



PROPOSED DEVELOPMENT:

**MERTHYR FAMILY CENTRE, THOMASTOWN HOUSE, QUEENS
ROAD, MERTHYR TYDFIL**

ECOLOGICAL ASSESSMENT

OCTOBER 2023

ISSUE 1, VD

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Proposed Development: Merthyr Tydfil Family Centre

Ecological Assessment

Document control

Issue	Stage	Author	Checked	Approved	Date
1	DRAFT FOR COMMENT	BE	BE	BE	18/10/23

Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Approved by	Date
1	VA	Minor Amendments	BE	03/11/23
1	VB	Minor Amendments	BE	07/03/24
1	VC	Minor Amendments	BE	18/03/24
1	VD	Minor Amendments	BE	28/03/24

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NON-TECHNICAL SUMMARY

An ecological assessment was undertaken of land at Merthyr Tydfil Family 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 building, scrub, 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.

A Protected Species Licence issued by Natural Resources Wales will be required for works to the onsite buildings. Please note, a protected species licence can take up to 40 working days to be issued by NRW.

This report will remain valid for a period of 18 months. After 18 months updated surveys may be required.

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

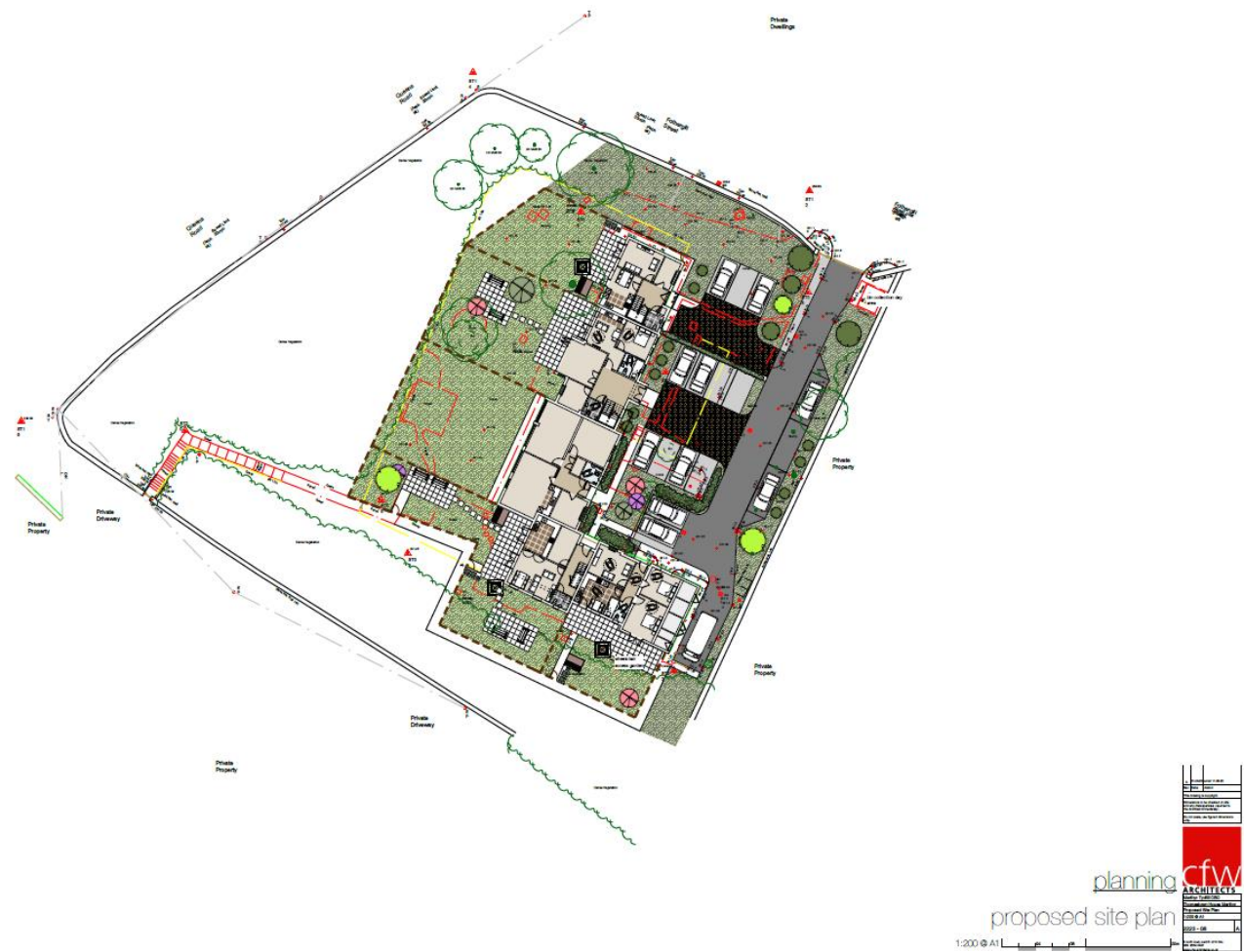
The site comprises of approximately 1 acre of land at the Merthyr Tydfil Family Learning Centre, Thomas Town House, Merthyr Tydfil.

The habitats on site comprise of amenity grassland, hard standing, scattered trees, scrub and buildings. Whilst the grassland is classed as amenity grassland and appears to be species poor (mainly perennial ryegrass) that is regularly mown. The scrub habitat is along the peripheries of the sit with a larger section to the west. The majority of these habitats are fenced off from the site by palisade fencing, walls and close board fencing between the site and gardens.

There is a series of buildings present on the site. The buildings are all comprised of brick beneath a clay tile roof. The main ridge runs from north east to south west with the second ridge running south west to south east.

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. There is some connectivity to the wider landscape to the south.

1.4 PROPOSED DEVELOPMENT



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, 2023) 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

It is acknowledged that one survey was undertaken in early June with two surveys being carried out in September. No bats were identified roosting within the building during the early June survey, it is considered that should a maternity roost have been present, this survey would likely have picked up bats. The September survey revealed the presence of bats.

In addition to this, the council has agreed to undertake the work to the rooves in the autumn with all mitigation and the rooves reinstated by April 15th prior to the following maternity season.

The rooves can be replaced on a like for like basis with enhancement features for bats.

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 197m and 215m away. The first record refers to a pipistrelle bat foraging, with the latter two referring to a field record of 27 bats at a property. It is unclear whether these are roosts or flight records.

There are two Site of Special Scientific Interest within 2km of the development site, one local nature reserve, 11 SINCS, one wildlife trust reserve, 8 ancient semi natural woodlands, The site is in a 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 (SEWBRc) was used (courtesy of Merthyr Council) in order to provide biological information on the presence of species and sites on or adjacent to the site

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 MTCBC 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 11 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.

Relevant records will be mentioned in the relevant sections below.

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
- Scrub
- 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 2nd June 2023.

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 .

