

Wold Ecology  
Bat Mitigation  
Method Statement  
For  
Hillside Farm  
Sleights

NYM/2011/0685/FL

NYM/NPA  
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**A Mitigation and compensation**

**A1 Summary of Mitigation Strategy**

A European Protected Species development licence will be obtained prior to re roofing work of building A and building B, Hillside Farm.

Based on the bat activity surveys carried out by Miles Worrton (July - September 2011) and Wold Ecology (January 2012), it has been determined that Hillside Farm supports a common pipistrelle maternity roost and temporary roost site.

To summarise, the mitigation strategy includes:

- Pre – works survey of Hillside Farm.
- Roof stripping is planned to start in February/March 2012.
- Strategies for safely removing bats, if present, from danger during the repair work to the buildings
- The re-instatement of the original maternity roosts and creation of roost through the inclusion of permanent bat boxes, gaps underneath traditional pan-tiles and the provision of a crevice beneath a ridge tile.
- External lighting will be directed away from all bat roost access points and flight paths.
- Security lighting will be on a short timer and motion sensitive to large objects only
- Contractors on site to receive an induction on bat species present at Hillside Farm and provided with a Method Statement. The contracted builders have previous experience with working around bats and development licenses.

The mitigation strategy will ensure that the bat populations at the site are maintained at a favourable conservation status.

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**B Works to be undertaken by the ecologist or suitably experienced person.**

**B.1 Capture and exclusion**

**B1.1 Timing**

The re roofing works to building A will start in February/March 2012. The roof will be completed and maternity roost re-instated before 1<sup>st</sup> May 2012. The construction of the extensions and internal refurbishment will be completed during summer 2012. The work to Building B is not due to start until June 2012.

**B1.2 Site Induction**

A tool box talk will be given to all contractors and others involved in the works prior to the start. This will provide background information on bats at the site, where bats are likely to be found and what to do if bats are unexpectedly discovered during works, as outlined in section B1.6. In the event that bats are found during works then all work will stop immediately. The ecologist; will be contacted immediately for advice, on 07789 783116.

**B1.3 Pre-Works Surveys**

An assessment by the ecologist will be made to determine the current level of bat activity on site. An endoscope (Model: RIGID SeeSnake Micro endoscope with a 9.5mm camera head and 1m extension cable) search will be undertaken. The inspection will focus on gaps in stonework, roof coverings, structural timbers and all other crevices in Building A and B.

**B1.4 Blocking Known and Potential Roosts**

Following the endoscope survey, all known or potential roost sites, identified as not occupied by bats, will be blocked immediately using pieces of foam (or similar material). If hibernating bats are encountered they will be left in situ. Once the bat has left then the roost site will be blocked immediately using pieces of foam (or similar material).

Once the ecologist is satisfied that the internal wall no longer is occupied by bats, then the building work can proceed.

**B1.5 Destructive Search**

In order to further reduce any unnecessary disturbance, injury, or death to any late discoveries of individual bats roosting in Building A, all external roof fittings and fixtures will be carefully removed, by hand under the watching brief of the ecologist. As the structure of the maternity roost is obscured by the lead flashing, this section will be carefully dismantled and the ecologist will photograph and note layout so it can be re-created at a later stage. If bats are encountered they will be removed by hand and placed into bat boxes located on the site. Works will be undertaken from scaffolding, a mobile elevated work platform (MEWP) or similar working platforms (see C.1.4, figure 1).

**B1.6 Discovering Bats**

The work to Building A will start in February/March 2012 and there remains a possibility of encountering torpid bats. If torpid bats are discovered during works the work on the site will stop immediately and Wold Ecology will be contacted on 07789 783116 for advice. The



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capture or disturbance of bats is not planned as a method of exclusion during winter months and will be only used as an absolute last option. If the hibernating bat cannot be removed safely it will be left in situ and a buffer area of 5m<sup>2</sup> will be created around the roost. All light and heating will face away from the roost to minimize disturbance. The bat will be left to leave of its own accord.

If any torpid bats are disturbed and aroused they will be taken into care (as directed by the Bat Workers Manual, section 7.3, pages 64 – 66: 3<sup>rd</sup> edition 2004) and fed until such time when conditions are suitable (night time temperature are >6°C) for them to be released at dusk in the mitigation area. A temporary Schwegler 1FS winter woodcrete box, designed to accommodate hibernating bats, will be available on Site. The 1FS bat box will be located on the south gable of Building B, within the grounds of Hillside Farm (see C.1.4, figure 1b and 3a).

