

Proposed conversion of garage and utility building

at Cherry Rise
Pen Y Lan, Wrexham

Bat and bird survey

June 2021



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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

Report Version	Date	Completed by:	Checked by:	Approved by:
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Amended	29/01/21	Mick Smith, MCIEEM Director Wildbanks Conservation	Clare Smith Director Wildbanks Conservation	
Amended	11/06/2021	Jack Halpin Ecologist, Wildbanks Conservation	Mick Smith, MCIEEM Director Wildbanks Conservation	

The information we have prepared is true and we confirm that the opinions expressed are our true and professional bona fide opinions.

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INTRODUCTION

- 1.1 The report has been prepared on behalf Mr and Mrs O'Brien and provides the results of a Preliminary Bat Roost Assessment of a single-story garage and utility building, hereafter referred to as the garage, conducted on 14th January 2021 and two nocturnal bat surveys carried out 10/05/21 and 11/06/21. A survey for the potential use by breeding birds was also undertaken.
- 1.2 The proposed development site is in a rural setting in Pen Y Lan, Wexham. Adjacent to the garage is a residential property (Cherry Rise) and gardens with hardstanding parking. Outside the boundary of this property are large pastoral fields with hedgerows in all directions, small woodlands and streams and the river Dee some 800m southeast.
- 1.3 Development proposals for the site are for the conversion of the garage into a residential annex to the main house and a small extension (approx.. 4m x 4m) on the northern aspect.
- 1.4 The aim of the survey was to provide sufficient ecological information for the local planning authority (LPA) to determine the associated planning application. The objectives of the study were to:
 - Provide baseline information on the current habitats and ecological features both on-site and in the immediate surrounding area;
 - Identify the presence or potential presence of any protected species or habitats and provide an appraisal of any potential effects that the proposed development may have on these;
 - Provide recommendations for pre and post-construction work and / or mitigation measures if required and present opportunities for habitat enhancement.

2.0 SURVEY METHODOLOGY

Desk Top Study

2.1 A desktop study was undertaken by Wildbanks Conservation during the ecological assessment. Protected species records within a 1km radius of the site were obtained from COFNOD, North East Wales Local Biological Records centre. The following other online resources were also used for background information of the Site.

- Ordnance Survey maps
- Aerial photographs

Bat Building Assessment

External and Internal Visual Assessment

2.2.1 The exterior of all aspects of the building were visually assessed for potential access points and evidence of bat activity on 14th January 2021. With the aid of binoculars and borescope, features such as small gaps under barge/soffit/fascia boards, raised or missing roof/ridge tiles or gaps at gable ends, which have the potential for use as access points, were sought. Evidence that bats actively used these potential access points would include staining within the gaps, or bat droppings or urine staining under gaps; a note being made wherever these were present. The presence of cobwebs and / or general detritus within and around potential access points was used as an indicator that bats had not recently used the area to access the building. Following the external assessment, an internal assessment of the building was undertaken, searching for the same evidence.

2.2.2 All buildings were classified as being one of either a confirmed roost or having high, moderate, low or negligible roosting potential for bats. Trees if present with low or negligible potential were classed as not requiring further surveys in relation to bats. Buildings with a rating of low or above would be subject to additional nocturnal surveys in line with current national guidelines.

2.2.3 The surveys were undertaken by Mick Smith MCIEEM (NRW bat licence S08944/1) and Jack Halpin (ACIEEM) of Wildbanks Conservation following methodology set out in the Bat Conservation Trust Handbook Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).

Bat Emergence Survey

- 2.3.1 Following the external and internal visual assessment, two nocturnal surveys were carried out. One emergence survey was undertaken on the building to observe any potential bats roosting in the building not identified during the visual assessment. The surveys were carried out by two experienced bat surveys led by Jack Halpin (5 years bat survey experience, accredited agent on Mick Smith NRW bat licence). Surveyors were positioned strategically so that good coverage of all aspects of the building was achieved. The surveys were undertaken within the optimum time for bat activity and under optimum conditions.
- 2.3.2 The surveyors each used an Anabat Walkabout with the additional aid of a FLIR SCION thermal monocular. Any recordings were analysed using Analook Insight.
- 2.3.3 The surveys were undertaken following methodology set out in the Bat Conservation Trust Handbook Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016). Dusk survey commence 15min prior to sunset and continued for 2hr post sunset. The dawn survey started 2 hr prior to sunrise and commenced until 15min after sunrise.

