

**Derelict House at
Llandarcy Park
Llandarcy
Skewen
Neath SA10 6FJ**



**An Ecological Survey
Report By:**



On Behalf Of:



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Client	NPTC Group of Colleges
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1 Executive Summary

- 1.1 The NPTC Group of Colleges wish to demolish an existing two-storey derelict house at Llandarcy Academy of Sport, at Skewen, near Neath. The proposed demolition is to make way for additional parking required at the site. These proposals will require consent from the local planning authority, Neath Port Talbot Council.
- 1.2 To inform the planning process, a Preliminary Roost Assessment was carried out in March 2022, by an experienced ecologist and a trainee ecologist. The primary focus for the appraisal was the presence, or potential presence, of bats and nesting birds. Survey found no live bats and no evidence of bats internally or externally. However, the building was assessed to have a 'medium' level of potential to be used by bats. The outcome of the assessment was that additional survey was required due to the potential of the structure to be used by bats.
- 1.3 Two dusk emergence/activity observations were carried out in May and July 2022, by a team of experienced, licenced ecologists and observers, using high quality detection equipment. No bats emerged from the derelict house during the first dusk observation carried out on the 19th May 2022. A second dusk observation on the 16th June 2022, recorded a single soprano pipistrelle emerging at the south-east corner of the building. The bat emerged from the dense ivy growth, but it is believed the animal was roosting in a space behind the fascia board, rather than the ivy.
- 1.4 When considering the nature conservation significance of the site recognised criteria (Bat Mitigation Guidelines 2004 and Good Practice Guide: NRW Approach to Bats and Planning October 2015), the nature conservation status of the site is assessed to be low due to the presence of a single bat of a common species (soprano pipistrelle), and no breeding colony present.
- 1.5 It will be necessary to obtain a European Protected Species licence for the demolition of this derelict building. All bat species and their places of rest are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. The legal protection for bats concerns impacts from disturbance, loss of roost locations, modifications to roosts and loss of access or obstruction to roost locations. The licence must be obtained once planning consent is issued before work commences that affects bat roost locations.
- 1.6 A scheme of mitigation will be required as part of the process to obtain planning consent, and to make the application for the European Protected Species licence. Recommendations for short and long-term mitigation provision are therefore outlined in this report.
- 1.7 Birds were also considered during the internal and external inspection of the derelict house as part of the Preliminary Roost Assessment conducted in March 2022. A single robin nest was located within the dense ivy growth covering the flat-roofed section attached to the east side of the house during the external inspection. However, later in the year during both dusk bat activity observations carried out in May and June 2022 no bird activity associated with the building was observed. The building still offers opportunities for birds to create nests. Breeding birds are protected under the provisions of the Wildlife and Countryside Act 1981 (as amended), and active bird nests cannot legally be disturbed or destroyed. General advice on the legal protection afforded to breeding birds is provided in this report in an unlikely event a nest is found during demolition.
- 1.8 In order to comply with current Welsh Planning Policy (PPW11), it will be necessary to provide enhancements for biodiversity so that the site offers features to support wildlife. General proposals for measures to promote wildlife and nature conservation are provided in this report.

2 Introduction

- 2.1 The NPTC Group of Colleges wish to demolish the existing two-storey derelict house at Llandarcy Academy of Sport, at Skewen, near Neath. The demolition is to make way for additional parking required at the site. These proposals require consent from the local planning authority, Neath Port Talbot Council.
- 2.2 In order to consider the presence or potential presence of protected species, a Preliminary Roost Assessment (PRA) was commissioned from Just Mammals Limited, and undertaken by a licenced Ecologist and assistant in March 2022. Assessment comprised of a day time inspection of the building, both externally and internally. Details of the site location are given in Table 1 below.
- 2.3 The outcome of the PRA was that additional survey effort was required due to the potential of the

structure being assessed to have a 'moderate' level of potential to be used by bats. Two dusk bat emergence/activity observations were conducted by Just Mammals Limited in May and June of the 2022 season by a team of experienced ecologists and support staff.

Table 1: Survey Site Details

Address	Grid Reference	Altitude
Derelict House at Llandarcy Park, Llandarcy, Skewen, Neath SA10 6FJ	SS 71854 95583	47m Above Ordnance Datum

2.4 Principal objectives of the survey effort were to;

- determine if bats are roosting in the building, and if so, identify roost locations;
- identify the species and the type of roost (maternity, day, transitional etc);
- identify any important bat foraging or commuting behaviour in relation to the building;
- identify any important bat flight lines;
- determine if breeding birds are also using the building;
- identify potential impacts, if any, from the development proposals;
- gather sufficient information to be able to make appropriate recommendations in order to minimise any impacts.

2.5 This report documents the findings of the assessment which includes the daytime internal/external inspection and two bat observations in the active summer period, and makes appropriate recommendations in light of the results.

3 Survey Team Experience

3.1 Lead surveyor was Robert Morgan, who is also the author of this report. A small team of ecologists participated in the appraisal and details of their experience are given in Table 2 below.

