



Liz Lord Ecology



Frog Hall Farm, The Street, Aldham

Preliminary Ecological Appraisal

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CONTENTS

1.0	SUMMARY	3
2.0	INTRODUCTION	4
3.0	METHODOLOGY	7
4.0	RESULTS (<i>Baseline Conditions</i>)	13
5.0	CONCLUSIONS AND RECOMMENDATIONS	22
6.0	ENHANCEMENT MEASURES	27
7.0	REFERENCES	29
8.0	LEGISLATION	30

Appendix 1: Proposed Site Layout

Appendix 2: Habitat Suitability Index Results

Appendix 3: Great Crested Newt Precautionary Method Statement

Figure 1A: Site Location Plan

Figure 1B: Survey Boundary and Site Boundary



1.0 SUMMARY

- 1.1 The site (located at central grid ref: TM 05199 45098) was found to comprise a small group of agricultural barns surrounded by bare ground, compacted hard core and margins of ruderal vegetation and scrub. Planning permission is being sought to demolish the existing buildings and construct a single replacement dwelling with parking and gardens, accessed via the existing site entrance.
- 1.2 Two of the buildings were assessed as being of 'negligible' suitability for roosting bats, with the breeze block building assessed as being of 'low' suitability for roosting bats due to the presence of relatively superficial crevices associated with missing mortar on three corners of the building. For a building assessed as being of 'low suitability' for roosting bats, best practice guidelines call for a single dusk emergence survey to determine presence / likely absence of roosting bats. Due to it being possible to fully inspect the crevices with a torch and ladder, a detailed inspection was carried out on 5th July 2022 and 26th September 2023 instead of a single emergence survey. Such an inspection is arguably more thorough than an emergence survey in this instance. No bats, or evidence of bats, was recorded during either inspection. Roosting bats are unlikely to be present on site and no further survey or mitigation is required with respect to bats.
- 1.3 There is very limited potential for great crested newts to be present in the small margins of scrub present along the northern and western site boundaries. The potential is low, and this can be further reduced by following the Precautionary Method Statement provided in Appendix 3. Subject to all measures in the PMS being followed, no further survey or mitigation is required with respect to great crested newts.
- 1.4 The buildings provide potential habitat for nesting birds, with occasional pigeon nests recorded at the time of survey. The patches of low bramble scrub also provide potential nesting habitat for smaller bird species. Ideally any works to remove the buildings and scrub would commence during October to February inclusive to avoid the bird nesting season, however where 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.
- 1.5 The site is not deemed suitable for any other protected species and no further survey or mitigation is required with respect to protected species.
- 1.6 The enhancement measures detailed in section 6.0 should result in a minor enhancement for roosting bats and house sparrow at the site scale.



2.0 INTRODUCTION

Instruction

- 2.1 This report has been prepared by Liz Lord following instruction by Mr D Pearce to carry out an ecological appraisal of a group of agricultural buildings at Frog Hall Farm, Aldham, Ipswich, Suffolk IP7 6NH.

Site Proposals

- 2.2 Planning permission is being sought to demolish the existing buildings and construct a single replacement dwelling with parking and gardens, accessed via the existing site entrance.

Site Description

- 2.3 The farmyard lies approximately 2.5km to the north east of Hadleigh, Suffolk in the village of Aldham. It is adjoined to the south by an existing residential garden, to the east by the existing hard standing access route and a small dilapidated storage building, and to the west by small pasture fields. Offsite to the north is a small overgrown area of long grass and scrub. Beyond the farmyard, the immediate surroundings are dominated by hedge-lined arable fields with occasional small grass paddocks. The wider landscape is mixed, dominated by arable fields of varying sizes, and interspersed with copses, occasional pasture and larger areas of woodland.
- 2.4 Aerial site location plans are provided below and overleaf.



Fig 1A: Site location, as indicated by red arrow. Aerial photograph sourced from Google Earth Pro





Fig 1B: Proposed site boundary highlighted red. Aerial photograph sourced from Google Earth Pro

Objectives

- 2.5 This report has been written broadly in accordance with the report writing guidelines 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 Where possible, identify and describe all potentially significant ecological effects on protected and notable species / sites associated with the proposals;
 - 2.5.2 Where possible, 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.



Timescales

- 2.7 The construction 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 buildings and vegetation 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 drawings provided by Mr D Pearce, as shown in Appendix 1. Note that any minor amendments to the overall scheme are unlikely to alter the conclusions and recommendations of this report.
- 2.10 Recommendations included within this report are the professional opinion of an experienced ecologist based on the client's proposals for the site, the site surveys, the results of the desk study, and features present in the surrounding environment.



3.0 METHODOLOGY

Desk Study

- 3.1 The Multi Agency Geographic Information for the Countryside (MAGIC) website was consulted on 4th October 2023 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 (last updated January 2022). 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 August 2022); and data from Natural England great crested newt Class Survey Licence returns within a 5km radius of the site (last updated August 2022).
- 3.3 Due to the small size of the proposals, the low ecological value of the habitats present, the very limited potential for protected or notable species to be present onsite, and the very limited potential for the site or surrounding land to form part of a County Wildlife Site, a records search with the Suffolk Biodiversity Information Service (SBIS) was not undertaken. This is not considered to be a limitation to the conclusions and recommendations of this report.

