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Preliminary Bat Roost and Pond Assessment.

of

**The Pheasantry, Hitcham Road,
Wattisham, Suffolk, IP7 7LA.**

Survey Commissioned by:	KLH Architects on behalf of Mr Richard Eldridge
Project Number:	REP22029
Report issued:	30 th September 2022
Date of survey:	2 nd August 2022
Ecologist:	Odette Robson BSc (Hons) PhD MCIEEM

Project number:	Title:	Revision:	Issued:
REP22029	Preliminary Bat Roost and Pond Assessment at The Pheasantry, Hitcham Road, Wattisham, IP7 7LA.	Final	30 th September 2022

Disclaimer

The findings detailed in this report are based on evidence from thorough survey, where every effort has been taken to provide an accurate assessment of the site at the time of the survey. No liability can be assumed for omissions or changes after the survey has taken place.

This report was instructed by KLH Architects on behalf of Mr Richard Eldridge and following the brief agreed. Robson Ecology Ltd has made every effort to meet the client's brief.

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*Where roosting bats are recorded, a Protected Species Licence may be required: Natural England (the licensing authority in England) require data **from the most recent survey season**. Where a bat roost is not recorded, data will be valid for a maximum of 18 months from survey date.*

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Summary

Site:	The Pheasantry, Hitcham Road, Wattisham, IP7 7LA.
Grid Reference:	TM 01191 51701
Report Commissioned by:	KLH Architects on behalf of Mr Richard Eldridge
Date of Survey:	2 nd August 2022

	Impacts	Recommendations
European Designated sites	None	Site does not lie within the <i>Zone of Influence</i> of any European Designated sites
Statutory Sites	None	No Statutory designated sites within 2km of the site.
Bats	Construction Phase Impact (roosting bats).	Negligible potential for any aspects of proposals to impact bats or their roosts. No further surveys or precautions required.
	Operational Phase Impact (commuting/ foraging bats).	Negligible impact to commuting or foraging bats: No foraging habitat will be lost, or flight lines interrupted, through proposals. <u>Sensitive external lighting on new extension and cart lodge to retain dark corridors around the site and adjacent pond.</u>
Great Crested Newts <i>Triturus cristatus</i> .	Construction Phase Impact (terrestrial phase)	The nearest pond holding water lies across the road from the site (13m to the east): A geese/wildfowl pond with very low potential to support great crested newts. Habitat within the zone of impact was sub-optimal for great crested newts in their terrestrial phase (gravel/hardstanding and very short mown amenity grass). Therefore, if newts are present in local ponds, they would not be impacted by proposals in the construction or operational phases, if precautionary working methods are implemented to ensure that: <ul style="list-style-type: none"> - an adequate buffer is left between water-bodies and site-works; - contractors do not inadvertently impact potential amphibian habitat close to the site; and - local water bodies/courses are protected from pollution incidents. Due to the small scale and low impact of the proposals, and lack of sensitive habitat on the site, works are highly unlikely to impact great crested newts: <u>No further surveys required. A protected species licence is not required: The proposed works will not impact on individual great crested newts, or the local conservation status of great crested newts if a precautionary <i>Non-Licensed Method Statement</i> is secured as a Condition of any Planning Consent and implemented prior to any works starting and throughout the construction phase.</u>
Birds	Nesting bird potential in outbuilding and extension zone of house.	Works should be carried out outside the nesting bird season (March to August inclusive) or following a survey for nesting birds carried out immediately before the works start. If active nests are recorded, there will be a delay in that part of the site (including an exclusion zone surrounding the nest) until all young birds have fledged and left the area.
Additional enhancement	Consider further enhancement of the site by locating bat and bird boxes on the new extension, cart lodge, and/or garden trees.	

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1 Introduction

1.1 Background

Robson Ecology Ltd was commissioned by Mr Richard Eldridge, to undertake a Bat Roost and Pond Assessment of The Pheasantry, Wattisham, to inform a planning application and legal obligations in relation to a householder planning application for erection of a single storey side/front extension (following demolition of existing outbuilding), erection of cart lodge/store, and internal and associated works to the main house.

