



Pond Cottage
Bat Survey Report &
Preliminary Ecological
Appraisal

Date: August 2023

by

Lewis Badham & Megan Price
Planning Ecologist/ Ecologist
(Planning and Consultancy)
Countryside and Wildlife Team
Neath Port Talbot CBC

CONTENTS

DECLARATION.....	4
EXECUTIVE SUMMARY	5
1 INTRODUCTION	6
1.1 SITE LOCATION.....	6
1.2 DESCRIPTION OF DEVELOPMENT	7
1.3 LEGISLATION AND POLICY	7
1.3.1 ENVIRONMENT (WALES) ACT 2016	7
1.3.2 LDP POLICY EN6.....	8
1.4 SCOPE OF SURVEY	9
1 BASELINE SURVEY RESULTS.....	10
1.1 BATS.....	10
1.1.1 LEGISLATION	10
1.1.2 PRELIMINARY SURVEY METHOD	10
1.1.3 SURVEY RESULTS.....	10
1.1.4 ACTIVITY SURVEY METHODOLOGY	11
1.1.5 LIMITATIONS	12
1.1.6 ACTIVITY SURVEY RESULTS.....	13
1.2 EXTENDED PHASE 1 HABITAT SURVEY	14
1.2.1 SURVEY METHODOLOGY.....	14
1.2.2 SURVEY LIMITATIONS.....	15
1.2.3 SURVEY RESULTS	15
1.2.4 CORE SUSTENANCE ZONES.....	16
1.2.5 BADGER.....	16
1.2.6 BROWN HARE	17
1.2.7 OTHER MAMMAL SPECIES.....	17
1.2.8 BIRDS	17
2 RECOMMENDATIONS FOR MITIGATION.....	17

2.1	SITE WORKS METHOD	17
2.2	ECOLOGICAL ENHANCEMENT	17
3	REFERENCES	19
4	APPENDICES	20

DECLARATION

The information, advice and opinions which we have prepared and provided is true, and has been prepared and provided in accordance with the CIEEM's Code of Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Signed:

X L Badham

Lewis Badham

Planning Ecologist

A handwritten signature in black ink, appearing to read 'M Price'.

Megan Price

Ecologist (Planning & Consultancy)

The following report is considered a reasonable and true representation of the ecological situation on the site assessed. The report is however just a snapshot assessment therefore the authors are unable to guarantee that all biodiversity interest has been identified. In addition, if works are not undertaken, a programmed re-assessment will be required. The survey information is considered applicable for two years from the date of the survey.

This report remains the copyright and intellectual property of the Countryside and Wildlife Team, Neath Port Talbot CBC. The report is not permitted to be reproduced other than in full.

EXECUTIVE SUMMARY

Gnoll Country Park is currently the focus of a Levelling up Fund grant which has been approved to improve multiple features in the Park (for full details please see The Stage 2 Report. Rev_B. Hiraeth).

The project has been subdivided up into multiple planning applications and the focus of this report is the Pond Cottage single storey extension and refurbishment works.

Over the course of 2022 and 2023, bat surveys were carried out on the Pond Cottage building which showed that bats are roosting in the soffits on the building as well as numerous house sparrow nests. Despite this, we feel that there are no constraints to the development from bats or nesting birds provided the works are carried out outside bird nesting season (March to September) and any works to the bat roosts take place in the transitional periods (March-May or August-October).

At present, only repairs are to be undertaken on the roof to ensure that the building is weather tight and remains safe, so a Continued Ecological Function (CEF) method will be adopted, in line with statutory permissions from Natural Resources Wales (NRW), to ensure the bat roosts are protected.

The new design for the Pond Cottage building also includes a green roof upon the single storey extension which will consist of native, wildlife friendly plant species. The exact species list is not yet specified but will need to be agreed with the NPTC Ecologist prior to any works commencing to ensure no potential invasive species are incorporated as part of the design.

1 INTRODUCTION

1.1 SITE LOCATION

At the time of writing, Pond Cottage, a detached residential building to the south of the Lake of Gnoll Country Park, is proposed for internal re-purposing and refurbishment works. The building is to be converted from a residential dwelling to a two-floor restaurant, with accompanying kitchen and toilet facilities. A single-storey extension is also proposed for the south-west elevation, which will house a green-roof. The site location is shown on the aerial photograph below (Fig 1). Grid reference for the centre of the building is SS 76346 97220.



Figure 1 Pond Cottage Location

The building is situated to the south of the lake of Gnoll Country Park. The building is surrounded by hard standing pathways and car parking areas for pedestrian and vehicle access. Several scattered trees are sporadically found across the immediate area with areas of woodland situated to the east, south and west.

1.2 DESCRIPTION OF DEVELOPMENT

At the time of writing, the full extent of the proposed works are not yet finalised; however, it is known that the development will include internal re-purposing and refurbishment works; the building is to be converted from a residential dwelling to a two-floor restaurant, with accompanying kitchen and toilet facilities. A single-storey extension is proposed for the south-west elevation, which will house a green-roof. The garden area to the south-east will accommodate several al fresco dining areas. A current proposed site plan is shown below (Fig 2).