Bats will only be handled by a licensed ecologist. Gloves will be worn and the ecologist, as aforementioned, will have an up-to-date rabies vaccination.

**B1.7 Exclusion of known roosts**

If bats are discovered in the building after the hibernation period, when temperatures >6°C, one way exclusion devices will be used. They will either be constructed from a plastic acetate sheet (or similar material) or a section of smooth drainage pipe with a diameter of 50mm. The devices will be secured by mortar, expanding foam and/or gaffer tape (or similar adhesive). Care will be taken to ensure that bats cannot come into direct contact with adhesive. This will allow the bat to leave the roost but prevent its return. The method of exclusion will follow the guidance within the Bat Workers Manual (JNCC 2004), Chapter 9: Public Relations, Section 9.1.2 Exclusion of Bat Colonies page 69-70. Once the ecologist is satisfied that the roosts are not occupied, then access points will be blocked immediately with pieces of foam, prior to work proceeding. Gaps and cracks with potential to be used as roosts will also be checked with an endoscope and blocked during exclusion.

Following four consecutive nights of temperatures > 8°C, the roost sites will be inspected and if vacated exclusion devices removed and roost blocked. This will ensure that bats have been excluded before roof stripping and demolition works proceed.

**C Works to be undertaken by the Developer/Landowner.**

**C.1 Bat roosts**

**C.1.1 In-situ retention of roost**

No roosts on site will be left in situ.

**C.1.2 Modification of existing roost**

**Building A**

The maternity roost (roost 1) located in the south pitch, at the west end of the roof, will be re-created during roof felting and re-covering. A maximum of 5m<sup>2</sup> section of bitumastic hessian will be laid over the Kingspan breathable membrane. It will be positioned from the chimney, across the ridge and down towards the eaves. The clay pan-tiles will be laid on top. Access will be created by leaving a gap under a tile and a gap under the lead flashing. The bats will be able to gain access to the tile gap from the lead flashing. Care will be taken to replicate what is found during the destructive search of the roof. Battens will be used to limit the roost area. The design may be slightly modified to portray this i.e. size and location of gap. Minimum access gap size will be 20mm (see C.1.4, figure 1b, 2a and figure 5a).

A similar area will be created on the east end of the south pitch of building 1. A maximum of 3m<sup>2</sup> section of bitumastic hessian will be laid over the Kingspan breathable membrane. It will be positioned from the chimney, across the ridge and down towards the eaves. The clay pan-tiles will be laid on top. Access will be created by leaving a gap under a tile and a gap under the lead flashing. The bats will be able to gain access to the tile gap from the lead flashing. Battens will be used to limit the roost area. A minimum gap size will be 20mm will be created (see C.1.4, figure 1b, 2a and figure 5a).

A 20mm access point to the ridge will be maintained on south pitch of building 1 in similar area to the original location (see C.1.4, figure 1b, 2a and 5b). This will be created by not pointing a section of ridge, 100mm in length.

Bat droppings from the common pipistrelle maternity roost will be collected once the tiles have been stripped. Immediately prior to the new roof tiles being replaced, the collected droppings will be scattered in the locations where they were collected, including the roost entrance points. The droppings will be collected and stored by a bat ecologist.

**Building B**

The common pipistrelle temporary roost (roost 2) located under tiles on the north-west roof pitch of building 2 will be re-created during roof felting and re-covering. A small section of bitumastic hessian <1m<sup>2</sup> will be laid over the Kingspan breathable membrane. It will be positioned in a similar area to the original roost. Access will be created by leaving a gap (minimum of 20mm) under a replacement tile (see C.1.4, figure 1b, 3a and figure 5a).

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**C.1.3 Temporary Roost Creation**

A Schwegler 1FS winter woodcrete box will be erected on the south gable of Building B between early February and 30 April 2012. The box will be used in case bats are discovered during winter works (see section B) and (see C.1.4, figure 1b and 3a).