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

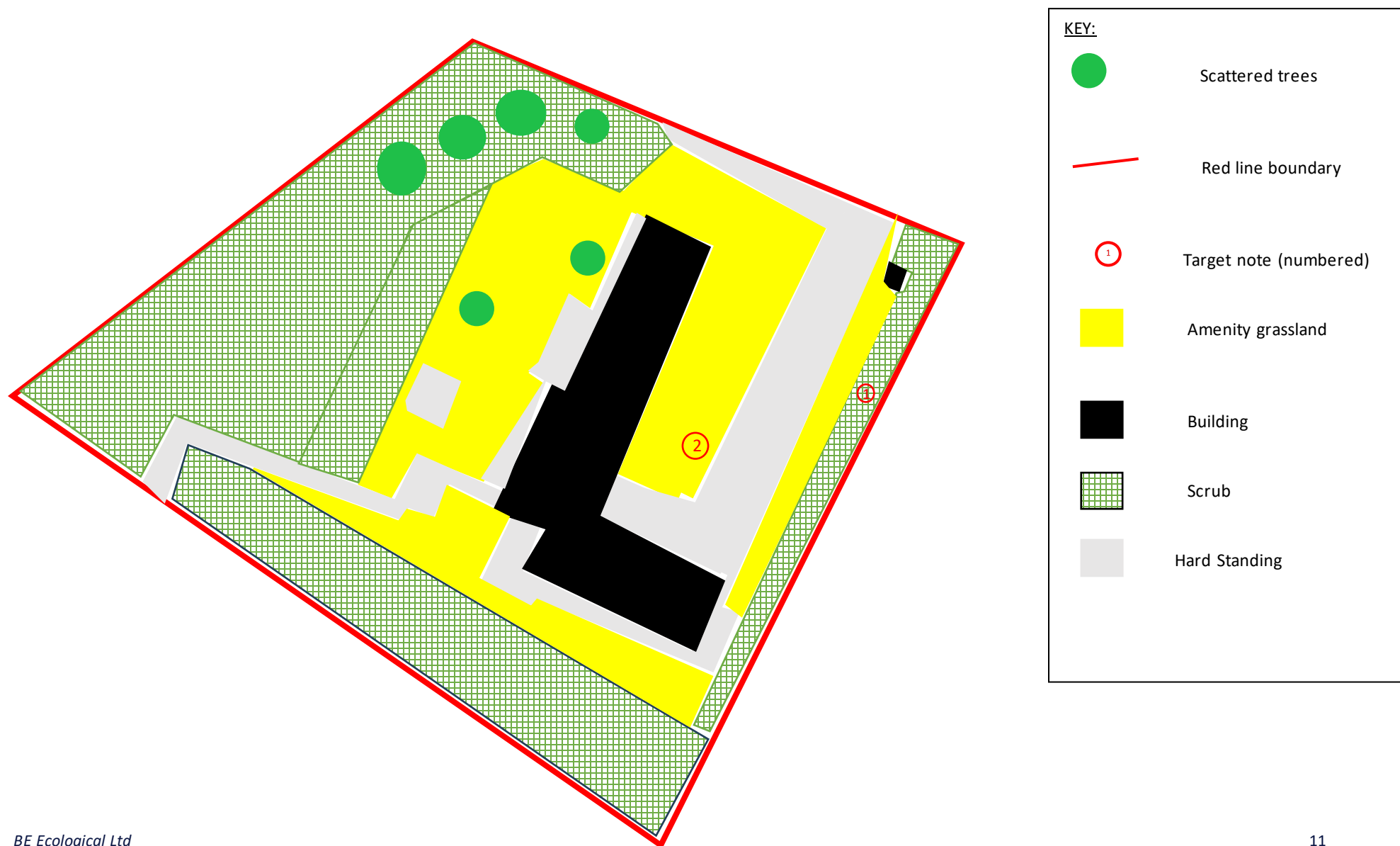
4.5.1 Habitats

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

- Buildings;
- Scattered trees
- Scrub
- 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 within the site. These areas are managed regularly and are generally species poor. Species in these areas comprise of perennial ryegrass, timothy, red clover, white clover, daisy and buttercup.

Only some of these areas will be directly affected by the development proposals as a result of new parking areas and paving.

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, parking areas, paved areas 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 to be removed are ornamental. There are no suitable bat roosting features within these trees. There are a number of native scattered trees amongst the shrub habitat (these may have originally been a hedgerow). This habitat will be retained in its 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.

4.5.1.4 *Scrub*

There is a scrub present on the peripheries of the site. At one point, this habitat may have been a hedgerow that matured. There are some scattered trees throughout the western boundary. The habitat to the east has also been labelled as scrub, however, the habitat is the remains of an existing hedgerow which are now overgrown, that sit on top of the site boundary wall. This habitat may be outwith the red line boundary. This area appears to be a mix of non-natives with the presence of bramble and ivy.

4.5.2 Protected species assessment

4.5.2.1 Bats

The closest record for members for this group is from approximately 197m from the centre of the proposed development site. It refers to a pipistrelle bat in flight. Other species records within 2000m refer to soprano pipistrelle, common pipistrelle, brown long-eared, myotis sp. 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 buildings are 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 819m 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 scrub habitat that may be suitable for dormice but dormice are not known in the locality. In addition to this, the majority of scrub will be retained. 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 994m 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.

There is suitable habitat within the scattered trees, scrub 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.

Birds will be mentioned further in this report.

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*) (*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 barely be impacted by the proposals and the site will be enhanced and managed to benefit wildlife.

This group will be mentioned further in this report.

4.5.2.8 Invertebrates

It is likely that common and widespread invertebrates will utilise the site.

Some areas suitable for invertebrates will be impacted by the proposed development. The site will be enhanced and managed to benefit wildlife. As such, this group will be mentioned further in this report.

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 revealed that the site is used by common 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 (SEWBRcC)
- 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 assisted during the activity surveys by Gavin Vella, Michael Hogan, Dion Rowles and Michael Rogers.

5.5 INTERNAL & EXTERNAL INSPECTION

An initial inspection survey was carried out on 10th March 2023 by Beth Evans 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.

It is acknowledged that one survey was undertaken in early June with two surveys being carried out in September. No bats were identified roosting within the building during the early June survey, it is considered that should a maternity roost have been present, this survey would likely have picked up bats. The September survey revealed the presence of bats.

In addition to this, the council have agreed that the work can be undertaken in the Spring March - April (the timing least sensitive to bats) with at least one roof completed with mitigation suitable for a maternity roost by the beginning of May.

The rooves can be replaced on a like for like basis with enhancement features for bats.

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 lead flashing
- Gaps beneath soffits/fascias in places
- Possibly a small number of slipped tiles

Please see appended plates for photographs of the building exterior.

6.1.2 Internal survey results

Internally, there are roof spaces above the double story elements of the building. All of the roof spaces are typical for their age with a simple rafter and perlin construction. The rooves are lined with bitumen felt and insulated at joist level with fiberglass insulation.

The lofts are full of pipes and electrical gables and insulation made entry difficult. The safety of the joists were unknown so the rooves were inspected from close to the access hatches.

Generally the insulation appears to be fresh and no bats or obvious evidence of bats were noted.

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- 1st June 2023

A survey was carried out on 1st June 2023 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 1).

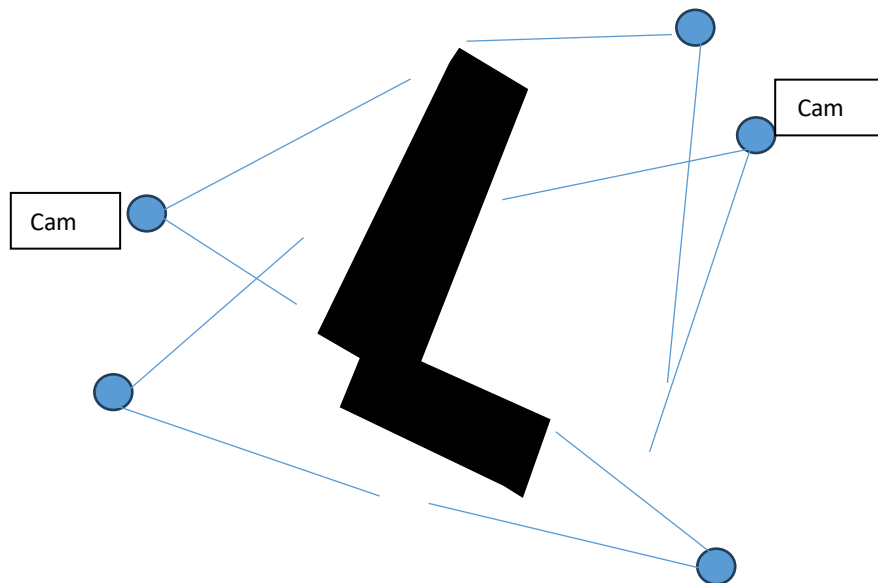


Figure 1: Viewing points (circled blue), line of sight (lined blue)

6.2.2 Survey 2- 11th September 2023

A survey was carried out on 11th September 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 1).

6.2.3 Survey 3- 28th September 2023

A survey was carried out on 28th September 2023 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 1).

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 1 st June 2023	21:22	Start	21:00	17	Low	30%	Dry evening, insects flying
		End	23:00	16	Low	15%	
Survey 2 11 th September 2023	19:38	Start	19:15	15	Low	25%	Dry evening, insects flying
		End	21:15	15	Low	40%	
Survey 3 28 th September 2023	18:59	Start	18:40	14	Low	50%	Dry evening, insects flying
		End		15	Low	40%	

6.5 ACTIVITY SURVEY RESULTS

6.5.1 Survey 1- 1st June 2023

The first bat heard was a common pipistrelle, approximately 15 minutes post sunrise, the bat was seen commuting back and forth the lane at the front of the property to the north along the vegetation. Activity in this area was very much the same throughout the course of the survey with common and soprano pipistrelles commuting along this route. The southwest corner of the site also had frequent activity for common and soprano pipistrelle with the occasional myotis sp. (natters) call heard.

Common and soprano pipistrelle activity was relatively frequent for the first hour of the survey with a small number of both species foraging around the boundaries whilst occasionally flying high or parallel to the building.

No bats were seen emerging from the building on this date.

6.5.2 Survey 2- 11th September 2023

Again, the first bat call heard was a common pipistrelle, approximately 10 minutes post sunrise. Again the bat was seen commuting along the lane at the north of the site. Activity was again frequent with both common and soprano pipistrelles commuting and foraging along the boundaries of the site. Bats were seen commuting and foraging throughout the site, occasionally along the building and over the grounds of the site.

At 20:22 a common pipistrelle emerged from the south west corner of the building before commuting west.

No further bats emerged from the building on this date.



Figure 4- Location of common pipistrelle emergence point (Arrowed red)

6.5.3 Survey 3- 27th September 2023

Again the first bat heard was approximately 10 minutes post sunrise. Again activity was very similar to that of the first two surveys with common and soprano pipistrelles commuting throughout the site and along the boundaries.

At 19: 39 a single common pipistrelle emerged from beneath the soffit area before shortly being followed by a further two common pipistrelles at 21:40 before commuting north.

No further bats interacted with the building on this date.



Figure 5: Location of common pipistrelle emergence points (arrowed red)

6.6 IDENTIFIED ROOSTS

Survey 1

The property was not identified as a bat roost on this date.

Survey 2

The property was identified as a roost for a single common pipistrelle on this date.

Survey 3

The property was identified as a roost for up to three single common pipistrelles on this date.