1.2 Legislation

Bats are strictly protected under European and UK legislation (Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, and the Wildlife and Countryside Act, 1981). Four UK species are also listed under Annex II of the Habitats Directive.

Seven species are *Species of Principal Importance in England* (SPIE) - formerly UK Biodiversity Action Plan Priority (BAP): Barbastelle *Barbastella barbastellus*, noctule *Nyctalus noctula*, brown long-eared *Plecotus auritus*, soprano pipistrelle *Pipistrellus pygmaeus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros* and Bechstein's bat *Myotis bechsteinii*.

Great crested newts are strictly protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, and the Wildlife & Countryside Act 1981 (as amended). Therefore, presence/absence needs to be established in order to meet the specific requirements of the legislation, to inform design, mitigation and, if appropriate, a European Protected Species Licence (EPSL) application. Great crested newts are a priority species under Section 41 of the NERC Act (2000) which is a consideration under the National Planning Policy Framework - NPPF (MHCLG, 2021), placing responsibility on Local Planning Authorities to aim to conserve and enhance biodiversity and to encourage biodiversity in and around developments.

1.3 Aims and Objectives

The survey was required to:

- Identify the presence, or potential presence, of any bats, birds or great crested newts;
- assess the potential impact of the proposals on protected species within the zone of impact;
- make recommendations for further surveys to inform the planning application and/or a protected species licence application (if required);
- detail any precautions required to protect bats, birds and great crested newts from impact, and/or mitigation or compensation, where necessary.

2 Survey Methodology

2.1 Site Survey

The site survey was undertaken on 2nd August 2022 by Odette Robson BSc (Hons) PhD MCIEEM, a full member of the Chartered Institute of Ecology & Environmental Management (MCIEEM), subject to the CIEEM Professional Code of Conduct and licensed by Natural England to survey for bats (WML-CL18; Level 2), and great crested newts (2015-16945-CLS-CLS – Class licence Level 2).

2.1.1 Bats

The survey was undertaken in accordance with *Bat Surveys for Professional Ecologists: Best Practice Guidelines* (Collins, 2016). All parts of the house and immediate surroundings were assessed externally and internally for potential bat roosting features using binoculars, high-powered torch, ladder and a borescope inspection camera (Ridgid CA300).

Aerial photographs, available maps and survey of the area outside the immediate zone of impact (where access was available) was used to identify any bat habitat in the wider landscape which could be impacted by proposals. The likely impact of the proposals (operational phase) to bats using the surrounding area (foraging and/or commuting) was also assessed.

2.1.2 Ponds

Ponds and waterbodies within 250m of the site were identified from available maps, and site survey. Those within impact distance of the site works and ecologically connected were surveyed (where access was available) for potential to support great crested newts using the Habitat Suitability Index (HSI; Oldham *et al.*, 2000). The HSI is a numerical index which uses specific habitat factors to assess whether the water body would be likely to support great crested newts, based on preferences for breeding ponds (see Table 2.1).

Table 2.1: Habitat Suitability Index (HSI) indicating suitability of ponds for breeding great crested newt.

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

2.1.3 Desk Study

A 2km radius search for statutory designated sites was conducted using “MAGIC”, the Multi-Agency Geographic Information system for the Countryside. The search radius was extended to the Zone of Influence (Zoi) for European designated sites: Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites, where the potential risk of impact to the qualifying features (species or habitats) of these sites may extend over a wider area.

A datasearch was requested from Suffolk Biodiversity Information Service (SBIS). Records of all bat species within a 2km radius of the site were provided on 22nd July 2022.

