Bat Survey.
Mr N Smart,
King William Public House,
Station Road,
Market Bosworth,
Leicestershire.

Map Ref SK404030
27th April 2009.

DEVELOPMENT
SERVICES
30 APR 2009
RECEIVED

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Summary.

- **There is no evidence of bats roosting in the two storey building which it is proposed be converted to dwellings.**
- **The building provides some possible opportunities for bats to roost.**
- **There is no evidence of bats using the remaining single story buildings on site which it is proposed will be demolished.**
- **New roosting opportunities can be provided on site to meet the requirements of Planning Policy Statement 9 (Bio-diversity and Geological Conservation).**
- **Two emergence surveys were undertaken on site on the 25th and 26th April 2009 to determine whether there are bats emerging from the possible roost sites. No bats were observed emerging or returning at dawn.**

Introduction.

A bat survey of the buildings at the King William Public House, Market Bosworth was requested by Mr. N Smart and Haden Ritchie Bailey, Architects. The survey was to be undertaken in relation to the renewal of a planning application for conversion of the existing public house building into residential uses; 05/01123/FUL, Hinckley and Bosworth Borough Council. This survey has been undertaken to look for evidence of bats using the buildings as a place of shelter. The building survey would then direct emergence surveys of the site to determine where bats may be roosting, the number and species of bats. This will allow an assessment of what level of mitigation may be required to allow the planning application to be approved.



Legislation concerning bats.

The Wildlife and Countryside Act 1981 (WCA) protects bats and their roosts in England, Scotland and Wales. Some parts have been amended by the Countryside and Rights of Way Act 2000 (CRoW) which applies only in England and Wales, and by the Nature Conservation (Scotland) Act 2004 which applies in Scotland.

The Conservation (Natural Habitats, &c) Regulations 1994 (better known as the Habitats Regulations) implements the Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. All bats are listed as 'European protected species of animals'. The Habitats Regulations were amended in 2007

It is an offence for any person to:

- Deliberately capture, injure or kill a bat.
- Intentionally or recklessly disturb bats, where that disturbance may significantly affect the ability of those bats to survive, breed, rear or nurture their young, or is likely to significantly affect the local distribution or abundance of any bat species, whether in a roost or not.
- Damage or destroy a place of shelter (roost) of a bat, be that a resting or breeding place.
- Possess a bat, whole or in part, alive or dead.
- Intentionally or recklessly obstruct access to a roost.
- Sell or offer for sale or exchange whole or parts of bats, alive or dead.

Methodology.

The building surveys have been undertaken in accordance with Bat Surveys - Good Practice Guidelines, 2007, the Bat Conservation Trust. Surveys of the buildings were undertaken during the daytime to look for evidence of bats using the buildings, or likely roosting sites. The evidence of bats using a building as a place of shelter can include bat droppings, grease marks, urine stains or actual bats. This evidence is then considered when planning evening emergence or dawn activity surveys, using bat detectors. These surveys provide evidence of where bats are roosting and activity across the site by foraging or commuting bats.

The emergence surveys are started at sunset, with bats emerging from roosts at different times, dependant upon the species. Dawn surveys of bats returning to their roost are started one and a half hours before sunrise. Surveys can only be undertaken from April to October when bats begin to emerge from hibernation. Their emergence is dependant upon the weather, the bats only leaving their roost on warm nights when there will be sufficient insect prey around to make flight worthwhile. While bats will emerge in light rain and moderate winds, the surveys would not be undertaken when there is heavy rain and/or strong winds as this would not provide reliable data upon which to base the conclusions of the surveys.

Building Survey.

The buildings to be surveyed consisted of a brick built two storey building with cavity brickwork and hanging tile elevations. There are also a number of single storey solid brick, flat roofed store buildings and toilets on site. Access was available to all areas. The public house is surrounded by residential areas, but Market Bosworth is a small village surrounded by agricultural land under arable and pasture. There are many trees and hedgerows around the fields and small areas with mature woodland exist around the village boundaries. These will provide foraging habitat for bats and the hedgerows will aid commuting between sites. The surveyor has collected a grounded bat, a male Common Pipistrelle, from a residential property in Market Bosworth, approximately 300 metres from the survey property.