Site Survey

- 3.4 A daytime site survey and detailed building inspection of Barn 1 was initially carried out on 15th March 2022, following by a second detailed building inspection of Barn 1 on 5th July 2022. A second daytime site survey and inspection of Barns 1, 2 and 3 and surrounding land was carried out on 26th September 2023. The survey was 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.
- 3.5 The survey encompassed all land within the red line boundary as shown in Figure 1B, plus land immediately adjacent to the site, where accessible or visible.
- 3.6 The survey also included an assessment of the site's potential to support any legally 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 & 2023) and



Habitat Suitability Index for Great Crested Newt (Oldham *et al*, 2000).

- 3.7 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*.
- 3.8 Where methodologies, classification or recommendations deviate from best practice guidelines, this report provides ecological justification for such changes.

Building Inspection

- 3.9 The buildings were surveyed and assessed in accordance with criteria outlined in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, J. 2016 & 2023).
- 3.10 The internal and external inspections of the buildings were carried out using – as necessary – a powerful torch, a ladder, a pair of Nikon 12 x 50 binoculars and an Easyview 8mm digital recording endoscope to inspect gaps and crevices for bats and evidence of bats.
- 3.11 Floors, walls and storage surfaces beneath all possible access points or crevices which may be used for roosting were checked for droppings, scratching and urine or fur staining, and particular attention was paid to the areas beneath tie beams from which bats may hang or rest.
- 3.12 The beams, barge boards and door / window frames of the buildings were specifically checked for scratching and staining, as well as roosting bats. Particular attention was paid to any gaps in and around structural beams, roofs and walls; and the walls, ledges and ground area below.
- 3.13 The floor surfaces comprised relatively clean concrete or bare ground, supporting a number of stored items. At the time of the building inspection the floors did not appear to have been recently swept or cleared.

Habitat Suitability Index (HSI) assessment

- 3.14 For each accessible water body located within potential influencing distance of the construction zone boundary (generally <250m in this case), a Habitat Suitability Index (HSI) assessment was carried out, following methods described in Oldham R.S. *et al*, (2000).
- 3.15 Features such as shading, water quality, terrestrial habitat, fish and fowl presence were noted during the survey. These features were used in the HSI to assess the potential of the ponds to support great crested newts. Following the survey, the HSI field scores are inserted into a table to calculate a score for each pond, with pond suitability for great crested newts assessed on the following scale:



HSI Score	Pond Suitability
< 0.5	Poor
0.5 – 0.59	Below Average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

Surveyors

- 3.16 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.
- 3.17 The weather at the time of the initial survey of 15th March 2022 was sunny and still with a temperature of 10°C. During the July inspection the weather was sunny with a temperature of 19°C and little wind (BF0-1), and on 26th September the weather was sunny with a temperature of 20°C and a moderate wind (BF2-3).

Zone of Influence

- 3.18 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.
- 3.19 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.
- 3.20 An assessment of the Zone of Influence has been made based on the site boundaries shown in Figure 1B, and where necessary recommendations to avoid any significant adverse impacts beyond the site boundaries have been provided in section 5.0.

Limitations

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



- 3.22 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.
- 3.23 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

- 3.24 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

- 3.25 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
- 3.26 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'.
- 3.27 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.



3.28 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

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

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

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

3.31 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."*

3.32 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.

3.33 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."*

3.34 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

3.35 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

3.36 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.

3.37 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.

3.38 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 group of agricultural barns surrounded by bare ground, compacted hard core and margins of ruderal vegetation and scrub.

Desk Study: Statutory Designated Sites

- 4.2 The MAGIC website indicates that there is one UK statutory designated site of national importance within a 2km radius of the site, and no sites of international importance within 5km of the site.
- 4.3 Hintlesham Woods SSSI is located c.0.6km to the south of the site, and Elmsett Park Wood SSSI is located 1.7km to the north east of the site. Hintlesham Woods SSSI is designated for its ancient coppice-with-standards woodland habitat and the diverse flora this supports, whilst Elmsett Park Wood SSSI is also designated for its species rich ancient woodland flora.
- 4.4 The site lies within the Zone of Influence of the Stour and Orwell Estuaries SPA and Ramsar site, which is located around 12km to the south east of the site. All development within 13km of this site is deemed to be within the Impact Risk Zone with respect to recreational pressures, and will require financial contributions towards the Suffolk Recreational Disturbance Avoidance and Mitigation Strategy (RAMS).

Desk Study: Non-Statutory Designated Sites

- 4.5 It is very unlikely that there are any County Wildlife Sites located within direct influencing distance of the site.

Habitats

Invasive species

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

Buildings

- 4.7 The vast majority of the site area consists of modern agricultural buildings, constructed of a mix of steel and concrete girders and roof supports, and with bare earth or concrete floors.
- 4.8 Barns 2 and 3 are constructed almost entirely of metal, with a small number of modern wooden wall beams fixed closely to surrounding metal framework. Roof sheets comprise corrugated fibreboard sheets, with occasional Perspex skylights. Some roof sheets are missing from the north eastern corner of Barn 3.



