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GREAT GROVEHURST FARM, SITTINGBOURNE

Bat Habitat Suitability Assessment

Client: G H Dean & Co Ltd

Reference: J005845

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NON-TECHNICAL SUMMARY

Site location and size	Great Grovehurst Farm, Sittingbourne; TQ 904 666 ; 4.8ha
Scope of Works	Bat Habitat Suitability Assessment
Purpose of Works	To inform a planning application for a housing development at the site
Dates of site visits and names of surveyors	20 July 2015; Kate Baldock MCIEEM
Overview	Five building are present on the site which were all assessed in terms of their suitability to support roosting bats. Three of the buildings on site were assessed as providing medium suitability to support roosting bats. All other buildings and the trees on site were assessed as having negligible suitability to support roosting bats.
Action Required for Planning and/or Legal Compliance	A suite of one emergence and one swarming survey will need to be conducted for each of the buildings with medium suitability to support roosting bats. Should bats be recorded roosting in the buildings during these survey a further emergence survey would be required. These surveys must be undertaken between May and August during suitable weather conditions.
Recommendations for ecological enhancement (site ecological enhancement is required under current planning policy)	Incorporation of bat roosting features, such as bat bricks, in the design of new buildings within the development scheme. Implementation of a sensitive lighting scheme on the site to reduce light spill onto green spaces and adjacent habitats. Ecological input into the landscaping scheme for the site to include night scented species.

CONTENTS

1 INTRODUCTION

1.1 In July 2015, Ecosulis was commissioned by G H Dean & Co Ltd to undertake a bat Habitat Suitability Assessment (HSA) of land at Great Grovehurst Farm in Sittingbourne. These surveys have been undertaken following ecological surveys which were undertaken by Ecosulis in 2006. It is understood that development proposals for the site include new housing with associated gardens and roads.

1.2 Kate Baldock experienced ecologist and representative of Ecosulis, visited the site in July 2015 to undertake the survey. Access was provided by the landowner.

Objectives of Study

1.3 The objectives of this study are: to provide information on the existing ecological conditions at the site with regards to bats; to identify potential constraints and opportunities that bats may pose to the development plans; and to identify further ecological studies that may be required to ensure that bats are fully considered within the proposals.

General Description of Site

1.4 The site is located on the northern outskirts of Kemley and is centred on OS grid reference TQ 904 666. It covers an area of 4.8ha and includes an unoccupied cottage, farm buildings which are now used by a car sales business, pet supply store and stables. Other areas on site include hardstanding and grassland.

1.5 The site is surrounded by a large built up areas on all sides, including a main road to the east.

Nomenclature

1.6 The common name only of flora and fauna species is given in the main text of this report; however, Latin names are used for species where no common name is available. A full list of all species recorded on site during the surveys is given in Appendix I with their Latin names. All plant names follow the nomenclature of Stace (2010).

2 METHODS

Bat Habitat Suitability Assessment

2.1 The surveys were undertaken on 20 July 2015 by Kate Baldock, experienced ecologist representing Ecosulis. Methodologies followed current best practice guidance including those outlined within the Bat Mitigation Guidelines (English Nature, 2004), the Bat Workers' Manual (JNCC, 2004) and the Bat Surveys Good Practice Guidelines (Bat Conservation Trust, 2012).

Buildings

2.2 The buildings were assessed externally and internally where possible for their suitability to offer roost sites for bats. This was undertaken by determining the style and construction of the buildings and presence of features such as roof voids and cracks, holes in brickwork/tiling and internal conditions. The buildings were then rated as having negligible, low, medium or high suitability as roost sites (Appendix 1 provides guidance on the criteria used in this assessment).

2.3 Following the initial assessment, the buildings were searched internally and externally for signs of bat use. External evidence of bat use may include droppings and/or staining on walls, window ledges, in cobwebs and on the ground under suitable roost entry and exit points (e.g. around soffits, fascias, eaves, flashing etc). Internal evidence of bat use may include droppings (floors, walls, window ledges and other structural elements), staining, scratch marks, feeding remains, or bats themselves. The surveyors used high powered torches to search for bat evidence.

