

Arbtech Consulting Ltd
European protected species licence application to Natural England
Sept 2013
Bankwood Mill, Glossop, SK13 5ER.

Mitigation Licence Application for Bats

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Document 1 Background and Supporting Information

A Executive Summary

Bankwood Mill has been granted planning permission (HPK/2010/0396) to demolish part of a former barn and renovate the remaining property on the site.

Ecological surveys of the site identified that bats had been using the building to roost in and the surrounding area was used for feeding and commuting.

Further surveys found that the roost was likely to be a summer roost for number of bats. A small number of bats, 11 in total, are estimated to be using the building. These are most likely to be either males or non-breeding females as other roosts are likely to be found in the wider area.

Common pipistrelles and a single *myotis* believed to be brandts/whiskered could be disturbed, injured or killed whilst works are undertaken. The roost will be lost. The roost will be compensated for its loss by installing bat boxes and tubes and tiles in the new buildings being development on site.

The impact on the populations and individual bats of the above species and within the surrounding habitat and region is considered to be of low conservation significance.

B Introduction

B1. Background to Activity/Development

Bankwood Mill is currently a former barn/print works which is unoccupied and is the subject of a granted planning permission HPK/2010/0396. The building will be partly demolished to make way for the re-development of the site, which is to include renovation of the 1800's mill.

No scoping bat survey was undertaken as the planning permission had been passed, however as part of the planning permission an ecology survey was required which included bat emergence surveys.

Two dusk surveys and two dawn surveys were undertaken. The dusk surveys were conducted on 22nd June 2011 and 16th August 2011 with the dawn being undertaken on the 23rd June 2011 and 17th August 2011 results showed that activity included feeding and passing bats as well as bats seen to emerge. A total of 11 common pipistrelles were seen to emerge from the building and a single *myotis* bat thought to be either whiskered or brandts *Myotis mystacinus/brandtii*. The building requires part demolition and renovation to make way for the re-development and therefore the roost will be lost.

Further to this an internal and further dusk survey was conducted on the 1st September 2013 to update the survey.

B2. Full details of proposed works on site that are to be covered by the licence

The licence is required for the part demolition of the building. The work is part of the redevelopment of the site described above and planning permission has been granted, however until this report is completed and submitted to the local planning authority (LPA) the demolition and re-development is on hold.

C. Survey and Site Assessment

C1 Pre-existing information on the bat species at the survey site

No previous records on the site existed before the emergence bat survey was undertaken. Although the NBN gateway holds records of the following species:

Daubentons *Myotis daubentonii*

Leislars *Nyctalus leisleri*

Common and Soprano pipistrelles *Pipistrellus spp.*

Brown long eared *Plecotus auritus*.

C2 Status of bat species

Common pipistrelle (Pipistrellus pipistrellus)

This species is common and widespread, found throughout Derbyshire and the UK. This species appears to be equally abundant as the similar soprano pipistrelle *Pipistrellus pygmaeus* and the combined estimated UK population of two million makes them by far the commonest of our bats. It is highly likely that there are several other roosting sites within other buildings and trees in the local area.

Whiskered/Brandts (Myotis mystacinus/brandtii)

These two species are known as cryptic species and were only separated in the 1970's, as recently as 2010 a third species *alcathoe M. alcathoe* has been found to be resident in the UK. Both the whiskered and brandts are regularly found in buildings and although are widespread have a greater population in the northern half of the UK. All three species have similar habitat requirements to pipistrelles and are often found in the same buildings.

C3 Objectives of survey

To examine the buildings at the site, to determine the presence or likely absence of bats and to advise on any necessary bat mitigation and compensation measures. The results of survey have been recorded and an assessment of the likely impacts for the proposed work has been made. The survey results have been used to propose a compensation and mitigation strategy to be able to undertake the proposed works with minimal disturbance to bats and ensuring the status of bat species on site is protected and maintained.

C4 Plan/map of survey

Bankwood Mill lies close to the town of Broadbottom to the west and Gamesley to the east in Derbyshire at grid reference SJ999940 or nearest postcode SK13 5ER (see Figures 1 and 2).