- 4.9 Barn 3 is open on all sides, and Barn 2 is open to the north and east. The western wall of Barn 2 is covered with metal sheets running to ground level. Immediately adjacent to here is a row of large straw bales extending across the western façade of Barn 3 to create a wall feature. Barns 2 and 3 currently store a range of materials and small equipment / vehicles, with the materials raised above the ground on pallets. Occasional vegetation growth is present at the eastern and northern edges of the buildings, but generally limited to low creeping bramble *Rubus fruticosus agg.* which provides little cover at ground level.
- 4.10 Barn 1 comprises a concrete frame, with the remaining wall sections infilled with bricks. The brickwork is in very good condition, however on the north western, south western and south eastern corners there are small sections of mortar missing where the brickwork meets the concrete wall supports. The gaps are relatively superficial, and do not appear to lead into a further cavity. All were easily accessible for inspection. Wooden double doors on metal runners are present across the eastern façade.
- 4.11 The roof of Barn 1 comprises a single layer of corrugated fibreboard, which extends down to cover the gable end apices. A small number of corrugated Perspex sheet skylights are present, creating moderately light internal conditions.
- 4.12 The concrete floor of Barn 1 had not been recently swept at the time of survey, with numerous mouse droppings recorded on the floor and also on some shelving units. The southern, western and northern walls support tall metal industrial shelving from floor to eave height, used to store a variety of tools and materials.
- 4.13 Barn 2 adjoins the northern wall of Barn 1, and a small metal shipping container is present immediately to the south of Barn 1.

Hard standing

- 4.14 A large area of hard standing extends away from the buildings to the east, comprising the current access to the site, made up of a combination of concrete hard standing and compacted hardcore.

Ruderal vegetation

- 4.15 A narrow margin (c.2m) along the western façade of the buildings supports nettles *Urtica dioica*, brambles and young elder *Sambucus nigra*, merging into bristly oxtongue, cocksfoot *Dactylis glomerata*, rough meadow grass *Poa trivialis* and couch grass *Elymus repens* to the rear of Barn 1. In 2022 the area to the rear of Barn 1 consisted of bare ground used by chickens.
- 4.16 Immediately to the north of Barn 3 is a narrow margin of ruderal vegetation dominated by nettles, with developing brambles and occasional grasses.



Trees

- 4.17 A young self-sown ash *Fraxinus excelsior* tree and a small self sown elm *Ulmus sp.* grows close to the southern wall of Barn 1. Bushy, semi-mature goat willows grow in the north eastern corner of the site. It is understood that all of the trees will be retained as part of the proposals.

Native scrub

- 4.18 A row of mature hazel *Corylus avellana* are present along a short length of the north eastern boundary, with patches of bramble extending west from here and along part of the northern site boundary adjacent to Barn 3.
- 4.19 Also in the north eastern corner of the site is a pile of small grade rubble and sediment, the majority of which is well consolidated, compacted and partially vegetated, and does not provide access to potential crevice and cavities. Some slightly larger and looser material is present at the base.



Photo 1: Eastern façade of Barn 1, with metal container adjacent to the south



Photo 2: Internal view of Barn 1



Photo 3: Internal view of Barn 2, with brick wall of Barn 1 to south, metal sheet walls to ground level to the west, and Barn 3 adjoining to the north



Photo 4: Internal view of Barn 2, with straw bale western rear wall of Barn 2 visible adjacent to metal sheet wall section





Photo 5: Barn 3 - eastern façade through to rear (western) façade



Photo 6: Internal view of Barn 3, with stored materials on raised pallets / containers



Photo 7: Nettle and bramble dominated margin to rear (west) of Barn 3 (straw bale wall visible)



Photo 8: Low growing ruderal vegetation to rear (west) of Barn 1. Small elm tree and young ash tree also present



Photo 9: Margin of grass, ruderal vegetation and brambles along northern edge of Barn 3. Note that part of this extends beyond the site boundaries to the north



Photo 10: Existing access into site, with mature boundary hedges to be fully retained and unaffected by the proposals





Photo 11: Hard standing, bare ground and compacted hard core in north eastern corner of site. Mature goat willow also present. Mature hazel in far eastern corner, adjacent to rubble pile



Photo 12: Northern eastern rubble pile – vast majority is fine and well consolidated, with some larger looser rubble at base

Water bodies

4.20 No water bodies are present on site. Aerial photographs and Ordnance Survey maps at 1:10,000 scale highlighted the presence of three water bodies within 250m of the site boundaries. Two appear to be seasonally wet ditches, as confirmed by the former landowner (Mr Jewers, pers.comm). A third is a small pond (WB1) located just over 50m to the south east of the proposed development site. Following two HSI assessments, the pond was found to be of 'average' suitability for great crested newts, with a score of 0.67. (Note that water quality could not be assessed in September 2023 due to a lack of water, and therefore this part of the assessment was based on the quality of the water observed in March 2022). The full results of the HSI assessment are provided in Appendix 2.

4.21 The pond is separated from the site by the converted buildings of Tadpole Cottage, and the adjacent Frog Hall farmhouse and associated outbuildings, which form an L-shape around the proposed development site. These buildings are surrounded by a mosaic of hard standing, hardcore and short amenity grassland which contrast with the mature hedge, ditches and pasture adjacent to the pond.

Animals

Bats

4.22 The MAGIC data search identified six bat EPSM licences within 5km of the site, as detailed in the table overleaf.

4.23 The author is also aware of the presence of common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, daubenton's *Myotis daubentonii*, barbastelle *Barbastella barbastellus* and brown long-eared bats *Plecotus auritus* around the nearby village of Elmsett.



