



GREDDINGTON ARMS

UPDATE PRELIMINARY ROOST ASSESSMENT AND EMERGENCE SURVEYS

DATE	ECOLOGIST	APPROVED	VERSION	COMMENTS
22/06/2020	Rhian Hughes	Lucy Boyett	1	
11/11/2020	Rhian Hughes		2	Amended mitigation following additional information

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Executive Summary

Site	Gredington Arms, Holt Road, Wrexham, LL13 9SD
Grid Reference	SJ 3676 5188
Surveyors	Rhian Hughes
Proposed work	Conversion of old pub and outbuildings into three properties
Type of survey	Update preliminary roost assessment and emergence survey (29th May 2020) from previous survey carried out by Alison Johnston in 2015 Follow up emergence survey carried out on 15th June 2020 A static detector was left in site from 10th June 2020 – 15th June 2020
Results of survey	• The main building had deteriorated from the original survey in 2015, with many slates missing providing easy access for bats • The outbuilding was in a similar condition to the time of the original survey, although a skylight was broken and a hole present in the boarding securing the building allowing access • A lesser horseshoe was roosting within the main pub building • A pipistrelle and unidentified bat were observed emerging from the barn
Survey conclusions	The main building is in use as a day roost for an individual/low number of lesser horseshoes, the barn is in use by pipistrelle and an unidentified bat, likely to also be a lesser horseshoe.
RAMs and Mitigation	• As bats are using the building, mitigation must be put in place either through a bat loft or a lean-to structure for bats. • Swallows are using the building and so Reasonable Avoidance Measures must be followed and mitigation must be provided to ensure nesting sites are available. • See sections 7 - 9 for full details.

1.0 Introduction

- 1.1 Enfys Ecology Limited were commissioned by TACP (on behalf of their client), to update a previous Preliminary Roost Assessment (PRA) and emergence survey at Gredington Arms, originally undertaken by Alison Johnston in 2015 (Johnston, 2015).
- 1.2 Planning permission was granted in 2015 to convert the old pub and outbuildings into three dwellings. To date, no works have been undertaken and the client is now looking to extend the planning permission, which requires an updated survey.
- 1.3 Alison Johnston undertook a PRA on 20th July 2015, and carried out emergence surveys on four nights, 20th – 23rd July 2015. During the PRA, no signs of bats were found and no bats were seen to emerge during the emergence surveys.
- 1.4 Enfys Ecology were commissioned to provide an updated PRA to determine whether the proposed works would affect protected species: specifically, bats and nesting birds. The surveys to inform this report was undertaken on 29th May and 15th June 2020. This report is valid for a period of two years from this date in accordance with best practice.
- 1.5 The survey involved an internal inspection of the pub building, it was not possible to enter the upper storey of the adjacent barn, as it had been boarded and screwed shut to prevent break-ins, there was however a hole in the door making it possible to see in. Please note that this report does not provide a full detailed description of the buildings and features, and must be read alongside the original survey report (Johnstone, 2015). The conclusions regarding badgers, and great crested newts are as stated in Johnstone, 2015, there have been no changes to the habitat which would alter this, however there was no obvious badger sett within the car park area, which had been identified previously – it appears to be in use by rabbits.
- 1.6 All British bats (and roost sites) are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended). In addition, all bats are classified as European Protected species by The Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation, it is an offence to kill, injure or disturb a bat, or to destroy any place used as a shelter by bats.
- 1.7 Should evidence of bats be found and it is deemed likely that they will be disturbed by the proposed works; a licence from Natural Resources Wales (NRW) must be obtained prior to works.

2.0 Methodology

2.1 *Preliminary Bat Roost Assessment (PRA)*

- 2.1.1 The buildings were assessed for any signs of bats; these include droppings, feeding remains, and other indicative marks, plus features of potential use to bats such as crevices, cracks and other holes, and any potential access points into the building. High-powered torches were used to inspect any identified features, and an endoscope was used to investigate any gaps or crevices, where appropriate. Both the interior and exterior of the building was examined.
- 2.1.2 The building inspections were carried out on the 29th May 2020 by ecologist Rhian Hughes (bat licence number S087351/1). Building and potential roost assessments were carried out following the guidelines set by the Bat Conservation Trust Good Practice Guidelines (Collins, 2016). Photographic evidence was taken where necessary.