**C.1.4 New roost creation**

In order to increase the amount of habitat available for bats on site a variety of bat boxes will be erected on site. This will create a variation of habitats. A Schwegler 1FF or 1FQ or similar will be positioned on the south elevation of the west chimney and east gable of Building A (see C.1.4, figure 1b, 2a, 2b and figure 4). If there is any delay to this schedule the bat boxes will provide temporary roosting habitat. The bat boxes will remain on site post development. A permanent box will also be located on the south gable of Building B once structural works are completed (see C.1.4, figure 1b and 3b).

This mitigation strategy will ensure that the bat populations on site are maintained at a favourable conservation status by the retention and creation of roost sites at the Site.

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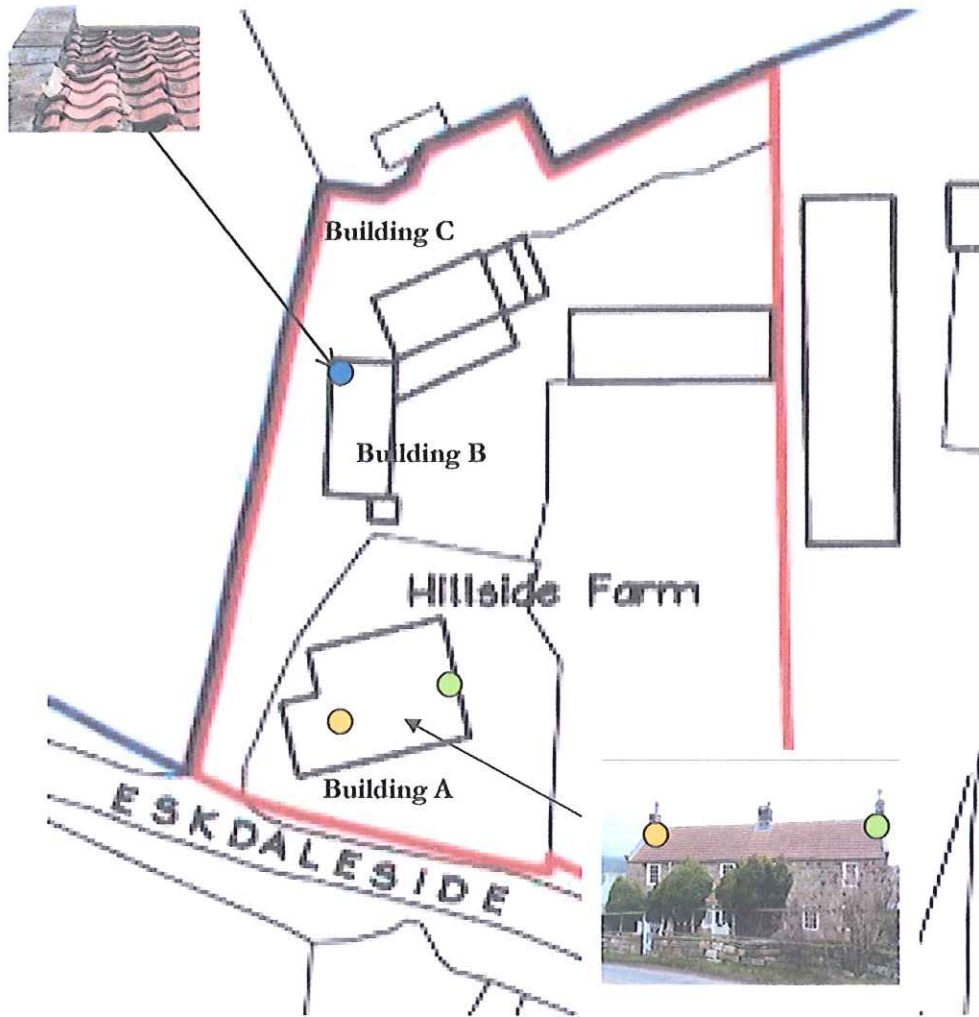


