



PROPOSED DEVELOPMENT:

THE NEIGHBOURHOOD LEARNING CENTRE, 17-20 PEN-Y-DRE, MERTHYR TYDFIL

ECOLOGICAL ASSESSMENT

SEPTEMBER 2021

ISSUE 1, VA

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Proposed Development: The Neighbourhood Learning Centre

Ecological Assessment

Document control

Issue	Stage	Author	Checked	Approved	Date
1	DRAFT FOR COMMENT	BE	HD	BE	01.09.20

Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Approved by	Date
1	VA	Minor Amendments	BE	01.09.20
1	VB	Minor amendments	BE	07/09/21

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NON-TECHNICAL SUMMARY

An ecological assessment was undertaken of land at Trevor Close, Pant, Merthyr Tydfil, South Wales in support of a planning application for the refurbishment of the Neighbourhood Learning Centre.

The work involved a phase 1 habitat survey to categorise the habitats present, an assessment of the site's ability to provide suitable habitats for protected species and recommendations for further survey and actions if considered necessary.

The habitats on and adjacent to the site comprise of amenity grassland, bare ground and scattered trees.

None of the trees have potential bat roosting features due to their size, age and species. The trees on site will be retained in their entirety. There is roosting potential for bats within the onsite buildings. Some of the buildings contain bat roosts and as such a licence from Natural Resources Wales will be required prior to any works commencing.

There were no waterbodies on or immediately adjacent to the site which could be suitable for use by breeding great crested newts (or other amphibians). There are records within the data search, however, these records at a fair distance from the site and are isolated by roads and infrastructure.

No evidence of badger activity was recorded within or immediately adjacent to the site boundary. It is possible that badgers will use the site for foraging, however, no evidence of badger was found throughout. It is unlikely that badgers will use the site for sett building to the high levels of disturbance present at the site and the isolation of the site by roads and housing.

It should be assumed that all trees and longer vegetation will be utilised by nesting birds during the breeding season. There is no habitat suitable for ground nesting species due to the site being overlooked and highly disturbed.

The site provides reptiles with potential habitat for foraging, basking, sheltering and hibernation purposes. Whilst there is habitat present, the site is very isolated and disturbed. Nonetheless presence of low numbers should be assumed.

All site clearance works should be undertaken in accordance with a method statement and ecological supervision to ensure that species are not harmed at any stage of the project.

Mitigation will be required and is outlined within the various habitat and species sections contained herein.

1 INTRODUCTION

1.1 OBJECTIVE

The objectives of this report are to:

- identify the habitats present on the site;
- identify the potential for protected species to be present on site;
- using the information gathered to determine whether there may be any impacts (both positive and negative) on protected species present;
- provide recommendations for further survey as necessary; and
- suggest outline mitigation and enhancement ideas and principles

1.2 METHODOLOGY

To achieve the objectives set out above, the following actions were taken:

- Field based assessments in respect of
 1. Habitats;
 2. Protected species, primarily:
 - i. Bats;
 - ii. Amphibians (particularly great crested newt);
 - iii. Badgers
 - iv. Reptiles; and
 - v. Breeding birds
 - vi. Invertebrates

The impact assessment has been undertaken by ecological feature rather than by section i.e. each subject is discussed and assessed separately and summarised in conjunction with the others.

1.3 SITE DESCRIPTION

The site comprises of just over an acre of land at the Neighbourhood Learning Centre, Pen-Y-Dre, Merthyr Tydfil, South Wales.

The habitats on site comprise of amenity grassland, hard standing, scattered trees and buildings. Whilst the grassland is classed as amenity grassland, the habitat is species rich and is good quality grassland.

There are 3 H shaped buildings on site. Block 1, Block 2 and Block 3. The buildings are of brick construction and all are similar in design. The rooves are of tile and barge boards and fascias where present are of timber. There are a number of windows and doors to the buildings, some of which have been grated for safety purposes.

The site is set within a wholly urban environment and is surrounded by roads, houses and associated infrastructure. The site is relatively isolated from the wider landscape that comprises of fields and patches of broad-leaved woodland.

Figure 1 – Detailed view of the site (approximate boundary boxed red)

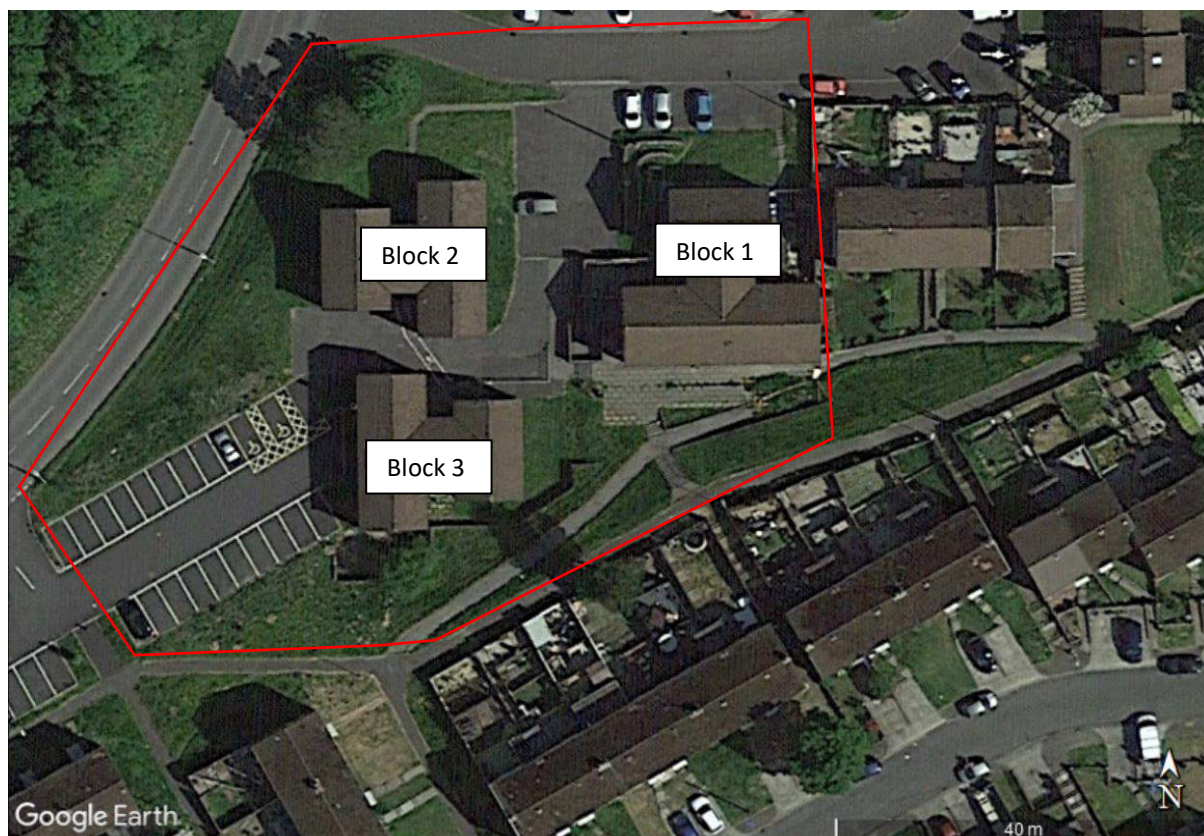


Figure 2 - aerial overview of the site (arrowed red)



No.	Ref	Species	Girth (cm)	Height (cm)	Clear Stem (cm)	Root condition
2	Ac	<i>Acer campestre</i>	8-10	200-350	80-120	BR
2	Cm	<i>Catalpa peltata</i>	8-10	200-350	80-120	BR
2	Cc	<i>Crataegus monogyna</i>	8-10	200-350	80-120	BR
2	Sa	<i>Sorbus aria</i>	8-10	200-350	80-120	BR
1	Sau	<i>Sorbus aucuparia</i>	8-10	200-350	80-120	BR
2	Pa	<i>Prunus avium</i>	8-10	200-350	80-120	BR
2	Pc	<i>Pyrus caleryana</i> 'Chanticleer'	8-10	200-350	80-120	BR