Trees

2.4 Mature trees in the south of the site likely to be affected by the proposed development were visually assessed from the ground for their potential to support bats. The trees were then rated as having negligible, low, medium or high suitability as roost sites (Appendix 1). This was determined by the presence of features such as crevices, holes, fissures and arboreal ivy. The tree bases and any features accessible from the ground were also searched for signs of bat droppings.

Ecological Context

2.5 An assessment of the ecological context of the site was undertaken with notes made with respect to the suitability of the site habitats and surrounding habitats to support foraging and commuting bats. The ecological context of a structure, such as a building or tree, can significantly influence the likelihood of it supporting roosting bats. For example, a structure of low suitability is more likely to be used if it is set within an area of high quality habitat with few alternative roosting opportunities. Likewise, a highly suitable structure is less likely to be used by roosting bats if it is isolated within an area providing no suitable foraging or commuting habitat.

3 BAT HABITAT SUITABILITY ASSESSMENT

Buildings

3.1 The buildings on site are described within Table 1 below, and locations are shown on Figure 1. Photographs are included within Appendix 2.

Table 1: Bat Habitat Suitability Assessment of Buildings, July 2015

Building Description	Suitability for roosting bats	Evidence of bats recorded	Constraints to assessment
Building 1: Cottage An unoccupied residential property is located at the north west of the site. This is a two storey brick building with a hipped clay tiled roof. Two single storey extensions are present on the southern elevation. Soffits are of uPVC construction and window frames are wooden, with the exception of the two small extensions where window frames are of uPVC construction. Lead flashing is present around the chimneys and where roof sections join. Externally, a number of features of bat potential were noted, including: • Missing mortar around the central ridge tiles on the north and east elevations; • Gaps beneath lifted hip tiles on all elevations; • Lifted lead flashing surrounding the chimneys; and • Gaps where the soffits meet the main roof on the western side. A single roof void is present this is insulated at floor level and partially boarded. Roof lining is present throughout, which is in an apparently good condition.	Medium Suitability External features of the building have moderate potential for crevice dwelling bat species such as pipistrelles. The internal loft spaces provide low to medium potential for void dwelling bat species such as long eared bats.	A single, old bat dropping was found, there are no obvious access points into the building. It is not known how long the uPVC soffits have been in place, but it is possible that the dropping pre-dates the installation of these, and subsequently there may be no bat access into the roof void. .	No constraints to assessment

Building Description	Suitability for roosting bats	Evidence of bats recorded	Constraints to assessment
Light was seen entering the void via the eaves. However, external inspection of the eaves found that the eaves are covered by soffits with small mesh vents, which were the source of light. However, these vents are too small to allow bat access. A single, old bat dropping was found in the roof void. This was old and crumbly and was not possible to remove for DNA analysis.			
Building 2 – Car Sales Building A large warehouse type building, formerly a car show room, is present at the south west of the site. The building is primarily of corrugated metal and breeze block construction, with a pitched asbestos type roof with skylight panels. No significant features of bat roosting potential were noted on the exterior of this building. The bat potential of the interior of the building could not be established. However due to the metal and asbestos materials used in the construction which would make roof features fluctuate in temperature significantly, and the skylight panels, this building is not thought to hold significant bat roosting potential.	Negligible Suitability	No evidence of bats was found.	Access was not possible into the interior of the building.
Building 3 – Pet food warehouse buildings A large warehouse building is present at the north east of the group of buildings within the site. This comprises a two pitched section at the west, with a single pitch section perpendicular to this at the west.	Negligible Suitability	No evidence of bats was found.	No constraints to assessment

Building Description	Suitability for roosting bats	Evidence of bats recorded	Constraints to assessment
This building has part brick, part breezeblock and part corrugated metal walls, and an asbestos roof with skylights. A flat roofed brick extension is present on the south western corner. Internally, the building is open plan, and very light due to the skylights. Overall, the building is of negligible roosting bats due to the materials from which it is constructed, which are subject to temperature fluctuations. Additionally the interior is light and no significant roosting opportunities were identified			
Building 4 – Pet Food Shop A two storey building is present at the west of the block of buildings, which is currently in use a pet supplies shop. A smaller single storey section is present at the western end. The building is of brick construction with corrugated metal roof. Externally, a number of features of bat potential were noted, including: • Gaps in the wooden door on the western side, leading into the roof void/upper floor; • Gaps at the eaves and gable ends, leading into the roof void/upper floor; and • Crack in the wall of the single storey section on the eastern side.	Medium Suitability The exterior features of the building are considered to have medium potential for crevice dwelling bats, also to provide access to the interior for bats.	No evidence of bats was found.	Access was not possible into the roof space or upper floor of this building.