Table 2: Survey Team Experience

Name/Position/Detector	Licences	Experience
Robert Morgan Ecologist (TE)	S090915/1; expiry February 2024	Over seventeen years' experience with bats and is a Natural Resources Wales (NRW) licence holder, carrying out roost surveys, emergence surveys, radio tracking of lesser horseshoes and monitoring of important sites. He holds a City & Guilds Level 2 award for working in Medium Risk Confined Spaces. Rob has expertise in respect of dormice with over 25 years' experience monitoring dormouse boxes at a Local Nature Reserve and surveying for dormice at various other sites (NRW licence holder). He is also licenced to disturb barn owls under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) with seven years' experience surveying for this species (NRW licence holder). He has experience surveying for otters, water voles, reptiles, amphibians, birds and marsh fritillary butterflies. Robert is an Ecologist with Just Mammals Limited
Daniel White LLB MSc QCIEEM Trainee Ecologist (TE)		Following qualification from the University of South Wales with an MSc in Wildlife and Conservation Management in 2021, Daniel has joined Just Mammals Limited as a Trainee Ecologist. He has experience of reptile surveys, having previously conducted presence/absence surveys for non-native Aesculapian snakes. In addition to carrying out botanical surveys, river surveys and small mammals trapping, he has also undertaken practical land management activities whilst volunteering with Cambrian Wildwood
Nic Aldridge BSc (Hons) MSc Senior Survey Assistant (TE)	S089980/1; expiry July 2022	Following a degree in Botany and Zoology, Nic completed an MSc in Wildlife Management, Conservation and Control, both at the University of Reading. He has practical experience of field based research with a focus on invertebrate and vegetation diversity and has produced Phase 1 habitat surveys and habitat management plans. He has attended courses with the Bat Conservation Trust to improve his knowledge and skills and has led voluntary projects to develop habitats and collect species data. Nic is a Senior Survey Assistant with Just Mammals Limited
Nigel Isaksson Senior survey Assistant (TE)	S089854/1; expiry July 2023	Nigel has seventeen years' experience undertaking bat surveys, flight line observations, census counts. Nigel holds an NRW licence to disturb bats, and is also licenced to disturb dormice, and is a Senior Survey Assistant with Just Mammals Limited
Thalia Godwin BSc (Hons) Survey Assistant (TE)		A graduate of the University of Plymouth, she is keen to develop her skills and knowledge in the environment and conservation sector. To this end she is a Survey Assistant with Just

		Mammals Limited
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Note: Detectors

TE = Time expansion (Pettersson D-240X)

4 Survey Methodology

- 4.1 An initial day time visual assessment of the derelict house at Llandarcy Park was carried out in March 2022, which involved an external inspection of the structure, seeking signs of the presence of bats. The external survey involved examining outer surfaces from the ground and looking for signs of bat presence including bat faeces (droppings) on ledges and walls. A high-powered lamp and close focusing monocular were used to examine potential access and roosting areas. Any gaps or crevices in the structure were inspected as closely as possible. The context of the building within the surrounding landscape was also assessed at this time.
- 4.2 Internal survey searched for the presence of bats or the remains of dead bats (including dead juveniles and babies, which might indicate the presence of a maternity site), and signs of bats including bat faeces (droppings) on floors, ledges, walls, and other surfaces. The loft spaces and roof structure, which are a favoured roost location, were checked for live bats and a careful search for droppings and insect parts was conducted. Urine staining, both on paintwork and window glass or staining on timbers caused by oil from bat fur were also searched for as well as discarded fragments of insects such as moth wings.
- 4.3 Two dusk observations were conducted in the summer period of 2022. In order to carry out these observations, the surveyors were equipped with Pettersson D-240X machines. These devices are particularly sensitive and excellent at separating species which employ the middle range frequencies for foraging (45 – 55 kHz). They are therefore very good at identifying the different pipistrelle species (*Pipistrellus sp.*), and the different myotis bats* (*Myotis sp.*) (*myotis bat is a collective term used where the species could not be specifically identified beyond this broad group). The myotis group encompasses seven species of British bat including Alcaethoe's (*Myotis alcathoe*); Bechstein's (*M. bechsteinii*); Brandt's (*M. brandtii*); Daubenton's (*M. daubentonii*); greater mouse-eared (*M. myotis*); Natterer's (*M. nattereri*); and the whiskered bat (*M. mystacinus*).
- 4.4 The Pettersson D-240X machine can be used in heterodyne or time expansion modes and for the purposes of this survey, only the time expansion facility was used. The received signals were then down loaded to Roland RO-5 recording devices for later analysis. The time expansion method is similar to making a high-speed tape recording of a bat's ultrasonic call and then playing it back at a slower speed. Digital technology is used to make the recording and slow it down for play back. Since the signal is stretched out in time, it is possible to hear details of the sound not audible with other types of detector.
- 4.5 Time expansion is also the only technique which preserves all characteristics of the original signal, which makes time expanded signals ideal for sound analysis. In addition to the simple echo-location calls which can be used for commuting, enabling the bat to find its way about, bats will also produce feeding 'buzzes' when foraging. These buzzes occur when the bat closes in on its prey and are a consequence of the Doppler Effect, which results in a feeding 'buzz' as the reflected signal shortens when the animal approaches its prey. Such buzzes are used to assess the importance of an area for foraging. The recorded echo-location calls are then interpreted using BatSound sound analysis software. By use of the software it is possible to separate the different species by analysis of the sonograms produced.
- 4.6 Nesting birds were also considered at the time of assessment, with the surveyor looking for signs of historic bird activity, nest remains, evidence of collections of bird dropping, feathers or any other indications of use by birds.

5 Site Description

- 5.1 The house is located along the western boundary of Llandarcy Academy of Sport, in Llandarcy which is owned by NPTC Group of Colleges. From the Ordnance Survey 25 inch map of Great Britain, it appears to have historically been known as Henbarc Cottage. It is situated towards the southern end of the site, some 60m north from the south-west boundary corner, within the community of Llandarcy. The area comprises residential and commercial properties and is some 3.6km north-east of the centre of Neath. The surrounding countryside consists of a mixture of different habitats with pastoral farmland to the south and some small pockets of arable land with associated farmsteads. Further south is the Pant-y-Sais Site of Special Scientific Interest (SSSI)/Special Area of Conservation (SAC), and Swansea Bay Golf Club. To the west there are remnants of the old Llandarcy Oil Refinery, and beyond that Crymlyn Bog SSSI/SAC. There are

also multiple woodland areas in close proximity to the survey site.