2.2 Site Context and Proposals

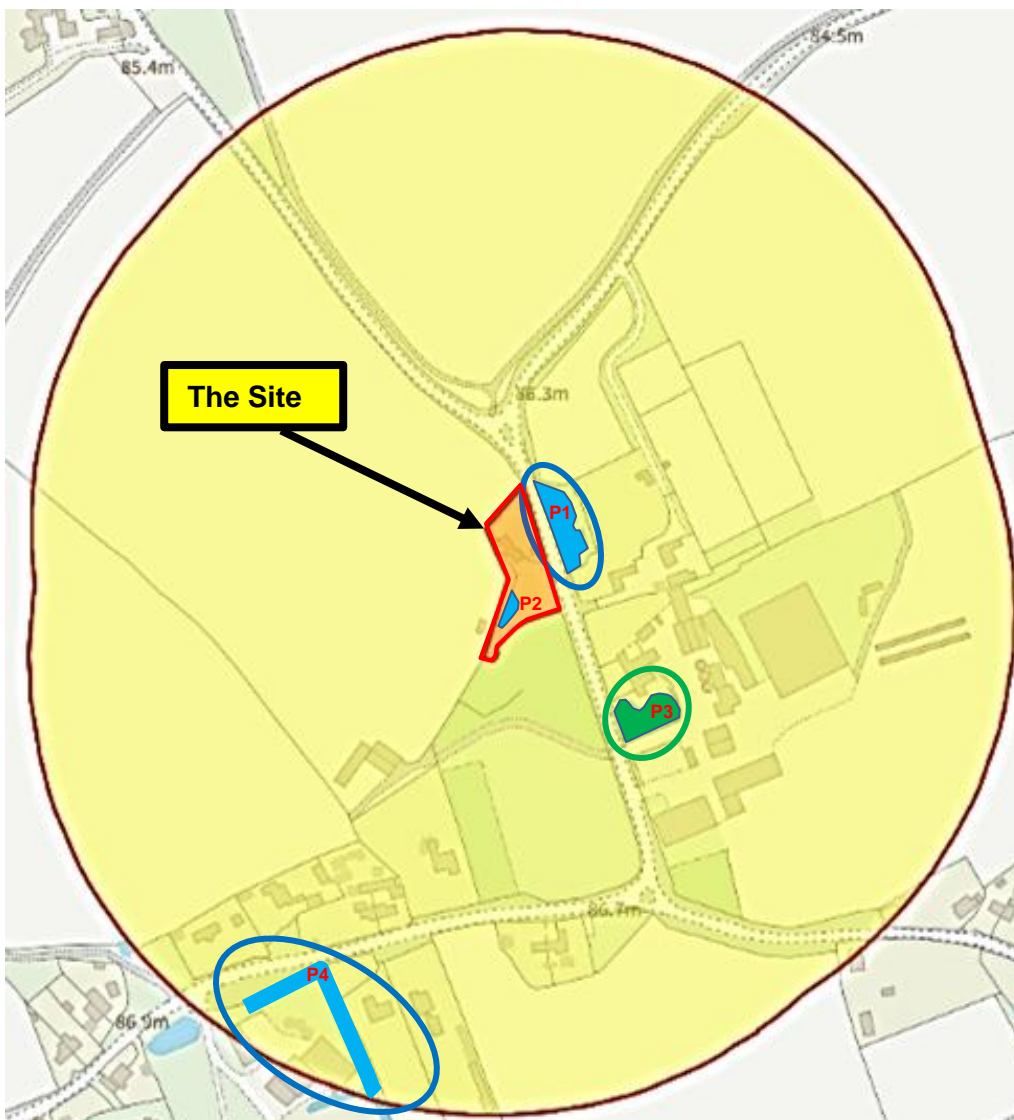
Householder planning application: Erection of single storey side/front extension (following demolition of existing outbuildings), erection of cart lodge/store. Internal and associated works to main house.

The property lies on the northern edge of the village of Wattisham, approximately 6km to the south-west of Stowmarket. Wattisham airfield lies approximately 350m to the east.

The wider landscape is predominantly agricultural, mainly arable land with some pasture, pockets of woodland and hedged field boundaries. A small woodland (Devils Wood) lies 800m west, and Park Wood (associated with Wattisham Airfield and designated a County Wildlife Site), is 1.5km to the south-east.

A number of ponds and water bodies are present within the local landscape, the nearest large water body is a reservoir approximately 1km to the south-west.

Figure 2.1 Ponds and ditches within 250m of the property (green = pond filled in; blue = pond/moat marked on available maps or identified during survey)



MAGiC – Sept 2022: (c) Crown Copyright and database rights 2022: Ordnance Survey 100022861.