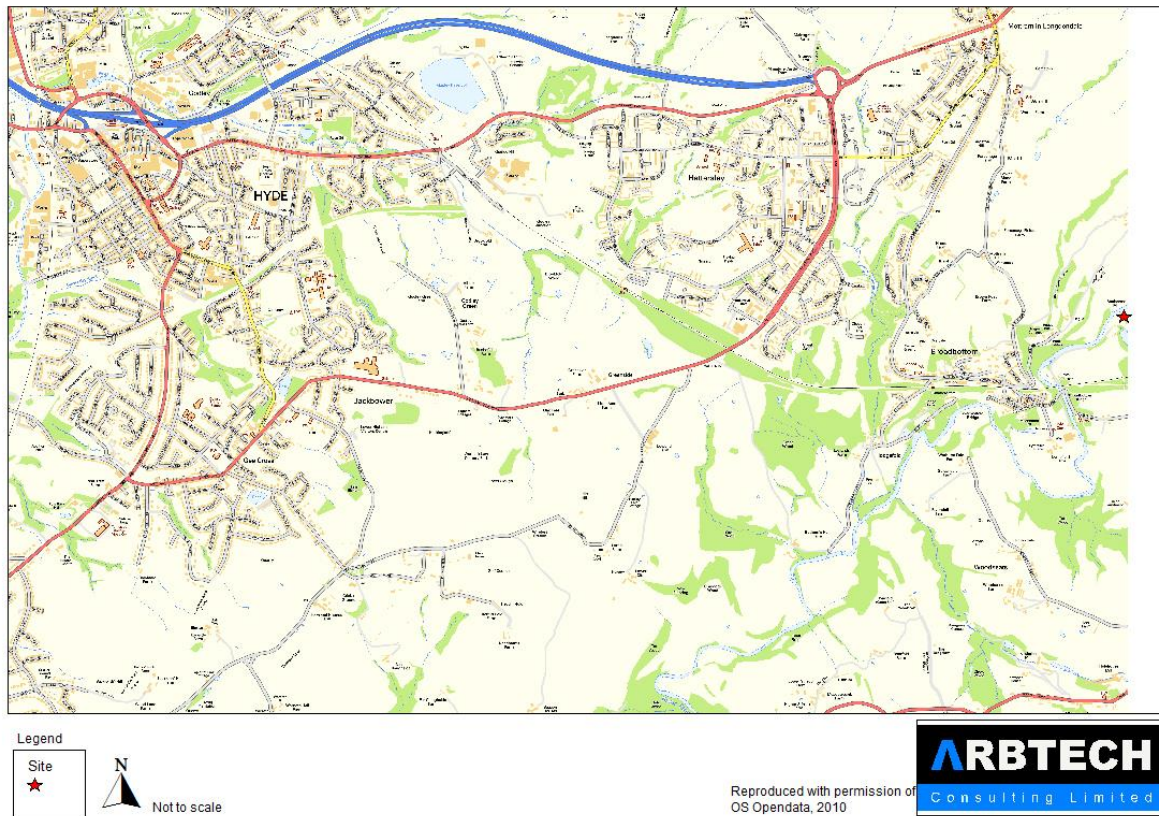


Figure 1 Site location in Derbyshire

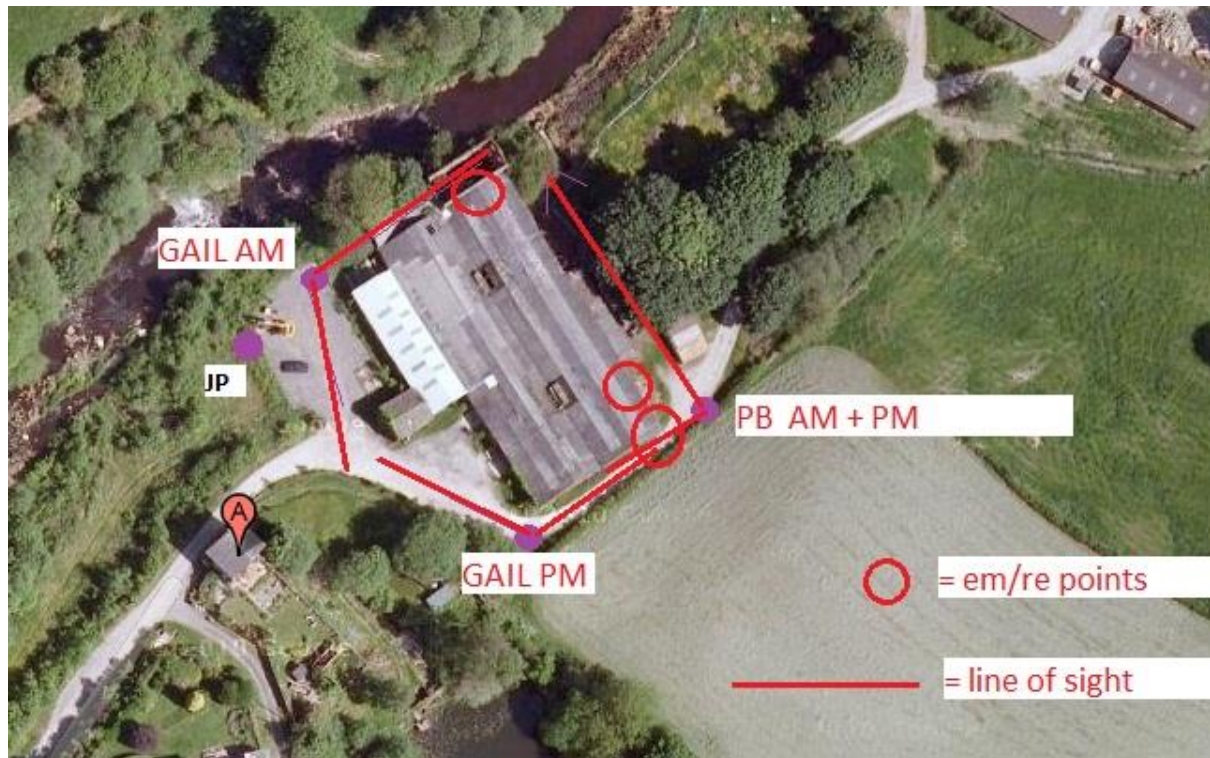


Figure 2: Site plan showing buildings surveyed

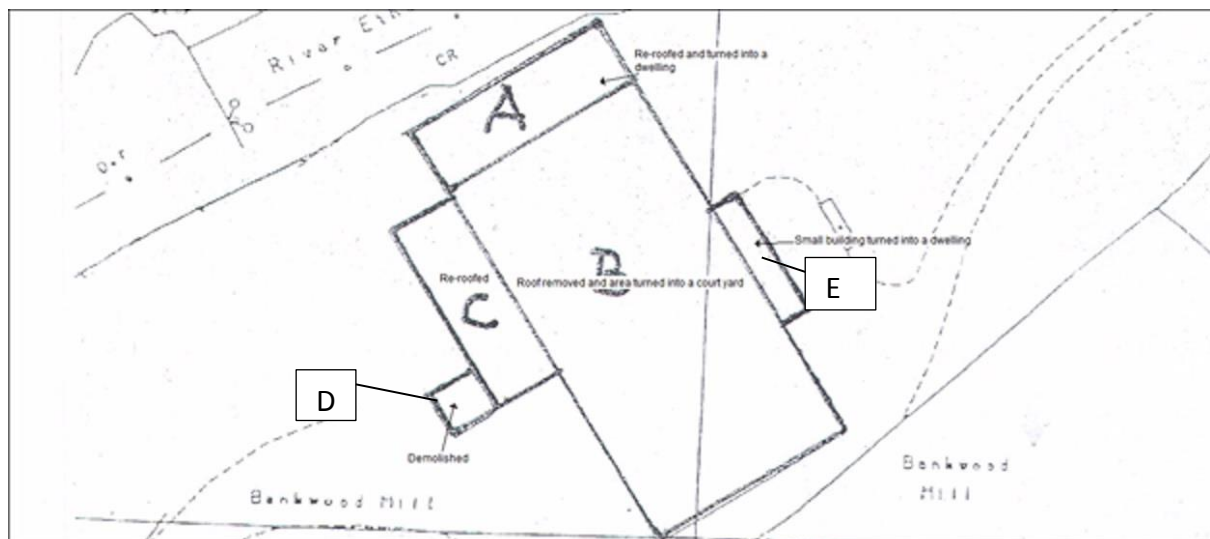


Figure 3: buildings to be demolished and converted. 'A' will be converted to a dwelling, 'B' is to be re-roofed to form a courtyard, 'C' will be re-roofed and converted, 'D' will be demolished and the 'E' will be converted to a dwelling

C5 Site/Habitat description

The site lies close to the towns of Broadbottom and Gamesley in Derbyshire at grid reference SJ999940 or nearest postcode SK13 5ER and consists of former print-works/barn building (B1). The site also consists of the grounds and several trees.

