



11 OCT 2017

Heathrow 1

Manor Court, Harmondsworth

Initial Bat Survey

Project No. 85631

MARCH 2016

RSK



RSK GENERAL NOTES

Project No.: 856431-01

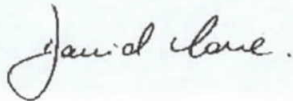
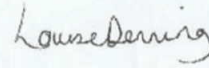
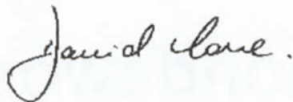
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Client: Heathrow 1

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Environment Ltd.

EXECUTIVE SUMMARY

1. This report presents the results of a Initial Building Assessment for bats in connection with proposals to convert two existing buildings at Manor Court, Harmondsworth, West Drayton, Middlesex,
2. The report is based on information collected in a field survey completed on 22 February 2016.
3. The site consists of four buildings the former stable block now converted to office space, the Office Barn, Manor Lodge and The Granary.
4. Immediately opposite the Stable Block and the Office Barn is a Grade 1 listed Tithe Barn owned by English Heritage and contains two small maternity roosts of Soprano Pipistrelle and Brown Long-eared bats.
5. The initial assessment of the buildings found that The former Stable Block, the Office Barn and The Granary all had HIGH potential for roosting bats with Manor Lodge having NEGLIGIBLE potential.
6. As all four buildings are to be developed further dusk emergence surveys and Dawn re-entry surveys will be required to confirm if bats are using these buildings or not.
7. No development should be undertaken on these buildings until the surveys are complete.
8. If bats are found then it is likely that a European Protected Species Licence will be required.

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1 INTRODUCTION

1.1 Purpose of this Report

This report presents the results of an Initial Bat Assessment undertaken to accompany a planning application for the conversion of four buildings at Manor Court, Harmondsworth, West Drayton, Middlesex, UB7 0NL (Ordnance Survey grid reference TQ 056 777). The works proposed include the conversion of three buildings to residential units, however The Granary will be used as an ancillary store to the residential buildings.. *Figure 1* shows the site location and an aerial photograph of the site and *Figure 2* shows the site layout.

This report is partly structured in the same way as a European Protected Species licence application *Method Statement Document*. This is to enable easy transfer of information into a licence application (which is likely to be needed in the case of this site) and to ensure that all issues relevant to obtaining a licence are addressed at an early stage.

1.2 Background to the Activity/Development

Manor Court consists currently of four buildings;

1. Manor Lodge (referred to as Building 1) currently in use as a temporary HMO, but this development will convert the building into two semi detached houses;
2. The former Stable Block (referred to as Building 2) currently configured as offices but this development will convert the building into 4 x 1 bedroom flats, 2 x 2 bedroom flats and 1 x 2 bedroom house;
3. The Office Barn (referred to as Building 3) currently configured as offices but this development proposes converting the building into 1 x Studio Flat, 1 x 1 Bedroom Flat, 1 x 2 Bedroom House and 1 x 3 Bedroom House.
4. The Granary (referred to as Building 4) currently used as a store and to be retained as a garden store.

Buildings 2, 3 and 4 are currently unoccupied and have been for some time, whereas Building 1 is currently configured as a HMO and has permission to be used as a HMO for three years.

1.3 Full details of the proposed works at the site

It is proposed to carry out the following works:

1. Building 1 – Internal reconfiguration of the building to convert the building into 2 three bedroom houses.

2. Building 2 – Internal reconfiguration of the existing building into 4 x 1 bedroom flats, 2 x 2 bedroom flats and 1 x 2 bedroom house which will involve the removal of internal walls, construction of new walls and repair of the existing roof covering.
3. Building 3 – Internal reconfiguration of the existing building into 1 Studio Flat, 1 x 1 bedroom flat, 1 x 2 bedroom house and 1 x 3 bedroom house which will involve the removal of internal walls, construction of new walls and repair of the existing roof covering.
4. Building 4 – No works proposed as this is to be retained as a store.

