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Ecological Impact Assessment: The Pound, Higham, Suffolk

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Client	Harry & Emma Hall
Site address	The Pound, Hadleigh Road, Higham, Babergh, Suffolk, CO7 6LB
Survey scope	Ecological Impact Assessment
Survey date(s)	30/06/20, 14/07/20 and 28/07/20
Report reference	2020.065
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Declaration of Compliance

This report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct and British Standard Institution's (BSI) BS 42020:2013 Biodiversity – Code of practice for planning and development. We confirm that the opinions expressed within this document are our bona fide professional opinions.

The information which is being provided is a true representation of the survey methods used and the results assembled, with respect to the stated dates of survey and assessment. The future validity of this report is conditional on any changes which occur to the assessment site, and in any case will be limited by professionally accepted survey lifespans[1,2].

Third Party Disclaimer

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[1] https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

[2] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust London. Section 2.6.3 Age of survey data (pg 20).

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1. Non-Technical Summary

The focus of the ecological impact assessment is The Pound, a Grade II listed house accessed off of Hadleigh Road, Higham in Suffolk. It is proposed to add extensions to both ends of the building.

The purpose of this report is to describe the current ecological baseline of the survey area and detail a summary of potential impacts to ecological receptors.

The application site was walked over and inspected by Seth Lambiase MCIEEM (Levels 3 and 4 bat licences 2015-11812-CLS-CLS and 2015-11813-CLS-CLS; Level 1 great crested newt licence 2015-19173-CLS-CLS) on 30/06/20. The house was inspected for evidence of roosting bats, and two ponds within 250 metres were sampled for great crested newt eDNA testing. Subsequent dusk bat roost emergence surveys were completed on 14/07/20 and 28/07/20.

The proposed works are not predicted to negatively impact upon any nearby designated nature conservation sites.

There are excellent natural habitats within or near to the application site, but the development proposal is expected to have only minor impacts to the garden area of the property.

The proposed extensions to the north-west and south-east ends of the house will require an amount of roof tile stripping to join the extensions to the original structure. This stripping, particularly on the far north-west aspect, has the potential to disturb roosting bats and temporarily damage common pipistrelle and soprano pipistrelle roosts. However, the majority of bat roost sites in the middle of the western aspect of the roof should be unaffected. The predicted impacts for the local common pipistrelle and soprano pipistrelle populations are rated as minor negative, but mitigation measures (European Protected Species mitigation licence) are obliged.

There is potential for a minor negative impact on local nesting birds, which can be mitigated by avoiding vegetation clearance during the main nesting season, or else having a competent watching brief before the works.

Potential minor impacts to terrestrial species that could be using the garden (hedgehogs, slow worms, grass snakes and common toads) would be mitigated by appropriately managing open excavations and new concrete.

2. Introduction

2.1. Description of the project

The focus of the ecological impact assessment is The Pound, a Grade II listed house accessed off of Hadleigh Road, Higham in Suffolk (grid reference TM 0302 3687; shown in Figures 1 and 2). It is proposed to add extensions to the west and east ends of the house, and to refurbish and extend an outbuilding (see Figures 2 and 3).

2.2. Purpose

The purpose of this report is to:

Describe the ecological baseline of the survey area.

Evaluate the habitats within the survey area for their ecological value in a geographic context.

Identify the requirement for further ecological surveys to fully inform the assessment of effects as a result of the proposal.

Identify and describe all potentially significant ecological effects as a result of the proposal.

Outline appropriate avoidance or mitigation measures for significant effects as a result of the proposal and how these could be secured.

Clearly identify requirements to ensure compliance with nature conservation legislation.

Identify potential ecological enhancement measures beyond avoidance or mitigation.

Figure 1: Survey area location (red star)

