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**PRELIMINARY ROOST ASSESSMENT AND
OBSERVATION SURVEYS, 7, TEN ACRE WOOD,
MARGAM, NEATH PORT TALBOT.**

On behalf of

MR ANDREW HALL

October 2023

Ref: HE/17/2022
Issue 1

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All habitat and protected species surveys present a ‘snapshot’ of conditions existing and species present, or considered having potential to be present, at the time of survey. Many species are mobile and distributions can vary across time. Results and findings presented in this report should be considered with these factors in mind.

Protected species surveys are recognised as having a ‘shelf life’ of two years maximum. Surveys older than this are unlikely to be accepted by a Local Planning Authority or Natural Resources Wales as viable documentation.

CONTENTS

	Summary	4
1.	Introduction	5
2.	Methodology	5
3.	Survey Team Experience	6
4.	Desk Top Study Findings	6
5.	Field Survey	7
6.	Relevant Legislation	12
7.	Discussion and Impact Assessment	14
8.	Recommendations	17
9.	Conclusions	20
10.	Bibliography	20

Figure:

- Figure 1 Location of observers
- Figure 2 Proposed bat loft locaiton
- Figure 3 Typical tile access point

Appendices:

- Appendix 1: Photographs

SUMMARY

Hawkeswood Ecology was instructed to carry out a daytime Preliminary Bat Roost Assessment (PRA) and observation surveys of 7 Ten Acre Wood, Margam. It is proposed to demolish the existing building and replace with a new single dwelling for the existing owner and family. The house consists of a 1970's built two storey structure with a later single storey extension. Both are brick/block construction with the original house rendered.

The loft space of the two storey house was found to have droppings most characteristic of long-eared bats and those similar to pipistrelle species. No bats were seen during the loft inspection. It was suspected that the loft space supported a probable maternity roost of brown long-eared bat.

Subsequent observations were undertaken on 7th June, 25th July and 16th August 2023 found four species of bat using the building. A maternity roost of whiskered bat was proven and brown long-eared, soprano pipistrelle and common pipistrelle were also shown to roost. Although a maternity roost of brown long-eared bat was not found during survey it is considered the house has recently supported such a roost and therefore it should be considered as such.

Compensation is to be provided within the new property to allow continued roosting on Site. The compensation will be appropriate to the roosts found in the existing property and no long term adverse impacts upon the species involved is predicted.

The conclusion of the surveys is that the building supports both high and low status male or non-breeding female day roost of four species of bat. There is potential that the building is used as a hibernation roost and this is catered for in recommendations. A European Protected Species Derogation licence must be sought to demolish the house with appropriate mitigation provided in the new build.

The conclusions of this report are considered valid for two years from the survey date noted in Section 1 of the report.

1 INTRODUCTION

- 1.1 Hawkeswood Ecology was instructed to undertake a Preliminary Roost Assessment (PRA) of 7, Ten Acre Wood, Margam to assess the suitability of the property to support roosting bats. Following the PRA, as evidence of bats was found during the survey, three subsequent observations surveys were undertaken from June to August 2023.
- 1.2 The property is a detached residence sitting in a low density development near Margam Castle and connected to Margam Country Park grounds (the Castle's former grounds) and nearby countryside by well-developed woodland and hedgerow connections. It is proposed to demolish the existing building and erect a new residential house considered fit for purpose for a young family. The Site is located at Grid ref SS 79744 86270.
- 1.3 The objectives of the survey were:
 - To establish whether the building is currently used by bats or shows potential for them to occupy it;
 - To assess the potential impacts on bats of the proposed works;
 - To provide mitigation proposals in the case of bats being found.
- 1.4 The PRA was carried out on 25th August 2022 with subsequent observations surveys undertaken on 7th June, 25th July and 16th August 2023. In addition a passive detector was left in the loft for the nights 24th July to 27th July 2023.

2. METHODOLOGY

Desktop Study

- 2.1 No dedicated biological data search was undertaken on this occasion. Hawkeswood Ecology has undertaken a number of bat and other ecological surveys in this area in recent years and it was considered that the data already held was sufficient to serve for this property.

Field Survey

- 2.2 The study methodology followed accepted guidelines set out in the Bat Conservation Trust documents '*Bat Surveys for Professional Ecologists, Good Practice Guidelines*' 2016.
- 2.3 The principal aim of the daytime inspection was to survey the main structures of the building for the presence of, and potential to support roosting bats. An external examination was made of the design and structure of the building to assess the suitability for use by bats and for potential access points. Following this an internal search of the building was made. Indications such as droppings, staining and potential access points and bats themselves were searched for.
- 2.4 The daytime inspection was carried out with close focusing binoculars, an endoscope, ladders and a 1,000,000 candlepower spot lamp available.