The site is bounded by open countryside in all directions. The wider area consists of woodlands 47metres to the north, open standing water is situated 25metres to the north, with open farmland surrounding the site. There are also numerous hedgerows and scattered trees across the general area. These present diverse habitats for bats to utilise.

The buildings surveyed are described below:

Building B1

The Building is brick built with cavities evident; there are also minor cracks and gaps in the brick work, which are located externally and internally. To the north of the site are two stone annexes, which are also in a state of disrepair with gaps and cracks.

C6 Field Surveys

C6.1 Methods

No scoping survey was undertaken, however the site was assessed on the emergence surveys and found that the site had potential to support bats in the form of loose slates, gaps and crevices in the brick work. The planning conditions also asked for ecology surveys of which one was an emergence bat survey.

Two dusk and dawn surveys were undertaken. These were conducted in June 22nd into the 23rd and August 16th into the 17th.

All surveys were conducted to national standards following the BCT good practice guidelines.

These surveys concentrated around the main building. Three surveyors were used for each survey. Bat Box 'Duet' detectors were used for all surveys as well as Ciel frequency division detectors. At least one surveyor was equipped with a digital recorder for each survey and these were later analyzed using cooledit pro 2.1. All bats observed were also recorded to paper with the activity, time and species were possible.

C6.2 Timing/Weather conditions

Table 1: Survey data

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
N/A	Scoping Bat	N/A	N/A	N/A
Date	Survey	Time: from/to	Weather: Start	Weather: Finish
22/06/2011	Dusk	9.00 pm – 11.00 pm	Temp: 14°C Humidity: 55% Cloudy: 80% Wind: 0/8 Rain: None	Temp: 14°C Humidity: 56% Cloudy: 90% Wind: 0/8 Rain: None
23/06/2011	Dawn	3:10am – 4:30am	Temp: 13.5°C	Temp: 12°C

		when considered to light for bats to be active.	Humidity: 76% Cloudy: 100% Wind: 0/8 Rain: None	Humidity: 74% Cloudy: 80% Wind: 0/8 Rain: Drizzle
16/08/2011	Dusk	8.15 – 10.30pm	Temp: 15.5°C Humidity: 76% Cloudy: 70% Wind: 0/8 Rain: None	Temp: 16.5°C Humidity: 76% Cloudy: 60% Wind: 0/8 Rain: None
17/08/2011	Dawn	4.00 – 5.50am when considered to light for bats to be active.	Temp: 10.5°C Humidity: 76% Cloudy: 15% Wind: 0/8 Rain: None	Temp: 10.5°C Humidity: 76% Cloudy: 10% Wind: 0/8 Rain: None
01/09/2013	Scoping and dusk	6.30pm until 9.45pm	Temp: 15.5°C Humidity: 58% Cloudy: 70% Wind: 2/8 Rain: None	Temp: 13.5°C Humidity: 59% Cloudy: 70% Wind: 2/8 Rain: None

C6.3 Personal

All the surveys were conducted and organized by a current Natural England Licenced bat workers at Arbtech.

No scoping survey undertaken. The buildings were checked for potential before the first emergence survey.

Dusk emergence and Dawn swarming:

Polly Booth MSc Graduate Surveyor: Appointed on licence 20113704

Gale Armstrong, Surveyor: Licence 20102813

James Porter, Surveyor.

C7 Survey Results

C7.1 Daylight inspection

Condition 19, 20 and 21 of the planning permission required ecology surveys of the site, this included emergence surveys for bats.

The building was checked before the first emergence survey and it was found to have high potential for roosting bats.

All of these conditions have now been discharged.

A site visit was undertaken on the 22nd May 2013 to assess to the site for material change, none was found.

Further to this visit an internal scoping survey was undertaken on the 1st Sept to check for further droppings etc. none were found.

C7.2 Dusk and Dawn Surveys

22nd June 2011 Dusk

Four bats (common pipistrelle) were seen to emerge from the building. Constant activity including passing bats, feeding buzzes and visual recognition were recorded with bats of several species being recorded.

16th August 2011 Dusk

Two bats seen to emerge from the building. Bat activity recorded for the duration of the survey.

23rd June 2011 Dawn

Two bats seen to re-enter the building, one common pipistrelle and one myotis (believed to be a brandts or whiskered by Gail Armstrong) species. Bat activity recorded for the duration of the survey.