C.1.4 Scaled Plans and Photographs

Figure 1a – Current roost locations and destructive search focus points

Scale 1:1250

N ↑



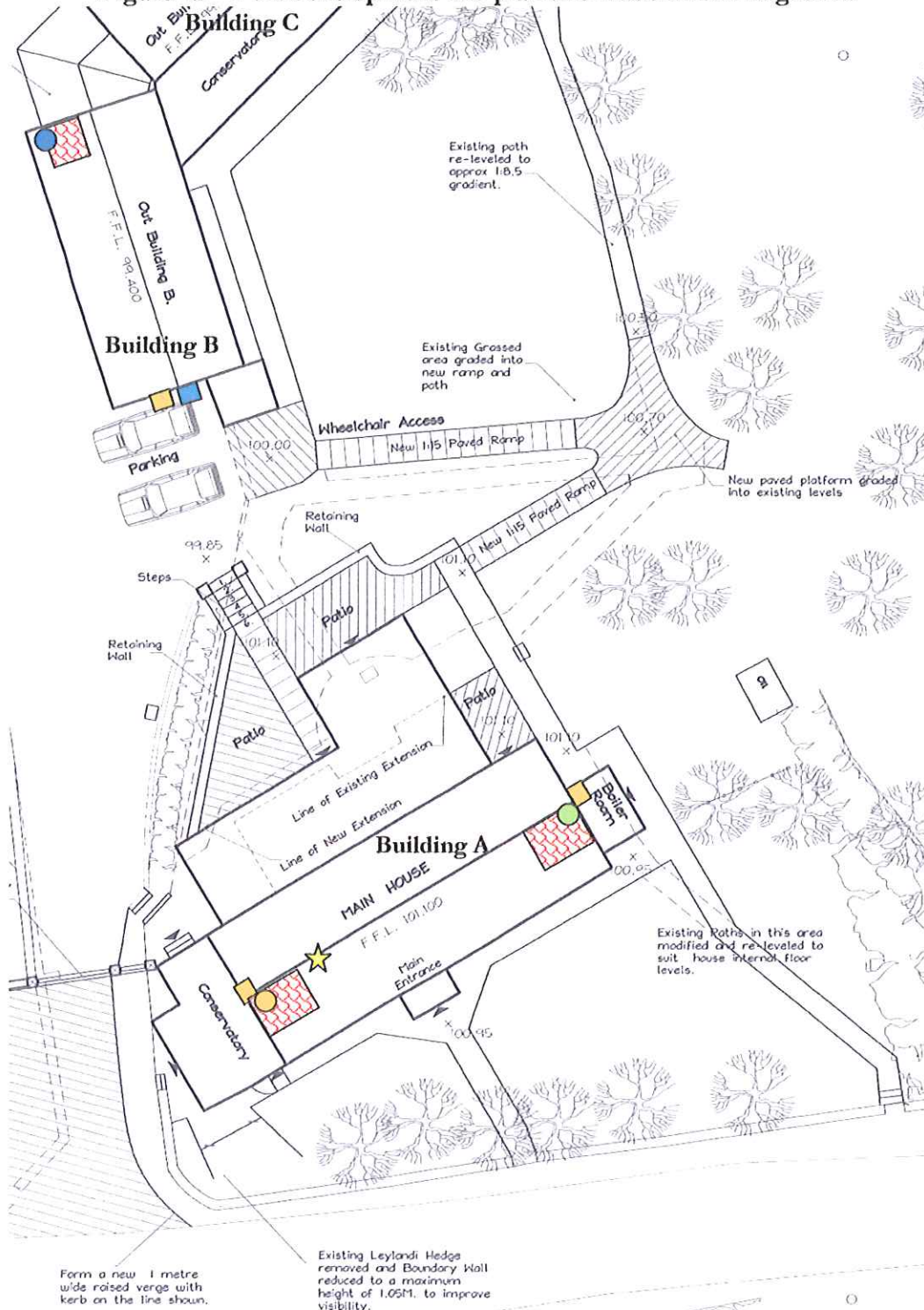
Key for figures 1a and 1b

- Common pipistrelle maternity roost
- Common pipistrelle temporary roost
- Unoccupied pipistrelle maternity roost
- 1FF or 1FQ permanent bat box
- 1FS temporary bat box