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 10-12 bats were observed foraging and commuting throughout the site throughout the course of the surveys (please see figure 6 for flight lines). A small number of myotis sp. were heard foraging along the scrub at the south western corner of the site.

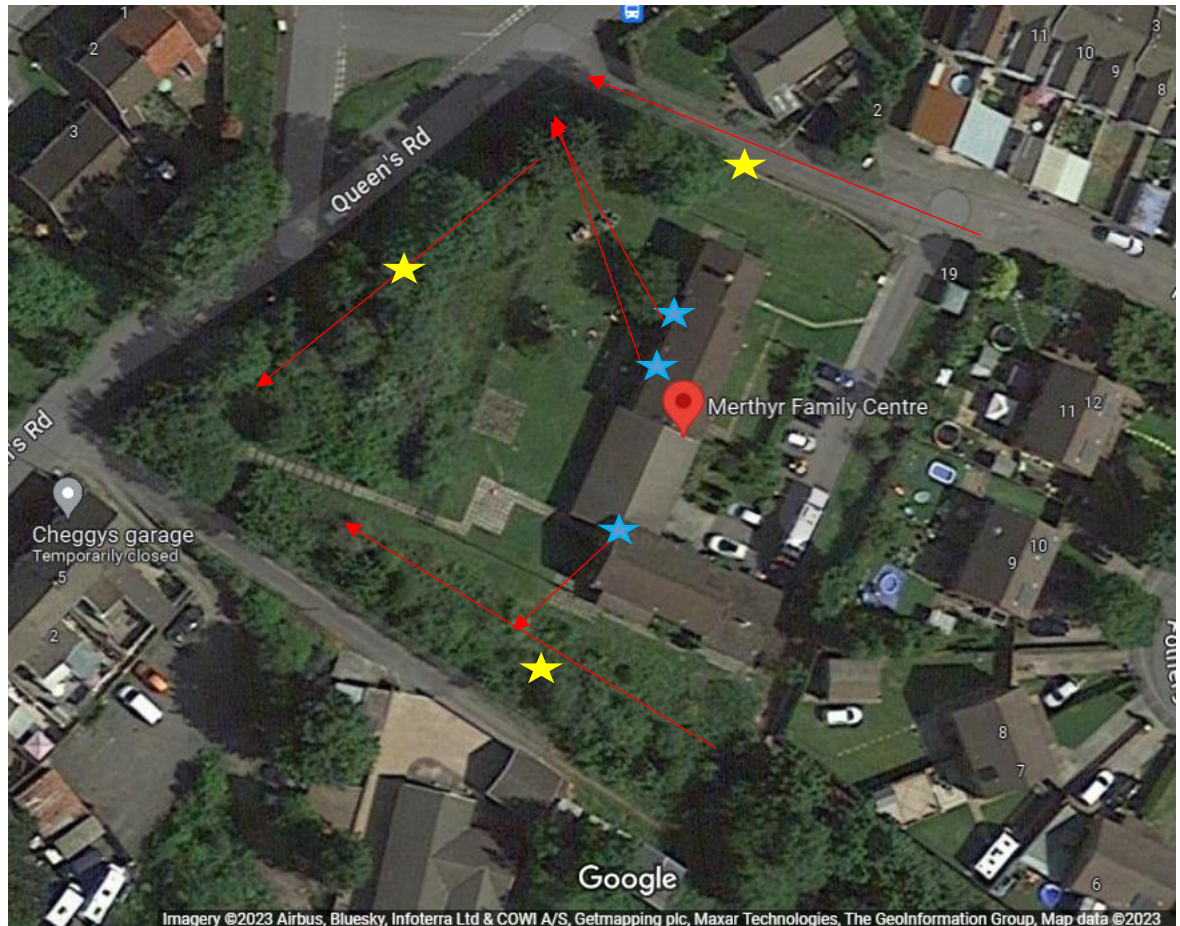


Figure 8: Identified commuting routes (arrowed red), foraging areas (starred yellow); roosts starred blue (Google Maps, 2023)

The property was found to be a roost for up to three common pipistrelles.

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. 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 the property is a roost for up to three common pipistrelle bats, surveys and the evidence inside the building do not seem to suggest that the roost is used by more than single bats.

7.1.2 Hibernation roosts

It is always possible that single pipistrelles will remain in the building over winter. Winter working should be avoided.

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 a day roost for three single common pipistrelle bats will be lost as a result of the proposed works.

A licence and mitigation will be required.

8 MITIGATION/ENHANCEMENT

8.1 BATS

Three Schwegler 1FF bat box will be attached within trees to the west. . Should the 1FF prove difficult to source, an elisa bat box <https://www.nhbs.com/elisa-bat-box> will be installed in its place. The boxes will be installed under the direction of the named ecologist, at least 3m in height and will face either south or east

A 15-20mm gap will be left beneath the fascia/barge boards on all elevations of the building allowing bats with access to the wall tops.

A bat access slates <https://www.nhbs.com/habibat-bat-access-slate> or similar (chosen to match new roof covering) will be installed on each section of the western pitch (three in total). The slates will allow access into the loft.

The following bat block will be installed in the new extension <https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box>. The block will be installed on the north eastern gable or the north western elevation. The bat block will be positioned away from windows and be at least 3m in height.

8.2 BIRDS

Two Schwegler 1SP Sparrow Terrace or the following <https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box> be attached to the western elevations of the site. The bird boxes will be placed at least 3m in height.

9 RECOMMENDATIONS (BATS)

9.1.1 Timing

It is considered that as the building is a roost for single bats only, however, it is acknowledged that two of the surveys were undertaken in September. In order to safeguard the small possibility that maternity roosts have been missed, destruction of the rooves will be undertaken in the autumn (15th September- 10th November) to avoid the hibernation season. The rooves will be reinstated no later than 15th April the following year with all bat mitigation in place for the following maternity season.

9.1.2 Timber/roofing materials

Roofing felt will be BS747 Type 1F bitumen only. There will be no use of breathable roofing membranes.

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/>. A lighting plan will need to be commissioned for the site.

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 suitable bat roosting features will be required (tiles, barge boards, fascias/soffits etc).

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, tiles, 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.

10.1 BREEDING BIRDS

10.1.1 Summary

A full breeding bird survey was not undertaken as it should be assumed that all the areas of scrub, hedgerow and trees are likely to be used by birds for nesting.

It should be assumed that all scrub and tree vegetation on the site is used by birds for breeding purposes during the nesting season.

The areas of grassland are not considered to be suitable for ground nesting species for breeding purposes as they are small and overlooked and subject to permanent disturbance by management.

10.1.2 Ecology

Most British avian species are found breeding during the spring and summer months, between April and August, although some, such as pigeons, and doves will frequently breed at all times of year, as they are not dependent on small, soft-bodied invertebrates to provide food for their chicks. Some other species, such as barn owl (*Tyto alba*) have also been recorded breeding in the winter months, in years when winters have been mild, and small mammal prey plentiful, although such breeding attempts are unusual, with chicks frequently failing to fledge. The breeding season can be extended for most species if the weather is mild, and food plentiful.

Contrary to common belief, whilst some bird species, such as crows and rooks, nest high in trees, often more than 10m high, the majority of British breeding birds will nest within 2m of the ground (or on the ground) within dense scrub or within holes and other natural and manmade cavities in rocks and walls.

Most bird species take considerably less than 60 days from egg-laying to chick fledging, whilst others, such as barn owl, can take more than 90 days. Many, but not all British species will make multiple breeding attempts if environmental conditions and food availability allow.

10.1.3 Legislation

In Britain, all naturally occurring avian species are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The legislation protects all birds, their nests and eggs, and it is an offence to:

- Intentionally kill, injure or take a wild bird;
- Intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built; and
- Intentionally take or destroy the egg of any wild bird.

In addition, birds listed on Schedule 1 of the Act, such as the Red Kite (*Milvus milvus*), are afforded further protection, and it is an offence to:

- Intentionally or recklessly disturb the bird whilst nest building or while at (or near) a nest with eggs or young; and
- Disturb the dependant young of such a bird.

10.1.4 Methodology

10.1.4.1 Habitat assessment

Signs looked for included:

- Availability of nesting habitat;
- Availability of foraging habitat;
- Territorial displays by birds;
- Courtship displays;
- Territory establishment and holding behaviour;
- Nests;
- Food carrying;

10.1.5 Constraints

There were no constraints to the assessment.

10.1.6 Results

10.1.6.1 Desk study

There were no records of birds from the development site or immediately adjacent land, however, there were multiple records of birds from the data search.

10.1.6.2 Habitat assessment

The trees, hedgerows and scrub are considered suitable for nesting birds.

All habitats on the site were suitable for foraging purposes, providing a variety of food sources. It should be assumed that the scattered trees are used for nesting purposes during the breeding season.

It is considered that the site does not provide suitable habitat for ground nesting species as the open areas are small, overlooked by numerous trees, all of which could be used by avian predators and subject of regular disturbance as a result management.

10.1.7 Breeding birds – evaluation

Birds should be considered to be of **high national** importance as a result of the legislation protecting them.