Trees to be planted in tree pits 1200 x 1200 x 600mm deep with nom. 550mm approved topsoil / compost mix backfill over 250mm free draining sandy subsoil

Rootballed trees to be staked with short double stake and cross bar

All trees fitted with irrigation / aeration pipe and inle

No.	%	Species	Size	Spec	Spacing (no/m ²)	
29		Berberis thunbergii 'Green Carpet'	30-40	3L	Branched 5 breaks	4
22		Hebe 'Red Edge'	30-40	5L	Branched 5 breaks	3
29		Brachyglottis 'Sunshine'	30-40	3L	Branched 4 breaks	4
22		Cornus sanguinea 'Midwinter Fire'	30-40	2L	Branched 4 breaks	3
29		Escallonia 'Apple Blossom'	3L	3L	Bushy 4 breaks	3
33		Hypericum x moserianum	30-40	2L	Bushy 5 breaks	3
33		Lavandula 'Hidcote'	30-40	3L	Bushy 5 breaks	4
33		Potentilla 'Elizabeth'	30-40	2L	Bushy 3 breaks	4
44		Bergenia 'Beethoven'		3L		6
29		Rosa 'Kent'	Cutting	3L	Bushy	4
22		Genista hispanica	30-40	3L	Bushy 5 breaks	3
9		Miscanthus Yakushima Dwarf		5L		2
22		Pennisetum alopecuroides 'Hamel'	3-4L			4

348100

Ornamental plant beds to have 400mm deep approved topsoil with 75mm deep bark mulch

No.	%	Species	Size (mm)	Posterior
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No.	%	Species	Size(mm)	Rootzone
60	15	<i>Acer campestre</i>	60-80	1+1 B
60	15	<i>Corylus avellana</i>	60-80	1+2 B
80	20	<i>Crataegus monogyna</i>	80-100	1+1 B
20	5	<i>Ilex aquifolium</i>	40-60	3L B
21	5	<i>Lonicera periclydium</i>	60-80	1+1 C
40	10	<i>Prunus spinosa</i>	80-100	1+2 B
20	5	<i>Rosa canina</i>	60-80	1+1 B
40	10	<i>Sambucus nigra</i>	80-100	1+1 B
40	10	<i>Viburnum opulus</i>	60-80	1+2 B
400	100%			

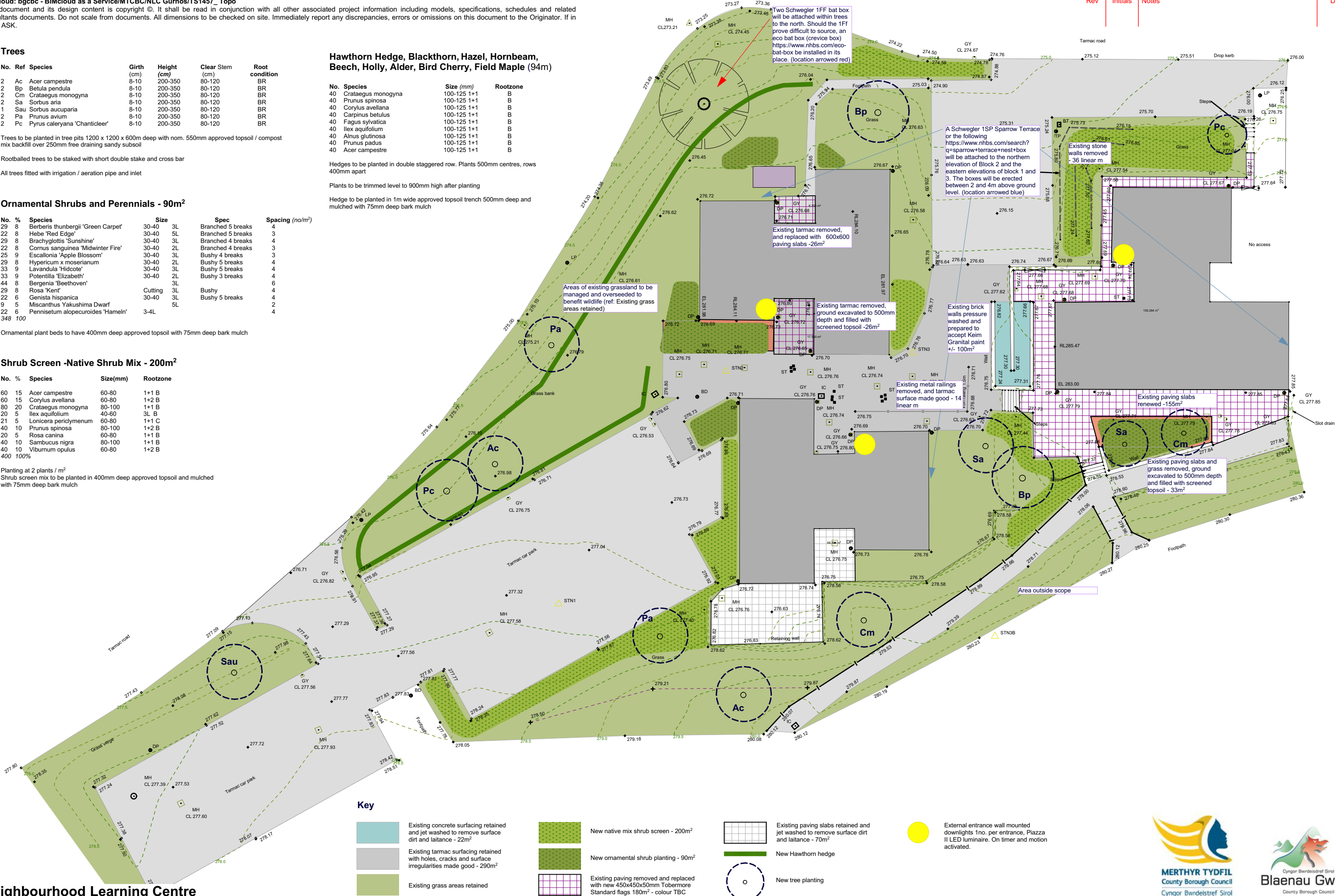
Planting at 2 plants / m²
Shrub screen mix to be planted in 400mm deep approved topsoil and mulched
with 75mm deep bark mulch

No.	Species	Size (mm)	Rootzone
40	<i>Crataegus monogyna</i>	100-125 +1	B
	<i>Prunus spinosa</i>	100-125 +1	B
	<i>Corylus avellana</i>	100-125 +1	B
	<i>Carpinus betulus</i>	100-125 +1	B
	<i>Fagus sylvatica</i>	100-125 +1	B
	<i>Ilex aquifolium</i>	100-125 +1	B
	<i>Alnus glutinosa</i>	100-125 +1	B
	<i>Prunus padus</i>	100-125 +1	B
40	<i>Acer campestre</i>	100-125 +1	B

Hedges to be planted in double staggered row. Plants 500mm centres, rows 400mm apart

Plants to be trimmed level to 900mm high after planting

Hedge to be planted in 1m wide approved topsoil trench 500mm deep and mulched with 75mm deep bark mulch



Blaenau Gwent County Borough Council
Community Services | Architects

1.5 STUDY AREA

The field survey looked at the red line development area itself and up to 20m from the site boundaries wherever possible.

The biological records search covered a search radius of 2000m from the centre of the development site for protected sites (international, national and local), protected and priority species, other species of conservation concern and locally important species. A buffer of 2000m was applied to locally designated sites.

2 REGULATORY FRAMEWORK

2.1 INTERNATIONAL

European Union legislation requires that member states designate sites for the protection of habitats and species included in the annexes of both Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). This legislation is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitat Regulations”). This results in sites being designated as Special Areas of Conservation (SACs) and Special Protection Areas respectively (SPAs).

2.2 NATIONAL (UK)

The Wildlife and Countryside Act 1981 (as amended) allows sites to be designated as Sites of Special Scientific Interest (SSSI) for one or all of the following categories:

- Flora;
- Fauna;
- Habitat; and
- Geological importance.

European designated sites are automatically designated as SSSIs prior to their designation.

