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Preliminary Bat Roost and Pond Assessment.

of

**Coles Green Farm, Chattisham Rd, Washbrook,
Ipswich, Suffolk, IP8 3HB.**

Survey Commissioned by:	Mr Ian Alderton on behalf of Mrs Julia Faulds
Project Number:	REP23026
Report issued:	3 rd July 2023
Date of survey:	7 th June 2023
Ecologist:	Odette Robson BSc (Hons) PhD MCIEEM

Project number:	Title:	Revision:	Issued:
REP23026	Preliminary Bat Roost and Pond Assessment at Coles Green Farm, Chattisham Rd, Washbrook, Ipswich, IP8 3HB.	Final	3 rd July 2023

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 Mr Ian Alderton on behalf of Mrs Julia Faulds 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:	Coles Green Farm, Chattisham Rd, Washbrook, IP8 3HB.
Grid Reference:	TM09942 41772
Report Commissioned by:	Mr Ian Alderton on behalf of Mrs Julia Faulds
Date of Survey:	7 th June 2023

Species/issues	Impacts	Recommendations
Bats	Construction Phase Impact (roosting bats).	<p>Negligible risk of bats roosting under the small section of tiles that will be removed when the existing porch is demolished: All tiles and timbers on the porch were well-sealed and lacked roosting opportunities.</p> <p>Evidence of bats roosting in the loft-void of the main farmhouse. Although this will not be directly impacted by proposed works, all works should be carried out under precautionary measures, to ensure that bats using the house loft are not impacted by the renewal of the porch.</p> <p>A European Protected Species licence and further survey will not be required if precautions are implemented during the demolition and construction phase.</p>
	Operational Phase Impact (commuting and foraging bats).	<p>Negligible impact to commuting or foraging bats: No foraging habitat will be lost, or flight lines interrupted, through proposals.</p> <p><u>Sensitive external lighting around new porch must retain dark corridors around the garden/site boundaries, mature trees, and any enhancement habitat boxes.</u></p>
Great Crested Newts <i>Triturus cristatus</i>.	Construction Phase Impact (terrestrial phase)	<p>Habitat within the zone of impact had very low potential to be used by great crested newts in their terrestrial phase. Therefore, if newts are present in the area, they would not be impacted in either the construction or operational phase.</p> <p>Due to the small scale and low impact of the proposals, and lack of suitable habitat within the ground-working zone, works are highly unlikely to impact great crested newts: 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. Due diligence precautions are recommended during the construction phase.</p>
Birds	Nesting bird potential	<p>There were no potential external nesting ledges/crevices, or access points on the porch for birds. No vegetation clearance is required to facilitate construction of the new porch.</p> <p>No further surveys or precautions are required.</p>
Additional enhancement	Consider further enhancement of the property by locating bat and bird boxes in tress close to the house and moat.	

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1 Introduction

1.1 Background

Robson Ecology Ltd was commissioned by Mr Ian Alderton on behalf of Mrs Julia Faulds, to undertake a Bat Roost and Pond Assessment of a property at Coles Green Farm, Chattisham Rd, Washbrook, IP8 3HB, to inform a Householder Planning Application and legal obligations in relation to the replacement of a single-storey lean-to porch/conservatory.

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

All UK species of bats, and great crested newts, are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to deliberately or recklessly capture, injure, disturb or kill a great crested newt or bat; damage or destroy a breeding site or resting place used by a great crested newt or bat; or obstruct access to any structure or place used for shelter or protection.

The surveys were therefore 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 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).

During the survey, on 7th June 2023, the temperature was 15°C; the wind at Beaufort Scale 4, 10% cloud cover and excellent visibility.

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 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 replacement porch (operational phase) to bats using the surrounding area (foraging and/or commuting) was also assessed.

2.1.2 Great Crested Newts

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.

Terrestrial habitat within the zone of impact was assessed for potential to support great crested newts.

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.

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 30th June 2023.

2.2 Site Context and Proposals

Coles Green Farmhouse is a detached house on Chattisham Road, approximately 900m to the south-east of the village of Chattisham, and 2.5km to the west of the outskirts of Ipswich.

The property is a Grade II listed timber-framed and brick occupied house, with rendered and painted walls and tiled roofs.

The house is surrounded by well-maintained gardens. Access driveway and parking/hardstanding also serves the farm buildings (barns and outbuildings) to the east.

