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Preliminary Ecological Appraisal Including a Protected Species Assessment at Hill House, Wades Lane, Shotley, Suffolk. IP9 1EW.

On behalf of:

Mr & Mrs Webb

April 2023

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0 SUMMARY

- 1.1.1 Skilled Ecology Consultancy Ltd. was commissioned by Mr & Mrs Webb to undertake a Preliminary Ecological Appraisal including a Protected Species Assessment at Hill House, Wades Lane, Shotley, Suffolk. IP9 1EW. The proposal is for Installation of a new outbuilding for storage of land maintenance machinery, winter livestock and boating equipment.
- 1.1.2 The survey was conducted on 12th April 2023 by experienced ecologist Roger Spring BSc MCIEEM (licensed to survey for great crested newts *Triturus cristatus* and licenced to survey for bats – level 2). The survey consisted of an inspection for preferred habitat types and signs and evidence of protected and priority species, such as for bats, great crested newts, reptiles, badgers *Meles meles* and nesting birds following Natural England (English Nature) Guidelines. A local biological record search was undertaken.
- 1.1.3 The site is a former arable field left fallow approximately four years ago and regularly cut since. The site now includes an existing modern outbuilding, gravel driveway and short improved grass with ruderal herbaceous plants.
- 1.1.4 The site is positioned in a rural location with further similar grassland habitats to the north, south and west. East of the site was Hill House and associated gardens.
- 1.1.5 The proposed construction zone is small and considered low in ecological value and unlikely to support protected, priority or rare species. No signs or evidence of such were observed.
- 1.1.6 Further ecological surveys or mitigation were considered unnecessary for the proposed development to proceed. However, to minimise any residual risk of impact, precautionary measures for hedgehogs, amphibians, badgers, brown hare and bats are provided in this report and should be followed.
- 1.1.7 With the recommendations followed as described, development could proceed with a minimal risk of harm or impact to local ecological value or to protected, priority or rare species and notable habitats. Biodiversity enhancement recommendations are also included in the report in accordance with national planning policy.

1 INTRODUCTION

1.1 Background

- 1.1.2 Skilled Ecology Consultancy Ltd. was commissioned by Mr & Mrs Webb to undertake a Preliminary Ecological Appraisal including a Protected Species Assessment at Hill House, Wades Lane, Shotley, Suffolk. IP9 1EW. The proposal is for Installation of a new outbuilding for storage of land maintenance machinery, winter livestock and boating equipment.
- 1.1.3 Wildlife such as nesting birds, bats, reptiles and great crested newts *Triturus cristatus* are protected by law. Protected and priority species and habitats, are also a material consideration for individual planning decisions under the National Planning Policy Framework, 2021 (MHCLG, 2021).
- 1.1.4 This study and report complies with the Chartered Institute for Ecology and Environmental Management (CIEEM) 2017 Guidelines for Preliminary Ecological Appraisals.
- 1.1.5 CIEEM guidelines indicate that ecological surveying typically remains valid for between 12 and 18 months (CIEEM, 2019).

2 METHODOLOGY

2.1 Desk Study

- 2.1.1 Skilled Ecology Consultancy Ltd. have undertaken ecology surveys including dusk and dawn bat surveys at Hill House Farm Barns approximately 80m north east (2017 & 2018). Notable species recorded at Hill House Farm are detailed later in the report. No additional biological records were considered necessary to support the assessment.
- 2.1.2 A search of the Multi-agency Geographical Information for the Countryside (MAGIC) was also conducted, to check for statutory nature conservation sites.
- 2.1.3 These results were then combined with the findings of the site survey, to assess the risk of ecology issues, relevant to planning, occurring on the site.

2.2 Study Limitations

2.2.1 Botanical assessment was undertaken at a suitable time of year, though some early flowering species and annuals may not be visible or identifiable to species level.