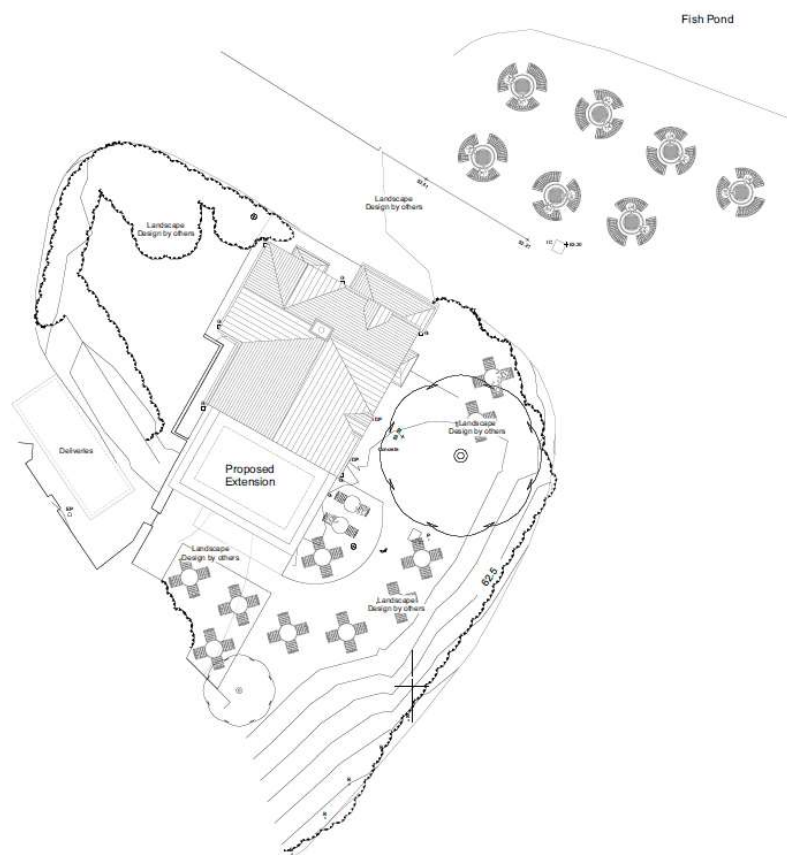


Figure 2 Current proposals

1.3 LEGISLATION AND POLICY

1.3.1 ENVIRONMENT (WALES) ACT 2016

Under Section 6 of the Environment (Wales) Act 2016 (Environment Act), NPTC has a statutory duty to maintain and enhance biodiversity in the exercise of its functions.

Section 7 (S7) of the Environment (Wales) Act 2016 lists habitats and species that the Welsh Government consider are of key significance to sustain and improve biodiversity in Wales.

1.3.2 LDP POLICY EN6

This policy states:

Policy EN 6

Important Biodiversity and Geodiversity Sites Development proposals that would affect Regionally Important Geodiversity Sites (RIGS), Local Nature Reserves (LNRs), Sites of Interest for Nature Conservation (SINCs), sites meeting SINC criteria or sites supporting Local Biodiversity Action Plan (LBAP) or S42 habitats or species will only be permitted where:

1. They conserve and where possible enhance the natural heritage importance of the site; or
2. The development could not reasonably be located elsewhere, and the benefits of the development outweigh the natural heritage importance of the site.

Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable.

NPTCBC usually requires that the area of replacement mitigation/compensation, for any habitat loss, is to be provided at a 2:1 ratio; however, a smaller area can be sufficient, provided it can be demonstrated that the mitigation habitat is of higher quality than what was previously present, and that it can be preserved and managed in perpetuity.

1.4 SCOPE OF SURVEY

The survey comprised a walkthrough of the proposed development site by an NPTC Ecologist to determine any ecological constraints to the development. The objectives of the survey were to obtain sufficient data to:

- Identify any protected habitat and species present/likely to be present that may pose potential constraints to redevelopment of the site e.g. birds, reptiles, or mammals in and around the surrounding area;
- Assess whether the proposed development would be likely to have an impact upon those species;
- Identify potential bat activity levels and use of buildings on site e.g. roosting within the buildings identified and/or foraging in and around the surrounding area;
- Assess whether the proposed redevelopment of the buildings on site would be likely to have an impact upon those species, if present;
- Recommend a mitigation strategy (where possible) for those habitats/species present that pose a constraint to the redevelopment of the site; and
- Identify any opportunities for enhancement of the ecological value of the site.

1 BASELINE SURVEY RESULTS

1.1 BATS

1.1.1 LEGISLATION

In the U.K. all bat species and their roosts are legally protected, by both domestic and international legislation (Wildlife & Countryside Act 1981 (as amended) & Conservation of Habitats and Species Regulations (2017) (as amended)).

It is an offence to:

- deliberately take, injure or kill a wild bat
- intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- damage or destroy a place used by bats for breeding or roosting (even if bats are not occupying the roost at the time)
- possess or advertise/sell/exchange a bat of a species found in the wild in the UK (dead or alive) or any part of a bat
- intentionally or recklessly obstruct access to a bat roost.

1.1.2 PRELIMINARY SURVEY METHOD

An external building assessment was undertaken which assessed the suitability of the building to support roosting bats.

Externally the building was surveyed, with the aid of binoculars where necessary, for evidence of access points and droppings, grease marks and urine staining. The buildings were examined in order to identify features that are favoured by bats as roosting sites, including pitched roofs with a void/loft, behind fascia boards and soffits, in and through gaps around windows and hanging tiles or weatherboarding. Any potential access points are recorded, along with any external physical evidence of use by roosting bats, such as urine staining and/or droppings around access points, on windows and on window ledges.

An assessment of the potential of the building to support nesting birds was carried out at the same time.

1.1.3 SURVEY RESULTS

Given the age of the building, its location and the number of access points present, an internal inspection of the roof voids was not deemed necessary as bats were already considered to be likely present within the building. See Table 1 below for photos providing an overview of the overall structure of the building.

	
Overview of north-western elevations.	Overview of north-eastern and portion of north-western elevations.
	
Overview of north-eastern and south-eastern elevations.	Overview of southern elevation.

Table 1. Photos highlighting roof structure of Visitor Centre building

The areas of the roofline associated with lifted lead flashing were considered to offer roosting potential for crevice dwelling species. Lifted ridge tiles which are known to support nesting house sparrows also provided roost potential as do the damaged fascias and soffits. Overall, the building was considered to be of Moderate potential to support roosting bats, given the features present and the environment in which the building is situated, namely parkland with immediately adjacent woodlands and a large waterbody.

1.1.4 ACTIVITY SURVEY METHODOLOGY

The surveys were conducted in accordance with the Bat Conservation Trust guidelines (Collins J. 2016). The building was assessed as having Moderate to High potential to support roosting bats. Two emergence surveys were carried out in 2022, and three follow-up surveys were carried out in 2023.

2022

The first dusk emergence survey was undertaken on the 14th July 2022 (by Marie Fowler and Megan Price) in weather conditions conducive to bat activity i.e. little or no rain and temperatures in excess of 10° C. The emergence survey began approximately 30 minutes before sunset and continued for approximately 2 hours after sunset. Two surveyors were positioned so as to cover the majority of elevations of the building.

