



Chetwynd Grove Cross Lanes

Outline Bat Mitigation Plan

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1 Introduction

1.1 Background

This document provides an outline bat mitigation plan for the redevelopment of two outbuildings located at Chetwynd Grove, Marchwiel, Wrexham, LL13 0TF (National Grid Reference SJ371472). Proposals are to convert the two outbuildings (Buildings 1 and 2) to provide dwellings and to provide a small garden area. The site layout is shown on Figure 2 in the Appendix.

Survey has identified Building 4 at the site as supporting day roosts used by individual or low numbers of common pipistrelle bats and brown long-eared bats and has also found the building to support a night roost used by individual or small numbers of whiskered bats.

The upper floor of Building 2 is linked to the roost sites within Building 4 by an open doorway and could be used intermittently by roosting bats.

Works proposals may result in a modification of habitats associated with the roost in Building 4 and may result in the loss of unidentified, infrequently used roosting locations within the upper floor of Building 2.

An outline mitigation strategy has been devised which will limit the negative impacts of the development on bats in the locality. It is considered that this strategy will ensure that the favourable conservation status of common pipistrelle, brown long-eared and whiskered bat is maintained both locally and nationally.

Bats receive full protection under the Wildlife and Countryside Act 1981 (as amended); through their inclusion in Schedule II of the Habitats Regulations 2010 and are considered to be a European Protected Species. Therefore, works to redevelop the site would be undertaken under a European Protected Species License (EPSL).

1.2 Bat Surveys

1.2.1 Daytime Bat Inspection

Each affected building was assessed as to its suitability to support bats following standard methodologies prescribed in English Nature's *Bat Mitigation Guidelines* (Mitchell-Jones 2004)¹ and the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines* 3rd Edition (BCT 2016)².

Survey, comprising of an inspection of the interior and exterior of each building, was undertaken during daylight conditions using binoculars, endoscope and a high-powered torch. The survey was initially undertaken during daylight hours on the 9th September 2016 with an update survey completed on the 27th June 2017.

In addition to searching for evidence of an actual bat roost the survey also aimed to assess the suitability of each building to support bats and consequently the likelihood of a bat roost being present but with no obvious field signs.

Survey assessed each building's roost suitability by examining structural features and the surrounding habitat. Structural features that will influence the suitability of a building to support roosting bats include the presence of a roof void; access points into a building including gaps beneath barge boards, gaps under lead flashing, gaps within masonry, loose tiles etc, complexity of any roof void, daytime light levels in roof void etc.

Important habitat features surrounding the structures which could influence roost potential include: whether the structure is in a semi-rural or parkland location, proximity to a significant linear feature (e.g. watercourse, mature hedgerow, wooded lane) or an area of woodland etc.

Taking account of these architectural and habitat features, each building was assigned a level of roost suitability based upon professional judgement.

1.2.2 Bat Emergence and Dawn Surveys

A dusk emergence and dawn activity survey of the affected buildings was undertaken on the 12th and the 27th June 2017 respectively. Three bat surveyors were used for each survey.

¹ Mitchell-Jones, A.J. 2004. *Bat Mitigation Guidelines*. English Nature, Peterborough.

² Bat Conservation Trust (2016) '*Bat Surveys: Good Practice Guidelines* 3rd Edition'

The surveyors were equipped with heterodyne, frequency division and time expansion bat detectors (Petersson D240x, Wildcare EM3 and Anabat Walkabout bat detectors). A night vision camcorder (Sony HDR SR12 with additional Infrared floodlighting) was used to support the surveyors. The surveyors were positioned so that all potential bat roosting features could be simultaneously assessed.

Emergence surveys commenced fifteen minutes before sunset and lasted up to an hour and a half after sunset. Dawn surveys started an hour and a half before sunrise and continued until fifteen minutes after sunrise. All bat species and bat behaviour were recorded.

1.2.3 Automated Bat Detector Survey

An automated bat detector (Anabat Express) was deployed within Building 1 and Building 4 between the 13th and the 19th June 2017.

The bat detector was set to automatically record any bat events along with the time of the event.

The bat data files were then analysed using Titley's AnalookW bat call analysis software. This allowed bats to be identified to species.