2.3 Initial Site Survey

Habitats and Surroundings

- 2.3.1 The site was visited on the 12th April 2023 to survey for ecology issues. This included the following:
 - Noting the suitability of habitats present on the site, with regard to protected, priority and rare species; including plants, amphibians, reptiles, mammals, nesting birds, invertebrates and protected, priority or red-listed Birds of Conservation Concern (BoCC);
 - Assessing the habitats surrounding the site and in the local area;
 - Direct survey for evidence of protected species as far as possible, e.g. for bats, reptiles, great crested newts, badgers *Meles meles*, and nesting birds;
 - Checking for invasive species such as Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum*.

Bat Inspection

- 2.3.2 The assessment for bats was conducted by an experienced ecologist, licensed by Natural England to disturb and take bats for science and education. The existing outbuilding was inspected for bat activity, suitability and potential for roosting following English Nature Bat Mitigation Guidelines (English Nature, 2004) and Bat Conservation Trust Best Practice Guidelines, therefore considerations were:
 - the availability of access to roosts for bats;
 - the presence and suitability of cracks, crevices, gaps, fissures, ivy growth and other places as roosts;
 - signs of bat activity or presence, such as; the bats themselves, droppings, grease marks, scratch marks, urine spatter and prey remains.
- 2.3.3 Equipment available for use during the survey included a ladder, high powered torch, digital camera and binoculars.
- 2.3.4 The availability of access to roosts was assessed based upon the presence of holes large enough to allow entry to bats and lack of cobwebs and dirt.

2.3.5 The outside and inside of the existing outbuilding were inspected for gaps, cavities, access points and crevices, and any signs of bats (droppings, staining, urine spatter), in accordance with Natural England (English Nature) guidelines (English Nature, 2004).

Reptiles & Amphibians

- 2.3.6 The site was inspected for potentially suitable terrestrial habitats for foraging, sheltering or dispersing amphibians and foraging, sheltering, breeding and basking habitat for reptiles. High quality terrestrial refuges searched for, included:
 - Log piles & rockeries,
 - Thick leaf litter,
 - Compost & manure heaps,
 - Mammal burrows,
 - Deep ground cracks;
 - Refuse suitable for shelter;
 - Tussock grassland;
 - Hedgerows and any other potential habitats.
- 2.3.7 The closest pond to the site was inspected for suitability for great crested newts by undertaking a Habitat Suitability Index assessment as developed by Oldham *et al.* 2000.

Badgers, Hedgehogs, Water Voles, Dormouse & Other Mammals

- 2.3.8 Signs and evidence of badgers, and other protected, priority and rare mammal activity searched for included the following:
 - Setts, holes and burrows;
 - Foraging holes and other diggings;
 - Latrines, droppings, spraints and scats;
 - Mammal hairs;
 - Paw prints and other tracks;
 - Feeding remains;

• Scratch marks, bedding material and other signs.

3 RESULTS AND RISK

3.1 Site Description & Location

- 3.1.1 The site is a former arable field left fallow approximately four years ago and regularly cut since. The site now includes an existing modern outbuilding, gravel driveway and short improved grass with ruderal herbaceous plants.
- 3.1.2 The site is positioned in a rural location with further similar grassland habitats to the north, south and west. East of the site was Hill House and associated gardens.
- 3.1.3 Ponds identified within 250m included:
 - Pond 1 a small garden pond approximately 150m east

3.2 Nature Conservation Sites

3.2.1 Approximately 400m east of the site is the Stour & Orwell Estuary Site of Special Scientific Interest (SSSI) & RAMSAR designated for its estuarine habitats supporting internationally important wintering bird communities, as well as notable botanical and invertebrate interest (MAGIC, 2023).

3.3 Data Search

3.3.1 The following information is a list of biological records collated by Skilled Ecology Consultancy Ltd. 2017/2018 at Hill House Farm.

Species	Location	Year
Barn owl	Hill House Farm (80m east)	2017
Swallow	Hill House Farm (80m east)	2017
Brown long-eared Bat	Hill House Farm (80m east)	2018
Common Pipistrelle Bat	Hill House Farm (80m east)	2018
Soprano pipistrelle Bat	Hill House Farm (80m east)	2018
Noctule Bat	Hill House Farm (80m east)	2018
Myotis sp. Bat	Hill House Farm (80m east)	2018
Serotine Bat	Hill House Farm (80m east)	2018

Table 1 - Summary of local records.