Table 1: Bat EPSM licences within 5km of site – distance, direction, year of issue, species & roost type

Licence location	Year	Species	Roost type
2.1km north east	2016	Common pipistrelle	Non-breeding
4.6km south east	2014	Brown long-eared	Non-breeding
4.7km south	2020	Common & soprano pipistrelle	Non-breeding
3.8km south west	2011	Common & soprano pipistrelle	Non-breeding
3.5km south west	2020	Brown long-eared	Non-breeding
4.5km west	2015	Common pipistrelle, soprano pipistrelle, brown long-eared, daubeton's, natterer's	Breeding

Bats - roosting

- 4.24 Barns 2 and 3 were assessed as being of 'negligible' suitability for roosting bats, with no potential roosting crevices noted between the metal structural beams and the external metal sheet west wall and roof.
- 4.25 Barn 1 was assessed as being of low suitability for roosting bats, with potential roosting opportunities limited to small, relatively superficial gaps associated with missing brick mortar on three corners of the building. Some are covered in dense cobwebs and show no indication of having recently been used by bats, and no evidence of the presence of roosting bats was recorded at the time of initial site survey of March 2023, during the second follow-up inspection of July 2022, or during the building inspection of September 2023. No evidence of the presence of bats was recorded anywhere inside the building, and roosting bats are therefore unlikely to be present on site.

Bats – commuting / foraging

- 4.26 The site provides small areas of potential bat foraging or commuting habitat, and is very unlikely to be used to any significant degree by bats for this purpose.

Reptiles

- 4.27 The narrow margin of long grass, ruderals and scrub to the rear (west) of the buildings provides a small area of potential reptile habitat, with a larger area of suitable reptile habitat present immediately offsite to the north. Whilst this margin is small in size and does not connect to any further areas of potential reptile habitat offsite to the south, there remains some potential for small numbers of individual reptiles – most notably slow worm *Anguis fragilis* – to be present in this margin.



Amphibians

- 4.28 As part of the MAGIC search, ten records were returned for great crested newt (GCN) within 5km of the site – seven class licence returns, two positive pond data returns, and a mitigation licence, all dating between 2016 and 2019. The records are located in all directions, and range from 1km to 4.4km from the site.
- 4.29 Whilst the suitability of the pond located c.50m to the south east of the site is predominantly limited by its small size and tendency for it to dry annually by around June until late autumn (Mr Jewers, pers.comm) as was confirmed at the time of survey, the numerous records of GCN in the surrounding landscape indicate that there remains good potential for GCN to attempt to use the pond. In this instance the pond is likely to support an unsustainable breeding population of GCN and may serve as a sink population.
- 4.30 The vast majority of the site does not provide potential terrestrial habitat for GCN, with the bases of the buildings in good condition with no cracks or crevices, stored materials raised above the ground on pallets and most of the site consisting of hard standing, bare ground and compacted hardcore.
- 4.31 The margin of grass, ruderal vegetation and scrub present to the west, and the bramble scrub growing along the northern boundary provide moderate quality terrestrial habitat for foraging and sheltering GCN; however there is no direct connectivity from the pond to these areas of the site. There are a large number of buildings present between the pond and the proposed development site – Frog Hall farmhouse and associated outbuildings and Tadpole Cottage, all of which create a significant barrier to the dispersal of amphibians in the direction of the site. Barn 1 itself prevents direct access to the habitats to the rear (west) of the building, as does the western metal sheet wall of Barn 2, and the continuous line of densely packed straw bales which create a c.1.2m high wall along the western side of Barn 3.
- 4.32 There is also a lack of ponds and high quality terrestrial habitats offsite to the west to which GCN may migrate, and a limited area of moderate quality grass and patchy scrub beyond the site to the north which is separated from the pond by buildings and hard standing. By contrast there is a small but locally significant area of moderate to high quality wide hedges, ditches and small pasture fields connected directly to the pond, capable of supporting a population of GCN through their terrestrial life phase; all of which further reduces the likelihood of GCN travelling across the site to forage or commute.
- 4.33 In the event of GCN presence in this pond, the proposals are very unlikely to have any adverse impacts upon the Favourable Conservation Status of any local GCN population. GCN are very unlikely to be present on site due to both the small areas of potential GCN habitat and very poor habitat connectivity between the site and pond. It is understood



that the trees and scrub present in the north eastern corner of the site will be retained, and the proposals will therefore result in the loss of less than 100m² of potentially accessible GCN habitat to the north of Barn 3, and approximately 80m² of poorly accessible habitat to the west of Barns 1-3. As result there is very low potential for the proposals to result in an offence under the relevant legislation, with the opportunity to further reduce this risk via a Precautionary Method Statement.

Birds

- 4.34 The buildings have potential to support nesting birds to varying degrees, with a likely old pigeon nest recorded in Barn 2. No evidence of the presence of barn owl was recorded on site, with very poor potential nesting opportunities inside the buildings. The scrub to the north of Barn 3 provides nesting opportunities for species such as robin *Erithacus rubecula* and wren *Troglodytes troglodytes*.

Badger

- 4.35 No evidence of badger was recorded on or within 30m of the site. No setts, footprints, hairs, latrines, snuffle holes or scratching indicative of the presence of badgers was recorded.

Water Vole and Otter

- 4.36 There are no features on or immediately adjacent the site which provide suitable habitat for otter or water vole.

Dormice

- 4.37 The site supports a very small area of potentially suitable dormouse habitat along the northern site boundary, but due to large gaps in adjoining hedgerows does not have any direct connectivity to larger areas of such habitat which may be capable of supporting a sustainable population of this species. Dormice are therefore unlikely to be present on site.

Invertebrates

- 4.38 The site is considered likely to support common and widespread invertebrate species typical of the habitats present.

Other Legally Protected Species

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



Species of Principal Importance

- 4.40 The western and northern boundaries of the site provide suitable habitat for foraging and sheltering hedgehog *Erinaceus europaeus* and toad *Bufo bufo*, and for nesting dunnock *Prunella modularis*, all of which are SPIE.