- 5.2 A two-storey former dwelling, the house is rectangular in shape, and closely aligned to an east-west axis. It is constructed with a mixture of materials including stone, cement blocks and brick. Exterior walls have been covered with a stone-chip or Canterbury spa render, and it features a pitched roof covered with cement tiles; supported by a timber purlins, rafters and trusses. A central ridge board is present and the roof is lined with a bitumen membrane. At the west end of the roof is a brick chimney. Attached to the east and north elevations are two single storey flat roofed sections, which are accessed internally. These two flat roofs are covered with felt and stone chippings. There is dense ivy (*Hedera helix*) growth partially covering all elevations of the structure.
- 5.3 All barge boards and fascia boards are timber. At the western gable end wall, the barge boards are rotten. The single door on the north wall is metal with a metal frame. All window frames are wooden, and many of the ground floor level windows have been boarded with plywood. The rainwater products are all uPVC.
- 5.4 Habitat connectivity to the property is relatively good. A mature tree line along the western boundary of the Academy provides links to several nearby woodland blocks and the wider countryside. There are several water bodies in the vicinity which can provide excellent foraging habitat for bats which include the Afon Nedd, the Tennant Canal, and several other small unnamed water bodies. A large unnamed reservoir situated approximately 1km to the north. Both Crymlyn Bog SSSI/SAC and Pant-y-Sais SSSI/SAC provide a range of habitats, including bog, meadows, reed beds, waterlogged scrub and woodland which will all offer foraging opportunities for bats, as would the mainly broadleaf woodlands to the south. Overall connectivity to these features is good.

6 Desktop Study

- 6.1 The context of the site was considered with regard to statutory sites of nature conservation interest, such as a SSSIs, SACs, National Nature Reserves (NNRs) or Local Nature Reserves (LNRs) etc. Within a 2km radius there are three designated sites; Pant-y-Sais SSSI/SAC is located approximately 1.06km to the south. Cors Crymlyn/Crymlyn Bog SSSI/SAC is situated approximately 1.23km to the west, and Earlswood Road Cutting and Ferryboat Inn Quarries SSSI is some 1.35km to the south-east. The development proposals are not considered likely to impact on any of the designated sites in the vicinity.
- 6.2 A South East Wales Biodiversity Records Centre (SEWBReC) record search was commissioned, and revealed numerous bat records and a number of bird records within a 2km radius of the site (unique LERC reference number 0223-205). There were no historic records for bats at the property. The nearest record of a roost is at Llandarcy Institute, on Prettyman Drive; reportedly some 247m to the south-west. This record which dates back to 2008 relates to foraging activity by at least three common pipistrelle bats.
- 6.3 Of the 100 historic records of bats in the data set, 30 were for common pipistrelle species (*Pipistrellus pipistrellus*), with 22 of the records for soprano pipistrelle (*Pipistrellus pygmaeus*). The remaining 48 records being species such as brown long-eared (*Plecotus auritus*), noctule (*Nyctalus noctula*), lesser horseshoe (*Rhinolophus hipposideros*), unidentified pipistrelle (*Pipistrellus sp.*), unidentified myotis species (*Myotis sp.*), and several records that relates to just bats (*Chiroptera*).
- 6.4 There were also 31 records for birds within 2km of the property, which included common house martin (*Delichon urbicum*), Eurasian blue tit (*Cyanistes caeruleus*), spotted flycatcher (*Muscicapa striata*), great tit (*Parus major*), house sparrow (*Passer domesticus*), pied wagtail (*Motacilla alba*), starling (*Sturnus vulgaris*), barn swallow (*Hirundo rustica*), swift (*Apus apus*), lesser black-backed gull (*Larus fuscus*), herring gull (*Larus argentatus*), kestrel (*Falco tinnunculus*), peregrine falcon (*Falco peregrinus*), and barn owl (*Tyto alba*).

7 Survey Constraints

- 7.1 The only constraint or limitation resulted from the dense ivy growth covering the structure which partially obstructed assessment of the barge boards at the gable ends and eaves on the southern elevation, hiding potential access features.
- 7.2 There were no constraints encountered during the dusk observations in May and June 2022.

8 Survey Results

- 8.1 Details of the survey activities and weather conditions are summarised in Table 3 below. Sunset times were ascertained in all cases by use of a geo-positioning system (GPS). Wind speeds shown employ the Beaufort scale.

Table 3: Summary of Survey Activity and Weather Conditions

Date	Survey Type	Timing	Weather Conditions
07/03/2022	(PRA) Day time visual inspection, internal and external (RM, DW)	10.00 – 11.45 hours Greenwich Mean Time (GMT)	Air temperature: 12°C Cloud cover: 4/8 oktas Wind speed: F3, gentle breeze Conditions: Dry
19/05/2022	Dusk emergence/activity observation (RM, NI, TG)	20.30 – 22.15 hours British Summer Time (BST) (Sunset 21.07 hours)	Air temperature: 14°C – 12.2°C Cloud cover: 7/8 oktas Wind speed: F2, light breeze Conditions: Dry
16/06/2022	Dusk emergence/activity observation (RM, DW, NA)	20.50 – 22.45 hours BST (Sunset 21.35 hours)	Air temperature: 17.2°C – 14.5°C Cloud cover: 7/8 oktas Wind speed: F1, light air Conditions: Dry
Surveyors	Robert Morgan (RM), Daniel White (DW), Nick Aldridge (NA) Nigel Isaksson (NI), Thalia Godwin (TG)		

