



Oak Cottage, Kingsland Lane, Leavenheath

Preliminary Ecological Assessment

Client: Mr & Mrs G Barrell

Author: Liz Lord BSc (Hons) MCIEEM

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Pond House
Earls Hall Drive
Clacton
CO16 8BP



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Appendix 1: Proposed Layout Plans

Figure 1A: Site Location Plan

Figure 1B: Aerial Plan



1.0 SUMMARY

- 1.1 The site (NGR: TL 94588 35466) was found to comprise a small area of regularly mown grassland and hard standing driveway surrounding a derelict wooden shed, a metal storage container and a wooden garage and adjoining kennel / chicken coop. The site is surrounded by a large number of mature oak trees and occasional conifers and mature holly shrubs. Planning permission is being sought to demolish the existing buildings and erect two holiday lodges and a detached garage, accessed via the existing driveway.
- 1.2 Due to the habitats present, the proposed development areas have negligible potential to support dormice, despite known records of the species in the immediate vicinity of the site, and no further survey works are recommended with respect to dormice. Precautionary methods of working are however recommended during the removal of the derelict building, which has become colonised in part by brambles.
- 1.3 Precautionary methods of working include a second check of the brambles immediately prior to their removal, which should be supervised by an experienced ecologist. Such works should also avoid the dormouse hibernation season (October to April inclusive), and the site must be maintained in a vegetation free state between commencement and completion of works.
- 1.4 A bat and dormouse friendly lighting scheme will be implemented to avoid illuminating the site boundaries at night. Lighting within the new development will be limited to one small porch light per holiday lodge, and no external lighting on the new garage building. CCTV will use infra-red technology instead of standard artificial illumination. Porch lights will have hoods / shields / cowls to direct light to the ground, and bulbs will be warm white (<3000K) LEDs, of the lowest wattage possible.
- 1.5 The buildings were not inspected in detail at the time of survey, since they have already been subject to an assessment in relation to bats by Essex Mammal Surveys (Dobson, J. 2022). Whilst the buildings were not found to be suitable for roosting bats, they do provide opportunities for nesting birds. Therefore works to the buildings should ideally commence during September to February inclusive to avoid the bird nesting season. If this is not possible, as with the derelict building, immediately prior to commencement of works a check for nesting birds should be undertaken by a suitably experienced ecologist. Any active nests will need to be left in situ until the young have left.
- 1.6 Subject to the implementation of the measures detailed in this report, the proposals are very unlikely to result in the loss of, or damage / disturbance of, any habitats of value protected or notable species. The provision of the enhancement measures detailed in section 6.0 will result in a minor overall enhancement of the site for a variety of crevice dwelling bats.



- 1.7 It is acknowledged that the site is located within a County Wildlife Site, and an ancient woodland. As the proposals are predominantly limited to the footprints of the existing buildings, and these buildings are surrounded by hard standing and closely mown grassland, there will be negligible loss of ancient woodland habitat. Measures will be implemented to ensure the retention and protection of nearby mature trees. It is also noted by both the CWS citation and the site survey that the woodland habitats have already considerably disturbed in the last 20-30 years with the construction of an access track and the removal of the bramble understorey. As a result the majority of the woodland is already in poor condition, and the replacement and change of use of the existing buildings are very unlikely to result in any further deterioration of the woodland habitats.



2.0 INTRODUCTION

Instruction

- 2.1 This report has been prepared by Liz Lord following instruction by Mr G Barrell to undertake a Preliminary Ecological Appraisal of land at Oak Cottage, Kingsland Lane, Leavenheath, Suffolk CO6 4NG.
- 2.2 The report has been written to address the concerns raised by Place Services in their comments to Babergh District Council dated 17th June 2022 with respect to application reference number DC/21/06742.

Site Proposals

- 2.3 Planning permission is being sought to demolish an existing outbuilding, garage and kennel, and erect two holiday lodges and a detached garage at the site, with access via an existing hard standing driveway.

Site Description

- 2.4 The site is located approximately 2km to the south west of Leavenheath, in countryside between Sudbury and Colchester. It is positioned within Breach Grove woodland; a small, narrow area of ancient woodland. The wood is surrounded by grazing pasture to the east and west, arable fields to the north and an orchard to the south. The wider landscape is a mixture of arable fields, pasture and woodlands of variable sizes, connected by mature hedgerows and lines of trees. A location plan is provided below.

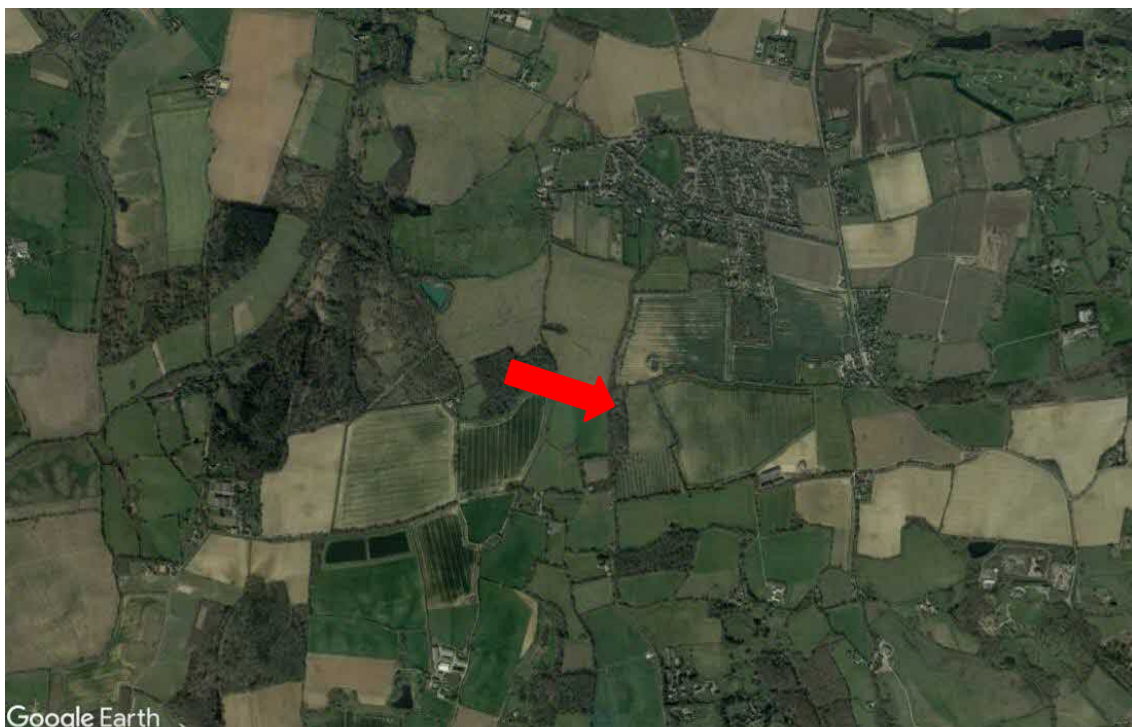


Fig 1A: Site location, with site location indicated by red arrow. Aerial photograph Google Earth Pro