3 Results

3.1 Desk Study

The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ); Consultation with Natural England is required for infrastructure/aviation and planning applications impacting air pollution or quarrying. Consultation is not required for extension and remodelling of a single dwelling of the type proposed.

There are no statutory designated wildlife sites within 2km (MAGIC, 2022). The Stour and Orwell Estuary Ramsar, Special Protection Area, and Site of Special Scientific Interest lies 18km to the south-east (Zone of Influence for this site is 13km). No direct or indirect impacts to the European designated site are predicted (designation is predominantly for estuarine birds).

The nearest European Protected Species (EPS) licence granted for bats is 5.8km to the north-west (2018-38137-EPS-MIT), for destruction of a common pipistrelle, soprano pipistrelle and brown long-eared resting place (MAGIC; 28th September 2022).

The nearest European Protected Species (EPS) licence granted for great crested newts is 4.8km to the south-west (2018-36308-EPS-MIT), for damage of a resting place. The nearest known great crested newt presence from Class Licence Return data, is approximately 2.5km south-west (MAGIC; 28th September 2022).

Suffolk Biodiversity Information Service (SBIS, 2022) provided records of five species of bats within 2km of the site the nearest was approximately 270m to the south-east, however, all other records were beyond 1.5km. Records of the following species were provided:

- Three common pipistrelle records (2014 and 2021), the nearest approximately 1.7km to the south-east of the site.
- Single brown long-eared bat record (2020) – 1.7km SE – flight record (not a roost record).
- A single soprano pipistrelle roost record (2020) – 1.7km SE.
- A single Nathusius pipistrelle roost in 2020 – 1.7km to the south-east.
- A hibernation record (bat species not specified) in 2004 – 1.75km NE.
- Noctule record, 1.7km SE (2020).
- Pipistrelle record - 270m SE (2016) – droppings recorded.
- Pipistrelle record – 1.9km SW (2006) – breeding colony recorded

3.2 Survey Results from 2nd August 2022

The property was a timber-framed thatched house (reed roof, with long-straw ridge), currently not occupied and undergoing renovations/re-ridging at the time of the survey. The garden was mainly paved to lawn with mature trees at the boundaries.

An outbuilding adjacent to the site entrance was disused. Target Notes described in Table 3.1 refer to numbers/locations shown in Figure 3.1 below. Pond descriptions in Table 3.1 refer to the numbering shown in Figure 2.1.

Figure 3.1 – Target Note locations (in red)