Within the context of the site, there is abundant suitable habitat for the smaller and more common species to utilise for nesting and foraging. It is therefore considered that birds are of a **medium local (site)** ecological importance.

10.1.8 Breeding birds - impact characterisation

It is anticipated that the majority of vegetation suitable for breeding birds will be retained. There may be some cutting back required on the western and southern boundaries.

10.1.9 Breeding birds - mitigation measures

Mitigation will be required and should include (but not be limited to) the following measures:

- All vegetation and brash removal should be undertaken outwith the breeding season i.e. between mid-August / September and April inclusive;
- Any clearance close to the start and end of this period should only be undertaken following an assessment by a suitably experienced ecologist as the breeding season is not fixed and is subject to annual variation;
- Where clearance is required during the breeding season, all areas should be subject to an assessment no more than 48 hours in advance to check for the presence of breeding birds;
- Should evidence of breeding birds, in particularly nests, be recorded, no clearance may be undertaken within 15m of any nest site until such time as the nest is vacated naturally; and
- Any post-development landscaping plan should include the provision of scrub &/or shrub habitats that can be utilised by breeding birds. Native species of as local provenance as possible will be used throughout. Management will need to be considerate to nesting birds, with any pruning works undertaken outside of the breeding bird season (September to March)

10.1.10 Breeding birds - impact characterisation with mitigation

It is considered that any impact on birds will be negligible.

10.1.11 Breeding birds - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**.

With mitigation

It is considered that the significance of the impact is **neutral**.

10.2 REPTILES

10.2.1 Summary

No reptile survey was undertaken at the site. The majority of grassland is short and unlikely to be used by reptiles due to management. It is considered likely that if reptiles are present, they will only be present on the interfaces between the grassland and longer areas of vegetation (scrub).

A full trapping and translocation exercise is not considered necessary as long as clearance of the site is undertaken in strict adherence to a method statement designed to prevent harm to any reptiles. In addition to the above, only small areas of grassland and scrub will be removed.

Reptiles are ectothermic, meaning they have to rely on external heat sources to warm their blood sufficiently to allow foraging and other activity. During the winter they are in brumation (similar to hibernation), emerging in April (or when the temperatures are consistently warm enough). Males tend to emerge before females, to enable them to prepare for mating. Females emerge a few weeks later and mating takes place. Female reptiles in the UK generally breed every other year to allow them to build up sufficient energy reserves. Grass snakes are the UK's only egg-laying reptile, eggs are laid in summer in warm piles of decomposing vegetation (or similar) and left to develop and hatch on their own. Young reptiles are born/hatch in late summer/early autumn. Brumation (hibernation) starts again as temperatures fall in the autumn.

The four more commonly occurring species of reptile in the UK (adder (*Vipera berus*), grass snake (*Natrix natrix*) slow worm (*Anguis fragilis*) and common lizard (*Lacerta vivipara*) have different preferences for habitat and diet. Adders generally prey on small mammals in drier habitats, grass snakes primarily hunt amphibians in wetter areas and aquatic habitats, slow worms take small, slow-moving invertebrates and inhabit drier areas and common lizards prey on small, faster-moving invertebrates and tolerate both wet and dry habitats.

10.2.2 Legislation

The four common species listed above are protected by the Wildlife and Countryside Act 1981 (as amended) against killing, injury and sale.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are not found in this area, having very specific geographical distribution within Britain, and so will not be referred to in this report despite the higher legislative protection afforded to them.

10.2.3 Methodology

10.2.3.1 Habitat assessment

The habitat assessment looked for features which would be attractive to reptiles such as:

- south facing banks;
- varied profile ground form;
- basking areas;
- vegetation cover;
- structurally diverse vegetation;
- potential hibernation sites; and
- evidence of suitable prey sources.

10.2.4 Results

10.2.4.1 Desk study

There are records of slow worm and common lizard within 2000m of the development site.

10.2.4.2 Habitat assessment

The site is considered to be generally sub-optimal for reptiles as described in the summary section above.

10.2.5 Reptiles – evaluation

Reptiles are protected by UK legislation and therefore they are of **medium to high national** ecological importance.

No reptiles were found throughout the course of the survey.

10.2.6 Reptiles - impact characterisation

It is anticipated that only small areas of managed grassland will be removed as a result of paving, slabs and new parking. It appears that only small areas of scrub will be moved to facilitate the development.

10.2.7 Reptiles - impact assessment without mitigation

It is considered that in the absence of mitigation there would be a **probable minor short term adverse** impact at a **local (site)** level.

10.2.8 Reptiles - mitigation measures

As long as reptile presence is assumed and site clearance is undertaken in accordance with an appropriate method statement, it is considered that a full trapping and translocation exercise is not required, and that habitat manipulation and denial is an appropriate method of ensuring that reptiles are not harmed during the site clearance.

Therefore, the following mitigation will be adopted:

- Clearance will be conducted in accordance with a Method Statement (to ensure that should reptiles be found in the course of site clearance or any other development activity, they will not be harmed and can be adequately cared for;
- Clearance will only be undertaken during the reptile active season (April-October, inclusive) unless it is determined that some areas of the site are not suitable for hibernation, unless the ground is too wet for hibernation or temperatures are consistently above 12 for seven consecutive days;
- Clearance outwith this period is possible, but depends on weather and temperatures being suitable to ensure that reptiles are likely to be active;
- There will be no clearance of hibernation habitat outwith the active season unless temperatures allow;
- Reptiles will be excluded from entering or re-entering the site during clearance/operational phase of works by ensuring that the site is kept as bare ground i.e. clear of any vegetation or other shelter

10.2.9 Reptiles - impact characterisation with mitigation

It is considered that there will be an **unlikely minor short term adverse** impact at a **local (site)** level as a result of the proposed development.

10.2.10 Reptiles - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**.

With mitigation

It is considered that the significance of the impact is **neutral**.

10.3 INVERTEBRATES

10.3.1 Summary

There are numerous records of invertebrate species within the records data search, due to the disturbance and habitats present on the site, it is considered that there will be a small number of common and widespread invertebrates present.

There are foodplants available for a range of species particularly within the site boundaries.

10.3.2 Ecology

Invertebrates are animals without spines or an internal skeleton, relying on their bodies to give them structure. There are over 40000 species of invertebrate in the United Kingdom, distributed across all terrestrial, aquatic and marine ecosystems. Their lifestyles are superficially at least similar; however, each genus has distinguishing characteristics, with each species within each genus having subtle differences resulting in each species occupying its own ecological niche.

Adults lay eggs which then hatch into larvae. The larvae then develop into adults. The processes involved in these three life stages are different from genus to genus and species to species and can be incredibly intricate, with sometimes very specific requirements, any interruption to which can cause any of the life stages can fail.

Adult animals generally have very specific food requirements, favouring single plant species or food source. Larvae and adults can be either plant eating or carnivorous dependent on species. The food source is a good indicator of how widespread a species may be: the more specific a food source, the more prone to range restrictions it may be.

Animals will generally be active during the spring, summer and autumn months and overwinter as eggs or larvae; some adults do go into hibernation over winter.

10.3.3 Legislation

No invertebrates are in receipt of international legal protection with the exception of the large blue (*Phengaris arion*) butterfly, protected by the Conservation of Habitats and Species Regulations 2017 (as amended); a number of other species are fully and partially protected by the Wildlife and Countryside Act 1981 (as amended). A number of species are listed on Section 42 of Species of Principal Importance to Wales and may, with others, be included within local planning authorities Biodiversity Action Plans (LBAPs).

10.3.4 Methodology

10.3.4.1 Habitat assessment

The proposed development site was subject of a walkover to assess its potential to provide suitable habitat for invertebrates. The features looked for included:

- Presence of a mosaic of multiple habitats;
- Presence of structural diversity in the habitats present;
- Presence of bare ground;
- Presence of common and likely food plants;
- Site aspect; and
- Previous and current land use.

10.3.5 Constraints

There were no constraints to the walkover.

10.3.6 Results

10.3.6.1 Habitat assessment

There is a varied mosaic of habitats on the site. There is abundant invertebrate habitat within the surrounding areas.

There are some food plants present on site for numerous invertebrates including section 7 species.

10.3.7 Invertebrates – evaluation

There are food plants on site suitable for a range of invertebrate species. Species present are likely to be common and widespread only due to the sites habitats.

10.3.8 Invertebrates - impact characterisation

It is considered that there will only be a small loss of managed grassland and a small area of scrub as a result of the development, therefore impacts on invertebrates are considered unlikely.

10.3.9 Invertebrates - impact assessment without mitigation

It is considered that there will be a ***possible minor short term*** adverse impact.

10.3.10 Invertebrates - mitigation measures

N/A

10.3.11 Invertebrates - compensation measures

- The creation of new vegetated habitats
- New wild flower planting

10.3.12 Invertebrates - impact characterisation with mitigation

It is considered that there will be a ***short term minor adverse impact***.

10.3.13 Invertebrates - significance of the impact

Without mitigation

It is considered that the significance will be ***slight***.

With mitigation

It is considered that the significance of the impact will be ***neutral***.

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.. Should lighting be installed at any point, it will be in line with the following guidance <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/> . A condition for a lighting plan will be required on the consent. This must be discharged prior to any lighting being installed on the site.

