

HAWKESWOOD ECOLOGY

Specialists in Ecological Survey and Assessment

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BAT ACTIVITY SURVEY, LLYS WERN,

CAEWERN, NEATH

ON BEHALF OF

TAI TARIAN LTD

July 2018

Ref: HE/03/2018

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We confirm that in preparing this Report we have exercised reasonable skill and care, taking into account the project objectives, the agreed scope of the work, prevailing site conditions and the degree of manpower and resources allocated to the project.

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.

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SUMMARY

Hawkeswood Ecology carried out a Bat Activity Survey on land at Llys Wern, Caewern, Neath. It is proposed to develop part of the Site for residential purposes.

The Site is dominated by amenity grassland which is currently roughly mown, and a wooded strip which has colonised part of the Site from an abandoned agricultural hedgerow. The Site is bounded by a recreation ground to the north but is otherwise contained within a very well developed area.

Four bat species were noted during survey, common and soprano pipistrelle, noctule and whiskered bats; it was possible that brown long-eared bat was also present. Of these, common pipistrelle was by far the most commonly recorded with the other species appearing rarely.

The development is principally restricted to the grassland area and the use of the Site by bats was mainly related to the wooded areas although they flew into the open areas and adjacent gardens as it grew darker.

It is concluded that with proper consideration during the development, particularly in regard to artificial lighting, the proposed development is unlikely to have any negative impact upon bats in the local area.

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 carry out a Bat Activity Survey on land at Llys Wern, Caewern, Neath on behalf of Tai Tarian Ltd. The Site lies at approximate central Grid Reference SS 74373 98629. It is proposed to develop part of the Site for residential purposes and to divert a currently informal pathway as part of the project.
- 1.2 The Site is dominated by amenity grassland and a woodland strip along the northern boundary. An open storm drain (possibly a culverted stream) lies in the west of the Site. To the north is a large open recreation area, the other boundaries of the Site are adjacent to existing roads and housing development.
- 1.3 The objectives of the survey are:
 - To assess the use of the Site by commuting and foraging bats;
 - To assess the potential ecological impacts of the proposed works on bat activity and use of the Site;
 - To provide recommendations to mitigate the proposed works.
- 1.4 The bat activity surveys were carried out over the period 3rd May 2018 to 14th June 2018.

2 SURVEY TEAM EXPERIENCE

- 2.1 The lead surveyor and report author is Eric Hawkeswood. Eric has many years experience of broad habitat and detailed botanical and species surveying. 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 Resources Wales (NRW) licensed bat worker (no. 74244a:OTH:CSAB:2016) and has extensive experience of roost inspections and emergence work. He has been a professional in the nature conservation field for twenty nine 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.
- 2.2 Assistant surveyor during the activity surveys was Emma Adamson. Emma has worked with Hawkeswood Ecology since 2006 and has extensive experience of emergence, re-entry and activity surveys.

3 METHODOLOGY AND CONSTRAINTS

Desktop Study

- 3.1 Hawkeswood Ecology have undertaken observation work on the adjacent section of the wooded strip and housing within the last two years and assessed the data gathered during those surveys.

Field Survey

- 3.2 The survey was designed to give as accurate a record as possible of bat foraging and commuting activity across the Site. The observers and machines were positioned along the Site giving good coverage of the wooded and open areas of the Site.
- 3.3 The evening visits commenced approximately 15 minutes before sunset and concluded approximately one and a half hours after sunset. The morning survey commenced approximately 1.5 hours before sunrise, concluding shortly after.
- 3.4 The survey timing allowed the changing behaviour of bat foraging activity to be monitored as the lowered threat of predation in the dark makes it more likely that bats will cross open ground in the darker conditions to access more exposed areas for foraging.
- 3.5 Bats were monitored using electronic bat detectors. Machines used were Echo Meter 3 (EM3) real time expansion units and an Anabat Express. Recordings were taken from the machines for later analysis. The recordings were analysed using Batsound and AnalookW software, by use of which it is possible to separate most of the different species present from the sonograms produced. Locations of observers and the automatic machine are shown in Figure 1.

Constraints

- 3.6 The surveys covered the start of the bat activity season up to the maternity period with no later observations undertaken due to pressures of planning. However, by utilising data gathered in 2016 on an adjacent area of the same wooded strip it is considered an accurate picture of usage of the area by bats could be gained.