5.0 CONCLUSIONS AND RECOMMENDATIONS

Designated Sites

- 5.1 There are two statutory designated sites of national importance within 2km of the site. The closest SSSI, the Wolves Wood section of Hintlesham Wood SSSI, is an RSPB reserve, and is already widely accessible to the public, whilst Elmsett Park Wood SSSI does not appear to be open to the public or accessible via public footpaths. The addition of one more residential dwelling within 2km of these two sites is therefore very unlikely to result in any significant adverse impacts upon either of these SSSI's, and no further works are necessary.
- 5.2 The site is located within the Zone of Influence of the internationally designated Stour and Orwell Estuaries SPA and Ramsar site. All internationally designated sites are fully protected by the Conservation of Habitats and Species Regulations 2017 (as amended). Any new development must avoid having a significant adverse effect on the ecological features for which an SPA/SAC/Ramsar site was designated. Any such effect must be considered in combination with potential effects from other developments within influencing distance of the designated sites. Due to the local topography, small scale of the development, surrounding habitats and distance from the relevant designated sites, this development proposal is very unlikely to have a direct significant adverse effect upon the Stour and Orwell Estuaries. It may however contribute to cumulative impacts associated with increased visitor pressure, by increasing the number of local residents.
- 5.3 A financial contribution to the Suffolk RAMS is therefore required in order to ensure that there will be 'no likely significant effect' on the Stour and Orwell Estuaries SPA and Ramsar site. A per house tariff has been adopted, and this should be secured via the necessary means (Section 106 Agreement, Unilateral Undertaking etc) as an adequate mitigation measure.
- 5.4 The RAMS will work towards a range of locally appropriate and effective mitigation measures to ensure that increased visitor numbers will not have an adverse impact upon any European designated site within the immediate region.
- 5.5 No further works are necessary with respect to County Wildlife Sites.

Habitats

- 5.6 A small length of mature hedgerow, dominated by mature hazel shrubs, grows in the north eastern corner of the site. This will be retained in full as part of the proposals, which will not adversely affect any Priority habitats.



Bats

- 5.7 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).
- 5.8 Potential effects on roosting bats: negligible.
- 5.9 Mitigation measures for roosting bats: none required.
- 5.10 Potential effects on commuting / foraging bats: in the absence of mitigation negligible impacts are predicted with respect to foraging and commuting bats due to the small size of the site and the overall lack of such habitat on site. A small area of potential foraging habitat is present offsite to the north. In the absence of mitigation there is potential for small numbers of commuting and foraging bats to be adversely affected by artificial illumination of these offsite habitats.
- 5.11 Mitigation measures for commuting / foraging bats: the proposed layout plans indicate that LED lighting will be used, which is more directional than traditional bulbs and will minimise light spill where used appropriately. To avoid any adverse impacts upon foraging and commuting bats, the LEDs should also be warm white (<3000K), ideally be motion sensitive and either be entirely downward facing or use hoods, cowls, louvres and shields to direct light to the ground.
- 5.12 Residual effects: a minor enhancement at the site level for roosting and foraging bats could be achieved via the installation of one artificial roosting feature built in or fixed to the external walls of the house or outbuilding, and via the planting of new native hedging along the southern, western and northern site boundaries, as detailed in Section 6.0.

Amphibians

- 5.13 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).
- 5.14 Potential effects: in the event of GCN presence in the nearby pond, potential effects upon GCN are likely to be negligible due to the very small areas of potential GCN habitat on site, the lack of any ponds or high quality terrestrial habitat beyond the site to which GCN may migrate, and the presence of a large number of buildings and obstructive features between the pond and the site. There is very low potential for GCN to be present within the construction zone, and the proposals will not have an adverse effect on the Favourable Conservation Status of any local GCN population.



5.15 Mitigation measures: further survey and mitigation for GCN is considered to be disproportionate when the potential for an offence under the relevant legislation is very low, and where there is no adverse impact on the Favourable Conservation Status of GCNs. To further reduce the potential for an offence, it is recommended that the Precautionary Method Statement provided in Appendix 3 is followed for the duration of the works. As detailed in the PMS, in the event of a GCN being discovered on site at any point, all works must cease and an ecologist contacted for further advice.

5.16 Residual effects: negligible.

Reptiles

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

5.18 Potential effects: in the absence of mitigation there is low potential for small numbers of reptiles to be harmed during the clearing of the vegetated margins to the north and west of the barns.

5.19 Mitigation measures: the precautionary methods of working detailed in the PMS with respect to great crested newts will ensure that these margins are cleared in a reptile friendly manner. Any reptiles which are discovered during clearance works will be relocated to the area of long grass, ruderals and scrub offsite to the north.

5.20 Residual effects: negligible.

Birds

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

5.22 Potential effects: the buildings and the low bramble scrub provide potential nesting habitat for a small number of bird species, and the disturbance and destruction of an active nest could have a negative effect on some bird species at the site level.

5.23 Mitigation measures: ideally building and vegetation clearance works would commence during October to February inclusive to avoid the bird nesting season. Where 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.

5.24 Residual effects: negligible.



Badger

- 5.25 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.
- 5.26 Potential effects: negligible.
- 5.27 Mitigation measures: none.
- 5.28 Residual effects: negligible.

Otters & Water Voles

- 5.29 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 and their habitats are fully protected by the Wildlife and Countryside Act 1981 (as amended).
- 5.30 Potential effects: negligible.
- 5.31 Mitigation measures: none.
- 5.32 Residual effects: negligible.