- 8.2 Assessment commenced with an internal inspection of the house, including the loft space; which found no live bats. No evidence of bats was found internally (i.e. no bat droppings, staining or insect remains). Nothing was found to indicate the presence of a bat roost within the building. A live brown rat (*Rattus norvegicus*) was seen briefly within the ground floor area and evidence of this species was seen inside the loft. Additionally, mouse droppings were noted in the loft.
- 8.3 Externally, survey revealed no live bats or evidence of bats in the form of bat droppings, staining or insect remains. However, the building was considered to offer moderate potential for crevice roosting bat species. Several potential access points which bats could exploit were noted. These features were identified as:
- gaps between the barge boards and the render provide access to the wall plates over the east facing gable end wall;
 - gaps between the fascia boards and the render provide access to the wall plates on the north and south facing elevations;
 - gaps in the fascia boards of the northern flat roofed section;
 - rotten timber barge boards with gaps at the west facing gable end wall;
 - several raised roof tiles;
 - large holes in the flat felt covered roof located at the base of the eastern gable end wall of the structure;
 - gaps around some of the boarded windows, potentially allowing bats to access the space between the wooden boards and the glass;
 - dense ivy growth over the east, north, south and west facing elevations.
- 8.4 Two dusk emergence/activity observations were undertaken, with results shown in Table 4 & 5 (see Appendix II). This first observation was conducted with three observers, on the evening of Thursday the 19th of May 2022. During this observation, no bats were seen to emerge from the derelict house. There was very little bat activity across the site. The first bat observed at 21.21 hours was a common pipistrelle, commuting over the building from north to south. At 21.35 hours the last bat recorded was a soprano pipistrelle, which was observed commuting south to north following the western treeline over the roof of the building. These two animals were the only bats seen during the observation.
- 8.5 A second dusk observation was conducted on Thursday 16th June 2022, with three observers. On this occasion at 21.39 hours a single soprano pipistrelle emerged from the ivy on the southern elevation, very near to the south-east corner of the building. It is considered likely that the bat was using a gap behind the fascia board beneath the ivy growth, rather than the ivy growth itself. The bat flew away from the building heading east, then turned west towards the mature treeline, and off to south. No other bats emerged from the structure for the remainder of the observation. General bat activity across the site was low, but an improvement on the first observation. The majority of the bat activity observed related to commuting activity. Several common pipistrelle and soprano pipistrelle bats were seen to be commuting along the mature tree line to the west of the building. No foraging activity was noted.
- 8.6 Breeding birds were also considered during the inspection. No active or inactive bird nests were

found internally. However, during the external inspection of the house, an active robin (*Erithacus rubecula*) nest was noted within the dense ivy growth covering the flat-roofed section attached to the east side of the house. This bird was observed flying back and forth to this location however, it was not observed carrying nest material or food at the time. Robins are known to be one of the earliest birds to build nests, especially in mild winters. This survey was conducted in early March within the bird nesting season. During the survey several birds were seen around the site which included jackdaw, herring gull, blackbird (*Turdus merula*), and high above the site a sparrow-hawk (*Accipiter nisus*). Opportunities for birds to create nests were identified as:

- large holes in the flat felt covered roof located at the base of the eastern gable end wall;
- missing fascia board on the west elevation of the northern flat-roofed section;
- gaps in the rotten timber barge boards and gaps behind them large enough for small birds to access;
- opportunities for birds to create nests within the dense ivy growth covering four sides of the building.

- 8.7 During both dusk bat activity observations, in May and June 2022, no bird activity was associated with the derelict building. A few bird species were recorded during this time, which included jackdaw and herring gull.

9 Discussion and Conclusions

- 9.1 The derelict house at Llandarcy Park is a bat roost. The owners of the building, NPTC Group of Colleges wish to demolish the building in order to make way for the creation of additional parking. These proposals will require consent from the local planning authority, Neath Port Talbot Council.
- 9.2 A PRA conducted in March 2022 found no live bats and no evidence of bats. No bat droppings, staining or insect remains were found but the building was assessed to have moderate potential to be used by both crevice and non-crevice roosting bat species. Additional survey in the form of two dusk bat emergence/activity observations was subsequently recommended.
- 9.3 Two dusk emergence/activity observations were carried out in May and June 2022, and during the second observation a single soprano pipistrelle emerged from near the south-east corner, from the dense ivy growth at eaves level. It is considered likely that the bat is using a gap behind the fascia board, hidden under the ivy, rather than the ivy growth itself. No other bats were seen to emerge from the building. During both dusk activity observations there was a minimal level of bat activity recorded with only commuting by common pipistrelle and soprano pipistrelle bats seen. No foraging activity was noted, and no other bat species was recorded.
- 9.4 Presence of bats at other times of year, apart from the summer was also considered. In this respect the property is assessed to have negligible potential to be used by hibernating bats. There are no low-level features on the house that are suitable for hibernating bats.
- 9.5 When considering the nature conservation significance of the site recognised criteria (Bat Mitigation Guidelines 2004 and Good Practice Guide: NRW Approach to Bats and Planning October 2015), the nature conservation status of the site is assessed to be low due to the presence of a single bat of a common species (soprano pipistrelle) and no breeding colony present.
- 9.6 The impacts of the proposed demolition of this derelict building will result in the destruction of a daytime roost from a single soprano pipistrelle bat. All bat species and their places of rest are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. The legal protection for bats concerns impacts from disturbance, loss of roost locations, modifications to roosts and loss of access or obstruction to roost locations. The owners the derelict building at Llandarcy Park will need to obtain planning consent for the demolition work and in addition to this it will be necessary to apply to NRW for a European Protected Species (EPS) licence.
- 9.7 To avoid impacts on nocturnal wildlife, a sensitive lighting plan must be prepared if any new external street lighting is proposed for the western edge of the new car park. Light must be directed away from the mature treeline and not cast light on the bat mitigation features i.e., bat boxes, proposed in this area.
- 9.8 A single active robin nest was noted during the PRA in March 2022. This nest was located within the dense ivy growth covering the flat-roofed section attached to the east side of the house. However, later in the year during both dusk bat activity observations carried out in May and June