Other relevant legislation includes:

- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000;
- Environment (Wales) Act 2016
- Wild Mammals (Protection) Act 1996;
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

Section 40 of the Natural Environment and Rural Communities Act 2006 (as amended) requires all public bodies to have regard wherever possible to conserving biodiversity. Section 42 of the Act requires that a list of habitats and species of Principle Importance for the Conservation of Biological Diversity in Wales be produced; however, this has been replaced by Section 7 of the Environment (Wales) Act 2016 Priority Habitats and Species lists.

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”.

This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that “Every public authority must, in exercising its functions, have

regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”.

Other elements of NERC 2006 may still apply.

Biodiversity Action Plans (BAPs) are tools which are used to monitor, manage and enhance those habitats and species which are of significance to an area or organisation, The United Kingdom BAP lists a number of priority habitats and species which are of conservation concern.

2.3 NATIONAL (WALES)

Planning Policy Wales (Welsh Government, 2016) and Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, September 2009) set out the protection given to wildlife (sites, habitats and species) by the planning system operational in Wales.

2.4 LOCAL AND REGIONAL

The proposed development is wholly within the Merthyr Tydfil County Borough Council (MTCBC) area of responsibility. Therefore, all policies adopted by that Planning Authority will apply, including policies which may not be specific to nature conservation or the natural environment but that may apply or be relevant and should be considered during the planning process.

There are a number of habitats and species which are of a high priority to MTCBC. These have been determined following examination of the UK BAP and the Environment (Wales) Act Section 7 list of Priority Species and Habitats and those habitats and species determined to be locally important by the Local Biodiversity Partnership.

2.5 PLANNING FRAMEWORK

The proposed development will be undertaken wholly under the auspices of the Town and Country Planning Act 1990 (as amended).

2.6 PREVIOUS SURVEYS

There are no known previous surveys of this site.

2.7 CONSTRAINTS

There were no constraints to the survey.

3 DESK STUDY

3.1 SUMMARY

There are no records of any priority or protected species, species of local conservation concern or other species of conservation concern from the site or immediately adjacent to it. The closest records are from 199m away.

There are two Site of Special Scientific Interest within 2km of the development site, one local nature reserve, 13 SINCS, one wildlife trust reserve, 17 ancient semi natural woodlands, 7 restored ancient woodland and one b lines site.

The site is completely isolated by roads and housing from any of the designated sites.

3.2 BACKGROUND

A desk study provides background information on historical and current biological data which can identify ecological constraints, mitigation, and biodiversity enhancement opportunities.

3.3 METHODOLOGY

The South East Wales Biodiversity Records Centre (SEWBReC) was consulted in order to provide biological information on the presence of species and sites on or adjacent to the site (0212-457).

A 2000m search buffer was applied to priority and protected species, species of local conservation concern and other species of conservation concern, statutorily designated sites (for nature conservation purposes) and 1000m locally designated sites.

The Multi-Agency Geographical Information System (MAGIC) website (www.magic.gov.uk) and the Local Biodiversity Action Plan (LBAP) for CCC were also consulted.

3.4 CONSTRAINTS

There were no constraints to the data search

3.5 RESULTS

3.5.1 Statutorily protected sites

3.5.1.1 European designated sites

There are no European Designated Sites within 2000m of the development site.

3.5.1.2 United Kingdom designated sites

There are two Sites of Special Scientific Interest within 2000m of the development site.

The works on site are extremely minor and the site does not support any habitats that the sites are designated for. The site is completely isolated from the designated sites by roads, housing and associated infrastructure. As such, these sites will not be considered further in this report.

3.5.1.3 Non statutory designated sites

There are 13 SINCS within 2km of the development site.

The works on site are extremely minor and the site does not support any habitats that the sites are designated for. The site is completely isolated from the designated sites by roads, housing and associated infrastructure. As such, these sites will not be considered further in this report.

3.5.2 Species: SEWBreC data search

There are no species records for the proposed development site or its immediate vicinity.

However, there are multiple records for protected species within 2000m of the site.

The closest records are of hedgehog, red kite, dunnoek, peregrine falcon and common pipistrelle, all within 500m of the site.

3.6 PREVIOUS SURVEYS

None known.

4 PHASE 1 HABITAT SURVEY

4.1 SUMMARY

A number of habitats were recorded across and adjacent to the survey area. These included:

- Buildings;
- Scattered trees
- Amenity grassland and
- Hard standing

The potential for a number of protected species was recorded, including habitats suitable for:

- Bats;
- Badgers;
- Breeding birds;
- Reptiles
- Invertebrates

The habitats are shown on **Figure 3** below.

4.2 BACKGROUND

The Phase 1 habitat survey was carried out to assess the existing habitats, identify any protected habitats or species that may be present, determine the impact of the proposed works on them, and identify any mitigation measures that may be necessary. This was done by undertaking both a desk study and field survey.

The survey was undertaken on 30th June 2021.

Phase 1 habitat survey is a way of recording the basic habitat data to form a baseline level of knowledge of the ecology of a site and provide recommendations for future surveys if considered necessary.

4.3 METHODOLOGY

4.3.1 Desk study:

A biological data search was undertaken. Refer to section 3 above.

4.3.2 Field survey:

Experienced surveyors from BE Ecological Ltd carried out a habitat assessment and mapping exercise in June 2021 using the Phase 1 habitat survey technique. Nomenclature follows Stace (1997)¹. The survey was carried out by Beth Evans and Hugh Dixon. Licences include Bats, dormouse and great crested newt. Both Hugh and Beth have numerous years' experience in habitat and protected species surveys from both small consultancy and multi-disciplinary level.

¹ Stace, C (1997). *New Flora of the British Isles* (2nd Ed.). Cambridge University Press

Features of note are assigned Target Notes (TN) and referenced accordingly and described at **Appendix C**.

A full species list is at **Appendix D**.

4.4 CONSTRAINTS

There were no constraints.