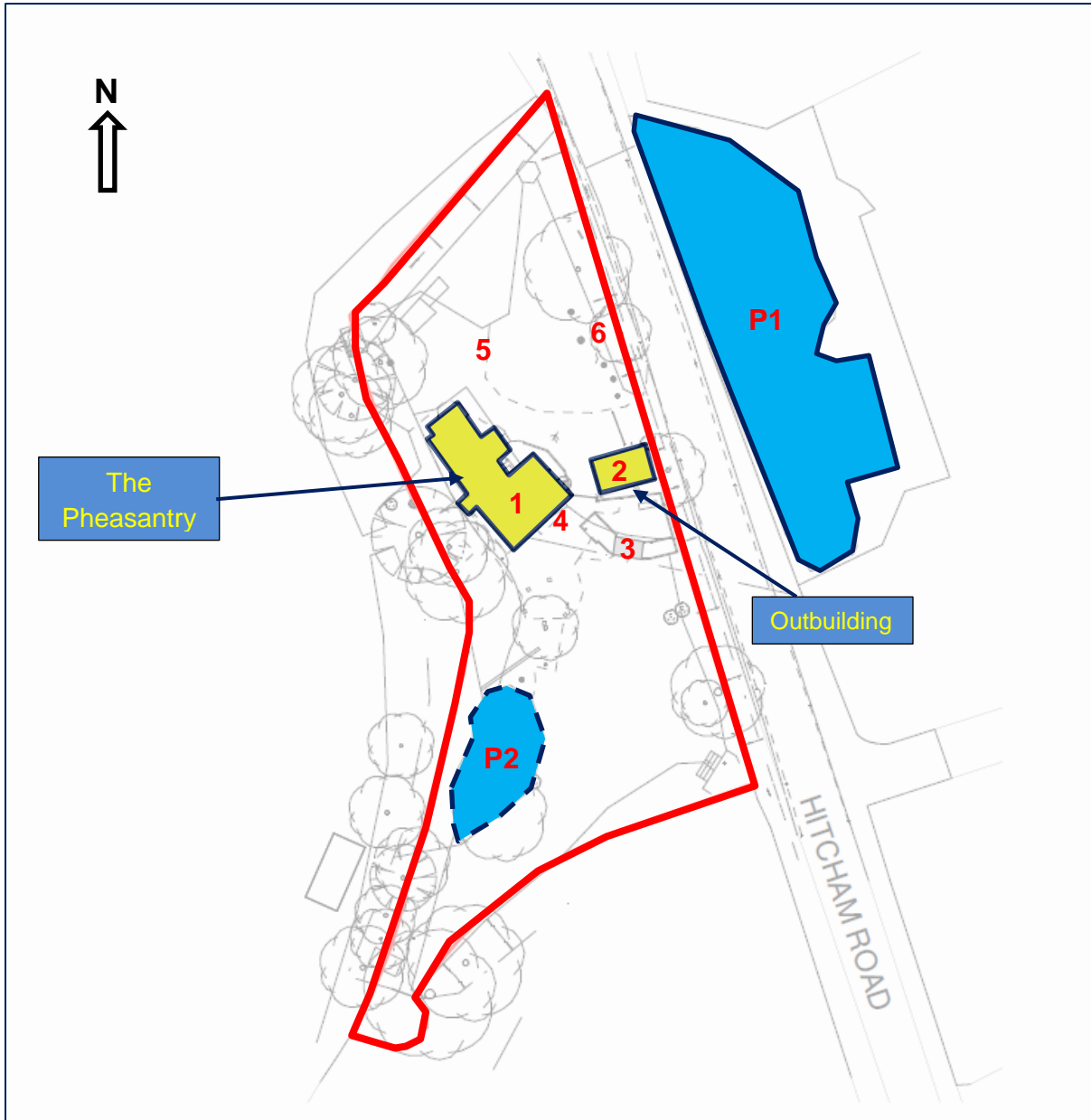


Table 3.1: Site and pond assessment carried out on 2nd August 2022.

Building and Pond Descriptions

1) Thatched House.

An C18 two-storey timber-framed house, externally rendered, with a thatched roof and end chimney stack. Extended and with a lean-to addition on the south-eastern elevation.

Pan-tiled lean-to roof largely intact, with minor lifting. Glazed windows were intact and well-sealed into their surrounds. No gaps between door/window frames or barge-board at roof edge on southern elevation of the lean-to, to which the proposed extension will be attached. The whole thatched roof was fully wired and secured under the eaves to the walls. Internally, the loft was heavily cobwebbed, and no access for bats was available due to vermin-proof wiring and sealed gable ends.

Negligible bat roosting potential.



2) Outbuilding.



Timber lapboard shed with double-pitched corrugated clear plastic sheet roof. Internally light and draughty (no door/window). No crevices or potential roost features.

Limited bird nesting potential within roof timbers and external dead Ivy growth.

Negligible bat roosting potential; low nesting bird potential.

3) Former Brick Structure/Patio



Sealed brick patio and concrete base with no crevices or amphibian hibernation opportunities beneath.

4) Wider Garden



Ground over which the new extension will be constructed was pea-shingle and gravelled, with sparse ruderal and garden planting. No potential refuge or hibernation opportunities for newts.

5) Parking Area/New Cart Lodge



Area for construction of new cart lodge/store was bare, disturbed ground with no vegetation at time of survey.

6) Garden Boundaries



Discontinuous line of trees and shrubs along the road (eastern) boundary.

Pond 1



Distance from site: 13m to east.

Area of pond: 565m² (approx.)

