

Preliminary Roost Assessment and Preliminary Ecological Appraisal at Chambers Farm, White Cross Road, Wilburton



Prepared for Morton and Hall Consulting Ltd

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Report Type	PRA and PEA
Client	Morton and Hall Consulting Ltd

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VALIDITY

Due to the dynamic nature of ecological conditions the results of the survey(s) and related conclusions and recommendations as contained within this report should only be considered valid for up to 24 months from the date the last survey was undertaken.

Any alterations to the site proposals may invalidate the recommendations contained within this report.

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1.0 Summary

- 1.1 A Preliminary Roost Assessment and Preliminary Ecological Appraisal have been carried out at Chambers Farm, White Cross Road, Wilburton, Cambridgeshire.
- 1.2 The survey of the building for potential bat roosts indicated negligible potential to support roosting bats.
- 1.3 The survey of the trees for potential bat roosts identified the trees as having negligible potential to support roosting bats.
- 1.4 No birds were recorded during the survey; the buildings and trees have potential to support nesting birds.
- 1.5 The survey for Badger produced a negative result with no Badger setts and no evidence of Badger using the site or surrounds.
- 1.6 The survey for reptiles considered the site unsuitable for supporting reptiles.
- 1.7 A habitat assessment of the site was carried out to look at its suitability to support Hedgehog, it was thought that the site and surrounds are optimal for supporting Hedgehog.
- 1.8 Sixteen common and widespread species of plants were recorded.

2.0 Introduction

- 2.1 Hillier Ecology Limited were commissioned by Morton and Hall Consulting Ltd to carry out a Preliminary Roost Assessment and Preliminary Ecological Appraisal at Chambers Farm, White Cross Road, Wilburton, Cambridgeshire.
- 2.2 The survey was carried out to support the demolition of the existing dwelling and rebuild.

3.0 Site Details

- 3.1 The site is located at NGR TL4947576225 (Appendix 1).
- 3.2 The site is situated in the open countryside; the site and its surrounds are made up of the following habitats:
 - Dwelling
 - Assorted Buildings
 - Hardstanding
 - Mature trees
 - Arable
 - Running Water

- 3.3 The low diversity of habitats found is thought to be unsuitable for supporting protected species.
- 3.4 The building is constructed as follows and shown in the photographs below.

Building Name/Number		Chamber	s Farm	
Building Grid Reference	TL4948076221			
Type of Building	Dwelling			
Age of Building		Unkno	own	
Condition of Building		Semi-De	erelict	
Wall Construction		Bric	k	
Roof Construction	Slate/Asbestos Sheet			
Roof Type	Gable			
Potential Access Points		Open a	ccess	
for Bats				
Roof Void	Yes	X	No	
Insulation	Yes	Х	No	
Structure of Roof			<u> </u>	
Roof Lining	Felt			
Dimensions of Roof Void	10m x 5m x 18m			
Suitable Roosting Features	None			
Evidence of Bats	None			
Evidence of Birds	None			
Evidence of Barn Owl	Not applicable			
Potential to Support	Negligible			
Roosting Bats				
Suitable for Hibernating Bats	No			



Plate 1 Dwelling-End View



Plate 2 Dwelling-Internal



Plate 3 Dwelling-Internal



Plate 4 Dwelling-Internal



Plate 5 Dwelling-Internal



Plate 6 Survey Area



Plate 7 Survey Area



Plate 8 Survey Area



Plate 9 Surrounds

4.0 Survey Methodologies

Bats Buildings

- 4.1 The building was assessed as to its potential to hold bat roosts.
- 4.2 The buildings survey involved a thorough internal and external search of all suitable cavities, holes and crevices, all suitable areas and floors were inspected for the following signs:
 - Bat droppings
 - Stains around roosting places and entrance points
 - Urine marks
 - Prey remains
 - Areas devoid of cobwebs
 - Live or dead bats
 - Suitable cracks and crevices for bats to enter
- 4.3 The building was categorised using the criteria below.