4 DESK TOP STUDY FINDINGS

- 4.1 An earlier survey carried out by Hawkeswood Ecology on an adjacent parcel of land found common and soprano pipistrelle, noctule and whiskered bats to be commuting through, foraging on or overflying the area. It was thought that a noctule roost lay somewhere north of the playing field as a number of noctule bats were identified flying from that direction southwards over the Site early in those observations. No roosting activity was noted.
- 4.2 The data search undertaken at that time did not identify any bats from the Site.

5 FIELD SURVEY FINDINGS

Introduction

- 5.1 The Site consists of an area of open space which is managed by infrequent mowing. This is bounded to the north by a wooded strip which has developed from an abandoned agricultural hedgerow. There is a bank and ditch from which trees and shrubs have encroached forming a wooded strip approximately 5 metres deep at its maximum. An informal footpath has developed along the edge of the wooded area which leads from Llys Wern to Dwr Yr Felin Road.
- 5.2 At the western end of the Site an open ditch runs along the southern boundary. This appears from a culvert and may be related to the ditch along the hedgerow. Details of the habitats and plant species recorded are given as Target Notes in Appendix 1 and shown in Figure 1 with photographs in Appendix 2. A full habitat survey was not commissioned and the Target Notes give a Site overview.

Bats Activity Surveys

- 5.3 The dates and weather conditions for the field surveys are given in Table 1 below:

Table 1: Weather Conditions for evening observations:

Date	Survey type	Times	Weather conditions
3 rd May 2018	Evening Activity	20.20 – 22.15 (sunset 20.40)	11.5 – 11.5°C, 100% cloud, dry, good visibility, F2/3 SW breeze; high levels of midge activity
3 rd June 2018	Morning Activity	03.30 – 05.10 (sunrise 05.00)	8 – 9°C, 5-25% cloud, variable, dry, good visibility, Still
14 th June 2018	Evening Activity	21.15 – 22.50 (sunset 21.33)	16 – 16°C, 100% clear, variable, dry, good visibility, F1 W breeze

3rd May 2018

- 5.4 The first bat was a common pipistrelle seen flying into the Site from the housing to the south at 20.50. Following this, at least three further bats were seen flying from the housing to the wooded strip and from the continuing hedgerow to the east. Foraging was regular for around fifteen minutes with social calls noted. From approximately 21.05 it became much quieter with only an occasional pass of a foraging bat. There was a slight increase in activity around 21.30 until 21.37 after which time activity ceased and neither observer recorded any further passes.
- 5.5 The only other species recorded during the observations was a noctule noted flying in the distance at 20.58. One pipistrelle pass was possibly best described as a ‘pip 50’ and could not be identified from the sonograms to common or soprano at species level. The Anabat Express located in the woodland recorded a number of common pipistrelle passes between 20.55 and 21.31.

3rd June 2018

- 5.6 The first pass recorded was a common pipistrelle at 03.37 after which time bats were noted regularly foraging in the trees and over the open grass area and adjacent gardens. From 03.50 to around 04.36 at which time the last animal was recorded. Activity stopped at the east of the Site at 04.28 but continued to 04.36 in the west. Although a considerable number of passes were recorded, it appeared to be a single bat mostly responsible for them. At 03.44 a pass was recorded on the Anabat Express which analysed to show a best match with a whiskered bat. This was the only recording on the automatic machine. No other species were noted.

14th June 2018

- 5.7 Fairly consistent levels of bat activity were noted throughout the observation with the first bat recorded a common pipistrelle seen to fly into the Site from the housing to the south at 21.29 shortly before sunset. It was quiet following this until 21.54 when a common pipistrelle was again seen to fly into the Site for the housing. After this foraging was frequent but never heavy.
- 5.8 A Myotis bat was recorded by Eric and on the Anabat Express over a period from 22.26 to 22.36 foraging in the wooded area before moving out; this animal was found to be most likely a whiskered bat on analysis. At 22.25 Emma saw a bat around the tree canopy near Llys Wern which was not echo-locating. It was thought possibly to be a brown long-eared bat gleaning but the area was fairly well lit by a street light at the end of Llys Wern. Soprano pipistrelle was recorded on this occasion with a few foraging passes noted.