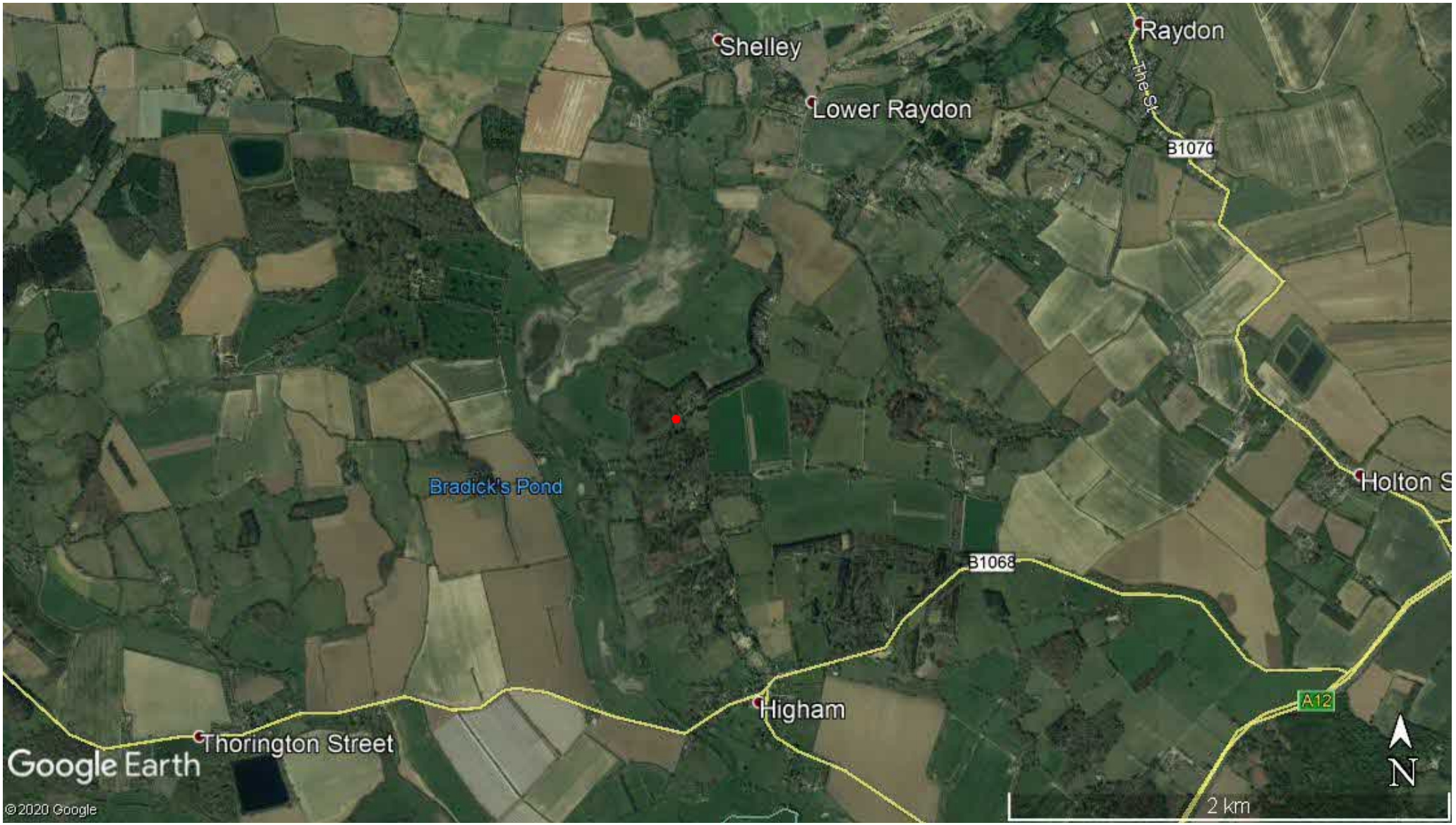


Figure 2: Aerial image of The Pound

Figure 3: Site proposal layout drawing

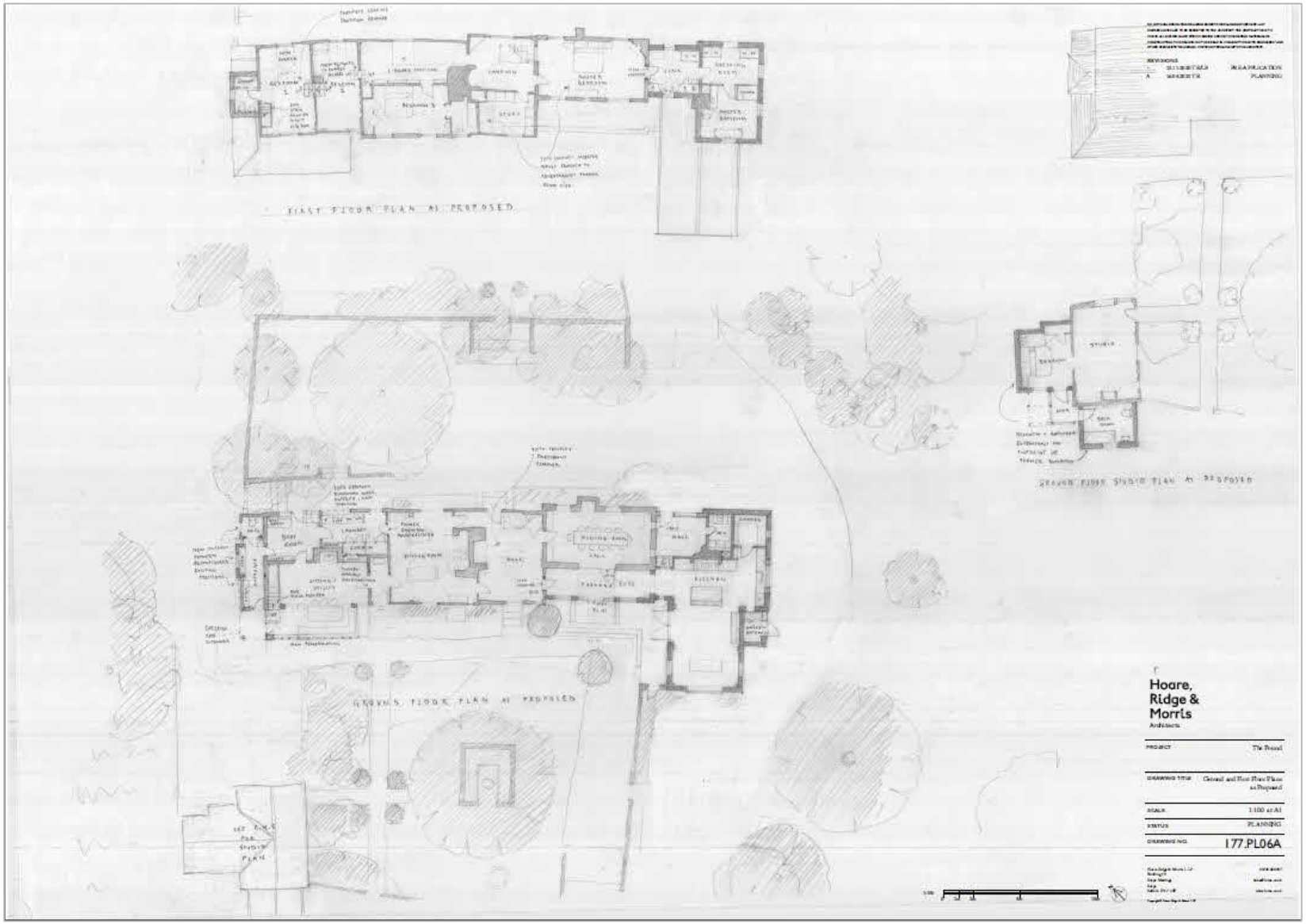


Figure 4: Site proposal elevation drawings

3. Methods

3.1. Zone of Influence

The Zone of influence (ZoI) is defined by the CIEEM Guidelines for Ecological Impact Assessment (2018) as: *"The areas/resources that may be affected by the biophysical changes caused by activities associated with a project"*.

The ZoI for this project considers multiple areas for the potential changes to ecological features as a result of the proposed development. The extents of these areas are:

> Within the application site boundary and immediately adjacent habitats for direct impacts to valued ecological features (e.g. habitats and protected species).
>
> Water-bodies within 250m of the development site which may be used for breeding by great crested newts (as based on the small-scale of the proposal).
>
> Designated nature conservation sites within a 2km radius of the application site boundary which may be indirectly impacted as a result of the proposed development.

3.2. Desktop study

A detailed desktop study was made of the survey area using the search criteria and sources described in the Table below in September 2020. It should be noted that an absence of records may only reflect an absence of survey data and cannot be taken as confirmation that a particular species is not present in the site or surrounding area.