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3.4 Protected, Priority & Rare Species

Vegetation & Habitats

3.4.1 The site includes a former arable field left fallow and regularly cut. The following plants were recorded within the proposed construction zone:

Perennial rye grass *Lolium perenne*, annual meadow grass *Poa annua*, common mallow *Malva sylvestris*, common fleabane *Pulicaria dysenterica*, creeping thistle *Cirsium arvense*, ox-eye daisy *Leucanthemum vulgare*, groundsel *Senecio vulgaris*, lesser trefoil *Trifolium dubium*, dandelion *Taraxacum* agg., white clover *Trifolium repens*, common vetch *Vicia sativa*, mugwort *Artemisia vulgaris*, greater celandine *Chelidonium majus*, petty spurge *Euphorbia peplus*, doves-foot cranesbill *Geranium molle*, ribwort plantain *Plantago lanceolata* and common hogweed *Heracleum sphondylium*.

3.4.2 No protected, priority or notable plants were found on the site. No UK priority habitats are proposed for impact. No Schedule 9 invasive plants were discovered.

Bats

- 3.4.3 No trees are proposed for impact. The outbuilding present was a light timber frame structure, single-storey in height with single-skin timber cladding and metal corrugated sheeting roof. The eastern elevation was open. The structure was considered negligible in ecological value or potential to support roosting bats. No signs or evidence of bat activity was discovered associated with the structure.
- 3.4.4 The site was considered very low in suitability for foraging bats, though surrounded mature trees, established gardens and field hedgerows were considered optimal for foraging bats.

Other Protected & UK Priority Mammals

3.4.5 The site is dominated by short improved grassland considered low in suitability for foraging by brown hare *Lepus europaeus*, badgers *Meles meles* and hedgehogs *Erinaceus europaeus* etc. No other signs or evidence of such species were noted during the survey.

Birds

3.4.6 Birds observed or heard on or close to the site during the survey included; skylark *Alauda arvensis*, goldfinch *Carduelis carduelis*, kestrel *Falco tinnunculus*, wood pigeon *Columba palumbus*, great tit *Parus major*, blue tit *Cyanistes caeruleus* and herring gull *Larus argentatus*.

- 3.4.7 No UK protected birds or evidence of such species were observed, skylark are UK priority birds, Herring gull are red-listed Birds of Conservation Concern (BoCC). Kestrel and woodpigeon are amber-listed BoCC. All other birds recorded are common and widespread species and green-listed BoCC.
- 3.4.8 No signs or evidence of past nests were observed on the site. The skylark recorded were approximately 200m west of the site within the adjacent arable field. The site was considered too low in the landscape and surrounded by trees to be suitable for nesting skylark. The structure was theoretically suitable for nesting by common birds such as swallow, though no signs or evidence of past nesting were observed associated with the structure.
- 3.4.9 The BoCC ratings are summarised as follows:
 - Red-listed highest conservation concern;
 - Amber-listed moderate conservation concern;
 - Green-listed least conservation concern.

Great Crested Newts & Other Amphibians

- 3.4.10 The proposed construction zone is dominated by an outbuilding, gravel driveway and short improved grassland that was very open structured as it is still establishing from being an arable field four years ago.
- 3.4.11 The closest pond to the site is a small garden pond positioned approximately 150m east. The pond was inspected during the survey for suitability for great crested newts. The same pond had also been inspected by Skilled Ecology Consultancy Ltd. in 2017. The pond supports fish.
- 3.4.12 The Habitat Suitability Index assessment indicated the pond was average in suitability for great crested newts (see Table 2 below).

Table 2: Habitat Suitability Index score for Pond 1 150m east of the site at Hill He	ouse
Farm.	