6. DISCUSSION AND IMPACT ASSESSMENT

- 6.1 The Site consists of roughly mown grassland with a wooded strip bounding it to the north. This is a continuation of a hedgerow which forms the southern boundary of the adjacent recreation area and then continues to run through the developed housing area to the east. It is a section of this same hedgerow that Hawkeswood Ecology surveyed for bat activity in 2016 at Heol Llwyn Celyn and the current survey is approximately 50 metres to the west so it can be assumed that bat activity is continuous along the wooded area.
- 6.2 The 2016 survey concluded that both common and soprano pipistrelles were associated with the hedgerow. Observations were undertaken in July, at the peak of the nursery season, and in the autumn. A whiskered bat was also recorded flying along the hedgerow on that survey and during the July visit at the noctule bats were noted flying overhead from an apparent nursery roost to the north early in the observation.
- 6.3 Both the 2016 and the current 2018 survey effectively provide a full season's observation on the full length of the hedgerow, which has become more a wide wooded strip at Llys Wern. The area was used in an entirely similar way to that at Heol Llwyn Celyn with bats concentrated along the tree line and foraging over the open areas in darker conditions. Possibly more activity was associated with the adjacent gardens in 2018 but this is a subjective assessment.
- 6.4 It appears that the Site provides a valuable foraging and commuting area for bats, particularly along the wooded strip. It is of interest that whiskered bat was recorded from both the 2016 and

2018 surveys and it is not impossible that this is the same animal. It was clear that when bats started to forage away from the woodland, they were recorded over the adjacent gardens as frequently as they were noted over the amenity grass area.

- 6.5 As was found in 2016, the most common species recorded was common pipistrelle and it may be that soprano pipistrelles were late returning to their summer roost this year. Bat records seem to be fairly erratic following the harsh late winter weather and this may have affected numbers seen (pers comm., various bodies).
- 6.6 It is concluded that the most important part of the Site is the wooded area and this should be retained with as little interference as possible as a result of the proposed development. Artificial light spill must be controlled; the current impact of light from the standard at Llys Wern is significant with around half of the Site, and most of the development footprint already well lit. The western end of the Site, adjacent to Dwr Yr Felin Road, is also very brightly lit with road lights. The main physical impact on the Site in relation to the wooded area will be the provision of the re-aligned footpath.
- 6.7 The Site is currently considered to be of **moderate value** for bats, forming an important foraging area and commuting route, although the main importance is considered to be the wooded area rather than the open grassland.
- 6.8 With proper mitigation and retention of the wooded area, it is considered that the development will be of **neutral impact** in the short to long term. Recommendations are made in Section 8 to assist in reduction of any potential impacts.

7 RELEVANT LEGISLATION AND POLICIES

Birds

- 7.1 Part I of the Wildlife and Countryside Act 1981 (as amended) makes it an offence (with certain limited exceptions and in the absence of a licence) intentionally to kill, injure or take any wild bird, or intentionally to damage, take or destroy its nest whilst being built or in use, or to take or destroy its eggs. Consequently, even common birds such as blackbirds or robins, and their nests and eggs are protected in this way. Any works involving removal or other management of trees or shrubs must be undertaken outside the breeding bird season (March- August).
- 7.2 Further, section 1(5) of Part 1 of the W&C Act states any person intentionally disturbing any wild bird included in Schedule 1 whilst it is building a nest or is in or near a nest containing eggs or young or disturbs the young of such a bird is committing an offence and liable to a special penalty.
- 7.3 Amendments to The Conservation of Habitats and Species Regulations 2010 made in 2012 have effectively strengthened the protection of wild birds and their habitats. The amendment is “To help preserve, maintain and re-establish habitats for wild birds.”
- 7.4 Under the amended Regulations, Local Planning Authorities (as well as national statutory conservation bodies such as Natural Resources Wales) are required to protect and create bird habitat.

Bats

- 7.5 British bats are protected under the Wildlife and Countryside Act 1981 (as amended). Schedule 5 of this act made it illegal to intentionally kill, injure or take any British bat. It is also an offence to intentionally damage or destroy their place of rest (the roost).
- 7.6 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. Lesser horseshoe bats are also protected under Annex II of the Habitat Regulations which requires the national government to identify Special Areas of Conservation to protect and enhance core populations of Annex II species.
- 7.7 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.
- 7.8 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.
- 7.9 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).
- 7.10 The introduction of the Conservation of Habitats and Species Regulations 2017 (as amended), 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.

- 7.11 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.
- 7.12 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.
- 7.13 A duty is placed on the Local Authority by the Welsh Assembly Government to maintain and enhance populations of species listed in Section 7.

