

## Hole Farm Ecological Impact Assessment

Document no: 1  
Revision no:1

**Forestry England**

**Hole Farm Community Woodland**  
18 April 2023

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**Client name:** Forestry England  
**Project name:** Hole Farm Community Woodland  
**Document no:** 1  
**Revision no:** 1  
**Date:** 18 April 2023  
**Project no:** 678379CH  
**Project manager:** Georgina Ellis  
**Prepared by:** Eliza Eakin  
**File name:** Hole Farm Ecological Impact Assessment

## Document history and status

Revision	Date	Description	Author	Checked	Reviewed	Approved
1	18/04/2023	Ecological Impact Assessment	Eliza Eakin	Nick Clark	Georgina Ellis	

## Distribution of copies

Revision	Issue approved	Date issued	Issued to	Comments

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### Jacobs U.K. Limited

West Wing  
1 Glass Wharf, Temple Quay  
Bristol, BS2 0ZX  
United Kingdom

T +44 (0) 117 457 2500  
F [Faxnumber]  
www.jacobs.com

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## 1. Introduction

- 1.1.1 The objective of this Project is to create a new community woodland on the site of an existing arable farm. It will involve the conversion of 99.09ha of arable land to a mixture of woodland, meadow, and other grassland, and the creation of a number of ponds. The existing hedgerows on site will be enhanced, and new hedges will be created.
- 1.1.2 Furthermore, the woodland creation in this Project will create a link between two areas of designated Ancient Woodland north and south of the site: Coombe Green Wood and Codham Hall Wood respectively.
- 1.1.3 Existing buildings on the site will be demolished to make way for a new community room and community tree nursery, and a large network of accessible footpaths will open up the site for the public.

## 1.2 Project Description

- 1.2.1 The creation of a community woodland facility comprising: vehicular access into a 94-space car and coach park, with EV charging points and overflow area; substation; an open sided visitor shelter; a modular café with covered outdoor seating area, bin store, cycle parking and WC facilities; demolition of a grain store and development of a community building including staff welfare and office facilities and outdoor terrace; staff and disabled car parking; demolition of an agricultural machinery store and construction of a Forestry England Barn; service yard and vehicle turning circle; surfaced and unsurfaced woodland paths; creation of six new ponds; countryside heritage and interpretation boards and informal natural play areas at Hole Farm Lane, Great Warley, Brentwood, Essex CM13 3JD (the site)
- 1.2.2 The land within the site boundary has historically been managed as arable farmland until September 2022, with access tracks, remnant boundary features and a few small woodland copse. The Agricultural Land Classification is Grade 3- good to moderate quality.
- 1.2.3 The site lies within both the Metropolitan Green Belt of London and Thames Chase Community Forest area as shown on the adopted Brentwood Local Plan Proposals Map (20162030). Parker's Shaw Wood within the southwest corner of the site is a designated Local Wildlife Site. The site is within Flood Zone 1, where there is less than a 0.1% chance of flooding.

## 1.3 Policy and Legislation

- 1.3.1 Table 1.3 presents the national and local policies that have been considered in the development of this site.

**Table 1.3 National and Local policies**

<b>National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021)</b>	
Paragraphs 174 and 180	<p>The Project has been designed to reduce adverse effect on sites of biodiversity value whilst still meeting its overall objectives. Where adverse effects are predicted to occur, these have been mitigated and compensated appropriately.</p> <p>The overarching approach to the project design is to provide an area of high-quality semi-natural habitats which link retained habitats and designated sites, building resilience into this landscape-scale network against future pressures such as climate change.</p>

<b>Brentwood Council – Replacement Local Plan (Adopted 2022)</b>
NE01: Protecting and Enhancing the Natural Environment
NE02: Green and Blue Infrastructure
NE08: Air Quality

## 1.4 Demolition Schedule

1.4.1 The Project includes plans to demolish Buildings 1 and 2 and retain Buildings 3, 4, and 6. For more information about the buildings on site, please refer to the structural survey report (Imperium Engineering, 2022).

**Table 1.4 Buildings on site**

<b>Building</b>	<b>Description</b>	<b>Status</b>
Building 1	Grain Store	Demolished
Building 2	Agricultural Machinery Store	Demolished
Building 3	Brick built stable building (Outside of the boundary)	Retained
Building 4	Open fronted barn (Outside of the boundary)	Retained
Building 6	Brick and metal farm building (Outside of the boundary)	Retained

## 2. Site Summary

### 2.1 Site Summary

2.1.1 In order to provide an ecological baseline against which this proposal could be assessed for potential impacts, a range of surveys were undertaken in 2022. The associated reports are provided in support of this application:

- a. Preliminary Ecological Appraisal (PEA) Survey (SonaEcology, 2021)
- b. Ecology Outline Report (Atkins, 2022)
- c. Bat Survey Report (Atkins, 2022)
- d. Badger Survey Report (Atkins, 2022)

### 2.2 Desk study summary

2.2.1 The PEA report provides a desk study composed of records from the Essex Local Records Centre and EssexWildlife Trust, OS online mapping and Google Earth 2021 imagery, MAGIC, and Natural England's Local Nature Reserve database.