	Assessment of Potential to Support Roosting Bats - Categories for Buildings	
Negligible potential	Buildings with no features capable of supporting roosting bats. Often these buildings are of a 'sound' well-sealed nature or have a single skin and no roof void. They tend to have high interior light-levels, and little or no insulation. Buildings without any roofs may also fall into this category.	
Low potential	Buildings with limited features for roosting bats (e.g. shallow crevices where mortar is missing between building blocks/bricks). They may have open locations which may be subject to large temperature fluctuations and bat-access points may be constrained. No evidence of bats found (e.g., droppings / staining). 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. Buildings usually of brick or stone construction with a small number of features of potential value to roosting bats e.g., loose roof / ridge tiles, gaps in brickwork, gaps under fascia boards, and/or warm sealed roof-spaces with under-felt. Evidence of bats found a small scattering of droppings or urine staining. Could be suitable for summer day roost.	
High potential	Buildings with a large number of features or extensive areas of obvious potential for roosting bats. Generally, they have sheltered locations, with a stable temperature regime and suitable bat-access points. Evidence of bats found droppings/urine staining. Could be suitable for a maternity roost or summer day roost.	
Confirmed roost	Bats discovered roosting within the building or recorded emerging / entering the building at dusk / dawn. A confirmed record (as supplied by an established source such as the local bat group) would also apply to this category.	

Bats (Trees)

- 4.4 The survey involved a thorough search of all the trees looking for potential roost sites, which are the following:
 - Cracks
 - Cavities
 - Loose Bark
 - Broken Limbs
 - lvy
- 4.5 A search was made for the following signs:
 - Faeces
 - Urine staining
 - Fur rubbing
 - Live bats
- 4.6 The trees were categorised using the criteria below.

Assessment o	f Potential to Support Roosting Bats - Categories for Trees
Negligible potential	Tree contains no suitable features for roosting bats. These can include young trees without ivy and without loose bark and obvious cracks / fissures. Usually saplings, semi-mature specimens with a small girth or mature trees which do not tend to form fissures as readily such as sycamore.
Low potential	Tree contains limited features suitable for roosting bats. Usually young (sapling or semi-mature) trees with some ivy or some loose bark but no obvious cracks or fissures. No evidence of bats found (e.g., droppings / staining).
Moderate potential	Tree contains some features suitable for roosting bats. Trees with some cracks or fissures and/or large amounts of ivy / loose bark. Usually, semi-mature or mature specimens. Trees tend not to have large splits, hollow trunks or woodpecker holes. No evidence of bats found.
High potential	Tree contains features that are highly desirable for roosting bats. Trees with woodpecker holes / large cracks and/or crevices. Often with a hollow trunk. May support very dense ivy. No evidence of bats found.
Confirmed roost	Bats discovered roosting within the tree or recorded emerging / entering a tree at dusk / dawn. Trees found to contain conclusive evidence of occupation by bats, such as bat droppings. A confirmed roost record (as supplied by an established source such as the local bat group) would also fall into this category.

- 4.7 The site was assessed as to its potential suitability for bats based on habitat features and professional judgement.
- 4.8 The site was categorised using the criteria below.

Assessme Foraging	ent of Potential to Support Bats - Categories for Commuting and
Negligible potential	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low potential	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e., not very well connected to the surrounding landscape by other habitat.
	Suitable, but isolated habitat, that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate potential	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.
	Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High potential	Continuous, high-quality, habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.
	High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.
	Site is close to and connected to known roosts.

Birds

- 4.9 An assessment of the sites suitability to support breeding birds has been carried out.
- 4.10 All birds seen and heard were recorded.

Badger

- 4.11 A walkover survey of the site has been carried out to search for the following signs (Harris et al 1989):
 - Setts
 - Latrines
 - Dung
 - Badger Hair
 - Footprints
 - Pathways
- 4.12 Evidence of Badger activity, if found, was recorded.

Reptiles

- 4.13 A walkover of the site has been carried out to assess if the habitat is suitable to sustain a population of reptiles. The following habitats were looked for:
 - Bare Ground
 - Variety of Sward Heights
 - Natural Refugia
 - Basking Areas

Hedgehog

- 4.14 A habitat assessment of the site was carried out to look at its suitability to support Hedgehog.
- 4.15 Favoured habitats are shown below:
 - Gardens
 - Hedgerows
 - Woodlands
 - Grasslands
 - Parkland

Flora

4.16 A walkover the site was carried out to record native plants.

5.0 Survey Results

- 5.1 The survey was carried out on 13th July 2022.
- 5.2 The weather conditions at the time of the survey were overcast with a Beaufort Windscale of 2 and a temperature of 21°c.
- 5.3 The survey was carried out by Howard Hillier who holds Natural England Bat Survey Licence 2016-21564-CLS-CLS, assisted by Joe Hillier.