Fig 1B: Site location, with approximate site boundary outlined in red. Aerial photograph taken from Google Earth Pro

Objectives

- 2.5 This report has been written broadly in accordance with the r produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM 2018, 2017a, 2017b). In accordance with the client brief, this survey and report aims to:
 - 2.5.1 Identify and describe all potentially significant ecological effects on protected & notable species / sites associated with the proposals;
 - 2.5.2 Set out the mitigation measures required to ensure compliance with nature conservation legislation and address any potentially significant ecological effects;
 - 2.5.3 Identify how mitigation measures will / could be secured;
 - 2.5.4 Provide an assessment of the significance of any residual effects;
 - 2.5.5 Identify appropriate enhancement measures; and
 - 2.5.6 Where deemed necessary, set out the requirements for post construction monitoring.
- 2.6 This survey and report is intended to inform, as necessary, the layout and design of the proposals, future landscape design and management on site, and where required the methodology and timing of development works.



Time scales

- 2.7 The total works period is expected to be around 12-24 months following the granting of relevant permissions.
- 2.8 This report is valid for a period of 18 months from the date of survey. Beyond this time, changes to the site may have occurred which could require re-assessment and potentially further survey to re-determine the presence / likely absence of protected species.

Relevant Documents

- 2.9 The site assessment was based upon the site boundaries as shown in Fig. 1B and the proposed layout drawing number 68-2021-01 dated November 2021 as shown in Appendix 1.
- 2.10 Note that any minor amendments to the scheme within the red line boundary are unlikely to alter the conclusions and recommendations of this report.
- 2.11 Recommendations included within this report are the professional opinion of an experienced ecologist based on the client's proposals for the site, the results of the desk study, and the results of the site survey.



3.0 METHODOLOGY

Desk Study

- 3.1 The Multi Agency Geographic Information for the Countryside consulted on 7th August 2022 to determine the presence of any nationally and internationally designated sites such as Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites within influencing distance of the proposals.
- 3.2 The MAGIC website was also used to search for any records of European Protected Species Mitigation (EPSM) licences that have been approved by Natural England within a 5km radius of the application site since late 2008. The website was checked for any data from Natural England's great crested newt eDNA Habitat Suitability Index pond surveys for District Level Licensing 2017-2019 (last updated October 2020); and data from Natural England great crested newt Class Survey Licence returns within a 5km radius of the site (last updated May 2020).
- 3.1 A records search for features and species of relevance to the proposals i.e. dormice and County Wildlife Sites was carried out in August 2022 with Suffolk Biodiversity Information Service. As detailed later in this report, due to the scale of the proposals and the habitats likely to be affected, no other records were considered to be of significant relevance to the proposals, and a more detailed records search is unlikely to affect the conclusions and recommendations of the report.

Site Survey

- 3.2 A daytime site survey was carried out on 1st August 2022. The surveys were based upon the standard methodology for Extended Phase 1 Habitat Surveys (JNCC 2010), with habitats classified according to the abundance of plant species present. Any evidence of invasive species such as Japanese knotweed was noted. The survey area was limited to the buildings and immediately surrounding land as highlighted in Figure 1B and Appendix 1, plus land within the potential Zone of Influence.
- 3.3 The survey also included an assessment of the site's potential to support any legal protected species; or Species and Habitats of Principal Importance, as identified by Section 41 of the Natural Environment and Rural Communities Act 2006. Where best practice guidelines exist, these have been used to assess the likelihood that individual species will be present, for example Bat Surveys: Good Practice Guidelines (Collins, J. 2016) and Habitat Suitability Index for Great Crested Newt (Oldham *et al*, 2000).



- 3.4 Using criteria provided in best practice guidelines, habitats have been assessed for their potential to support protected species; notably bats, barn owls *Tyto alba*, badgers *Meles meles*, great crested newts *Triturus cristatus*, reptiles, water voles *Arvicola amphibius*, dormice *Muscardinus avellanarius* and otters *Lutra lutra*. Due to the concerns raised by Place Services, the survey and report have focused on dormice and Priority Habitats.
- 3.5 Where methodologies, classification or recommendations deviate from best practice guidelines, this report provides ecological justification for such changes.

Surveyors

- 3.6 The survey was carried out by Liz Lord. Liz has been a professional ecologist since 2005, and holds current Natural England licences to survey bats - Class Licence Reg. No. 2015-13305-CLS-CLS; great crested newts - Class Licence Reg. No. 2020-44816-CLS-CLS; and barn owls - Class Licence Reg. No. CL29/00160. Liz is a full member of CIEEM.
- 3.7 The weather at the time of survey was sunny, with a temperature of 24°C and wind speeds of approximately BF2-3.

Zone of Influence

- 3.8 The potential impacts of a development are not always limited to the boundaries of the site concerned, such as where there are ecological or hydrological links beyond the site boundaries. In order for the proposed works to have an impact on habitats and species outside of the site boundaries, there needs to be a source of impact, a pathway and a receptor for that impact.
- 3.9 The Zone of Influence will vary for different habitats and species depending on their sensitivity to predicted impacts, the distribution and status of the relevant species, whether a species is mobile, migratory, and whether its presence and activity varies according to the seasons.
- 3.10 An assessment of the Zone of Influence has been made based on the site layout shown in Appendix 1, and where necessary recommendations to avoid any significant adverse impacts beyond the site boundaries have been provided in section 5.0.