2022 no bird activity associated with the building was observed. The building still offers opportunities for birds to create nests, this will need to be inspected prior to any demolition works. All breeding birds are legally protected and once a nest is established it is an offence to disturb or destroy the nest. Advice concerning birds is given below.

10 Recommendations

- 10.1 The derelict house at Llandarcy Park is a bat roost. As already noted, all bat species are legally protected from the impacts of disturbance, as well as loss and damage to roost locations; and loss of access or obstructed bat access. As indicated in the previous section, it is considered that the works to demolish this derelict house will result in impacts on bats and their roosts. Therefore, an application to NRW for an EPS licence is required. No work which has the potential to affect bat roost locations can commence until such time as a licence has been issued.
- 10.2 An EPS licence application for the development must be made to NRW. Under the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 an EPS licence can only be issued if NRW are satisfied that:
 - there are imperative reasons of overriding public interest including those of a social or economic nature;
 - there is no satisfactory alternative, and;
 - the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.
- 10.3 As noted above, bats are fully protected under the provisions of the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. An application for an EPS licence can only be made once planning consent is granted and can take several weeks to put together. Considerable supporting documentation is needed including the licence application forms; a detailed Ecological Method Statement (EMS) (providing information on the survey effort with recent survey data not older than 18 – 24 months), and details of the local status of the species concerned; the duties of an independent experienced Ecological Clerk of Works (ECW); as well as the duties and responsibilities of the various contractors and the owner/developer of the site. A local planning authority consultation document must also be completed and signed. The EMS must also include post project monitoring, for a period of at least one year following completion of the development work. NRW do not currently make a charge for issuing a licence but this circumstance may change in the future.
- 10.4 A single soprano pipistrelle emerged from the building, which is relatively common and widespread species throughout Wales. No maternity colony is present at the site. It is considered unlikely this bat will be present during the winter months as the south facing elevation would be subject to temperature variation and would not be suitable for hibernation.
- 10.5 No restriction on the timings of the demolition works is proposed. However, a suitably qualified ecologist will need to be employed and present to supervise the removal of dense ivy growth, slate roof coverings and fascia boards in the area where the bat was observed to emerge at the south-east corner of the derelict building.
- 10.6 It will be necessary to identify a suitable location at Llandarcy Park under the ownership of NPTC Group of Colleges, where a total of two Schwegler 1FF bat boxes (or equivalent), can be installed to provide long term mitigation for the loss of the daytime roost at this derelict building. The boxes will also act as a receptor location for any bats found during the supervised soft strip removal of roof coverings and fascia boards in the area where the bat emerged. Pipistrelle bats are crevice roosting species and the bat boxes installed in suitable locations, preferably on natural linear features such as mature tree lines near to woodlands or watercourses, will meet the need to support the local population with new alternative roost locations.
- 10.7 A Bat Conservation Trust study of the impacts of lighting on bats has considered the increased risk of the bats being preyed on in well illuminated areas. Also, lighting was found to be harmful when present near woodland edges and hedgerows. Inappropriate lighting can result in the isolation of bat colonies and can affect insect behaviour which then adversely affects bats. If the demolition of the derelict house will result in new external street lighting, then a lighting plan designed to minimise impacts on nocturnal wildlife must be prepared. External lighting features must ensure low output; fittings must be attached to external walls at a low level with all light directed downwards. There must be no upward light spill and shrouds or deflector fittings are a simple way of avoiding this. Lighting must not be directed at natural features such as the mature tree line along the western

- boundary of the woodland band to the south, and lighting must not be directed at new mitigation features.
- 10.8 Bats can be encountered unexpectedly during building work, and if this occurs, it is important to stop activity in the vicinity of the bat(s). It is possible that a bat will be in a torpid state and unable to fly off for several minutes or even up to 20 minutes. Advice must be sought from NRW, or if this is not possible, then from an ecologist who holds a bat licence. To proceed without taking advice would be an offence under the provisions of the Wildlife and Countryside Act 1981 (as amended).
 - 10.9 Breeding birds are protected under the provisions of the Wildlife and Countryside Act 1981 (as amended), and active bird nests cannot legally be disturbed or destroyed. Once a nest is established, the birds must be able to have access at all times until the young have fledged and the nest is no longer active. The bird breeding season commences as early as March for some species and continues to late August for species which rear a second or third brood. If an active nest is found, it must be retained and protected from disturbance. A cordon must be established for a safe working zone a suitable distance from the nest site, and not until the chicks have fledged can the nest be destroyed and the cordon taken down. To avoid nesting birds disrupting the development timetable, it is best for such work to be planned to avoid the breeding season.
 - 10.10 PPW11 requires that development provides a positive outcome for local biodiversity. As an enhancement feature, it is recommended that two Schwegler 2H open fronted bird boxes, a single Schwegler 1B bird box (32mm hole), and a single Schwegler 1B bird box (26mm hole), are installed at the site. Suitable locations for the nest boxes must be identified within the boundary of the site which avoid predation by cats and avoid full sunlight. The boxes can be installed on built structures, or suitable vegetation (i.e. trees). The mature tree line along the western boundary of the site or the woodland to the south would be suitable locations for these boxes if it is within the boundary of the site and under the ownership of NPTC Group of Colleges.