The results of the building survey are presented as the likelihood of bats using an area/feature;

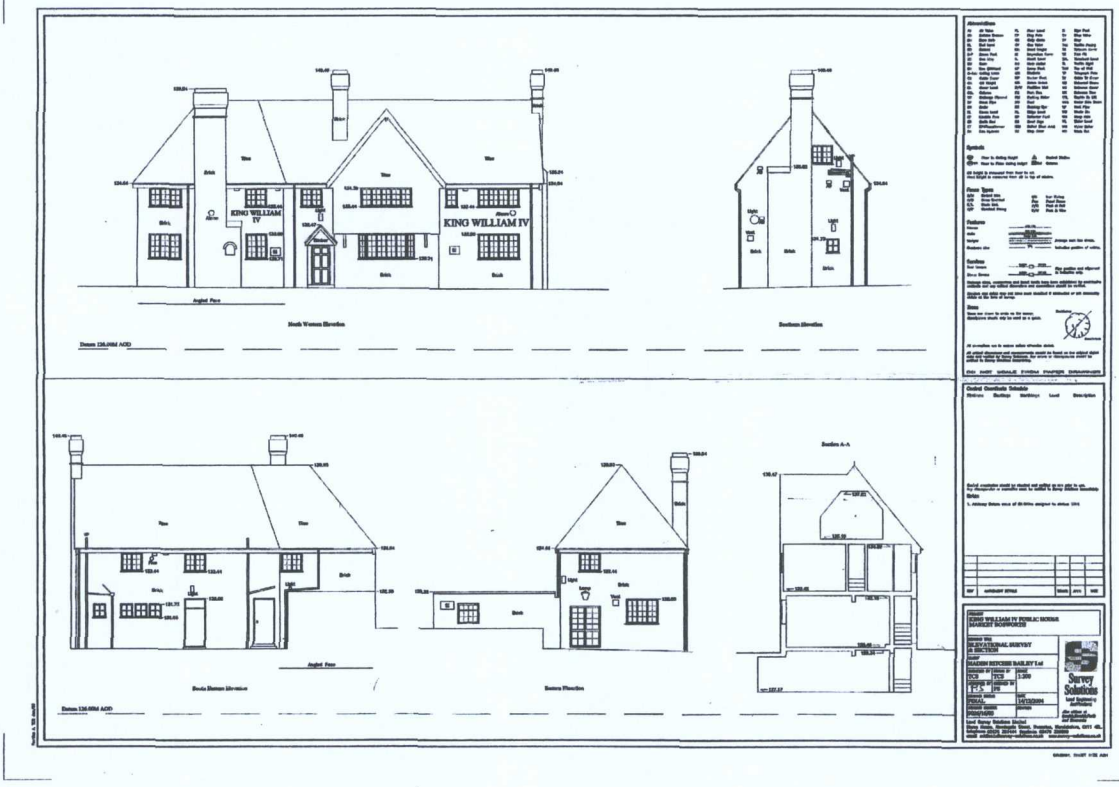
None.	Bats are unlikely to use the feature/area in any way.
Poor.	Bats may use the feature/area but it is not thought to be likely.
Possible.	The feature/area provides an area that may be used by bats but no direct evidence of occupation was found.
Definite.	Clear evidence of the use of a feature/area as a place of shelter, such as droppings.

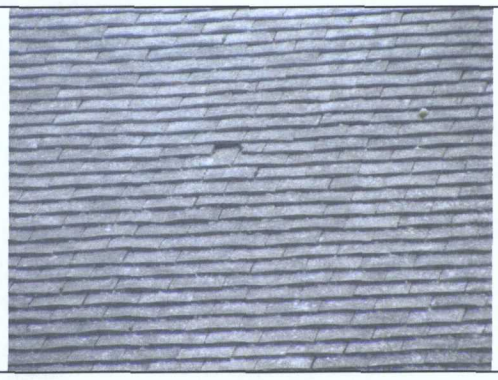
Two storey public house.