The wider landscape, beyond the farm complex, is predominantly agricultural - mainly arable land and grazed paddocks, pockets of woodland, and hedged field boundaries.

A number of small ponds and water bodies are present within the local landscape, though the nearest significant large water body is Alton Water Reservoir, 4.5km to the south-east. The nearest large woodland is Hintlesham Great Wood, approximately 2.3km to the north-west.

Figure 2.1: Farmhouse – porch location

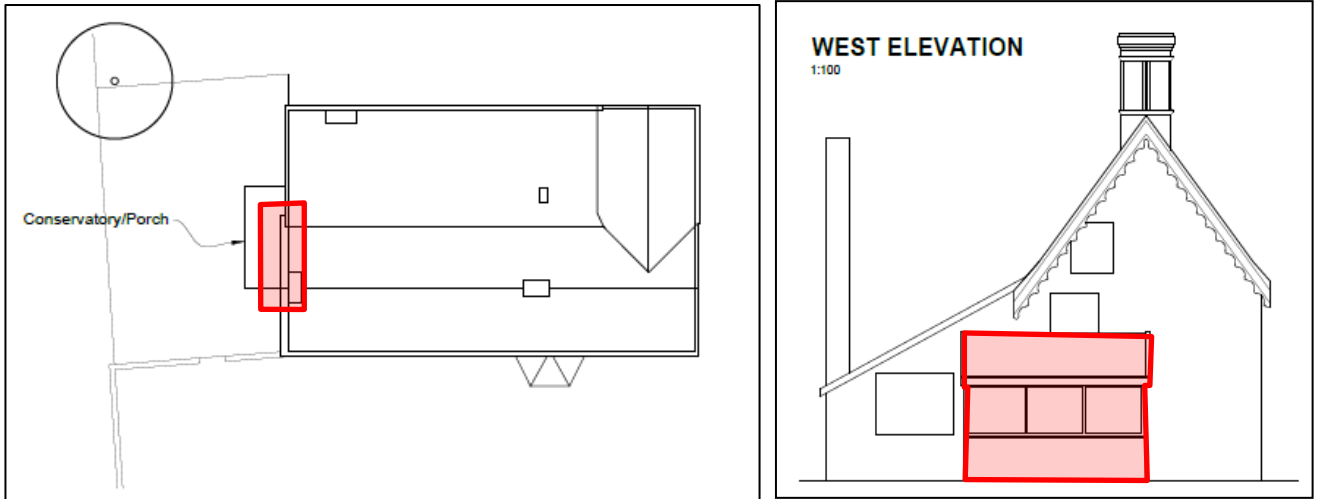
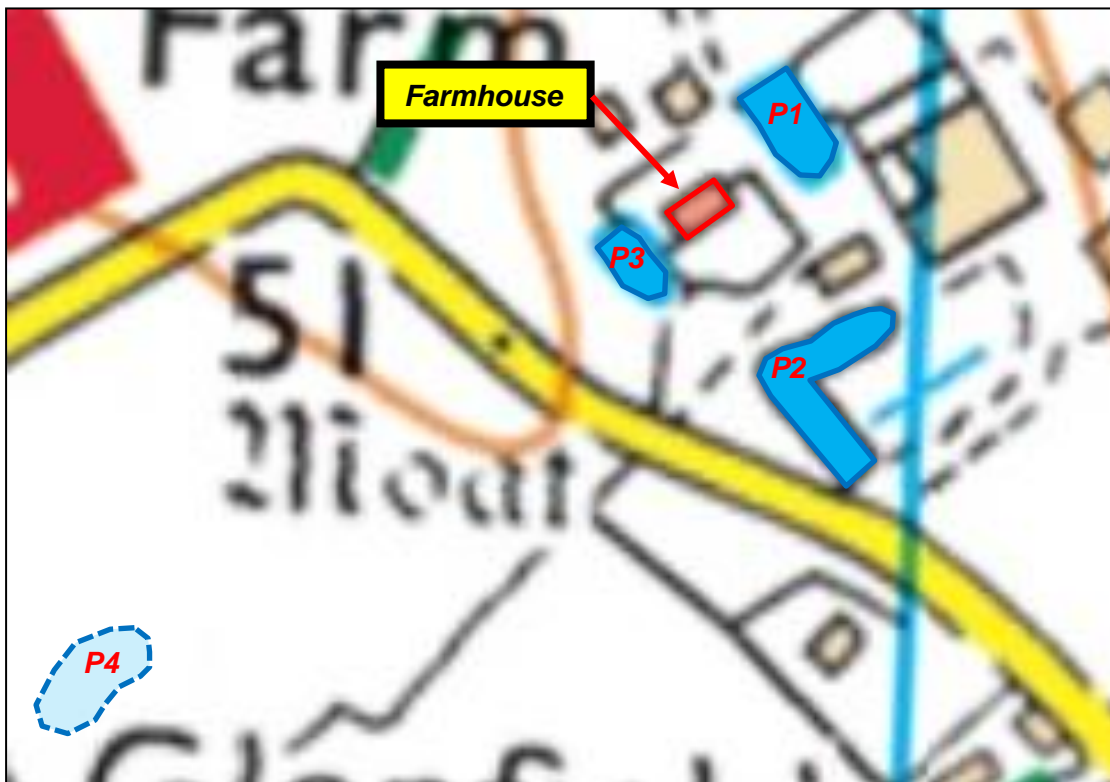