The second dusk emergence survey was undertaken on the 28th September 2022 (by Marie Fowler and Megan Price) in weather conditions conducive to bat activity i.e. little or no rain and temperatures in excess of 10° C. The emergence survey began approximately 30 minutes before sunset and continued for approximately 2 hours after sunset. Two surveyors were positioned strategically around the building so to have a clear view of the building.

2023

The first dusk emergence survey was undertaken on the 2nd May 2023 (by Marie Fowler and Chloe Angelone) in weather conditions conducive to bat activity i.e. little or no rain and temperatures in excess of 10° C. The emergence survey began approximately 30 minutes before sunset and continued for approximately 2 hours after sunset. Two surveyors were positioned strategically around the building so to have a clear view of the building.

The second dusk emergence survey was undertaken on the 24th May 2023 (by Marie Fowler and Chloe Angelone) in weather conditions conducive to bat activity i.e. little or no rain and temperatures in excess of 10° C. The emergence survey began approximately 30 minutes before sunset and continued for approximately 2 hours after sunset. Two surveyors were positioned strategically around the building so to have a clear view of the building.

The third dusk emergence survey was undertaken on the 6th June 2023 (by Laura Palmer and Lewis Badham) in weather conditions conducive to bat activity i.e. little or no rain and temperatures in excess of 10° C. The emergence survey began approximately 30 minutes before sunset and continued for approximately 2 hours after sunset. Two surveyors were positioned strategically around the building so to have a clear view of the building.

Each surveyor was equipped with either a SSF Bat 2 detector, Echometer Touch Pro detector and iPad or an Elekon Batscanner bat detector.

1.1.5 LIMITATIONS

There were no limitations to the survey as it was carried out at the correct time of year in conducive weather conditions.

1.1.6 ACTIVITY SURVEY RESULTS

2022

14th July 2022

Low levels of activity were recorded on site during the initial emergence survey. An individual Soprano Pipistrelle (*Pipistrellus pygmaeus*), an individual of an unidentified species of pipistrelle and an unidentified species of bat, were all observed emerging from a gap situated along the eaves of the building on the north-western elevation, near a valley. Soprano Pipistrelle, Common Pipistrelle (*Pipistrellus pipistrellus*), Noctule (*Nyctalus noctula*) and Daubenton's Bat (*Myotis daubentonii*) were observed foraging and commuting within the immediate vicinity of the Pond Cottage building. A plan highlighting surveyor positions and bat activity over the course of the survey can be found at Appendix A. A summary table of the data collected over the course of the survey can be found at Appendix F.

28th September 2022

Moderate levels of bat activity were recorded on site during the emergence survey. A single unidentified species of bat was seen emerging from a gap along the eaves of the building on the north-western elevation, near a valley. Soprano and Common Pipistrelle, Noctule, Daubenton's and Brown Long-eared Bat (*Plecotus auritus*) were all observed foraging within the immediate area of the Pond Cottage building. A plan highlighting surveyor positions and bat activity over the course of the survey can be found at Appendix B. A summary table of the data collected over the course of the survey can be found at Appendix G.

2023

2nd May 2023

High levels of bat activity were recorded on site during the emergence survey. A total of 19 Common and Soprano Pipistrelles were observed emerging from the building: 16 Common and Soprano Pipistrelles emerged from the apex of the western gable end of the building, and all commuted north-east towards the Gnoll Country Park lake; 3 Soprano Pipistrelles were seen emerging from the south-western elevations; 1 individual was seen emerging from the eastern corner; 1 from the south-eastern corner; and 1 from the apex of the south-western elevation. The only other species heard within the immediate area during the survey was Noctule. A plan highlighting surveyor positions and bat activity over the course of the survey can be found at Appendix C. A summary table of the data collected over the course of the survey can be found at Appendix H.

24th May 2023

High levels of bat activity were recorded on site during the emergence survey. A total of 3 Soprano Pipistrelles emerged from the building: 1 individual emerged from apex of south-eastern gable end; 2 individuals emerged from the north-western elevation. High levels of foraging took place around the building. Other species observed foraging within the immediate vicinity include Daubenton's Bat and Noctule. A plan highlighting surveyor positions and bat activity over the course of the survey can be found at Appendix D. A summary table of the data collected over the course of the survey can be found at Appendix I.

6th June 2023

Moderate levels of bat activity were recorded on site during the emergence survey. A single Common Pipistrelle was seen emerging from the roofline near some broken guttering on the western elevation. Moderate levels of foraging took place around the immediate area of the building. Other species observed foraging within the immediate vicinity include Daubenton's Bat. A plan highlighting surveyor positions and bat activity over the course of the survey can be found at Appendix E. A summary table of the data collected over the course of the survey can be found at Appendix J.

1.2 EXTENDED PHASE 1 HABITAT SURVEY

1.2.1 SURVEY METHODOLOGY

The site was surveyed on 14th July 2022 by Megan Price (Ecologist) and further notes taken during subsequent site visits and bat surveys. All visits were undertaken in dry weather conditions.

An extended phase 1 habitat survey was undertaken for the site. The habitat types present on the site were assessed using the habitat classification system as set out in the Joint Nature Conservation Committee Handbook for Phase 1 habitat survey – a technique for environment audit (JNCC, 2010). Habitats were mapped and classified based largely on vegetation composition, with target notes used to demarcate features of interest. In addition to the habitats, conspicuous fauna, particularly protected species, were also recorded.

1.2.2 SURVEY LIMITATIONS

There were no limitations to this survey as it was undertaken during appropriate weather conditions and at an appropriate time of year.

1.2.3 SURVEY RESULTS

The results of the phase 1 habitat survey are presented on the plan below (Figure 3). The below sets out descriptions of each habitat type represented on the site.