Building Description	Suitability for roosting bats	Evidence of bats recorded	Constraints to assessment
Building 5 – Stables At the centre/ south of the group of buildings is a block of former stables, now used for storage. The stable block is split into four self-contained units. The stables have brick walls and pitched metal roofs. Externally, a number of features of bat potential were noted, including: • Gaps above the doors to allow internal access for bats; and • Gaps under the eaves allowing internal access for bats. Internal access to the two western sections was possible, but not the two eastern sections. The interior sections that were accessed are used for storage. The roofs are lined with timber boarding, and timber boarding is present at the internal gable ends of each section. Internally, a number of features of bat roosting potential were noted, including: • Behind the wooden lining at the internal gable ends; • Along the ridge line; and • Low potential between the timber roof lining and the metal roof.	Medium Suitability The external fabric of the building has low potential for crevice roosting bats but provide access into the internal roof spaces. These internal loft spaces provide potential roosting opportunities for both crevice dwelling and void dwelling bat species.	No evidence of bats was found.	No constraints to assessment

Trees

3.2 Trees present on the site were also assessed in terms of their potential to support roosting bats. No significant features of bat roosting potential were recorded.

Ecological Context

3.3 Areas surrounding the buildings provide some foraging and commuting opportunities for bats and the wider area includes agricultural, residential and industrial land, with small areas of woodland. This further increases the potential of buildings on the site to support roosting bats.

4 ASSESSMENT AND ECOLOGICAL RECOMMENDATIONS

4.1 This section provides considerations in relation to the ecology of the site and any adjacent habitats that should be considered within development proposals to ensure that impacts on ecology are avoided and / or mitigated within the scheme.

4.2 All British species of bat and their place of shelter are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 from deliberate capture, injury and killing, intentional or reckless disturbance, intentional or reckless obstruction of access to any structure or place which any such animal uses for shelter or protection, and deliberate damage or destruction of a breeding site or resting place. This includes buildings and trees and applies throughout the year whether bats are present or not at the time of survey or work being carried out.

4.3 Although foraging areas and commuting routes are not legally protected, the effects of development proposals on these are a material consideration when assessing the impact of the proposal on the maintenance of favourable conservation status (NPPF).

4.4 Of the five building present on the site three have been assessed as providing medium suitability for roosting bats. This includes roosting opportunities for both crevice dwelling and void dwelling bat species and have the potential to support significant numbers of bats.

4.5 Three of the five buildings present on site were assessed as providing Medium suitability to support roosting bats whilst a further two buildings have Negligible suitability.

4.6 Buildings which have medium suitability to support roosting bats will require further survey work to assess whether they are in active use as bat roosts. It is recommended that an emergence and dawn swarming survey is conducted for each of these three buildings as outlined in Table 2. As part of these surveys all external access opportunities should be observed. In the event that bats are recorded emerging from the building during these surveys a further survey would be required. These surveys can only be undertaken between May and August during suitable weather conditions. Surveys can be undertaken in September during suitable weather conditions, however these are usually considered to be suboptimal.

Table 2: Survey requirements for emergence and swarming surveys

Building number	Building Name	No. Surveyors	No. Surveys
1	Cottage	3	2
4	Pet supplies shop	2	2
5	Former stables	2	2

4.7 If bats are confirmed to be roosting within the buildings, then a European Protected Species Licence (EPSL) would need to be obtained from Natural England to allow works to proceed. An EPSL application would need to be supported by a detailed Method Statement outlining the specific mitigation strategy for the site. Details of the mitigation would be dependent on the species and type of roost present. Applications for bat licences can only be made once planning permission has been granted (with no outstanding conditions relating to nature conservation). Natural England aim to process licence applications within 30 working days.