- 2.5 The observation surveys involved up to three observers plus IR Night Vision Aids (NVA) and covered all aspects of the building. Bat detectors used were Anabat Scout units. The observers carried two way radios. Locations of the observers are shown in Figure 1; the NVAs were placed to cover appropriate areas of the building.
- 2.6 Additionally, an Anabat Express passive detector was left in the loft for a period of four days in July 2023. A machine was also in place in the loft during the first observation survey undertaken in during the first observation survey in June 2023.
- 2.7 Recordings were made continuously on the machines. The recordings were analysed using Anabat Insight and Batsound software, by use of which it is possible to separate most species present from the sonograms produced.

Constraints

- 2.8 No specific constraints to the survey were noted.

3. SURVEY TEAM EXPERIENCE

- 3.1 The surveyor and report author is Eric Hawkeswood. Eric has been an active member of the Brecknock Bat Group since 1999 and been involved in a number of long running surveys within the county. He is a Natural Resource Wales (NRW) licensed bat worker (no. S092015-1, 2022) and has extensive experience of roost inspections and emergence work. He has been a professional in the nature conservation field for thirty four years formerly working as Reserves Manager and Conservation Officer at Gwent Wildlife Trust and Woodland Manager for the Ruperra Conservation Trust. Eric has worked as an Ecological Consultant as joint proprietor of Hawkeswood Ecology since 2001.
- 3.2 Assistant surveyor on the evening observations were Emma Adamson and Liam Kelly. Emma has worked with Hawkeswood Ecology for 20 years and Liam for fifteen, both have much experience of emergence/re-entry surveys and have received a level of training appropriate with the role of observer.

4 DESKTOP STUDY FINDINGS

- 4.1 No dedicated data search was undertaken for this project as Hawkeswood Ecology hold a number of bat records and have searched this area on a number of occasions previously. A significant number of records come from the adjacent Margam Country Park buildings and grounds complex. Reports of soprano and common pipistrelle and brown long-eared bat |(including maternity roosts) are reported from approximately 200 metres to the north, from a building within the Country Park. Other records from Margam include Daubenton's, whiskered, natterer's, lesser horseshoe, greater horseshoe, noctule, Leisler's, barbastelle, serotine and Nathusius pipistrelle bats. Margam Park is closely monitored and has been for a number of years, by bat workers, as part of a long running research project.

- 4.2 Away from the Country Park, further records of pipistrelle species, brown long-eared and *Myotis* bats are reported with a potentially significant soprano pipistrelle roost reported approximately 1800 metres east of the Site.
- 4.3 Hawkeswood Ecology are aware of a significant soprano pipistrelle maternity roost approximately 200 metres south east of the Site which may relate to the roost referred to in paragraph 4.6 below and a day roost of common pipistrelle approximately 400 metres to the south.
- 4.4 No Statutory Sites designated for the presence of bats are present within 10 kilometres of the Site.
- 4.5 Relevant roof nesting birds known from the area include house martin, spotted flycatcher, swift, house sparrow, pied wagtail, starling and great tit.
- 4.6 Personal communication with Richard Crompton has indicated that there has been a large soprano pipistrelle roost in Margam Orangery which lost a large number of bats following some works in the mid to late 2010's. The works did not directly affect the known roost space but may have had indirect impacts leading to a considerable reduction in roost numbers with only around 12 counted recently.

5 FIELD SURVEY

- 5.1 The property is a detached house sitting in around 0.5 hectares, it is brick built with a roman tile roof. The property is largely rendered with a brick built 'wrap around' single storey extension to the south gable and eastern elevation. It dates from the 1970's. It is sited in a low density development set on the boundary of Margam Country Park and within woodland connecting it to the Park and Margam Castle and surrounding countryside. Photographs of the building are given in Appendix 1.
- 5.2 Externally the original build is rendered brick/block with a cavity wall. The render is mostly in decent condition but is breaking down on the north western gable. The building doesn't have soffits and the eaves are all well sealed with render, no obvious access points were noted to the wall top. Small gaps were noted in the verge at both gable end between the slates and the verge bargeboard.
- 5.3 The roof cover is roman concrete tiles and these were sealed externally at the joints by a concrete mix largely preventing access between the tiles. Tiles were missing from the rear of the chimney on the eastern elevation at the north of the building. Two chimneys are present, both in apparent fair condition, gaps were noted in the lead flashing to the roof cover.
- 5.4 The single storey extension is brick/block construction with a shallow roman tile covered roof. It appeared generally well-sealed with some cracks in the verge mortar noted on the southern gable.