Dormice

- 5.33 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).
- 5.34 Potential effects: negligible.
- 5.35 Mitigation measures: none.
- 5.36 Residual effects: negligible.

Invertebrates

- 5.37 Potential effects: negligible.
- 5.38 Mitigation measures: none.
- 5.39 Residual effects: negligible.

Other Legally Protected or Notable Species

- 5.40 The working measures detailed in the PMS for great crested newts will ensure that the northern and western vegetated boundaries are cleared in a manner which avoids harm



to hedgehogs and toads. Any such individuals discovered during works will be relocated to the long vegetation and scrub offsite to the north.

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

5.42 Enhancement measures will provide artificial roosting opportunities for a range of crevice dwelling bats (many of which are also SPIE), enhanced foraging habitat for bats and common garden birds, and new nesting opportunities for house sparrows, also a SPIE.

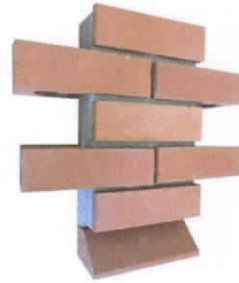


6.0 ENHANCEMENT MEASURES

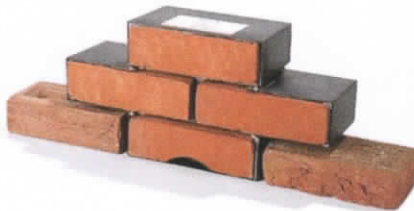
- 6.1 **1 no. bat box** taken from any of the designs detailed below will be built in or fixed externally to the house or outbuilding. The box will be located at a height of 3-6m, facing between east, south and west, with an unobstructed clear drop beneath the box entrance. The box will be located well away from sources of artificial lighting.



Vivara Pro woodstone build in bat tube – to be built in to a wall and covered externally with render or weather boarding



*Habibat Bat Box – to be built in to a brick wall. Also **available with no facing to be built into a weatherboarded wall***



Bat Box

*To fit in to the outside skin of 75mm / 3" brickwork course; or **can be supplied without brick facings for incorporation into a weatherboarded wall***

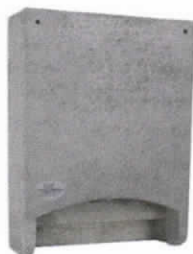
Available from birdbrickhouses.co.uk



Beaumaris woodstone bat box midi – for external installation on buildings



Chillon woodstone bat box – for external installation on buildings



Lela bat box – for external installation on buildings



Eco crevice / cavity bat box – for external installation on buildings



6.2 **1 no. double or triple house sparrow box** will be built in to the northern or eastern façades of the house or outbuilding. The box will be positioned at a height of at least 3m, but ideally immediately beneath the eaves where possible. A selection of recommended box types are shown below; others must be agreed with an ecologist.



Habibat House Sparrow Terrace Box

Made of concrete, to be integrated into buildings during construction. Can be supplied with various brick facings, or without brick facings for incorporation into a rendered or weatherboarded wall.

440 x 215 x 150mm

Available from habibat.co.uk



Woodstone Estella House Sparrow Box

Made of long lasting woodstone; can be built-in or fixed externally

Available from [CJ Wildlife](http://CJWildlife.com)

Dimensions 29 x 16 x 21cm, weight 6kg

6.3 The **southern, western and northern site boundaries** will be planted with a mixed native hedge and mulched with woodchip. A species rich mix of at least five of the following should be used: hawthorn *Crataegus monogyna*, dogwood *Cornus sanguinea*, field maple *Acer campestre*, hazel *Corylus avellana*, guelder rose *Viburnum opulus*, holly *Ilex aquifolium*, spindle *Euonymus europaeus*, guelder rose *Viburnum opulus* and yew *Taxus baccata*.



7.0 REFERENCES

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

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

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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) will soon become the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019). These regulations will 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 animals 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 (SNICIs) 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.'