2.4 *Buildings-Birds-Visual Assessment*

The building was assessed for nesting birds within the same timeframe as the bat visual assessment of the building on 14th January 2021. All birds, their eggs and their nests are protected by law under the Wildlife and Countryside Act 1981 (as amended) and therefore it is an offence to take, damage or destroy the nest of any wild bird whilst it is in use or being built. All cracks, gaps and potential nesting areas were checked for the presence of nests/nesting material/live birds, and 10 minutes was spend listening for any noise of nestlings whilst inside the building. The exterior of the building was watched for approximately 1 hour to locate any birds entering or exiting the building.

Survey Limitations

- 2.5 January is outside the optimal survey season to observe recent signs of bats and nesting birds. However, an assessment of a property's potential to be used by bats and birds can be made at any time of the year. Therefore, there were no limitations to the survey in terms of assessing the buildings potential to be used by bats or birds. All areas of the buildings could be checked. May and June are

optimal months to carry out nocturnal surveys for bats to establish presence or likely absence.

3.0 RESULTS

Desk Study

3.1 A data request was submitted to COFNOD during the desktop study. Three records of bats were provided within 1km of the development site.

- 395m north west, n=30 Whiskered/brandts bat in 1996. Record provided anonymously. Assumed this to be a roost.
- 675m north west, sighting Unknown bat in 2003
- 849m southwest, sighting unknown bat in 1981

Other notable records include the presence of badger setts at 291 and 372m south east within a woodland strip adjacent to a stream running to the River Dee recorded in 2000 and a sett 871m north of the development site. Four records of Otters are also provided from the River Dee south east of the Site between 815 -969m (dated 1997-2005)

Wider habitat

3.2 Habitat surrounding the Site is farmland bordered by hedgerows and wooded streams with small lanes connecting dispersed rural properties. Figure 2 shows the site in relation to the wider environment.

3.3.1 *Buildings – Bat Visual Assessment – January 2021*

External assessment

3.3.2 The building is a detached double pitched roof garage, similar to two single garages that are joined together (plates 1-3). These are referred to as the northern and southern garages, however it is only the southern garage that has a door, the northern garage has a large window. The walls are block and rendered and provide no roosting opportunities for bats. Barge boards and soffit boxes are present but largely provide no gaps behind them or into them for bats (plate 4-6). The roof is concrete tiles and are in excellent condition and covered by large amounts of moss covering any possible access points and providing no roosting feature, as are the ridge tiles.

- 3.3.3 Potential roosting features are limited to 3 access points behind the barge boards at the apex and valley on the western and eastern gable ends (plates 7-9). Crawling access into the roof void could be possible at these points. No free flight access is possible here or at any point into the loft space. The access point on the western valley showed evidence of use by blue tits, this was confirmed by the owner.
- 3.3.4 Overall the building is very well sealed providing only limited roosting opportunities.
- 3.3.5 *Internal assessment*
No access routes into the garage or loft space other than those mentioned above was present. During the assessment, the garage door and all windows were shut. Access between each section of the garage was through a closed internal door. The northern garage has a snooker table and is used for storage and the southern section is used to run the owners hog roast business from and includes butchering tables and numerous fridges and freezers and equipment. Disturbance levels (light, movement, noise etc) within the garages throughout the year is high. No internal roosting features within the garages exist.
- 3.3.6 Plate 10 shows the roof construction of the southern roof, with multiple roof trusses and braces and a traditional bitumen F1 type roof felt. The Northern roof structure is of the same construction. Both loft spaces are also used for storage of household items. No internal direct access between loft spaces exist, they are independent of each other. Access into loft spaces are from ceiling hatches from the ground floor, the southern loft space loft hatch is permanently open.
- 3.3.7 No bat droppings or other signs of bat use was seen within the northern roof loft space.
- 3.3.8 Within the southern garage loft space a single dead lesser horseshoe bat (*Rhinolophus hipposideros*) was found hanging to the felt within the roof (plate 11) and approx. 23 bat droppings (not historic) found scattered within the loft, not in an accumulation. The bat is an adult but it is not known how long it has been dead, it does not appear to be that old due to its lack of degradation, it is in almost perfect condition but without the soft tissue of eyes etc being present. I would suggest it may have died within the last 2 years. Conditions within the loft space is dry, likely cold in the winter and warm in the summer.

3.3.9 The owner of the property informed us that during the summer the garage door is sometimes left open over night which would allow opportunistic and irregular access into the loft space through the open loft hatch.