Table 1: Desktop study searches

Search	Sources
A 2km search radius for designated sites and features of interest	Natural England Magic Map Application (www.magic.gov.uk) Suffolk Biodiversity Information Service Planning Search Tool (https://www.planningfinder.co.uk/search/near?radius=1.0&postcode=NR11+6PT&order=date_recent - accessed 06/02/2020)
A 2km radius for significant records of protected and priority species and EPSL mitigation projects	Natural England Magic Map Application (www.magic.gov.uk) Suffolk Biodiversity Information Service
A 250m radius for extant waterbodies	Natural England Magic Map Application (www.magic.gov.uk) Google Earth Pro Ordnance Survey maps (1:10,000)

3.3. Field survey and establishment of baseline ecological conditions

The survey area was walked over and inspected by Seth Lambiase MCIEEM (Levels 3 and 4 bat licences 2015-11812-CLS-CLS and 2015-11813-CLS-CLS; Level 1 great crested newt licence 2015-19173-CLS-CLS) on 30/06/20.

The weather conditions were: 17°C; overcast with very light rain; Beaufort Wind Scale 0-1.

Photographs of ecological features have been referenced within the Results Section and are shown in Appendix 2.

3.3.1. Habitats

A general habitat assessment of the relevant areas of the site was conducted, with habitats noted and assigned to Phase 1 Habitat classes where relevant (Joint Nature Conservation Committee, 2010).

3.3.2. Species

Mammals

[redacted]

Bats

The bat roost inspection focused on the house and the outbuilding west of the house. The visual inspection searched for bat evidence (e.g. roosting bats, dropping and feeding evidence) both internally and externally. The survey was achieved using a torch, ladder, binoculars and endoscope.

Based upon signs found and the condition of the building, an assessment was made of the potential of the buildings for roosting bats based on guidance in: Bat surveys for Professional Ecologists: Good Practice Guidelines 3rd edition (Collins, 2016).

Two dusk bat activity surveys were completed following the Bat Conservation Trust's (BCT) Good Practice Guidelines (Collins, 2016). Dusk bat roost emergence surveys were completed on 14/07/20 and 28/06/20, focusing on the entirety of the house (the outbuilding have negligible bat roost potential).

Both surveys were completed by Seth Lambiase MCIEEM (Levels 3 and 4 bat licences 2015-11812-CLS-CLS and 2015-11813-CLS-CLS), John Harris MCIEEM (Level 2 bat survey class licence 2015-19157-CLS-CLS), Christian Whiting MCIEEM (Level 2 bat survey class licence 2015-14745-CLS-CLS) and two FLIR Scion OTM 266 thermal imaging monoculars (recording video). See Figure 6 for survey positions.

Anabat SD1, Elekon Batlogger and Bat Box Duet paired with SongMeter 4ZC (for recording) were used by the surveyors to listen to and record bat activity. An additional SongMeter 4FS was used to give audio recording coverage for the thermal imaging cameras.

Birds

An assessment was made of the features within the application area with the potential to support breeding birds and Schedule 1 birds (e.g. barn owl Tyto alba).

Reptiles

Identification of suitable habitat within the site was carried out, and an assessment was made of the potential for reptiles to be present within the application site.

Amphibians

A desktop search for water-bodies within 250m of the application site was conducted using the Natural England Magic Map Application (Magic Maps) and Google Earth Pro.

During the 30/06/20 site assessment, samples from the two ponds south-west of the house (c.130m and 175m distant) were taken and sent off for eDNA analysis to determine great crested newt Triturus cristatus presence/absence.

Identification of suitable habitat within the survey area was carried out, and an assessment was made of the potential for great crested newt to be present within the application site.

3.4. Assessment of impact potential / risk

Potential impacts on ecological features are characterized using the following criteria.

Positive or Negative

The definition of a positive or negative impact/effect is as per CIEEM (2018):

> "Positive – a change that improves the quality of the environment e.g. by increasing species diversity, extending habitat or improving water quality. This may also include halting or slowing an existing decline in the quality of the environment.
>
> Negative – a change which reduces the quality of the environment e.g. destruction of habitat, removal of foraging habitat, habitat fragmentation, pollution."

Spatial Extent

The spatial extent of an impact's predicted effects are estimated according to the following categories: international and European; national; regional / river basin district; county; local planning authority district; local (≈ parish); site (within the proposed development boundaries).

Magnitude

> Major – an impact which is predicted to have a crucial effect (positive or negative) on a designated conservation site, habitat or species population within a specified spatial extent. Normally the effect will be considered either long-term (potentially reversible) or permanent.
>
> Moderate – an impact which is predicted to have a modest effect (positive or negative) on a designated conservation site, habitat or species population within a specified spatial extent. Normally the effect will be considered temporary in either the short- or medium-term, and reversible.
>
> Minor – an impact which is predicted to result in a slight but unimportant effect (positive or negative) on a designated conservation site, habitat or species population within a specified spatial extent. Normally the effect will be considered to be short-term and reversible.
>
> Neutral – a 'non-impact', with no appreciable effects on a designated conservation site, habitat or species population.

Duration

The duration of an impact's predicted effect may be quantified, or else broadly defined as either short-term, medium-term, long-term or permanent.

4. Results

4.1. Local context

The Pound is in the village of Higham, within the Stour Valley and the Dedham Vale Area of Outstanding Natural Beauty. The River Brett flows less than 0.5km west of the house.

4.2. Desktop study results

No statutory designated nature conservation sites were found to be within 2km of the proposal (see Figure 5). The only sites within 1km and even remotely relevant to the proposal are detailed below in Table 2.

Table 2: Desktop search results – designated sites within 1km

Site name	Details	Location
Rowley Grove	Ancient woodland.	480m west
River Brett (sections)	A portion of the river with good water quality and high conservation value.	545m south-west
Higham Meadow	A mosaic of habitats including a stream, mixed woodland and a wet meadow.	975m east

Species records relevant to the application site and the nature of the development proposal are given below in Table 3.

Table 3: Desktop search results – species

Species	Location details	Date
[redacted]		
Bats	21 records (many roost records) from five confirmed species: barbastelle Barbastella barbastellus, brown long-eared bat Plecotus auritus, soprano pipistrelle Pipistrellus pygmaeus and common pipistrelle Pipistrellus pipistrellus.	2001-2018
Hedgehog Erinaceus europaeus	1 record from Higham.	2011
Breeding Birds	Numerous small bird species (e.g. house sparrow Passer domesticus) have been recorded within 2km of the application site, and are considered to have the potential to nest within the gardens around the house and within the climbers on the house.	2008-2017
Reptiles	1 slow worm Anguis fragilis record from Higham; 2 grass snake Natrix Helvetica records, 1 from Higham and 1 from Raydon	2000-2018
Amphibians	1 smooth newt Lissotriton vulgaris record from Higham.	2018
Stag beetle Lucanus cervus	7 records from Higham	2016-2019

MAGIC shows no previously granted European Protected Species mitigation licences granted within 2km of the application site.