- 5.5 Additionally there is a UPVC conservatory on the western elevation with a pagoda running along the remainder of that elevation to the northern gable.
- 5.6 Internally the main loft space is of open cut construction underlined with Bitumen underfelt. The floor is insulated with rockwool insulation which is deepened to modern specifications. Droppings were noted on entering the loft space near the southern chimney (see sketch in Figure 1) and through out the loft, generally concentrated at the northern chimney and under the ridge although scattered droppings were noted throughout the loft. Droppings appeared to be possibly pipistrelle species bats and brown long-eared.
- 5.7 A hole was found at the rear of the chimney (between the chimney and ridge), other than this the roof seems well-sealed against bat entry.

Surrounding area

- 5.8 The house sits in a large, maintained garden and within an area of woodland. Margam Country Park and castle are adjacent to the north and east, woodland continues to the west. The M4 corridor lies approximately 125 metres to the south west and known significant bat roosts in Margam Country Park and nearby properties lie within 300 metres of the Site.

Evidence and Potential for roosting Bats

- 5.9 Droppings were found throughout the loft and potential access points identified. The droppings were most characteristic of brown long-eared and pipistrelle species bats. No live animals were found during the PRA but the droppings found were considered to include 'fresh' examples.
- 5.10 The presence of small numbers of bats during the hibernation season could not be ruled out. The only evidence of breeding birds found during the survey was the remains of an old house martin nest under the eaves.

Observations

- 5.11 Three dusk observation surveys were undertaken on 7th June, 25th July and 16th August 2023; conditions at the time of the observations are shown in Table 1 below, the location of the observers and NVAs are shown in Figure 1:

Table 1: Weather conditions for observations:

Date	Survey type	Times	Weather conditions
7 th June 2023	Dusk emergence	21.10 – 23.22 (sunset 21.29)	20-17°C, clear, mild, dry, good visibility, F1 NE breeze. Notable midge activity.
25 th July 2023	Dusk emergence	20.55 – 23.50 (sunset 21.14)	16-16°C, clear, mild, dry, good visibility, F1 NW breeze. Notable midge activity.
16 th August 2023	Dusk emergence	20.20 – 22.16 (sunset 20.36)	21-19°C, clear, mild, dry, good visibility, still. Notable midge activity.

7th June 2023

- 5.12 The first bat noted was a common pipistrelle passing along the garden western boundary and not associated with the house at 21.29. From 21.37 foraging soprano pipistrelles were noted in the trees around the garden and from this point the majority of bats recorded were soprano pipistrelle, no activity was noted that could be associated with the house. Brown long-eared bat was recorded on the eastern side of the house at 22.40 and 22.46 but the NVA showed no visible emergence of bats at any time.
- 5.13 Soprano pipistrelle passes were most frequently recorded with common pipistrelle also regular. Whiskered bats were recorded at all observer locations from around 22.15, noctules overflying were recorded throughout the observation. At 22.51 a Daubenton's pass was recorded by the observers at the north gable and western elevation.
- 5.14 The Anabat sited in the loft for the duration of the survey did not record any bat passes and examination of the NVA recordings failed to identify any emergence.

25th July 2023

- 5.15 Foraging soprano pipistrelle could be heard distantly from 21.14 with a bat flying into the Site from the east shortly after. **At 21.27 a soprano pipistrelle flew from the gable apex of the single storey extension.**
- 5.16 Following this soprano pipistrelle foraging was fairly constant with occasional common pipistrelle passes noted. **At 21.33 a possible soprano pipistrelle emergence from the western corer of the extension was noted.** This area of the house was not in the NVA range.
- 5.17 **Between 21.38 and 21.43 four, possibly five bats emerged from the northern gable, all leaving from near the ridge.** Video showed a bat emerge from the hole in the roof to the rear of the chimney, but also bats leaving the building from gaps in the verge, from the gable apex and from under tiles near the gable. No echolocation was picked up leading to the suggestion that brown long-eared bats were emerging, the observer to the east picked up whiskered bats flying from the direction of the gable around that time.

- 5.18 From that point no further activity associated with the house was noted but foraging activity continued, becoming notably less regular from around 22.05. Brown long-eared, whiskered, Daubenton's (infrequently) and noctule bats were also recorded during the observation with the most frequent passes again related to soprano pipistrelle.

16th August 2023

- 5.19 Activity was fairly constant and regular throughout the third observation with soprano pipistrelle again the most frequently recorded bat. **At 20.54 a common pipistrelle emerged from the ridge or near the ridge of the western pitch of the single storey extension. At 21.06 a non-echolocating bat emerged from the northern gable, video shows this is not a long-eared species.**
- 5.20 **At 21.06 a soprano pipistrelle emerged from the ridge of the extension. At 21.14 and 21.17 bats were seen to emerge from the roof behind the northern gable again, from gaps in the tiles and ridge. These bats were not picked up echo locating and were considered to be probably brown long-eared.**
- 5.21 Following this no further emergence was noted, species recorded to the end of the observation included whiskered, brown long-eared and Daubenton's bats. Again, most frequently recorded passes were of soprano pipistrelle with common pipistrelle also regular.

