

**Proposed Development  
at Oakwood Community School on Heath Road  
in Bagworth, Leicestershire, CV13 0JD  
(Phase 2 Expansion Project)**

**Protected Species Surveys**

**A report to:**

**SRA Architecture Ltd.**

**By:**

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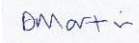
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**November 2024**

| CONTRACT DETAILS |                                                                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contract Title   | Oakwood Community School, Bagworth: Ecology                                                                                                                 |
| Contract No.     | 722/23                                                                                                                                                      |
| Client           | SRA Architecture Ltd.                                                                                                                                       |
| Survey Dates     | June, July, August and September 2024                                                                                                                       |
| Report Date      | 5 <sup>th</sup> November 2024                                                                                                                               |
| Report Title     | Proposed Development at Oakwood Community School on Heath Road in Bagworth, Leicestershire, CV13 0JD (Phase 2 Expansion Project): Protected Species Surveys |

| REPORT REVIEW/QUALITY ASSURANCE |                                |                                                                                     |                        |            |
|---------------------------------|--------------------------------|-------------------------------------------------------------------------------------|------------------------|------------|
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## EXECUTIVE SUMMARY

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### Proposed Works

The proposed development works involve the construction of new school buildings, car parking areas and sports pitch and the reinstatement of a former access road, at an existing school site.

### Method of Study

The brief was to carry out further protected species surveys (as recommended in the PEA report), identify potential protected species issues associated with the proposed development and make recommendations for mitigation, compensation, enhancement and further surveys, as appropriate. A great crested newt Habitat Suitability Index (HSI) assessment, a badger survey, a bat activity/transect survey (including remote monitoring) and reptile surveys of the site were carried out.

### Baseline Ecological Conditions

The great crested newt HSI assessment indicated 'Excellent', 'Average' and 'Poor' suitability for potential great crested newt breeding habitat in the ditch/ponds. Badger evidence comprised of fresh and old badger dung and paths through vegetation. No badger setts were recorded on the site or within 30m of the site. Bat activity and remote monitoring revealed low numbers of common pipistrelle bat, soprano pipistrelle bat, noctule bat, *myotis* bat species and brown long-eared bat using the site boundaries, particularly adjacent to the adjoining woodland for foraging/commuting. No reptiles were recorded on the site.

### Evaluation and Potential Ecological Issues

The main potential ecological constraints associated with the proposed development works are (i) damage/disturbance to adjoining areas of the historical pLWS on the site, (ii) loss/damage/disturbance to habitats, (iii) disturbance to roosting, commuting and foraging bats on the site and/or in the vicinity (due to limited habitat loss and also more significantly new lighting), (iv) harm/injury/disturbance to individual great crested newts and loss of breeding and terrestrial habitat, (v) harm to foraging/commuting badger (from any trenches/pipes etc.), (vi) harm to nesting birds and (vii) loss of bird nesting habitat. There are ecological opportunities with habitat creation, native planting and faunal species enhancements.

### Mitigation Recommendations

- Habitat mitigation recommendations are provided in the PEA report.
- The proposed habitat mitigation, compensation and enhancement measures will provide continued badger foraging and sett building habitat, bat foraging and commuting habitat, amphibian cover and sheltering habitat and nesting bird habitat.
- **District Level Licencing Scheme for great crested newts to be applied for.**
- Prior to site clearance strim grassland and check for common amphibians and hedgehogs. Site clearance works to start the following day.
- Any common amphibians and hedgehogs found will be handled by a site worker and placed by hand (with thick gloves) beneath hedgerows in the vicinity.
- If a great crested newt is found, works will stop and Udall-Martin Associates telephoned to provide advice.
- Further pre-works badger survey.
- Trenches will be left with a sloping end or ramp to allow any badgers or other animal that may fall in to escape. Development works excavation holes will be covered over at night. Pipes over 200mm in diameter will be capped off at night to prevent animals entering.
- Any new exterior lighting will be sensitive to the needs of roosting, foraging and commuting bats, badger and other nocturnal wildlife.
- Ideally any hedgerow, tree and shrub/dense scrub removal would be carried out outside the bird breeding season, which runs from March to September inclusive. However, if works are carried out during the bird breeding season, then firstly a nesting bird check will be carried out by an ecologist.

