



Hillier Ecology

Preliminary Roost Assessment on a Barn at Ashwell Hall Farm, Great Bardfield, Braintree, Essex



**Prepared for Cabotlane
April 2022**

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Site Name	Barn at Ashwell Hall Farm
Report Type	Preliminary Roost Assessment
Client	Cabotlane

Name	Position	
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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 has been conducted on a barn at Ashwell Hall Farm Great Bradfield, Braintree, Essex.

1.2 The survey of the of the existing barn for potential bat roosts identified it as having negligible potential to support roosting bats with no evidence of bat usage and no suitable roosting features identified.

1.3 Bats may use the site and surrounds for foraging and commuting purposes.

1.4 No further bat surveys are required.

1.5 No evidence of nesting birds was encountered during the inspection.

2.0 Introduction

2.1 Hillier Ecology Limited were commissioned by Cabotlane to carry out the Preliminary Roost Assessment and prepare the report.

2.2 The survey was conducted to assess the impact the proposed renovation of the building would have on bat species.

3.0 Site Details

3.1 The site is located at NGR TL7078130238 (Appendix 1).

3.2 The site is situated in the open countryside in the Braintree district; the site and its surrounds are made up of the following habitats:

- Barn
- Assorted Buildings
- Mature trees
- Hedgerows
- Stables
- Barn Conversions
- Arable

3.3 The diversity of habitats found is thought to be capable of supporting bat species.

3.4 The barn is constructed as follows and shown in the photographs below.

Building Name/Number	1			
Building Grid Reference	TL7076330236			
Type of Building	Barn			
Age of Building	20 th century			
Condition of Building	Good			
Wall Construction	Breezeblock and Wood			
Roof Construction	Corrugated Tin			
Roof Type	Gable			
Potential Access Points for Bats	Open access			
Roof Void	Yes	X	No	
Insulation	Yes		No	X
Structure of Roof	Not applicable			
Roof Lining	None			
Estimated Dimensions of Roof Void	20m x 10m x 2.2m			
Suitable Roosting Features	None			
Evidence of Bats	None			
Evidence of Birds	None			
Evidence of Barn Owl	Not applicable			
Potential to Support Roosting Bats	Negligible			
Suitable for Hibernating Bats	No			



Plate 1 Barn-Front View



Plate 2 Barn-Side View



Plate 3 Barn-Side View



Plate 4 Barn-Internal



Plate 5 Barn-Internal



Plate 6 Barn-Internal



Plate 7 Barn Roof-Internal



Plate 8 Barn Roof-Internal



Plate 9 Surrounding Area



Plate 10 Surrounding Area



Plate 11 Surrounding Area



Plate 12 Surrounding Area



Plate 13 Barn and Surrounds

4.0 Survey Methodologies

Bats Buildings

4.1 The building was assessed as to its potential to hold bat roosts.

4.2 The building 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.

4.4 The site was assessed as to its potential suitability for bats based on habitat features and professional judgement.

4.5 The site was categorised using the criteria below.

Assessment of Potential to Support Bats - Categories for Commuting and Foraging	
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.

5.0 Survey Results

5.1 The survey was conducted by Howard Hillier, who holds Natural England Bat Survey Licence 2016-21564-CLS-CLS, assisted by Joe Hillier.

5.2 The survey was conducted on 23rd March 2022 in the following weather conditions; sun, Beaufort Windscale 1 and a temperature of 17°C.

Bats

5.3 The building assessment for potential bat roosts identified the barn as having negligible potential to support roosting bats with no evidence of bat usage and no suitable roosting features.

5.4 The site and surrounds offer moderate foraging and commuting habitat for bat species.

Birds

5.5 No evidence of nesting birds was recorded during the survey of the barn.

6.0 Conclusions

Bats

6.1 The barn offers negligible potential to support roosting bats with an absence of evidence of bat usage and suitable roosting features.

6.2 It is possible that bats may be using the site and surrounds for foraging and commuting purposes, but the proposed alterations will have little impact on these bats.

6.3 It would be beneficial to install a bat boxes on the building to create new roosting opportunities.

Birds

6.4 There was no evidence of birds nesting in the barn surveyed but it would be beneficial to create new opportunities for nesting birds by installing bird boxes on the building.

7.0 Recommendations

Bats

7.1 To enhance biodiversity Vivaro Pro built in bat boxes, or equivalent should be installed on the south facing elevation of the barn at a height of at least three metres.

7.2 Any external lighting should be kept to a minimum and directed downwards using hoods and cowls; particular care will be taken to avoid lighting newly created roost features.

Birds

7.3 To enhance biodiversity a nest box for House Sparrow, House Martin and Swift should be installed between north and east elevations.