17th August 2011 Dawn

11 common pipistrelles seen to re-enter the building.

1st September 2013 scoping/dusk

Similar bat activity to the 2011 surveys with CP emerging at 20.15.

Many passes of bats including myotis species (brandts/whiskered)

Table 2: Summary of survey results

Date	Survey	Results
22 nd June 2011	Dusk	Four common pipistrelles (CP) seen to emerge from the roof and southern end of the building.
23 rd June 2011	Dawn	Two bats re-entered the building one CP and one myotis. Both entered on the north side of the building through a stone annex.
16 th August 2011	Dusk	Two CP's thought to emerge from the building and flying within.
17 th August 2011	Dawn	11 CP's emerged.
1 st Sept 2013	Scoping and dusk	No new evidence of bats internally Myotis bats foraging CP emerging from similar locations to the 2011

		surveys.
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Table 3: Summary of bat evidence

Building /Tree	Potential	Actual status	Unknown
B1	High	Summer roost for small number of common pipistrelles and single myotis.	Unknown if used for hibernation

Common pipistrelles and a single brandts/whiskered are roosting in the building.

C8 Interpretation/evaluation of survey results

C8.1 Estimated Population

Based on the emergence survey results a maximum population of 15 common pipistrelles are likely to be using the building and a maximum of 3 myotis bats are likely to be using the building. Including the 2013 dusk survey there is no reason to believe the bat population has changed on site in the interim period.

C8.2 Status of Roost

It is concluded that the roost is a male or pre-breeding female summer roost. At any one time there may be a maximum of 18 bats using the roost. The proposed development is unlikely to have long term effect on the roosting bats present.

C8.3 Survey Constraints

There were no constraints to the survey.

D Impact assessment in absence of mitigation

D1 Short-term impacts: disturbance

In the absence of mitigation disturbance will occur by the demolition of part of the building and the building work following. This could lead to damage, death or encasement.

D2 Long-term impacts: roost modification

There will no modification to the roost in the long term. The roost is to be lost if no mitigation was to take place.

D3 Long-term impacts: Roost Loss

The current roost will be lost when the building is demolished.

D4 Long-term Impacts: Fragmentation and isolation

No fragmentation or isolation of bat roosting sites is likely as a result of the development on site. The area has woodland and riparian corridors and new roosting opportunities will be provided, with bat boxes in trees and bat tiles in the roof of the new building. **If these were absent the bats would not be able to continue the use of the site.**

D5 Post development interference impacts

It is possible that human activity will contribute to disturbance of the roost when the site has been development, **this is however unlikely as the site was a former mill and disturbance would have been the norm.** .

New and extra lighting will be deflected downwards, be on PIR sensors and will not be directed at the new roosting sites or enhancements. Were possible (affordable) lighting should be of the new LED type, which is directional, and can be dimmed.

D6 Predicted scale of impact

The predicted scale of impact on the populations and individuals, in Derby and the region is of low conservation significance, due to the suggested re-placement roosting opportunities.

E Land Ownership

E1 Mitigation Site Ownership

The site is owned by:

Mr. Stephan Dobie

Manor Street

Audenshaw

Manchester

M34 5JG

F References

Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature

Mitchell-Jones, A.J & McLeish, A.P eds (1999). The Bat Workers Manual 3rd Edition. JNCC

G Annexes

Bat Emergence Survey, Arbtech, 2011

Bat scoping and emergence, Arbtech 2013 updated

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Document 2 – Delivery Information

A Mitigation and Compensation

A1 Summary of Mitigation Strategy

Bankwood Mill will be partly demolished by hand and partly renovated under ecological supervision (see Figure 3 section C4, Doc 1).

During suitable weather conditions before the demolition occurs, any bats will be removed where possible by hand and placed in a suitable bat box that has been erected on the retained trees.

All contractors and those involved with the work will be informed of any action that must be taken should bats be encountered at any stage. Work will stop and further advice sought if the roost is larger than surveys indicate.

Replacement bat roosting is to be provided in the form of bat boxes and tubes and access tiles. Boxes will be in place before the demolition and the tubes and tiles will be built into the building during renovation.

These boxes will be checked a minimum of three times over three years.

B Works to be Undertaken by the Ecologist or Experienced Person

B1 Capture and Exclusion

Before works commence the Ecologist will check all accessible likely roost locations in the building. The Ecologist will remove the bats by hand (where possible) and without harming them, they will be placed in a suitable bat box located as close as possible to the works area.