2 Survey Results

2.1 Site Description

The study site comprises of a set of farm outbuildings located at Chetwynd Grove, Marchwiel. Development proposals will affect two of the outbuildings present (Buildings 1 and 2 on Figure 2). The remaining outbuildings and the main house at the site will not be affected. Proposals will include the creation of a small garden area to the west of Building 1.

Building 1 comprises of detached single storey, brick-built outbuilding. Building 2 comprises of a two storey, brick-built out building which is attached to Building 3 at its southeast face and to Building 4 at its northeast face. The buildings are located around a hardstanding farmyard. The farm buildings are considered likely to be originally of 19th century origin.

The site is located on the A525 Wrexham Road close to the new Wrexham Industrial Estate Southern Gateway/A525 roundabout at Cross Lanes. The site is located in a rural setting with surrounding habitats comprising principally of pasture land with areas of broadleaved woodland to the south.

Surrounding habitats are considered to offer 'moderate' quality bat foraging habitat.

The site layout is shown on Figure 2. Photographs of the site are shown in the Appendix.

2.2 Bat Survey

2.2.1 Daytime Inspection

Building 1

Building 1 comprises of a former pigsty. The building is a single storey, brick-built structure with a pitched, gable ended roof clad in tightly fitted, asbestos tiles.

Internally, the building comprises of three adjacent rooms- one room is approximately 15m in length whilst the other two smaller rooms each measure approximately 2.5m in length. There is a 0.5m gap at the tops of the dividing walls between the internal rooms.

The building does not have a separate roof void, with the internal rooms open to the internal face of the roof. The roof is supported on original stout wooden beams and is lined internally with tightly fitting, wooden sarking board. The roof of the building is approximately 4.5m in height. In total, the building measures approximately 20m x 7m in area. The internal walls are partly white washed and part faced with glazed bricks.

The building has glazed windows on its east and west faces and consequently the interior of the building is brightly lit.

The external brick work is intact and has been painted in cream paint.

The interior and exterior of the building was observed to be in good condition with no obvious potential bat roosting features identified.

The building is considered to offer a negligible/low bat roosting potential.

No evidence of nesting birds or roosting bats was found associated with the building either internally or externally.

Building 2

This building comprises of a two storey, brick built outbuilding with a pitched gable-ended roof clad in slate tiles. The building is attached to Building 4 with an internal, open doorway on the building's upper floor providing a link between the upper floors of Buildings 2 and 4. The building has a brick-built single storey section at its southwestern end. One half of the single storey section is linked to the internal ground floor room of the two-storey section whilst the other half comprises of an open garage area.

The upper floor of the building is accessed via a hatch within Building 4 and then through the internal doorway described above.

The building has glazed windows at its northwest face consequently the interior of the building is brightly lit. There is no access between the ground floor room of the building and the upper floor of the building. The ground floor of the building (single and two-storey sections) is

completely sealed and inaccessible to bats and birds. The ground floor of the building is accessed via external stable doors on the building's northwest face.

The building is approximately 16m x 4m in area. The two-storey section of building is approximately 8m in length as is the single storey section. Internally, the building does not have separate roof void with both the upper floor of the two-storey section and the single storey section open to the internal faces of the roof and approximately 3.5m in height.

The roof of the building is supported on the original stout, wooden beams and is lined internally with bitumastic hessian felt.

Scattered brown long-eared bat droppings were found on the floor of the upper room of Building 2 (approximately 200 droppings of various ages). Evidence of roosting brown long-eared bat was found within the adjacent upper floor room of the Building 4 (see description below). Roosting bats within Building 4 are able to fly into the upper floor of Building 2 via the open doorway.

No large aggregations of bat droppings were found within the upper floor of Building 2 and it is considered most likely that bats roost within the upper floor of Building 4 but fly within the upper floor room of Building 2 for light sampling etc, prior to full emergence.

No obvious potential roosting crevices were identified within the upper floor of Building 2 but bats may be able to roost between the roof trusses and the roofing felt and above the ridge beam.

As previously mentioned, the upper floor of Building 2 is brightly lit by windows on its northwest face which makes this room less suitable for roosting bats when compared to the adjacent roosting habitat offered within the upper floor of Building 4.

Externally the building is in very condition with no gaps or obvious potential roosting crevices identified.

The external brick work is intact and has been painted in cream paint.

The roof was replaced approximately 20 years ago and is in good condition with no loose tiles, gaps at the ridge or gaps at the gable ends.