7.4 Bat and bird boxes are shown in (Appendix 5).

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 1992 (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, 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 a 6 month 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.

The Natural Environment and Rural Communities Act (2006)

8.6 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 (2019)

8.7 National Planning Policy Framework (NPPF) (2019) 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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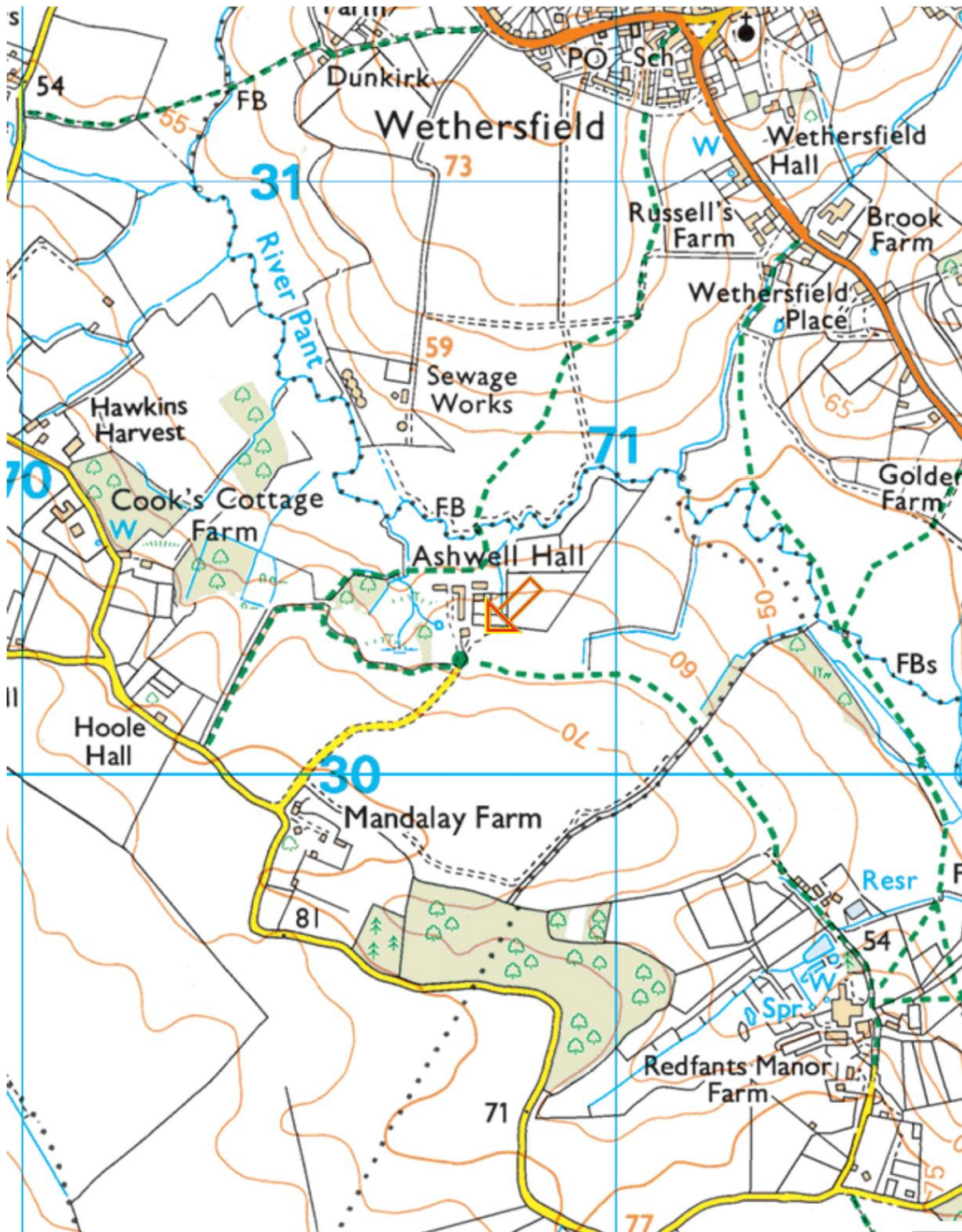
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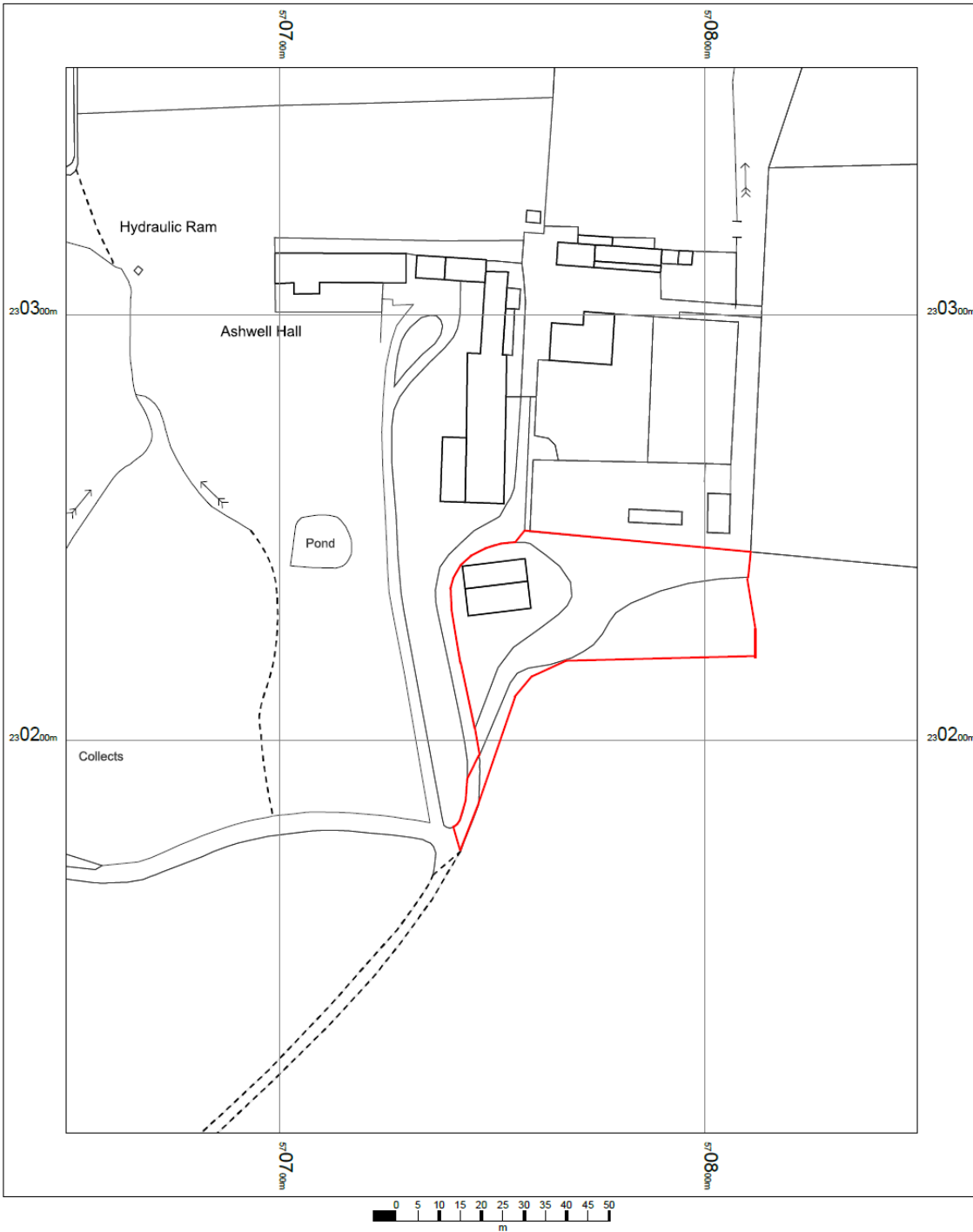
10.0 Appendices