2.2 *Emergence surveys*

- 2.2.1 A bat emergence survey was carried out on the building on 29th May 2020 and a follow up emergence survey on 15th June 2020, these surveys were both within the peak bat survey months of May to August (inclusive).
- 2.2.2 During the emergence survey, the buildings were monitored by seven surveyors for the initial and five surveyors for the follow up survey. Records were taken of any bats observed emerging from the buildings, and of any other bat activity taking place in the area during the survey. The surveyors used Batbox Duet detectors and Anabat Express bat detectors were positioned around the buildings to record any bat calls for further analysis. As per the guidelines the dusk emergence surveys began approximately 30 minutes before sunset and continued for approximately 90 minutes after sunset.
- 2.2.3 The dusk emergence survey was carried out on 29th May 2020 by Rhian Hughes (NRW licence number S087351/1), Tony Medcalf (NRW licence number S085611-1) and five assistants.
- 2.2.4 The follow up emergence survey was carried out on 15th June 2020 and undertaken by five surveyors, again Rhian Hughes (NRW licence number S087351/1), Tony Medcalf (NRW licence number S085611-1) and three assistants.

2.3 *Limitations*

- 2.3.1 It was not possible to access the upper stored of the barn, as this had been boarded up and screwed shut.
- 2.3.2 Bats are a difficult group to survey, and as they are highly mobile animals, it is possible that they could move into a building after the survey has occurred. Therefore, it cannot be guaranteed that bats will not move into the building following the survey.

3.0 Building Description

3.1 *External and internal*

- 3.1.1 The site comprised two buildings, the old pub, and an adjacent barn to the east. The main pub was a two-storey red brick building with the main roof being a pitched slate roof, however there were numerous flat roof areas and single pitch slate roofs.
- 3.1.2 The barn was also a two-storey red brick building with a pitched roof. Please see Alison Johnston, 2015 for further detail on the building descriptions.



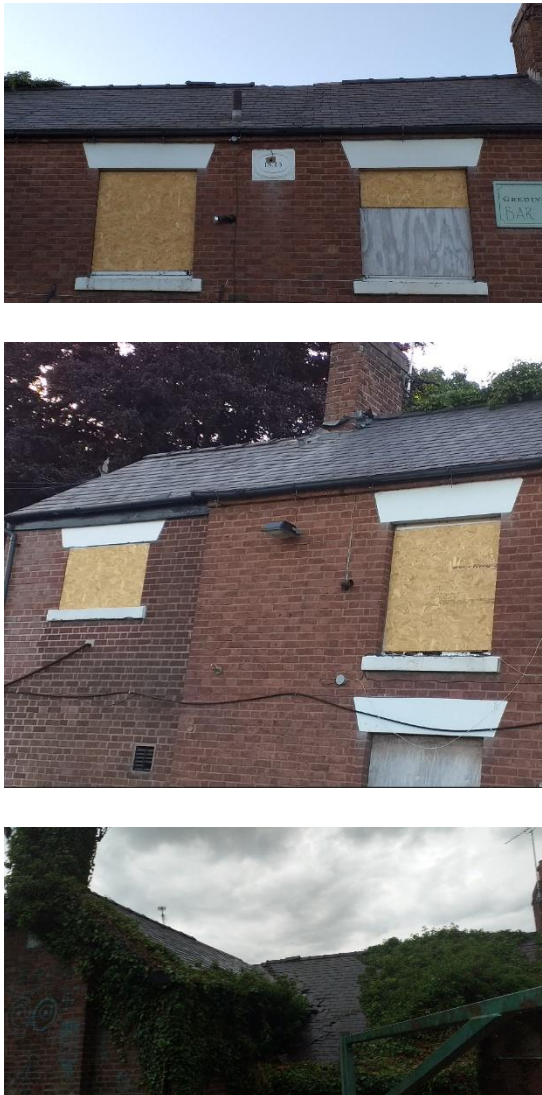
FIGURE 3.1. AERIAL VIEW OF THE SITE
BASE MAP © GOOGLE 2020