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

A hibernaculum will be installed within the site to benefit reptiles

Any post-development landscaping plan should include the provision of scrub &/or shrub habitats that can be utilised by breeding birds. Native species of as local provenance as possible will be used throughout. Management will need to be considerate to nesting birds, with any pruning works undertaken outside of the breeding bird season (September to March)

The existing/retained grassland will be overseeded with yellow rattle in order to increase species diversity. These habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups.

Areas of the site will be given over to wildflowers. It is proposed that this habitat is managed and enhanced to benefit wildlife. 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 using hand tools and 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. Following this, these habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups

Prior to any works commencing on the buildings, a bat licence will be required from Natural Resources Wales.

All ecological measures will be checked for compliance by an appropriately qualified ecologist and an e-mail or short tech note provided to the LPA ecologist for approval.

13cm x13cm gaps will be created at the bases of fences at the site boundaries to allow passage of hedgehogs across the site. Cautious working will be undertaken when clearing the site to prevent killing or injury to this species.

In summary the following mitigation, compensation and enhancement will be included within the scheme:

Habitat/Species	Mitigation	Compensation	Enhancement
Amenity grassland	Only small areas of grassland are to be removed. Area is largely retained.	The existing/retained grassland will be overseeded with yellow rattle in order to increase species diversity. These habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups.	Areas of the site will be given over to wildflowers. It is proposed that this habitat is managed and enhanced to benefit wildlife. 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/m ² . In the first year. The areas will be mown once every 8 weeks in the first year using hand tools and 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. Following this, these habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups
Tree/Scrub	None required	None required	Shrub and tree planting will be incorporated into the final design. Species will be native and as of a local provenance as possible. This habitat will be the subject of appropriate management as per the LEMP for the site.
Bats	Three Schwegler 1FF bat box will be attached within trees to the west. Should the 1FF prove difficult to source, an elisa bat box https://www.nhbs.com/elisa-bat-box will be installed in its place. The boxes will be installed under the direction of the named ecologist, at least 3m in height and will face either south or east A 15-20mm gap will be left beneath the fascia/barge boards on all elevations of the building. Type 1 bitumen felt to be used in rooves Roof removals will only be undertaken in Spring (March/April) or autumn (30th September to 10th	A bat access slate https://www.nhbs.com/habibat-bat-access-slate or similar (chosen to match new roof covering) will be installed on each section of the western pitch (three in total).	The following bat block will be installed in the new extension https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box . The block will be installed on the north eastern gable or the north western elevation. The bat block will be positioned away from windows and be at least 3m in height

	November) unless the presence of a maternity roost is disproved via a pre-commencement check. Works will not be undertaken between 10th November- 15th February to safeguard the possible presence of hibernating bats. Lighting will be designed in such a way that it will not impact bats and other wildlife. Bat access points and boundary vegetation will remain unlit.		
Reptiles	All clearance will be undertaken in line with a method statement and ecological supervision. Where necessary, potential hibernacula (brash, log piles, stumps, roots etc) will only be cleared during the active season (March-October) while day time temperatures are consistently over 12°C for a period of at least seven days prior as otherwise reptiles may be killed or injured as a result of inconsistent (low) temperatures (during the day and night) and/or low prey availability. Potential hibernacula will only be dismantled by hand unless the supervising ecologist gives the approval for machine dismantling	The existing/retained grassland will be overseeded with yellow rattle in order to increase species diversity. These habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups.	1 hibernaculum will be installed within the site Areas of the site will be given over to wildflowers. It is proposed that this habitat is managed and enhanced to benefit wildlife. 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 using hand tools and 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. Following this, these habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups
Birds	Works to any suitable breeding bird habitat will be undertaken outside of the breeding season (March- September unless the habitat is checked for the presence of nests by an appropriately qualified ecologist. Works will only commence if no nests are present.	The existing/retained grassland will be overseeded with yellow rattle in order to increase species diversity. These habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups. This will provide more foraging resources for birds.	Native species planting will be included within the final design in order to provide nesting opportunities and new foraging resources. Two Schwegler 1SP Sparrow Terrace or the following https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box be attached to the western elevations of the site. The bird boxes will be placed at least 3m in height.
Hedgehogs	Clearance will be undertaken carefully and in line with a method statement to ensure this species is not harmed at any stage of the project	N/A	N/A
Invertebrates	Reduction in the amount of vegetated habitat.	The existing/retained grassland will be overseeded with yellow rattle in order to increase species	Areas of the site will be given over to wildflowers. It is proposed that this habitat is managed and enhanced

		diversity. These habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups. This will provide more foraging resources for birds.	to benefit wildlife. 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 using hand tools and 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. Following this, these habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for invertebrates
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12 REFERENCES

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APPENDIX A - PHOTOS

Plate 1- eastern view of site



Plate 2- western view of site



Plate 3- south west corner of site



Plate 4- example of gap beneath soffit



Plate 5- photograph of single storey building linking two two storey buildings



Plate 6- photograph of roof void



Plate 7- photograph of roof void



Plate 8- photograph of roof void

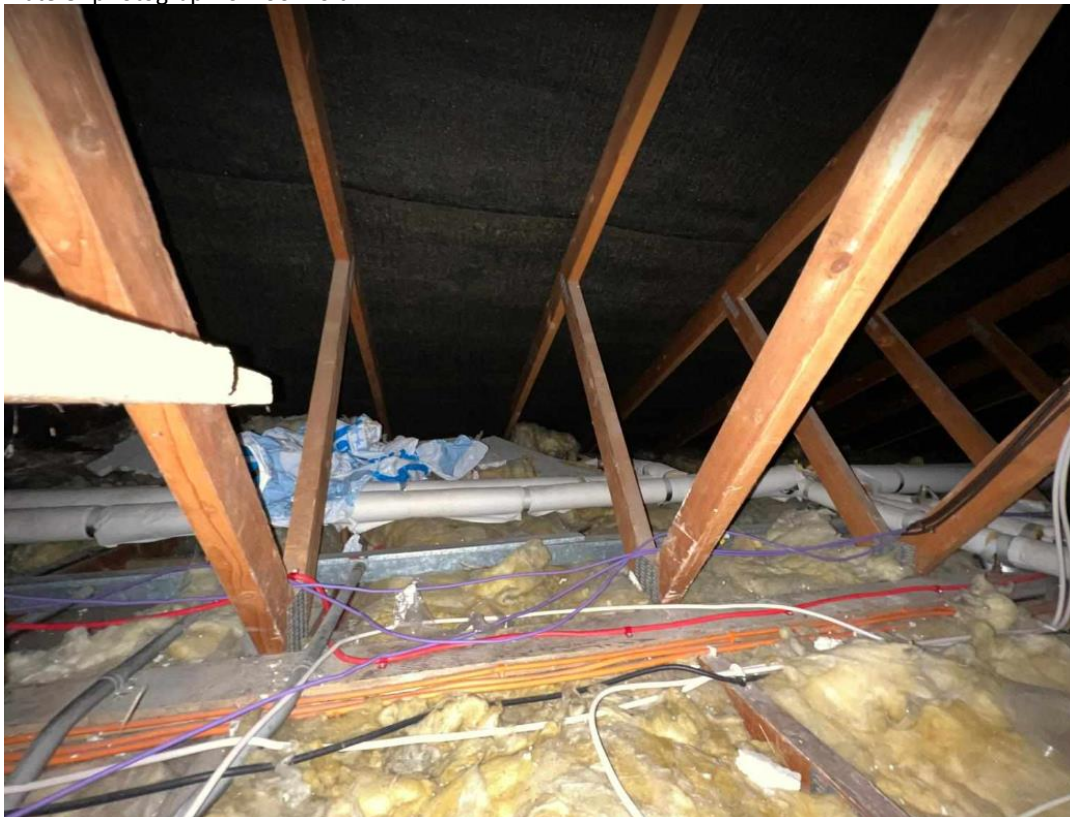


Plate 9- photograph of roof void



Plate 10- photograph of grounds facing south west



Plate 11 – photograph of rear amenity area



APPENDIX B - TARGET NOTES

Target note number	Description
TN 1	Lots of tree removal (stumps now present)
TN2	Non-native patch of planting

