nivalis*), and two Eurasian badger (*Meles meles*) within 1km of the site.

3.1.8. Invertebrates

SEWBrEC returned 57 notable invertebrate species from within the study area, comprising: 29 priority invertebrate species were recorded within 1km of the site, namely: knot grass (*Acronicta rumicis*), green-brindled crescent (*Allophyes oxyacanthae*), ear moth (*Amphipoea oculatea*), dusky brocade (*Apamea remissa*), small pearl-bordered fritillary (*Boloria selene*), brown-banded carder bee (*Bombus humilis*), mottled rustic (*Caradrina morpheus*), broom moth (*Ceramica pisi*), small heath (*Coenonympha pamphilus*), small square-spot (*Diarsia rubi*), dusky thorn (*Ennomos fuscantaria*), dingy skipper (*Erynnis tages*), autumnal rustic (*Eugnorisma glareosa*), grayling (*Hipparchia semele*), wall (*Lasiommata megera*), shoulder-striped wainscot (*Leucania comma*), white ermine (*Spilosoma lubricipeda*), buff ermine (*Spilosoma lutea*), blood-vein (*Timandra comae*), cinnabar (*Tyria jacobaeae*), flounced chestnut (*Anchoscelis helvola*), pearl-bordered fritillary (*Boloria euphrosyne*), sawfly (*Cirrhia icteritia*), small phoenix (*Ecliptopera silaceata*), marsh fritillary (*Euphydryas aurinia*), garden dart (*Euxoa nigricans*), shaded broad-bar (*Scotopteryx chenopodiata*), dark-barred twin-spot carpet (*Xanthorhoe ferrugata*), and neglected rustic (*Xestia castanea*).

19 invertebrates listed as species of conservation concern were recorded within 1km of the site, namely: anoscopus albifrons (*Anoscopus albifrons*), bagous lutulentus (*Bagous lutulentus*), chaetarthria seminulum/simillima (*Chaetarthria seminulum/simillima*), chaetarthria simillima (*Chaetarthria simillima*), scarce grass-veener (*Crambus pratella*), eledona agricola (*Eledona agricola*), eupeodes nitens (*Eupeodes nitens*), gabrius keysianus (*Gabrius keysianus*), gymnetron beccabungae (*Gymnetron beccabungae*), brooklime gall weevil (*Gymnetron veronicae*), helochares punctatus (*Helochares punctatus*), magdalis carbonaria (*Magdalis carbonaria*), malthodes pumilus (*Malthodes pumilus*), molophilus propinquus (*Molophilus propinquus*), opomyza lineatopunctata (*Opomyza lineatopunctata*), barley flea beetle (*Phyllotreta vittula*), phytobius leucogaster (*Phytobius leucogaster*), psacadina verbekei (*Psacadina verbekei*), temnocerus longiceps (*Temnocerus longiceps*),

Nine invertebrates listed as locally important species were recorded within 1km of the site, namely: heath bumblebee (*Bombus jonellus*), red-tailed bumblebee (*Bombus lapidarius*), white-tailed bumblebee (*Bombus lucorum*), common carder bee (*Bombus pascuorum*), bilberry bumblebee (*Bombus monticola*), golden-

ringed dragonfly (*Cordulegaster boltonii*), emerald damselfly (*Lestes sponsa*), scallop shell (*Rheumaptera undulata*), and slender ground-hopper (*Tetrix subulata*).

3.1.9. 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 SSSI¹⁴ 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:

Table 2: Ancient Woodland Sites Within 2km

Ancient Woodland Site	Number within 2km of Site
Ancient Semi-Natural Woodland (ASNW) ¹⁵	29
Restored Ancient Woodland Sites (RAWS) ¹⁶	Six
Plantations on Ancient Woodland Sites (PAWS) ¹⁷	Seven
Ancient Woodland Sites of Unknown Category ¹⁸	Four
Nearest Area of Ancient Woodland	An unnamed area of ASNW located 0.1km to the west of the site

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

¹⁵ 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.

¹⁶ 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.

¹⁷ 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.

¹⁸ 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'.

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 habitat¹⁹.