The only potential bat access points to the building are via the access points associated with Building 4 (see below), with bats then able to move internally from Building 4 into Building 2.

No evidence of breeding birds was found either internally or externally associated Building 2.

Building 3

Building 3 will not be affected by proposals.

This building comprises of a steel framed shed clad in corrugated asbestos and sheet metal panels. The building is open at its north and

south faces. The shed has a mono-pitched, corrugated sheet metal roof. The building is used to house cattle.

The shed is constructed adjacent to Buildings 2 and 4. Building 3 does not offer any obvious roosting potential itself however potential bat access points are located on the southeast facing wall of Building 4 and these open out into Building 3.

The bat access points comprise of a horizontal gap above a partially bricked up doorway (1m x 15cm) and a vertical ventilation hole (25cm x 50cm) located in the southeast external wall of Building 4. These gaps lead into the ground floor of Building 4 (Potential Roost Access Point 1 on Figure 2, see further description below).

Building 4

This building forms a continuation of Building 2. It is a two storey, brick built structure with a pitched gable-ended roof clad in slate tiles. The building is linked internally to Building 2 via an internal, open doorway on the building's upper floor.

There is a hatch linking the ground floor and upper floors of the building. The ground floor of the building is accessible to bats via a partially bricked up doorway (1m x 15cm) and a vertical ventilation hole (25cm x 50cm (Potential Roost access Point 1 on Figure 2)) located in the southeast external wall of Building 4. These gaps lead out from Building 4 into the adjacent, open, steel-framed cattle shed (Building 3).

Brown long-eared bat droppings were noted on the ground floor wall adjacent to the access hatch. A further bat access point is located on the building's northwest face where there is are five horizontal gaps measuring approximately 8cm x 50cm located at the base of a ground floor window (Potential Roost access Point 2 on Figure 2).

The upper floor of the building does not have any windows and is consequently dark. The upper floor room is approximately 5m x 4m in area and approximately 3.5m in height. The roof of the building is supported on the original stout, wooden beams and is lined internally with bitumastic hessian felt.

Approximately 1000 brown long eared bat droppings of varying ages were identified below the ridge beam near the northeastern end of the upper floor room. A small pile of approximately 10 yellow underwing moth wings was also identified below the ridge beam.

A common pipistrelle bat was also identified roosting between the dividing wall and a roofing truss during the September survey.

Building 4 will not be significantly affected by proposals. However, works will require that the doorway linking Buildings 2 and 4 is bricked up. These works will prevent bats from light sampling/potentially roosting within the upper floor of Building 2.

Buildings 5, 6 and 7

These buildings comprise of the main house plus two further outbuildings. These buildings will not be affected by any works proposals.

2.2.2 Bat Emergence/dawn Surveys

A bat emergence survey and dawn survey were undertaken at the site with three surveyors used for each survey.

In summary, bats (brown long-eared and common pipistrelle bats) were only identified emerging/re-entering from the partially bricked up doorway and the vertical ventilation hole on the southeast face of Building 4 (Potential Roost access Point 1 on Figure 2). No bats were identified emerging/re-entering via the horizontal gaps below the window on the building's northwest face (Potential Roost Access Point 2 on Figure 2). No other bat roosting locations were identified.

The emergence survey was undertaken on the 13th June 2017. Weather was recorded as dry, overcast and calm. Temperatures were recorded at 14°C. Sunset was recorded at 21.38.

Common pipistrelle bats were identified emerging from Potential Roost Access Point 1 at 22.06 and 22.20 (2 bats in total). A brown long eared bat emerged from Potential Roost Access Point 1 at 22.13.

Common pipistrelle bat foraging activity was recorded within the open shed building (Building 3) from 22.00. Up to two bats were recorded at any one time. Constant common pipistrelle foraging activity was recorded up to 22.13. The pipistrelles were identified flying around the inside of the shed and occasionally flying in and out of Potential Roost Access Point 1. After this, occasional, intermittent common pipistrelle bat passes were recorded; whiskered bat passes were recorded within the shed at 22.06 and 22.17; a soprano pipistrelle bat was recorded at 22.30.

Bat activity to the north of Building 2 and Building 4 was fairly limited comprising of intermittent common pipistrelle passes at 22.18, 22.24 and 22.58.