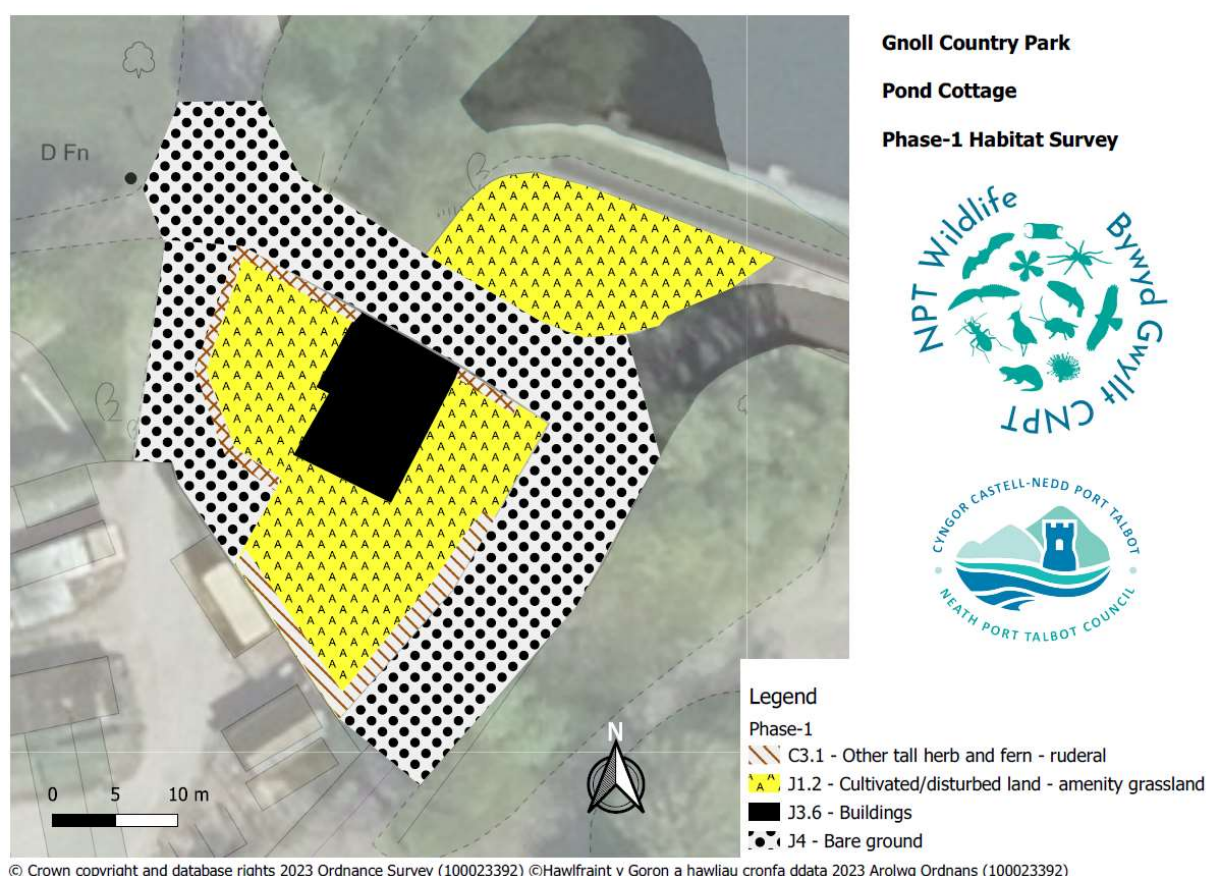


Figure 3 Phase 1 habitat plan

Buildings

The Pond Cottage building has bat and bird potential as discussed in more detail in the previous section.

Bare ground

A large proportion of the site is bare ground – tarmac roads.

Amenity Grassland

The garden lawn present is amenity grassland containing species such as dandelion (*Taraxacum*), daisy (*Bellis perennis*), selfheal (*Prunella vulgaris*), Yorkshire fog (*Holcus lanatus*) and perennial rye grass (*Lolium perenne*) as well as other common amenity grassland species as shown in the below photo.

Tall Ruderal Vegetation

The vegetation around the internal boundary of the garden area is ranker and relatively unmanaged, with ruderal species such as broad-leaved dock (*Rumex obtusifolius*), sow thistle (*Sonchus* sp.) and spear thistle (*Cirsium vulgare*), amongst other species, dominating. The invasive non-native species, Himalayan Balsam (*Impatiens glandulifera*) is also present amongst the ruderal vegetation within the site.

Scattered trees – Garden

For full details on what trees are present within the site, please see the accompanying 'Tree Survey & Arboricultural Constraints Report' by Nick Thomas, dated May 2023.

1.2.4 CORE SUSTENANCE ZONES

It is not anticipated this works will have any impact on the core sustenance zones of the local bat populations in the Gnoll Country Park due to it being such a small footprint, the works being mainly to a building that supports bat roosts but will not have any impact on those roosts, and it not affecting any significant areas of vegetation that would support important foraging resources.

1.2.5 BADGER

Legislation: The Protection of Badgers Act 1992 makes it an offence to:

- to willfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so
- damaging or destroying a sett
- obstructing access to a sett
- disturbing a badger when occupying a sett
- plus, offences in relation to persecution.

Any development to be carried out within the vicinity of a sett may require a license from Welsh Government. Generally, use of heavy machinery within 30m of an active sett would need a license.

There are known badger setts in Gnoll Country Park. However, there are no setts within the immediate vicinity of the works, there are also no paths or foraging signs which would indicate the works could affect a badger sett.

1.2.6 BROWN HARE

Brown hare are listed on S7 of the Environment Act.

Gnoll Country Park contains habitats which could support brown hare however, there are no such habitats near the Pond Cottage building.

1.2.7 OTHER MAMMAL SPECIES

Dormouse and Water vole are not a consideration for this project as there is no habitat suitable for these species in the vicinity.

1.2.8 BIRDS

Legislation: Section 1 of the Wildlife and Countryside Act 1981 (as amended) affords general protection to all species of wild birds whilst nesting.

House Sparrows are known to be nesting in the building. Consequently, any works to roofline will be carried out outside of nesting bird season defined as the period between September to February (inclusive) to ensure no bird nests are disturbed/destroyed in the process. This also applies to tree works.

2 RECOMMENDATIONS FOR MITIGATION

2.1 SITE WORKS METHOD

Works are planned to happen to Pond cottage over Winter 2023. Most of the works will be of an internal refurbishment nature which will not affect bat or bird roosts, neither will the single storey extension on the back of the building.

The repair works to the roof and gutters/ soffits/fascias will affect bat roosts and must be carried out in accordance with a Continued Ecological Function (CEF) methodology line with statutory permissions from Natural Resources Wales (NRW), to ensure the ongoing use of the site by roosting bats is unaltered.