Pond	Pond 1
SI1 - Location	1
SI2 - Pond area	0.3
SI3 - Pond drying	0.9
SI4 - Water quality	0.67
SI4 - Shade	1
SI6 - Fowl	0.67
SI7 - Fish	0.33
SI8 - Ponds	0.65
SI9 - Terr'l habitat	0.67
SI10 - Macrophytes	1
HSI	0.67

HSI Pond suitability <0.5 = poor 0.5 - 0.59 = below average 0.6 - 0.69 = average 0.7 - 0.79 = good> 0.8 = excellent

Reptiles

- 3.4.13 Habitats present on the site were considered very low in suitability or potential for reptiles. The ground conditions were open with thinly structured grassland, cut short.
- 3.4.14 The survey was undertaken in suitable weather for active reptiles. No reptiles were not discovered during the survey visit.

Invertebrates

- 3.4.15 The proposed construction zone was considered negligible in suitability or potential for invertebrates of conservation concern with common and widespread habitat types present.
- 3.4.16 No notable invertebrates were observed during the survey.

Other Protected, Priority or Rare Species

3.4.17 No signs or evidence of any other protected or priority species were observed on the site, nor were there any suitable habitats for such.

4 DISCUSSION OF RISK AND LEGISLATION

4.1 **Protected & Priority Species**

Bats

- 4.1.1 Bats are protected under the Wildlife and Countryside Act 1981 as amended by the Countryside Rights of Way Act 2000 and under the Conservation of Habitats and Species Regulations 2017. Some bats are also UK priority species. A summary of the offences likely to be relevant to development are:
 - Intentionally or deliberately kill, injure or take a bat;
 - Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection, whether bats are present or not;
 - Damage or destroy a breeding site or resting place of any bat;
 - Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection;
 - Deliberately disturb a bat anywhere.
- 4.1.2 Bats are known to be present locally foraging around nearby mature trees and hedgerows etc. (Skilled Ecology Consultancy Ltd., 2018). However, the proposed construction zone was considered negligible in suitability for roosting and foraging bats. No signs or evidence of bats were observed on the site.
- 4.1.3 No trees are proposed for impact.
- 4.1.4 Therefore, it was considered that the risk of significant impact, to bats, bat roosts or local bat populations is very low/negligible.
- 4.1.5 Further bat surveys or mitigation were considered unnecessary. However, to minimise any residual risk of impact to bats, precautionary measures, detailed later in the report, should be followed.

Other Protected, Priority & Rare Mammals

4.1.6 The proposed construction zone was considered theoretically suitable for foraging by brown hare, badgers and hedgehog. However, the site is small and unlikely to be of significant value for such species. No signs or evidence of brown hare, hedgehogs or badgers were discovered on the site or adjacent to the site.

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4.1.7 Therefore, further surveys or mitigation were considered unnecessary. However, to minimise any residual risk of impact to such species during construction, precautionary measures, detailed later in the report, should be followed.

Birds

- 4.1.8 Wild birds are protected under the Wildlife and Countryside Act 1981 and, with certain exceptions (e.g. pest species) in certain situations, it is an offence to intentionally:
 - Kill or injure any wild bird;
 - Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Take or destroy the egg of any wild bird.
- 4.1.9 Some bird species (such as barn owls) are also specially protected under Schedule 1 of the Wildlife and Countryside Act 1981 and others are UK priority species.
- 4.1.10 The proposed construction zone was considered low in suitability for protected and priority bird species.
- 4.1.11 The risk of significant impact to notable birds or local bird conservation was considered negligible.
- 4.1.12 Therefore, it was considered unnecessary to undertake further bird surveys for rare or protected birds or provide mitigation for such species. However, to prevent harm to actively nesting birds, recommendations, detailed later in the report, should be followed.