Passive detector in loft 24th to 27th July 2023

- 5.22 External weather conditions during the period of survey were maximum temperature of 18°C, minimum of 12°C; cloud was patchy with showers throughout. Winds were from the west varying to northerly before backing to westerly again, generally Beaufort Force 1 to Force 2, occasionally Force 3.
- 5.23 Temperatures recorded in the loft were:

Dates	Temp °C
24-25/07/2023	Data not saved
25-26/07/2023	24-14
26-27/07/2023	20-18
27-28/07/2023	23-18

- 5.24 Analysis of recordings clearly shows use of the loft by whiskered and brown long-eared bats. The majority of calls recorded were whiskered bat passes although brown long-eared are recorded throughout. Social calls of whiskered bat were also recorded.
- 5.25 Most whiskered bat passes were recorded in the evening around emergence time with frequent social calls, brown long-eared often recorded in the early hours and with much less frequency.

Trees

- 5.26 A number of fruit trees and a young semi-mature ash tree were present in the garden, non showed any significant Potential Roost features. The ash was showing signs of *Chalara*, ash dieback.

6 RELEVANT LEGISLATION

- 6.1 All UK bats are protected under the Wildlife and Countryside Act 1981. Schedule 5 of this act makes it illegal to intentionally kill, injure or take bats. It is also an offence to intentionally damage or destroy their place of rest. In 2007 the offences of killing, injuring or taking species under Section 9(1), 9(2) and 9(4)a of European Protected Species listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) were removed to avoid duplication with their protection under Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (The Habitats Directive) as amended. The regulations remove the defence of inadvertent or accidental damage to roosts and make the offence ‘absolute’.
- 6.2 Further all bat species are protected under Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (The Habitats Directive) as amended which requires the United Kingdom government to provide bats with strict protection. The Habitats Directive is transcribed into England and Wales Law by The Conservation of Habitats and Species Regulations 2017; this legislation consolidates amendments made to the earlier 2010 act. This legislation states in Part 3, Protection of Species, paragraph 43(1) that a person who:
- (a) deliberately captures, injures or kills any wild animal of a European protected species,
 - (b) deliberately disturbs wild animals of any such species,
 - (c) deliberately takes or destroys the eggs of such an animal, or
 - (d) damages or destroys a breeding site or resting place of such an animal,
- is committing an offence.
- 6.3 Further, with regard to disturbance of EPS, Paragraph 43(2) that disturbance is an act which is likely to:
- (a) to impair their ability—
 - (i) to survive, to breed or reproduce, or to rear or nurture their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;
 - or
 - (b) to affect significantly the local distribution or abundance of the species to which they belong.
- 6.4 In the case of a development involving the loss or modification of a building which may affect bats the above legislation must be considered and it may be necessary to apply to Natural Resources Wales for a European Protected Species Licence (EPSL).
- 6.5 The introduction of the Conservation of Habitats and Species Regulations 2017 has removed the defence of killing or injuring a protected species during a lawful operation, thus even in an instance where planning permission is granted, the presence of bats must be considered and mitigated for prior to commencement of works. Under the above regulations, a WAG licence can only be given if three tests are satisfied:
- The action proposed is in the interest of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or

economic nature and beneficial consequences of primary importance to the environment;

- That there is not a satisfactory alternative;
- That the action proposed will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

- 6.6 Failure to satisfy the regulations and obtain an EPSL where required is likely to result in prosecution and can lead to severe fines of up to £5000 per bat and possible imprisonment.
- 6.7 Eight species of bat are listed under section 7 of the Environment Wales Act (2106). Section 7 of the Act provides a list of living organisms of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This is a list of species considered at threat within Wales and in need of conservation management to maintain and enhance population numbers.
- 6.8 A duty is placed on the Local Authority by the Welsh Assembly Government to maintain and enhance populations of species listed in Section 7.