Limitations

- 3.11 The conclusions in this report are based on the best information available during the reported period of survey.



- 3.12 Ecological surveys provide only a 'snapshot' of the site in time, and many species, such as bats and badgers, are capable of colonising a site in a very short space of time. Lack of evidence of a species at the time of survey can only allow conclusion of the *likely* absence of this species, since no level of survey effort is capable of proving absence beyond doubt.
- 3.13 Whilst best efforts have been made to identify all water bodies within 250m of the site, it is not always possible to record all garden ponds using Ordnance Survey maps and aerial photography. Additional search effort with respect to garden ponds is likely to be disproportionate, as many garden ponds have limited suitability for great crested newts, and it is a common constraint associated with all Ecological Assessments.

Geographic Context

- 3.14 Where applicable, the importance of each ecological feature has been considered in a geographic context as follows:

International and European

National

Regional

Metropolitan, County, vice-county or other local authority-wide area

River Basin District

Estuarine system/Coastal cell

Local (further categorized into District, Borough or Parish)

Site

Assessment of Impacts and Effects

- 3.15 The following definitions are used for the terms 'impact' and 'effect' in accordance with CIEEM (2018) guidelines:

Impact – actions resulting in changes to an ecological feature

Effect – outcome to an ecological feature from an impact

- 3.16 The importance of any ecological feature has been determined via the site surveys detailed in this report. Note that species and habitats afforded legal protection are, by default, always considered within the EclA assessment process to be 'important'.
- 3.17 Potential impacts of the proposals on any such features have been assessed based on the client proposals for the site, and following a review of all phases of the project. Impacts are assessed through consideration of the extent, magnitude, duration, reversibility, timing and frequency of works which may result in likely 'significant' impacts to any ecological features



present. The route through which impacts may occur (direct, indirect, secondary or cumulative) has also been considered. Positive impacts are assessed as well as negative.

- 3.18 The results of the surveys have been used to identify any potentially significant impacts in the absence of any avoidance, mitigation or compensation measures. Any such appropriate measures have then been proposed where necessary.

Characterisation of Ecological Impacts

- 3.19 When considering ecological impacts and effects, the following characteristics have been considered:

- positive or negative
- extent
- magnitude
- duration
- frequency and timing
- reversibility

- 3.20 Where various characteristics have not been specifically referred to in this report, they have been considered insignificant or irrelevant to that specific feature.

- 3.21 A 'significant effect' is defined within the current CIEEM guidelines (2018) as: *"an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local."*

- 3.22 Where a significant effect is predicted, this requires assessment and reporting in order to provide the decision maker with sufficient information to determine the environmental consequences of a project. A significant effect can be either positive or negative, and its extent will determine the requirement of conditions, restrictions or monitoring works.

- 3.23 The current CIEEM guidelines (2018) also state that: *"After assessing the impacts of the proposal, all attempts should be made to avoid and mitigate ecological impacts. Once measures to avoid and mitigate ecological impacts have been finalised, assessment of the residual impacts should be undertaken to determine the significance of their effects on ecological features. Any residual impacts that will result in effects that are significant, and the proposed compensatory measures, will be the factors considered against ecological objectives (legislation and policy) in determining the outcome of the application."*



3.24 This report has taken into account the factors detailed above for each important ecological feature in the absence of mitigation. Recommendations have then been made with respect to avoidance / mitigation / compensation / enhancement as necessary, and an assessment of the residual impacts after such measures has been made.

Mitigation Hierarchy

3.25 In order to minimise the likelihood of any significant negative residual effects on environmental features, this assessment has followed the mitigation hierarchy (listed below in order of preference):

Avoidance – measures that avoid harm to ecological features, both spatially and temporally;

Mitigation – avoidance or minimisation of negative effects through appropriate timing of works, or the provision of mitigation measures within the scheme design which can be guaranteed by condition or similar;

Compensation – measures taken to offset residual effects which result in the loss of, or permanent damage to, ecological features despite mitigation;

Enhancement – measures to provide net benefits for biodiversity, either by improved management of existing features, or the provision of new features, and over and above that which is required to mitigate / compensate for an impact. Delivery should be secured via planning condition or similar.

Legislation and Policy

3.26 Specific reference has been made to the individual legal protection of the species detailed within this report, however additional information with respect to other relevant legislation and planning policy is provided in section 8.0.

3.27 The legislation of particular relevance within the body of this report is the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). The former confers legal protection to ‘European’ Protected Species against both disturbance and harm, and extends to the full protection of their habitats. This legislation also provides legal protection for a number of internationally designated sites within the UK, and remains in place following Brexit.

3.28 The Wildlife and Countryside Act 1981 (as amended) is UK specific, and generally only provides protection against direct harm to individuals of a species.



4.0 RESULTS (*Baseline Conditions*)

Site Summary

- 4.1 The site comprises a small area of land dominated by existing buildings, hard standing, closely mown grassland, five mature oak trees and small pockets of bramble. The site is located within an area of ancient broadleaved / deciduous woodland.

Desk Study: Statutory Designated Sites

- 4.1 The site is not located within potential influencing distance of any national or international statutory designated sites, and is not situated within the Zone of Influence with respect to recreational impacts upon any such sites.

Desk Study: Non-Statutory Designated Sites

- 4.1 The site is located within the boundaries of Breach Grove / Kingsland Lane County Wildlife Site, the designation of which is detailed below:

'Breach Grove is one of several ancient woods in this part of Suffolk which is listed in the Inventory of Ancient Woodland (English Nature). It has been considerably disturbed in recent years by the construction of a number of buildings and a cinder track which runs the length of the wood. It is composed mainly of medium-aged oaks, planted approximately one hundred years ago. In addition, it contains hazel, holly, elder, cherry and bramble. Recent management work has included the thinning of some mature trees. Breach Grove is bordered along its western margin by Kingsland Lane, a green lane which links Leavenheath with the Naylano road. This lane consists of a grassy track bordered on both sides by ditches and mature hedges. The hedges support a very good diversity of woody plants; a total of twenty one species has been recorded including holly, aspen and the scarce small-leaved lime. Of particular conservation value is the presence of three scarce Suffolk species which grow along the track, namely betony, common cow-wheat and wood spurge. In order to improve access to Breach Grove, part of the southern section of the track has been reinstated with cinders. Improvement were to be extended northwards the populations of both betony and common cow-wheat would be eliminated'.