### **Compensation Recommendations**

- Habitat compensation recommendations are provided in the PEA report.
- The proposed habitat mitigation, compensation and enhancement measures will provide continued badger foraging and sett building habitat, bat foraging and commuting habitat, amphibian cover and sheltering habitat and nesting bird habitat.
- **District Level Licencing Scheme for great crested newts to be applied for.**
- Install general bird nesting boxes on the new buildings on the site.

### **Enhancement Recommendations**

- Habitat enhancement recommendations are provided in the PEA report.
- The proposed habitat mitigation, compensation and enhancement measures will provide continued badger foraging and sett building habitat, bat foraging and commuting habitat, amphibian cover and sheltering habitat and nesting bird habitat.
- Install a bat roosting box on each of the new buildings on the site.
- Install bird nesting boxes for house sparrow and house martin on each of the new buildings on the site.
- Install two hedgehog boxes in the bases of the retained hedgerows on the site.

### **Further Survey Recommendations**

- **District Level Licencing scheme for great crested newts to be applied for.**
- Badger survey two to three weeks prior to site clearance/development works commencing.
- Nesting bird check if hedgerows, trees or shrubs/dense scrub are removed during the bird breeding season.

# 1 INTRODUCTION

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## 1.1 General

- 1.1.1 This report has been prepared by Udall-Martin Associates Ltd. for SRA Architecture Ltd. It provides the details of protected species surveys of an area of land, where a development is proposed.
- 1.1.2 The site is situated at Oakwood Community School on Heath Road in Bagworth, Leicestershire, CV13 0JD (National Grid Reference SK 444066).
- 1.1.3 The proposed development works is the Phase 2 expansion project involving the following (see Figures 1 and 2, Appendix 1):
- Construction of new school buildings, car parking areas and sports pitch.
  - Construction of a small forest school structure.
  - New pedestrian footpath linking the new forest school structure to the access road/car park on the site.
  - Reinstatement of a former access road through the site from the eastern boundary.
  - Some limited scrub and young trees and a short section of hedgerow will be lost.
  - Grassland and a small pond will be lost.
- 1.1.4 The brief was to carry out the further protected species surveys (as recommended in the initial Preliminary Ecological Appraisal report; Udall-Martin Associates Ltd. November 2023), identify potential protected species issues associated with the proposed development and make recommendations for mitigation, compensation, enhancement and further surveys, as appropriate.
- 1.1.5 To meet the requirements of the brief, a great crested newt (*Triturus cristatus*) Habitat Suitability Index (HSI) assessment, a badger (*Meles meles*) survey, a bat activity/transect survey (including remote monitoring) and reptile surveys of the site were carried out by a suitability qualified and experienced ecologist.
- 1.1.6 Our ecology reports follow best practice guidelines as stated by Chartered Institute of Ecology and Environmental Management (CIEEM 2018 – updated April 2022) and The British Standards Institute (BSI 2013).
- 1.1.7 Every effort has been made to provide an ecological appraisal for the site (for great crested newt, badger, bats and reptiles); however, the site visits have provided an assessment of the site at limited points in time and that the natural environment is unpredictable and changeable. Therefore, a limited site visit investigation cannot ensure complete assessment and prediction of the natural environment.

## 1.2 Badger Legislation and Licencing

### 1.2.1 General

- a) Badger is a widespread and generally common species. It is legally protected under The Protection of Badgers Act 1992, which is based primarily on the need to protect badgers from baiting/ deliberate harm or injury. Under this legislation it is illegal to:
  - Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
  - Possess any dead badger or any part of, or anything derived from, a dead badger and
  - Intentionally or recklessly interfere with a sett by disturbing badgers whilst they are occupying a sett, damaging or destroying a sett, causing a dog to enter a sett, or obstructing access to it.
- b) A badger sett is defined in the legislation as *“any structure or place, which displays signs indicating current use by a badger”*. Natural England provide an advice note detailing ‘Guidance on ‘Current Use’ in the definition of a Badger Sett’ (Natural England June 2009a).
- c) Before works could go ahead which would cause damage to setts or disturbance to badgers, a licence would be needed from Natural England. The licence would allow otherwise illegal activities to be permitted.
- d) Licence applications are generally determined within 15 to 30 working days. Natural England will normally only issue licences for work to be carried out between the 1st July and 30th November, to avoid the badger breeding season, although exceptions may be possible if a sound justification can be made.
- e) It is not illegal and therefore a licence is not required, to carry out activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.