The dawn re-entry survey was undertaken on the 27th June 2017. Weather was recorded as dry, calm and overcast. Temperatures were recorded at 15°C. Sunrise was recorded at 04.46.

One brown long-eared bat was identified entering Building 4 via Potential Roost Access Point 1 at 04.14 followed by a further two brown long-eared bats at 04.16. One brown long-eared bat was then observed to emerge at 04.19 and to then fly out of the shed. No other roosting bats were identified.

Again, bat activity was concentrated within the interior of the cattle shed (Building 3). Common pipistrelle and brown long-eared bats were

recorded intermittently flying in loops around the shed interior from 03.45 until 04.20; bats that did not roost within Building 4 were then observed to fly out of the shed.

Bat activity to the north of Building 2 and Building 4 was fairly limited comprising of a common pipistrelle passes at 4.20; a brief spell of common pipistrelle bat foraging activity from 04.21 to 04.20; a myotis pass at 04.10 and a brown long-eared pass at 04.20.

2.2.3 Automated bat detector survey

Automated bat detectors (Anabat walkabout) were positioned inside Building 1 and Building 4 between 13th and the 19th June 2017.

No bat activity whatsoever was recorded within Building 1.

Within Building 4, intermittent brown long-eared bat activity was recorded on every evening, short bursts of whiskered bat activity was recorded the 16th June at 23.25; on the 18th June at 01.37 and 22.36 and on the 19th June at 22.36.

No other bat activity was recorded within the building.

The timings and frequency of the bat registrations indicate that the building is used frequently as a day roost by brown long-eared bats and is likely to be used only occasionally, as a night roost by individual whiskered bats. No pipistrelle activity was recorded during the survey period however pipistrelle bats were observed to emerge from the building during the emergence survey and an individual common pipistrelle was observed roosting within the barn during the September 2016 daytime inspection.

2.2.4 Bat Survey Evaluation

No evidence of roosting bats has been found within Building 1.

Evidence of bat activity has been found within Building 2 however it is considered likely that bats are principally roosting within the upper floor room of Building 4.

Nevertheless, it is likely that the upper floor of Building 2 functions as part of the overall roosting habitat offered within Building 4 by providing a flight space to allow light sampling prior to emergence. The open cattle shed (Building 3) is likely to offer a similar function as well as a foraging resource for pipistrelle bats.

Evidence of bat roosting activity has been identified within the upper floor of Building 4 during daytime inspections and during follow-on bat emergence/dawn surveys and automated bat detector surveys.

Building 4 has been found to support day roosts used by individual or low numbers of brown long-eared and common pipistrelle bats.

The automated bat detector survey has also recorded whiskered bat using the interior of the barn during the middle of the night on three evenings. This activity is considered to represent occasional usage of the building's interior as a night roost by individual whiskered bats.

The roosts identified are considered to be of 'low' conservation value.

It is considered unlikely that the site supports a roost site of any significant conservation value such as a maternity roost. Whilst some breeding brown long-eared bats have been identified roosting in very low numbers (5 individuals or less). This is generally unusual with brown long-eared bat maternity colonies typically numbering 10-50 individuals (Altringham 2003³, Harris et al. 2008⁴; Swift 1998⁵)

3 Recommendations

3.1 Bat Survey Overview

Development proposals are to convert Buildings 1 and 2 to provide new dwellings. Works will also include the re-landscaping of an area of improved pasture to create a garden area to the west of Building 1.

Building 1 is considered unlikely to support roosting bats.

Building 2 is linked to an upper floor room of Building 4 which has been found to support individual/small numbers of roosting common pipistrelle, brown long-eared and whiskered bat.

The upper floor room of Building 2 is considered less suitable for roosting bats when compared to the adjacent upper floor room within Building 4 as it has much higher levels of daytime light. This is evidenced by fewer bat field signs within Building 2 (only scattered droppings indicative of flying bats as opposed to large aggregations of droppings indicative of frequently used roosting locations).

Works to convert Building 2 will require the access doorway between Buildings 2 and 4 to be bricked up which could result in a modification of habitats associated with the bat roosts identified.

Building 4 and the identified main roosting area will not be directly affected by works and would be retained post-development.

³ J. D. Altringham (2003) British Bats, Collins New Naturalist, Book 93, Haper Collins.