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Appendix I: Site Location Plan

Figure 1: Site location plan and aerial view



Aerial View of the Site

Site Reference:
JM3122

Map Scale:
1: 15 000 & 1: 500

Source:
© Google Satellite Imaging 2022



Legend

- Site location
- Extent of building

Appendix II: Results of Bat Activity Observations

Table 4: Derelict House, Llandarcy Park – Dusk Observation 19th May 2022

Time (24 Hour Clock)	Species (Common Name)	Recording No.	Observed Activity
21.21 hours	Common pipistrelle	1 NI, 1 TG	Commuting north to south over roof of building along tree line
21.35 hours	Soprano pipistrelle	2 NI, 2 TG	Commuting south to north over roof of building along tree line

Note: Highlighted records indicate emergence activity

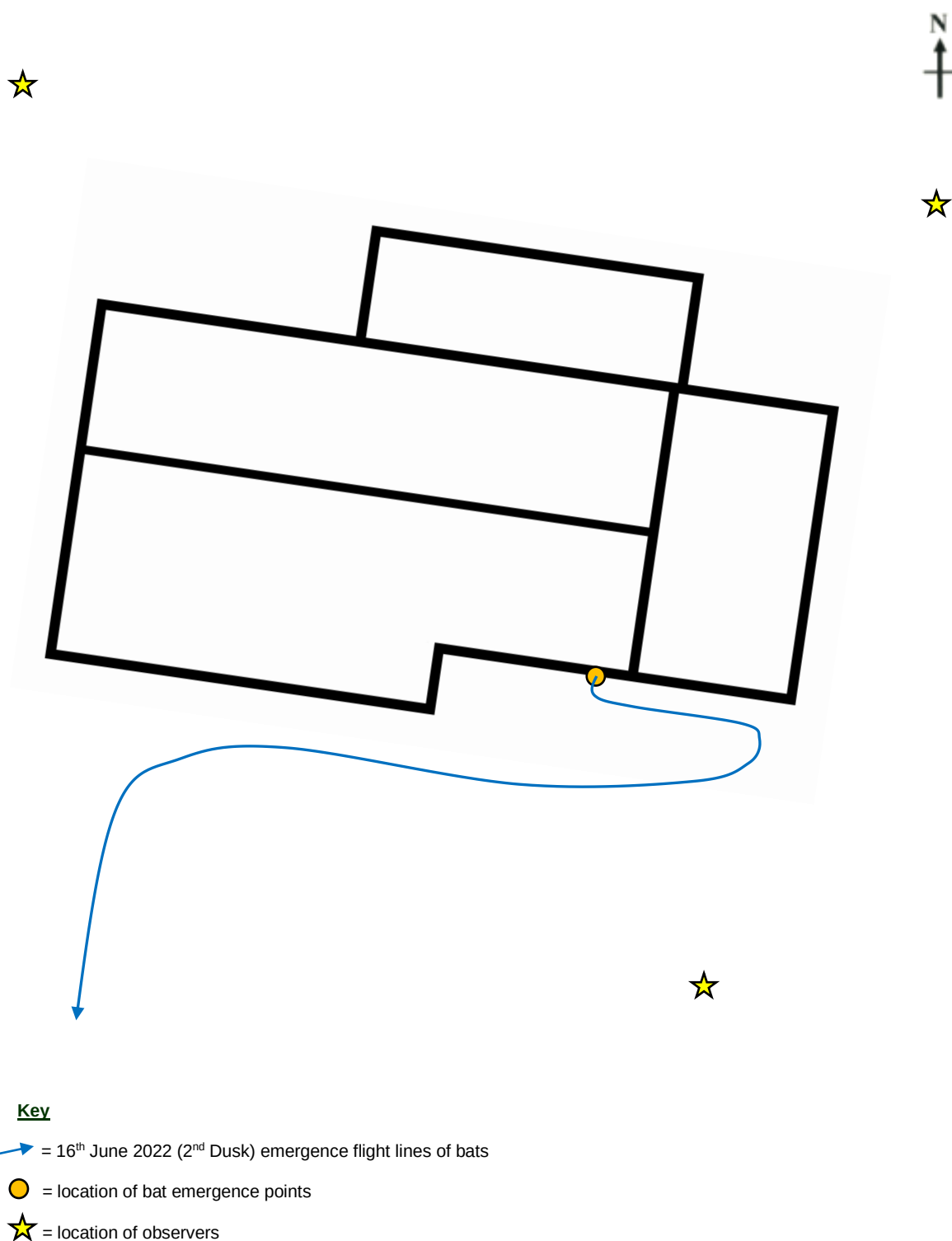
Table 5: Derelict House, Llandarcy Park – Dusk Observation 16th June 2022

Time (24 Hour Clock)	Species (Common Name)	Recording No.	Observed Activity
21.39 hours	Soprano pipistrelle	1 NA	Emerged from ivy close to fascia board at south-east corner of building; flew away from building heading east and then turned around heading west towards trees, then off to south
21.42 hours	Soprano pipistrelle	1 RM, 1 DW	Heard but not seen, though to be on west side of mature tree line
21.47 hours	Common pipistrelle	2 NA, 2 DW	Commuting north to south over roof of building along tree line
21.57 hours	Soprano pipistrelle	3 NA	Commuting north to south over roof of building along tree line
21.59 hours	Common pipistrelle	4 NA, 2 RM, 3 DW	Commuting north-west to south-east over roof of building along tree line
22.04 hours	Common pipistrelle	4 DW	Heard but not seen, though to be on west side of mature tree line