4.3. Field survey results

4.3.1. Habitats

The property covers about 5.4ha. There are well-planted and managed garden areas (lawns, shrubbery and flowerbeds) to the front and back of the house, and mature broad-leaved woodland a short distance from both ends.

4.3.2. Species

Mammals

No signs or evidence of badger were observed within 30m of the proposal areas.

The Pound is a Grade II listed building with a 16-17th century core, 19th century wing and 20th century alterations. The Pound is a large, two-storey brick house with a plain tile roof (see Photos 1-3), and there was judged to be considerable bat roost potential.

Bat droppings (c.500 total) consistent with intermittent use by a very small number of brown long-eared bats (definitely not a maternity roost) were observed in the roof voids of the house (Photos 4-7). These droppings were not judged as fresh, but it is thought that a portion of them could have been deposited in 2019.

The outbuilding is in very poor condition, and has been made weatherproof by a wrapping of tarps (Photos 8-9). The structure lacks decent roosting niches, and the inspection found no evidence of any bat activity inside it.

The 14/07/2020 dusk emergence survey of the house was carried out from 20:55 to 22:10 (sunset 21:10) under overcast skies (100-80% cloud cover) and temperatures of 18-16°C. At 21:09, a single soprano pipistrelle emerged from under the roof tiles at the north-west end of the house. At 21:15, three pipistrelles (one confirmed as a soprano pipistrelle, the other two suspected as soprano pipistrelles) emerged from different locations in the middle portion of the western roof aspect. At 21:20, a single soprano pipistrelle emerged from the right side of a dormer on eastern roof aspect. At 21:22, one common pipistrelle and one soprano pipistrelle emerged from different locations in the middle portion of the western roof aspect. Finally, starting at 21:33, a pipistrelle was filmed by the thermal camera swarming back and forth to a roost on the western roof aspect that a pipistrelle echolocating at 50kHz (suspected soprano pipistrelle) exited from at 21:15. The pipistrelle is believed to have re-entered the roost, and then emerged from it again at 21:43. Regular common pipistrelle and soprano pipistrelle echolocations from bat activity all around the house at the same time, again prevented confident audio determination of which of the two species it was. In total, six pipistrelles emerged from roosts in the roof (one common pipistrelles, three soprano pipistrelles and two indeterminate pipistrelles). See Figure 6 for an illustration of the 14/07/20 bat activity survey results.

The 28/07/2020 dusk emergence survey was carried out from 20:35 to 22:22 (sunset 20:52) under 60-70% cloud cover, light wind (Beaufort Wind Force Scale 0-1) and temperatures of 17-16°C. At 21:01, the first emerging bat was a single common pipistrelle coming from under the roof tiles at the north-west end of the house. This was followed by three soprano pipistrelle roost emergences from different locations in the middle portion of the western roof aspect, at 21:04, 21:06 and again at 21:06. Another pipistrelle (whether common or soprano is uncertain) emerged from the edge of the roof at the north-west gable at 21:07, and at the same time another common pipistrelle emerged from the western aspect of the roost at the far south-east end. Singular common pipistrelles emerged from under tiles of the western roof aspect at 21:10 and 21:13. In total, seven pipistrelles emerged from roosts in the roof (three common pipistrelles, three soprano pipistrelles and one indeterminate pipistrelle). See Figure 7 for an illustration of the 28/07/20 bat activity survey results.

Other bats (not roosting at the target building) recorded during the surveys included noctules, serotines and barbastelle.

There is a good possibility of hedgehogs transiting through the site at night.

Birds

The surrounding garden trees and shrubbery have nesting bird potential. The dense climbers on the south-west elevation of the house, and the less-dense climbers on the south-east and north-east elevations, also have nesting bird potential.

The outbuilding is of negligible suitability for barn owl, having restricted access, regular disturbance and no suitably wide perch for a nest.

Reptiles

There are few local reptile records, but this may only reflect a rarity of reporting to SBIS and not a widespread local absence. It is considered conceivable that small numbers of resident slow worms and grass snakes (more likely transient) could be present in the gardens.

Great crested newt

No local great crested newt records were returned by the data search.

Two ponds are present; Pond 1 is approximately 130m south-west of the house, and Pond 2 is approximately 175m south-west. The great crested newt eDNA analyses of samples from both ponds were returned as negative by Sure Screen Scientifics (see Appendix 3).

However, there is still a potential that common toad Bufo bufo (a Species of Principal Importance) could use the ponds for breeding and be present in the gardens around the house.

4.4. Limitations

No significant limitations.

4.5. Further survey recommendations

None to predict the ecological impacts, but updating of the bat survey data could be required if mitigation licensing is applied for after the bat surveys exceed their accepted age[3].

[3]Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust London. Section 2.6.3 Age of survey data (pg 20).