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 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 3: 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

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

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	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



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Photo 11: Northern Front Doors



Photo 12: Large Interior Vent



Photo 13: Workshop Interior

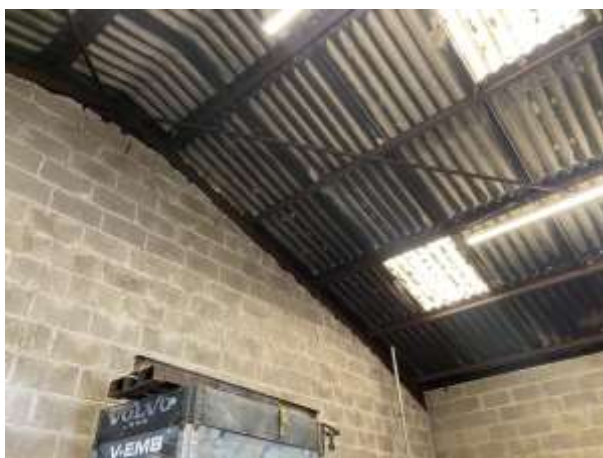


Photo 14: Workshop Interior



Photo 15: Brickwork on Northern Face of Extension



3.2.3. Dusk Emergence Surveys

The results of the dusk emergence surveys are summarised below.

Table 4: Summary of Conditions During Dusk Emergence Surveys

	Survey 1	Survey 2
Date	29/07/2023	30/08/2023
Sunset/Sunrise Time	21:07	20:10
Start Time	20:53	19:55
Finish Time	22:38	21:40
Start Temperature (°C)	14	15
Sunset Temperature (°C)	14	15
Rain	None	None
Wind (Beaufort scale)	5	2
Cloud Cover (Oktas)	7	1

Table 5: Summary of Dusk Emergence Surveys Results

	Survey 1: Dusk Emergence	Survey 2: Dusk Emergence
Emergences/ Re-entries	No bats emerged from or interacted closely with the workshop.	No bats interacted closely or returned to roost within the workshop.
Important Commuting/ Foraging Routes	No noteworthy commuting or foraging routes were identified.	No noteworthy commuting routes were identified.
Bat Activity²⁰	Low levels of common pipistrelle (<i>Pipistrellus pipistrellus</i>) activity was recorded throughout the survey.	Low levels of common pipistrelle and soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) activity were recorded throughout the survey. One noctule (<i>Nyctalus noctula</i>) pass was recorded towards the end of the survey.

3.2.4. Nesting Bird Survey

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

²⁰ Activity thresholds have been quantified using personal judgement according to past experience of surveying similar sites.

4. Evaluation

4.1. Summary of Field Work

The preliminary roost assessment and the dusk emergence surveys found no evidence of bats roosting within or on the external parts of the workshop.

4.2. Potential Winter Roosts

The crevices between the brickwork, cavities in the external walls and gaps on the window frames of the workshop provide potential hibernation sites for bats. However, the presence of hibernating bats is considered unlikely due to the lack of direct evidence of bats using the workshop during the preliminary roost inspection and dusk emergence surveys.

4.3. Birds – Interpretation of Nesting Bird Survey

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

5. Impact Assessment

5.1. Potential Impacts of the Development on Bats

Based on the conclusion that bats are unlikely to be using the workshop as a roost site, no negative direct or indirect impacts on bats are anticipated.

5.2. Potential Impacts of the Development on Birds

Based on the conclusion that birds are not currently nesting in the workshop, no negative direct or indirect impacts on birds are anticipated.

6. Required Actions

6.1. Licensing Requirements for Bats

A protected species licence from NRW is not required as the bat survey results indicate a likely absence of roosting bats in the workshop.

6.2. Measures to Avoid Disturbing, Injuring or Killing Bats

No evidence of any use by roosting bats were recorded on site and it is therefore highly unlikely that bats or their roosts will be affected by the works. No precautionary timing conditions on works are required. However, it is not possible to rule out bat use entirely, and there is also a risk of an offence being committed if active birds' nests are present. The following recommendations are made to minimise risks to bats and birds:

- It will be clearly understood, and contractors made aware that in the event of any bats being found, the contractor must halt works (if bats are encountered, the bat will be carefully covered over again). Appropriate advice will be obtained from a suitably qualified bat consultant or Natural Resources Wales and, if necessary, a bat development licence obtained before work can resume;
- If any active bird nests are found these will be protected, along with an appropriate buffer zone of 5-10m, until the nesting is complete, and the young have fledged;
- Contractors will check for the possible presence of bats on the undersides of roofing tiles, fascias, soffits and bargeboards etc. as they are lifted off. This is especially important at the outset of the works, since once the works have started, the disturbance is likely to drive any bats which are present away voluntarily; and
- The services of an appropriately qualified and licensed ecological consultant will be available on an 'on-call' basis at all stages of the works to deal with any unexpected encounters with bats or nesting birds. Contact details of such will be held on site. Acer Ecology Ltd. could be retained to provide this support.