3.3.10 Habitat in the surrounding vicinity of the Site is excellent for foraging bats, numerous wooded streams and hedgerows link through the habitat and to the River Dee. Farmland is mostly pasture for livestock with fields being predominantly semi improved. Hedge lined lanes also provide corridors and foraging routes through the wider area.

3.4 *Building – Birds*

During the visual assessment evidence of use of the building by small birds was identified (confirmed as blue tits by the client during the previous summer) through the remains of a nest and droppings being present by gap behind the bargeboard at the valley on the western aspect (plate 7). No other signs were seen.

Other notable species

Badger

3.5 A badger sett is identified 291m from the Site. No evidence of badgers traversing or using the wider residential property was seen. It is possible they do travel within close proximity of the site along the wooded streams and along field boundaries. The relatively small scale development proposals offers no risk of harm or disturbance to badgers

Otters

3.6 Records of otters from 1997-2005 are present on the River Dee some 815 -969m distant. No features within the wider residential site provide opportunities for otter. A route along a wooded stream from the River Dee to the site is present of some 1.3km. The relatively small scale development proposals and lack of features suitable for otters offers no risk of harm or disturbance to otters

Bat Emergence Surveys

3.7.1 Two bat emergence surveys were undertaken on 10/05/2021 and 11/06/2021, dusk and dawn, respectively. Two bat activity surveys were carried out to inform

conclusions as to how bats are using the building, this is in line with best practise guidelines published by Bat Conservation Trust.

3.7.2 The following table provides details of the surveys undertaken.

Date	Survey type	Time starte	Time finished	Sunrise/Sunset time	Temperature	Weather conditions
10/05/2021	Dusk	20.41	22.56	20.56	13 - 9C	Dry, mild, fresh evening
11/06/2021	Dawn	02.47	05.02	04.47	17 - 16	Overcast, warm, blustery morning

3.7.3 *Dusk survey 10th May 2021*

The Survey was undertaken by Jack Halpin and Luke Osman of Wildbanks Conservation, each surveyor was positioned to be able to view all aspects of the garage and be able to take in to account the main section of the house also. A Flir Scion thermal imaging camera was also used to aid identification of a roost.

3.7.4 No bats were seen emerging from the building during the survey. Bat activity was low throughout survey with only a small number of passes throughout survey period. Infrequent passes of common (*Pipistrellus pipistrellus*) and Soprano pipistrelle (*Pipistrellus pygmaeus*) bats were recorded, as well as a single Noctule (*Nyctalus noctula*) pass. The first bat heard/seen was recorded as Soprano pipistrelle at 21.14, 18min after sunset commuting over the site from the North. No Lesser Horseshoe bats were recorded during the survey.

3.7.5 *Dawn survey 11th June 2021*

The Survey was undertaken by Jack Halpin and Joe Taylor of Wildbanks Conservation, each surveyor was positioned to be able to view all aspects of the garage and be able to take in to account the main section of the house also. A Flir Scion thermal imaging camera was also used to aid identification of a roost.

3.4.5 No bats were seen re-entering the building during the survey. Bat activity was low throughout survey with only a minor number of passes throughout survey period. Infrequent foraging passes of common and soprano pipistrelle bats were

recorded at start of survey period; later turning into commuting passes. A single pass of a *Myotis* sp. was recorded at 3.44. The last bat heard/seen was recorded as Soprano pipistrelle at 04:17. No Lesser Horseshoe bats were recorded during the survey.

4.0 **DISCUSSION, RECOMMENDATIONS AND SUMMARY**

Proposed works to the garage include the conversion of it in to residential living space. The roof of the southern garage will not be modified in any way. The northern garage will have an extension keyed into it.

Bats

- 4.1 This property has been subject to a bat Preliminary Roost Assessment survey and a Visual Assessment for nesting birds on 14th January 2021 by Mick Smith MCIEEM (NRW bat licence number: S086043/1) and Jack Halpin (ACIEEM) of Wildbanks Conservation. As well as two nocturnal surveys (10/05/21 and 11/06/21). Evidence of bats using the building was seen during the Visual Assessment through the presence of a dead single adult lesser horseshoe bat and approx. 23 bat droppings within the southern garage building. Roosting opportunities for bats are very limited within the building and are limited to 3 gaps behind barge boards on the eastern and western aspect, one of which has been used by small birds in 2020. No other roosting opportunities were seen.
- 4.2 The two nocturnal surveys carried out were done so in optimal conditions by experience bat surveyors with the aid of Anabat Walkabout detectors and a thermal imaging camera. No bats were seen emerging from the garage or returning to a roost within it. Furthermore, activity levels were low during both surveys and no LHB passes were recorded.
- 4.3 Although roosting features and access points within the building are limited to 3 locations, a dead lesser horseshoe bat (LHB) and droppings were found within the building indicating that the building has been used in some way. However, the bat found is a type that would not ordinarily use the features present, ie cracks behind barge boards (plate 7-9) to access their roost, nor do these features provide clear direct access into the loft space where the dead LHB bat was found. Lesser horseshoe bats must be able to fly directly into the roost and their roosting positions (*Altringham, 2003*). This cluttered loft space (plate 10) of a modern constructed building is also not the typical roost type associated with