Securing Biodiversity Enhancements

- 6.9 Planning Policy Wales Technical Advice Note (TAN) 5, Nature Conservation and Planning, provides advice on how the planning system should contribute to biodiversity protection and enhancement. TAN 5 recognises the importance of biodiversity and the enjoyment of it. TAN 5 requires Local Planning Authorities (LPAs) to protect and enhance biodiversity during the planning process and to encourage sustainable developments. It also requires LPA's to ensure that protected Sites are properly accounted for within the planning system.
- 6.10 The Chief Planning Officer sent a letter to LPAs (dated 23rd October 2019) following the refusal of a planning application. This letter has provided clarification on the Welsh Governments approach to Paragraph 6.4.5 of Planning Policy Wales 10 which sets out that *“planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity.”*
- 6.11 The purpose of this letter was to clarify that considering the legislation and Welsh Government policy outlined above, where biodiversity enhancement is not proposed as part of an application, significant weight will be given to its absence, and unless other significant material considerations indicate otherwise it will be necessary to refuse permission. Biodiversity enhancement therefore will need to be included in any future planning application.

7 DISCUSSION AND IMPACT ASSESSMENT

- 7.1 Survey has shown that 7, Ten Acres, Margam is supporting roosting bats and four species are involved. Common and soprano pipistrelle bats have been recorded using the property as single animal (male or non-breeding female) day roosts. Whiskered and brown long-eared bats have been recorded in the loft and droppings most characteristic of brown long-eared bat found throughout the loft space. The survey identified the use of the loft as probably maternity for whiskered bat but no evidence of maternity use by brown long-eared was proven.
- 7.2 The amount and spread of droppings attributed to brown long-eared bats does suggest use as a maternity roost at some point and factors that may have affected the roost this season include the very hot and dry early season and potentially the fact the house is now empty and a lack of warmth during the colder spell in the maternity season. As brown long-eared bat is normally an extremely roost faithful species perhaps the most likely explanation is an unknown external factor.
- 7.3 Interestingly during the first observation survey, the passive detector left in the loft space recorded no calls during the survey period and no evidence of bats emerging was seen either by observers or recorded on NVA equipment. Brown long-eared and whiskered bat passes were recorded during this survey but late into it suggesting travel to the Site rather than emerging from it on this occasion.
- 7.4 The Site sits in a low density housing area which is itself sites largely in woodland and is adjacent to Margam Country Park. The area is known for significant bats roosts and roosts of important bat species. The use of the wooded areas around the house by bats was noted and bats were clearly foraging through the Site and adjacent gardens. Maintaining its suitability as a foraging as well as a roosting site will be important and this is addressed in Section 8 Recommendations.
- 7.5 The importance of the location for foraging and commuting bats is perhaps best demonstrated by the passage of Daubenton's bat through the Site on all survey occasions. Recordings were limited to single passes fairly late on in the survey suggesting again that the bat was travelling through rather than emerging near the Site.
- 7.6 The majority of bat passes recorded were soprano pipistrelle with common pipistrelle frequently noted too. The numbers of soprano pipistrelle passes probably reflect the known maternity roosts near to the property. Generally common pipistrelle were later arriving at the Site and this may suggest the common pipistrelle emerging from the house during the third observation is using the roost opportunistically.
- 7.7 Under the Environment (Wales) Act 2016 and Well Being of Future Generations Act 2015 require Local Planning Authorities (LPA's) and other public bodies must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems. Assessment of the Ecosystem Resilience is therefore an integral part of the LPA's duty and they will need to consider the impacts of the proposed development upon the resilience of the adjacent

wooded areas in this context. LPAs are directed to consider the resilience of ecosystems early in the planning process to aid assessment of the impacts of any proposed development upon biodiversity. In addition, a letter from the Chief Planning Officer clarified planning requirements in relation to biodiversity impacts points out the responsibility of the LPA to maintain and enhance biodiversity and to provide ‘*a net benefit for biodiversity*’.

Ecosystem resilience

7.8 The premise for Ecosystem Resilience is laid out in Section 4 of The State of Natural Resources Report, a 2018 document produced by Natural Resources Wales (NRW) on behalf of the Welsh Government. It lays out a framework for assessing ecosystem resilience. However, despite the duty placed on LPA’s, there is no currently agreed format for this assessment.

7.9 Section 4 names five attributes that NRW consider ‘building blocks’ of ecosystem resilience, these are:

- Diversity
- Extent
- Condition
- Connectivity
- Adaptability

7.10 These factors are considered below, although none of them are considered ‘standalone’ and all interrelate to some extent. It is also important to note that it is the responsibility of the LPA to assess Ecosystem Resilience and that any Site based report is not able to make judgements on a wider scale. As pointed out above, it is important to note that there is as yet no agreed format to undertake such an assessment.

Diversity

7.11 The Site can be classed as amenity and is managed as a garden with a single detached dwelling. The main ecological interest of the Site is in its use as a bat roost for four species of bat including maternity use by whiskered and historically brown long-eared bats. Secondary to this is its used for foraging and commuting in which it is part of a larger area which effectively created a glade with garden boundaries forming linear features within a wider wooded area.