As the building is known to support breeding birds, namely house sparrow, it is recommended that works are undertaken outside of the nesting bird season, i.e. between the months of March and August inclusive. If this is not possible, the building will need to be subject to a nesting bird check; this will just be a brief watch on the day of the works starting by a qualified ecologist.

2.2 ECOLOGICAL ENHANCEMENT

In line with the general principles set out in SPG: Biodiversity and Geodiversity (May 2018) and the Environment Act, the applicant is required to demonstrate how biodiversity enhancement is to be achieved.

As part of the new Pond Cottage design, a green roof will be installed (See Figure below) which will consist of native, wildlife friendly species (exact species list is not specified at this time but it will be agreed with the NPTC Ecologist to ensure it is appropriate). The details are to be finalised and agreed with the NPTC Ecologist to ensure no invasive species are used.

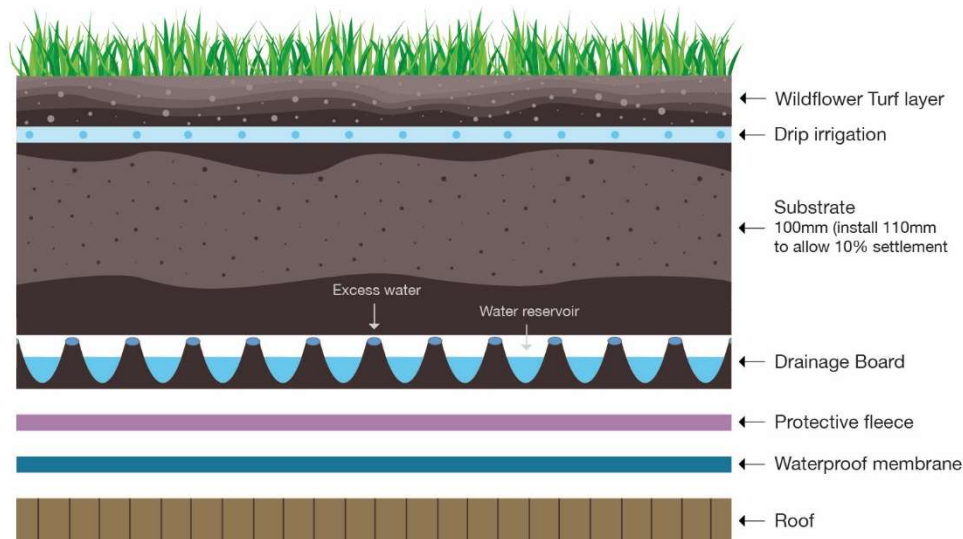


Figure 4 Green-roof Design

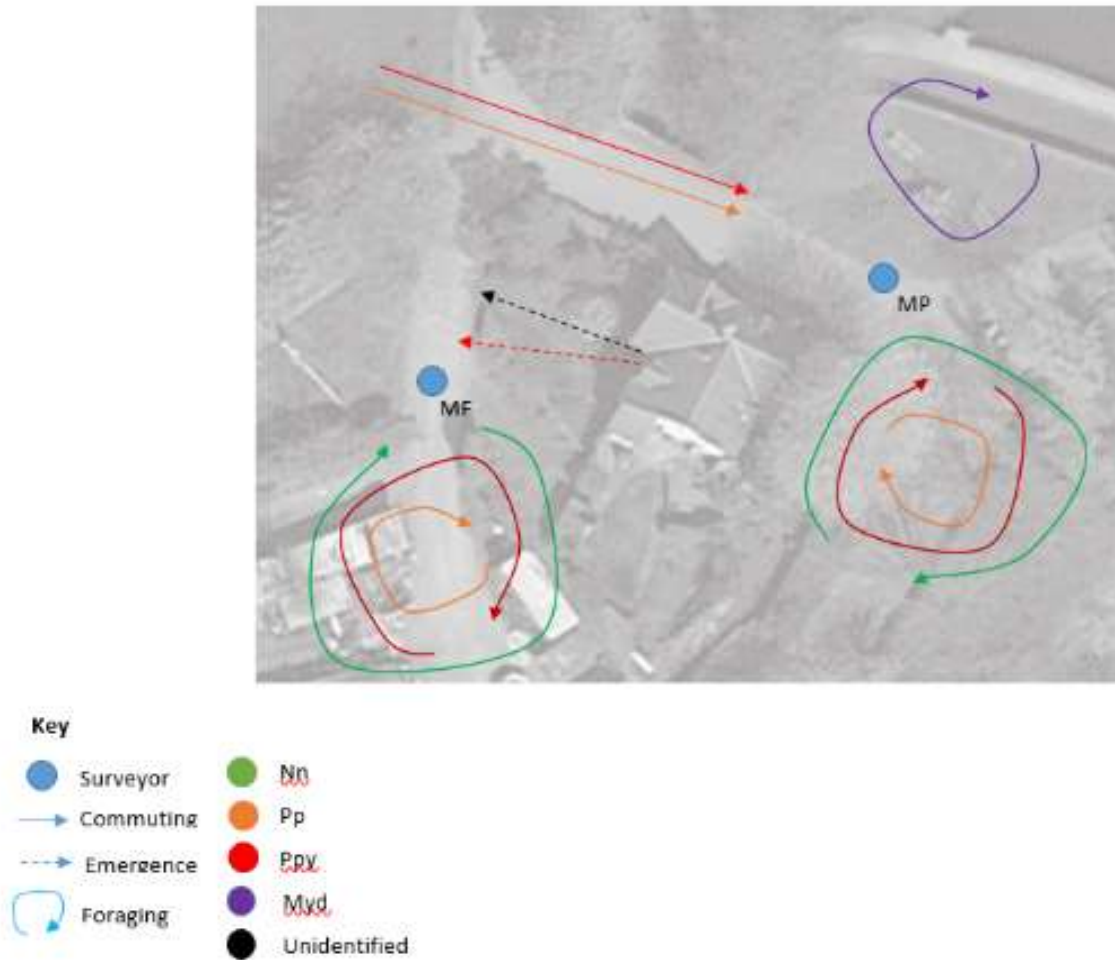
3 REFERENCES

- Anon.** HMSO, London. All legislative references. www.legislation.gov.uk
- CIEEM.** (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine
- CIEEM.** (2017). Guidelines for Preliminary Ecological Appraisals. 2nd Ed
- Collins, J. (ed.) (2016)** Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.
- Joint Nature Conservation Committee.** (2010). Handbook for Phase 1 Habitat Survey. A technique for environmental Audit.
- Wales Biodiversity Partnership.** Environment (Wales) Act 2016: Section 7 List of Species of Principal Importance for Conservation of Biological Diversity in Wales.
- Wales Biodiversity Partnership.** Environment (Wales) Act 2016: Section 7 List of Habitats of Principal Importance for Conservation of Biological Diversity in Wales.
- Wales Biodiversity Partnership.** (2008). Wildlife Sites Guidance Wales. A guide to develop local wildlife systems in Wales.