Figure 2.2: Ponds within 250m of the site



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 *residential development of 50 units or more*. Therefore, consultation would not be necessary for a householder planning application to replace the porch on an existing dwelling.

There are no statutory designated wildlife sites within 2km.

The nearest European Protected Species (EPS) licence granted for bats is 1.3km to the west (2014-4374-EPS-MIT), for destruction to a brown long-eared bat resting place.

The nearest European Protected Species (EPS) licence granted for great crested newts is 4.4km to the north of Cole Green Farm (2016-24231-EPS-MIT), for damage and destruction of a resting place. The nearest record of great crested newt presence is from Class Survey Licence Return data (MAGIC, 2023) – approximately km to the south.

Suffolk Biodiversity Information Service (SBIS, 2023) provided 23 records of bats (seven species) within 2km of the site, as detailed below:

- Ten common pipistrelle records (2011 - 2022), nearest 800m to the north-west.
- Four brown long-eared bat records (2011-2019), the nearest is from a building within 20m of the Farmhouse itself – a record from 2011.
- Three Noctule records (2014 – 2019), the nearest approximately 900m to the south.
- A single Serotine record over 1km to the south-east, in 2014.
- A single *Myotis* spp record (2019) from approximately 900m to the south.
- Two soprano pipistrelle records (2014 - 2019), nearest from approximately 900m to the south.
- A single barbastelle record (2022) – 1.9km to the south-east.



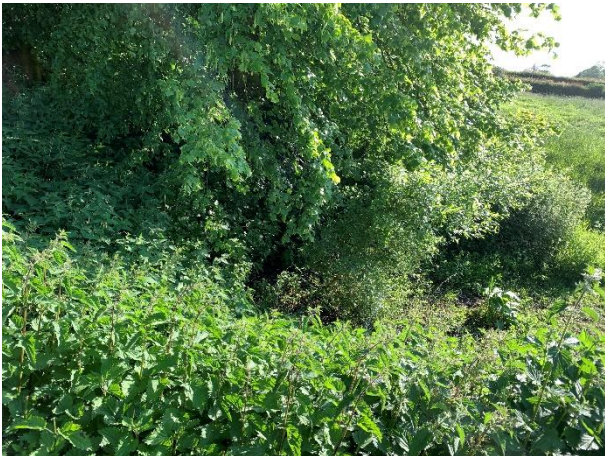
3.2 Survey Results from 7th June 2023

The occupied dwelling was a Grade II Listed timber-framed house, with rendered external walls, painted brick gables, and tiled roof. The porch is attached to the south-west-facing gable end of the main house, and single-storey, slate-roofed lean-to (Figure 2.1).

Table 3.1: Building assessment carried out on 7th June 2023.