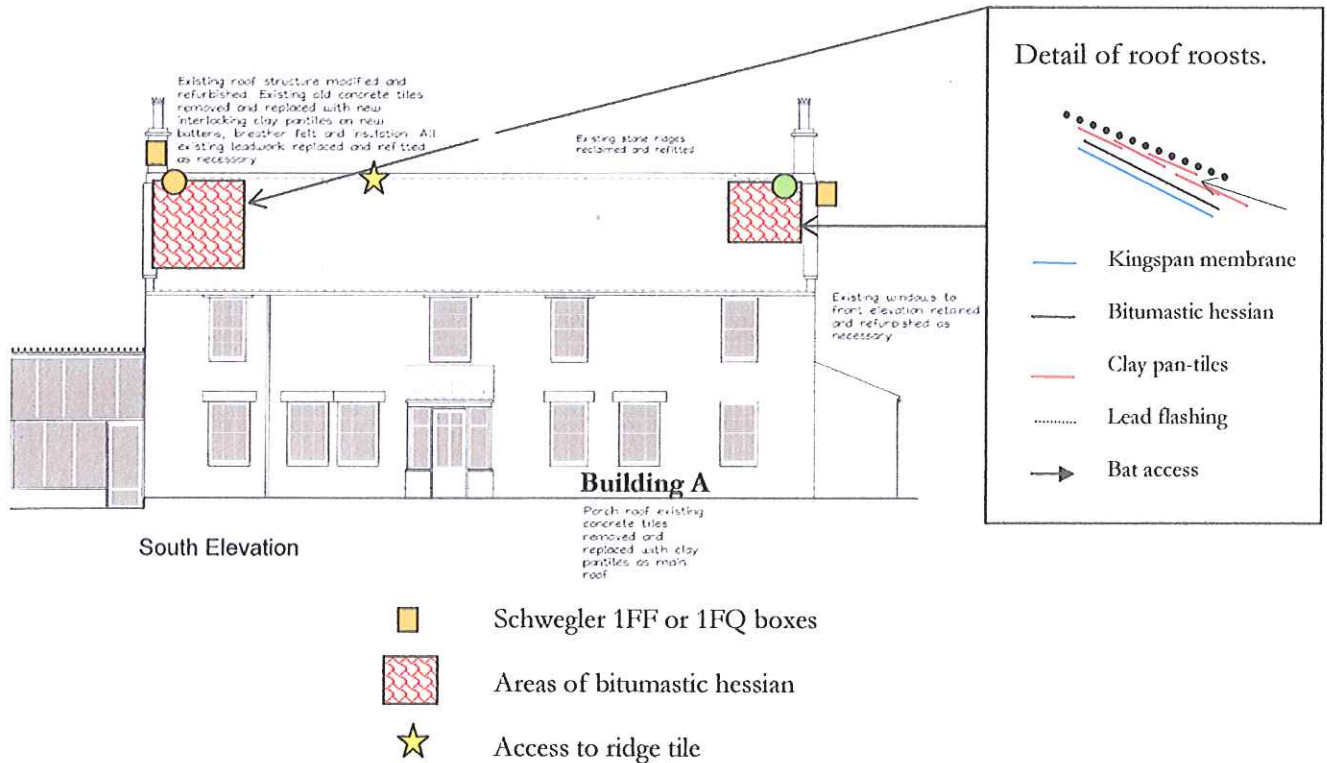
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**Figure 1b – Post development site plan and location of mitigation.**