Mature pond with resident ducks/geese and consequently cloudy, green water. No evidence of fish or aquatic/emergent vegetation (limited Reedmace *Typha latifolia* stands). Surrounded by mature tree/shrubs and predominantly bare ground (due to wildfowl activity). Shallow sides sparsely vegetated with Bramble *Rubus fruticosus*, Nettle *Urtica dioica* and coarse grasses.

Pond 2



Distance from site: Within garden of property, approximately 10m from proposed extension.

Area of depression (approx.): 100m².

Surrounded by mature trees: Alder *Alnus glutinosa*, Birch *Betula pendula* and Cherry Laurel *Prunus laurocerasus*.

A shallow, dry depression not marked on available maps as a pond. No evidence of seasonal/regular inundation: Aquatic/emergent vegetation, or other evidence of the depression holding water regularly was not present.

Pond 3 (In-filled)



Formerly a large farmyard duck-pond – filled in and no longer holding water.

3.3 Suitability of House and Outbuilding for Roosting Bats

An assessment was made under the criteria detailed in current Best Practice Guidelines (Collins, 2016). The house and outbuilding lacked potential roost features and had negligible potential to support roosting bats. No further surveys or precautions are required prior to construction of the extension.

3.4 Foraging and Commuting Bats.

There is potential for foraging and commuting bats to move through the area, or around the garden boundaries, due to good quality foraging habitat in the wider local landscape (adjacent pond, mature tree-lines/hedges, farmland and gardens) and small woodlands locally. However, the site does not lie on any obvious commuting corridors, with no adjoining hedges or other linear features. The proposed extension and new cart lodge would result in no net loss of habitat. Impact to commuting bats can be minimized by ensuring that any new external lighting is sensitive to wildlife.

3.5 Pond Assessment for Great Crested Newts

Distance from a potentially suitable water body/terrestrial connectivity is a major factor in determining the potential suitability of a site to be used by great crested newts during their terrestrial phase. Small numbers of great crested newts have been known to range significant distances (1km) to colonise new ponds. However, research undertaken by English Nature (2006) has shown that it is most common to encounter them within 50m of a breeding pond, with few moving further than 100m unless significant linear features or suitable terrestrial habitat is involved, when great crested newts can be encountered at distances of between 150m-200m. At distances, greater than 200-250m great crested newts are hardly ever encountered.

The garden surrounding pond P2 was maintained as a short-mown lawn. This provides low-quality habitat for great crested newts during their terrestrial phase. Known water bodies within 250m were addressed for potential to support breeding amphibians.

Table 3.2: Water bodies within 250m of the site (locations shown on Figure 2.1):

Pond	Distance to Site	Direction from Site	Connectivity to the Site
P1	13m	East	Moderate ecological connectivity – no significant barriers to amphibian movement: A road separating the pond and site could reduce movement in the direction of the site. Short-mown amenity grass/garden and bare ground with no cover reduces the risk of amphibians moving from the water body into the construction zone. Road forms a minor impediment to movement.
P2	On site (10m from extension)	South	Moderate connectivity – no significant barriers to amphibian movement, though the garden amenity grass with no cover reduces the risk of amphibians moving from the water body towards the construction zone – ditch/hedged site boundaries would be used as movement corridors in preference.
P3	70m	South-east	Road separates site and in-filled pond, forming a minor impediment to movement. If amphibians had been using the pond for breeding, it is unlikely that they would have moved to the site during their terrestrial phase – good terrestrial habitat with greater ecological connectivity is present close to the pond.
P4	220m	South-west	The moats and water bodies close to P4 are ecologically separated from the site by village infrastructure. Negligible potential for any amphibians to use the site from these water bodies.

Table 3.3: Habitat Suitability Index (HSI) of P1; the only known pond holding water within 100m of the site.

Suitability Index (SI)	P1
SI1 – Location	1
SI2 - Pond area	1
SI3 - Pond drying	0.9
SI4 - Water quality	0.33
SI4 – Shade	0.8
SI6 – Fowl	0.01
SI7 – Fish	0.67
SI8 – Ponds	1
SI9 - Terrestrial habitat	0.7
SI10 – Macrophytes	0.3
HSI score	0.45
Potential for GCN to use the ponds for breeding.	Poor

A HSI below 0.5 indicates ‘*poor*’ suitability of the pond to support breeding great crested newts. A HSI was not carried out on the dry depression (P2), which is likely to be dry most of the time, if not permanently – no vegetation indicating regular seasonal inundation/standing water.