6.3. Ecological Enhancement Measures for Bats

6.3.1. Roosting Provision

One Vivara WoodStone bat box could be installed on the external wall at the rear of the work shop as an enhancement measure for roosting bats (see Appendix 6 and Plan 4).

6.4. Mitigation and Enhancement Measures for Birds

6.4.1. Nesting Bird Provision

To further enhance the site for nesting birds, one Vivara Barcelona WoodStone Open Nest Box (see Appendix 7) could be installed on the external wall at the rear elevation of the workshop (See Plan 4). The nest box should at least be 3m above ground level and ideally orientated so that they face north or east.

6.5. 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 factors²¹ (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 42020:2013²² and CIEEM (2019), to determine if conditions and bat usage has changed since described in the current report.

²¹ 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.

²² 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.

7. References

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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>

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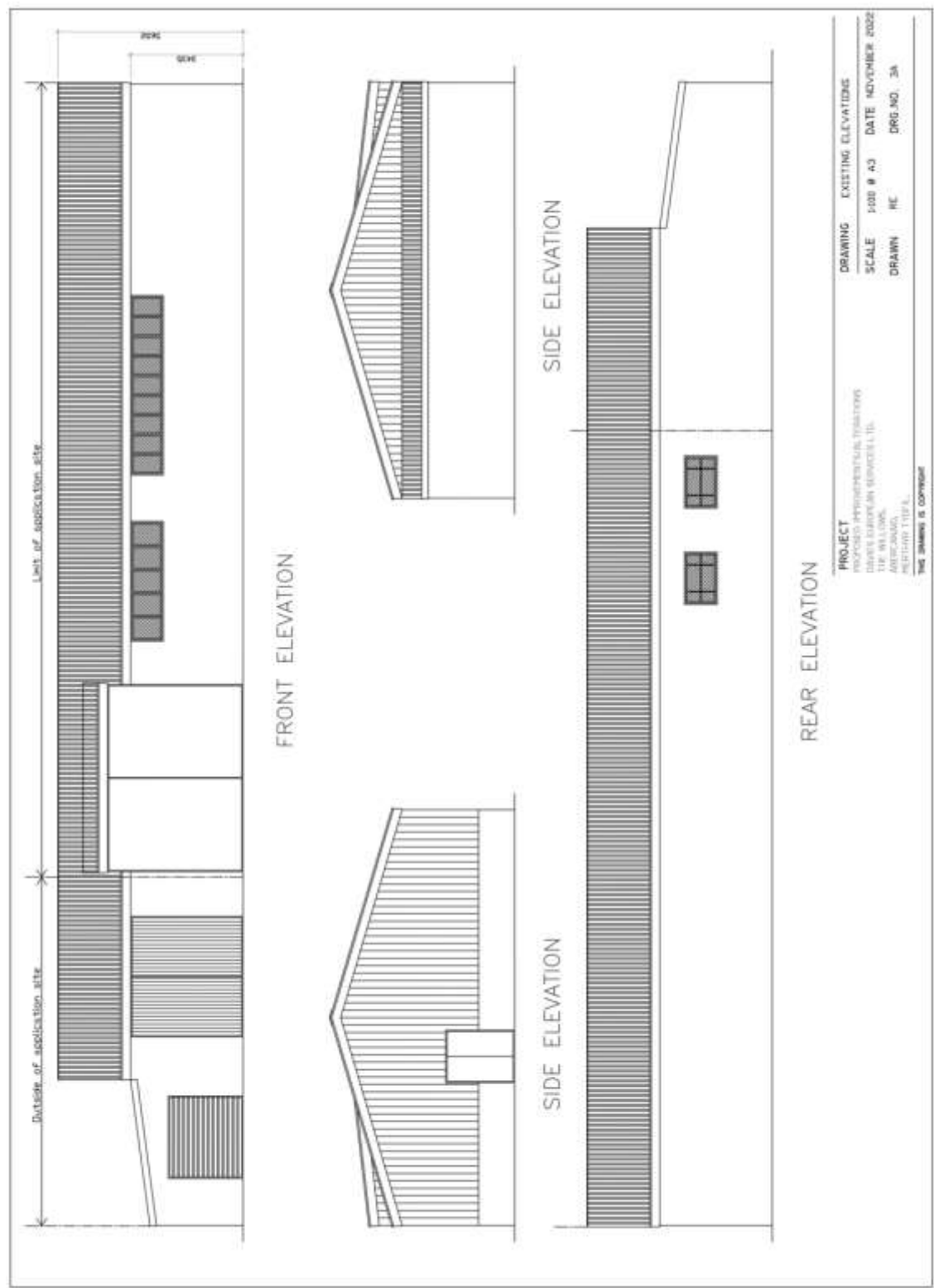
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Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.