LHB, although it is known that they will use a variety of roost sites through the year, these are described as “buildings (chimneys and attics down to cellars), caves, mines and tunnels” (*Altringham, 2003*) and summer roosts as within “roofs of larger rural houses and stable blocks offering a range of spaces” BCT’.

- 4.4 The loft space of the garage is not a typical roost site for LHB and access to it was likely through a left open garage door leading to an open loft hatch. It is probable the individual LHB was opportunistic in its use of the garage, made use of an open door and loft space and unfortunately got inadvertently locked in once the garage door was closed. If another access/egress point was present the individual bat would likely have used this to get out, rather than perish within the loft.
- 4.5 A bat has previously roosted within the garage, it is impossible to know if this was for one night or multiple nights. No bats were recorded roosting within the garage during surveys in 2021. Therefore, the development can proceed following a set of Reasonable Avoidance Measures rather than the need for an EPS mitigation Licence.

Recommendation

- 4.6 Prepare a Reasonable Avoidance Measures Method Statement to facilitate the development of the garage to be agreed by Wrexham Council and NRW prior to works commencing on Site. A summary of what the RAMS would include is below.
- When planning external lighting, consideration is to be given to the commuting and dispersal routes used by bats. External lighting is to be directed away from the potential roosting features and commuting routes.
 - Prior to the commencement of works a toolbox talk will be provided to on site personal by a NRW licensed ecologist. The talk will include information regarding the protection of species, habitats, legal implications, their responsibilities and what to do if a protected species are encountered.
 - The initial works will be carried out under “soft works” technique to include removal of roost features by hand. A licensed ecologist will provide a watching brief during the initial works and during works to areas where a potential bat roost is present and will be available throughout construction on an ‘on call’ basis.

- If bats or birds, or any other animal are found during works, works must stop immediately, and the site ecologist will be contacted, and advice sought. Wildbanks Conservation 01978 710786

- 4.7 In accordance with the National Planning Policy Framework (NPPF, Para 170(d) and Para 175(d)), to increase biodiversity at the proposed development site, it is recommended a mitigation/compensation scheme should be devised. This will include the installation of artificial roosts on suitable trees within the client's land ownership and roosts built within the new development.

Ecological Enhancements

- 4.8 Install a loft space within the extension on the northern aspect of the garage (Fig 3 and 4. The roof to be constructed using traditional methods (not trusses) and with bitumen F1 felt and a direct access flight point. Positioned on the western aspect, mirroring the potential access route through the open garage door would be a dormer style bat access point (300x200mm in size). The dimensions of the loft space would be approximately 3500mm x 4000mm x 150mm in height. The loft to be fully sealed using 25mm chipboard on the floor and between rafters. Full design to be included within the RAMS

- 4.9 One month prior to the development commencing two bat boxes, (i.e., 1FF Schwegler bat box and 2F Schwegler Bat Box (General Purpose) will be installed on suitable trees within the clients ownership to provide alternative roosting features during the construction phase. Plate 12 and 13.

- 4.10 *Breeding birds*

Evidence of nesting birds was found in the form of a small nest behind the barge board on the eastern aspect,

- 4.11 **Recommendations**

The disturbance and/or destruction of bird nests is prohibited under the Wildlife and Countryside Act 1981 as amended. If the development (including works to structures and vegetation/hedgerow removal) is to commence during the nesting bird season (March-August inclusive), there is potential for nesting birds to be disturbed and nests to be destroyed during the process. To avoid impacts on nesting birds, a nesting bird survey will be undertaken by a qualified ecologist prior to any works taking place within the above-mentioned breeding season. If nests are identified, the nests must remain intact and undisturbed until young have fledged. The demolition of the buildings will result in long-term loss of

nesting opportunities for swallows and other species. Mitigation will be required to compensate for the loss of nesting habitat and to facilitate the development.