Habitats

Water bodies

- 4.2 No water bodies are present on site. Ordnance Survey maps at 1:10,000 scale did not highlight the presence of any ponds within 250m of the site boundaries.



Broadleaved woodland

- 4.3 The site is located within an area of broadleaved woodland / lowland mixed deciduous woodland, and designated ancient woodland. At the time of survey, the wider woodland was dominated by high density mature standard oak *Quercus robur* trees with a regularly mown grass understorey, and occasional scattered mature ornamental conifers and holly *Ilex aquifolium* shrubs. A dense carpet of bluebells *Hyacinthoides non-scripta* is reported to cover the floor of the wider woodland in spring (Barrell, G. pers.comm), with the accompanying ecology report by John Dobson (Dobson, J. 2022) showing post-flowering bluebells present in grassland offsite to the south of the proposed development site, and no bluebells within the site boundaries.
- 4.4 The eastern and western boundaries of the woodland are marked by raised bank supporting mature, unmanaged native shrubs including hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and bramble *Rubus fruticosus* agg.
- 4.5 It is reported that when the site was acquired by the current owners in 1991, the woodland understorey consisted of dense brambles to around 2m height (Barrell, G. pers.com). These were cleared around 1992, along with the majority of the conifers and the ground vegetation was thereafter maintained by regular close mowing.
- 4.6 Whilst the proposed development site is located in an area of broadleaved woodland, the understorey is very open and more typical of a parkland habitat. The proposed red line boundary encompasses / may affect up to five mature oak trees, all of which have a high canopy cover and main trunks generally clear of large, low branches. This is likely to be the result of the very close positioning of the trees. With the exception of the brambles which now grow over one of the derelict buildings, the only understory vegetation is limited to closely mown grass and occasional conifer / holly shrubs.

Species poor neutral grassland

- 4.7 Grass cover is short due to regular mowing, and within the site boundaries is dominated by Yorkshire fog *Holcus lanatus*. Some bare patches of earth are present due to regular disturbance and a lack of recent rainfall.
- 4.8 No evidence of the presence of bluebells was recorded on site or in the immediate surroundings at the time of survey, however due to the time of year and the management of the site it is unlikely that evidence of this species would be present. The accompanying ecology report by John Dobson (Dobson, J. 2022) provides photographs of post-flowering bluebells in grassland offsite to the south of the proposed development areas, and no such growth within the site boundaries.



Scrub

- 4.9 A light covering of brambles is present over the derelict building which stands in the centre of the woodland. A small elder *Sambucus nigra* and cherry *Prunus sp.* sapling also grow amongst the brambles, as well as occasional scattered nettle *Urtica dioica*. The bramble stand is surrounded by closely mown grassland and is encircled by an existing driveway consisting of compacted road planings.
- 4.10 The brambles are reported to have grown in the last 18-24 months (Barrell, G. pers.comm), and this is supported by a relatively sparse covering across the building, as well as an abundance of green brambles stems comprising much of the growth – indicative of recent, fresh growth of the 2022 spring / summer season. The older stems are brown and woody.

Invasive species

- 4.11 No aerial evidence of Japanese knotweed *Fallopia japonica* was recorded within the site or the immediately adjacent areas at the time of survey.

Buildings

- 4.12 Three distinct buildings are present on site – a derelict, partially collapsed former wooden shed; a metal storage container; and a wooden garage / kennel currently used as a chicken coop. The derelict shed consists of a wooden frame with single skin wooden walls on a raised wooden floor. No roof is now present, and the western end wall remains partially standing.
- 4.13 The metal storage container stands immediately to the south of the garage / kennel, which is a wooden framed building covered with a single layer of shiplap boarding, and covered with corrugated fibreboard sheets. A large dog pen, currently used to house chickens, adjoins the northern end of the building.

Hard standing

- 4.14 The site is accessed by, and the derelict shed is surrounded by, a c.2m wide compacted hard core / road planing driveway which is used frequently on a daily basis by the current residents. The driveway leads from the south western corner of Breach Wood to Oak Cottage, a residential dwelling currently under construction.



Site Photographs



Photo 1: Southern side of storage container and kennel building



Photo 2: Eastern facades of storage container and kennel building



Photo 3: View of derelict shed from north



Photo 4: Southern view of derelict shed, surrounded by short grassland, hard standing, two mature oak trees



Photo 5: Stand of brambles partially covering the derelict shed, separated from surrounding by short grass, hard standing and high canopy:



Photo 6: Bramble growth covers around derelict shed, isolated on all sides by open ground





Photo 7: Typical view of surrounding woodland – tall oaks with high canopies, very little shrub layer and mown grassland



Photo 8: Driveway separating the derelict shed from the kennel building



Photo 9: Open nature of woodland to south and east of derelict shed, which is encircled by driveway



Photo 10: Open nature of woodland and driveway to north of derelict shed

Animals

Bats

- 4.15 The MAGIC data search identified two bat EPSPM licences within 5km of the site, located 5km to the north west (2014) and 0.9km to the north east (2012) for non-breeding roosts of brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus* and natterers *M. nattereri* and barbastelle *Barbastella barbastellus*

Bats - roosting

- 4.16 A number of mature oak trees are present within the site boundaries and in the immediate surroundings, some of which supported small scale deadwood features with potential to be used on a sporadic basis by individual bats.



4.17 The buildings on site were surveyed by John Dobson in May 2022, and were found to be of negligible suitability for roosting bats (Dobson, J. 2022).

Bats – commuting / foraging

4.18 The proposed development site provides a small area of potential bat foraging habitat due to the presence of mature oak trees and surrounding woodland habitats, however all of the trees are due to be retained and protected as part of the proposals. The site is very unlikely to be of importance to local bat populations for the purposes of foraging or commuting due to an abundance of such habitats in the immediate vicinity.

Reptiles

4.19 The site does not provide any potential habitat for reptiles, and is not connected to any areas of potential offsite reptile habitat.

Amphibians

4.20 The MAGIC data search highlighted two records of great crested newts (GCN) from the pond survey data set dating from 2019, from ponds located 0.5km and 1.1km to the north west of the site.