Ecological Enhancements

4.8 Any lighting required within the scheme should be kept to a minimum and carefully consider bats (BCT, 2008). Where possible the lighting scheme of the site should include directional lighting, avoiding light spill onto green spaces within the site and adjacent habitats.

4.9 Consideration should be given to installing built-in bat and bird features within new buildings on site to increase nesting/roosting opportunities.

4.10 Further enhancement of the site for bat species should include the planting of night scented flowers within the landscape scheme for the site. Night scented flowers attract moths and other invertebrates which form the diet of UK bat species. Suitable plant species include honeysuckle, dog-rose, ivy, evening primrose and night-scented catchfly. More information can be found in the Bat Conservation Trust's 'Landscape and Urban Design for Bats and Biodiversity' document

4.11 Future management should aim to enhance the value of the site for wildlife whist maintaining amenity function, such as leaving longer edge grassland zones (adjacent to boundaries and around the trees, for example) and rotational management of new planting.

5 LIMITATIONS OF SURVEY AND REPORT

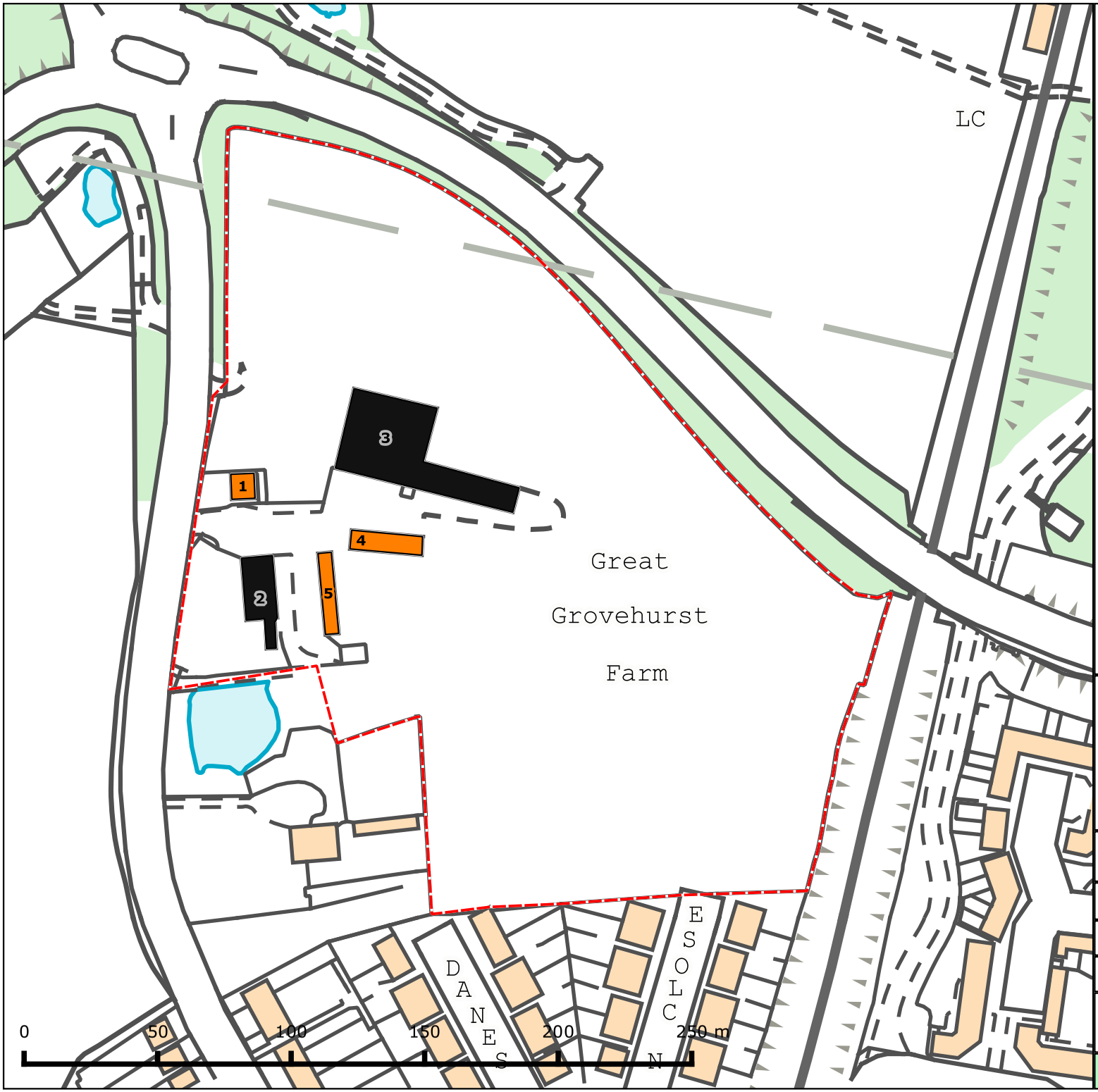
5.1 This report records wildlife found during the survey and anecdotal evidence of sightings. It does not record any plants or animals that may appear at other times of the year and were therefore not evident at the time of visit. Some species that might use the site or be apparent at other times of year, or only in certain years, would not have been detected.