Appendix 1 Site Location

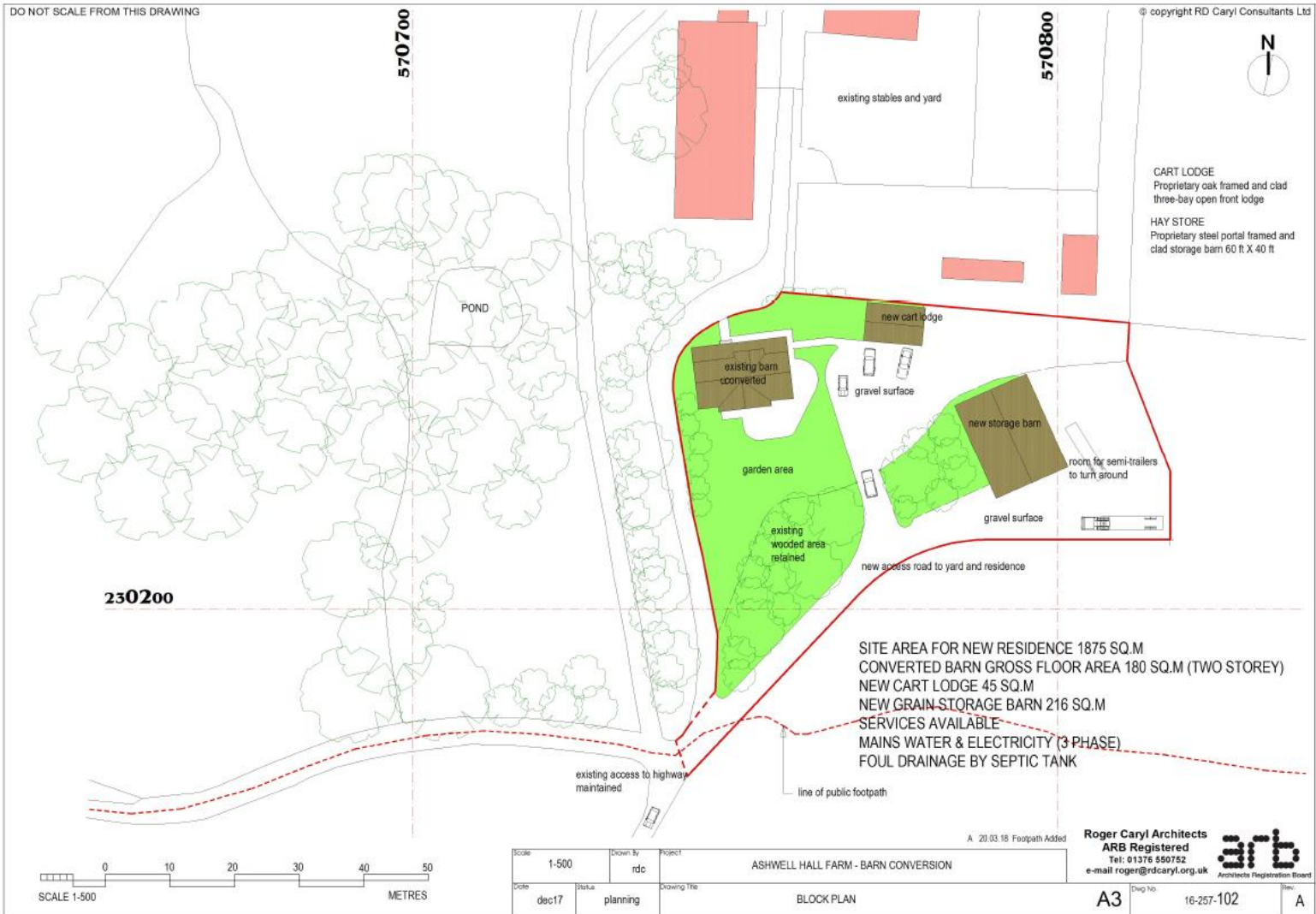


Appendix 2 Location Plan

Ashwell Hall Farm



Appendix 3 Block Plan



Appendix 4 Proposed Elevations

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green colour coated profiled steel sheeting

SOUTH

EAST

cream painted cement render
light grey powder coated aluminium door and window frames
facing brickwork in chimney

WEST

NORTH

0 2 4 6 8 10
SCALE 1-100 METRES

Scale	1-100	Drawn By	rdc	Project	ASHWELL HALL FARM - BARN CONVERSION
Date	Jun17	Status	planning	Drawing Title	PROPOSED ELEVATIONS

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Architects Registration Board

A3 Drawn No. 16-257-104 Rev.

Appendix 5 Biodiversity Enhancements

Bat Boxes



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



Woodstone Sparrow Nest Box

The House Sparrow Nest Box is from the Vivara Pro range and is manufactured from WoodStone - a mix of concrete and FSC wood fibres. This material is strong and highly insulating which helps to provide a thermally stable environment within the box. It also protects against damage from predators such as woodpeckers, squirrels and cats. It has two breeding chambers making it particularly suitable for house sparrows as they prefer to nest in colonies.

The House Sparrow Nest Box can be integrated into the masonry of a new house or fixed onto an external wall using strong screws and wall plugs (not included). If possible, it should be positioned near to vegetation and at a minimum of 2 m above ground.



Cambridge Swift Nest Box System x 2

The Cambridge Swift Nest Box system comprises a nesting block built into a standard block or brick wall and faced with either a red or buff brick entrance. The nesting block has two nesting depressions and a large space for the young to exercise. Cost-effective concrete construction.



House Martin Nest Box x 2

House Martins build nests constructed from mud under the eaves of buildings often in colonies averaging five nests. Unfortunately, changes to house construction and roof design mean that suitable nest sites have dramatically declined. Providing an artificial nest provides a great alternative and House Martins will readily use artificial nests and encourage other birds to nest nearby. These House Martin Nests have been specially designed to appeal to House Martins and are constructed from exterior grade plywood and WoodStone, a mixture of FSC wood fibres and concrete. The backing to the nests is exterior grade plywood, making them lightweight and easy to fit, but hard-wearing. These nests should be sited underneath the eaves on exterior walls of your house or outbuildings, at a minimum height of 2m above the ground.