1.4 Ecological Context

1.5 Structure of this Report

The remainder of this report is structured as follows:

- *Section 2* describes the survey and assessment methods;
- *Section 3* presents the survey results;
- *Section 4* evaluates the results;
- *Section 5* lists the references; and
- *Section 6* provides the figures and plates.
- *Appendix A* explains the protected species legislation;
- *Appendix B* presents the target notes and a list of plant species;
- *Appendix C* presents details of the background data search;
- *Appendix D* details of the abbreviations used in the text; and
- *Appendix E* presents the results of the DNA analysis.

2 SURVEY AND SITE ASSESSMENT

2.1 Pre-existing information on the bat species at the site

There is no knowledge of any bats using the four buildings at the site that are the subject of the proposed planning application.

However there are bats present within the Grade 1 listed Tithe Barn immediately adjacent to Buildings 2 and 3. This building has recently been the subject of a European Protected Species Licence (EPSL) application on behalf of the owners English Heritage as part of the restoration of the barn. The EPSL was for two species *Plecotus auritus* (Brown Long-eared bat) and *Pipistrellus pygmaeus* (Soprano Pipistrelle) bats. Two small maternity colonies were discovered using the barn.

This report is partly structured in the same way as a European Protected Species licence application *Method Statement Document*. This is to enable easy transfer of information into a licence application (which is likely to be needed in the case of this site) and to ensure that all issues relevant to obtaining a licence are addressed at an early stage.

2.2 Status of the Species at the site

Table 1

Species	Conservation Status Assessment		
	Local	County	Regional
<i>Pipistrellus pygmaeus</i> (Soprano Pipistrelle)	This bat is frequent and common in the local area	This bat is frequent and common throughout Middlesex and is the second most frequent species encountered	This bat is frequent and common throughout the South East of England and is the second most frequent species encountered.
<i>Plecotus auritus</i> (Brown Long-eared)	This bat is frequent and common in the local area of the London Borough of Hillingdon	This bat is frequent and common throughout Middlesex and is the Third most frequent species encountered	This bat is frequent and common throughout the South East of England and is the second most frequent species encountered.

2.3 Objectives of the Survey to inform this Proposal

The objectives of the surveys were to:

- establish the potential for bats to roost within the building;
- establish the presence or absence of bat roosts in the building;
- confirm species identification and possible roost status of any bats roosting in the building;
- confirm exit and entry points for the bats; and
- Confirm if the works would impact on any identified roosts within the building.

The above information enables an accurate assessment of the potential impacts of the proposed works.

2.4 Site/Habitat Description

2.4.1 Site Description

The site is on the western edge of Harmondsworth in Middlesex. The site consists of four buildings that form part of the Manor Farm complex. Outside of the site boundary but immediately opposite the Office Barn is a Grade 1 listed Tithe Barn owned by English Heritage.

All open areas of the site consist of amenity grassland and hard standing. There is a tree line of conifers along the eastern side of the site separating the site from the local parish church.

2.4.2 Building Descriptions

Building Number and type	Building Description
Building 1 – Manor Farmhouse	The house is of brick construction constructed over two floors. The house has a slate roof which is in excellent condition.
Building 2 – Former Stable Block	This building is constructed from brick over two floors. The building has a pitched clay tile roof with some missing tiles and the majority of tiles which are handmade are uneven with many gaps. The roof has valleys and gable ends, There are two small dormers on the rear of the building. Internally the building has been converted throughout into office space. The building does not have a loft void with all offices on the first floor being extant to the roof covering. There is a small inaccessible void between the roof tiles and the

	internal ceilings.
Building 3 – Office Barn	This is a large building constructed as offices. The building is constructed from brick, with a pitched clay tile roof. There are corrugated panels within the lower levels of the roof on its eastern elevation. There are three large dormers within the western elevation of the building. The building exterior is generally well maintained with no gaps or crevices within the walls. The roof tiling is uneven with a few missing tiles and many gaps beneath the tiles. The interior of the building is open plan over both floors and is extant to the roof. There is a single small void within the building at its north-east corner where there is a void containing water tanks etc. This void is extant to the roof showing that the roof has an F1 bitumastic lining. The rest of the building has a small inaccessible void between the roof covering and the internal ceilings.
Building 4 – The Granary	This is a small square timber framed building with a pitched and hipped roof covered with clay tiles. Internally the building is open to the roof.