TAN 5

- 7.14 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 (LPA's) 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.

8 RECOMMENDATIONS

- 8.1 Any removal of shrubs to enable development of the new footpath should be undertaken outside the accepted bird breeding season of March to August. If this is not possible, the affected areas will be searched by a suitably experienced ecologist prior to commencement of works. There is no licence for the destruction of active bird nests and translocations invariably fail. Any nest will be protected by a buffer zone until such time as it is no longer in use.
- 8.2 Mature trees should be retained and the existing woodland not reduced in size or extent. Any work to mature trees may require further survey in relation to their potential to support roosting bats.
- 8.3 The new build should incorporate bat tubes or bricks, provisional locations are shown in Figure 2 along with typical examples of boxes.
- 8.4 Control of artificial lighting post construction is of utmost importance as this has the potential to affect the use of the hedgerow/wooded area by bats, reducing its value as a foraging area and commuting route. Light spill from the development to the hedgerow and wider retained open areas must be prevented. Directional light sources (i.e. LED lights, low UV component light sources, i.e. sodium lamps (preferably low pressure but most likely high pressure) and lamp baffles will be used where appropriate. LED lights levels should be turned down to the minimum acceptable for the Highways Department thresholds; this does not appear to be the case with the very bright lamp at Llys Wern.

- 8.5 Lighting to the rear of the properties will only be for safety purposes. All lighting will be at a maximum height of 3 metres and be angled downwards; the woodland, retained grassland areas or gardens will not be directly lit by external lighting.
- 8.6 Any landscaping plan should introduce native species reflecting those present in the local area (all planted species should be of local provenance) or species with known value to British wildlife. Plantings should include species known to be valuable to foraging birds and bats such as those producing berries and attractive to insects, i.e. heather, hawthorn, pyracantha and hazel.

9 CONCLUSIONS

- 9.1 The Site is presently dominated by the woodland and amenity grassland. The development may only marginally directly affect the wooded area. The woodland, which has developed from an existing agricultural hedgerow, is of value to foraging bats and is likely to be used by a number of species of local birds.
- 9.2 Recommendations are made to remove any detrimental impacts on bats and to offer new roosting opportunities.
- 9.3 There are no apparent ecological concerns that would prevent the development proceeding.

10 BIBLIOGRAPHY

Nature Conservancy Council, 1990, (2010 revision), *The Handbook for Phase 1 Habitat Survey – a technique for environmental audit*, JNCC

The Wildlife and Countryside Act 1981 (as amended).

The Conservation of Habitats and Species Regulations, 2017 (as amended), HMG.
Bat Conservation Trust (2016), *Bat Surveys for Professional Ecologists – Good Practice Guidelines*. Bat Conservation Trust, London.

Chartered Institute of Ecology and Environmental Management (2013), '*Guidelines for Preliminary Ecological Appraisal*'

Bat Activity Surveys, Land at Heol Llwyn Celyn, Caewern, Neath.
Hawkeswood Ecology – September 2016

**FIGURE 1:
LOCATION OF OBSERVERS; KEY HABITATS**

Bat Activity Survey, Llys Wern, Caewern, Neath
Hawkeswood Ecology – July 2018

Figure 1: Location of
Observers; Key habitats.