Extent

7.12 The Site is small, approximately 0.16 hectares of which the current building footprint is around 0.04 hectares. The proposals are for a replacement dwelling of which the house and associated hard standing will roughly equate to the present built footprint. The small size of the Site will limit any impacts on species in the local area.

Condition

7.13 The Site is a garden and is currently managed formally. Outside of the presence of roosting and foraging/commuting bats it is not considered of great value for wildlife.

Connectivity

- 7.14 The proposals do not particularly impact upon the existing Site boundaries and connections to the adjacent gardens and woodland which appear to be of importance for commuting and foraging bats, no impacts are foreseen on these factors.

Adaptability

- 7.15 NRW comments that:
‘Adaptability differs from the other attributes because it is part of the definition of resilience rather than an attribute that supports it. However, its inclusion in the Environment (Wales) Act is important because it emphasizes one of the most important features of resilience: dynamism and the ability to adapt to change.’
- 7.16 NRW also comments that *‘Adaptability cannot yet be quantified in an equivalent way to the other attributes and so we have not used it in the assessment of resilience in this State of Natural Resources Review’*. As such this cannot be considered in this report.
- 7.17 At its most simple, this would mean that the LPA must protect any biodiversity value of the of the Site and any impacts likely to affect adjacent areas. In this instance, it is considered that there are not likely to be any significant impacts if proper mitigation is put in place prior to, and in the course of, construction. Without mitigation, these impacts could be considered to be significant. Recommendations are made in Section 8 to ensure that any impacts are properly negated.

Assessment of Potential Impacts on Bats

- 7.18 The proposals are to demolish the existing house and redevelop the Site with a new residential dwelling. The building supports four species of bats with day roosts and maternity roosts present. Although there are only small numbers of bats recorded the works are considered to be of a **major adverse impact** if no mitigation or compensation is undertaken in a Local (Margam) and County (Neath Port Talbot) context and of **minor adverse impact** in a wider regional (South Wales) context.
- 7.19 If recommendations made in Section 8 are fully implemented it is considered that there will be **no adverse impact** on the favourable conservation status of bats within the local or wider area in the longer term although short term disturbance is likely resulting in a **moderately adverse impact** in the short term. Recommendations are made which if implemented should ensure the long term safety of bats at the Site.

8 RECOMMENDATIONS

- 8.1 A European Protected Species derogation Licence (EPSL) will be required to allow the demolition to proceed lawfully.
- 8.2 An Ecological Clerk of Works (ECW) will be appointed to oversee ecological issues through the demolition period. The ECW will be available to oversee planned works affecting protected species and also be available on standby to assist in the case of unforeseen ecological issues arising.
- 8.3 The applicant must show in the licence application that the works satisfy the ‘three tests’ of the Habitat Directive. These are detailed in Section 7, Relevant Legislation and Policies, paragraph 7.6.
- 8.4 The application for an EPSL must be accompanied by a detailed Method Statement showing the measures to be taken to protect bats during the works and to mitigate and compensate against any unfavourable impacts in the longer term. The Method Statement will detail the necessary requirements of the renovation process to secure the safety of any bats present; it will identify timing requirements and how bats are to be excluded or otherwise removed from the building. NRW currently aspire to turn-round a licence application within forty working days if all the relevant and required detail is provided at the application stage.
- 8.5 Mitigation and compensation **must** be appropriate and as a minimum must maintain the Favourable Conservation Status of the species affected.
- 8.6 Compensation proposals will include provision of access back to the roof with permanent access measure incorporated into the new roof cover.
- 8.7 Bats are mobile species and can use a number of roosts or change roosting places through the year; as such the works will take account of the potential for bats to be present at any time during the works.
- 8.8 Guidance on appropriate mitigation is shown in **bold type** in Table 2 below. It is considered in this instance that the roost is of low conservation importance. It is important to note that whatever the conservation importance of a roost, it remains fully protected under European and UK law even if the bats are not present.

Table 2: Guidelines for Proportionate Mitigation (English Nature Bat Mitigation Guidelines – bold font indicates status of the present roost and appropriate mitigation)

Conservation significance	Roost Status	Mitigation Requirement
	Low	High
	Feeding perches of common/rarer species	Flexibility over provision of batboxes, access to new buildings etc. No conditions about timing or monitoring
	Individual bats of common species	
	Small numbers of common species. Not a maternity site	Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements
	Feeding perches of Annex II species	
	Small numbers of rarer species. Not a maternity site	
	Hibernation sites for small numbers of common/rarer species	Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.
	Maternity sites of common species	
	Maternity sites of rarer Species	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years.
High	Significant hibernation sites for rarer/rarest species or all species assemblages	
	Sites meeting SSSI Guidelines	Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.