Drawing 1: Existing Site Plans



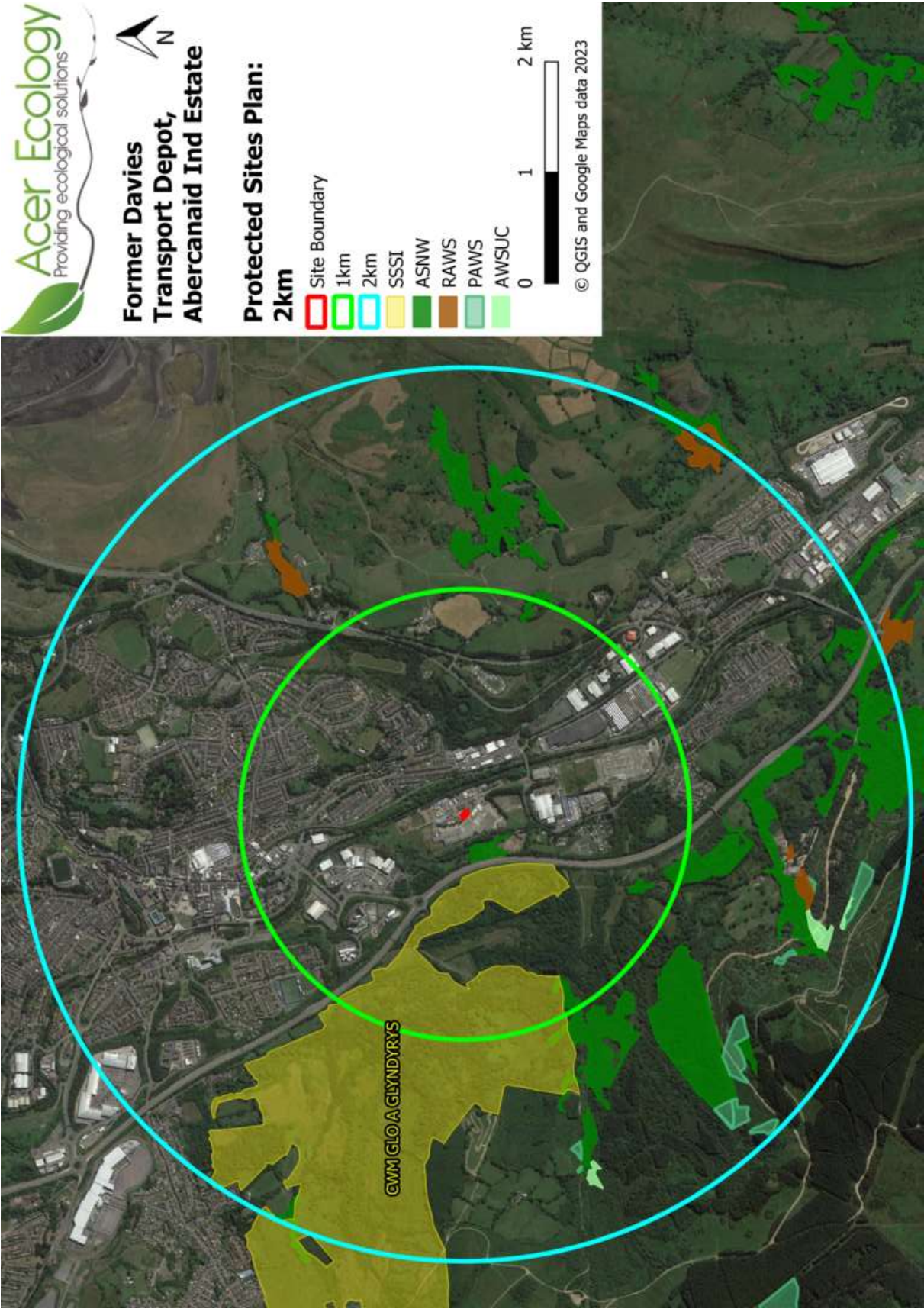
Plan 1: Location Plan



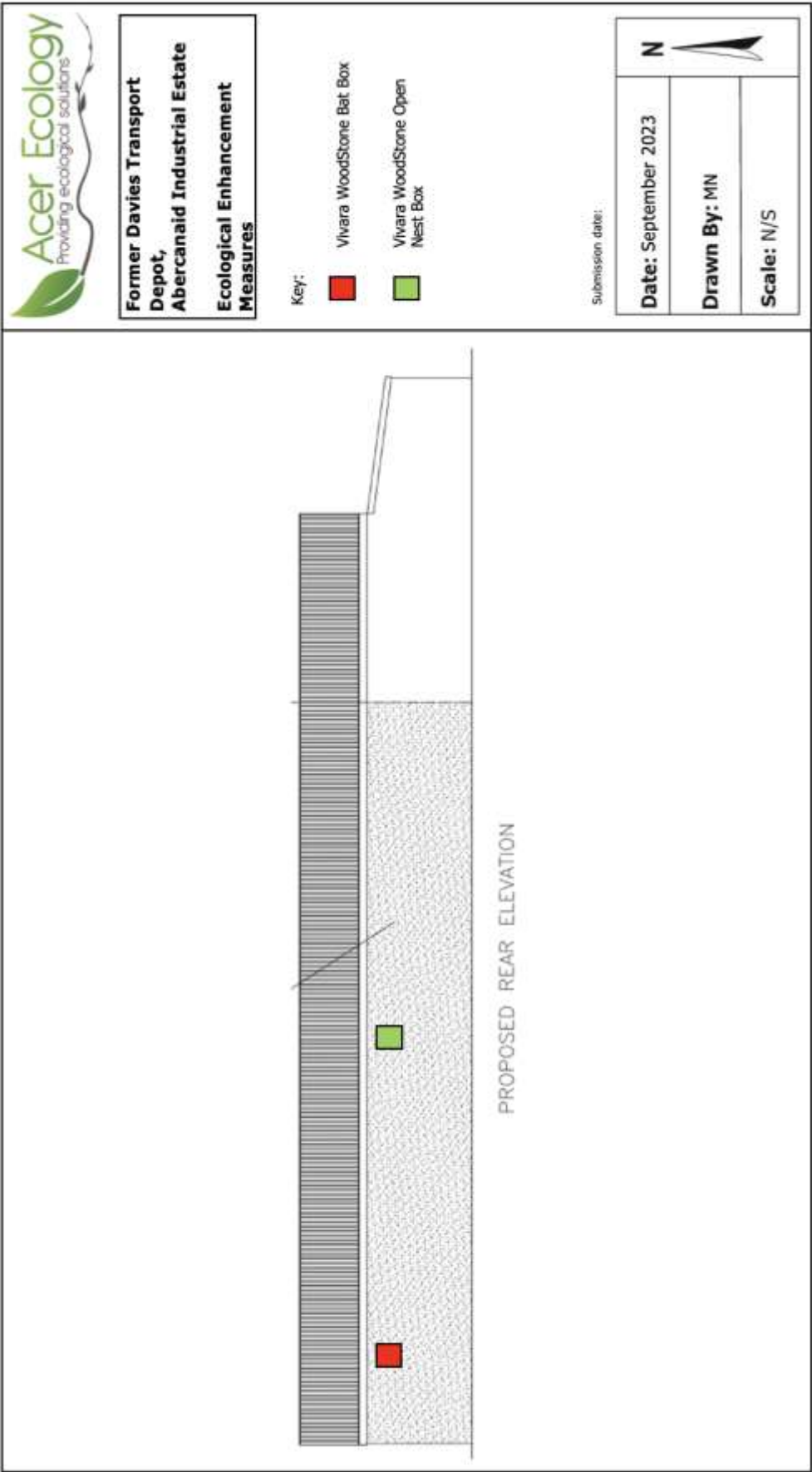
Plan 2: Location/Block Plan



Plan 3: Protected Sites Within 2km



Plan 4: Ecological Enhancement Measures



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 2016²³ 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).

²³ <http://www.legislation.gov.uk/anaw/2016/3/contents>

Appendix 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 bats²⁴ (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.

²⁴ 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.

Appendix 3: 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.

Appendix 4: 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.

Appendix 5: Surveyor experience

29th July 2023

Alice Thorne - Alice is a second-year university student at the University of South Wales studying Natural History. During her degree she has undertaken a range of ecological survey techniques including grey seal population counts, bat surveys and kick sample surveys. She is in her second season of bat survey work.