The roof repairs/demolition of building/roof sections will be undertaken by hand, under ecological supervision in suitable weather conditions and at a time when bats are unlikely to be present.

All construction staff will be briefed on the procedure to follow should a bat be found whilst the demolition occurs.

The Ecologist will be present for the demolition of the sections detailed in Figure 1. Whilst the roof is removed by hand any bats found will be safely relocated to a suitable bat box which will be in place before the works commence. This bat box will be located as close as possible to the existing dwelling.

Any bats accidentally harmed will be safely put in a suitable container (vivarium) and passed to the local bat group carer, until at which time the bat can be re-released at the roost site.

These works will commence once there is written approval from the LPA and the licence is issued, during the autumn months (September to October) to prevent disturbing hibernating bats and when night temperatures are constantly above 8°C.

C Works to be Undertaken by the Developer

C1 Bat Roosts

C1.1 *In Situ* Retention of Roosts

The existing bat roost will be lost.

C1.2 Modification of Existing Roost

There will be no modification to the current roost.

C1.3 New Roost Creation

A minimum of six Schwegler type 2FN bat boxes will be located as close as possible to the existing roost. There are several trees which will be retained in the development which are suitable for this propose.

These boxes will face north or northwesterly (as the current roost) and be a minimum of 3.5m above ground level.

A minimum of four Schwegler 2FR or EcoServ's bespoke face bat tubes (depending on budget) will be built into the new buildings when the development occurs. One of the current entrances is located to the north facing side of the building, **the remaining are located to the south**. The tubes will also face the same direction and will sit a minimum of 3m above ground level.

Bat access tiles (see Figure 3 and Plate 1) (long term replacement roost) will be located in the roof of the new development allowing bats access into the space between the tiles and under felt. The roofing materials will be traditional bitumen felt under slate tiles, creating similar conditions to the current roost. These materials are utilized by bats in many roosting situations and are known to support both maternity and occasional summer roosts of common pipistrelles and myotis bats.

C1.4 Plans/Maps

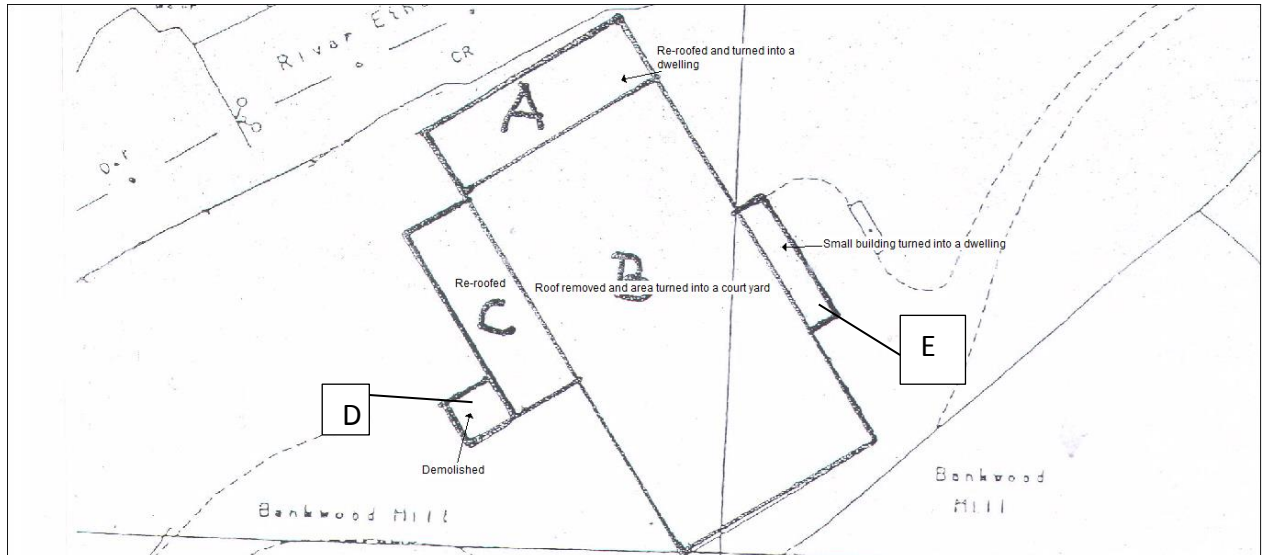


Figure 1: Detail of works, also see figure 3 section C4 document 1 for descriptions