Figure 5: The Pound location relative to designated nature conservation sites

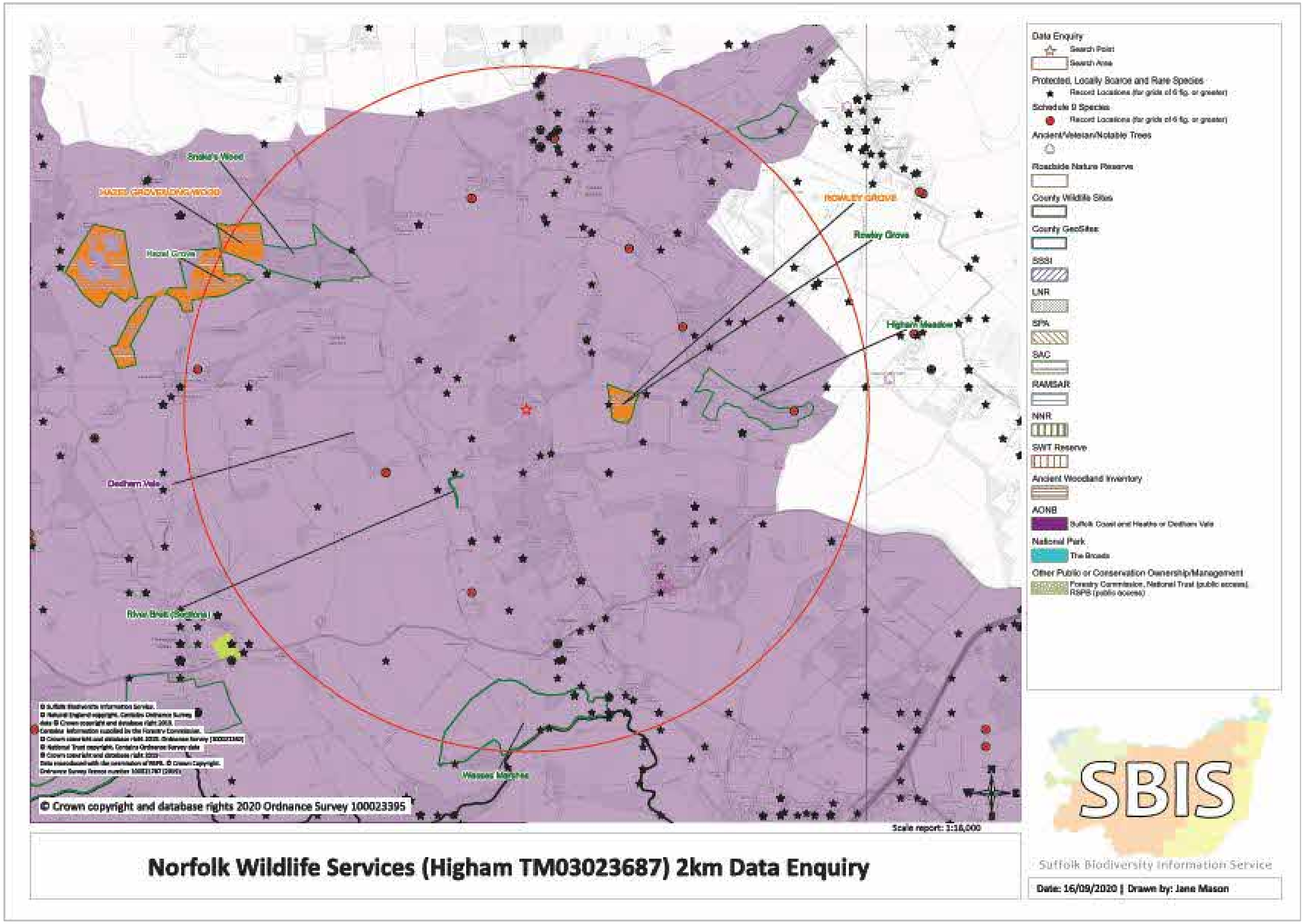


Figure 6: Bat activity survey results (14/07/20)

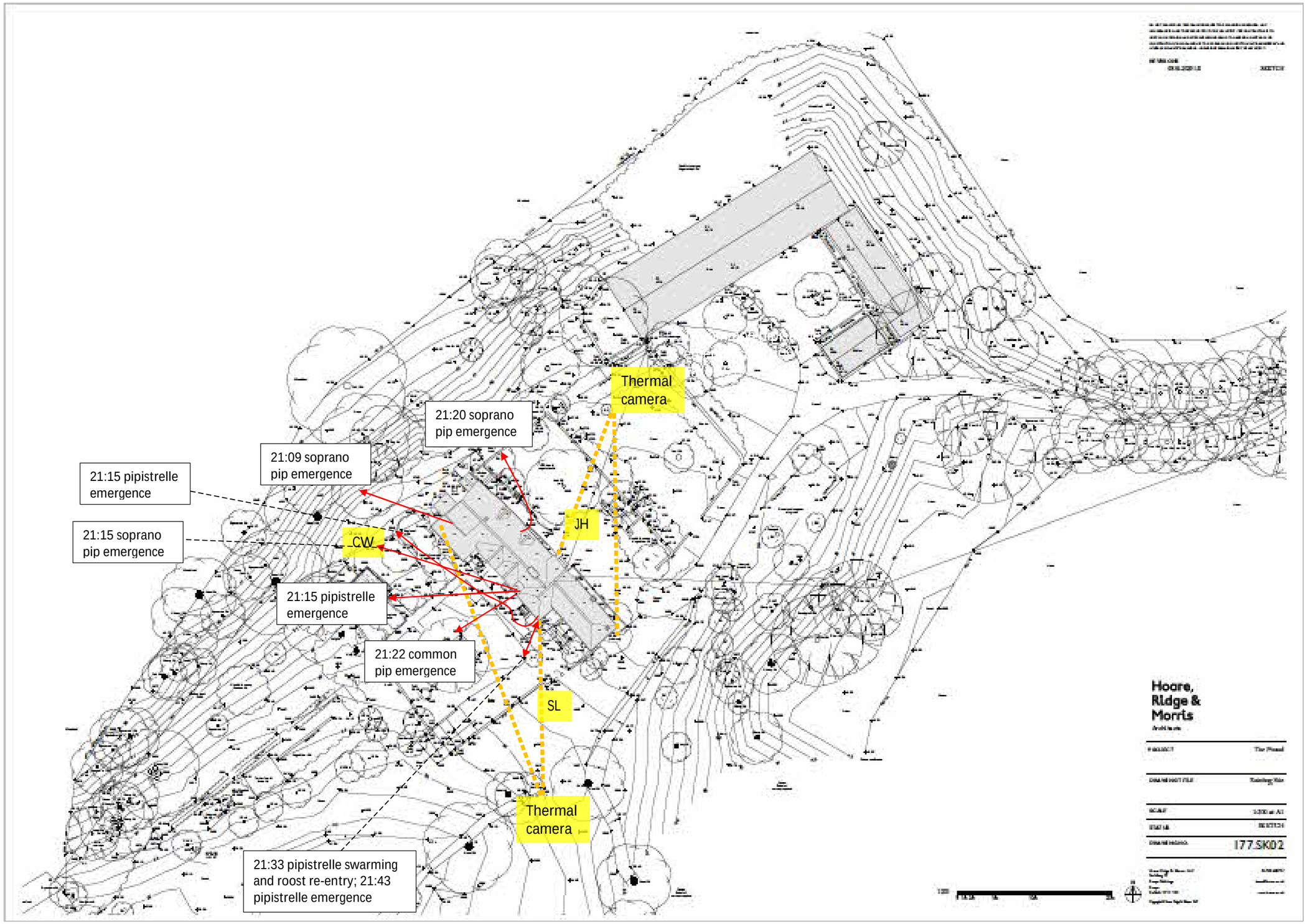
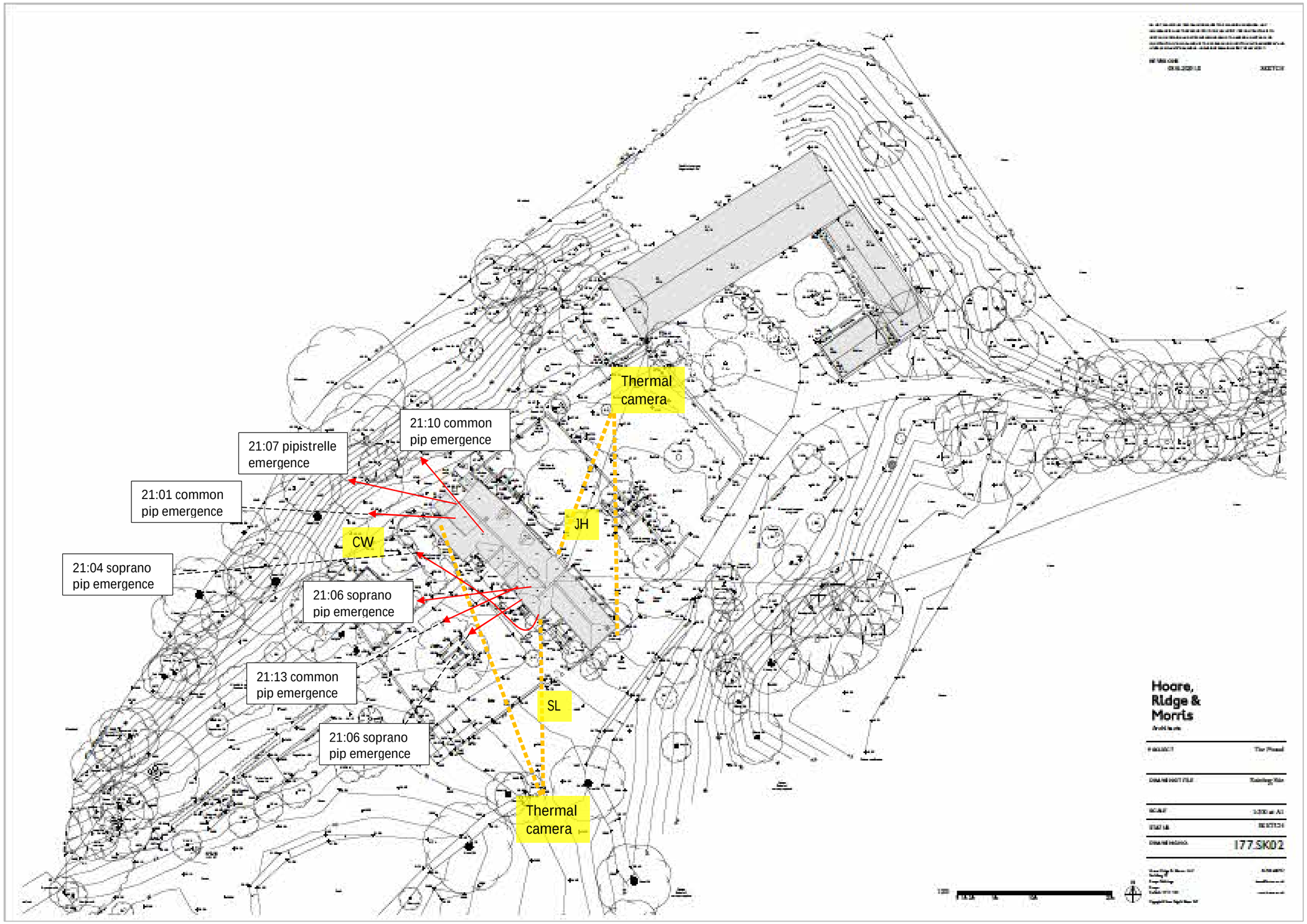