Nikita Bettersby - Nikita is a first-year university student at the University of South Wales studying Natural History. She is in her second season of bat survey work.

Ellen Medway – Alice is a second-year university student at the University of South Wales studying Natural History. She is currently working for Acer Ecology as a seasonal bat surveyor in her first bat season.

Aiden Gibson – Aiden is in his first season of bat surveying and is receiving training from Acer Ecology.

30th August 2023

Rebecca Corley – Rebecca graduated with a degree in Biological Science from the University of Birmingham and an MSc in Global Ecology and Conservation from Cardiff University. Rebecca is currently in her second season of bat surveying, working as an Assistant Ecologist and receiving training from Acer Ecology. She is listed as an accredited agent on Paul Hudson's bat licence (S091671-1). Further details of Rebecca's qualifications can be found at: <https://uk.linkedin.com/in/rebecca-corley-b33b61138>

Isabel Humphries – Isabel graduated with a degree in Chemistry from Cardiff University. She is currently working for and receiving training from Acer Ecology. Full details of Isabel's qualifications and experience can be found at: <https://www.linkedin.com/in/isabel-humphries-a182491b9>

Rebecca Jones – Rebecca graduated with a first-class degree in Ecology and Wildlife Conservation from the University of Reading. She has previously worked in the field of sustainable business and in learning development for the Field Studies Council. She is currently working as an Assistant Ecologist at Acer Ecology and completing training in habitat and protected species surveys. Further details of her qualifications and experience can be found at: <https://uk.linkedin.com/in/rebecca-jones-52564915b>

Maiya Evans - Maiya graduated from Swansea University with a MSc in Clinical Psychology. Maiya is working for Acer Ecology as a seasonal bat surveyor and is in her first season of surveying.

Appendix 6: Vivara WoodStone Bat Box



The Vivara Pro WoodStone Bat Box is a hard-wearing bat box. It is made from WoodStone, a mixture of wood fibres from fully certified FSC wood sources and concrete, and it is designed to last for years.

It is breathable so there will be no problems with condensation and WoodStone maintains a consistent temperature inside, providing excellent insulation for roosting bats. WoodStone also provides a rough surface which the bats can easily cling to and move around the box. The Vivara Pro WoodStone Bat Box is black with a grey front panel.

Siting - The box can be attached to either a wall or a tree and should be sited at a height of at least 3 m from the ground. Bats prefer to change roosts to benefit from varying ambient temperatures, so bat boxes should ideally be clustered in small groups.

Dimensions - (H) 250 x (W) 190 x (D) 165 mm, weight: 4.5 kg.

Bat Box Availability

The bat box is available from NHBS (www.nhbs.com) where it retails at approximately £20.99 including VAT plus postage costs.

Appendix 7: Vivara Barcelona WoodStone Open Nest Box

These attractive nest boxes are manufactured from WoodStone which is a mix of concrete and FSC certified wood fibres. Unlike a traditional wooden nest box, these boxes will not rot away or deteriorate and are guaranteed for 10 years. This robust material safeguards against attacks from predators such as woodpeckers, cats and squirrels, whilst also providing a well-insulated interior with a more consistent internal temperature than an ordinary wooden box. This is especially important during the breeding season and ensures that young birds have a greater chance of survival. Nesting sites have become rare for cavity nesting birds due to changes in woodland management practices, so you can provide much-needed space for rearing chicks and birds that are roosting overwinter with these durable, long-lasting nest boxes.

These open nest boxes are suitable for wrens, robins, spotted flycatchers, pied and grey wagtails, song thrushes and blackbirds, and they are available in brown, green or grey to complement both natural woodland and garden settings.

The best height for your nest box is between 1.5m and 3m high, and open nest boxes should be sited in undergrowth such as ivy to provide cover for the nest.

These nest boxes have a removable front panel for easy cleaning. Although birds will clean their own nest boxes before each breeding season, cleaning the boxes out at the end of each breeding season may encourage them to be used again in future years, as it reduces parasites. The nesting time of birds varies from species to species so we suggest you wait until October when the last of the birds will have left before cleaning. The nest may come out easily but if there are any deposits scrape them out. We recommend using hot water rather than chemicals to remove any parasites that remain.

Specification

- * Width: 19cm
- * Height: 24cm
- * Length: 17.5cm
- * Entrance hole: Open

Purchase source:

<https://www.nhbs.com/vivara-pro-barcelona-woodstone-open-nest-box>