This is a two storey building of cavity brickwork with plain clay roofing tiles. There are hanging tiles on the main road frontage. The building has a cellar. There is no access to the cellar for bats. There is a single storey flat roofed toilet block built onto the main building. This provided no roosting opportunities for bats.


KING WILLIAM IV

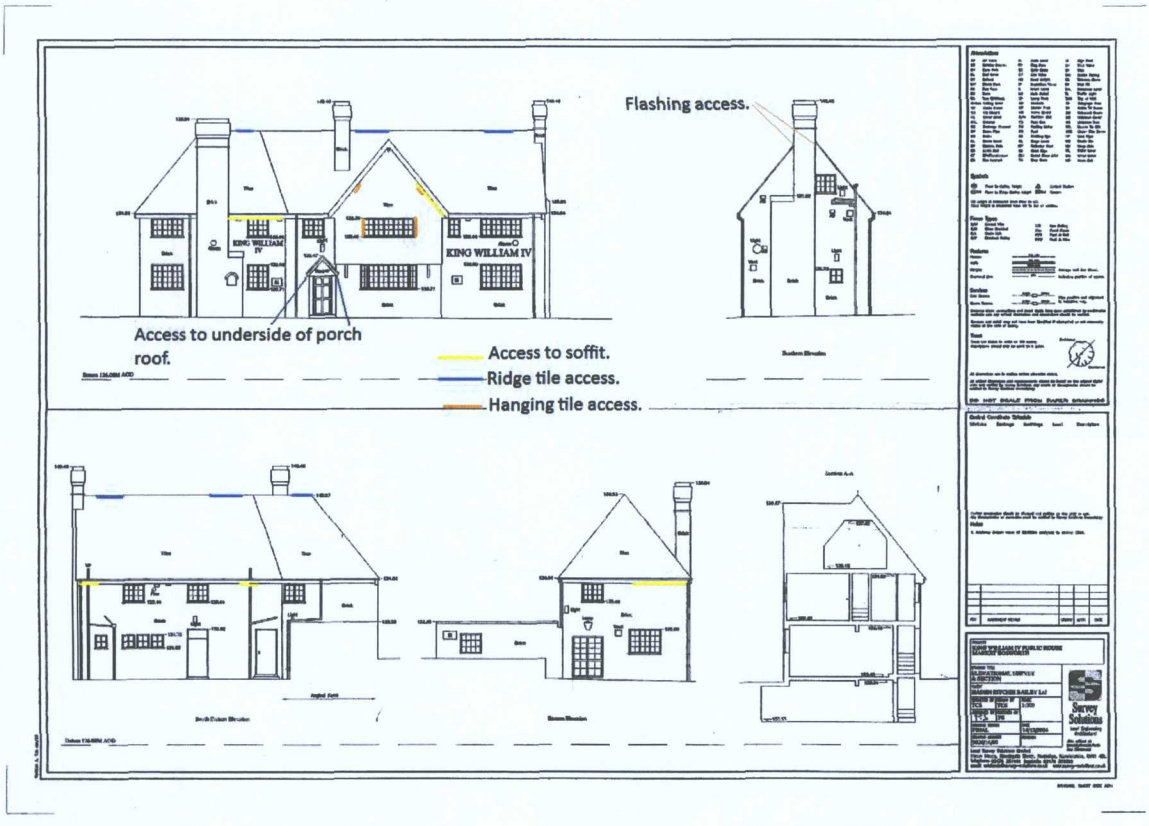



KING WILLIAM IV
KING WILLIAM IV

Feature.	Evidence of bats.	Likelyhood of bats roosting.	Photograph.
Beneath slipped or missing roof tiles.	None.	Possible. There is underfelt on the roof. Access to underside of roof tiles.	
Beneath ridge tiles.	None.	Possible. Ridge tiles have underfelt beneath them, providing roosting opportunity.	
In splits in timber purlins and rafters.	None.	None. Machine cut timber, no splits or gaps.	
Gaps in hanging tiles where purlins meet walls.	None.	Poor. Gaps few, very shallow and largely filled with cobwebs.	