4.5 RESULTS

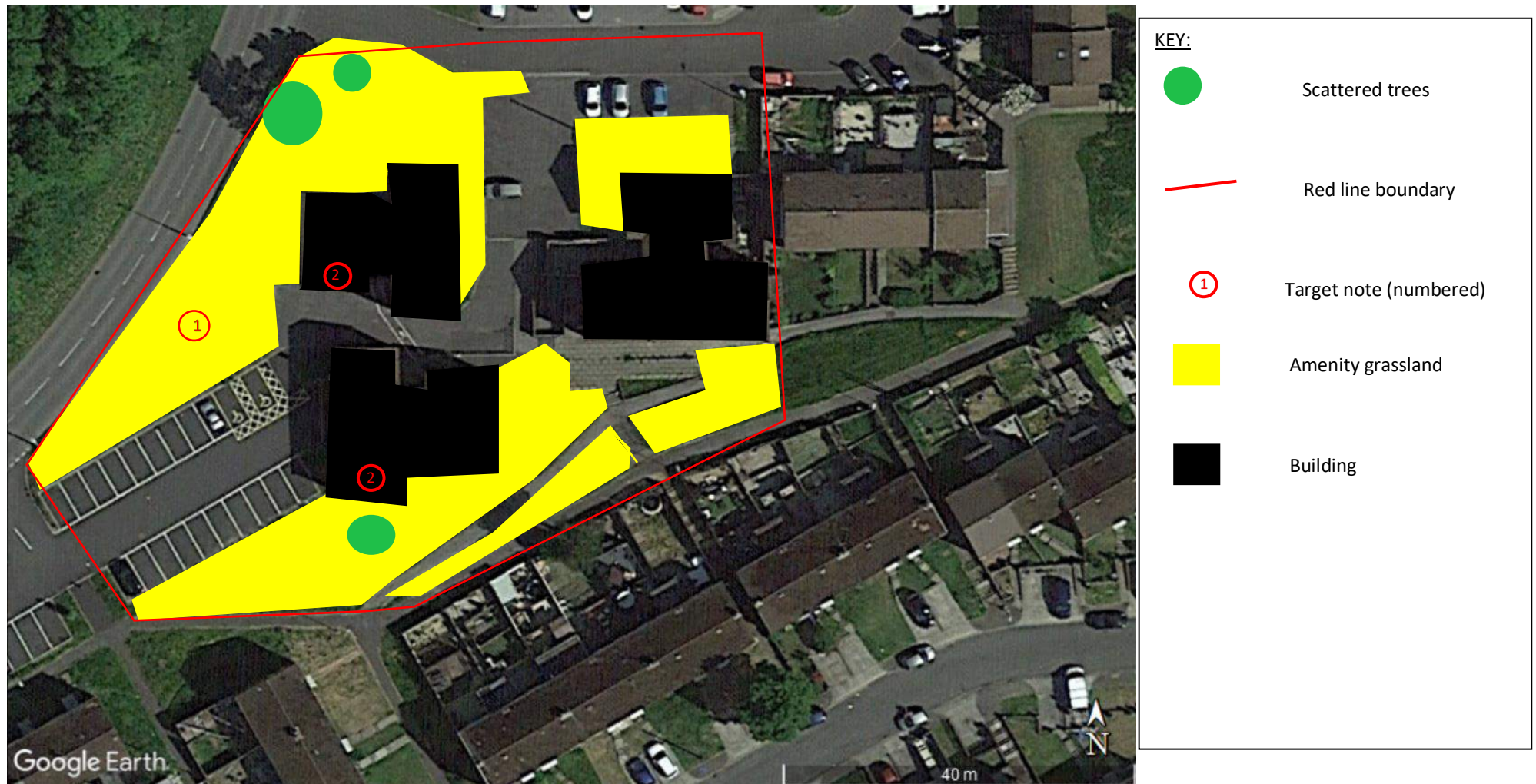
4.5.1 Habitats

The following habitats were found on the site and are mapped on **Figure 3** below:

- Buildings;
- Scattered trees
- Amenity grassland and
- Hard standing

Photos are located at **Appendix A**.

Figure 3 – habitat survey results



4.5.1.1 *Amenity grassland*

There are a number of grassed areas, verges and banks surrounding the site. Species found throughout these areas include Pyramidal orchid, meadow buttercup, Ribwort plantain, common bent, red fescue, achillea, creeping cinquefoil, white clover, dandelion, Chickweed, common field speedwell, Yorkshire fog, hop trefoil, black medick, meadow foxtail, common daisy, false fox sedge, curled dock, cuckoo flower, common field horsetail, soft rush, red clover, Ragwort, broad leaved dock, great willowherb, Rosebay willowherb, creeping thistle, common birds foot trefoil, creeping buttercup, coltsfoot, silverweed, creeping bent, Cocks foot, cotoneaster, viburnum sp., yarrow, , ox eye daisy, red campion, common cats ear, perennial Ryegrass and timothy.

These areas will not be directly affected by the development proposals, As these areas are already relatively species rich, it is suggested rather than removal and new planting, that these areas are enhanced and managed for the benefit of nature conservation.

This habitat will not be mentioned further in this report other than in relation to enhancements.

4.5.1.2 *Hard standing*

This habitat is found throughout the site in the form of roads, pavements and footpaths. This habitat has no ecological value and will therefore not be mentioned further in this report.

4.5.1.3 *Scattered trees*

There are a small number of trees to the north and south of the site. Species include, grey willow, Scots pine, oak, beech and silver birch. There are no suitable bat roosting features within these trees. In addition to this, the trees will be retained in their entirety. Appropriate protection zones must be implemented throughout the works. As a result of the above, the trees will not be mentioned further in this report.

4.5.2 Protected species assessment

4.5.2.1 Bats

The closest record for members for this group is from approximately 400m from the centre of the proposed development site. It refers to a bat in flight along the Taff Fechan River. Other species records within 2000m refer to soprano pipistrelle, brown long-eared and noctule bats.

There are no trees present on the site that could offer bats with any roosting potential. Bat surveys within the appropriate season revealed that the site is a roost for single numbers of common pipistrelle. This group will be considered further in this report.

4.5.2.2 Amphibians & great crested newt

There are no waterbodies on the development site which could be used by this group for breeding purposes. The terrestrial habitat on the site could provide amphibians with suitable foraging and sheltering habitat. There are records of great crested newt from approximately 867m away, however, the records are isolated from the site by roads, housing and associated infrastructure.

Areas suitable for reptiles will not be directly impacted by the proposals and will be enhanced and managed to benefit wildlife. As such, this group will not be mentioned further in this report other than in relation to management and enhancement.

4.5.2.3 Dormouse

There were no records of dormice within the data search. There is no habitat on site suitable for this species. This species will not be considered further in this report.

4.5.2.4 Otters

There is no habitat on site suitable for this species. This species will not be considered further in this report.

4.5.2.5 Badgers

The closest record of badger is 558m from the site.

It is considered that the site is too isolated and disturbed to be able to support badgers. No evidence of badger was found throughout the site. As such, this species will not be considered further in this report.

4.5.2.6 Breeding birds

There are multiple records for members of this group within the data search but none from the site.

Birds heard and seen on and adjacent to the site include sparrow and jackdaw.

There is suitable habitat within the scattered trees and buildings on the site.

The habitats on the site are not considered to be suitable for ground nesting birds given the small overlooked nature of the site, the small area of open ground, the high levels of disturbance on the site, the availability of avian predator perches and the presence of predators.

All trees will be retained and protected. Birds will only be mentioned further in this report in relation to buildings.

4.5.2.7 Reptiles

There are records of slow worm and grass snake approximately 350m from the site.

The site offers some habitat for this species for foraging, basking, sheltering and hibernation purposes and it should be assumed that slow worm (*Anguis fragilis*), common lizard (*Lacerta vivipara*) and grass snake (*Natrix natrix*) use the site. It is likely that the population densities of these species are at perhaps lower levels given the amount of disturbance on the site and the amount of available habitat present.

Areas suitable for reptiles will not be directly impacted by the proposals and will be enhanced and managed to benefit wildlife. As such, this group will not be mentioned further in this report other than in relation to management and enhancement.

4.5.2.8 Invertebrates

It is likely that common and widespread invertebrates will utilise the site. There is a record of grayling using the SINC to the north of the site.

Areas suitable for invertebrates will not be directly impacted by the proposals and will be enhanced and managed to benefit wildlife. As such, this group will not be mentioned further in this report other than in relation to management and enhancement.

4.5.3 Other features

None.

5 PROTECTED SPECIES

5.1 BATS

5.1.1 Summary

There is no roosting potential for bats present within trees on the site.

Surveys undertaken by BE Ecological Ltd (please see Bat Survey, BE Ecological Ltd 2020) revealed that the site is used by common pipistrelle and soprano pipistrelle. There is a roost for low numbers of common pipistrelles within the onsite buildings.

Prior to works commencing, a licence will need to be obtained from Natural Resources Wales. Appropriate mitigation will need to be provided.

5.1.2 Ecology

British bats are small flying nocturnal mammals that feed exclusively upon insects. There are 17 species resident in Britain, ranging in size from the smallest, soprano pipistrelle (*Pipistrellus pygmaeus*) up to the largest noctule (*Nyctalus noctula*), serotine (*Eptesicus serotinus*) and greater horseshoe bat (*Rhinolophus ferrumequinum*). Bats are active from April through to October and hibernate when insects are in short supply in the winter months. Bats emerge from hibernation in late March - early April and move into their transition / intermediary roosts. Female bats will move to maternity sites by the beginning of May and will give birth to a single baby between June and early July. The baby is reared solely by the mother and is weaned and independent by end of August. After breeding, bats move to transition / intermediary roosts and females will visit males at mating roosts. During the autumn, bats feed voraciously to gain weight for the hibernation ahead.

Although traditionally trees, caves and rock faces were used by roosting bats and are still used, many different structures are used nowadays by bats, which take advantage of readymade (man made) roosts. Structures used frequently include bridges, ice-houses, pill-boxes, disused railway tunnels, houses and barns etc. Bats have home ranges which vary from species to species; from just 3-4km from the roost for the smaller bats while the larger noctule may fly 20km or more. Threats to bats include habitat destruction and the severance of commuting routes, use of agricultural pesticides, intensification of farming methods and deliberate persecution by man. Bats have few natural predators; however, the domestic cat is probably the most efficient predator.