2.4.3 Description of offsite areas

The surrounding landscape is characterised by agricultural fields and patches of woodland to the north, east and south. Heathrow Airport is 800 meters to the south of the site.

There are numerous lakes all within 1km of the site to the south, west and north of the site. There are small areas of woodland to the west, and north-west providing some areas of potential foraging for bats.

There is the M4 motorway ½ km to the north and the M25 1km to the west of the site. These motorways are likely to form a barrier to dispersal of bats that are present at the site.

2.5 Field Surveys

2.5.1 Visual Inspections of Buildings

Table 3 – Details of Visual Inspections of Building

Date of Survey Visit	Structure Reference	Equipment Used	Weather - Temperature Beaufort Wind Scale
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			Precipitation
22.02.2016	Buildings 1, 2, 3 and 4	Hand Held Lamps, Mirrors	6°C 1 Light Drizzle
Comments:	This survey was carried out by David Cove.		

Table – Surveyor details for visual inspections

Date	Surveyor Details:
15.01.2016	David Cove Principle Ecologist Licence No: 2015-14432-CLS-CLS Natural England Class Registration 00727 Licence Level 3 Jess Breeze Ecologist Licence No:2015-17895-CLS-CLS Natural England Class Registration 179117 Licence Level 2

2.5.1 Survey Methods for Visual Inspection of Buildings

Ecologists from RSK Environment inspected the building internally and externally using the methods described below:

The building was assessed for its suitability to support roosting bats using primarily a 1,000,000-candle power torch but also binoculars, ladders and an endoscope where necessary. The buildings were assessed for their bat roost potential according to the following factors that influence the likelihood of bat roosting.

- Surrounding habitat: whether there are potential flight-lines and bat foraging areas nearby.
- Construction detail: the type and construction of architectural features such as drainage pipes or naturally occurring voids within the buildings.
- Building condition: Whether there were suitable gaps within the external construction of the buildings that may give access to internal voids.
- Internal conditions: bats favour sheltered locations with a store temperature regime, protection from the elements and little wind/light/rain penetration.
- Potential bat-access points: whether there is flight and crawl access.
- Potential roosting locations: descriptions of all bat-accessible voids, cracks and crevices.

A description of each building was recorded on survey sheets, and digital photographs of them were taken as a record. The buildings were categorised into a standard scheme as described in *Table* below.

Table 6. Classification Criteria for Bat Roosting Potential of Buildings and Built Structures.

Category (Potential to support roosting bats)	Description
Negligible potential	Buildings with no features suitable for supporting roosting bats. Modern, well maintained buildings or built structures that provide few opportunities for bat access/roosting (<i>i.e.</i> with no cracks or crevices); composed of prefabricated steel and sheet materials; no internal loft space; high level of regular disturbance; high interior light levels and subject to large temperature fluctuations. Buildings may be surrounded by poor or sub-optimal bat foraging habitat. No evidence of bats found.
Low Potential	Buildings with limited features to support roosting bats - shallow crevices where mortar is missing between brickwork. Buildings may have large open locations subject to large temperature fluctuations. Buildings may be surrounded by poor or sub-optimal bat foraging habitat. No evidence of bats found.
Moderate potential	Buildings with some features suitable for roosting bats – building usually of brick or stone construction with a small number of features suitable for roosting bats – loose roof or ridge tiles, gaps in brickwork, gaps under fascia boards, and/or sealed internal loft space. No evidence of bats found.
High Potential	Buildings with a large number of features or extensive areas with potential for roosting bats. Sheltered locations with a store temperature regime and suitable access points. Features can include: weatherboarding and/or hanging tiles with gaps/large (>20cm) roof timbers with mortise joints, cracks, holes); poorly maintained fabric providing ready access into roofs, walls, but at the same time not being draughty and cool; large and complicated roof void with unobstructed flying spaces. No evidence of bats found.
Confirmed roost	Bats or evidence of bats recorded within the building during the initial inspection surveys or during dusk/dawn surveys. A confirmed record (supplied by records centre/local bat group) would also apply.