5.2 A national standard has not been adopted for minimum survey effort for bats since the extent of surveys required is dependent upon species present and site specific factors. Natural England will not comment on survey effort and they expect this decision to be made by the ecological consultant. There is also some difference in opinion from local authorities across the UK as to what constitutes sufficient survey effort. The recommended level of survey within this report is based upon extensive experience of surveying and assessment for similar sites and the Bat Conservation Trust survey guidelines 2012.

5.3 This report provides provisional ecological baseline for the site and should not be considered to be conclusive until the ecological considerations have been undertaken and all necessary further surveys completed. Likewise the ecological considerations at this stage are not necessarily final and may be subject to change or additional proposals made following the results of further surveys and detailed development plans.

5.4 The behaviour of animals can be unpredictable and may not conform to standard patterns recorded in current scientific literature. This report therefore cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

5.5 The advice contained in this report relate primarily to factual survey results and general guidance only. On all legal matters you are advised to take legal advice.



Key

- Site Boundary

Bat HSA - Buildings

- High
- Medium
- Low
- Not Accessed
- Negligible

N

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Project: Great Grovehurst Farm

Title: Bat Habitat Suitability Assessment

August 2015

Figure 1

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Appendix I: BAT ASSESSMENT CRITERIA

Roost Suitability Category	Criteria
Negligible	No features or locations presenting roosting opportunities apparent. Building, structure or tree considered unlikely to be used by roosting bats, although occasional or transient use can rarely be entirely ruled out
Low	Few features or locations within building, structure or tree with the potential to support roosting bats, although quality of these features limited by size, aspect or internal micro-climate. Although not directly assessed by these criteria, the chances of significant roost types (maternity or hibernation) is not considered likely
Medium	Some features/locations within building, structure or tree with the potential to be used by roosting bats. Although not directly assessed by these criteria, the chances of significant roost types (maternity or hibernation) is considered possible
High	Several features/locations within building, structure or tree with the potential to support roosting bats. Combination of size, aspect and internal micro-climate within these locations make them very suitable for roosting bats. Although not directly assessed by these criteria, the chance of significant roost types (maternity or hibernation) is considered possible

Appendix II: PHOTOGRAPHS OF BUILDINGS

Building 1: Cottage

Plate 1 –East facing elevation of Building 1

Plate 2 – North facing view of Building 1, showing gap beneath the central ridge tile, which is an example of one of the potential bat roost/access features within the building

Plate 3 – Internal view of the roof void, showing lining in a good condition

Building 2: Car Sales Building

Plate 4 – External view of Building 2

Building 3: Pet Supply Warehouses

Plate 5 – External view of Building 3

Plate 6 – Internal view of Building 3

Building 4: Pet Supply Store

Plate 7 – West facing elevation of Building 4

Plate 8 – North facing elevation of Building 4 showing gaps in wooden door allow potential bat access

Plate 9 – Large crack in the brick wall at the south east of Building 4

Building 5: Stables

Plate 11 – External view of Building 5. Possible bat access points shown in red

Plate 12 – Internal view of the western stable section of Building 5. Timber boards at the internal gable ends and timber roof lining have potential for crevice dwelling bats, and the internal space has potential for void dwelling bats