4 APPENDICES

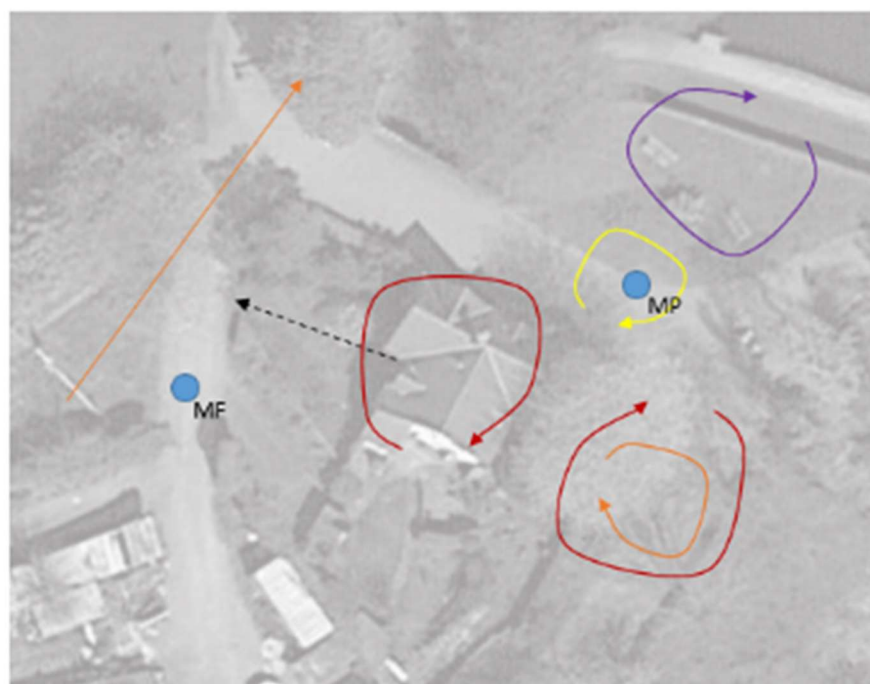
APPENDIX A – 2022-07-14: FLIGHT LINES & SURVEYOR POSITIONS