Figure 7: Bat activity survey results (28/07/20)



5. Ecological Impact Risk Assessment

5.1. Potential impacts

5.1.1. Designated nature conservation sites

The proposed development is very limited in scale and well-distanced from any designated nature conservation sites.

A neutral impact on designated nature conservation sites is predicted.

5.1.2. Habitats

Small areas of garden would be impacted by the proposed extensions. The potential impacts to protected/valued species (hedgehogs, nesting birds, slow worms, grass snakes and common toads) from the tree/shrub clearance and garden disturbance would require mitigation measures, but the impacts to valued natural habitats would be negligible.

A neutral impact on valued habitats is predicted.

5.1.3. Species

Mammals

The surrounding woodland habitats are extensive and suitable for foraging badger, but there was no evidence of any sett within a relevant distance (i.e. with a 30m potential disturbance range).

A neutral impact on badgers is predicted.

The proposed extensions to the north-west and south-east ends of the house will require an amount of roof tile stripping to join the extensions to the original structure. This stripping, particularly on the far north-west aspect, has the potential to disturb roosting bats and temporarily damage bat roosts. However, the majority of bat roost sites in the middle of the western aspect of the roof should be unaffected.

The predicted impacts for the local common pipistrelle and soprano pipistrelle populations are rated as minor negative, but mitigation measures (including mitigation licensing) are obliged.

The extensions joining on the west and east ends of the house are not thought to be likely to exclude the intermittent and minor brown long-eared bat roosting use of the house roof void. This is because the roost location in the central void space is quite unlikely (if not actually impossible) to be accessed starting from the far ends of the house.

Without precautionary measures, there is a possibility of minor negative impacts to a local hedgehog population during the construction phase of the development.

Birds

Works to the house could conceivably result in nest disturbance/destruction affecting a very small number of a common species, should works occur within the breeding season (from the beginning of March to the end August).

The house extension works could potentially result in a short-term minor negative displacement impact to nesting birds at a local scale. There are abundant other favourable habitats within the locality for birds to nest. Basic mitigation precautions are advised.

Reptiles

Without precautionary measures, there is a possibility of minor negative impacts to local slow worm and grass snake populations (affecting very small numbers) during the construction phase of the development.

Amphibians

With no breeding ponds within 250m, there is considered to be a negligible likelihood that great crested newts are present within the site or would travel across it. A neutral impact on great crested newts is predicted.

Without precautionary measures, there is a possibility of minor negative impacts to any local common toad population (affecting very small numbers) during the construction phase of the development.

5.2. Cumulative effects

Because of the very small scale of the proposed development, and the proposal site's isolation from nearby developments, cumulative impacts are not a credible concern.

5.3. Mitigation measures

5.3.1. Species

Bats

A maximum of 3-4 common pipistrelles and 3-5 soprano pipistrelles have been confirmed roosting under the house roof tiles. An estimated 1-2 brown long-eared bats make occasional roosting use of the house roof void. The proposed re-roofing necessary to join the new extensions has a reasonable potential to impact some of the pipistrelle roosts noted under the house roof tiles, and so a European Protected Species (EPS) mitigation licence for bats will be required for those works to proceed lawfully.