Toolbox Talk

- 8.9 Prior to the commencement of demolition works, a toolbox talk will be undertaken with all relevant members of staff working on the project. The toolbox talk will provide details of basic bat ecology, the species involved and the applicable legislation. A temporary bat box will be provided by the client and erected prior to demolition commencing in a location agreed with the ECW
- 8.10 A search of the building loft space will be undertaken to assess if bats are present prior to commencement of works. If bats are found, they will be removed to the temporary bat box.

Timing constraints

- 8.11 As a maternity roost has been identified no works will take place that are considered licensable between mid-May and end of September.

Roost destruction

- 8.12 Given the location of roosts identified, it is intended that the roof at the north west of the house will be stripped in the presence of the ECW. This will include the northern chimney area and extend for a minimum of four metres from the gable end where damage has been noted. Tiles on the gable wall tops at the northern and southern gables will also be stripped by hand and the verges destroyed in the presence of the ECW.
- 8.13 On the extension, ridge tiles and tiles above the gable end wall will be removed in the presence of the ECW and the soffits fully exposed.
- 8.14 Tiles will be removed by hand only and with care. The underside of the tile will be inspected after lifting for the presence of bats.

Compensation

- 8.15 Compensation will be in the form or provision of a dedicated bat loft area which will have dimensions of 4 metres depth (from the northern gable end), approximately 2.8 metres ridge to floor height and nearly 8 metres width (see Figure 2). This area will have an open roof construction using rafters and purlins. Beyond this the roof will be of truss construction.
- 8.16 Access to soffits will be formed during construction allowing the crevice dwelling bats to access the soffit and wall tops. This will allow pipistrelle species to colonise the wall tops and crevices in the building roof. In addition access for brown long eared bats will be formed using access tiles or slates near the ridge.
- 8.17 Typical access tiles are shown in Figure 3. Costs of tile sets are around £40 – 60 plus VAT. If lead-formed tiles are used, a minimum thickness of Code 4 material should be used to prevent collapse of the entrance. Soffit access points will be slots at least 15mm in depth and 100 mm in width. Soffit access points allowing access to the wall tops and into the bat loft will also be provided on the northern gable with slots approximately 1 metre either side of the gable apex (see Figure 2).

- 8.18 Only bitumen Type 1F roofing underfelt will be used to line the roof. The use of non-bitumen coated roofing membranes will not be permitted.

Monitoring

- 8.19 Monitoring of licensed works in year two and four post completion is considered sufficient in this instance. Two dusk visits (with IR video camera) should be undertaken at an appropriate time of year in each monitoring year.
- 8.20 The inclusion of a swift nesting brick is recommended. These should be placed on the west and eastern facing gables of the southern transect roof at as high a point as possible.

9 CONCLUSIONS

- 9.1 The house supports roosting bats, four species are identified. Two of the roosts are considered to be maternity and therefore high status roosts, these are whiskered and brown long-eared, male or non-breeding female roosts of soprano and common pipistrelle were also identified. Both the animal and its resting place are fully protected in British Law.
- 9.2 Compensation and working arrangements are outlined in Section 8, Recommendations. These will maintain the favourable conservation status of the species involved in the longer term.
- 9.3 A European Protected Species Derogation Licence (EPSL) must be sought before the works can proceed.

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FIGURE 1
LOCATION OF OBSERVERS AND EMERGENCE POINTS

Preliminary Roost Assessment and Observation Surveys, 7, Ten Acre Wood, Margam.
Hawkeswood Ecology – October 2023