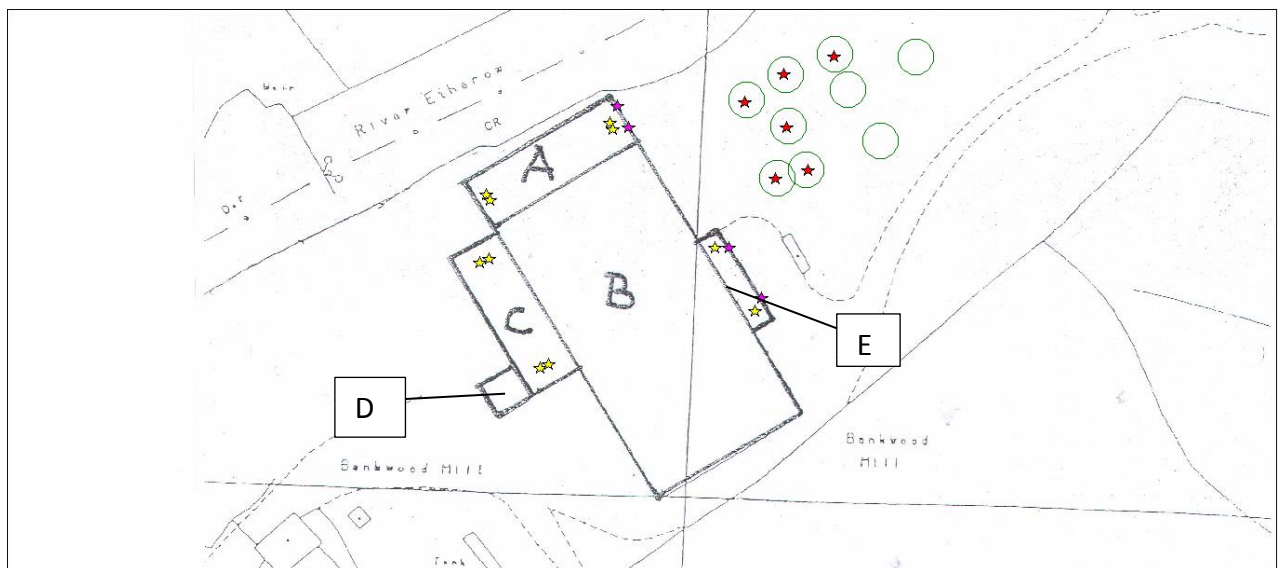


Figure 2: Proposed compensation red stars = boxes, pink stars = tubes and yellow stars = tiles. Green circles = retained trees