⁴ S. E. Harris and D. Yalden (2008) Mammals of the British Isles: Handbook 4th Edition, Mammal Society, Blackwell scientific

⁵ S. Swift (1998) Long-eared Bats, Poyser Natural History

3.2 Bat Mitigation Plan

Survey has identified Building 4 at the site as supporting day roosts used by individual or low numbers of common pipistrelle bats and brown long-eared bats and has also found the building to support a night roost used by individual or small numbers of whiskered bats. Such roosts are considered to be of a low conservation value.

The upper floor of Building 2 is linked to these roost sites by an open doorway and could be used intermittently by roosting bats.

Works proposals may result in a modification of habitats associated with the roost in Building 4 and may result in the loss of unidentified, infrequently used roosting locations within the upper floor of Building 2. Bats are a European Protected Species. Therefore, works to redevelop the site would need to be undertaken under a European Protected Species License (EPSL).

Natural Resources Wales (NRW) are the EPS licensing authority. In order to issue an EPSL to allow a development to destroy or damage a bat roost, NRW would require evidence that 3 statutory tests have been met. The 3 tests are:

1. *Demonstration of **the Need** for the development- this includes preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance to the environment.*
2. *Demonstration that there is **no satisfactory alternative**.*
3. *Demonstration that **the action will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.***

Consideration of Test 1, 'The Need'

It is likely that the proposed development will satisfy the need in terms of a social and economic basis by providing further high-quality housing within the Marchwiel area. The development will use existing developed land/underused farm buildings. This need is in line with various local and national housing and planning policies.

Consideration of Test 2, 'No Satisfactory Alternative'

There is 'no satisfactory alternative' as the construction of new housing cannot be feasibly achieved without converting the barns. Development within an alternative location would require the use of undeveloped, green field land.

Consideration of Test 3, Maintenance of a Favourable Conservation Status

Surveys have identified non-breeding roosts likely to be used by low numbers of common pipistrelle, brown long-eared and whiskered bat. Such roosts are considered to be of 'low' conservation value.

An outline mitigation strategy has been devised which will limit the negative impacts of the development on bats in the locality. It is considered that this strategy will ensure that the favourable conservation status of common pipistrelle, brown long-eared and whiskered bat is maintained both locally and nationally.

3.2.1 EP SL and Site Enhancements/Mitigation Measures

A mitigation strategy has been designed which will aim to enhance bat roosting habitat at the overall site, limit disturbance to roosts to be retained within Building 4 and will also aim to limit the risk of harm to individual animals during the development process.

Works will follow a strict method statement whereby sensitive stages of the works are overseen by the named ecologist on the EP SL. An outline method statement for works has been produced and is described below.

3.2.2 Bat Method Statement

It is considered unlikely that the buildings on site are used as a hibernation or maternity roost therefore redevelopment works can take place at any time of year without resulting in significant disturbance to bats.

Prior to the start of works a mitigation area would be prepared which would act as a receptor site for any bats encountered during conversion works.

As Building 4 will not be significantly affected by works and is considered to be the main bat roosting location at the site, the upper floor room of this building would function as the receptor site for any bats encountered and would also provide the focus for bat roost enhancements.

It is considered that the upper floor of Building 4 can be enhanced by providing additional bat roosting opportunities. This will be achieved relatively easily by fixing 16 x 'Kent Bat Boxes' to the internal gable walls, the internal face of the roof and the main roof truss of the upper floor room (see Figure 3 for bat box locations). These bat boxes are relatively simple to construct and will offer extensive new roosting opportunities. Instructions on how to create the bat boxes are included in the Appendix. The bat boxes will be fixed as high on the gable end walls/ roof truss/ roof as possible. The installation of the bat boxes would be overseen by the licensed ecologist.

A new access point for workers will need to be created into Building 2 so that contractors do not have to pass through the existing hatch in Building 4 potentially causing disturbance to bats. A new staircase is proposed at the centre of Building 2 and will be used throughout the construction period (See Figure 3).

Works will ensure that no roosting bats are present within Building 2 prior to the start of works. To achieve this a new bat access point would be fitted into the one of the building's windows. This would comprise of the removal of a glass pane to provide of a 15cm x 15cm hole.

The internal doorway between Building 2 and 4 will then be bricked up to isolate Building 2 from Building 4 and to limit disturbance to bats roosting within Building 4 during the construction process (see Figure 3).