4.21 The derelict building and the associated brambles provide a small area of habitat potentially suitable for foraging or sheltering GCN, however due to an apparent lack of ponds within 250m of the site, these areas are very unlikely to be used by GCN. There is also an abundance of such habitats in the immediate vicinity, further reducing the likelihood of GCN using the small areas of habitats on site. The remainder of the proposed development site is not suitable for use by GCN.

Birds

4.22 The mature oak trees provide potential nesting habitat for birds, however none of these trees will be affected by the proposals. The kennel building and derelict shed provide some opportunities for common nesting bird species such as wren *Troglodytes troglodytes*, robin *Erithacus rubecula* and blackbird *Turdus merula*, however no nests were recorded at the time of survey.

Badger

4.23 No evidence of badger was recorded on or within 30m of the site as far as could be inspected. No setts, footprints, hairs, latrines, snuffle holes or scratching indicative of the presence of badgers was recorded on site or immediately adjacent.



Otter and water vole

- 4.24 There are no waterbodies on, adjacent or directly connected to the site which have potential to support otters or water voles.

Dormice

- 4.25 The issue of dormice was raised as a concern by Place Services in their response dated 17th June 2022. The records search identified 21 records of dormice within 1km of the site dating between 2009 and 2016. The two most recent records were from Kingsland Lane, approximately 120m to the north of the proposed development site. One record was described as being from Breach Grove, however this record had the same 6 figure grid reference as the 10 figure grid reference for the Kingsland Lane record, and it is possible that this record was from Kingsland Lane and not Breach Grove given the lack of public access to Breach Grove. All remaining records were c.0.5km to the north west of the site, with connectivity to Breach Grove via mature hedgerows.
- 4.26 It is reported by the site owner, and supported by the site survey, that Breach Grove was cleared of its c.2m high bramble understorey in 1991, after which it was maintained as closely mown grassland with bluebells emerging in spring. The vast majority of Breach Wood currently provides low quality potential habitat for dormice due to a lack of understorey vegetation, with native shrubs present only along the woodland boundaries. The standard oak trees present through the woodland are tall and leggy, and have relatively poor connectivity via their canopies.
- 4.27 Photographs of the derelict shed taken in 2021 and 2020 by Mr G Barrel are provided below, and appear to show a very low covering of brambles across a semi-derelict building, which was damaged by tree fall and since allowed to further deteriorate. Vegetation surrounding the building is in the same state as recorded in August 2022 i.e. closely mown grassland, and the bramble cover is low and in the early stages of establishment.



Photo 11: Southern façade of derelict building taken 2021. Minimal bramble growth present concentrated at eastern end



Photo 12: Southern façade of derelict building taken 2020. Very little bramble growth





Photo 13: North western facades of d building, surrounded by disturbed ground with very little bramble cover – photo 2021



Photo 14: Northern façade of derelict building taken 2021 – very little bramble growth, partially covering central and western sections

- 4.28 Dormice are aerial mammals and the closely mown grassland present on site and throughout the woodland, along with the driveway, create large expanses of open land which are likely to be avoided by dormice. The open nature of the ground layer is also likely to exacerbate the negative effects of domestic cat predation on dormice, with the site currently supporting three cats, one of which was seen on site at the time of survey. It is reported that cats have been present on site since 1991 (Barrell, G. pers.comm) and three dogs also have free rein across the site.
- 4.29 The brambles were thoroughly inspected for the presence of potential dormouse nests at the time of survey, looking from ground level upwards. No nests – of dormice or birds – were recorded.
- 4.30 Despite the known presence of dormice in adjoining Kingsland Lane (a green lane with mature hedgerows and a high diversity of shrubs and herbs), the contrasting poor quality of the woodland habitats on site combined with the long term presence of three cats and three dogs is likely to have significantly reduced the potential for dormice to be present within or immediately adjacent to the proposed development site. Whilst a small area of brambles is present across the derelict building, Photos 11-13 and the extent and stage of growth recorded in 2022 does support the claim that the brambles have only established within the last 18-24 months. The area of potential dormouse habitat on site is therefore very recently established, is very small (c. 25m²), is isolated from connective habitats by large, open expanses of mown grass and hard standing, and is home to three domestic cats. The likelihood of dormice being present within the site boundaries and either directly or indirectly affected by the proposals is therefore assessed as negligible.

Invertebrates

- 4.31 The habitats on site are considered likely to support a very small number of common and widespread invertebrate species typical of the habitats present.



Other Legally Protected Species

- 4.32 Due to a lack of suitable habitats the site is not considered likely to support any other legally protected species.

Species of Principal Importance

- 4.33 The majority of the site does not provide suitable habitat for any Species of Principal Importance in England (SPIE), however the brambles could be used to a limited degree by foraging and sheltering dunnock *Prunella modularis*, common toad *Bufo bufo* and hedgehog *Erinaceus europaeus*



5.0 CONCLUSIONS AND RECOMMENDATIONS

International and National Statutory Designated Sites

- 5.1 No direct or indirect impacts upon national or international statutory designated sites predicted, and no further works are required in this regard.

Non-Statutory Designated Sites

- 5.2 The site is located within Breach Grove County Wildlife Site, a small deciduous woodland designed for its ancient woodland habitats and the adjoining mature and diverse green lane (Kingsland Lane).
- 5.3 Ancient woodland is defined as an irreplaceable habitat, and lowland mixed deciduous woodland is listed as a Habitat of Principal Importance in England under Section 41 of the NERC Act 2006 (as amended). Whilst the site is located within an area of designated ancient woodland, the proposals are entirely limited to the replacement of existing buildings and a very small area of closely mown grassland which surrounds them. No trees will be lost, and the recently established brambles are limited to the derelict building only, with no connectivity to any of the nearby trees. Bluebells – an ancient woodland indicator species – do not appear to be present within the site boundaries, but are present within the wider woodland.
- 5.4 It is understood that tree protection measures have been proposed by Tree Planning Solutions (Choat, J. 2022) and that these measures will ensure the trees are fully protected against direct and indirect damage during construction works. It is recommended that building materials are stored on pallets only, to prevent damage to tree roots within the wider woodland.
- 5.5 It is also understood that the following measures will be adhered to during construction to avoid any direct or indirect damage to the trees and disturbance to wildlife present immediately adjacent to the site:

Heras fencing will be erected along the western site boundary, to prevent machinery or materials being used / stored in close proximity to offsite trees and boundary shrubs. The remaining works will be carried out only inside the natural boundaries created by the circular access drive, which must in any case be kept open for constant use

Dry bare earth will be damped down where necessary to reduce dust levels, however the vast majority of the tree canopies are well above construction height

No fires will take place on site



Fuel will be stored in appropriate facilities, will be used in association appropriately sized drip trays or will be banded to prevent any accidental spillages or leaks reaching tree root zones

- 5.6 Given the small scale of the proposals, the proposed tree protection measures, the existing and previous use of the site for buildings surrounded by hard standing, the very small areas of closely mown grassland and the lack of ancient woodland indicator species within the site boundaries or immediately adjacent, negligible adverse changes to the woodland are predicted, and no loss of ancient woodland habitat.
- 5.7 Negligible direct and indirect adverse effects upon the woodland are predicted due to the current use of the site i.e. existing compaction caused by regular and frequent car movements across the driveway and grassland, existing disturbance by a large family and six cats and dogs, existing small-scale lighting of the site with porch lights, an existing lack of understorey vegetation, no proposed removal of trees, small garden areas to avoid access and disturbance to the wider woodland, use of the site as holiday lodges to avoid any increase in the number of domestic pets on site, limited existing value of the site to wildlife due to six free ranging dogs and cats, control measures to avoid dust pollution during construction, mitigation measures to avoid artificial illumination of the surrounding woodland, and limiting the development proposals to the existing building footprints.
- 5.8 It is noted that ancient woodland is considered to be 'irreplaceable habitat', and that the current standing advice relating to ancient woodland states that planning permission should be refused where it results in the loss or deterioration of ancient woodland. For the reasons stated above, it is considered that the proposals will not result in the loss or deterioration of any ancient woodland habitat features. The creation of a habitat buffer adjacent to the woodland is therefore not recommended since it is not feasible and is likely to be disproportionate to the predicted impacts.

Invertebrates

- 5.9 Potential effects negligible.
- 5.10 Mitigation measures: none.
- 5.11 Residual effects: negligible.

Amphibians

- 5.12 Great crested newts (GCNs) and their habitats are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended).
- 5.13 Potential effects negligible.



5.14 Mitigation: none required.

5.15 Residual effects: negligible.

Reptiles

5.16 All Suffolk reptile species are protected against harm under the Wildlife and Countryside Act 1981 (as amended).

5.17 Potential effects negligible.

5.18 Mitigation measures: none required.

5.19 Residual effects: negligible.

Birds

5.20 Breeding birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended).

5.21 Potential effects the existing buildings and the bramble scrub could be used by common nesting birds, however the likelihood is limited due to the relatively sparse nature of the bramble growth and the presence of six cats and dogs on site. The disturbance and destruction of an active nest could have a negative effect on some bird species at the site level. There will negligible loss of foraging habitat.

5.22 Mitigation measures: ideally works to the buildings and brambles would commence during September to February inclusive to avoid the bird nesting season. If this is not possible, immediately prior to commencement of works a check for nesting birds should be undertaken by a suitably experienced ecologist. Any active nests will need to be left in situ until the young have left the nest.

5.23 Residual effects: negligible. In the context of the surrounding environment the loss of the building is likely to have negligible impact on common bird species. The provision of nest boxes has not been recommended in this instance due to the larger number of cats (and dogs) on site, and the resultant threat to fledglings.

Bats

5.24 All species of bat are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended). In summary, this makes it an offence to harm or disturb a bat; damage or destroy a roost; and obstruct access to a roost (whether or not bats are present at the time).



- 5.25 Potential effects on roosting bats: negligible. Whilst a number of mature oak trees are present within the site boundaries and in the immediate surroundings, some of which supported small scale deadwood features with potential to be used by individual bats subject to the implementation of the measures contained within the arboricultural report (Choat, J. 2022) no trees will be adversely affected by the proposals.
- 5.26 Mitigation measures for roosting bats: none required.
- 5.27 Potential effects on commuting / foraging bats: in the absence of mitigation, negligible to minor adverse effects at the site level are predicted with respect to foraging and commuting bats due to the local abundance of potential commuting and foraging habitats, and no loss of such habitat. However, the effects on bats using the site to forage and commute could be greater where inappropriate lighting is installed.
- 5.28 Mitigation measures for commuting / foraging bats: lighting within the new development will be minimal – limited to one porch light on each of the holiday residences, and no security lighting. The lights will use hoods, cowls, louvres and / or shields to direct light to the ground, and bulbs will be warm white (<3000K) LEDs, of the lowest wattage possible. Security cameras will use infra-red lights and not standard flood lights.
- 5.29 Residual effects: a minor positive effect on roosting bats at the site level is predicted following the provision of five bat boxes in trees across the surrounding woodland. The recommended Kent bat boxes aim to provide well insulated roosting opportunities for a range of crevice dwelling bats. The planting of a mixed native hedge along the northern site boundary will also result in a minor enhancement at the site level for foraging bats.

Badger

- 5.30 Badgers and their setts are afforded protection under the Protection of Badgers Act 1992 (as amended). This legislation includes protection against damage to badger setts and against interference and disturbance of badgers whilst they are occupying a sett.
- 5.31 Potential effects: negligible.
- 5.32 Mitigation measures: none.
- 5.33 Residual effects: negligible.

Otters and water voles

- 5.34 Otters and their habitats are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended). Water voles are protected by the latter only.
- 5.35 Potential effects negligible.



5.36 Mitigation measures: none.

5.37 Residual effects: negligible.

Dormice

5.38 Dormice and their habitats are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and by the Wildlife and Countryside Act 1981 (as amended).

5.39 Potential effects: in the absence of mitigation, there is negligible potential for dormice to be disturbed by the proposals, negligible potential for dormice to be directly harmed by the proposals, and negligible potential for dormouse habitat to be lost as part of the proposals. The proposals are likely to have negligible impact upon the local population of dormice.

5.40 Mitigation measures: the measures relating to the protection of the surrounding woodland detailed in sections 5.4 and 5.5 will ensure that the offsite potential dormouse habitat is not damaged or disturbed during construction works. The measures detailed in section 5.28 relating to sympathetic use of artificial lighting will also ensure that dormice – a nocturnal species – are not disturbed during the operational phase by artificial lighting.