A visual and systematic examination of the building was made for bats and evidence of bats, both internally and externally where access was made. Features inspected (if present) included:

- roof slopes and the ridge;
- wall, window and door surfaces;
- window and door frames;
- wall bases;
- wall ledges and wall tops;
- cracks, crevices and sheltered voids;
- the floors and stored items; and
- external features such as soffits and lead flashing.

Evidence of roosting bats includes droppings, urine stains, staining from fur-oils, scratch marks, wear marks, feeding remains, dead bats, odour, squeaking and chattering, and in some cases the absence of cobwebs.

Bat droppings provide evidence that bats use a structure and can help to identify roosting locations where piles accumulate beneath roosting sites or entrance points. The location, size, shape, texture and colour of the droppings can be used to aid species identification. All droppings found were compared to a reference collection of droppings from known species. The number and condition (age) of droppings can indicate the size of the roost and when it was last used.

2.5.2 Ground Level Inspection Methods for Trees

All trees on site were inspected from ground level using high powered binoculars to identify Potential Roost Features including splits, rot holes, woodpecker holes, dense ivy cover and any other feature that may have provided potential roost features suitable for bats. Any PRF's identified were graded using the grading system from the Bat Survey Guidelines (Hundt, 2012).

Table 7 - Tree assessment categories for potential bat roosts

Tree Category (Potential to support roosting bats)	Description
Known or Confirmed Roost	Roost confirmed
Category 1*	Trees with multiple, highly suitable features capable of supporting larger roosts
Category 1	Trees that have a high potential to support bat roosts, with fewer features than Category 1*, or potential to be used by single bats
Category 2	Trees with a moderate/low potential to support bat roosts. There are no obvious features, but the tree is of an age and size where an elevated survey may result in features being found.
Category 3	Trees with negligible potential to support bat roosts

2.6 Survey Results

2.6.1 Visual Inspections of Buildings

Table 8 – Visual Inspection Results

Date	Species Observed	Roost Type	Structure Reference	Roost Location	Potential Access Points	Dimensions of existing roosts
22.02.2016	None	None Identified	Building 1 – Manor Lodge	None Found	None Found	
Notes and Observations: The exterior of the building was examined using close focusing binoculars. The roof was in excellent condition with all of the slates on the roof being laid flat with no missing or broken slates that could allow bats into the interior voids of the building. All of the walls of the building were in good condition with no cracks or crevices that would be suitable for roosting bats. All of the soffits surrounding the roof line were all intact and had no gaps where access could be gained to the interior of either the soffit or the roof void. This building is classified as having NEGLIGIBLE potential as a bat roost as shown in Table 4, Section .						
22.02.2016	None	None Found	Building 2 – Former Stable block	None Found	Beneath roof tiles throughout structure	Various
Notes and Observations: This building is located on the west side of the site immediately north of Manor Lodge and just south of the end of the Tithe Barn. The exterior of the building was examined using close focusing						

binoculars. The roof was examined and a small number of tiles were found to be missing on various elevations. The rest of the roof tiles are handmade clay tiles and are uneven throughout. There are extensive gaps where the tiles do not lay flat potentially allowing bats to gain access to the small void between the roof covering and the internal ceilings of the building.