5.1.3 Legislation

5.1.3.1 *Conservation of Habitats & Species Regulations 2017 (as amended)*

The Conservation of Habitats and Species Regulations (2017) provides safeguards for European Protected Species (those listed under Annex IV Habitats Directive). With regards to bats, this makes it an offence to:

- Deliberately (or recklessly in Scotland) capture, injure or kill a bat
- Deliberately (or recklessly in Scotland) disturb a bat in a way that would (significantly in Scotland) affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
- Damage or destroy a roost (this is an 'absolute' offence)
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

It is possible to undertake damaging activities under the auspices of a European Protected Species Licence issued by Natural Resources Wales which provides a derogation from the Regulations, meaning that an otherwise illegal operation carried out under licence is lawful.

5.1.3.2 *Wildlife & Countryside Act 1981*

The Wildlife & Countryside Act 1981 (as amended) is the legislation for England and Wales for nature conservation, making it an offence to:

- Intentionally or recklessly disturb a bat in or at a roost;
- Intentionally or recklessly obstruct access to a roost;
- Intentionally destroy, damage or otherwise disturb a roost (whether bats are present or not); and
- Intentionally or recklessly kill, injure or take (capture) a bat.

5.1.3.3 *The Environment (Wales) Act, 2016*

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”.

This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”.

Other elements of NERC 2006 may still apply.

5.1.4 Methodology

5.2 SURVEY OBJECTIVES

- To carry out an initial bat inspection survey the building
- To present the above details and if necessary further surveys, recommendations for mitigation, future research and compensation within this report.
- To carry out a scoping survey for breeding birds

5.3 SURVEY SUMMARY

The bat survey comprised of three parts:

- Initial bat inspection survey of building (including birds)
- Data Search (SEWBrEC)
- Three activity surveys

5.4 SURVEYOR INFORMATION

The inspection survey was undertaken by Beth Evans. Beth is the owner of BE ECOLOGICAL LTD and has a postgraduate degree in Environmental Biology: Conservation & Resource Management, specialising in British bats. Beth has 11 years' experience of ecological surveys, both in a small scale and large multi-disciplinary context. Beth also holds Natural Resources Wales and Natural England bat licences to disturb and handle bats. Beth was accompanied on the survey by Hugh Dixon. Hugh has multiple years' experience of bat surveys and also holds Natural Resources Wales and Natural England bat licences to disturb and handle bats.

Beth was assisted during the activity surveys by Stephen Shutt, Sylvia Sanyalou, Gavin Vella, Maddie Anderson, Michael Rodgers, Victoria Zerbino, Hugh Dixon and an IR camera and thermal imaging camera.

5.5 INTERNAL & EXTERNAL INSPECTION

An initial inspection survey was carried out on 30th June 2021 by Beth Evans and Hugh Dixon to search the building, both internally and externally to identify potential bat roosting areas and signs of bat use including; live bats, dead bats, droppings, urine staining, grease marks and discarded prey items. The buildings and all areas/items of interest were recorded and photographed. Extension ladders/steps were used to safely access areas where no safe access was available the survey was conducted using, close focus binoculars and/or a high powered lamp.

5.6 SURVEY LIMITATIONS

Any survey for bat species can only be a series of snapshots in time. Bats are highly mobile, long lived creatures (capable of living up to 30 years, sometimes longer) with complex social structures and utilising multiple roost sites within a year. The implications of this are that surveys and surveyors have to make informed assumptions based on observations, recorded data, local information and a detailed knowledge of the species.

6 RESULTS

6.1 INSPECTION SURVEY

6.1.1 External survey results

The survey carried out by BE Ecological Ltd revealed no droppings or evidence of bats on the exterior of the buildings however, there were a number of potential access points into all three of the buildings on site:

- Gaps beneath soffits
- Gaps beneath barge boards
- Gaps beneath lifted concrete tiles

Please see appended plates for photographs of the building exterior.

6.1.2 Internal survey results

Please see figure 1 for block locations

Block 1

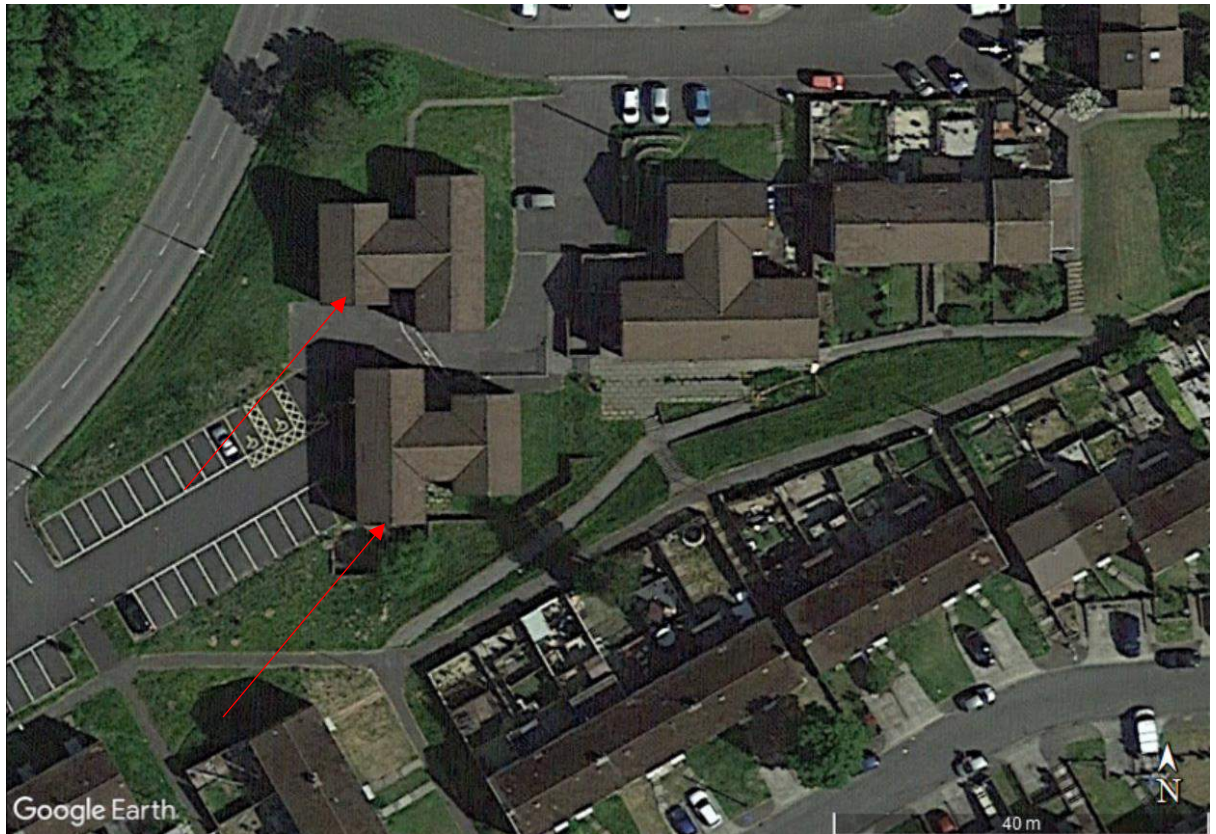
There are numerous roof spaces within Block 1. The voids are a traditional rafter and purlin style and are lined with bitumen felt. No evidence of bats were found in this location.

Block 2

There are numerous roof spaces within Block 2. The voids are a traditional rafter and purlin style and are lined with bitumen felt. A small number of pipistrelle droppings (less than 20) were found at the southern gable end of the roof void .

Block 3

There are numerous roof spaces within Block 3. The voids are a traditional rafter and purlin style and are lined with bitumen felt. A small number of pipistrelle droppings (less than 20) were found at the southern gable end of the roof void .



Location of droppings within buildings (arrowed red)

Please see appended plates for photos of the roof void interiors.