5.41 As a precaution it is recommended that the brambles are cleared only following a prior check for dormouse nests by an experienced ecologist, and between May and September only, to avoid the dormouse hibernation season. In the unlikely event that a dormouse or potential dormouse nest is discovered at any point during clearance or construction, all works must cease and an ecologist contacted for further advice.

5.42 As holiday lodges, the proposals will not result in any increase in the number of domestic cats present on site.

5.1 Residual effects: negligible. Due to the presence of three cats on site, the creation / enhancement of habitats specifically for dormice in the immediately surroundings has not been recommended, as encouraging dormice to use the woodland could have an overall negative effect as a result of predation. The planting of a mixed native hedge along the northern site boundary is unlikely to benefit dormice as it will remain isolated from the nearby tree canopies.

Other Legally Protected or Notable Species

5.2 The proposed development is not anticipated to impact on any other legally protected species, therefore no mitigation measures are recommended.



5.3 The mitigation and enhancement measures detailed above and below will provide artificial roosting features suitable for a range of crevice dwelling bat species (many of which are SPIE) and will ensure the low value woodland habitat adjacent to the site remains unaffected by the proposals. Nest boxes have not been recommended due to the high number of cats present on site and the resultant threat to fledglings.



6.0 ENHANCEMENT MEASURES

- 6.1 **5 no. Kent bat boxes** will be fixed to mature trees in the immediately surrounding woodland (blue line boundary). The boxes will be positioned between 3-6m high, facing in a variety of directions, and with a clear 1-2m drop beneath the box entrance i.e. clear of branches, ivy etc.

Other external bat boxes are available, however only the Kent bat box design should be used. The boxes may be purchased or constructed in accordance with the specification provided below.

Design and measurements

Simple to construct, self-cleaning and low maintenance, the Kent bat box (designed by the Kent Bat Group) is a great way to encourage bats in your garden or your green space. The box should be rainproof and draught-free.

The only critical measurement is the width of the crevices: between 15-25mm. Other measurements are approximate. Timber should be approximately 20mm thick.

Measurements for one Kent bat box kit would be as follows:

Part	Quantity	Size (mm)
Roof (A)	1	250 x 160 x 20
Back (B)	1	450 x 200 x 20
Centre (C)	1	330 x 200 x 20
Front (D)	1	210 x 200 x 20
Centre Rails (E)	2	330 x 20 x 20
Front Rails (F)	2	210 x 15 x 15
Stand-offs (optional)	2	200 x 20 x 20

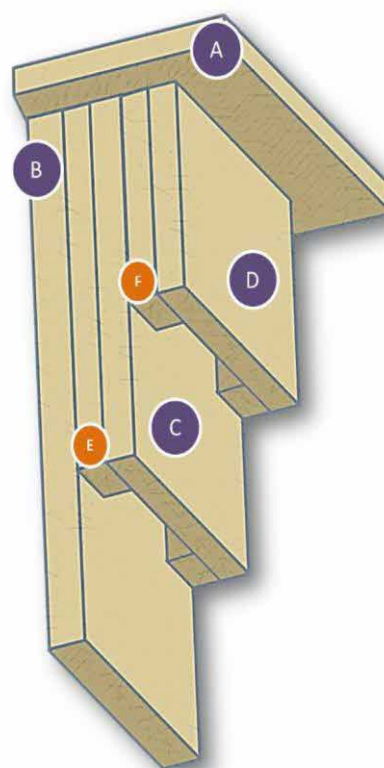
Material and Tools

This kit requires approximately 1.6m of rough wood and 25 screws (8 x 1 ½ inches) to assemble. You can rough it up by scraping with a suitable tool – possibly a saw blade or even a screwdriver but make sure you use untreated wood as some preservative chemicals can kill bats.

Pre-drill the holes to prevent the wood splitting. Alternatively you can assemble your bat box kit with nails although they tend to be less robust than boxes made with screws.

The hanging screws may either be at the edges of the front panel or in the side centre block (not in the rails!). Fixing may be by use of brackets, durable nylon cord or wires.

When installing the box, assess the risks of working at height, use the appropriate fittings and assess where the box will be located, in relation to any public access. Regular checks should be made to ensure the box remains securely fitted, especially after high winds.



- 6.2 **Species rich native hedging** should be planted along the northern site boundary, consisting of at least five of the following species- hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, dogwood *Cornus sanguinea*, field maple *Acer campestre*, hazel *Corylus avellana*, guelder rose *Viburnum opulus*, holly *Ilex aquifolium* and spindle *Euonymus europaeus*– in double staggered rows and mulched with 75mm of woodchip.



7.0 REFERENCES

Choates, J. (2022) Arboricultural Impact Assessment and Method Statement for Land at Oak Cottage, Cawley Road, Leavenheath, Suffolk. 26th May 2022

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* Version 1.1. Chartered Institute for Ecology and Environmental Management, Winchester.

CIEEM (2017a) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute for Ecology and Environmental Management, Winchester.

CIEEM (2017b) *Guidelines for Ecological Report Writing*. Chartered Institute for Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)* The Bat Conservation Trust, London.

Dobson, J. (2022) *Ecological Survey and Assessment for Oak Cottage, Leavenheath*. Essex Mammal Surveys. May 2022

Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit*. Revised print, JNCC, Peterborough.

Miles et al. (2018) *Bats and Artificial Lighting in the UK*. Institution of Lighting Professionals and Bat Conservation Trust.

Mitchell-Jones, A.J (2004) *Bat Mitigation Guidelines*, English Nature, Peterborough.

Multi-agency Geographic Information for the Countryside (MAGIC) Interactive Map. Department for Environment, Food and Rural Affairs.

Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M., (2000). *Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*)*. Herpetological Journal, 10, pp. 143-155.