4.0 Survey Results – Building Inspection

- 4.1 The main pub building had deteriorated from the previous survey in 2015, this was due to break-ins and vandalism, resulting in large areas of the roof missing, providing access into the building, and also allowing water to enter the building. Most of the windows were boarded up.

- 4.2 The barn appeared to be in a similar condition, externally and internally (where could be surveyed), to that of the previous survey, however, a skylight was broken and there was also a hole in the boarded-up door (Johnstone, 2015).
- 4.3 Please see the building inspection results in Table 4.1 below.

TABLE 4.1. BUILDING INSPECTION RESULTS OF THE BUILDINGS

Building Section	Description	Photo
Main pitched roof section of the pub	Many slates and ridge tiles missing, especially from the northern aspect. Gaps present behind soffits/ barge boards.	 The 'Photo' column contains three separate photographs. The top photo shows a brick wall with two windows boarded up with plywood; a small sign is visible between the windows. The middle photo shows a similar view from a slightly different angle, highlighting the boarded-up windows and the roofline. The bottom photo shows a side view of the building with a gable end, showing missing roof tiles and a boarded-up door area.

Building Section	Description	Photo
Extensions to the east of the building	Large areas of roof with missing slates and lead flashing. Door open allowing access into separate store area.	
Internally – main building	Large area of scattered lesser horseshoe droppings, one lesser horseshoe observed hanging up in the toilets.	

Building Section	Description	Photo
Barn	Barn in better condition than the main building, however a broken sky light provided access into the upper storey and a hole in the boarded up door. Access behind barge boards and holes in brickwork.	

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- 4.4 Lesser horseshoe droppings were present in the downstairs of the main building, there were two accumulations, one in the ladies toilet, and one in the gentlemen's toilets. A lesser horseshoe was observed hanging up in the gentlemen's toilet (Photos 4.1 & 4.2). A small number of lesser horseshoe droppings were also found in the loft space (the loft hatch was off).

PHOTO 4.1 – LESSER HORSESHOE DROPPINGS IN THE LADIES TOILET



PHOTOS 4.2 – LESSER HORSESHOE HANGING IN THE GENTLEMEN'S TOILET



- 4.5 Birds were observed using the both buildings and nesting within the barn, there were the start of swallow nests in the barn, however no active swallow nests were seen.

5.0 Survey Results – Emergence and re-entry surveys

- 5.1 Following on from the update preliminary roost assessment, emergence and dawn re-entry surveys were carried out on the buildings. Table 5.1 summarises the survey conditions.

Ref no.	Survey type and number	Date	Start time	Sunset / sunrise time	End time	Temp. at start	Weather
1	Dusk Emergence	29/05/2020	20:55	21:25	22:55	19.8°C	No cloud cover, warm, calm
2	Dusk survey	15/06/2020	21:10	21:40	23:10	16.5°C	Rain prior to survey, 90% cloud, light breeze

TABLE 5.1 – SUMMARY OF SURVEY DETAILS

5.2 Emergence survey – 29th May 2020

- 5.2.1 The first activity of each bat recorded and any emergences are summarised in Table 5.2 below. There was much bat activity recorded with noctule (*Nyctalus noctule*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and lesser horseshoe (*Rhinolophus hipposideros*) recorded. A lesser horseshoe was observed emerging and a bat also emerged from the barn, however this did not echolocate. Much foraging behaviour was recorded, especially early on in the evening, this was mainly pipistrelles which commuted from the east of the site.