6.2 ACTIVITY SURVEY METHODOLOGY

Building 'emergence' and 're-entry' surveys were carried out on the following dates, times and weather conditions. Climatic conditions including rain, wind, temperature and cloud cover were recorded for each survey using a hand held Kestrel 4500 weather station.

6.2.1 Survey 1- 16th July 2021

A survey was carried out on 10th August using surveyors ,positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors were equipped with Batlogger M detectors (figure 3).

6.2.2 Survey 2- 4th August 2021

A survey was carried out on 4th August using surveyors ,positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors were equipped with Batlogger M detectors (figure 3).

6.2.3 Survey 3- 23rd August 2021

A survey was carried out on 23rd August using surveyors ,positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors were equipped with Batlogger M detectors (figure 3).

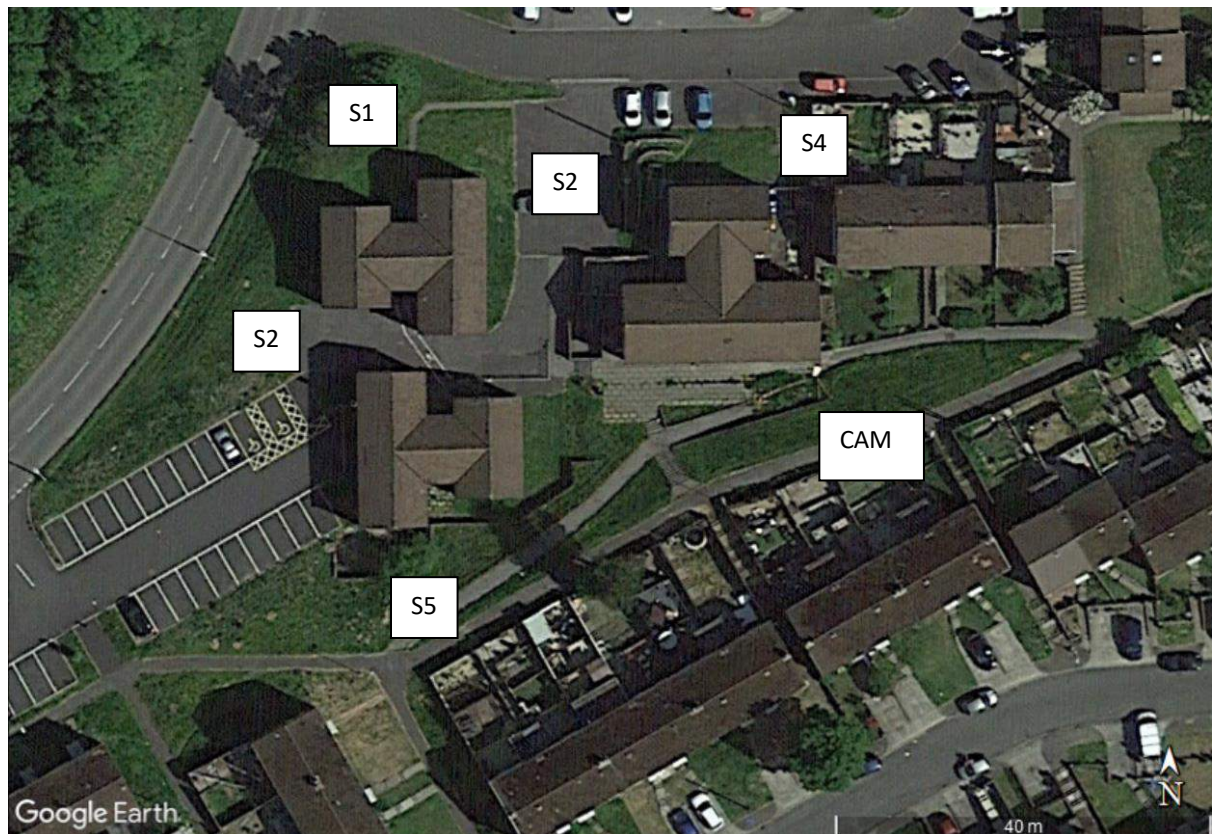


Figure 3: Approximate surveyor locations (surveyors were moved around between surveys)

6.3 ACTIVITY SURVEYS

The surveys were undertaken as per the table below:

6.4 SURVEY SCHEDULE AND WEATHER CONDITIONS

Table 1: Schedule and weather conditions

Visit	Date (sunrise) (sunset)	Start End	Time	Tem p C	Wind	Cloud Cover	Notes
Survey 1 16 th July 2021	21:24	Start	20:30	17	Low	30%	Dry evening, insects flying
		End	22:50	15	Low	15%	
Survey 2 4 th August 2021	20:57	Start	20:40	19	Low	25%	Dry evening, insects flying
		End	23:00	18	Low	40%	
Survey 3 23 rd August 2021	06:11	Start	04:30	15	Low	50%	Dry morning, insects flying
		End	06:25	16	Low	40%	

6.5 ACTIVITY SURVEY RESULTS

6.5.1 Survey 1- 16th July 2021

The first bat heard was a common pipistrelle at 21:37. The bat was seen emerging from the southern gable end of Block 2 (figure 4). This was shortly followed by a second common pipistrelle emerging from the southern gable end of Block 3 (figure 5). The bat from block 2 commuted north, with the bat from Block 3 commuting south.



Figure 4- common pipistrelle emergence point (arrowed red)



Figure 5- common pipistrelle emergence point (arrowed red)

A number of common and soprano pipistrelle bats were heard and seen throughout the course of the survey. The majority of activity was focussed towards the north and south of the site. No further bats emerged from any of the buildings throughout the course of the survey.

6.5.2 Survey 2- 4th August 2021

The first bat heard was a common pipistrelle at 21:06, the bat was seen emerging again from the same location that it had done during the previous survey, the southern gable of Block 3 (figure 5).

Again activity was very similar to that of the first survey with only common and soprano pipistrelle bats seen foraging to the north and the south of the site.

No other bats emerged from the building on this date.

6.5.3 Survey 3- 23rd August 2021

The first bat heard was a common pipistrelle at 04:40. A small number of common pipistrelle calls were heard intermittently and briefly throughout the course of the survey. At approximately 15 minutes prior to sunrise a single common pipistrelle bat was seen re-entering Block 1 above the entrance of the building (figure 6). This was the last bat call heard throughout the course of the survey.

No other bats re-entered the building on this date.



Figure 6- common pipistrelle re-entry point (arrowed red)

6.6 IDENTIFIED ROOSTS

Survey 1

Block 2 and Block 3 were identified as roosts for single common pipistrelles on this date.

Survey 2

Block 3 was identified as a roost for a single common pipistrelle on this date.

Survey 3

Block 1 was identified as a roost for a single common pipistrelle on this date.