Exact details of the mitigation requirements will be determined during the licence application process, but roost compensation would primarily be given by reroofing with like-for-like materials, essentially restoring the bat roosting opportunities as they were prior to adding the extensions. The reroofing will need to use type 1F bitumen felt with hessian matrix as the underlay. All other underlays referred to as 'Non- Bitumen Coated Roofing Membranes' (NBCRMs, formerly referred to as Breathable Roofing Membranes) are currently not licensed by Natural England. NBCRMs have been established as unsuitable for bats (causing entrapment from long fibres) and so are not considered acceptable for use on developments under mitigation licence. NBCRMs are not obligatory under the Building Regulations 2010, and appropriate ventilation can be achieved with type 1F felt (see British Standard BS 5250:2011). Alternatively, sarking (regular timber or certain other products) can be acceptable, as assessed on a case-by-case basis. The new extensions will also need to avoid breathable membrane liners, and will also provide new roosting potential in time.

The numbers of bats do not confirm that The Pound is a maternity roost site, but nevertheless avoiding roof tile stripping during either the main pipistrelle maternity season (1st May through 31st August) or the main hibernation season (1st December to 1st April) is advised as a sensible precaution given the numbers of bats observed by the surveys. If the amount of roost stripping required for the extensions is limited in extent, then the seasonal safeguarding may not be so important. Roof tiles would need to be stripped under the supervision of a licensed bat worker.

As roost displacement compensation and for potential translocation purposes during the works, two new bat boxes (e.g. Large Multi Chamber WoodStone Bat Box or equivalent) would be erected on a tree close to the ponds, to remain there permanently.

In regards to potential hedgehog impacts, care must be taken with open excavations and fresh concrete when preparing the foundation and any utility connections. Any trenches dug for construction should be covered overnight. If overnight coverage is not practicable, then either a shallow-graded sloping side to the excavation must be provided, or an animal egress board put in place to provide animals a means of getting out. All excavations must be inspected for animals before filling.

Wet/drying concrete should be effectively barricaded-off to avoid small animals entering it and getting caught.

Birds

The proposed works, including any vegetation clearance, should either be started outside of the main breeding bird season (March-August), or else a competent watching brief should establish an absence of active nests. Any active nests would need to be given an appropriate buffer zone until the nesting had reached a natural conclusion.

Reptiles and Amphibians

Care must be taken with open excavations and fresh concrete when preparing the foundation and any utility connections. Any trenches dug for construction should be covered overnight. If overnight coverage is not practicable, then either a shallow-graded sloping side to the excavation must be provided, or an animal egress board put in place to provide animals a means of getting out. All excavations must be inspected for animals before filling.

Wet/drying concrete should be effectively barricaded-off to avoid small animals entering it and getting caught.

Any reptiles or amphibians encountered during the works must be moved out of the works zone to a safe location within the property.

5.4. Mitigation licensing for European Protected Species

European Protected Species (EPS) mitigation licensing will be required for the tile stripping of the house, as needed to allow the extension joinings. Bats are an EPS as they were listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017, which post Brexit has been replaced by The Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019 which are effectively the same. Mitigation licences permitting derogation from the protection afforded to EPS (relating to development) can only be granted in cases where the activity meets the following three tests.

1. Overriding public interest. The overriding public interest of the proposed development project is derived from its necessary refurbishment of a Grade II listed structure to a modern amenity standard befitting the location and value of the property. The works would also provide some economic benefits for local builders and suppliers. The cost would be negative ecological impacts which are rated as being of a minor magnitude and amenable to effective mitigation and compensation under an EPS mitigation licence.

2. There is no satisfactory alternative. The alternatives to the proposed works are doing nothing and leave the building as it is, or undertaking the works but avoiding the bat roosts entirely.

   The 'do nothing' option would be a disappointment for the property owners, leaving the house in a state that is not up to modern amenity standards. There would be no immediate related impact on bats.

   Undertaking the works but avoiding the bat roosts entirely is not possible. To a large extent the proposal is avoiding the confirmed bat roost locations (e.g the brown long-eared roost), but there is a potential for the pipistrelle roosting to shift anywhere under the tiles, including where the roof

must be stripped to accommodate the extension joining. Extension to the house cannot be added without some disturbance of the tile roof.

3. The resulting permitted actions will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

No roosts of significant numbers or species rarity were found to be present. Roost compensation (effectively restoration) will be provisioned for the disturbed/destroyed roost feature, and there are alternative roosting opportunities in the locality (barns just north-east of the house). There is no credible expectation that the favourable conservation status of the local common pipistrelle and soprano pipistrelle populations would be detrimentally impacted by the proposal.

Developments which would affect 'small' bat populations of certain relatively more common species may be eligible for a low impact bat mitigation licence (WML-CL21). The low impact licence is virtually the same in mitigation execution as a standard licence. There are conditions/ criteria which restrict the use of WML-CL21.

5.5. Residual impact assessment

Table 4: Residual impact risk assessment

Receptor	Potential impact	Mitigation	Residual impact
Bats	Minor negative local impact to common pipistrelle and soprano pipistrelle local populations from roost disturbance and temporary displacement. Minor negative site impact on any local bat populations from additional lighting of the operational phase.	House extension works done under the mitigation methods of an EPS mitigation licence. House reroofing and extensions done using F1 felt or sarking as liner. If any new lighting intended, it will employ a wildlife-sensitive lighting scheme. Erect 2 bat boxes on trees.	Short-term minor negative, but long-term neutral
Hedgehogs	Minor negative disturbance impacts during construction phase.	Excavations covered overnight or fitted with a means of animal escape; wet/drying concrete barricaded.	Neutral
Birds	Minor negative local impact to breeding birds as a result of nest disturbance/destruction.	Timing of site clearance works outside the nesting season, or for work within nesting season areas to be checked first and exclusion zones set up around active nests to reduce disturbance risk.	Short-term minor negative, but long-term neutral
Slow worms and grass snakes	Minor negative local impact during construction phase.	Excavations covered overnight or fitted with a means of animal escape; wet/drying concrete barricaded; reptiles encountered during works	Neutral

		moved to a safe location within the property.	
Common toads	Minor negative local impact during construction phase.	Excavations covered overnight or fitted with a means of animal escape; wet/drying concrete barricaded; amphibians encountered during works moved to a safe location within the property.	Neutral

6. Enhancements

The placement of two bird nest boxes (e.g. 1B Schwegler Bird Box – 32mm hole or Vivara Pro Seville WoodStone Nest Box – 28-32mm hole) on a selected tree(s) would contribute towards a modest net gain for biodiversity from the proposed development.