Bats (Buildings)

5.4 The dwelling indicated negligible potential to support roosting bats with no evidence of bat usage and no suitable roosting features identified.

Bats (Trees)

- 5.5 The trees offered negligible potential to support roosting bats with no potential roost features present
- 5.6 The site is of moderate suitability for commuting and foraging bats.

Birds

5.7 There was no evidence of nesting birds using the buildings or trees; both offer suitable nesting habitat.

Badger

5.8 No Badger setts were present on site and no evidence of Badger using the site or surrounds was recorded.

Reptiles

5.9 The habitat did not meet the criteria as suitable reptile habitat; lacking in a variety of sward heights as well as the floral diversity required to provide food.

Hedgehog

5.10 A habitat assessment of the site was carried out to look at its suitability to support Hedgehog, the site and surrounds were considered optimal Hedgehog habitat.

Flora

5.11 Sixteen common and widespread species were recorded; a species list can be found in (Appendix 6).

6.0 Conclusions

Bats (Buildings)

6.1 The dwelling has negligible potential to support roosting bats due to an absence of evidence of bat usage, roosting features and an unstable microclimate, due to the poor condition of the building.

Bats (Trees)

6.2 The assessment of trees for potential bat roosts, assessed the trees as having negligible potential to support roosting bats with an absence of potential roost features.

Birds

6.3 The survey recorded no evidence of nesting birds having used the buildings or trees was recorded; both offer suitable nesting habitat.

Badger

6.4 The survey for Badger produced a negative result with no Badger setts and no evidence of Badger using the site.

Reptiles

6.5 The survey for reptiles produced no evidence to suggest that reptiles are present on the site; the habitat did not meet the criteria as suitable reptile habitat comprising in the main of improved grassland and tall ruderals, lacking in a variety of sward heights, the low diversity of flora and therefore invertebrates would not provide an adequate food source.

Hedgehog

6.6 The habitat assessment found the site to be sub-optimal for Hedgehog, but Hedgehog homes would offer enhancements.

Flora

6.7 All species are considered common and widespread.

Recommendations

Bats

- 7.1 To provide enhancements Vivara Pro Build-in bat boxes should be installed in new builds; advice on the number and location should be sought from the ecologist.
- 7.2 It will be necessary to employ a bat friendly lighting scheme avoiding lighting to newly created roost features and retained trees and generally directing light downwards through the use of hood and cowls.

Birds

- 7.3 Work to the buildings and trees has the potential to disturb nesting birds and should be completed outside of the bird breeding season (March to September inclusive), if this is not practical then a qualified ecologist should make an inspection prior to work being carried out.
- 7.4 The installation of nest boxes in/on new buildings will mitigate any loss of habitat and provide enhancements; Sparrow Terraces, House Martin Nests and Swift boxes should be installed with advice on the number and location sought from the ecologist.

Hedgehog

7.5 A Hedgehog home should be installed.

General

7.6 Enhancements are shown in (Appendix 7).

8.0 Legal Protection

Bats

8.1 The Conservation of Habitats and Species Regulations 2017 transpose into UK law Council Directive 92/43/EEC of 992 (often referred to as the Habitats Directive). All bats are listed under Annex IV and some (horseshoe bats, Bechstein's and Barbastelle) are also listed under Annex II which relates to Special Areas of Conservation.

These Regulations make it an offence to:

- Deliberately capture, injure or kill a bat.
- Deliberately disturb bats in a way as to be likely significantly to affect the ability of any significant groups of bats to survive, breed or rear or nurture their young, or to affect the local distribution of abundance of that species.
- Damage or destroy a breeding site or resting place of a bat.
- Keep, transport, sell or exchange, or offer for sale or exchange a live or dead bat or any part of a bat.
- 8.2 In addition the Wildlife & Countryside Act 1981 (as amended) makes it an offence to:

Intentionally or recklessly

- Disturb any bat whilst it is occupying a structure or place which it uses for shelter or protection.
- Obstruct access to any structure or place which any bat uses for shelter or protection.
- 8.3 Penalties are fines of up to £5000 per bat and up to 6 months custodial sentence.