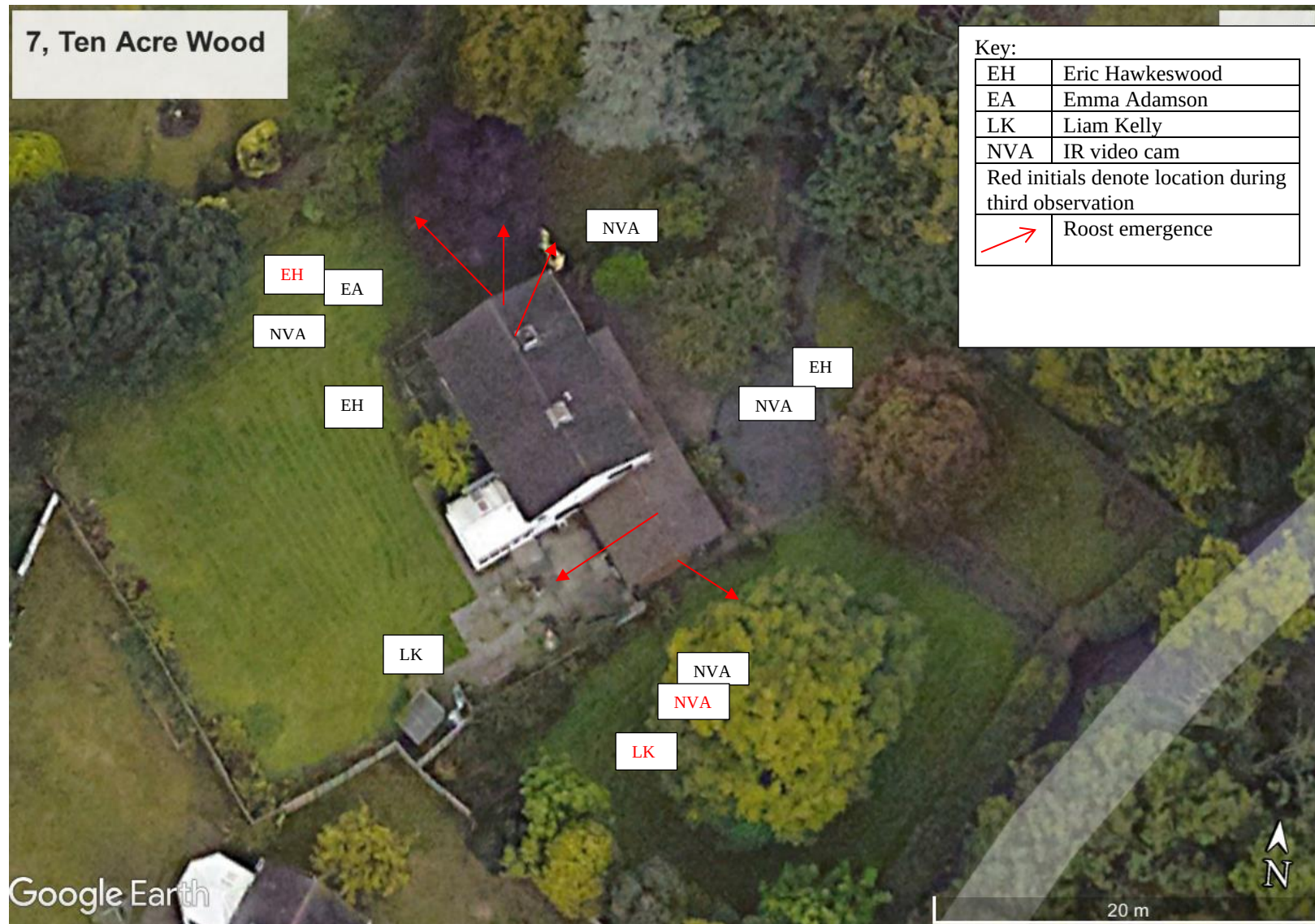


FIGURE 2
PROPOSED BAT LOFT LOCATION



FIGURE 3
TYPICAL TILE/ SLATE ACCESS POINTS



Spicer Tiles Handmade Bat Access Clay Roof Tile



A tile set available from NHBS showing details of the set and access point.



Bat Access Slate, Code 4 thickness, fabricated by LeadworX

APPENDIX 1
PHOTOGRAPHS



Northern gable showing emergence locations from verge and ridge



Approximate location of emergence from behind chimney



Emergence of long-eared bats from hole near chimney



Whiskered bat emerging from between tile and concrete verge



Common pipistrelle emergence from ridge



Soprano pipistrelle emergence from gable apex



Western elevation.



Southern gable and eastern elevation



Both eaves and verges generally tight against bat entry.



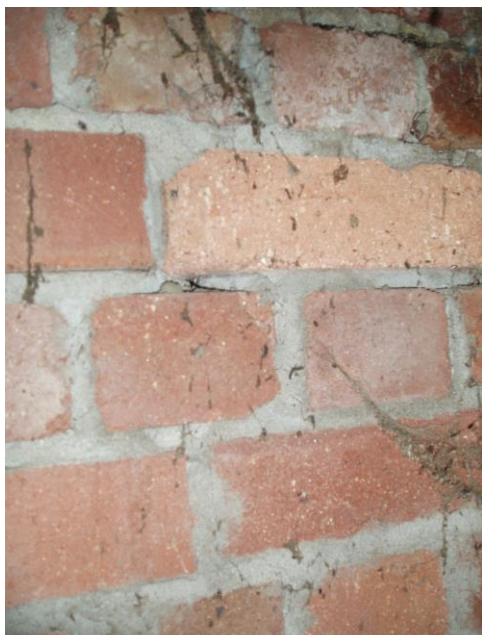
Render breaking down on northern gable



Droppings near northern chimney.



Damaged structure of roof near northern chimney, between chimney and ridge.



Droppings on northern chimney.



Northern gable wall.

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