7. Conclusions

An ecological impact assessment of proposed development works at The Pound property in Higham makes the following predictions:

No impacts on designated nature conservation sites.

Negligible impacts on valued habitats.

A minor negative impact on roosting common pipistrelles and soprano pipistrelles, requiring EPS mitigation licensing. Works under licence are predicted to have a minor negative but temporary impact.

A potential for a minor negative impact on a small number of nesting birds. Site clearance should avoid the main nesting period of March through August, or else completing a watching brief and, if necessary, use exclusion zones set up around active nests to mitigate the disturbance risk.

A potential for a minor negative impact on very small numbers of slow worms, grass snakes and common toads, which is to be addressed by mitigation measures.

Modest biodiversity enhancement can be supplied by a small number of bird nest boxes fitted within the property.

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Appendix 1: Relevant Legislation and Policy Guidance

Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 (as amended), Section 9, offers protection from intentional or reckless actions upon species listed on Schedule 5 or Schedule 8. Schedule 5 listed species have different degrees of protection depending on whether they are protected by Section 9.1, 9.2, 9.4 or 9.5.

> Section 9.1 - animals protected from killing or injury; includes water vole, grass snake, common lizard, slow-worm and adder.
>
> Section 9.4a - animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection; includes water vole.
>
> Section 9.4b - animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection; includes all bat species, hazel dormouse, otter and water vole.
>
> Section 9.4c - Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed; includes all bat species, hazel dormouse, otter, water vole, great crested newt and natterjack toad.

All birds are protected from destruction of their nests (with minor exceptions) under the Wildlife and Countryside Act 1981. A higher level of disturbance protection is extended to Schedule 1 species, such as barn owls, and their active nest sites.

Plants listed under Schedule 9 of the act are invasive and generally need controlling on a development site. It is an offence to "plant or otherwise cause to grow in the wild", the invasive species listed on this schedule. Disposal of the plants or soil contaminated by them may need to be to a controlled waste site.

Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019

The statutory protection for European Protected Species and Natura 2000 sites (now referred to as 'National Site Network' sites) remains unchanged for now, and the status quo is expected to be maintained for some time. The Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019 broadly retains the habitat and species protections that are required under the European Habitats Directive (EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) and the Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds).

The UK legislation affords very strict protection to Annex IV listed species (e.g. all species of bats, hazel dormouse, otter, great crested newt and natterjack toad). Developments that are likely to have a significant impact upon Annex IV listed species (e.g. bats and great crested newts) require a European Protected Species mitigation license from Natural England in order for the development to legally proceed.

Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 (NERC) came into force on 1 October 2006. Under Section 40 of the Act, all public bodies (including planning authorities) now have a legal duty to consider biodiversity in their work (i.e. a material consideration for planning applications). As such, in order to increase the likely success of any planning application, consideration should be given to enhancing the biodiversity value of the site following redevelopment. Section 41 lists priority (Principle Importance) habitats and species which are to be particularly considered with respect to potential impacts, and may include species which are not otherwise protected by UK legislation.

Appendix 2: Photographs

Photograph 1: South-east (left) and north-east (right) elevations of the house

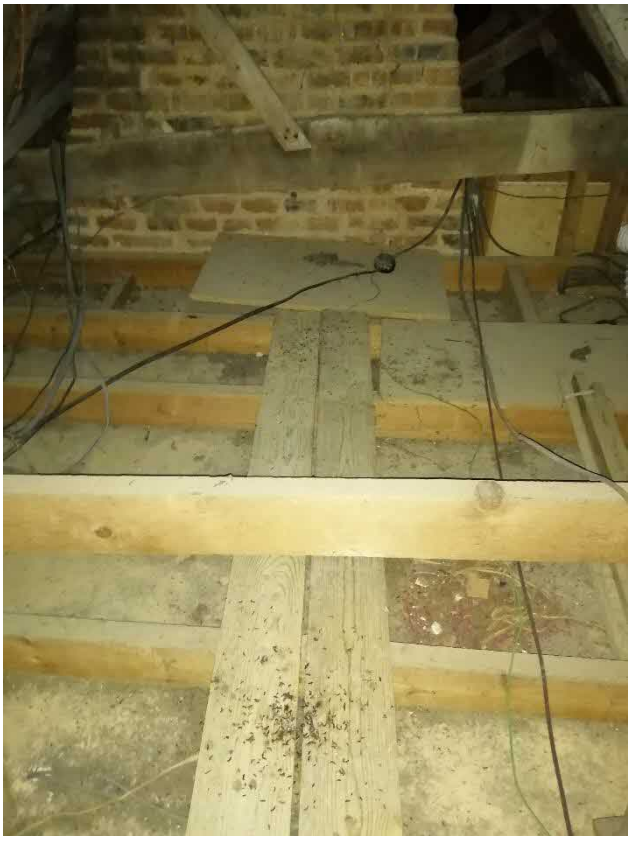
Photograph 2: North-west elevation of the house

Photograph 3: South-west elevation of the house

Photograph 4: House roof void (east-central)

Photograph 5: Modest number of brown long-eared bat droppings in the east-central roof void

Photograph 6: House roof void (west-central)



Photograph 7: Modest number of brown long-eared bat droppings in the west-central roof void

Photograph 8: Dilapidated outbuilding west of the house

Photograph 9: Interior of the dilapidated outbuilding west of the house

Photograph 10: Garden space between the house and the outbuilding

Appendix 3: GCN eDNA Test Results

SureScreen Scientifics

Folio No: E8304
Report No: 1
Purchase Order: NWS-2379
Client: NORFOLK WILDLIFE SERVICES
Contact: Seth Lambiase

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 02/07/2020
Date Reported: 14/07/2020
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
3936	Pond 1, The Pound	TM 0301 3685	Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Sarah Evans **Approved by:** Chris Troth

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Company Registration No. 08550940

SureScreen Scientifics

Folio No: E8267
Report No: 1
Purchase Order: NWS-2379
Client: NORFOLK WILDLIFE SERVICES
Contact: Seth Lambiase

TECHNICAL REPORT

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RESULTS

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Date Reported: 14/07/2020
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
3941	Pond 2, The Pound	TM 0299 3683	Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Sarah Evans **Approved by:** Chris Troth

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