- 4.12 Three replacement nesting boxes (one Schwegler 1N Deep general bird nesting box and two Schwegler 1B) will be installed within the site replacing features for passerine birds (Plates 15 and 16). These will be positioned nearby vegetation between 2-4 in height and facing between north and east.

4.13 *Other notable species*

Badgers and otters are recorded within the area historically. It is also known that active badger setts are present within the area. No limitations to commuting route of badger or otter will be created through the development, as such the development can continue without further survey effort or limitations.

5.0 LEGISLATION

- 5.1 All bat species are protected in the UK under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The species is also protected under Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (the EC Habitats Directive). This has been transposed into UK law by the Conservation of Habitats and Species Regulations 2010 (as amended) in England and Wales. Bats are referred to as European Protected Species (EPS).
- 5.2 It is an offence to deliberately capture, injure or kill a bat; intentionally or recklessly disturb in a way that would affect their local distribution or abundance, or affect their ability to survive, or breed. It is also an offence to damage or destroy a bat roost and to possess, advertise, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.
- 5.3 If work is proposed that would affect an EPS then a licence will be required. Natural England (NE), in exercise of the powers conferred under regulation 53(1) and 56(3) (a) of the Conservation of Habitats and Species Regulations 2010, may issue licences for the following purposes:
- 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 for the environment;
 - Preventing the spread of disease;
 - Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries; to allow people to carry out activities which would otherwise be illegal.
- 5.4 Before issuing a licence under the Habitats Regulations, the licensing authority must be satisfied that “there is no satisfactory alternative” to the work as proposed and, that the proposed actions “will not be detrimental to the maintenance of the population of the species at a favourable conservation status (FCS)”.
- 5.5 To ensure these requirements are met, the licensing authority must have enough information to complete an assessment of the application. This includes sufficient survey data so that the roost and how it is used by bats is understood and impacts upon the roost are appropriately assessed so that mitigation and/or

compensation can be designed into the proposed development that will ensure the bat population can be incorporated and maintained in the long term.

5.6 Seven bat species are UK BAP Priority Species. These are as follows:

- Barbastelle *Barbastella barbastellus*
- Bechstein's *Myotis bechsteinii*
- Brown long-eared *Plecotus auritus*
- Greater horseshoe *Rhino ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*
- Common noctule *Nyctalus noctula*
- Soprano pipistrelle *Pipistrellus pygmaeus*.

5.7 Under the NERC Act, local authorities (and other public bodies) have a duty to conserve biodiversity the local authority must take the protection of the priority habitat into consideration when it is making a planning decision.

6.0 REFERENCES

- CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*. Winchester. CIEEM.
- Collins, J (ed.). 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust. London.
- Department for Communities and Local Government (2012). *National Planning Policy Framework*.
- Mitchell-Jones, A.J. 2004. *Bat Mitigation Guidelines*. English Nature, Peterborough
- Natural England (2010). *European Protected Species and the Planning Process*.
- Altringham, J (2003). *British Bats*. Harper Collins, London

A1 APPENDIX – SITE PHOTOGRAPHS

A1.1 Plate 1: View of front and western aspect of the garage



A1.2 Plate 2: View of northern and eastern (back) aspect of the garage



A1.3 Plate 3: View of eastern (back) and southern aspect of the garage



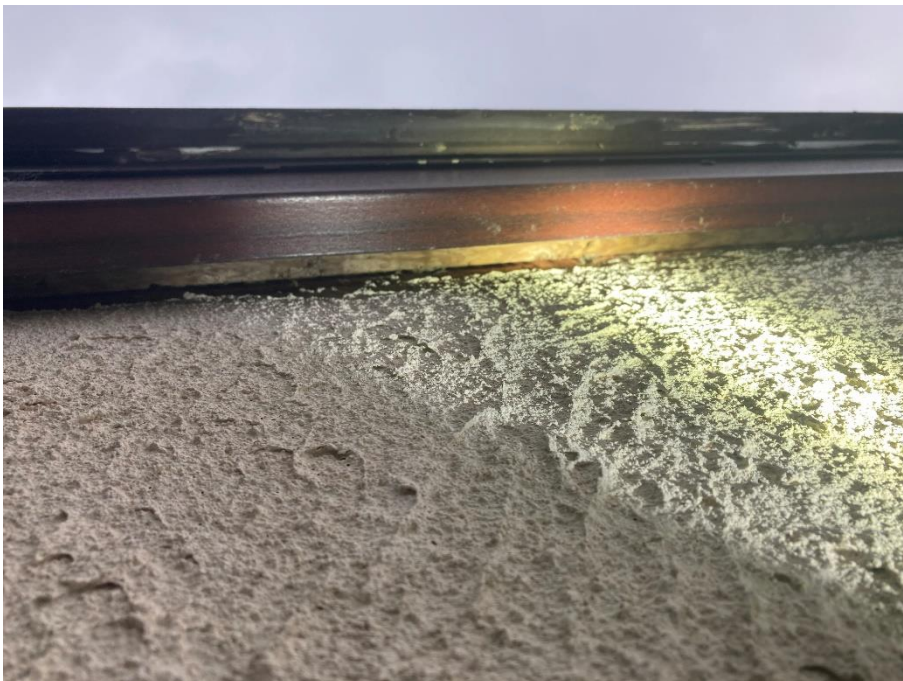
A1.4 Plate 4: gable end barge boards well sealed no gaps for bats