### 1.2.2 Disturbance of Badgers

- a) The issue of what constitutes an act capable of disturbing a badger occupying a sett is difficult to determine and has been open to debate. Natural England has provided an advice note detailing the ‘Interpretation of ‘Disturbance’ in relation to badgers occupying a sett’ (Natural England June 2009b).
- b) Badgers are found in a variety of places including urban and rural locations, creating setts under railways and road and within urban gardens, therefore, they appear to be

able to withstand significant amounts of noise/activity near their setts without apparently being disturbed (Natural England June 2009b).

- c) Natural England believes that badgers are relatively tolerant of moderate levels of noise and activity around their setts, and that low or moderate levels of apparent disturbance at or near to badger setts do not necessarily disturb the badgers occupying those setts. As such, Natural England do not believe that such levels of apparent disturbance around setts require a licence under section 10 of the Act.
- d) Examples of activities at or near setts that Natural England do not consider likely to cause disturbance to badgers, and would not normally require a licence, include:
  - (i) Development, or other activities occurring close to badger setts (use of hand tools and/or machinery), where there is no reason to believe that the 'disturbance' will be greater than that which badgers commonly tolerate, and therefore any badger(s) occupying the sett are unlikely to be disturbed;
  - ii) Vegetation removal (including felling small trees or shrubs) over or adjacent to setts (using hand tools and/or machinery);
  - (iii) Clearing out ditches/watercourses using machinery and/or hand tools where badger setts are present.
- e) Persons involved in activities near setts will need to exercise judgement as to whether their action may or may not cause disturbance to badgers.

### **1.3 Bat and Great Crested Newt Legislation**

- 1.3.1 All species of British bat and their roosts and great crested newts and their terrestrial and breeding habitat are protected under British law by the Wildlife and Countryside Act 1981 (as amended), and bats and great crested newts are classified as European Protected Species under The Conservation of Habitats and Species Regulations 2017 (as amended). This makes it an offence to kill, injure or disturb a bat or great crested newt and to destroy any place used for rest or shelter by a bat or great crested newt.
- 1.3.2 Under this legislation development work that could affect a bat or great crested newt or bat roost or great crested newt breeding or terrestrial habitat can only be permitted under a licence from Natural England.
- 1.3.3 Licences in respect of European Protected Species affected by development can be granted under Section 53(3) (e) of The Conservation of Habitats and Species Regulations 2017 (as amended), for the purpose of preserving public health or public safety or other imperative reasons of overriding public interest including those of

social or economic nature and beneficial consequences of primary importance for the environment.

1.3.4 Under this legislation licences can only be issued if Natural England are satisfied that:

- There is no satisfactory alternative and
- The action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

1.3.5 Natural England aim to process licence applications within 35 working days of receipt.

## 1.4 Reptile Legislation

1.4.1 There are six native species of reptile in the UK: adder (*Vipera berus*), common lizard (*Zootoca vivipara*), grass snake (*Natrix natrix*), sand lizard (*Lacerta agilis*) slow-worm (*Anguis fragilis*) and smooth snake (*Coronella austriaca*), which are afforded varying degrees of protection under UK and European legislation.

1.4.2 Adder, common lizard, grass snake and slow-worm are protected under the Wildlife and Countryside Act 1981 (as amended) and the Countryside & Rights of Way Act 2000 against deliberate or reckless killing and injuring and sale. These species are found in the East Midlands and could potentially use the proposed development site. Whilst protection is not extended to their habitat, damage to it may result in an offence if suitable mitigation measures are not implemented.

1.4.3 The implications for the proposed development works are that any site clearance/construction activities should not result in the death or injury of individual reptiles should they occur on site. Hence, measures to provide for their individual protection will need to be put in place if they are found to be present.

1.4.4 Licences are not required for works affecting adder, common lizard, grass snake and slow-worm or for handling of these reptiles whilst undertaking survey or mitigation activities.

1.4.5 Smooth snake and sand lizard and their habitat are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and The Conservation of Habitats and Species Regulations 2017. However, the proposed development site does not provide appropriate habitat for these species.