2.2.2 The desk study search area included any records within 2km of the Project.

2.2.3 The desk study returned results of two statutory sites and 14 non-statutory sites; 12 European Protected Species (EPS) (several bat species and great crested newts (GCN)); six schedule one bird records; 20 Section 41 species; one Schedule 8 plant record; and two Schedule 5 animals (adder and common lizard).

2.2.4 The only designated sites found within 200m of the site boundary are Parkers Shaw Local Wildlife Site, and two Ancient Woodlands boarding the north and south edges of the site; Coombe Wood and Codham Hall Wood respectively. None of these sites are affected by the works.

2.2.5 For more information please refer to tables 1, 2, and 3 of the PEA report.

2.2.6 On further consideration only bats, badgers, and GCN were found to be potentially impacted by the works on the Project, and therefore this document only considers these species going forward.

### 2.3 Habitats

2.3.1 A Phase 1 habitat survey conducted in April 2021 (see Appendix A of PEA Survey) found the following habitats:

- i. Arable fields
- ii. Broadleaved deciduous woodland
- iii. Improved grass field margins with encroaching scrub
- iv. Scattered trees
- v. Waterbodies
- vi. Hedgerows with trees

vii. Ditch network along field boundaries

viii. Farm buildings

### 2.4 Badgers

2.4.1 Surveys recorded five disused, two partially used, and two well-used setts. All recorded setts were outside the Project boundary, with the exemption of one disused entrance. For exact locations please refer to Figure B-1 and Table B-1 in the Atkins Badger Survey Report appendices.

2.4.2 Latrines and mammal paths were also noted, ten within the boundary, and two on the edge.

### 2.5 Bats

2.5.1 The four buildings on site identified as having bat potential (Buildings 1, 2, 4, and 6) had emergence surveys conducted in summer 2022.

2.5.2 Buildings 1 and 2 were found to support a small population of common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* bats.

2.5.3 [REDACTED] was found to support a small maternity roost of brown long-eared *Plecotus auritus* bats (see Appendix A for photographs).

2.5.4 Building 6, which lies outside the boundary of this proposal, was found to include a feeding perch of brown long-eared bats.

2.5.5 For more detail please refer to the Atkins Bat Survey Report.

### 2.6 Great Crested Newts

2.6.1 Presence/absence surveys were conducted on the one pond on site. This pond was subjected to eDNA sampling and returned a negative eDNA result.

2.6.2 For more detail please refer to the Atkins Hole Farm Ecology Outline Report.

### 3. Impact Assessment

#### 3.1 Impact pathways

- 3.1.1 The assessment of effects to biodiversity from the construction of this Project are expected to include:
- a. Habitat loss – direct loss of habitat as a result of construction
  - b. Injury/mortality – construction activities causing direct mortality
  - c. Fragmentation/habitat severance – preventing animals dispersing and moving within the wider landscape
  - d. Disturbance – noise, lighting, and visual disturbance of species present, including from anthropogenic influences

#### 3.2 Habitats

##### Habitat loss

- 3.2.1 The construction of the Project will result in permanent conversion of arable land to semi-natural grassland and broadleaved woodland. This is further discussed in table 32.

**Table 3.2 Habitats Loss: Gain summary**

Habitat Type	Area Lost	Area Gained
Cereal crops	88.62ha	0ha
Other neutral grassland	0ha	13.49ha <i>+ Enhancing existing</i>
Mixed scrub	0ha	6.10ha
Artificial unvegetated, unsealed surface	0ha	2.40ha
Developed land; sealed surface	0.09ha	0.14ha
Ponds (Non- Priority Habitat)	0ha	1.90ha <i>+ Enhancing existing</i>
Lowland meadows	0ha	9.47ha
Other coniferous woodland	0ha	0.56ha
Other woodland; broadleaved	0ha	52.34ha
Other woodland; mixed	0ha	0.92ha
Wet woodland	0ha	1.02ha
Traditional orchards	0ha	0.37ha
<b>Total</b>	<b>88.71ha (of 99.09ha)</b>	<b>88.71ha</b>



### 3.3 Badgers

#### **Injury / mortality**

- 3.3.1 Any excavations generated by the works have the potential to create a feature which a badger may not be able to exit from and could lead to injury.