The 15cm x 15cm bat access hole within Building 2 would be left open for at least two week to allow bats to become habituated to using it.

The access hole will then be fitted with a bat excluder by the licensed ecologist. The bat excluder will comprise of a flap or valve that will allow bats to exit the building via the access hole but not re-enter.

Once the bat excluder has been left in position for two weeks, the upper floor room would be monitored for 5 nights by the licensed bat ecologist, using an automated bat detector, to confirm that it is no longer used by roosting bats.

Once no further bat activity has been confirmed by the licensed bat works, the access hole can be sealed and works to convert the building can take place.

Prior to the start of conversion works, a 'toolbox talk' would be given to the site contractors identifying the locations where bats have been encountered, their responsibilities under UK Legislation and the EPSL method statement; plus, what they should do if any bats are encountered during works.

It would be identified to the contractors that they must not enter Building 4 at any stage of the works.

If any bats are encountered at any time during works at the site, works would immediately stop and the named ecologist on the EPSL would be contacted to attend site and provide further advice.

Post construction, the bat loft will not be used for storage or suffer human disturbance. The loft hatch (as identified on Figure 3) would be retained and the identified bat access points on the ground floor of Building 4 would be maintained in perpetuity. Any disturbance of the bat loft or blocking of the bat access points would constitute an offence under the previously described wildlife legislation.

Building 4 will remain under the ownership of the applicant who will ensure that the mitigation/compensation area is retained and protected and will ensure that an appropriate bat consultant is appointed to undertake further monitoring work.

The layout of mitigation proposals in relation to the development of Building 2, is shown in Figure 3 in the Appendix.

3.2.3 Bat Monitoring Plan

The site would be monitored post construction to confirm that the mitigation measures have been a success; to determine the status of bat roosts present including species, numbers of bats and type of roost.

As a minimum, each monitoring visit would comprise of an internal inspection of the mitigation area within Building 4 and a bat emergence survey.

Surveys would be completed by a licensed bat worker and would be conducted during the optimal bat survey season (June-August inclusive).

Surveys would be conducted in years 1, 2 and 3 following the completion of the development. An annual report would be provided to NRW and Wrexham County Borough Council.