TABLE 5.2 – SUMMARY OF EMERGENCE SURVEY RESULTS

Time	Species	Emergence (Y/N)	Comments	
21:46	Soprano pipistrelle	N	Heard by all surveyors, flew into the site from the east	
21:47	Unknown	Y	Observed emerging from under the barge boards on the northern gable. Thought to be crevice dwelling	
21:49	Noctule	N	Recorded by all surveyors	

Time	Species	Emergence (Y/N)	Comments	
21:53	Soprano pipistrelle	N	Foraging activity to the north	
22:01	Lesser horseshoe	Y and re-entry	Emerged and re-entered	

5.3 *Second emergence survey – 15th June 2020*

5.3.1 The main activity of the survey is summarised in Table 5.3 below.

TABLE 5.3 – SUMMARY OF DAWN RE-ENTRY SURVEY RESULTS

Time	Species	Emergence (Y/N)	Comments	Picture
21:40	Pipistrelle sp	Y	Emerged from gable, flew to the north	
21:42	Soprano pipistrelle	N	Commuting to the north	
22:02	Common pipistrelle	N	Foraging along treeline to the north	

Time	Species	Emergence (Y/N)	Comments	Picture
22:14	Not picked up on any detector – possible lesser horseshoe	Y	Emerged and re-entered	

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- 5.4 A static detector was left in the main building for five nights from 10th June – 15th June 2020, only one lesser horseshoe call was recorded during this period on the 15th June 2020 at 00:33. Unfortunately it was not possible to leave a detector in the barn as it was not possible to gain access.
 - 5.5 Nesting birds were observed using the building, with birds flying into the ivy to the north of the main building, and also three birds observed entering the barn.
 - 5.6 To the north there is a large car park area to the north of the property, a walkover was carried out over this, however a full survey was not carried out as this was beyond the scope of this work, and it is believed a separate application has been submitted previously regarding this area. There is an underground area here, which was highlighted by Alison Johnston in 2015, no bats were observed in this, however this was not observed during the emergence survey. There were also many rabbit burrows in this area, but no obvious badger holes, which had previously been recorded.

6.0 Conclusions

- 6.1 Since the last survey in 2015 there has been a big deterioration in the condition of the main building due to numerous break ins, there are many gaps in the roof from missing slates and lead flashing providing easy fly in access for bats and birds.
- 6.2 The barn appears to be in a similar condition although the sky light has been broken, again providing easy access into the upper storey of the barn.
- 6.3 From the results of the internal, emergence and static surveys it can be concluded that the buildings are being used by a low number of bats. An individual lesser horseshoe appears to be using the main building, however there could be a small number of individual using it (however only one observed during surveys) – one was also observed in the same location on the internal survey when the static detector was set on 10th June 2020.
- 6.4 An unknown bat was also observed emerging the barn on both occasions, however is was not picked up on any detector. On the initial survey this was likely to be *Pipistrellus* as it was quite early during the survey (20 minutes after sunset) and it emerged from behind the barge board, no other crevice dwelling bat species were detected during the rest of the survey. During the second survey a bat was observed flying in and out of the skylight and was thought to be a lesser horseshoe bat, however again this was not picked up on the detector and it was not possible to gain access into the upstairs of this building. Prior to the survey an internal check was carried out of the main building, and there were no lesser horseshoes present here, so it is possible it was the same individual which had previously been observed in the main building.

6.5 As bats were observed using the buildings an NRW licence will be required before works on the buildings can commence.

6.6 *Impact of works*

6.6.1 The proposed works comprise the renovation of the buildings into residential accommodation. From the results the buildings to be affected by the works are used by *Pipistrellus* and lesser horseshoe, however from the results of the survey these were both in low numbers, none of the species were using the building as a maternity roost.

6.6.3 For roosts of small numbers of common species, which are not a maternity site, provision of new roost facilities must be provided where possible. Although these need not be exactly like-for-like, they should be suitable, based on species requirements (Mitchell-Jones. A.J, 2004) - this applies to the individual pipistrelles. The compensation/mitigation for the lesser horseshoes is also the same as above, these are classed as “small numbers of rarer species. Not a maternity site”.