The HSI index is only a guide to the likely presence or absence of great crested newts and should be interpreted in conjunction with background information on habitats/connectivity in the area and knowledge of great crested newts’ ecology.

Both water bodies (P1 and P2) are surrounded by habitat under tree cover, which provides good refuge, hibernation and foraging opportunities for amphibians. This reduces the likelihood of great crested newts travelling across the open amenity grass/garden, during their terrestrial phase.

No ponds or ditches will be impacted by the proposed works: The site access is hardstanding and already in use, and all areas within the construction zone for the extension and new cart lodge are either hardstanding/gravel or very short amenity grass/sparse ruderal vegetation.

No high-quality terrestrial habitat for great crested newts lies within the clearance zone. There were no refuge or hibernation opportunities within the zone of impact: No significant log/rubble piles, loose paving slabs, hedgerow bases, rough grassland or other foraging habitat within the area that will be impacted by proposed works.

Due to the very low risk of impact, further great crested newt surveys are not recommended. A European Protected Species Licence will not be required to carry out the proposals due to the low/negligible risk of impact to newts, and no loss of potential amphibian habitat. However, precautionary working methods should be implemented to reduce the residual low risk of impact to newts to negligible. **This should be formalized in a *Non-Licensed Method Statement* and listed as a condition of the planning consent.**

3.6 Nesting Birds

Nesting birds and their eggs are protected under the Wildlife & Countryside Act 1981.

Timing of works, or a pre-start precautionary nesting bird survey would ensure compliance with legal obligations with regards nesting birds: The main breeding season is between March and August inclusive. Should any works impacting the outbuilding or vegetation be proposed during the bird breeding season, a nesting bird survey should be undertaken to confirm presence/absence of nests immediately prior to works being undertaken. If nests are identified, there may be a delay to the start of the work until all young birds have fledged.

Between September and February (inclusive), a nesting bird survey would not be required if standard due-diligence and a cautious approach is adopted by contractors.

3.7 Limitations and Assumptions

The baseline conditions reported and assessed in this document represent those identified during a single site survey, on the 2nd August 2022. A reasonable assessment of habitats can be made during a single survey; however, seasonal variations cannot be observed. The survey provides an overview of the likelihood of presence of roosting bats, birds, and newts, limited by the transient use of roosting opportunities by bats, and the short-lived nature of some signs (such as droppings). Where no evidence was found, this does not mean that protected species do not use impacted parts of the site at some stage of the life-cycle. Further surveys are only recommended if there is a significant likelihood that bats/newts may be present and impacted by the proposed conversion, based on the suitability of the property, ponds, surrounding habitat, connectivity and any direct evidence.

All areas of the site were accessible on the day of the survey. The pond assessment was carried out outside the newt breeding season, when newts and newt-eggs would not be present in ponds, and newts would be leaving, or have left, ponds. As an initial inspection to address the potential suitability of ponds to support great crested newts, the assessment and timing was adequate. All constraints were within normal limits and have been taken into consideration when drawing conclusions and recommendations from the survey.

4 Key Recommendations and Precautions

4.1 Further Surveys

No further surveys are required to inform the planning application, or to comply with wildlife legislation.

4.2 Precautionary Measures

To ensure compliance with wildlife legislation, avoidance measures and precautionary working methods should be implemented, as detailed below, to enable development of the site without impacting any protected species or habitat.

4.2.1 Great Crested Newts

There is a low risk that great crested newts could be present in the ponds close to the property. However, it is highly unlikely that any great crested newts would use the site or be impacted by the construction works, given the very low quality of the terrestrial habitat within the clearance zone (predominantly hardstanding and gravel/shingle with sparse ruderals) for amphibian foraging or hibernation/refuge habitat.