8.0 LEGISLATION

The Conservation of Habitats and Species Regulations 2017 (as amended)

- 8.1 The Conservation of Habitats and Species Regulations 2017 (as amended) continue to provide safeguards for European Protected Sites and Species as listed in the Habitats Directive. As a result, the same provisions remain in place for European protected species, licensing requirements and protected areas after Brexit.
- 8.2 Species protected by the former European legislation includes great crested newt, all UK bat species, dormice and otter. A number of other plant and animal species are also included such as sand lizard, smooth snake and natterjack toad, however these additional species are rare, with restricted geographical ranges and specific habitat types.
- 8.3 Under The Conservation of Habitats and Species Regulations 2017 (as amended) it is an offence to:
- Damage, destroy or obstruct access to an EPS breeding or resting place;
 - Deliberately capture, injure or kill an EPS (including their eggs);
 - Deliberately disturb an EPS, in particular any actions which may impair an animal's ability to survive, breed or nurture their young; or their ability to hibernate or migrate; or which may significantly affect the local distribution or abundance of the species to which they belong.
- 8.4 The legislation applies to all stages of amphibian life cycles (eggs, larvae and adult), and to active bat roosts even when they are not occupied at that particular time of year.
- 8.5 Natural England can, under certain circumstances, grant a licence to permit actions which would otherwise be unlawful, subject to the species concerned being maintained at a Favourable Conservation Status and there being a true need for the proposed works to take place.
- 8.6 Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are also afforded protection under the Conservation of Habitats and Species Regulations 2017 (as amended). Ramsar sites, which are designated under the Convention on Wetlands of International Importance (1971), are afforded the same level of protection as SPAs and SACs via national planning policy.



The Wildlife and Countryside Act 1981 (as amended)

- 8.7 The Wildlife and Countryside Act 1981 (as amended) provides varied levels of protection for a range of species including those already listed above. Water vole are one of the species not listed under the Conservation of Habitats and Species Regulations 2017 (as amended), but are afforded the highest level of protection under the Wildlife and Countryside Act 1981 (as amended).
- 8.8 It is an offence to intentionally kill, injure or take a water vole, to intentionally or recklessly damage or destroy a structure or place used for shelter and/or protection, to disturb a water vole whilst occupying a structure and/or place used for shelter and protection, or to obstruct access to any structure and/or place used for shelter or protection.
- 8.9 Other species, such as common lizard, slow worm, adder and grass snake, are afforded less protection. For these species it is an offence to intentionally or recklessly kill or injure animals.
- 8.10 All active bird nests, eggs and young are protected against intentional destruction. Schedule 1 listed birds e.g. barn owls, kingfishers, are further protected from intentional and reckless disturbance whilst breeding.
- 8.11 Schedule 9 of The Wildlife and Countryside Act lists plant species for which it is an offence for a person to plant, or otherwise cause to grow in the wild. This includes Japanese Knotweed which, under the Environment Protection Act 1990 (as amended) is classed as 'controlled waste'. If any parts of the plant including stems, leaves and rhizomes are taken off-site they must be disposed of safely at a landfill site licensed to deal with such contaminated waste.
- 8.12 Sites of Species Scientific Interest (SSSI) are afforded protection by the Wildlife and Countryside Act 1981 (as amended).

The Protection of Badgers Act 1992 (as amended)

- 8.13 The Protection of Badgers Act (1992) makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so, and to intentionally or recklessly interfere with a sett.

The Protection of Mammals Act 1996 (as amended)

- 8.14 The Act protects all wild mammals against actions which have the intention of causing unnecessary suffering, including crushing and asphyxiation.



The Natural Environment and Rural Communities Act 2006 (as amended)

- 8.15 Under sections 40 and 41 of the Natural Environment and Rural Communities Act (NERC) 2006 local authorities have an obligation to have regard to the purpose of conserving biodiversity in carrying out their duties. The majority of UK legally protected species are listed under Section 41 the NERC Act.
- 8.16 Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006) also requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity' in England (Species of Principal Importance in England – SPIE). The S41 list is used to guide decision-makers, including local and regional authorities, in implementing their duty under Section 40 of the act to have regard to the conservation of biodiversity in England when carrying out their normal functions.

Statutory Designated Sites

- 8.17 Under the National Parks and Access to the Countryside Act 1949 (as amended), statutory conservation agencies were able to establish National Nature Reserves (NNRs), with provisions for these areas strengthened by the Wildlife and Countryside Act 1981 (as amended). They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them.
- 8.18 Local Nature Reserves (LNRs) can be declared by local authorities after consultation with the relevant statutory nature conservation agency under the National Parks and Access to the Countryside Act 1949 (as amended). LNRs are not subject to legal protection, but are afforded protection against damaging operations via byelaws, and against development via local planning policies.

Non-Statutory Designated Sites

- 8.19 Local Wildlife Sites (LWS), Sites of Importance for Nature Conservation (SINCs), Sites of Nature Conservation Importance (SNCIs) and County Wildlife Sites (CWS) are often designated by the local Wildlife Trust. They are not usually afforded any legal protection, but are recognised in the planning system and given some protection through planning policy.

National Planning Policy Framework (NPPF)

- 8.20 The National Planning Policy Framework (2019) sets out the Government's planning policies for England and how these should be applied. The NPPF must be taken into account when preparing a Local Authority's development plan, and is also a material consideration in planning decisions.



8.21 As well as highlighting the importance of protecting ecologically valuable sites and habitats, the NPPF highlights the duty of local planning authorities (LPA's) to deliver net gains for biodiversity within the planning system. Planning policies and decisions should, as per Paragraph 170d, contribute to and enhance the natural and local environment by:

d) 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'

8.22 To protect and enhance biodiversity, policies and plans should, as per Paragraph 174b:

b) 'promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.'

8.23 When determining planning applications, LPA's should apply principles which avoid an adverse effect on natural environments and notable species:

d) 'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.'



Appendix 1:
Proposed Site Layout





Contract PROPOSED HOLIDAY LODGES & DETACHED GARAGE (REPLACEMENT BUILDINGS) AT OAK COTTAGE, KINGSLAND LANE, LEAVENHEATH, SUFFOLK, CO6 4NG.	Title EXISTING & PROPOSED SITE PLANS.	Client MR & MRS G. BARRELL	PA 06/22 PRELIMINARY-PLANNING REVISIONS.	Scale 1:500 Date NOVEMBER 2021. Drawn S. TANKARD	Drawing No. 68-2021-01 PA
			P 11/21 PRELIMINARY-ISSUED FOR PLANNING APPROVAL.		
			REV DATE DESCRIPTION		

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Liz Lord Ecology