6.6.4 To reduce the scale of impact, mitigation, compensation and enhancement measures, as discussed in Section 7 will be implemented.

7.0 Mitigation and Recommendations

7.1 **No works can be undertaken until a licence has been obtained from NRW. A licence can only be applied for following the granting of planning permission and the discharge of any ecology related conditions. Once submitted the licence application takes 30 working days to be processed (or more if any there are any queries).**

7.2 Mitigation measures and recommendations will be included in the licence application, and are also included below. Mitigation for swallows can be found in section 8.

7.3 *Mitigation - destructive works*

- Any removal of fascias/soffits or works to re-roof or secure the existing roofs, windows, doors and other gaps and cracks which have been identified as providing roosting features for bats or which may allow bats access into the buildings, must be completed before internal works can proceed. As no maternity roosts were discovered the work can take place at any time, however, it is preferable for the works to be undertaken in September or April so if any bats are found they will not be in hibernation but they will have finished breeding.
- Prior to the start of works, a toolbox talk will be given to everyone involved in the project and a log of this will be kept.

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- Any works to the roofs including the removal of slates, fascias and soffits and any re-pointing of gaps and cracks will be supervised by a suitably qualified ecologist. A bat box will be erected prior to the works commencing for any bat to be placed in if a bat is found during works. If carried out over winter and a hibernating bat is found, work must stop until the bats have dispersed naturally if possible. If this is not possible then the bat must be placed in a hibernation box erected on the property.

7.4 *Mitigation roost*

- A mitigation roost must be provided suitable for crevice dwelling bats and also lesser horseshoes. This should be retained in the loft space of the current property with an exit to the north of the building, providing connectivity to the trees running east-west to the north. Although this should be suitable for lesser horseshoes, the available height is 1.4m which would be acceptable given the numbers recorded, the size would be a minimum of 4x4m.
- Mitigation would also be provided within the barn, again a roof void could be provided in a section of the barn, this would be 960m in height, however it would be best retained within the building than moved to another building.
- The roofs will be slated and lined with bitumen felt. Wherever possible old timbers from the buildings should be retained within the roost space. Access will be provided into the building through a letter box style entrance on the gable, the dimensions will be 300 x 200mm with an internal baffle to prevent light egress and draughts. Entrances will be created at the eaves to allow crevice dwelling bats to enter.
- The floor will be boarded and sound insulated to prevent noise disturbance from the garage below. A small loft hatch will be installed slightly off centre – this will be locked so it can only be accessed by bat licenced individuals. A double ridge board from rough sawn timber will be installed to provide perching location from bats, as well as timber installed in the apex to create “hot boxes”.
- On each gable of the building two 18 x 150mm gaps will be created along the fascial lines to provide roosting potential for crevice dwelling bats.
- Further details of mitigation will be provided in the licence application and method statement.

8.0 Swallow mitigation strategy

- 8.1 There was evidence of the start of swallow nests within the barn, both buildings were also being used by nesting birds.

8.2 In order to minimise the risk of harm or disturbance to birds on site, and to mitigate for the loss of nesting opportunities the following methods will be employed:

- Specific Reasonable Avoidance Methods (RAMS) for all works on site
- Addition of swallow nest cups
- Addition of other nest boxes

8.3 Reasonable Avoidance Measures: During Works

As swallows are nesting within the building, works should be constrained by the bird nesting season (which is March to September [inclusive]) with no work taking place within this period.

If works must be conducted during this period then a thorough search for any nesting birds should take place immediately prior (no more than 48hrs beforehand) to the commencement of works by a suitable qualified ecologist. If any nest is recorded then all works to that section of the project would have to cease until the nestlings have fledged.

Under the Wildlife and Countryside Act all birds, their nests and eggs are protected during the breeding season (typically March to August inclusive) from killing/destruction, damage and disturbance.