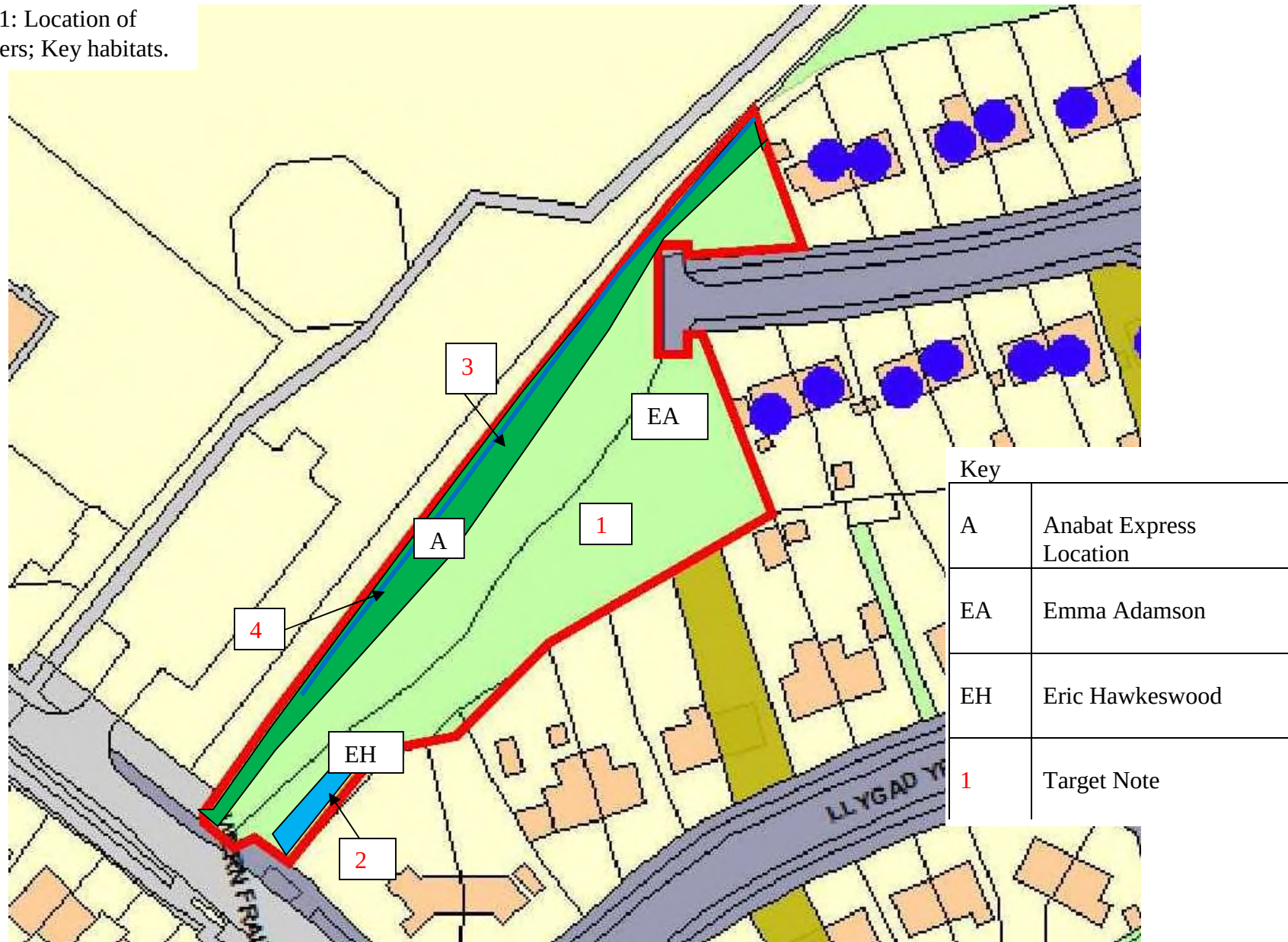
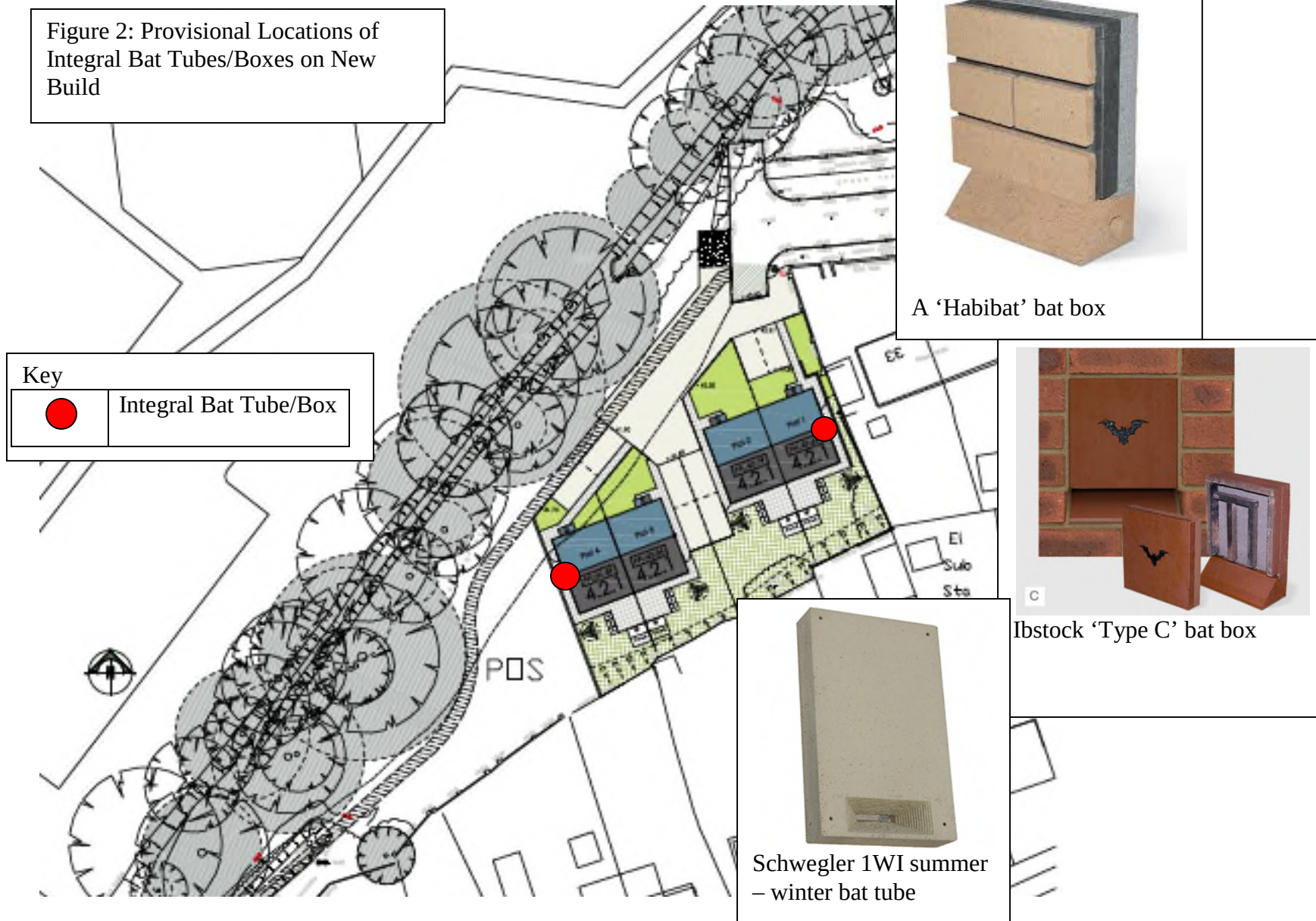