Great Crested Newts & Other Amphibians

- 4.1.13 Great crested newts are protected under the Wildlife and Countryside Act 1981 as amended by the Countryside Rights of Way Act 2000, and the Conservation of Habitats and Species Regulations 2017. Great crested newts are also UK priority species. A summary of the offences likely to be relevant to development are:
 - Intentionally or deliberately capture or kill;
 - Intentionally injure;
 - Deliberately disturb, or intentionally or recklessly disturb in a place of shelter or protection;

- Damage or destroy a breeding site or resting place;
- Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.
- 4.1.14 Habitats proposed for impact were small in area and very low in suitability for great crested newts or other amphibians being mostly an outbuilding, gravel driveway and small area of short grass.
- 4.1.15 Furthermore, the closest pond to the site is over 100m from the site and most great crested newts are known to stay within 100m of a breeding pond (Great Crested Newt Conservation Handbook, 2003). Therefore, even if this pond does support great crested newts, the risk of impact or harm was considered negligible.
- 4.1.16 Further amphibian surveys or mitigation were considered unnecessary. However, to minimise any residual risk of impact, precautionary measures, detailed later in the report, should be followed.

Reptiles

- 4.1.17 Widespread reptile species including, grass snake, adder, slow worm and common lizard, are protected from intentional killing and injuring under the Wildlife and Countryside Act 1981. They are also UK priority species.
- 4.1.18 The proposed development was considered small scale and habitats very low in suitability for reptiles.
- 4.1.19 Therefore, further reptile surveys or mitigation were considered unnecessary.

Plants & Invertebrates

- 4.1.20 No rare, protected or priority plants were present or were likely to be impacted.
- 4.1.21 Further botanical surveys or mitigation for rare plants or notable habitats were considered unnecessary.
- 4.1.22 No Schedule 9 invasive plants were discovered and the risk of spreading such plants was considered negligible.
- 4.1.23 Regarding invertebrates, the proposed construction zone is small and habitats present common and widespread. The risk of presence of a significant assemblage of invertebrates of conservation concern was considered negligible.
- 4.1.24 Further invertebrate surveys or mitigation were considered unnecessary.

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Other Protected & Priority species

4.1.25 No signs or evidence of other protected, priority or rare species were observed on the site and it was considered that there was a very low risk of such species occurring on the site or being impacted by the proposed development.

4.2 Other Issues

Sensitive Habitats

- 4.2.1 The proposed works are small with a relatively small construction zone. The site is close to the Stour & Orwell Estuary SSSI & RAMSAR site, though far enough away to mean that risk of direct impact from works is considered negligible. Furthermore, the proposed works will not increase local housing supply meaning the risk of increased human recreational pressures on the estuary is negligible.
- 4.2.2 Therefore, further surveys or mitigation for designated nature conservation sites or other sensitive habitats were considered unnecessary.

5 **RECOMMENDATIONS**

5.1 **Precautionary Measures & Compensation**

Bats

- 5.1.1 To minimise any residual risk of impact to bats, the following precautionary measures should be undertaken:
 - Any new proposed external lighting should be minimised. Where external lighting is required, it should be warm white LED lamps with glass glazing, rather than plastic, as these produce the least amount of heat and UV light possible, minimising the attraction effects on insects and minimising disturbance to local bats.
 - Any new external lighting proposed for the development should be aimed carefully, to minimise illumination of boundary habitats and avoid light spillage into the sky, or horizontally out from any structures, by using hoods or directional lighting;

Hedgehogs, Badgers, Brown Hare & Amphibians

5.1.2 The risk of hedgehogs, badgers, brown hare or amphibians being significantly impacted by the development was very low/negligible, to minimise any residual risk of impact or harm or impact, the below recommendations should be followed:

- Before construction commences, vegetation should be maintained short with regular cutting to prevent the site improving in ecological value for wildlife.
- During works, waste materials should be removed off site immediately to prevent wildlife using the materials for shelter and being harmed by subsequent movement;
- Construction materials should be stored on hardstanding or on pallets to prevent wildlife from sheltering in the materials and being harmed by movement of the materials;
- No construction work at night when hedgehogs, badgers, brown hare and amphibians are mostly active;
- Any excavations for the development should be covered at night or should have a roughly sawn plank placed in them to facilitate escape, the plank should not be placed at more than 30° and must be at least 30cm in width;
- If at any stage hedgehogs, badgers, brown hare or amphibians are observed on the site, works should stop immediately, and the animal should be allowed to disperse of its own accord, or an ecologist should be contacted for advice.