#### **Disturbance**

- 3.3.2 Noise and vibrations from machinery, and lighting during construction has the potential to affect setts found within, or immediately adjacent to the order limits of the Project.
- 3.3.3 One of the identified outlier setts is within the scheme boundary (Badger Survey Report Table 3 1), with six of the identified disused setts within 30m of the Project boundary, between the red line and the 50m buffer (Badger Survey Report Table 3-3). Two of the identified latrines are also within 30m (Badger Survey Report Table 3-4). If these were to become active again, they are within the buffer zone of disturbance for badgers.

### 3.4 Bats

#### **Injury/mortality**

- 3.4.1 The planned demolition of Buildings 1 and 2 has the potential to result in the injury of a number of common and soprano pipistrelles.

#### **Habitat loss/fragmentation**

- 3.4.2 Buildings 1 and 2 are confirmed roosts used by common and soprano pipistrelle bats. These would be lost as a result of the Project.
- 3.4.3 No direct impacts are anticipated for fragmentation, as the existing linear habitats on site are being retained and enhanced, and some new hedgerows/lines of trees are being created.

#### **Disturbance**

- 3.4.4 Buildings 4 and 6, whilst outside the Project boundary and with no demolition plans, are 27m and 57m respectively from the planned demolition of Buildings 1 and 2. There is therefore the potential for disturbance through noise and vibration during construction/demolition works.
- 3.4.5 Increased presence of human activity during demolition/renovation of the buildings and new habitat planting on site is likely to cause short-term low impact to the foraging use of the site.

### 3.5 Great Crested Newts

- 3.5.1 No direct impacts are anticipated for GCN during the Project, as the waterbody on site is not being affected, and no positive eDNA results were returned

## **4. Mitigation Strategy and Recommendations**

### **4.1 Badgers**

- 4.1.1 There are currently no active badger setts within the project boundary. However, badgers are considered a highly mobile species and it is recognised that they may excavate new setts or open disused ones between application and the start of works. To mitigate this risk, a walkover prior to works commencing will be carried out to determine the status of all setts.
- 4.1.2 If an active sett is found on site, an exclusion zone of 30m will be provided and left in place until the works have finished.
- 4.1.3 Any excavations will be either fenced off, backfilled, or covered overnight to prevent mammals becoming trapped. If this is not possible, one side of the excavation will have a gradient to act as an escape ramp for any mammal that enters. Excavations must be checked every morning for mammals prior to works commencing.
- 4.1.4 It is not considered that this Project would result in any significant adverse effects on badgers. In the long term, the conversion of arable land to woodland and grassland has the potential to increase the value of the site for foraging and sett establishment.

### **4.2 Bats**

- 4.2.1 A Natural England European Protected Species (EPS) mitigation licence will be required prior to the commencement of any licensable works. This includes any vegetation clearance within the vicinity of the bat roosts as well as any building demolition.
- 4.2.2 To compensate for the loss of the roosts in Buildings 1 and 2, replacement roosts will be provided in the form of bat boxes. The recommended box style for pipistrelles are crevice boxes, varieties of which include 2FN, 1FF, 2F, Kent, and Modified Greenaway, which will provide features similar in size and function to the roosts being lost.
- 4.2.3 We will employ a minimum ratio of 3:1 bat boxes per roost lost for any non-annex II species (common and soprano pipistrelle both). In this instance, as two roosts will be lost (buildings 1 and 2), a minimum of six bat boxes will be installed within the Hole Farm site.
- 4.2.4 It is not considered that this Project would result in any significant adverse effects on bats. In the long term, the conversion of arable land to woodland and grassland has the potential to increase the value of the site as foraging and roosting habitat for a wider range of bat species.

## 5. Summary

- 5.1.1 This Project will convert arable land to a mixture of woodland and grassland, creating a new community woodland, creating a green link between areas of designated Ancient Woodland north and south of the site.
- 5.1.2 A new community room and community tree nursery will be built on the footprint of the existing farm buildings, and a large network of accessible footpaths will open up the site for the public.
- 5.1.3 This Project aligns with several sections of the NPPF relevant to biodiversity, and the Brentwood Council Replacement Local Plan.
- 5.1.4 The main potential impacts from the Project are the demolition of Buildings 1 and 2, which will lead to the disturbance and destruction of two low significance pipistrelle day roosts. This loss would be offset by the provision of a minimum of six bat boxes within the Hole Farm site.
- 5.1.5 The design of the Project and mitigation strategy for the species on site demonstrate that it will provide a positive outcome for wildlife and biodiversity at the Hole Farm site.

## A. Photographs