APPENDIX C – REPTILE METHOD STATEMENT

1. All clearance will be supervised by a suitably experienced ecologist until such time as the ecologist states that direct supervision is not necessary.
2. The ecologist will be on call for the duration of clearance works.
3. Vegetation will be cleared from directly affected areas only and the area minimised wherever possible.
4. All vegetation and brash removal will preferentially be undertaken during the winter months i.e. between November and February inclusive.
5. If this is not possible, all areas to be cleared must be subject of a finger-tip search by an ecologist immediately prior to and during any clearance work; the ecologist should also be present while all post hole excavation (or other ground breaking should it be required) is being undertaken.
6. Should evidence of breeding birds, in particularly nests, be recorded, no clearance may be undertaken within 5m of any nest site until such time as the nest is vacated naturally.
7. No spraying of vegetation to be carried out. Vegetation will be maintained close to ground using repeated cutting only. 1x Hibernaculum will be added to an area of the garden remaining unaffected by the development. Materials already onsite (e.g., brash, logs) will be used.
8. Woody vegetation will be cleared (ONLY IF NECESSARY) to ground level using a chainsaw with all arisings stacked in unaffected areas NOT on areas of tall vegetation (over 300mm). Where necessary, stumps and roots will only be removed by machine (under ecological supervision) once the clearance is complete.
9. All woody vegetation will be checked by the ecologist prior to cutting for the presence of bird nests.
10. Vegetation will be cut in three phases. The first phase will reduce the vegetation height to 150mm; the second will reduce it to ~50mm; the third phase will reduce the height to as close to ground level as possible. All cuts will have a period of 24 hours between each cut.
11. All vegetation cutting will be directional. This ensures that any animals present will be pushed from the site into adjacent retained habitats.
12. After clearance, if the vegetation is allowed to regrow above 150mm high, it will be cut and raked as described above.
- 13. Where necessary, potential hibernacula (brash, log piles, stumps, roots etc) will only be cleared during the active season (March-October) while day time temperatures are consistently over 12°C for a period of at least seven days prior as otherwise reptiles may be killed or injured as a result of inconsistent (low) temperatures (during the day and night) and/or low prey availability. Potential hibernacula will only be dismantled by hand unless the supervising ecologist gives the approval for machine dismantling.**
14. If a bird's nest is observed on the site, the ecologist will assess it to determine whether or not it is active, the species concerned, the lifecycle state of any occupants and provide advice on next steps.
15. If reptiles are observed within the clearance area during the works, a decision on how to deal with them will be made on site in light of the conditions on site at the time and the state of the animals themselves. There are three options for dealing with them:

- It may be possible to leave the animals alone to find their own way into cover, depending on where they are seen, what they are doing and their apparent activity levels; or
- Capture, remove from site and take into temporary captivity until such time as they can be released adjacent to the cleared area (a vivarium has been prepared in case it is required); or
- Should conditions allow, capture and translocate the animals to a safe area immediately adjacent to the site.

16. Habitat and the unlikely presence for other species (e.g. dormice, otter, great crested newts & other amphibians etc.) can be identified and avoided by following this method statement.

17. In the event that a European Protected Species such as great crested newt or dormouse is observed during the clearance,, all work will stop, and the ecologist consulted. It will be necessary to consult with Natural Resources Wales; further surveys and a development licence may be required before work can recommence.

If large numbers of reptiles are discovered, an offsite receptor area should be suggested to be agreed by the County Ecologist.

NOTE: should it be required, a Natural Resources Wales development licence for European Protected Species is likely to take up to 30 working days to be issued following submission

APPENDIX D- ASSESSMENT AGAINST POLICY -PLANNING POLICY WALES: STEPWISE APPROACH AND GREEN INFRASTRUCTURE STATEMENT

On the 11th October 2023, ahead of PPW12 being published, the new Chapter 6 came into force with immediate effect.

Net benefit must be secured via planning applications using the step-wise approach, including the acknowledgement of off-site compensation measures and the need to consider enhancement and long-term management. Green Infrastructure Statements will be used to demonstrate the step wise approach. The following information will be used in order to show compliance with policy.

Proposed Development: Thomastown House

Site description: Series of brick built buildings beneath clay tile rooves with wooden barge boards and fascias. The immediate surrounding comprise of managed amenity grassland surrounded by fences and scrub/tree boundaries beyond..

Surrounding Area description: The site is immediately adjacent to existing residential development. The wider landscape is made up of further residential development, associated infrastructure, intertwined with grassland, tree corridors and broad-leaved woodland.

Development Impacts: Loss of vegetation (amenity grassland). Building rooves to be removed and replaced resulting in the temporary loss of bat roosts. Increased site lighting.

Step wise approach

Step 1- Avoidance- Impacts cannot be avoided on existing habitats due to small size of site and due to the need to upgrade the existing family centre.

Step 2- Minimise- Impacts have been minimised by retaining the majority of vegetation and replacing the rooves on a like for like basis on completion of the work.

Step 3- Mitigate/Restore- Mitigation will be via appropriate safeguarding method statements and licences to ensure no harm to protected species and the retention of the majority of grassland and site boundaries. Cautious working will be undertaken when clearing the site to prevent killing or injury to hedgehogs. Any site lighting will conform to the following guidance to prevent any indirect impacts on foraging bats <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>. Mitigation for the temporary bat roosts will be via reinstating the existing rooves on a like for like basis with the addition of new features for bats within the building. Native tree and shrub planting will be included within the final design (please see associated landscaping plan) (Appendix E)

Step 4- Compensation on site- The existing grassland will be overseeded with yellow rattle in order to increase species diversity. These habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups.

Biodiversity Enhancements Proposed

Native tree and shrub planting will be included within the final design (please see associated landscaping plan) (Appendix E)

Areas of the site will be given over to wildflowers. It is proposed that this habitat is managed and enhanced to benefit wildlife. 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 using hand tools and 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. Following this, these habitats will be cut twice per year, using hand tools once in March/April and again no earlier than 15th July in order to mimic hay meadow management and improve the site for reptiles and other species groups. A hibernaculum will

be installed within the development. Native tree and shrub planting will be included within the final design (please see associated landscaping plan). This will be managed for a minimum of 5 years.

Bat and bird boxes will be included within the final design.

The proposed scheme acknowledges the requirement to achieve a Net Benefit for Biodiversity and from the beginning this has been built into the planning of the project. It is recognised that the footprint of the scheme removes a limited amount of amenity grassland and possibly a small amount of scrub habitat. Whilst the positive effects of removing this land from overmanaged amenity grassland are acknowledged, the applicant aims to deliver biodiversity enhancements at the local scale by offering the enhancements stated above on the site. The site will be subject to enhancements along with long term appropriate management.

As result of the ecological measures within this report, it is expected that there will be a demonstrable net benefit for biodiversity. The vegetated habitats to be impacted have been identified as being of relatively low value, with impacts (bat roosts in buikdings) adequately mitigated on-site and net gain being achieved within the site. All habitats will be retained/created/enhanced on site, as well as and will be subject to a long-term Habitat Management Plan for the foreseeable future

APPENDIX E – LANDSCAPING PLANS



[illegible]

APPENDIX F – Landscape Management Plan



Report No:	Date	Revision	Author	Checked
LB446_R01	15.03.24	-	Andrew Laird (CMLi)	David Bailey (CMLi)

Disclosure:

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LB446_D01a: Detailed Soft Landscape Plans



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Section 1: Introduction

Purpose

- 1.1. This Landscape Management Plan (LMP) has been prepared by Laird Bailey Landscape Architects (LBA) on behalf of cwf Architects for the development at Merthyr Family Centre, Thomastown House, Queen's Rd, Merthyr Tydfil, CF47 0HE (hereafter referred to as the 'site'). The site is centred on OS grid reference SO054067.
- 1.2. The purpose of the LMP is to provide details of measures to ensure the successful establishment and ongoing maintenance of the soft landscape elements of the development proposals for a period of up to 5 years and beyond.
- 1.3. This LMP should be read in conjunction with drawings LB446_D01a Detailed Soft Landscape Plans (Sheets 1-2).

Scope of the Landscape Management Plan

- 1.4. This Landscape Management Plan is set out as follows:
 - Section 2 sets out relevant standards and legislation;
 - Section 3 describes the site, and provides an overview of the site and existing landscape features;
 - Section 4 describes the proposed soft landscaping typologies;
 - Section 5 sets out the long-term design objectives;
 - Section 6 sets out the management regimes and responsibilities; and
 - Section 7 sets out the maintenance operations for all the soft landscape areas.



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Section 2: Technical and Environmental Considerations

- 2.1. The contractor shall familiarise themselves and their operatives with all British Standards and regulations, as referred to in this document, and any subsequent revisions thereof. All chemical weed control must be carried out by suitably trained staff in accordance with the manufacturers recommendations and the legislation set out below.
- 2.2. The Contractor must only use chemicals specifically approved for the purpose for which it is intended as dictated by the Control of Pesticides Regulations 1986 and the conditions of approval for the chemicals and any relevant code of practice issued by DEFRA. The Contractor will consider in every instance whether the use of chemicals is strictly necessary before application.

Relevant Standards and Legislation	
ISO 7851	Classification scheme for fertilizers and soil conditioners
BS4428	Code of practice for general landscape operations
BS 8545: 2014	Trees: from nursery to independence in the landscape - Recommendations
BS 5837	Trees in relation to design, demolition and construction - Recommendations
3882:2015	Topsoil
The Food and Environment Protection Act (1985)	
The Control of Pesticides Regulations 1986 (COPR) (as amended 1997)	
The Control of Substances Hazardous to Health Regulations (2002)	
The Environment Protection Act (1990)	



Section 3: Site Overview of Existing Landscape

Site Context

- 3.1. The site is located off Queen's Rd, Merthyr Tydfil. The development proposals are for:

'Change of use from family centre into 2 children's home, 1 short break home for disabled children and their families, 1 therapy/continuing care home and one therapy/office area. External alterations proposed including ground and first floor extensions refurbishment of and existing'.
- 3.2. The site comprises approximately 1 acre of land with a two-storey building at the centre. Served by vehicle accessed at the north-east corner of the site, there is car parking area to the front of the existing building which is to be retained. Landscape features include amenity grass, scrub and scattered trees. The scrub is contained to the south and western boundary with scattered trees found across the site.
- 3.3. The character of the site is urban with built development surrounding the site on all sides.