8.4 *Addition of swallow nest cups*

Swallows prefer to nest in covered structures. To provide nesting opportunities, swallow nest cups should be installed within the garage adjacent to the barn, a gap at least the size of a house brick needs to be provided on the exterior of the garage to allow access. If this is not possible, a purpose made covered nest box structure can be installed on the gable walls of the garage and/or the barn.

Examples of swallow nesting cups can be found online from several suppliers including NHBS website (www.nhbs.com), the RSPB, and others. The following is one example of a nest cup suitable for the mitigation work: <https://www.nhbs.com/no-10-schwegler-swallow-nest>

8.5 *Addition of other nest boxes*

Suitable crevices left unsealed provide potential for nesting house sparrows and bird boxes can be erected in the area to provide extra nesting opportunities.

9.0 General Reasonable Avoidance Measures

9.1 As reported in Johnston, 2015, it is likely there are great crested newts in the local area, and also badgers (however the sett she identified no longer seems to be in use by badgers, and is approx. 40m from the site). In the unlikely event that great crested newts are found on the site all works **must** cease immediately, a suitably licensed ecologist must be called and a licence from NRW must be obtained.

9.2 *General Site*

9.2.1 Suitable RAMs will be implemented to reduce the potential to impact to amphibians, nesting birds, and other species that may be found on site. All measures in this section should be implemented as appropriate.

9.2.2 *Reasonable Avoidance Measures*

The following measures should be implemented at all times during the works:

- Working areas should be kept to the minimum required.
- Works should be avoided within 1 hour of dawn and dusk where possible to avoid disturbance to nocturnal animals. If works outside this time are needed, all lighting should be directional and be directed away from tree lines or hedgerows.
- Should it be necessary to have any excavation left open (even within the hard standing) these excavations should be securely covered overnight. These excavations must be thoroughly checked prior to back filling, or if leaving them open is unavoidable, a suitable ramp (such as a plank or batter) must be provided to allow animals to escape.
- Trenches must be checked each morning (by site operatives) prior to works commencing to ensure that small mammals/reptiles *etc.* are not present.
- Storage of fuel must follow best practice. Potential pollutants should be restricted to site compounds and hardstanding areas.
- All materials brought onto site are to be stored on hard standing ideally, or the amenity grassland (NOT adjacent to any hedgerows) if this is not possible. Materials will be stored on raised pallets or bagged, to prevent amphibians (or other wildlife) from taking refuge beneath them.
- If at any point in the works an amphibian or reptile is found within the works area all works in the vicinity of the sighting must immediately cease. Common amphibians should be moved from the working area by site workers (wearing gloves) and placed in a nearby hedgerow. Reptiles will usually retreat to a safe area of their own accord.

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- Any terrestrial mammals seen must be allowed to leave the area on their own. If this is not possible e.g. the animal is injured or trapped then an ecologist must be called.

10.0 Legislation

The Wildlife and Countryside Act (WCA) 1981 (as amended) forms the key legislation protecting habitats and species in the UK. All UK bat species are fully protected under the 1981 Act through inclusion on Schedule 5. All bats are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations (2017) which transcribes the EC Habitats Directive into UK law. In combination, this legislation makes it an offence to:

- Deliberately or recklessly take, injure or kill a bat;
- Deliberately or recklessly damage or destroy a place or structure used by bats for shelter or protection;
- Deliberately or recklessly obstruct access to a bat roost; or
- Deliberately or recklessly disturb bats while occupying a roost.

Bat roosts are protected under these laws whether the animals are present at the time of survey or not. Under both laws the Welsh Government and D.E.F.R.A. are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest. It is not illegal to tend to a disabled bat pending recovery.

Birds

In addition, under the Wildlife and Countryside Act, 1981 (as amended) and the Countryside and Rights of Way, 2000, all wild birds, their nests and eggs are protected during the breeding season (typically March to August inclusive). This makes it an offence to:

- Intentionally kill, injury or take any wild bird.
- Take, damage or destroy the nest of a wild bird included in Schedule ZA1.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

11.0 References

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

Alison Johnston (2015) Gredington Arms Survey Report