Birds

- 8.4 All common wild birds are protected under The Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to:
 - Kill, injure or take any wild bird.
 - Take, damage or destroy the nest of any wild bird while it is in use or being built.
 - Take or destroy the egg of any wild bird.
- 8.5 Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

Badger

- 8.6 The Badger receives legal protection under The Protection of Badgers Act 1992.
- 8.7 The following is a summary of the offences contained in the act. It is a criminal offence to commit any of the following:
 - To interfere with a sett by damaging or destroying it.
 - To obstruct access to, or any entrance of a Badger sett.
 - To disturb a Badger when it is occupying a sett.
- 8.8 A Badger sett is defined by the legislation as "any structure or place, which displays signs indicating current use by a Badger" and this is taken by Natural England to include seasonally used setts.

Reptiles

- 8.9 Common Lizard, Slow Worm, Adder and Grass Snake are all protected under Section 9 of the Wildlife and Countryside Act, 1981 (as amended) against injuring, killing or selling.
- 8.10 For developers in England, Wales or Scotland to reduce the risk of prosecution under the Wildlife and Countryside Act, 1981 (as amended), wherever works may impact on reptiles there must be evidence that reasonable effort was made to avoid breaking the law, including proof of adequate surveys.

The Natural Environment and Rural Communities Act (2006)

8.4 Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006) sets out a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) drawn up in consultation with Natural England, provides a guide to local and regional authorities when implementing their duty as defined in Section 40 of the NERC Act 2006.

- "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." - Section 40(1).
- "Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". - Section 40(3).

National Planning Policy Framework (NPPF) (2019)

8.5 Sets out Government Policy on Biodiversity and Nature Conservation and places a duty on planners to give material consideration to the effect of a development on legally protected species when considering planning applications. NPPF also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

9.0 References

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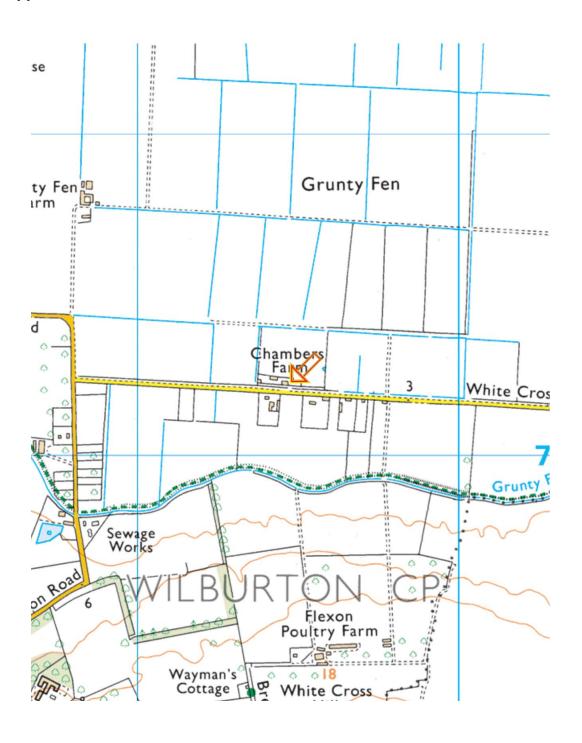
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10.0 Appendices