## 2 SITE DESCRIPTION

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- 2.1 Photographs of the site are provided in the PEA report (Udall-Martin Associates Ltd. November 2023). The Extended Phase-1 habitat survey map is shown in Figure 3, Appendix 1. The site comprises some of the wider grounds at Oakwood Community School and includes grassland, scrub, a pond, a ditch, short section of hedgerow and areas of bare ground (with emerging vegetation) and hardstanding. There is a former access road leading from the eastern boundary of the site to a car park to the west; however, this road was in a very poor state of repair, with grassland vegetation growing over the hardstanding.
- 2.2 The limited area of land adjoining the western end of the woodland is proposed for the new small forest school structure and pedestrian footpath.
- 2.3 On the northern side of the former access road, the ground was uneven and had mounds of vegetated earth. There was also dumped rubbish/tipping on the site.
- 2.4 The boundaries of the site are open with the adjoining areas of the school grounds, apart from a former sports pitch area which is fenced off.
- 2.5 The remaining areas of the school grounds (outside the site) comprise school buildings, hardstanding, grassland, woodland and hedgerows.
- 2.6 The site is situated in a rural location, to the south west of the village of Bagworth. There are fields to the north, north east and north west, Bagworth Road (B585) adjoining on the south western boundary (with scattered houses/barns and fields beyond) and Heath Road adjoining on the south eastern boundary (with fields beyond).
- 2.7 The ditch and ponds assessed for great crested newts are as follows

The ditch is located on the south western side of the site and is 1m x 40m.

Pond 1 is located near the former access road on the site and is 6m x 10m.

Pond 2 is located in the wider school grounds (outside the site), approximately 210m to the north of the site (with a grassland field between the pond and the site) and is 25m x 12m.

Pond 3 is an attenuation pond near the school entrance located in the wider school grounds (outside the site), approximately 25m away to the south west (with some limited areas of hardstanding between the pond and the site) and is 6m x 8m.

Pond 4 is located outside the site and school grounds, beyond Heath Road, in a corner of an agricultural field, approximately 30m to the south west of the site and is 6m x 15m.

### 3 SURVEY METHODOLOGY

#### 3.1 Site Surveys

##### 3.3.1 Survey Area

- a) The survey areas for the badger survey, bat activity/transect survey (and remote monitoring) and reptile surveys are shown in Figures 3 and 4, Appendix 1.
- b) The great crested newt Habitat Suitability Index (HSI) assessment comprised a ditch and a pond on the site and three further ponds within 500m of the site (see Figure 1, Appendix 1). According to the Magic Map website there is a further area of standing water to the east of the site (see Figure 1, Appendix 1); however, this pond was according to the land owner an old slurry pit and was therefore not assessed.

##### 3.3.2 Survey Methodology

###### a) Great Crested Newt Habitat Suitability Index Assessment

- i) A Habitat Suitability Index (HSI) assessment was carried out at a ditch and four ponds (Oldham *et al.* 2000) (see Figure 1, Appendix 1). The HSI establishes the suitability of a waterbody to support great crested newts, based on a set of criteria such as pond location, size of pond, years when pond dries out, water quality, suitability of terrestrial habitat, connectivity to other ponds and presence of wild fowl and fish.
- ii) A system using HSI scores to define pond suitability for great crested newt is on a categorical scale as shown in Table 1 overleaf:

| 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        |

**Table 1. HSI Scores and Pond Suitability Scale**

###### b) Badger Survey

- i) A badger survey of the site and adjacent woodland was carried out following standard methodology (Hill *et al.* 2005). The following field signs were searched for: footprints,

dung pits, latrines, snuffle holes, runs through vegetation, hairs caught on fences and hedgerows and setts. Any setts found would be classified as well used, partly used or disused.

**c) Bat Activity Surveys and Remote Monitoring**

- i) One bat activity/transect survey was carried out during the bat active period (i.e. April to October) (as per BCT 2023).
- ii) The bat activity/transect survey involved walking a pre-determined transect route after dusk around the survey area and recording bat passes using bat detectors. The transect was walked at a slow pace starting approximately 15 minutes before sunset for a duration of approximately 1 hour, with five static listening points, at which the surveyors remained for five minutes.
- iii) The transect route and locations of static listening points are shown in Figure 4, Appendix 1. The listening points were chosen to incorporate potential foraging and commuting habitat, e.g. hedgerows and woodland edges. Equipment used was Pettersson ultrasound 240X bat detectors with an Edirol R-09 wav recorder and Anabat express bat detector/recorder.
- iv) Also, as per the Bat Survey Guidelines remote monitoring at the site was carried out (BCT 2023). Two Anabat express static remote bat monitoring detectors/units were left on the site for a period of five nights during the active season, i.e. in June. Both detectors were left at suitable locations on the site (see Figure 4, Appendix 1). The data files from the survey/remote monitoring were downloaded and analysed on Analook computer software.
- v) The bat activity/transect survey was carried out in July and the bat remote monitoring in June, during the optimal survey period for bat activity (BCT 2023).
- vi) The survey climatic conditions for the bat activity/transect survey are shown in Table 2 below. The weather conditions were conducive to bat activity with the survey validated by the presence of active bats.