Description/photo	
<p>Farmhouse Loft – Internal</p> <p>Large, open loft void with historic roof timbers and lagging insulation with boards overlaid. Bitumen-felt internal roof-lining was intact. Living/attic section at northern end. Glazed window at gable end (high internal light levels).</p> <p>Scattered brown long-eared droppings throughout with an accumulation of approximately 400 droppings of mixed age (some relatively fresh) in the darker middle section of the loft.</p>	
<p>Farmhouse - External</p> <p>Externally rendered walls and painted brick gable to south-west (with porch attached). All intact and sealed. Leadwork around the chimneys was largely flush with tiles, with minor lifting.</p> <p>Roof and ridge tiles were largely well sealed, with minor gaps below ridge tiles which could facilitate bat access to loft void. Single-storey lean-to off north-western elevation with slate mono-pitch roof.</p> <p>No notable access points (for bats) to the loft at the gable end above the porch: Apex, rake eaves, and barge boards at the south-west gable were all well-sealed.</p>	
<p>Porch</p> <p>Painted brick plinth to 1m, with glazing above. Small void above ceiling (not accessible). Peg-tiled mono-pitch roof was intact and tiles well-sealed with no notable gaps. Barge-boards and timber boarding above windows/door were all sealed and no gaps that could be accessed by bats. Porch well-sealed to gable wall of house with no gaps at roof or wall join. Wooden window frames were damaged and decaying, but not forming any extending internal cavities.</p> <p>The replacement porch will extend beyond the footprint of the existing porch, over existing hardstanding.</p>	

Table 3.2: Building and pond assessment carried out on 7th June 2023.

Pond Description	Photo
<p>P1: 30m NE of porch: Farm pond.</p> <p>Surrounded by brick wall, scrub, rush, and Willowherb <i>Epilobium</i> spp. Poor water quality. No evidence of aquatic or emergent vegetation. Mature Ash <i>Fraxinus excelsior</i> tree. Surface of pond <10% shaded.</p> <p>Surrounding terrestrial habitat: Hardstanding/access drive/parking; mown grass and paddock.</p> <p>Low potential to support great crested newts.</p>	
<p>P2: 40m SE of porch: Former Moat.</p> <p>Very low water levels at the time of the survey. Reedmace <i>Typha latifolia</i> dominated the south-eastern end. Woody Nightshade <i>Solanum dulcamara</i> and Willow <i>Salix</i> spp. saplings throughout inundated area suggest regular drying and low water levels.</p> <p>Poor/average water quality. Surrounded by Blackthorn <i>Prunus spinosa</i> scrub, and mature trees: Ash, Oak <i>Quercus robur</i>, Horse Chestnut <i>Aesculus hippocastanum</i>. Banksides well-vegetated: Dominated by Willowherb and coarse grasses.</p> <p>Good potential to support great crested newts.</p>	
<p>P3: 10m SW of porch: Dry depression – marked on some maps as a pond but appears to be a storm-water temporary or ephemeral water body/storage.</p> <p>Grassed/vegetated base suggesting only low levels of seasonal inundation.</p> <p>Separated from the demolition/construction zone by a steep bank and brick wall, forming a barrier between works and the inundation area.</p> <p>Negligible potential to support great crested newts.</p>	

P4: 180m SW of porch: Dry Depression – not a pond.

Hay-field/pasture. Marked on some maps as a pond, but found to be a dry depression which may be seasonally waterlogged, but no aquatic or emergent vegetation which would suggest significant inundation.

Negligible potential to support great crested newts.



3.3 Suitability of Porch for Roosting Bats

An assessment was made under the criteria detailed in current Best Practice Guidelines (Collins, 2016).

Tiles on the porch were all well-sealed, with no lifting or damaged tiles that bats could use to access the cavity between the tiles and bitumen-felt roof lining.

No further surveys or licences are required to inform the planning/listed building application or to comply with wildlife legislation. However, precautionary working methods must be implemented during the construction phase to avoid indirect impacts to the known roosting in the main roof of the house.

3.4 Foraging and Commuting Bats.

There is very good potential for foraging and commuting bats to move through the area, and around the property, due to high quality foraging habitat close to the Farmhouse and in the wider local landscape (mature trees/hedges, water bodies, and farmland) and records of bats locally. The proposed porch replacement would not result in a net loss of habitat. There would be no impact to commuting or foraging bats if any new external lighting is sensitive to wildlife.

Lighting precautions should be implemented (Section 4.2.2.2) to maintain dark corridors around the garden boundaries and ensure bat activity in the local area is not impacted, and bats roosting on the house loft have dark commuting routes between roost and foraging grounds.

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.

Known water bodies within 250m (identified from available maps) were addressed for potential to support breeding amphibians. The nearest pond shown on some maps (but not marked on others) is approximately 10m to the south-west of the porch (Figure 2.2; P3): This is not a permanent pond, seasonally inundated, and separated from the construction works by a steep bank and brick wall, forming a barrier between works and the inundation area.