2022/07/14 Emergence Survey: Pond Cottage



APPENDIX B – 2022-09-28: FLIGHT LINES & SURVEYOR POSITIONS

2022/09/28 Emergence Survey: Pond Cottage

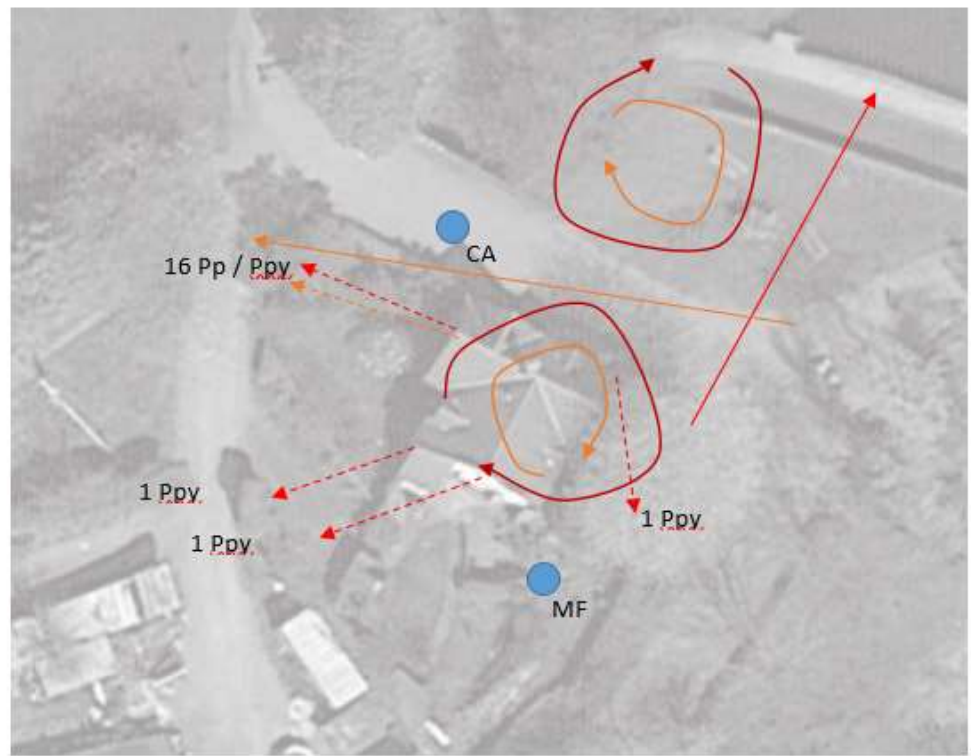


Key

Surveyor	Nn
Commuting	Pp
Emergence	Ppx
Foraging	Myd
	Pa
	Unidentified

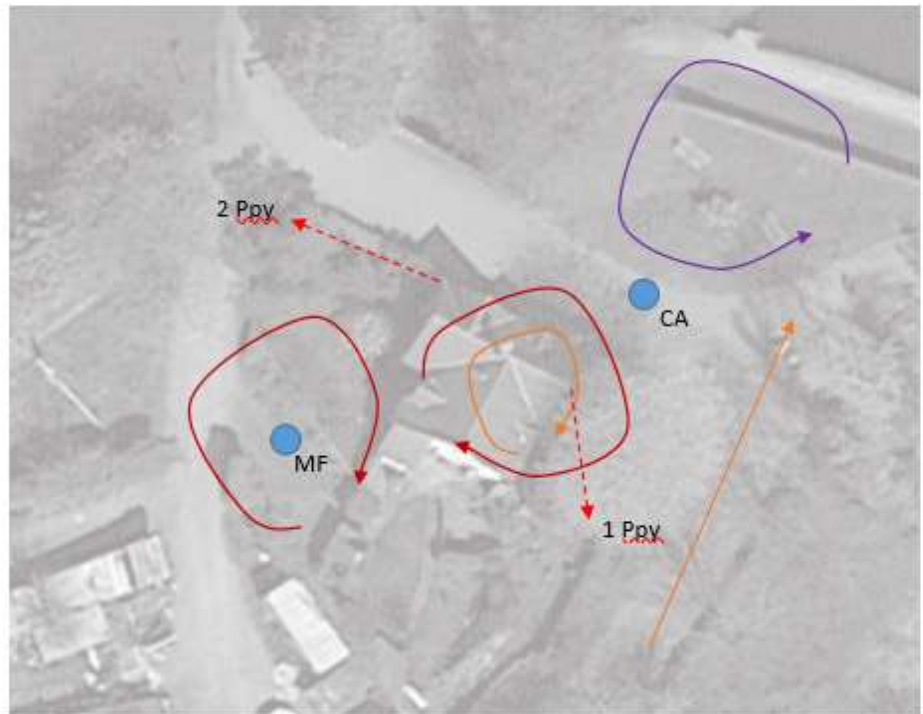
APPENDIX C – 2023-05-02: FLIGHT LINES & SURVEYOR POSITIONS

2023/05/02 Emergence Survey: Pond Cottage



APPENDIX D – 2023-05-24: FLIGHT LINES & SURVEYOR POSITIONS

2023/05/24 Emergence Survey: Pond Cottage

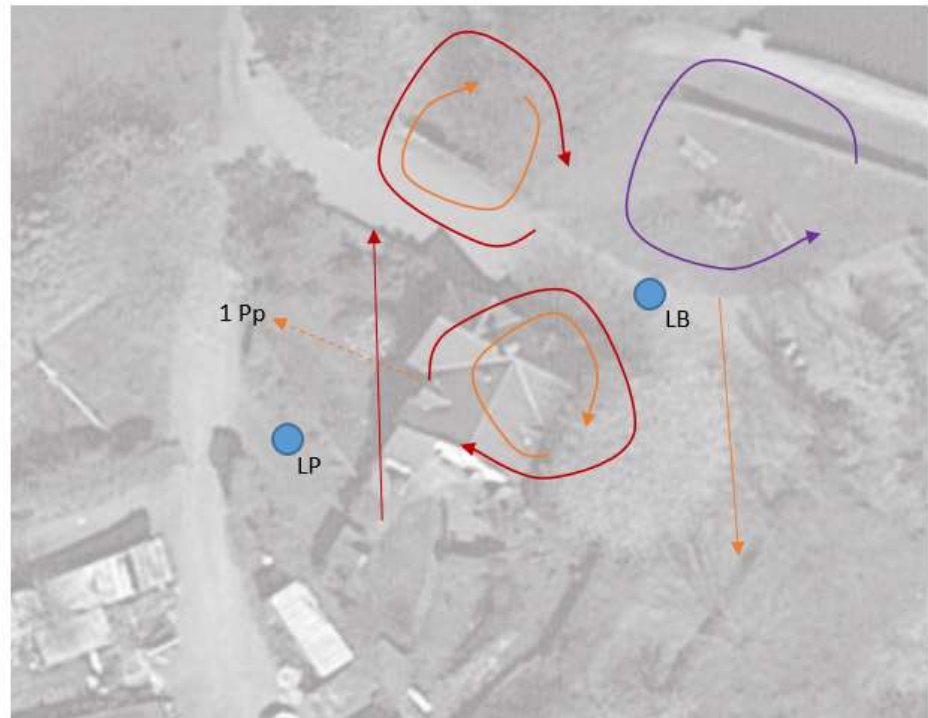


Key

Surveyor	Nn
Commuting	Pp
Emergence	Ppy
Foraging	Myd

APPENDIX E – 2023-06-06: FLIGHT LINES & SURVEYOR POSITIONS

2023/06/06 Emergence Survey: Pond Cottage



Key

- | | |
|---|---|
|  Surveyor |  Pp |
|  Commuting |  Ppy |
|  Emergence |  Myd |
|  Foraging | |

APPENDIX F – 2022-07-14 SURVEY SUMMARY TABLE

<u>Dusk Emergence/ Dawn Re-entry Survey Form</u>			
Surveyors:	Meg Price, Marie Fowler		
Date:	14/07/2022		
Location/ Project:	Gnoll Pond Cottage		
Feature/s being surveyed:	2-storey stone cottage; slate roof; brick chimney; wooden fascias & soffits; brick window lintels; single glazing old wooden windows.		
Time Start:	21:00	Time Finish:	22:30
Sunset time:	21:30	Detectors Used:	Echometer Touch; Petterson; SSF2
Temperature Start (°C):	18	Temperature Finish (°C):	16
Cloud Cover (%):	10%	Cloud Cover Finish (%):	10%
Humidity Start (%):	–	Humidity Finish (%):	–
Wind Start:	Light Wind	Wind Finish:	Light Wind
Precipitation:	None.		
Land Use:	Country Park		

Surrounding Land Use:	Parkland / Outdoor Recreation		
Surveyor:	Time:	Species:	Activity & Direction:
MF	21:23	Nn	HNS
MF	21:37	Ppy	Emerged from building corner of guttering / dormer window (1 individual)
MP	21:37	Ppy	Commuting from cellar direction
MP	21:38	Pp	Commuting from cellar direction
MP	21:43	Nn	HNS
MF	21:46	Pp	Emerged from building corner of guttering (1 individual)
MF	21:52	Pp	Emerged from building corner of guttering (1 individual)
MP	21:54	Md	Foraging over pond
MP	21:56	Pp/Ppy	Foraging
MF	21:56 - 22:02	Md	Foraging & socialising
MP	22:25	Pp/Ppy/Md	Foraging over pond and within vicinity of building