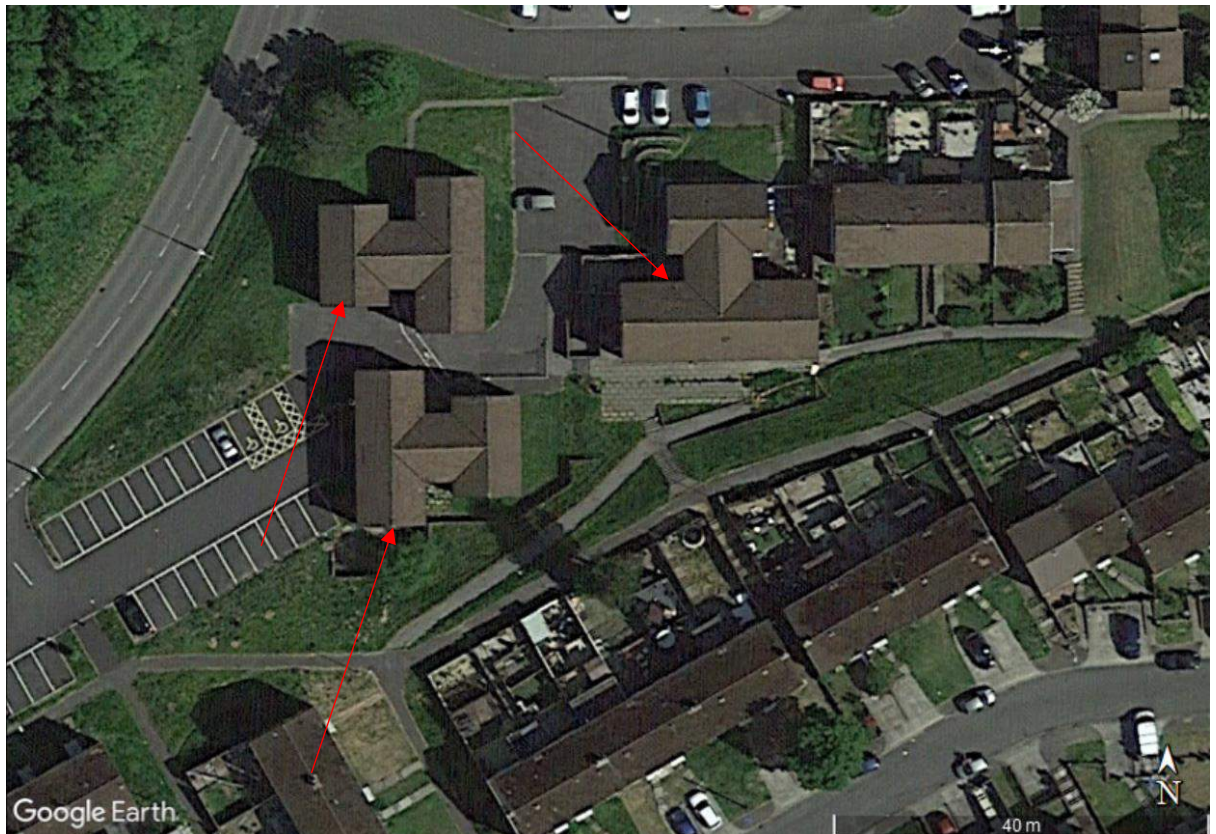


Figure 7: Location of identified roosts (arrowed red)

6.7 CONCLUSION

Overall levels of bat activity at the site were relatively high with common pipistrelle and soprano pipistrelle commuting and foraging all over the site. Approximately 10- 15 bats were observed foraging and commuting throughout the site throughout the course of the surveys (please see figure 8 for flight lines). If these, 20% of calls were soprano pipistrelle with the remainder being common pipistrelle. Emerging bats all commuted south before commuting east. Bats encountered during the dawn survey commuted from the east.

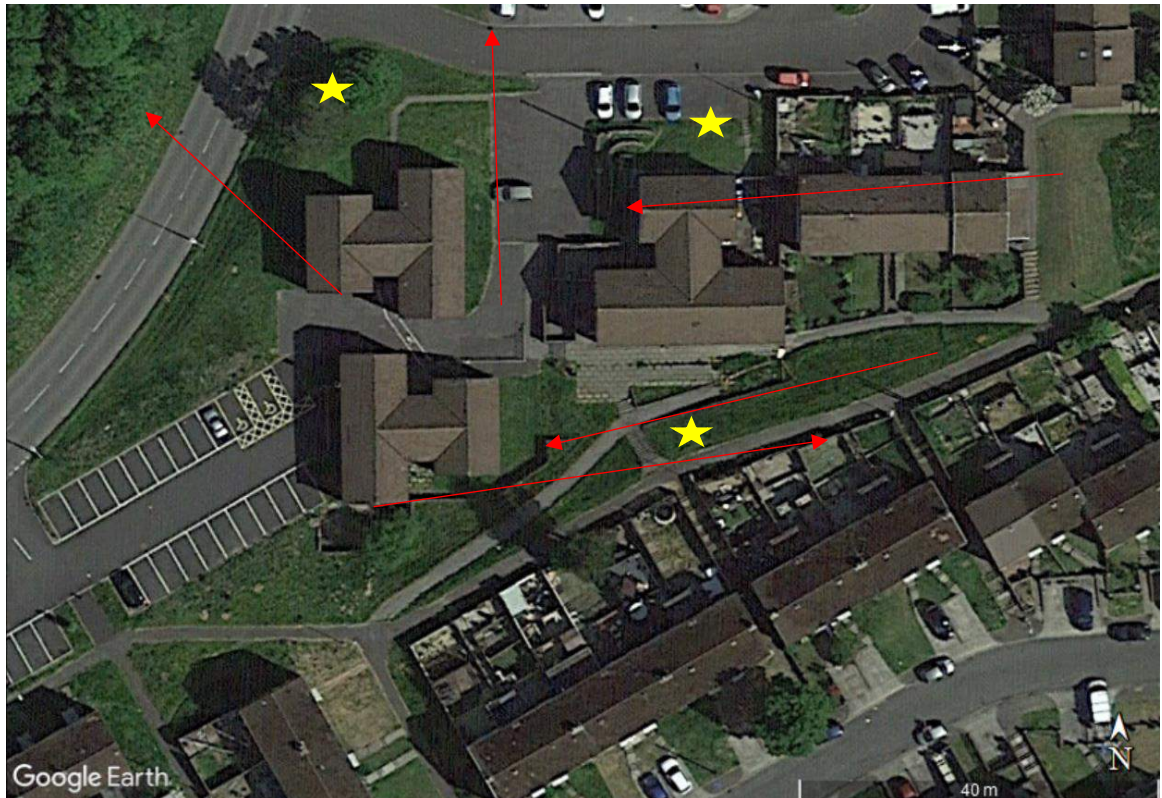


Figure 8: Identified commuting routes (arrowed red), foraging areas (starred yellow)

It is considered that each block is a day roost for a single common pipistrelle bat, likely a male or non-breeding females.

Based on the current evidence, it is considered that mitigation and an NRW development licence will be required to cover all of the buildings as the works will result in the destruction of a common pipistrelle roost albeit occasional. A method statement and supervision will be required as part of that licence.

6.8 BREEDING BIRDS

No evidence of breeding birds was found throughout the properties.

7 INTERPRETATION & IMPACT ASSESSMENT

7.1.1 Summer roosts

It is considered that each block is used as a day roost by a single common pipistrelle bat, surveys and the evidence inside the building do not seem to suggest that the roost is used on a more occasional basis nor by more than single bats.

7.1.2 Hibernation roosts

It is always possible that single pipistrelles will remain in the building over winter and any licence application and method statement will need to take account of this.

7.2 BREEDING BIRDS

No evidence of breeding birds was found throughout the property.

7.3 ECOLOGICAL IMPACTS OF DEVELOPMENT

The impacts of the development have been assessed using the current information of the proposed works. Should any changes be made to the proposed works, the assessment will need to be reviewed and amended as necessary.

It is considered that an occasional day roost for three single common pipistrelle bats will be disturbed/possibly lost as a result of the proposed works.

A licence and mitigation will be required.

8 MITIGATION/ENHANCEMENT

8.1 BATS

Two Schwegler 1FF bat box will be attached within trees to the north. . Should the 1FF prove difficult to source, an eco bat box (crevice box) <https://www.nhbs.com/title?slug=eco-bat-box> will be installed in its place.

Whilst the roof remains untouched, It is likely that as a result of the installation of insulation to the exterior of the buildings will result in the removal and replacement of fascias/barge boards. Materials used will be on a like for like basis. A 15-20mm gap will be left between any new barge board and wall to allow bats to continue with the access that they have currently.

In addition to this, again a 15-20mm gap will be left between the wall and fascia on all eastern elevations of Blocks 1, 2 and 3.

A new extended tree buffer will be installed on the site. A range of native species of local provenance will be used. The area will be managed by the current land owner.

8.2 BIRDS

A Schwegler 1SP Sparrow Terrace or the following <https://www.nhbs.com/sparrow-terrace-nest-box> will be attached to the northern elevation of Block 2 and the eastern elevations of block 1 and 3. The boxes will be erected between 2 and 4m above ground level.

9 RECOMMENDATIONS (BATS)

9.1.1 Timing

It is considered that as the building is a roost for single bats only, the winter period should be avoided but other than that the works can be undertaken at any time of year.