A1.5 Plate 5: Soffit box on northern and southern aspects well sealed no gaps for bats



A1.6 Plate 6: Bargeboards on eastern aspect well sealed an no access points for bats



A1.7 Plate 7: Gap beneath cap of barge board on western aspect (front) and access under roof tiles.



A1.8 Plate 8: Gap beneath cap of barge board on western aspect (front)



A.1.9 Plate 9: Small gaps present behind guttering on eastern (back) aspect



A1.10 Plate 10: Roof void of southern garage, where LHB was found



A1.11 Plate 11: Dead lesser horseshoe bat found at the apex of the loft space.



A1.12 Schwegler 1FF bat box	A1.13 Schwegler 2F bat box
	 

A1.14. Schwegler 1N Deep general bird nesting box	A1.15. Schwegler 1B
	 

Figures

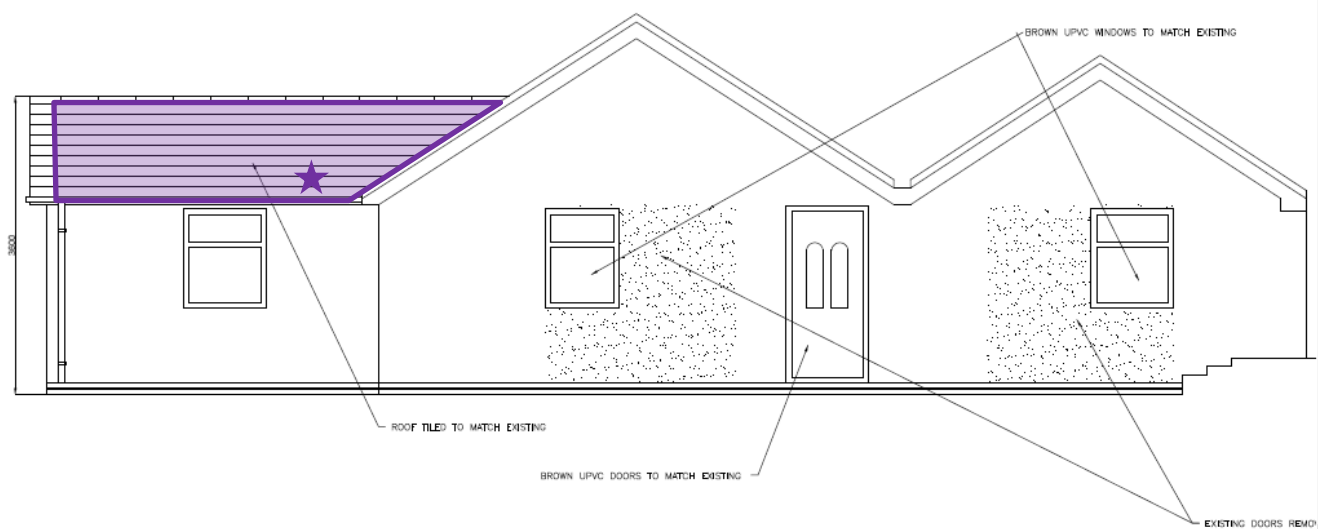
Figure 1: Site location plan, showing location of LHB



Figure 2: Wider Site location Plan



Figure 3: Showing extension to northern aspect and potential access point to bat loft space.



PROPOSED FRONT ELEVATION

Figure 4: Access point into bat loft



Figure 5. Survey results