Note: Highlighted records indicate emergence activity

Appendix III: Building Plan

Figure 2: Building plan indicating bat emergence points and flight lines



Appendix IV: Site Photographs

Plate 1: View of the house from the north-east



Plate 2: View from the north



Plate 3: View from the south



Plate 4: View from the north-west



Plate 5: Eastern facing gable end wall



Plate 6: View of the roof structure and bitumen liner



Plate 7: Internal view of the eastern gable wall

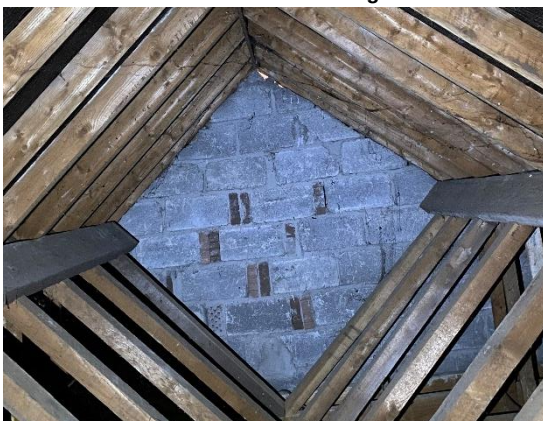


Plate 8: Internal view of the western gable wall

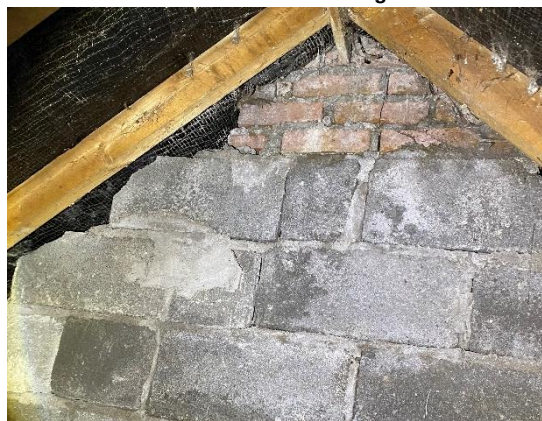


Plate 9: Gaps behind barge boards at east gable



Plate 10: Gaps at eaves on the northern elevation



Plate 11: Gaps at barge boards on western gable 1



Plate 12: Gaps at barge boards on western gable 2



Plate 13: Gaps behind fascia boards on south elevation



Plate 14: Holes in the flat-roofed section attached to the eastern gable

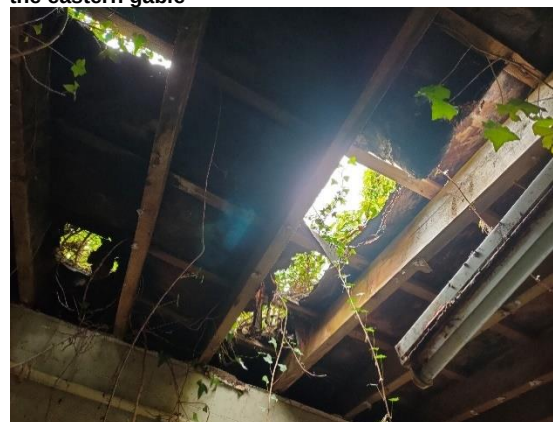


Plate 15: Active robin nest within dense ivy growth on eastern elevation

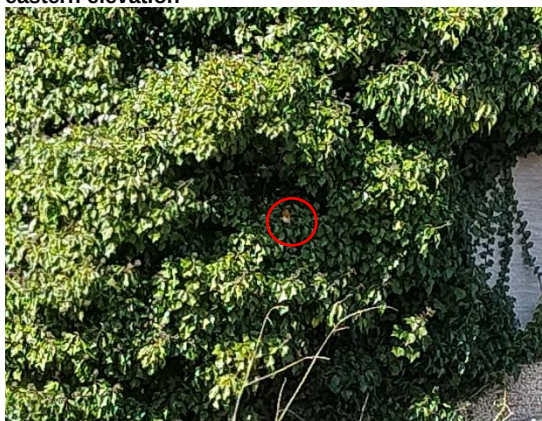


Plate 16: Bat emergence point and flight line



Appendix V: Bat Mitigation Features

Plates 17 and 18: Bat mitigation features (Schwegler 1FF Bat boxes)



Appendix VI: Ecology of British Bats

There are at least 18 species of bats breeding in Britain. Most of them are regarded as threatened due to a variety of factors including habitat loss, intolerance and disturbance/damage or loss of roosts. Of these species a number regularly use buildings at certain times of year in order to find safe secure roost sites. Often several different species can use a building over the course of the year, and not all species are present at the same time, making assessment of their presence complex.

Bats are highly mobile flying mammals, which in Britain, feed entirely on insects. They have evolved over seventy million years and have developed sophisticated mechanisms to allow them to effectively 'see' in the dark by using sound waves. This system is called echo-location which enables them to track and hunt down small moving insects whilst in flight, rather like radar does in a modern military fighter aircraft. It is possible to record this sound, and because each species of bat echo-locates in a different way, determine what the species is without actually handling the animal which made the call.