			
Feature.	**Evidence of bats.**	**Likelyhood of bats roosting.**	**Photograph.**
Within timber soffit.	None.	Possible. Gaps evident on different elevations of property.	
Behind hanging tiles.	None.	Possible. Gaps sufficient for bats to access rear of hanging tiles.	

In roof space above porch, access from open eaves.	None.	Possible. Cavity in eaves beneath underfelt.	
Beneath chimney flashing on gable wall.	None.	Poor. Flashing access to underside of tiles poor and cobweb filled.	
Feature.	**Evidence of bats.**	**Likelyhood of bats roosting.**	**Photograph.**
Tile verges.	None.	None. No access to underside of tiles at verge.	



Single Storey Stores.



This building is a single storey set of storerooms built of solid brickwork with a flat roof. The parapet around the flat roof is in brickwork. These sections of the property do not provide any roosting opportunities for bats.

Emergence Surveys.

In order to determine whether bats are roosting in buildings or to allow the identification of bats emerging from buildings, one evening emergence survey was undertaken and one dawn survey. The aim of each survey was to look at different areas of the buildings to determine if bats were

emerging from a roost and to assess bat activity across the site. The surveys were undertaken using heterodyne and frequency division bat detectors from which it is possible to identify bats by their different ultrasound call. Bat passes were recorded during ten minute periods from sunset. Where a bat was seen it was recorded on a plan of the site to provide information upon movements across the site. A dawn survey was planned as well as the emergence survey for bats as they will 'swarm' around the entrance to their roost at dawn before re-entering.

The surveys were undertaken using a Batbox Duet heterodyne and frequency division bat detector with an Edirol R09 recording device.



No bats were recorded emerging from the building or passing across or close to the site.



No bats were recorded returning to the building or passing across or close to the site.

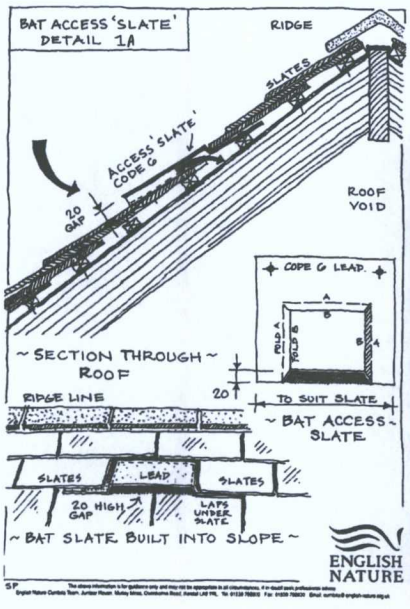
Conclusion.

There is no evidence of bats roosting in the buildings on site. The evidence from the emergence and dawn surveys did not produce any bat records at all in or around the site. This does not mean that there are definitely no bats in the building but that the chance of find bats during the conversion work is small and could managed by implementing a method of working that accounts for the possibility of finding bats.

The conversion to a dwelling may result in the loss of a number of possible roosting opportunities. New roosting opportunities can be created on site in mitigation for the loss of roosting opportunities, in support of Planning Policy Statement 9(Bio-diversity and Geological Conservation).

Mitigation.

New roosting opportunities can be created by installing a bat slate when replacing roof tiles. This will allow bats access to the rear of the tiles where they often roost between the underside of the tiles and the underfelt. Bat slates can be purpose made lead slates as per the attached diagram from Natural England.

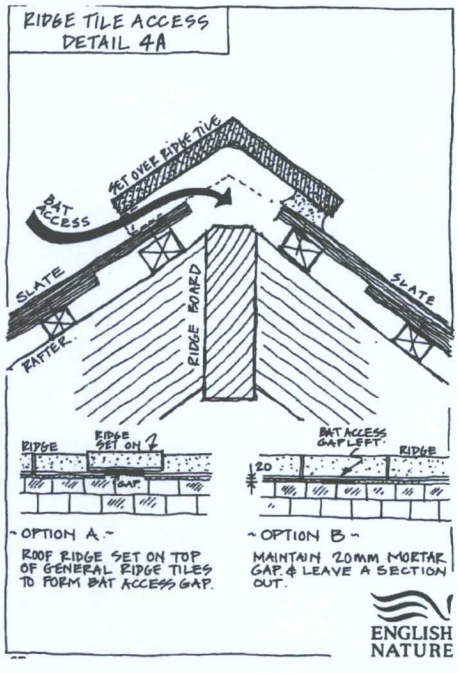




To best provide new roosting opportunities for bats on site it is recommended that a bat slate be fitted to the east and west facing roof elevations of the two storey building, to provide a variety of roosting environments.