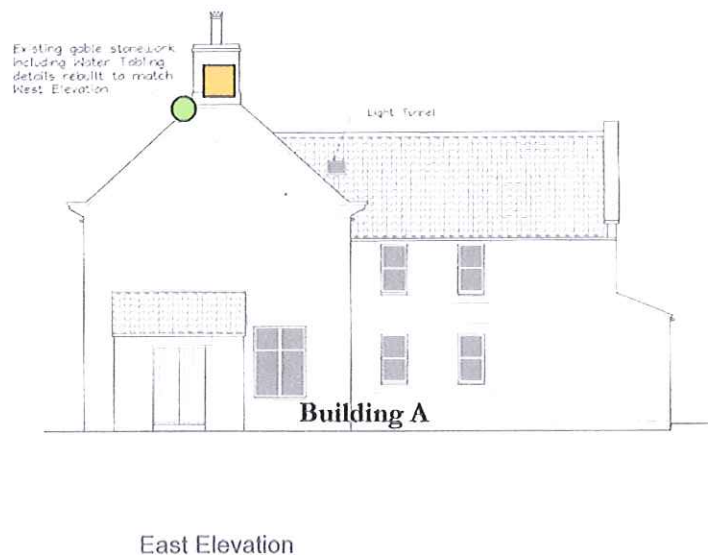


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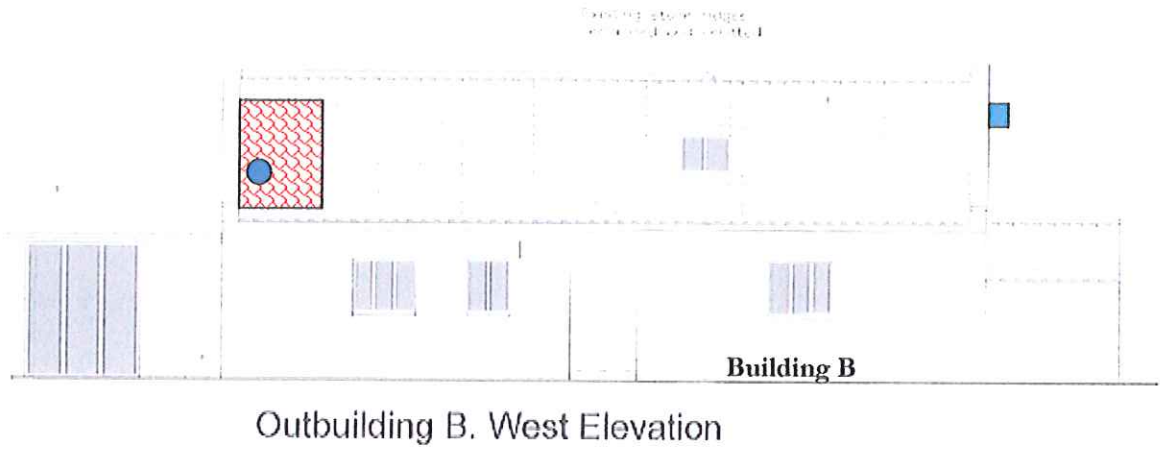
**Figure 2a: Bat roost provision on south elevation of Building A**