4 Appendix

FIGURE 1- Site Location



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Ordnance Survey 100054686

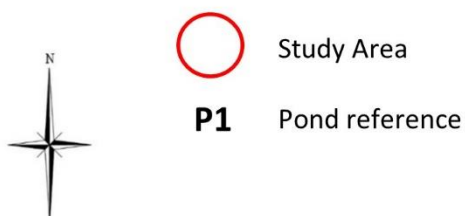
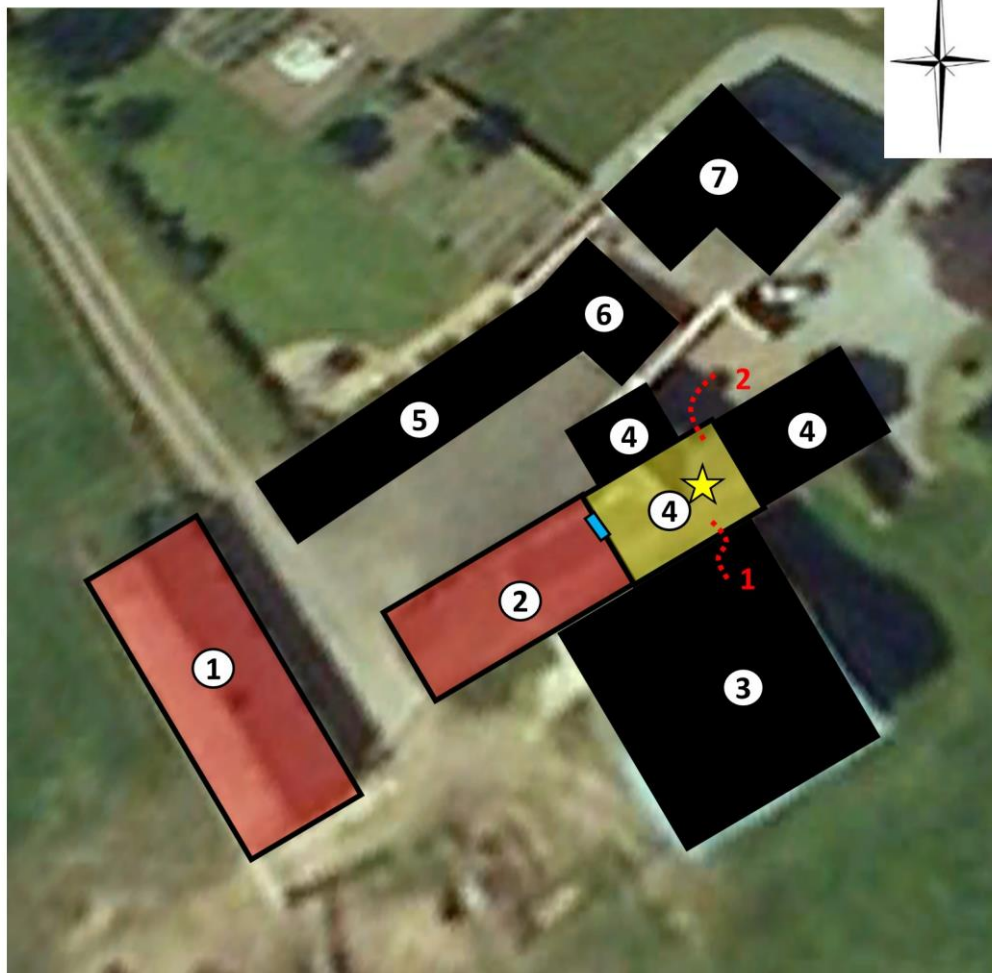
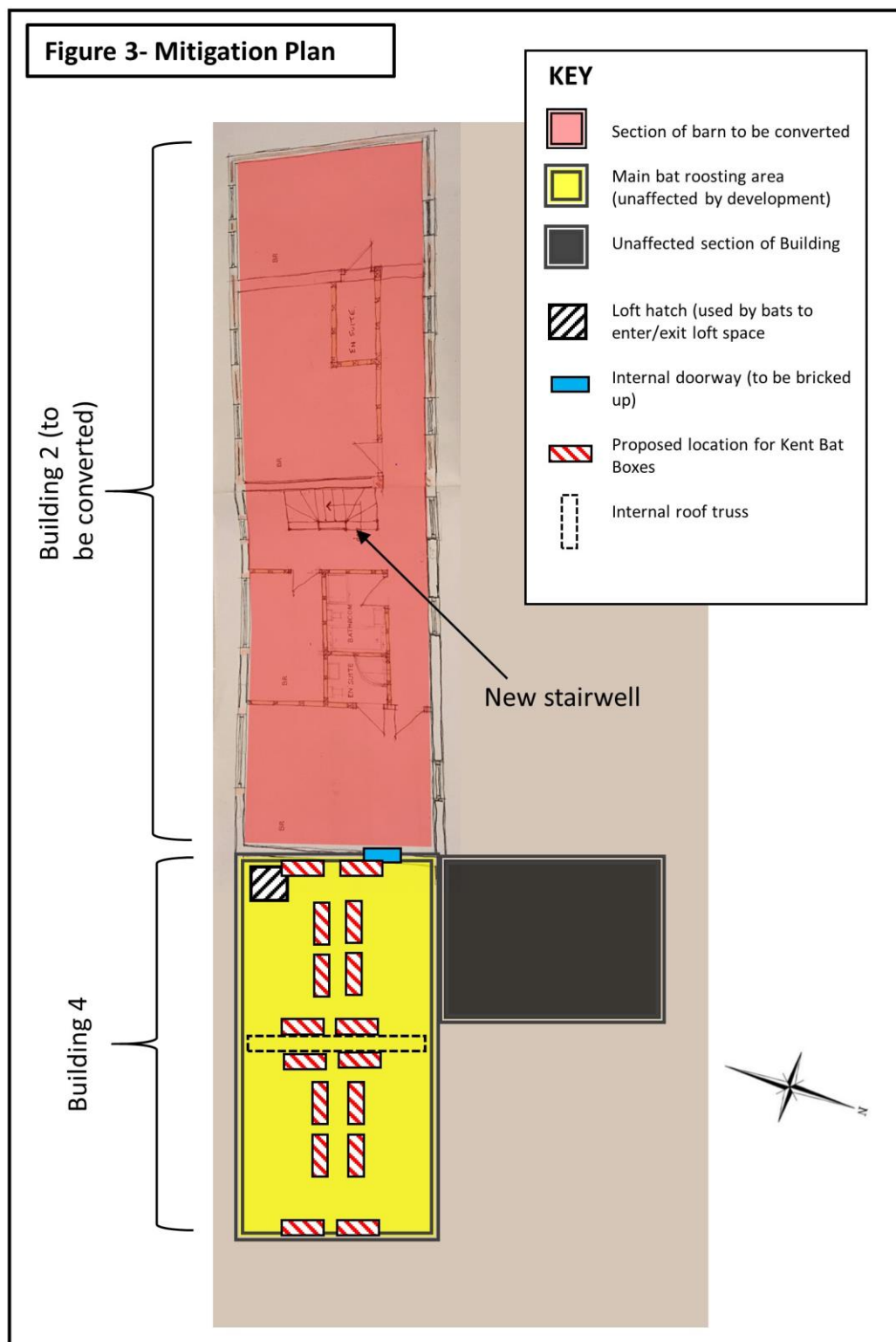