The former moat (P2) had good potential to support protected amphibians and was surrounded by good quality terrestrial habitat on all sides, with tree cover, dead wood and other good refuge, hibernation and foraging opportunities for amphibians. This reduces the likelihood of great crested newts travelling 40m north-west during their terrestrial phase to the construction zone, across the intervening mown grass and hardstanding driveways.

No ponds or ditches will be impacted by the proposed replacement porch: The site access is already in regular use and areas used during construction would be hardstanding drive/parking areas and well-managed garden of low value as amphibian habitat. No tree, hedge, or scrub removal is required.

No high-quality terrestrial habitat for great crested newts lies within the clearance zone (footprint of replacement porch and working area). There were no refuge or hibernation opportunities within the zone of impact: The walls of the property were intact to ground level and the new porch will extend slightly beyond the footprint of the existing porch, over existing hardstanding and short-mown lawn. There are no log/rubble piles, loose paving stones/slabs, hedgerow bases, rough grassland or other foraging habitat within the area that would be impacted by the proposed works.

Great crested newt surveys and/or 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.

3.6 Nesting Birds

Nesting birds and their eggs are protected under the Wildlife & Countryside Act 1981. There were no potential external nesting ledges, or access points for birds into the roof void. No further surveys or precautions are required.

3.7 Limitations and Assumptions

The baseline conditions reported and assessed in this document represent those identified during a single site survey, on the 7th June 2023. 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 bats do not use the buildings 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 works, based on the suitability of the house, pond, surrounding habitat, connectivity and any direct evidence.

All areas of the site were accessible on the day of the survey, including the loft-void of the main house. Ponds and terrestrial habitats in the zone of impact, were accessible and surveyed to inform the assessment for potential impact on protected amphibians.

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

Further surveys are not required to inform the planning application, or to comply with wildlife legislation. However, good practice precautionary measures (for great crested newts and bats) should be implemented during the construction phase.

4.2 Precautionary Measures

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

4.2.1 Great Crested Newts

Great crested newts could be present in local ponds. However, it is highly unlikely that any great crested newts would use the site clearance/working zone, or be impacted by the demolition/construction works, given the low quality of the habitat within the clearance zone/impact area (predominantly hardstanding garden) for amphibian foraging or hibernation/refuge habitat.

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: No further surveys are required however, standard good practice precautions should be implemented during site works:

- Site Manager to inform all site-workers about the potential presence of newts in adjacent water bodies, during the initial site induction process. This will include details of the legal protection afforded to great crested newts, the methods of working to reduce potential impacts on great crested newts, identification of newts, and procedure if great crested newts are found within the working area.
- Standard due-diligence and precautions should be undertaken in relation to pollution prevention and protection of adjacent water bodies.
- If a great crested newt is found within the works area despite the avoidance and precautionary measures, work should stop immediately pending advice from the Project Ecologist on how to proceed. Contact details of the Project Ecologist should be available on site at all times and Natural England (NE) will be contacted for advice if necessary.
- Great crested newts must only be handled by a NE licensed ecologist.
- Temporary pools of water must not be allowed to form during the construction phase.
- Any temporarily stored materials (bricks, paving slabs, debris piles) should be kept above the ground and on pallets to avoid forming refuge or hibernation opportunities.

- Works to be conducted in daylight hours only - when newts are less likely to be moving/active.
- All waste should be placed directly into skips or removed immediately from the site, to avoid creating places that could be used for refuge.
- The optimal time for construction works is between April and June inclusive, when most great crested newts will be in ponds and less likely to be using terrestrial habitat.
- Any heavy machinery should be stored on hard-standing.

4.2.2 Bats

The proposed works would not impact on individual bats, or the local conservation status of bats if the following precautionary working measures are implemented during the construction phase:

- **If bats are found at any stage of the works, works should cease immediately and the Project Ecologist or Natural England called for advice on how to proceed.**
- Existing tiles will be lifted by hand off the tiling battens during demolition. Each tile will be turned over to check for bats clinging to the underside, before being laid aside for re-use or discarded.
- Breathable membranes which have not been approved for use in bat roosts will not be used on the new roof or walls if there are gaps which bats could access (bats can access gaps of 1cm wide or more).
- To avoid disturbance to bats in the main roof loft, all construction works will be carried out with minimal noise, vibration, and disturbance. Screws and hand-tools will be used where feasible: Hammers, nails and power tools to be used only if there is no alternative.