Appendix 1 Site Location



Appendix 2 Exisiting Block Plan, Elevations and Location Plan



Appendix 3 Existing Site Plan

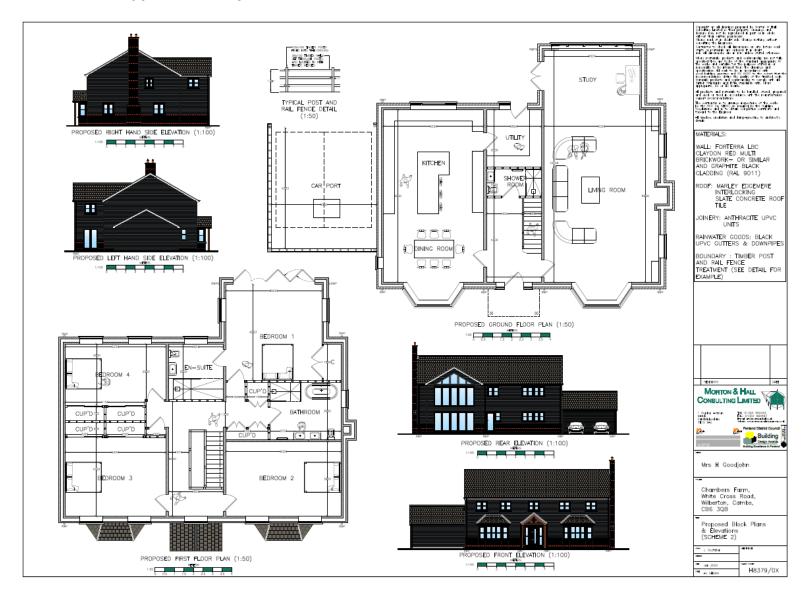


Appendix 4 Proposed Site Plan and Elevations





Appendix 5 Proposed Block Plans and Elevations



Appendix 6 Species List-Flora

Autumn Hawkbit

Bramble

Broad-leaved Dock

Cleavers

Common Nettle
Creeping Thistle
Curled Dock
False Oat-grass
Greater Plantain

Herb-Robert Hogweed

Ribwort Plantain Scentless Mayweed

Spear Thistle

Yarrow

Yorkshire Fog

Leontodon autumnalis

Rubus fruticosus Rumex obtusifolius Galium aparine Urtica dioica Cirsium arvense

Rumex crispus

Arrhenatherum elatius

Plantago major

Geranium robertianum Heracleum sphondylium Plantago lanceolata

Tripleurospermum inodorum

Cirsium vulgare Achillea millefolium Holcus lanatus

Appendix 7 Biodiversity Enhancements

Bat Boxes

Vivara Pro Build-in WoodStone Bat Box 4





The Vivara Pro Build-in WoodStone Bat Box has been specifically designed to fit into the cavity of house walls. It features a slim sized entrance hole which can sit flush in a course of bricks to provide a discreet entry way for bats. It is manufactured from hard-wearing WoodStone and plywood with removable side panels so that several boxes can be placed side by side. Position the box at least 2m above ground level away from artificial light sources. WoodStone is a mixture of sawdust from FSC wood sources and concrete, and it is designed to last for years. It is breathable so there will be no problems with condensation and Woodstone maintains a consistent temperature inside, providing excellent insulation for roosting bats.

Bird Boxes





Suitable for House Martin 3

Suitable for Swift x3



Suitable for House Sparrow 3

Hedgehog Homes





A completely redesigned hedgehog nest that incorporates all the best features of previous nests, is far safer for the hedgehog, and eliminates loose entrance tunnels and plastic pipes by building all these features into one robust design.

This nest box has been designed and ultimately tested extensively with great

success over a period of 12 months by the Hedgehog Preservation Society and their hedgehog "carers", whose help is much appreciated. The final nest design has also been approved by Dr Pat Morris of London University who has contributed to its development.

Features:

- * Fully built-in tunnel with 5" square access for even the largest hedgehog to avoid unwanted visitors.
- * Raised 'step' at entrance to enable the box to be partly buried.
- * Totally safe nesting area well away from the tunnel entrance.
- * Lower roof to enable the hedgehog to build a snug nest.
- * Specially designed inbuilt "unlockable" ventilation to provide just the right temperature and humidity without draughts.
- * Totally removable roof for easy inspection and cleaning.
- * Underfloor runners letting air to the underside of the box but allowing the box to be pushed easily into place in undergrowth, etc.
- * Reinforced and strengthened corners making a sturdy nest box.
- * One compact unit easy to position.

Specification

Exterior quality 12mm resin bonded ply. The box remains untreated on the inside. Best situated in a quiet corner of the garden and covered with leaves and other garden debris. Removable lid for cleaning purposes and reinforced corners, manufactured with surface sunk nails to resist rusting.

Nest box size: Height 22cm x Width 38cms x Length 47cm