In winter, when their prey is scarce, British bats hibernate or enter torpor, in cool parts of caves, buildings (cavity walls), and tree cavities. They may wake occasionally and will feed if evening temperatures are greater than 7°C, when flying insects can be active. Generally however, activity during cold winters is very limited and bats only become fully active in spring, with late March and early April being a critical time for animals desperately trying to save energy whilst gaining weight. Disturbance during these months can therefore be more devastating to bats than at other times of year.

By late spring female bats will gather together in maternity roosts in order to give birth and rear their single baby in June. Such maternity roosts are often near to important foraging areas in order to save energy as flight requires vast energy resources. Flight routes to and from such roosts can therefore also be important and some bats are extremely light averse preferring dark locations without street or security lamps which can force them to take complex routes to reach foraging areas. Such lighting can also badly degrade foraging areas where they occur close to buildings and hedgerows and tree lines can be particularly important areas for bat foraging to take place particularly when close to the roost building.

Whilst females form maternity colonies, usually in warmer roofs or trees, male bats tend to seek out cooler sites which may not be so close to the foraging areas. Males are often solitary and do not exhibit the social behaviour that marks out females during the birthing period. Non-breeding females will also roost in this way, when they have no need to spend energy on raising a single baby.

Several British bat species are known to rely heavily on buildings to roost. Of these species, the most likely are the soprano pipistrelle bat and the common pipistrelle. Other bat species regularly found in buildings are the brown long-eared bat; Natterer's bat; Brandt's bats and whiskered bat. Pipistrelle species and the small myotis or mouse-eared species (Brandt's, whiskered etc) often favour locations at the ridge or around the exterior shell of the structure. Brown long-eared and Natterer's tend to prefer living within the roof area of a building – large lofts being popular.

Other species that are known to use the internal areas of built structures such as barns include the two horseshoe species, the greater horseshoe bat (*Rhinolophus ferrumequinum*), and lesser horseshoe bat, as well as western barbastelle bat (*Barbastella barbastellus*).

Appendix VII: Relevant Legislation

Bats

All species of bat in Britain, and their places of rest are protected under the provisions of the Wildlife and Countryside Act 1981 (WCA), Section 9(1), 9(4)(a) and 9(4)(b) as amended by Schedule 12 of the Countryside and Rights of Way Act 2000. Further protection is afforded by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. In relation to structures used by bats for shelter or protection (i.e. roosts), this legislation makes it an offence to either intentionally or recklessly damage, destroy or obstruct access to any site used by bats, whether bats are present at the time or not, or to intentionally or recklessly disturb bats within a roost.

Infringements under this legislation include building demolition, removal of hollow trees, blocking, filling or installing grills over old mines or tunnels, building alteration or maintenance work, re-pointing of stone walls, getting rid of unwanted bat colonies, re-roofing, remedial timber treatment, re-wiring or plumbing in roofs, treatment of wasps, bees or cluster flies (Mitchell-Jones, 1992; Childs, 2001). Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, greater mouse eared bat and barbastelle are included in Annex II of the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 and hence require special protection.

Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/1991 (i.e. £5000 in April 2001) per roost or bat disturbed or killed, or to both. Bodies corporate and their directors/secretaries are liable for offences under the (Amendment) (EU Exit) 2019 Regulations and the WCA. Additionally, where such an offence results in the offender benefitting in a monetary form from the illegal action, confiscation or civil recovery of the proceeds can occur under the Proceeds of Crime Act 2002.

It is sensible to assess as soon as possible if bats are present at potential sites for development – preferable before the land is acquired. In some cases the period required for adequate survey work may span more than one calendar year. If a development, including demolition or change of use, is likely to impact on bats and their roosts then a licence will usually be required. Adequate survey results are a necessary input to any licence application. If bats are not found until late in the development stage this may result in delays while a licence is sought and even in offences being committed.

The law with respect to dwellings and other structures is applied equally. Where disturbance is deemed likely to have a significant effect on bats to survive, breed and rear their young or will affect the local distribution and abundance of the species, a European Protected Species licence issued by Natural Resources Wales. A licence application must demonstrate that the development will not be detrimental to the maintenance and conservation status of the species concerned.

This explanation must be regarded only as a guide to the law. For further details, reference must be made to the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019, and the Countryside and Rights of Way Act 2000.

Wild birds

All wild birds, their eggs and nests are protected by The Wildlife and Countryside Act 1981 (as amended). It is an offence, with certain exceptions, to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- sell wild birds or put them on display for sale;
- use traps or similar items to kill, injure or take wild birds; and
- intentionally, or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Penalties that can be imposed for criminal offences in respect of a single bird, nest or egg contrary to the Wildlife and Countryside Act 1981 (as amended) is an unlimited fine, up to six months imprisonment or both. In exceptional cases NRW and Natural England issues licences for specific purposes, so that legitimate work may be undertaken without breaking the law.

Appendix VIII: European Protected Species Licences

Under the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 a licence can only be issued if Natural Resources Wales are satisfied that:

- there are imperative reasons of overriding public interest including those of a social or economic nature;
- there is no satisfactory alternative, and;
- the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

Natural Resources Wales will require a copy of the full planning consent, as well as an explanation of why there is a need to carry out the proposed work and what alternative solutions have been considered (e.g. other sites) and why they have been discounted. The alternative of retaining the roost within the development must be considered. The last point will depend on the possibility of implementing appropriate mitigation and on assurances that it can be and will be carried out and maintained and the results monitored. Natural Resources Wales aim to process applications within 30 working days, but in practice licences often take longer depending on the number of applications being processed at any one time. NRW do not currently make a charge for issuing a licence but this circumstance is likely to change in the future.

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