4.2.2.1 Breathable roofing/wall membranes

Breathable roofing and wall membranes should only be used in areas which bats cannot access: If there are gaps which bats can access (over 1cm) then a bat-safe membrane should be used: Bitumen 1F felt that has a non-woven, short fibre construction. If a breathable, non-bitumen coated roofing membrane is used, this must pass a snagging propensity test to ensure that the material can stand the repeated snagging actions of roosting bats. Further clarification on this is detailed on the Bat Conservation Trust website <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes>

4.2.2.2 Sensitive Lighting

Due to roosting bats in the Farmhouse and good quality foraging habitat close to the replacement porch, lighting should be minimized to encourage bats to use the property, both during the porch demolition/construction works, and on completion (operational phase). Guidance from the Institute of Lighting Professionals and the Bat Conservation Trust (IPL 2018; ILE 2012, BCT 2009) has been used to inform the following considerations:

- No lighting should be directed towards the garden boundaries which should be maintained as dark corridors.

- LED luminaires should be used where possible (No UV elements: Metal halide, fluorescent sources should not be used).
- A warm white spectrum (ideally <2700Kelvin) should be used to reduce the blue light component.
- Peak wavelengths higher than 550nm should be used to avoid the component of light most disturbing to bats (Stone, 2012).
- Only luminaires with an upward light ratio of 0% and with good optical control should be used (See ILP 2011).
- Any external security lighting should be set on motion-sensors sensitive to large moving objects only, and short (<1 minute) timers.
- All external lighting should be kept to the minimal feasible level and be directed downward: Baffles, hoods or louvres can be used to reduce light spill and direct it only to where needed.
- Lighting should be appropriately directed to avoid illuminating any mature trees, hedges/shrubs, and any mitigation/enhancement habitat boxes.
- Building works should only be undertaken during daylight hours and task lighting should not be used during the construction or operational phases of the project.

5 Ecological Enhancement (Habitat Boxes)

These additional recommendations would enhance the value of the site for wildlife, as encouraged through the NPPF (MHCLG, 2021), and to help achieve Suffolk BAP targets. Woodcrete boxes are more durable and long-lasting than wooden alternatives.

5.1.1 Bat Box

A Schwegler 2F bat box (Table 5.1) could be installed on a mature tree adjacent to the moat (Figure 2.2, P2), facing south-east or south-west to receive sun for part of the day, at least 4m above ground level, and sited out of reach of cats. Woodcrete boxes are more durable and longer-lasting than wooden alternatives. There must be unobstructed flight access enabling entry/exit for bats, but with suitable flight-lines in close proximity. The access hole is at the base so that the boxes are self-cleaning and do not require any maintenance.

No external lighting should be installed close to the box or directed at the box. Surrounding vegetation should be maintained to facilitate an open flight-line into the box for bats.

Bat boxes should be left in perpetuity and must only be checked or moved by individuals licenced by Natural England to survey and handle bats.

5.1.2 Sparrow Boxes

House Sparrows are listed on the Birds of Conservation Concern red-list (Stanbury *et al*, 2021) and are Species of Principal Importance for conservation of biodiversity in England (SPIE) - formally BAP species. This is a colonial nesting species that readily uses nesting boxes of the type specified in Figure 5.1.

A group of two or three individual sparrow boxes should be located close together on mature trees in the garden, or adjacent to the moat (P2). 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>Schwegler 2F Bat Box</p> <p>Multi-purpose bat box for pipistrelles – tree-mounted. Manufactured from long-lasting Woodcrete, a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years.</p>	 A dark grey, conical bat box mounted on a tree trunk. It has a small entrance hole near the bottom.	<p>Schwegler 1B (32mm hole)</p> <p>General purpose nesting box; for house sparrows. To be located together in a group for colonial nesting species.</p>	 A brown, rectangular nesting box with a white entrance hole and a metal wire loop at the top for hanging.
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6 Conclusion

It is likely that the proposed replacement porch can proceed with negligible impact on bats, birds, great crested newts or other protected species, if precautionary working methods are implemented during the demolition and the construction phase, to avoid impact to bats using the main roof of the Farmhouse, and any protected amphibians, if present in the adjacent water bodies.

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

7 References

Bat Conservation Trust. (2009). Bats and lighting in the UK- bats and the built environment series www.bats.org.uk

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