Figure 2- Site Layout



-  Barn to be converted
-  Existing bat roost (roost habitat to be enhanced)
-  Building (not affected)
-  Building reference number
-  Roost access point
-  Internal door between Buildings 2 and 4





Appendix: The Kent bat box (D.I.Y. instructions)

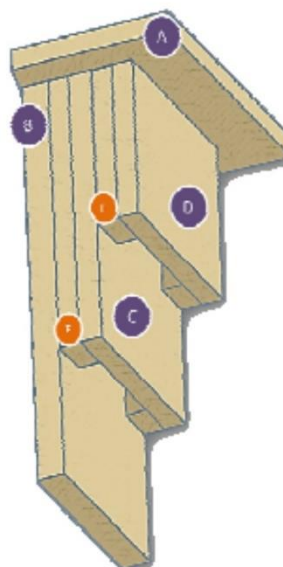
Design and measurements

Simple to construct, self-cleaning and low maintenance, the Kent bat box (designed by the Kent Bat Group) is a great way to encourage bats in your garden or your green space. The box should be rainproof and draught-free.

The only critical measurement is the width of the crevices: between 15-25mm. Other measurements are approximate. Timber should be approximately 20mm thick.

Measurements for one Kent bat box kit would be as follows:

Part	Quantity	Size (mm)
Roof (A)	1	250 x 160 x 20
Back (B)	1	450 x 200 x 20
Centre (C)	1	330 x 200 x 20
Front (D)	1	210 x 200 x 20
Centre Rails (E)	2	330 x 20 x 20
Front Rails (F)	2	210 x 15 x 15
Stand-offs (optional)	2	200 x 20 x 20



Material and Tools

This kit requires approximately 1.6m of rough wood and 25 screws (8 x 1 ½ inches) to assemble. You can rough it up by scraping with a suitable tool – possibly a saw blade or even a screwdriver but make sure you use untreated wood as some preservative chemicals can kill bats.

Pre-drill the holes to prevent the wood splitting. Alternatively you can assemble your bat box kit with nails although they tend to be less robust than boxes made with screws.

The hanging screws may either be at the edges of the front panel or in the side centre block (not in the rails!). Fixing may be by use of brackets, durable nylon cord or wires.

When installing the box, assess the risks of working at height, use the appropriate fittings and assess where the box will be located, in relation to any public access. Regular checks should be made to ensure the box remains securely fitted, especially after high winds.

Photos and illustrations in this document by the Bat Conservation Trust unless otherwise stated.

The Bat Conservation Trust (known as BCT) is a registered charity in England and Wales (1012361) and in Scotland (SC040116).

Registered office: Quadrant House, 250 Kennington Lane, London SE11 5RD
Email: enquiries@bats.org.uk National Bat Helpline: 0345 1300 228

PHOTOGRAPHS

Photograph 1- Building 1 viewed from east



Photograph 2- Interior of Building 1



Photograph 3- View of northwest face of Building 2 (within red line)



Photograph 4- Interior of upper floor room Building 2



Photograph 5- Interior of upper floor room of Building 4



Photograph 6- Bat Access Point 1 viewed from interior of Building 3 (circled)



Photograph 7- External view of building 4 and Bat Access Point 2 (circled)