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Section 4: Proposed Soft Landscaping

- 4.1. This LMP is to be read in conjunction with details of proposed soft landscaping (see LBLA Drawing No. LB398_D01a - Soft Landscape Proposals (Sheets 1-2)).
- 4.2. Soft landscaping within the site is designed to:
- Create an attractive and appropriate setting for residents and visitors of the site, providing all year-round interest and colour;
 - Create a strong soft landscape framework with planting to the perimeter of the site including native trees and hedgerows selected to maximise biodiversity, green infrastructure links and visual interest;
 - Create a safe space for children; and
 - Promote flowers, berries and general 'form' offering the maximum benefit of amenity/habitat for birds, small mammals, and insects.
- 4.3. Proposed soft landscaping elements and planting consists of the following.

Trees

- 4.4. A selection of native trees, planted at appropriate sizes will feature within both publicly accessible areas and within private rear gardens.

Native Hedgerow Planting

- 4.5. Bare root stock is to be planted in single and a double staggered row to establish natural hedgerows. All whips are to be fitted with a rabbit guard and staked.

Shrubs/Perennials

- 4.6. Native specimen shrubs and perennials have been proposed within the site as amenity features enhancing the building, street scene and rear garden amenity areas.

Sustainable Urban Drainage Planting (SUDS) – Bioretention Strip

- 4.7. A bioretention strip is to be implemented within the car parking area of the site. This area is to consist of a single strip. The bioretention feature will be dry throughout the year but for periods of heavy rainfall. The proposed bioretention feature will be planted with *Cornus sanguinea*, tolerant of both dry and saturated soils.

Wildflower Meadow Mix

- 4.8. Wildflower areas will be implemented to the peripheries of the development forming a successional buffer to existing scrub and new hedgerow planting. Seed mixes will consist of a



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range of native non-invasive grass and long-lasting wildflowers, offering maximum benefits to bees, butterflies, birds, and small mammals.

Proposed Bulb Planting

- 4.9. A native seasonal bulb mix has been proposed to amenity areas to the front of the building.

Amenity Grassland

- 4.10. Amenity grass areas will be retained and proposed around the new buildings.



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Section 5: Long-term Design Objectives

- 6.1 This landscape management plan has been produced to ensure that the new and existing planting on site will be managed effectively, ensuring landscape features establish and thrive in perpetuity whilst maintaining a safe environment for children.

Existing Trees and Scrub

- 6.2 Management of existing trees and scrub offers to secure the current landscape elements that have potential for enhancement without compromising other important aims of the development.
- 6.3 Specific objectives include:
- Maintaining long-term health of existing trees and scrub to contribute to buffering the development from neighbouring land and infrastructure;
 - To extend the life of mature trees through sound arbouricultural management;
 - Managing scrub to stop encroachment into the site; and
 - Creating a healthy tree and shrub understorey to knit into the proposed soft landscaping proposals, offering a series of mature/interconnected wildlife corridors.
- 6.4 Any tree works such as the removal of hazardous branches or the felling of mature trees will be completed outside of the active period for breeding birds (generally understood as March to August inclusive but some bird species may nest all year round). Should any management be required within the breeding bird period, checks for nesting birds by a suitably trained ecologist will take place prior to any works commencing to ensure that no breeding birds are present. Should a nest be present then a suitable buffer would be installed until the nest is confirmed as being inactive.
- 6.5 Checks for the presence of roosting bats would also be completed prior to management taking place regardless of the time of year. Potential bat roosting features can include woodpecker holes, rot holes, any cracks or splits in the tree bark, cankers, gaps between overlapping stems or branches, partially detached ivy (with stem diameters in excess of 50mm), and man-made holes. If any of the potential bat roosting features are identified, evidence of roosting bats is identified or a bat is found, then works would temporarily stop and a licenced ecologist/Natural England consulted.

Proposed Tree Planting

- 6.6 The long-term design and management objectives of proposed tree planting is to ensure that trees establish well and continue to thrive and contribute to an attractive and habitable environment. Trees shall be managed to develop a healthy and even form. Stems should only be removed to retain the natural appearance of the individual plant species or to remove broken or badly damaged branches and dead wood. Tree surgery such as crown lifting



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should be carried out as required by a suitably qualified individual to prevent restriction to site users.

- 6.7 Watering operations will be carried out as specified in this management plan and in conjunction with drawing LB446_D01a (Sheet 2) to ensure healthy establishment and longevity.
- 6.8 Irrigation timing and frequency will take into account the prevailing weather conditions, soil moisture release, response of the tree species to water deficits or prolonged soil saturation. The holding capacity of the soil and amount of water available to the tree to be assessed at each visit. Frequency of watering is more important than the volume and should be undertaken as required. Monitoring is recommended when 5 consecutive days at 25 degrees is recorded during the growing season. Water should only be added if the probe / tensiometer values indicate that it would be appropriate to do so.
- 6.9 All proposed trees to be in compliance with BS8545: 2014 Trees: from Nursery to independence in the landscape – Recommendations. Staked trees will be inspected at each maintenance visit, and any trees which have died or are excessively damaged will be removed from site, complete with the stake, and replaced according to the original planting specification.
- 6.10 Mulched areas around trees will be maintained to an acceptable standard (75mm in 1m circumference around stem).

Proposed Native Hedgerow Planting

- 6.11 Mixed native hedgerows along the fence line boundary are to be planted as bare root stock in a double staggered row to establish a natural hedgerow. Mixed native hedgerow planting will be managed to achieve a minimum height of 2m above ground level. Ornamental single species hedgerow will be planted in a single row and managed to achieve a maximum height of 1.2m.
- 6.12 The ground around the hedgerow transplants will be bark mulched to conserve moisture and reduce weed growth. Careful trimming and pruning will be required in the early years to ensure the development of a well-clothed hedge. Trimming should aim to form an 'A' profile.

Inspect monthly and maintain shrubs/hedging in a weed free condition through combined techniques by hand, herbicides, cultivation and mulching. Prune or clip to promote bushy, healthy growth and required shape when necessary. Trimming back of growth overhanging adjacent footpaths or windows when required. Remove/replace individual specimens as required.

Existing and Proposed Amenity Planting

- 6.13 The long-term design objective of the amenity planting is to ensure the plants thrive to create attractive foliage for amenity value, contribution to drainage features and habitat for wildlife. Planting will be managed to achieve a maximum height commensurate with their location and surrounding features. Pruning should be undertaken to promote flowering and fruiting in



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accordance with the species and age of the plant. Species and cultivars are to be pruned particularly to maximise flowering and berrying for amenity and wildlife.

- 6.14 As such, any management will take place at the end of the winter months to avoid the active period for most wildlife, providing the plants with time to produce flowers, seeds and berries. Should any management be required within the breeding bird season (March to August inclusive), checks for nesting birds will take place prior to any works commencing by a suitably qualified ecologist. Should a nest be present then a suitable buffer would be installed until the nest is confirmed as being inactive. Any vegetation management will have consideration for the potential presence of breeding birds as per the management considerations stated above.

Bioretention Strip

- 6.15 The bioretention strip shall be managed for aesthetics as well as to ensure optimum health in order to function in reducing the speed of water infiltration.
- 6.16 It is intended that planting will be managed annually by shaping and pruning in line with the other ornamental hedgerow on site. The bio-retention hedgerow will be maintained to no higher than 1.2m.

Proposed Bulb Planting

- 6.17 A native seasonal bulb mix has been proposed to amenity areas to the front of the building.
- 6.18 Before the bulbs are laid out, the soil should be thoroughly loosened to a depth of 10-15cm. Lay out or scatter the bulbs evenly over the location being planted (at 20 per meter square and in species groups of between 20 and 30 in each group) and then cover with a layer of soil (10 to 15cm thick).
- 6.19 Grass in which flower bulbs have been planted should not be mowed until 6 to 8 weeks after the flowering period. Do not cut before flowering. Interval between end of flowering and start of grass cutting, every 6 weeks thereafter.

Existing and Proposed Amenity Grass Mix

- 6.20 Management aims to provide a safe and open playing space for children meeting their amenity requirements. The management objectives are as follows:
- 6.21 Amenity grass will be cut to a height of 35mm monthly during the growing season with arisings removed.