The external walls are all in good condition with no suitable gaps or crevices suitable for bats. The soffits surrounding the roof line of the building are in fairly good condition, there are no cracks or splits in the wood that form the soffits and they are positioned close to the walls of the building with no gaps suitable for bats.

This building is classified as having HIGH potential as a bat roost as shown in Table 4, Section .

22.02.2016	None	None Found	Building 3 – Office Barn	None Found	Beneath roof tiles throughout structure	Various
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Notes and Observations: This building is located on the east side of the site. The exterior of the building was examined using close focusing binoculars. The roof was examined and a small number of tiles were found to be missing on various elevations. The rest of the roof tiles are handmade clay tiles and are uneven throughout. There are extensive gaps where the tiles do not lay flat potentially allowing bats to gain access to the small void between the roof covering and the internal ceilings of the building.

The external walls are all in good condition with no suitable gaps or crevices suitable for bats. The soffits surrounding the roof line of the building are in fairly good condition, there are no cracks or splits in the wood that form the soffits and they are positioned close to the walls of the building with no gaps suitable for bats.

All gable ends were inspected and all found to have intact pointing preventing any access at these locations.

This building has a small void on the first floor at its north-east corner. The interior was examined and no evidence of bats was found i.e. no droppings or feeding remains. The small void between the roof covering and the internal ceilings on the first floor of the building was inaccessible but could provide roosting opportunities for bats beneath the roof covering.

This building is classified as having **HIGH** potential as a bat roost as shown in Table 4, Section

22.02.2016	None	None Found	Building 4 – Granary	None Found	Beneath roof tiles throughout structure	Various
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Notes and Observations: This building is located at the south end of Building three centrally within the site. This is a small rectangular building and is constructed on a timber frame with timber cladding on all walls. The roof is pitched and hipped with clay tiles. The clay tiles have gaps throughout allowing access to the interior. The interior was inspected and found to be of open construction throughout and no bats or evidence of bats was found.

This building is classified as having **HIGH** potential as a bat roost as shown in Table 4, Section

2.6.1 Visual Inspections of Trees

All trees inspected were around the boundary of the site. None of the trees around the boundary revealed any suitable PRF's.

2.7 Interpretation/Evaluation of Survey Results

Table 10 – Interpretation/Evaluation

Structure Reference	Species	Count/Estimate of number of individuals	Site Status assessment – roost types	Conservation Significance of Roost	Use and importance of the site throughout the year
Building 1 – Manor Farmhouse	None	None	None	None	This building has not been used by bats. There are no entry points suitable for bats.
Building 2 – Former Stable block	None Found	None	Potential for Maternity Roosts, Summer Roosts of individual bats beneath roof tiles	Potentially High	There is no physical evidence of use of this building by bats however until emergence surveys are carried out it cannot be confirmed if bats use this building.
Building 3 – Office Barn	None Found	None	Potential for Maternity Roosts, Summer Roosts of individual bats beneath roof tiles	Potentially High	There is no physical evidence of use of this building by bats however until emergence surveys are carried out it cannot be confirmed if bats use this building.
Building 4 -	None Found	None	Potential for Maternity Roosts, Summer Roosts of individual bats beneath roof tiles	Potentially High	There is no physical evidence of use of this building by bats however no emergence surveys are required as there are no plans to carry out works to this building.

The above table shows that during the inspection surveys of the buildings no bats or evidence of bats was discovered. Building 1 has no potential to support bats as there are no potential access points where bats could enter the building. Buildings 2 and 3 have extensive potential for roosting bats between the roof covering and the internal ceilings an area that could not be inspected. Crevice dwelling bats frequently roost beneath roof tiles and as the site already has records of crevice roosting bats in the adjacent Tithe Barn the potential for these buildings cannot be ruled out without additional surveys. Building 4 although having High Potential to support roosting bats



there was no evidence found to suggest that the building has been used historically by roosting bats and all areas of the structure were able to be inspected during this survey. No works are proposed to this structure therefore no further surveys will be required.