**Figure 2b: Bat roost provision on east elevation of Building A.**



**Figure 3a: Bat Roost Provision on west elevation of Building B**



**Figure 4 – Bat Boxes**



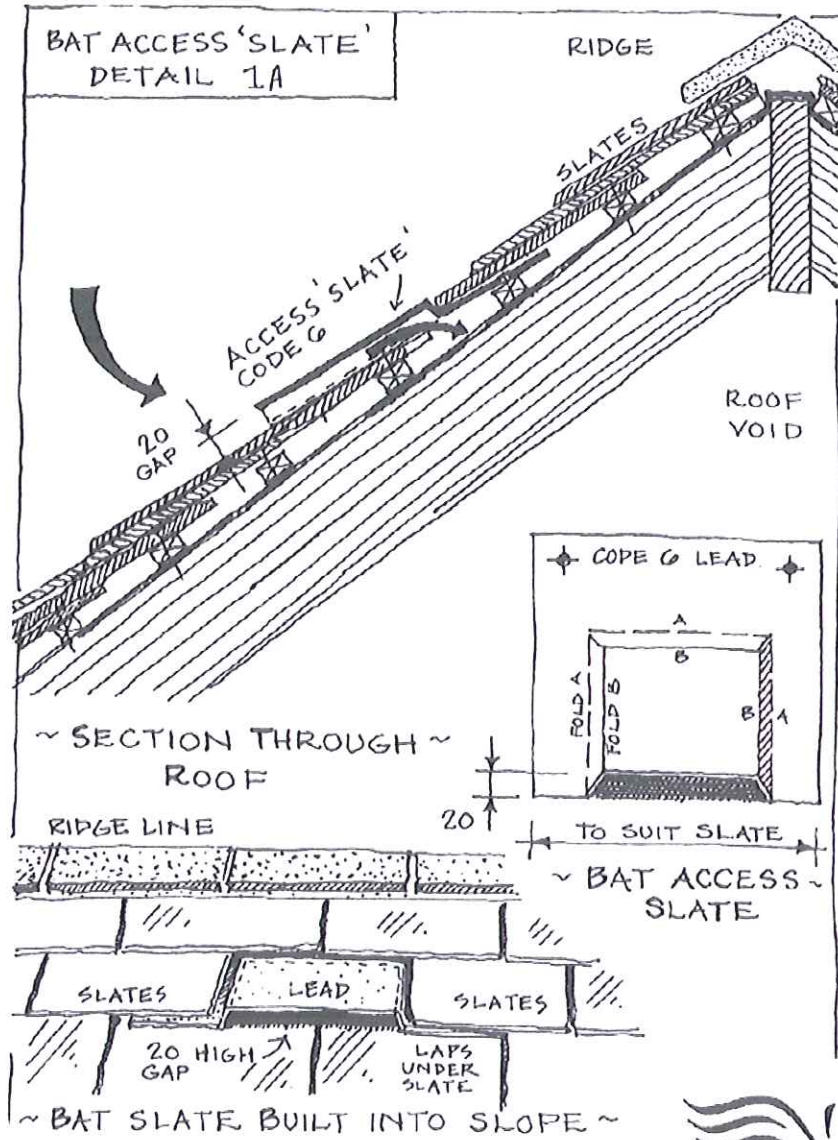
**Schwegler 1FF**



**Schwegler 1FQ**

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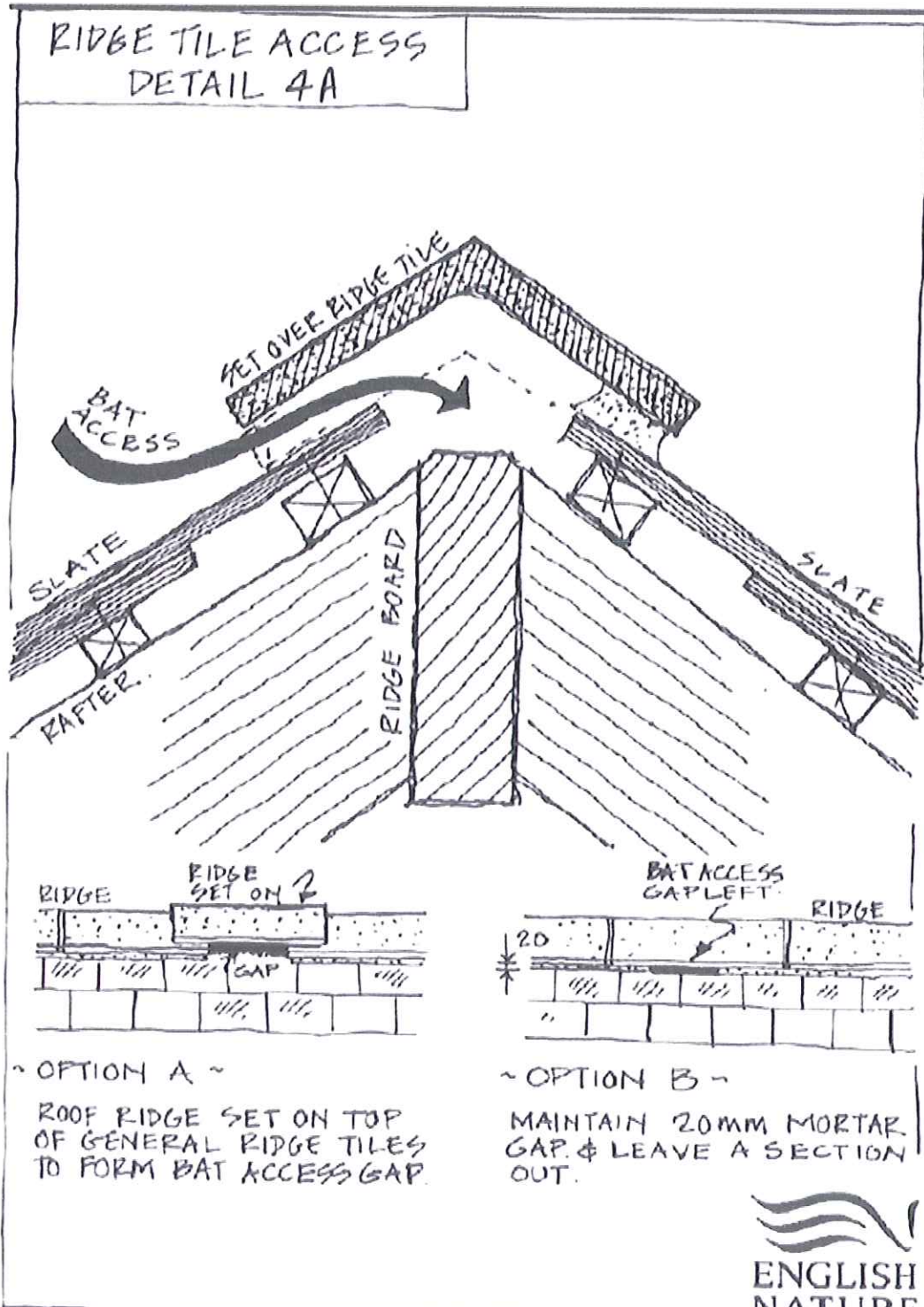
**Figure 5a – Access slate design detail.**



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Figure 5b: Ridge access design detail.