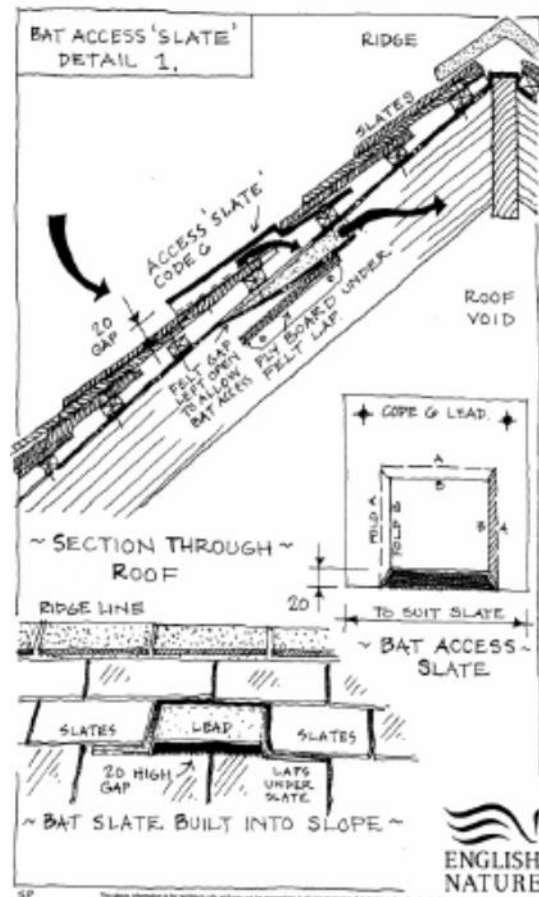


Figure 3 Detail of bat access tiles



Plate 1: Access tile

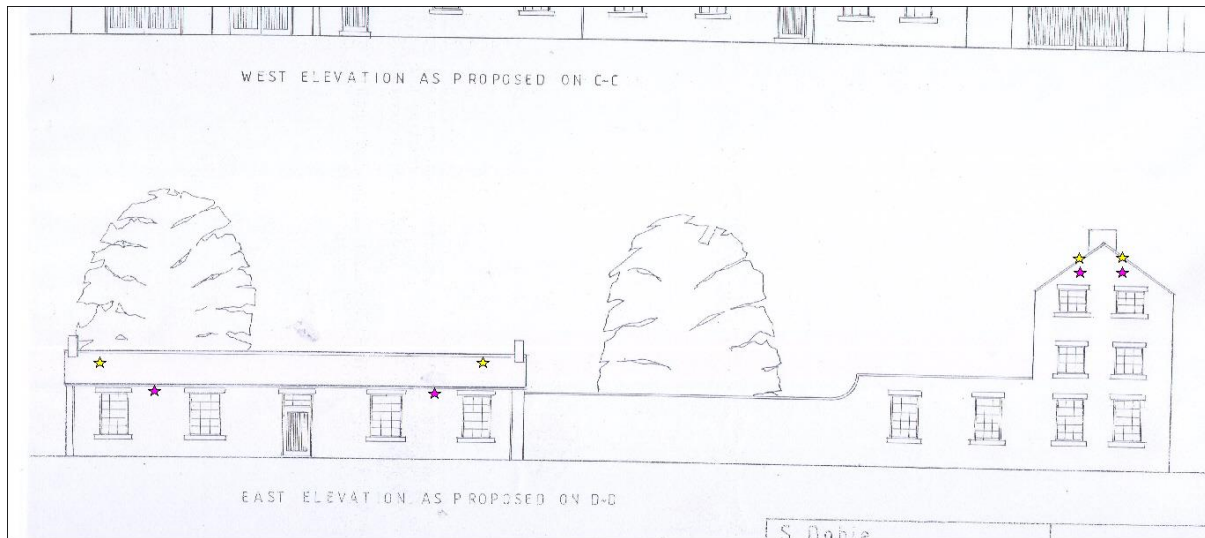


Figure 4: Elevation sketch showing the position of tubes and tiles
Pink stars = tubes and yellow = access tiles

D Post-development Site Safeguard

D1 Habitat/Site Management and Maintenance

The new roosts provided will require minimum maintenance due to the longevity of the boxes construction. When the boxes and tubes are checked this will require a licenced bat worker.

No permanent lighting will illuminate any created roost entrance.

It is the owner's responsibility to purchase and install the suggested mitigation and maintain these.

D2 Population Monitoring, Roost Usage etc.

The boxes and tubes should be checked once at the end of the first summer (August/September 2014) after development by a licenced bat worker. This can be carried out during daylight hours and will require the use of a ladder to reach the boxes/tubes.

The boxes/tubes will be checked for a further two years (minimum once a year) in August or September thereafter.

D3 Mechanism for Ensuring Delivery of Post-development works

The Natural England licence will facilitate the measures are carried out and a report of works will be carried out in the licence return.

Legal contracts will contain clause stating that bats are in the building and PDM will need to take place, see letter from owner.

E Land Ownership – Mitigation Site

The mitigation site is owned by the developer.

E1 Declaration Statements

E1. Mitigation Site Ownership

The site is owned by:

Mr. Stephan Dobie

Manor Street

Audenshaw

Manchester

M34 5JG

E1.1

I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts onto land outside the applicant's ownership –Not applicable

Not Applicable

E1.2

I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts onto land outside the applicant's ownership –Not applicable

Not Applicable

E1.3

I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts onto land outside the applicant's ownership –Not applicable

Not Applicable

F Timetable of Works

A Development Activates and Timing

Activity	Timing	Notes
Demolition and re-roofing works of current building and parts of the building.	October/November 2013.	Removal of roof by hand only under ecologist supervision.
Hang bat boxes	October 2013	These will be in place before demolition.
Install bat tiles	May/June 2015	Ecologist to check positions and number whilst scaffold still erected.

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Build in bat tubes	May/June 2015	
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B Post Development Monitoring

Year	Details
May/June 2015	One bat box/tube check by licenced ecologist
December 2016	One bat box/tube check by licenced ecologist