APPENDIX G – 2022-09-28 SURVEY SUMMARY TABLE

<u>Dusk Emergence/ Dawn Re-entry Survey Form</u>			
Surveyors:	Rebecca Sharp, Beth Parker, Chloe Angelone		
Date:	28/09/2022		
Location/ Project:	Gnoll Cellars		
Feature/s being surveyed:	Stone Cellar Entranceways; Roofline; Holes in Stone Walls;		
Time Start:	18:45	Time Finish:	20:15
Sunset time:	19:00	Detectors Used:	Echometer Touch; Petterson; SSF2
Temperature Start (°C):	12	Temperature Finish (°C):	10
Cloud Cover (%):	1%	Cloud Cover Finish (%):	1%
Humidity Start (%):	73	Humidity Finish (%):	82
Wind Start:	Light Wind	Wind Finish:	Light Wind
Precipitation:	None.		
Land Use:	Historical Stately Home (Ruin) with remaining cellar network		

Surrounding Land Use:	Parkland / Outdoor Recreation		
Surveyor:	Time:	Species:	Activity & Direction:
RS, CA	18:57 - 19:06	Pp	Foraging
CA	19:06	Ppy	Foraging
RS	19:10 - 19:28	Pp, Ppy	Foraging
BP	19:18	Pp	Commuting south
CA	19:25	Pa	Emergence - 1 individual
CA	19:41	Pa	Light sampling in cellar entrance
CA	19:47	Pa	Emergence - 1 individual
RS	20:09	Pa	Foraging

APPENDIX H – 2023-05-02 SURVEY SUMMARY TABLE

<u>Dusk Emergence/ Dawn Re-entry Survey Form</u>			
Surveyors:	Chloe Angelone, Marie Fowler		
Date:	02/05/2023		
Location/ Project:	Gnoll Pond Cottage		
Feature/s being surveyed:	Pond Cottage		
Time Start:	20:00	Time Finish:	22:15
Sunset time:	20:40	Detectors Used:	Echometer Touch; Petterson; SSF2
Temperature Start (°C):	17 Celsius	Temperature Finish (°C):	13.8 Celsius
Cloud Cover (%):	25%	Cloud Cover Finish (%):	–
Humidity Start (%):	70%	Humidity Finish (%):	–
Wind Start:	None	Wind Finish:	None
Precipitation:	None.		
Land Use:	Gnoll Country Park		
Surrounding Land Use:	Parkland / Outdoor Recreation		
Surveyor:	Time:	Species:	Activity & Direction:
CA	20:37 - 20:51	Pp / Ppy	16 individuals emerged from apex of western gable end of building, headed towards bottom pond

MF	20:48 - 20:58	Ppy	3 individuals emerged from building: 1 from eastern corner of building; 1 from corner of south-eastern corner of building; 1 from apex of gable end of south-western elevation
CA	20:42	Ppy	Commuting north-east
CA	20:56 - 21:11	Pp / Ppy	Foraging around cottage
MF	21:02 - 21:25	Ppy	Foraging around cottage
MF	21:30	Nn	HNS
CA	21:15 - 21:40	Pp / Ppy	Foraging over pond
MF	21:35 - 21:42	Nn	HNS
MF	21:42	Pp	HNS

APPENDIX I – 2023-05-24 SURVEY SUMMARY TABLE

	<u>Dusk Emergence/ Dawn Re-entry Survey Form</u>		
	Surveyors:	Chloe Angelone, Marie Fowler	
	Date:	24/05/2023	
	Location/ Project:	Gnoll Pond Cottage	
	Feature/s being surveyed:	2-storey stone cottage; slate roof; brick chimney; wooden fascias & soffits; brick window lintels; single glazing old wooden windows.	
	Time Start:	21:00	Time Finish: 22:30
	Sunset time:	21:11	Detectors Used: Echometer Touch; Petterson; SSF2
	Temperature Start (°C):	15	Temperature Finish (°C): 13
	Cloud Cover (%):	0%	Cloud Cover Finish (%): 0%
	Humidity Start (%):	68	Humidity Finish (%): 74
	Wind Start:	Light	Wind Finish: Light
	Precipitation :	None.	
	Land Use:	Country Park	
	Surrounding Land Use:	Parkland / Outdoor Recreation	
Surveyor:	Time:	Species:	Activity & Direction:
CA	21:13	Pp	Commuted north-east
CA	21:18	Ppy	Single individual emerged from building from apex of south-east gable

CA	21:34	Pp	Commuted north-east
MF	21:40	Ppy	Foraging in garden
MF	21:49	Ppy	Single individual emerged from building
CA	21:50 - 22:30	Ppy	Constant foraging around house - low - medium levels
MF	22:04	Ppy	Single individual emerged from building
CA	22:12	Pp	Commuted north-east
CA	22:17	Myd	Heard not seen (HNS)
CA	22:18	Myd / Pp	Foraging above surveyor
CA	22:21	Pp / Ppy	High level of foraging activity around house
MF	22:26	Nn	HNS

APPENDIX J – 2023-06-06 SURVEY SUMMARY TABLE

	<u>Dusk Emergence/ Dawn Re-entry Survey Form</u>		
	Surveyors:	Laura Palmer, Lewis Badham	
	Date:	06/06/2023	
	Location/ Project:	Gnoll Pond Cottage	
	Feature/s being surveyed:	2-storey stone cottage; slate roof; brick chimney; wooden fascias & soffits; brick window lintels; single glazing old wooden windows.	
	Time Start:	21:15	Time Finish: 23:00
	Sunset time:	21:28	Detectors Used: Echometer Touch; SSF2
	Temperature Start (°C):	15	Temperature Finish (°C): 13
	Cloud Cover (%):	0%	Cloud Cover Finish (%): 0%
	Humidity Start (%):	67	Humidity Finish (%): 71
	Wind Start:	Slight	Wind Finish: Slight
	Precipitation :	None.	
	Land Use:	Country Park	
	Surrounding Land Use:	Parkland / Outdoor Recreation	
Surveyor :	Time:	Species:	Activity & Direction:
LP	21:35	Pp	Single individual emerged from broken gutter
LB	21:39	Pp	Committed south-east

LP	21:47	Ppy	Heard not seen (HNS)
LB	21:55	Ppy	HNS
LB	22:00	Pp	Commuting south-east
LP	22:04	Ppy	Commuting from south
LP	22:10	Ppy	Two individuals foraging over building constantly
LB	22:15 - 22:57	Myd, Pp, Ppy	Foraging around trees, building and pond