The HSI is *poor* for the pond closest to the site – across the road to the east. However, the lack of suitable habitat within the site boundary, and good quality of the habitat close to the pond (outside the site boundary), significantly reduces the probability that great crested newts would cross the site or use the site itself at any stage of the life-cycle. Due to the negligible potential for newts to be impacted or harmed during the construction or operational phase, a protected species licence is not required: The proposed works would not impact on individual great crested newts, or the local conservation status of great crested newts if a precautionary Non-Licensed Method Statement is secured as a Condition of any Planning Consent, and implemented prior to any works starting on the site, and during the construction phase.

4.2.2 Nesting Birds

The outbuilding has negligible potential to support nesting WCA Schedule 1 birds, such as barn owls. However, smaller nesting birds could access the structure which has internal ledges and external dead ivy that could provide opportunities for nesting.

A nesting bird survey of the outbuilding should be carried out immediately prior to demolition, if this is within the nesting bird season, to check for active bird nests, and avoid infringing legislation which protects all nesting birds (WCA 1981). If nesting birds are identified, then works to the outbuilding (including an exclusion zone – the extent of which would be advised by the project ecologist), until all young birds had fledged and left the nesting area.

If works start outside the main nesting period (end of August to end of February), then a survey is not necessary, if contractors adopt a precautionary approach.

5 Ecological Enhancement (Habitat Boxes)

These additional recommendations are not legal requirements but would enhance the value of the site for wildlife, as encouraged through the NPPF (MHCLG, 2021), and to help achieve Suffolk BAP targets and a net gain for biodiversity.

5.1.1 Bat Boxes




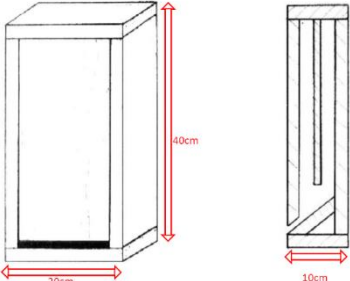
Woodcrete boxes (which are more durable and long-lasting than wooden alternatives) should be installed below the eaves of the new cart lodge: e.g., low profile Chillon or Schwegler 1FF externally mounted boxes (Figure 5.1). Alternatively, a purpose-made, bespoke box could be constructed beneath the wall-cladding of the new building.

Bat boxes should be located at least 4m above the ground and facing south-east, south and/or south-west, to receive sun for part of the day, with open flight access to the boxes.

5.1.2 Bird Boxes

A sparrow terrace (or three separate sparrow boxes with 32mm holes, located close together for this colonial nesting species) could be provided below the eaves on the new cart lodge or extension. Boxes should be installed at least 3m above the ground and should avoid direct sunlight (not directly south-facing), prevailing wind and be out of reach of cats and other predators.

Figure 5.1: Specification of bat and bird boxes:

 <p>Chillon Woodstone Bat Box:</p> <p>A large crevice style bat box made from woodstone. The internal space can accommodate up to 15 pipistrelle bats.</p>	 <p>Schwegler 1FF</p> <p>Suitable for hanging on steep slopes, house walls or trees</p>
	<p>Schwegler 1SP Sparrow Terrace</p> <p>This terrace provides nesting opportunities for three families. Made of wood-concrete mix, this terrace is durable, breathable and will last many decades. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. Place the terrace two metres or more above the ground or install directly into the wall. Cleaning is advisable but not necessary. The front panel can be removed by turning the screw hook.</p>
 <p>Technical drawing of a bespoke bat box showing dimensions: 20cm width, 40cm height, and 10cm depth.</p>	<p>Bespoke bat box.</p> <p>Designed to fit beneath the wall cladding of the new dwelling – below eaves.</p>

6 Conclusion

It is likely that the project can proceed with negligible impact on bats, birds, great crested newts or other protected species, if the following precautionary working methods are applied prior to start of siteworks/construction:

- A pre-start nesting bird survey (or works timed to avoid the nesting season).
- A *Non-Licensed Method Statement* implemented to avoid impact to amphibians.
- Pollution prevention measures to ensure local waterbodies are not damaged.

There is scope to further enhance the site for bats and birds through incorporation of the roosting and nesting boxes detailed in Section 5, in line with planning objectives for positive gains for biodiversity through development.

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