5.2 Enhancements

- 5.2.1 To provide biodiversity enhancement, the applicant has already planted several hundred meters of new mixed species native hedgerow, as well as individual tree planting. It is understood that further tree planting is proposed in the future, as well as creation of a new wildflower meadow using a native seed mix such as EM1 from Emorsgate Seeds, which will provide significant ecological value (net gain) to many local wildlife.
- 5.2.2 To further improve the site for wildlife the below new habitat boxes will also be installed on the site:
 - 1 x Barn owl box positioned high (above 4m) on a mature tree facing a northerly direction over fields.
 - 1 x Schwegler 2FD Bat Box (or similar if out-of-stock) should be installed on a mature boundary tree. The boxes should be positioned high (above 4m) facing a southerly direction.
- 5.2.3 Wildlife boxes can be purchased on-line.

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6 CONCLUSION

- 6.1 At the time of survey, the proposed construction zone supported common and widespread habitats low/negligible in suitability or potential for protected, priority or rare species. No signs or evidence of such were identified. The risk of significant impact to such species or to local ecological value was considered negligible.
- 6.2 Further ecological surveys or mitigation were considered unnecessary for the development to proceed. Recommendations for birds, hedgehogs, badgers, brown hare, bats and amphibians are provided and should be followed accordingly.
- 6.3 With recommendations followed as described, the development could proceed with a minimal risk of harm impact to protected, priority or rare species or notable habitats.
- 6.4 With the biodiversity enhancements followed as described, the proposed development would be enhanced for the benefit of local wildlife in accordance with national planning policy.

7 **REFERENCES**

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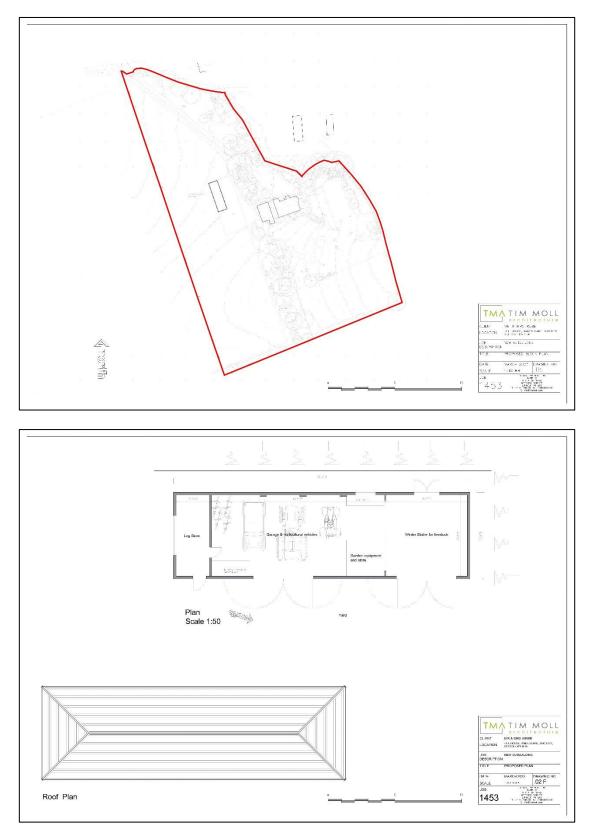
8 APPENDICES

8.1 Appendix 1: Figures

Figure 1 – Habitat map.



Figure 2 – Proposed development.



8.2 Appendix 2: Photographs

Photograph 1: Driveway leading to the site at Hill House.



Photograph by Roger Spring 2023

Photograph 2: Gravel and outbuilding on the site at Hill House.



Photograph by Roger Spring 2023

Photograph 3: Inside the outbuilding at Hill House.



Photograph by Roger Spring 2023

Photograph 4: Rear of the site at Hill House.



Photograph by Roger Spring 2023

Photograph 5: Pond approximately 150m east of the site at Hill House Farm.



Photograph by Roger Spring 2023