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Section 6: Management Regimes and Responsibilities

- 7.1. The landscaping works will receive post installation maintenance for a one-year Defects Liability Period (DLP). All defects resulting from plant loss, disease, or failure will be replaced on a like for like basis. A visit every month, or more frequently should watering be required, is recommended during the DLP. Subsequently a minimum of 12 maintenance visits per annum is recommended with this LMP covering a period of 5 years. Following the Defects and Liability Period all plants shall be replaced by the site owner up to a period of 5 years post DLP.
- 7.2. Maintenance and management activities are set out below (which covers a minimum period of 5 years) to ensure the soft landscaping is managed effectively beyond the time limits of the implementation and establishment works. The responsibility for this management and maintenance is to be agreed. LBLA's recommendation is for the landscape contractor that undertakes the planting works to be engaged to carry out the one-year establishment maintenance.
- 7.3. Management and maintenance operations will be monitored and reviewed annually on an on-going basis and modified where required; if the operations and frequencies set out do not deliver the required results or meet the specific aims and objectives.
- 7.4. As a minimum, maintenance visits should be undertaken to inspect and monitor as well as to carry out routine operations, including weeding and litter picking, with other specific operations being undertaken as scheduled below.
- 7.5. The appointed Contractor must provide details of all necessary insurances and certification to carry-out the works specified in this management plan. It is the responsibility of the appointing authority to ensure that all submitted insurances and certificates are up to date and provide the appropriate level of cover for the specified works.
- 7.6. Defects in the landscape are to be identified early and addressed promptly.



Section 7: Soft Landscape Maintenance Work Schedule

Component	Task	Time of Year	Frequency
<i>Visits every month throughout the one-year defects and liability period, more frequently if required due to prologued dry weather conditions and the need for watering.</i> <i>Subsequently management and maintenance operations will be monitored and reviewed annually for the first five years and then every five years by the appointed management company. If operations and frequencies set out do not deliver the required results or meet the specific aims and objectives, these should be modified accordingly.</i>			
Trees and Peripheral Scrub	Inspect, prune and repair wounds in accordance with good horticultural and arboricultural practice.	Oct-Feb	As required (annually).
	Check tree ties regularly for rubbing and adjust if necessary. Constriction of the stem by ties happens very quickly, so fast-growing trees need frequent checking. After bad weather, check for abrasion and snapped stakes or ties. Re-firm tree by adjusting tree ties and ensuring soil is re-firmed around the base.	All year round and especially after strong winds, frost heave and other disturbances.	As required (annually).
	Hand weed mulched areas around trees.	Mar-Sep	Every visit.
	Control weeds by hand or mechanical tools only.	Mar/Oct	Only if required.
	Replace any failed specimens.	Oct-Mar	As required during the one-year DLP and 5 years post DLP (next available planting season).
	Remove debris/litter	Throughout	Every visit.
	Top up bark mulch around bases of trees to full depth of 75mm.	Mar/Apr	As required during the DLP.
	Newly planted trees will be watered throughout May-August months after any period of four weeks without significant rain to thoroughly wet the top 150mm of soil around the tree roots.	Throughout	As required – or at least once after a period of four weeks without significant rainfall (see monitoring in proposed tree section).



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Component	Task	Time of Year	Frequency
	Trimming and selective thinning of the canopy. Trim back growth overhanging adjacent footpaths when required.	Oct-Mar	Annually if required.
	In year 2, remove staking if tree has established well.	Any	As required.
	Cut back and prune peripheral scrub to stop encroachment	Oct-Feb	Annually if required
Native Hedgerow	Re-shaping	Hard prune Oct-Feb	Annually if required
	Hand weed	Throughout	Every visit
	Apply suitable non-selective herbicide to control weeds	April to Sept	As required
	Apply fertiliser: Slow release, applied as per manufacturer's recommendations.	March / April	Annually
	Remove debris/litter	Throughout	Every visit
	In years 2 and onwards remove shrub shelters and rabbit spirals if specimens have established well and are no longer required.	Throughout	As required
	Replace any failed specimens	Oct-March	As required (next available planting season)
	Top up bark mulch hedge base to full depth of 75mm.	April	Annually
	Watering of newly established hedgerows. Watering is required in the first two years after planting, which will be the responsibility of the developer before handover to the management company.	Throughout	As required after a period of four weeks without significant rainfall



Component	Task	Time of Year	Frequency
Bulb Planting	Do not cut before flowering finishes and leave interval of 6 weeks between end of flowering and start of grass cutting.	April-Oct	Once (when flowering finishes)
Amenity Shrubs and Perennial Planting	Trimming, pruning and reshaping to encourage healthy bushy growth, flowering and fruiting. Trim back growth overhanging adjacent footpaths when required.	Oct-Mar	Annually if required.
	Hand weed.	Throughout	Every visit.
	Control weeds to by hand or mechanically.	Apr-Sep	Only if required.
	Remove debris/litter.	Throughout	Every visit.
	Replace any failed specimens.	Oct to March	Within the DLP, as required (next available planting season).
	Top up bark mulch around bases of shrubs to full depth of 75mm.	Throughout	As required.
	Watering of newly established shrubs.	Throughout	As required to ensure successful establishment and longevity.
Meadow Grassland	During the first year allow annual weeds to establish to protect seed stock. Cut, compost, and remove in August. In subsequent years cut to 50mm and allow cuttings to drop seed before removal.	August	Once per year. Leave hay cuttings to drop seed for minimum of 3 days (up to 7) before removing.
	Clearance of debris/ rubbish	Throughout	The basin is to be regularly checked for rubbish or other detritus material. Any rubbish to be cleared by hand and removed from site.
	Mowing/trimming following the initial hay cut.	September-March	Mow/trim meadow grassland to 50mm over the autumn and winter as required.



Component	Task	Time of Year	Frequency
	Weed control.	Mar-Sep	Invasive weeds to be removed by hand or mechanically.
	Re-seeding (if required).	Sep	Any bare patches of ground where seed has failed to germinate should be re-seeded as per the original specification.
Amenity Grass Mix	Mowing and removal of arisings. Allow 4 weeks for establishment. Before the first cut lightly roll or tread newly seeded areas, after a few days once the grass has picked up again the lawn shall be ready for its first cut (Do not roll however if the ground is saturated with water).	Mar-Oct	Monthly/every visit. Grass should be mown regularly to aid with establishment to a height of 50mm after a full, thick sward has established.
	Clearance of debris/rubbish.	Throughout	Area to be regularly checked for rubbish or other detritus material. Any rubbish to be cleared by hand and removed from site.



Plans:

LB466_D01a: Detailed Soft Landscape Plans (Sheets 1-2)



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APPENDIX G- PROPOSED PLANS





recommendation from the Ecological Report by BE Ecological Ltd - Issue 1, VA

1. A 15 - 20mm gap will be left beneath the fascia/barge boards on all elevations of the building.
2. A bat access states <https://www.rhbs.com/habitat-for-access-state> or similar (chosen to match new roof covering) will be retained on each section of the western pitch (three in total).
3. Timber/cladding materials - Roofing felt will be Type 1 (batten only). There will be no use of insulating/cladding materials.
4. 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 outside lighting will conform to the following guidelines: <https://help.org.uk/publication/guidance-note-6-bats-and-artificial-lighting/>. Please see associated plan with lighting details.

Habitat Bat Access State

Dimensions: (H) 418 x (W) 375 x (D) 80mm
Entrance hole dimensions: (H) 20 x (W) 100mm
Weight: 1.5kg

Correct placement of Habitat is fundamental to the successful uptake by bats.

Orientation - Temperature is known to be the major factor influencing successful uptake of artificial roost by bats. In general, bats seek warm spaces to help them with rearing young. For this reason, Habitat should be located where it will receive the maximum amount of sunlight. In the northern hemisphere this will be the southerly aspect/orientation (south, south-west and south-east).

Height - Position Habitat a minimum of 2 metres but preferably 5 to 7 metres above ground. Avoid placement above windows, doors and well-draining plants, thereby reducing the likelihood of predation by cats. A position near the eaves or gable apex of the property would be preferable.

Landscape considerations - To make Habitat a potential roost for a wider range of bat species, it is helpful to consider whether there is nearby linear vegetation features such as hedges and tree lines. This is because some bat species use these features for navigation between their roosting site and feeding ground and to avoid flying in open and exposed areas.

recommendation from the Ecological Report by BE Ecological Ltd - Issue 1, VA

1. Two Schwegler 15P Sparrow Terrace in the following: <https://www.rhbs.com/sparrow-terrace-mail-box> will be attached to the western elevations of the site.

Sparrow Terrace Mail Box

Dimensions: 240mm x 270mm x 170mm (H x W x D)
Weight: 2.0kg
Fixing: 2 screws

Installation height - The boxes can be hung to fit the shape of any building horizontally or vertically, diagonally to fit gable eaves or A-shaped for a gable apex. The Terrace should be installed at least 2m to 4m off the ground making sure that there is a clear flight path to the nest. Boxes may also be sited directly under the eaves, but make sure that they are away from areas used by house martins. It is simple to add more compatible sparrow boxes later to suit your expanding colony.

recommendation from the Ecological Report by BE Ecological Ltd - Issue 1, VA

Vivara Pro Build-in Woodstone Bat Box to be installed on the new extension on the north eastern gable end the north western elevation. The bat box to be positioned away from windows and be at least 3m in height

(<https://www.rhbs.com/vivara-pro-build-in-woodstone-bat-box>)

Vivara Pro Build-in Woodstone Bat Box

Dimensions: 240mm x 270mm x 170mm (H x W x D)
Weight: 2.0kg
Fixing: 2 screws

Task	Responsible	Start Date	End Date	Status
1. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
2. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
3. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
4. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
5. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
6. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
7. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
8. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
9. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed
10. Review and update the ecological assessment	BE Ecological Ltd	10/10/23	10/10/23	Completed