9.1.2 Timber/roofing materials

The roof will not be removed as part of the proposed works. The membrane will remain as Type 1 bitumen felt.

9.1.3 Lighting

Potential access points and bat boxes will not be directly illuminated. All external lighting will face downwards and be set on timers to ensure that bats can use the area should they wish. – In addition to this, any onsite lighting will conform to the following guidelines:

<https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>. Please see associated plan with lighting details.

9.1.4 Bat Licensing

A European Protected Species Licence obtained from Natural Resources Wales will be required on receipt of planning permission and prior to works commencing on the building.

9.1.5 Supervision

Supervision for the removal of any timberwork (fascias, barge boards etc will be required).

10 METHOD STATEMENT (once a licence has been obtained)

1. A suitably licenced and experienced ecologist will be on site/call for the duration of the works.
2. Before any work begins on site, a briefing for contractors and other site-staff 'toolbox talk' will be given by an ecologist. The briefing will cover the issues in respect of protected species they may encounter on site, where they might find them, methods of working, and what they need to know to avoid committing an offence. Every briefing attendee will be provided with a copy of a Method Statement and the contact details of an ecologist and Natural Resources Wales.
3. Prior to any conversion works commencing, the roof voids will be thoroughly checked by the supervising ecologist for the presence of bats.
4. All suitable bat roosting features will need to be removed by hand (barge boards, fascias, drainage etc) and inspected by the onsite bat ecologist.
5. Only when the onsite bat ecologist is happy that there is no further potential for bats, may he/she leave and the works continue with no supervision. A licensed bat ecologist will be on call for the remainder of the works. In the unlikely event that bats are found during a period that the licensed bat ecologist is not present on site, all works must cease and the licenced bat ecologist engaged.

If any other bats or any evidence of bats other than common pipistrelle is found on site, a EPS licence amendment will be required before works can legally resume

Monitoring of the mitigation and enhancements for bats will be required in year 2 following completion of the development.

11 CONCLUSION AND RECOMMENDATIONS

Overall the site is of a moderate ecological value (perhaps increased by the presence of a bat roost within the onsite building).

It is considered that no other ecological surveys are required as largely the habitats on site will be retained.

It is recommended that the mitigation measures, outlined in the various sections above are incorporated as far as is possible into the design process for this development. and construction methodologies.

There will be no lighting of retained habitats , dark corridors will need to be implemented throughout the development to allow light intolerant species to continue using the site. Bat roosts will not be directly illuminated as described in Section 9. A lighting plan will be provided.

It is recommended that consideration be given to the inclusion of enhancement features to benefit wildlife are included within the design of the housing units and post-development landscaping scheme on the site. The enhancement measures for bats and birds are outline in section 8 above.

The grassland on site, whilst managed amenity grassland is actually quite nice. It is proposed that this habitat is managed and enhanced to benefit wildlife. The grassland will be overseeded with yellow rattle and other wild meadow seeds in order to increase species diversity. These habitats will be cut twice per year, excluding the first year which is described in the paragraph below, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management. Emorsgate EM2 is the suggested species mix.

In the first year, the selected areas will be scarified, with the seed sown in the autumn or spring at a sowing rate of 4grams/m2. In the first year. The areas will be mown once every 8 weeks in the first year to a height of 40-60mm with the cuttings removed if dense. If the seed is sown in the autumn and overseeded with yellow rattle, spring and summer cuttings should be avoided in the first year. Species such as dock will be dug out from the planted areas.

12 REFERENCES

- Battersby, J. (Ed) & Tracking Mammals Partnership. (2005). UK Mammals: Species Status and Population Trends. First Report by the Tracking Mammals Partnership. JNCC/Tracking Mammals Partnership,
- Collins, J (Ed). Bat Surveys for Professional Ecologists - Good Practice Guidelines (BCT, 2016).
- Joint Nature Conservation Committee (2001) *Handbook for phase 1 habitat survey: A technique for environmental audit*. JNCC.
- Joint Nature Conservation Committee (2003). Herpetofauna Workers' Manual JNCC
- Mitchell-Jones, A.J. & McLeish, A.P. (2004) The bat workers' manual (3rd Edition). Joint Nature Conservation Committee.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. Natural England
- Planning Policy Wales (2013).
- Protection of Badgers Act (1992).
- Stace, C A (1997) *New Flora of the British Isles* (2nd Ed) Cambridge University Press
- The Conservation of Habitats and Species Regulations 2017.
- The Environment (Wales) Act 2016. (HMSO)
- The Natural Environment and Rural Communities Act (2006) (as amended) (HMSO).
- The Wildlife and Countryside Act 1981 (as amended).
- Welsh Assembly Government (2007). Planning Policy Wales Technical Advice Note 5: *Nature Conservation and Planning*.

APPENDIX A - PHOTOS

Plate 1- Roadside verge



Plate 2- view of rear car park



Plate 3- Block 2



Plate 4- Trees to the north



Plate 5- south of block 3



Plate 6- north of Block 3



Plate 7- south of Block 1



Plate 8- east of block 3



Plate 9- Block 1



Block 10-east of Block 3



Plate 11- north of block 2



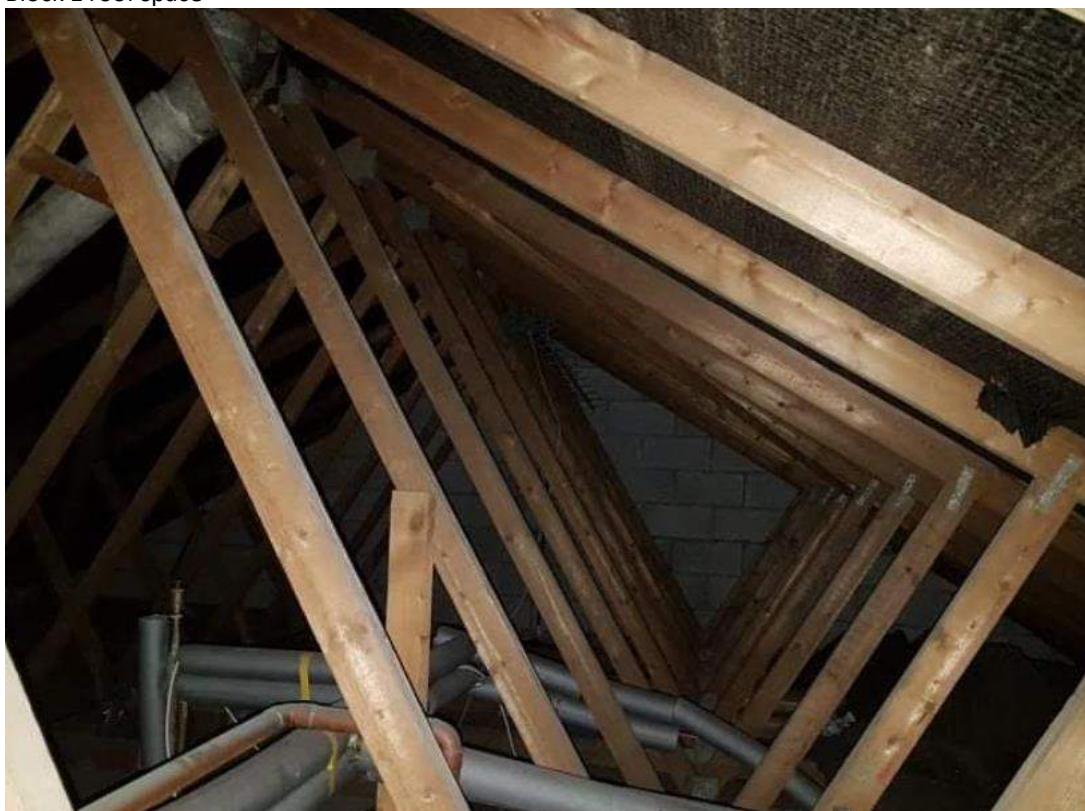
Plate 12- Block 1



Block 13- Block 2



Block 1 roof space





Block 2





Block 3 roof space





APPENDIX B - TARGET NOTES

Target note number	Description
TN 1	Amenity grassland (species rich)
TN2	Bat droppings