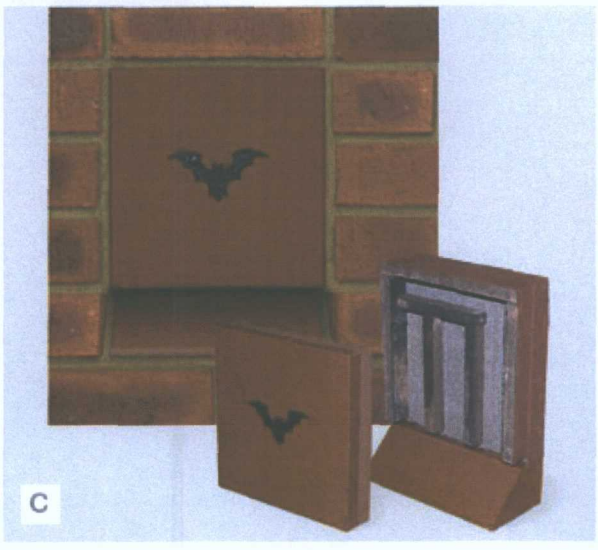
An alternative roosting opportunity can be created by providing access to the underside of the ridge tile. Access to this area can be created by lifting one ridge tile and bedding it to its neighbours using mortar. The bats would not have access to the roof space if underfelt is used. Where underfelt is installed it is recommended that a traditional bitumous underfelt be used in this area as it is more bat friendly.





An alternative roost to the use of bat slates within the brickwork of the southern gable wall, would be to fit a ready made bat box such as the one provided by Ibstock Brick which can have facing materials to match the building, or a Schwegler one which has a concrete finish for painting or rendering.

Ibstock Brick Bat Box.



Schwegler Bat Tube.



These can be built into a section of the chimney brickwork on the southern gable wall of the building. The bat box should be built into the brickwork at the gable apex where it would provide a roosting opportunitiy for crevice dwelling bats. The choice of style can be agreed with the Architects and Local Authority to meet the requirements of the development and ensure that Building Regulations are met.

Bats are affected by lighting around a development. The lighting of the area outside that used by the roosting bats should be restricted to low level down lights that do not shine directly on the new roost access.

Method of working.

Whilst there is no evidence of a large roost of bats in the building it is possible that individual bats may use the possible roosting sites at different times of year. Because of this possibility a method of working should be put in place when there are contractors on site. This would cover work to the roof or alterations to brickwork where there was access for bats.

- The demolition of any part of the building which takes place between early November and mid-March, when bats are hibernating, should be by hand where there are opportunities for bats to roost. If a bat is found the work should be stopped immediately and a bat worker called to come and deal with the bat. The bat should not be handled except by a licensed bat worker. Any bats found will be taken into care for release on site in the spring or relocated to a new roost opportunity on site.
- When roof or hanging tiles are removed they should be lifted away from the structure and battens, not slid or twisted, to avoid injuring any bats roosting beneath the tiles.

- Ridge tiles should be lifted without twisting or sliding to avoid injuring any bats roosting beneath.
- If a bat is found under a roof, hanging or ridge tile, the tile should be carefully replaced and work in that area stopped until such time as a licensed bat worker can attend the site.
- The bat can then be removed to a place of safety until such time that it can be released at night.

Bibliography.

Bat Mitigation Guidelines, A.J.Mitchell-Jones, English Nature, 2004.
Bat Surveys – Good Practice Guidelines, Bat Conservation Trust, 2007.
Bats and Lighting in the UK, Bat Conservation Trust and Institution of Lighting Engineers, 2007.

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