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**D Post-development site safeguard**

**D.1 Habitat/site management and maintenance**

Management and maintenance of the Site is the responsibility of Mr Rod Hodgson. Mr Hodgson has a positive attitude to the conservation of bats and wishes to protect and enhance habitats and roosting opportunities as much as possible.

The bat boxes have a life of 20 years and are self cleaning therefore will not require specific maintenance or management. Theoretically, they will not need replacing until 2032. However, the condition of the bat boxes will be monitored every two years and if they are found to be in poor condition, they will be replaced. This will be initiated by the Mr Hodgson. Bat boxes will be maintained in the autumn months.

**D2 Population monitoring, roost usage etc.**

**D2.1 A compliance monitoring visit** will be made by an experienced the ecologist once mitigation measures for bats are in place.

- This visit serves to check that the Method Statement requirements have been implemented correctly, and will take place while contractors are still on site so that any necessary amendments can be made immediately.
- The visit comprises a daytime survey.

**D2.2 Population monitoring visits** will be made between July 2012 and July 2013 by experienced bat ecologists. Licence periods cover post development monitoring so this must be undertaken as a condition of the licence. Post development monitoring data must also be collected in accordance with the licensed method statement and returns sent within the specified timeframe to Natural England and, if appropriate, to the Local Record Centre. Natural England (December 2011) state that *'it is a condition of this licence that any post development monitoring data (e.g. survey data and habitat assessment), including 'nil' returns, are submitted to Natural England to arrive not later than 14 days (two weeks) after the expiry of the licence. Post development survey data (except nil returns) must also be sent to the relevant Local Biological Records Centre within this time period'*. The population monitoring visits are necessary to determine:

- Whether the mitigation measures have been successful and whether any modifications may be necessary to improve success. This information is essential in informing future conservation strategies.
- The visit will comprise a building survey and a dusk emergence survey, commencing approximately 30 minutes before sunset and continuing for a period of around 2 hours. Bat detectors and recording devices will be used by all ecologists for these surveys.

No further maintenance will be required on these buildings for the foreseeable future.

**D.3 Mechanism for ensuring delivery of post-development works**

It is the responsibility of Mr Hodgson to ensure that the post development work is undertaken.

**E. Landownership**

**E1 Mitigation Landownership**

- E.1.1** The land where the mitigation will be implemented is owned by Mr R. Hodgson.  
I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts onto land outside the applicant's ownership – Yes/No/Not applicable
- E.1.2** I confirm that landownership consent/s has/have been granted to allow the creation of the proposed habitat compensation on land outside the applicant's ownership - Yes/No/Not applicable
- E.1.3** I confirm that consent/s has/have been granted by the relevant landowner/s for monitoring and maintenance purposes on land outside the applicant's ownership - Yes/No/Not applicable





**F Timetable of works.**

<b>A: Development activities and timing</b>		
<b>Activity</b>	<b>Timing</b>	<b>Notes</b>
Erect temporary 1FS bat box on Building B	February 2012	Temporary roost during re roofing works to building A.
Pre-construction preparation and construction of scaffold against Building A	February 2012	Pre-work inspections and supervised by ecologist. Prepare Building A and B roof stripping i.e. endoscope survey and blocking.
Erect two 1FF/1FQ bat boxes on Building A	February 2012	
Start and complete Building A roof strip and refurbishment.	February – 30 April 2012	Remove tiles and felt by hand; supervised by licensed ecologist.
Re-instate roosts in roof of Building A.	<30 April 2012	New roosting opportunities created.
Start and complete building external structure of building A	March – summer 2012	
Start and complete Building B roof strip and refurbishment.	May – August 2012	New roosting opportunities created.
Internal refurbishment of Building A.	Completed by December 2012	
Internal refurbishment of Building B.	Completed by March 2013	

<b>B: Post development monitoring</b>		
<b>Year</b>	<b>2012</b>	<b>2013</b>
<b>Details</b>	An emergence survey will be conducted in July. A bat box and bat loft check will be conducted between late- August and mid-October	An emergence survey will be conducted in July. A bat box and bat loft check will be conducted between late- August and mid-October

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