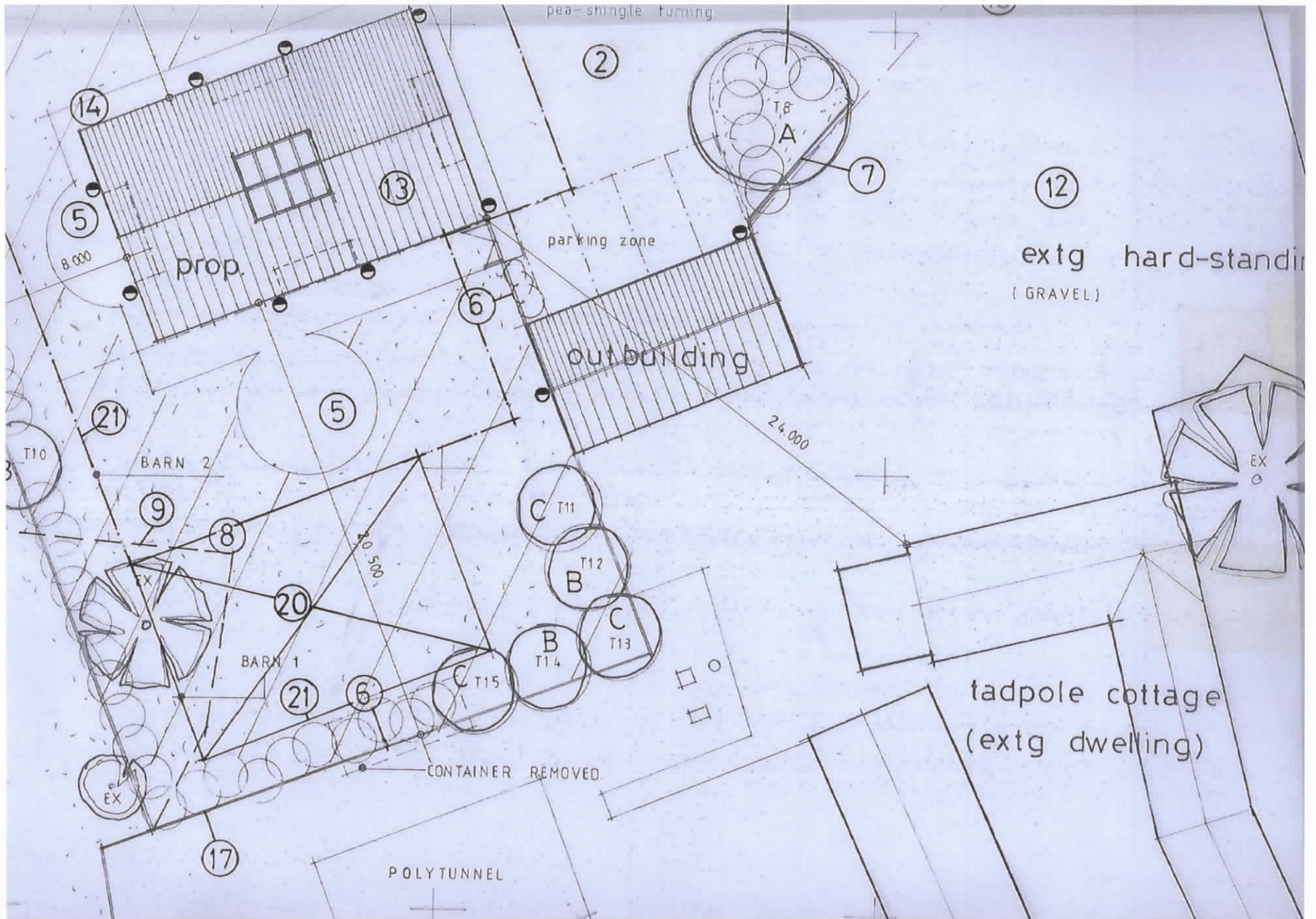
8.23 When determining planning applications, LPA's should apply principles which avoid an adverse effect on natural environments and notable species:

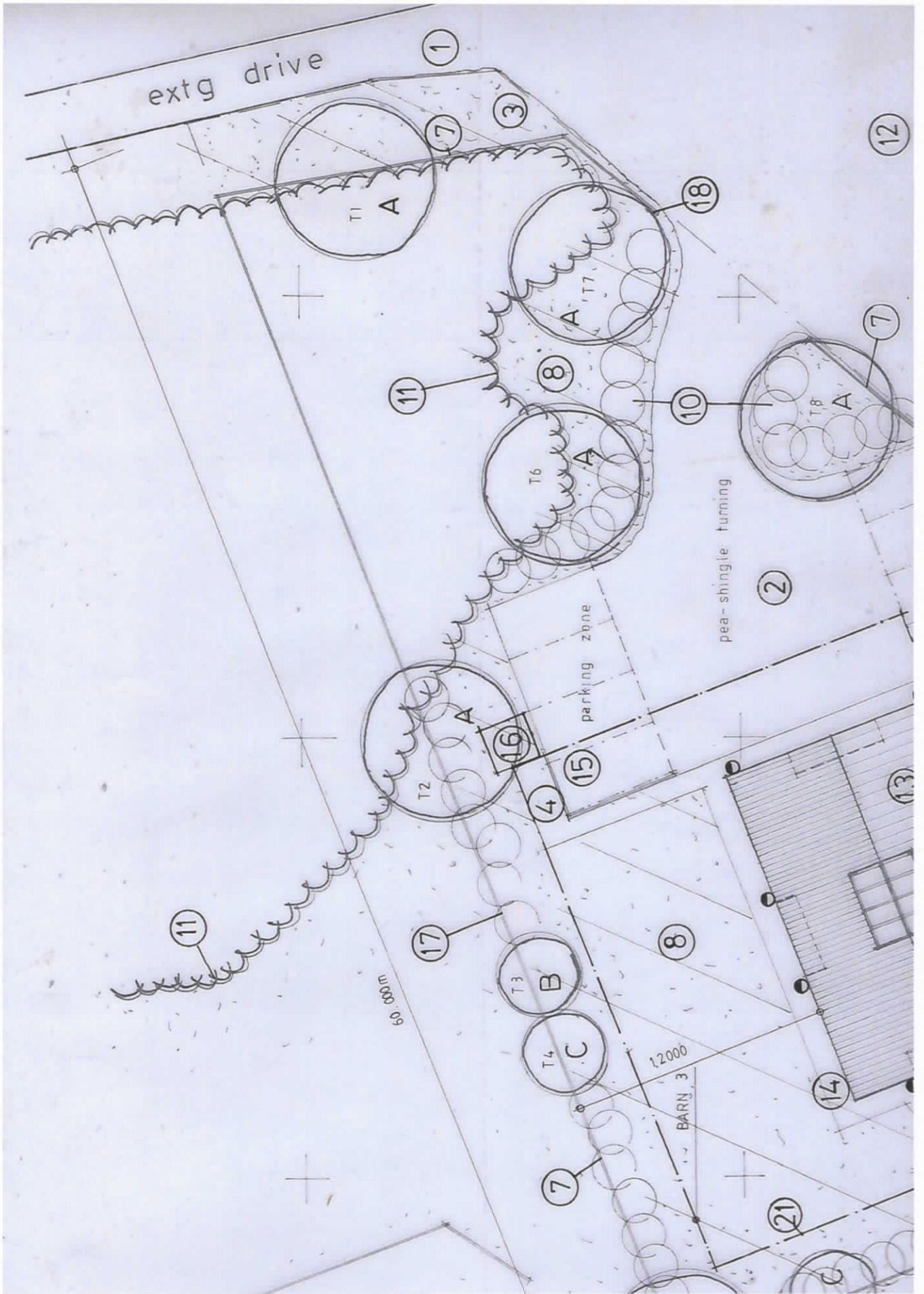
d) 'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;'