FIGURE 2
PROVISIONAL LOCATIONS OF INTEGRAL BAT TUBES/BOXES ON NEW BUILD

Figure 2: Provisional Locations of
Integral Bat Tubes/Boxes on New
Build



APPENDIX 1
TARGET NOTES

Bat Activity Survey, Llys Wern, Caewern, Neath
Hawkeswood Ecology – July 2018

1. Amenity grass, poorly managed by infrequent mowing.
2. Ditch at west of the Site near entrance from Dwr Yr Felin Road. Overshadowed by dense bramble, other species noted includes marsh marigold (rare), hairy bittercress, floating sweet-grass, common nettle, meadow sweet and bracken. The ditch held limited water at the time of initial inspection (3rd May 2018).
3. Wooded strip, along northern boundary and encroached from abandoned agricultural hedge on a bank at the Site boundary. The boundary is ash, common oak, sycamore and alder with a well developed shrub layer of goat willow, hazel and sycamore. The ground flora consists of locally abundant bramble, ivy, common nettle, common cleavers and bracken. Enchanter's nightshade and lesser celandine are frequent; bluebell and male fern are locally frequent. Occasionally occurring species include Spanish bluebell and creeping soft-grass, bamboo grass is rare.
4. Ditch along bank of old hedgerow, muddy but not in water at time of survey. Limited vegetation but marsh marigold present occasionally.

APPENDIX 2
PHOTOGRAPHS

Bat Activity Survey, Llys Wern, Caewern, Neath
Hawkeswood Ecology – July 2018



Entrance form Llys Wern



Entrance from Dwr Yr Felin Road

Bat Activity Survey, Llys Wern, Caewern, Neath
Hawkeswood Ecology – July 2018



The amenity grassland



Inside the wooded area, paths and a
dry ditch

Bat Activity Survey, Llys Wern, Caewern, Neath
Hawkeswood Ecology – July 2018



A poor picture but showing the light spill form the existing LED light



Amenity grassland looking to the open ditch at Dwr Yr Felin Road

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