Appendix 1:
Proposed Site Layout







Appendix 2:
HSI Assessment Results

HSI Assessment results

Table 2: WB1

Habitat Suitability Index			SI value
SI1.	Map location	A/B/C	A 1.00
SI2.	Surface area	rectangle/ellipse/irregular length (m) width (m) OR estimate (m ²) if irregular <i>area (m²) =</i>	irregular 188 188 0.38
SI3.	Dessication rate	never/rarely/sometimes/frequently	frequently 0.10
SI4.	Water quality	good/moderate/poor/bad	good 1.00
SI5.	Shade	% of margin shaded 1m from bank	50 1.00
SI6.	Waterfowl	absent/major/minor	absent 1.00
SI7.	Fish population	absent/possible/minor/major	absent 1.00
SI8.	Pond density	number of ponds within 1km	3.1 1.00
SI9.	Terrestrial habitat	good/moderate/poor/isolated	good 1.00
SI10.	Macrophyte cover	%	25 0.56
			HSI = 0.68
<i>Use provisional HSI value if above 0.75</i>			provisional HSI = 0.65
			Date undertaken 26.09.23

Appendix 3:
**Great Crested Newt Non-Licensed
Precautionary Method Statement**

Non-Licensed Precautionary Method Statement

1.0 Timing of Works

Works to the areas of potential GCN habitat (stands of long grass, nettles, brambles and loose rubble) will be carried out between April and end-October inclusive to avoid the amphibian hibernation period (and the reptile hibernation period).

No ground works will take place during temperatures of below 5°C, and no works will take place at night.

2.0 Toolbox Talk

Every contractor and site worker will be briefed by an experienced ecologist in possession of a Natural England GCN Survey Licence prior to commencement of works. They will be made aware of the legal protection of GCN, the reasons for this Method Statement, how to identify a GCN, and what to do if a GCN is found during works. All site contractors will be provided with a copy of this Method Statement, which includes an ID sheet for reference purposes.

3.0 Ground Vegetation, Top Soil and Debris Removal

All vegetated areas will be subject to a staged fingertip search by the licensed ecologist, with the vegetation trimmed to 150mm height before being searched. Upon completion of each stage, all vegetation and topsoil – where required – will be slowly and carefully stripped - either mechanically or using hand tools. Arisings will be removed from the working area or stored in skips. NOTE: all scrub and trees in the north eastern corner of the site are to be retained in an undisturbed state, and should be fenced out of the construction zone.

All loose rubble, stored materials and debris, where not stored in a container or on a pallet, will be lifted by hand and with care under the supervision of the ecologist, and checked beneath for both newts and reptiles. Where it is necessary for machinery to assist with lifting of materials, the materials must be lifted clear of the ground, and not pushed across the ground to avoid harm to newts (or reptiles) which may be sheltering beneath. All materials and debris will be removed from the working area, or stored on pallets or in skips.

4.0 Construction Methodology

During works the following measures will be followed at all times:

- No building materials (rubble, wood, tiles etc) or excavated material (rubble, unconsolidated spoil) will be stored on site to avoid use of the piles by sheltering GCN/reptiles. All such materials will be removed or stored in skips or on raised pallets;
- Wherever possible trenches or similar will not be left open overnight. Any trenches which are left open overnight will contain an angled plank of wood to ensure any GCN which may use the site do not fall in and become trapped. The trenches will always be checked the following morning for GCN;
- All areas of wet cement will be covered and / or obstructed at night to prevent access by GCN.

5.0 Delays to Works

Wherever possible, works will proceed quickly and without delay, to minimise the duration of ground disturbance. If any delay is predicted following commencement of works, the site will always be left in a condition that is unsuitable for GCN i.e. following the measures detailed in section 4.0.

6.0 Discovery of GCN during works

If a GCN is found on site at any point during construction, all works will cease. An ecologist will be contacted for further advice, if not already present on site. Natural England will be informed, and works will not re-commence until either a development (EPSM) licence has been secured or other provisions have been agreed with Natural England.

7.0 Great Crested Newt ID

Great crested newts: these newts are **noticeably black to very dark brown** in colour, with a warty texture to their skin. Some of the warts are white, accentuating the warty and slightly speckled appearance. In spring male newts have a white stripe along the centre of their tail, and females have an orange stripe at the bottom of their tail. The bright orange-yellow belly colouring extends fully to join with the dark upper skin tone.

By contrast, *common and palmate newts* are a lighter brown-green colour and are significantly smaller (up to 9cm in length, whilst great crested newts may be up to 15cm in length). **Both common and great crested newts have an orange-yellow belly with black spots**; however the orange colouring fades towards the edges of the belly of common newts. Males of all species have crests in the spring.



Female Great Crested Newt



Female Common Newt



Female Great Crested Newt & Smooth Newt



Male Great Crested Newt



Liz Lord Ecology