| Bat Activity/<br>Transect Survey | Start<br>Time | Finish<br>Time | Temperature | Wind:<br>Beaufort | Weather            | Cloud<br>Cover |
|----------------------------------|---------------|----------------|-------------|-------------------|--------------------|----------------|
| Start of survey                  | 21:45         |                | 16°C        | 0                 | Dry, mild,         | 80%            |
| Finish of survey                 |               | 22:45          | 15°C        | 1                 | overcast and still | 80%            |

**Table 2. Climatic Conditions during the Bat Activity/Transect Survey in July**

**d) Reptile Surveys**

- i) The reptile surveys of the site followed standard methodology (English Nature 1994; Froglife 1995) which involved the deployment of 60 artificial refugia (i.e. 0.5m<sup>2</sup> to 1m<sup>2</sup> roofing felt tiles) in potentially suitable habitat on the site and checking those refuges on seven visits during suitable weather conditions during the active season for reptiles (Froglife 1999). This was used to determine the presence/absence of reptiles and also provide a rough population estimate (if found to be present).
- ii) Reptile surveys can be carried out April to early October, with April, May and September being the optimal months for reptile surveys. The artificial refugia were deployed on the site on the 10<sup>th</sup> June 2024 and left to become established prior to the first check on 7<sup>th</sup> July 2024, followed by six further checks, the last of which was carried out on 16<sup>th</sup> September 2024.
- iii) During each visit the surveyor walked along a transect through potentially suitable reptile basking areas and including each of the refugia. In addition to checking for reptiles basking on the upper surface of the refugia, each tile was lifted to inspect beneath it. Any existing refugia such as brash/logs on the site were also checked for the presence of basking reptiles during the survey visits.
- iv) Each survey visit was timed to take place during ideal weather conditions, described as periods of sunshine after rain or dull weather with a lack of wind (Inns 1995).
- v) Climatic conditions were recorded to include time of day, temperature and wind speed using the Beaufort scale<sup>1</sup>. Survey details and conditions are provided in Table 3 overleaf.

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<sup>1</sup> Beaufort scale = 0 smoke rises vertically, 1 slight smoke drift, 2 wind felt on face, 3 leaves and twigs in slight motion, 4 dust raised and small branches move, 5 small trees in leaf begin to sway, 6 large branches and trees sway.

| Survey Visit | Date       | Time:<br>Start & Finish | Temperature:<br>Start & Finish | Wind<br>Speed | Cloud | Weather                                         |
|--------------|------------|-------------------------|--------------------------------|---------------|-------|-------------------------------------------------|
| Survey 1     | 07/07/2024 | 17.20pm –<br>18:20pm    | 17°C<br>17°C                   | 0-2           | 45%   | Dry, sunny, part cloudy<br>and light breeze     |
| Survey 2     | 11/07/2024 | 15:20pm –<br>16:20pm    | 14°C<br>14°C                   | 0-2           | 100%  | Dry, overcast and light<br>breeze               |
| Survey 3     | 30/07/2024 | 10.30am –<br>11.30am    | 21°C<br>20°C                   | 0-2           | 40%   | Dry, warm, part cloudy<br>and light breeze      |
| Survey 4     | 04/08/2024 | 09:30am –<br>10:30am    | 19°C<br>19°C                   | 0-3           | 95%   | Dry, mild, overcast and<br>light breeze         |
| Survey 5     | 03/09/2024 | 16.30pm –<br>17.30pm    | 20°C<br>20°C                   | 0             | 40%   | Dry, part sunny, mild,<br>part cloudy and still |
| Survey 6     | 04/09/2024 | 16:10pm-<br>17:10pm     | 22°C<br>22°C                   | 0             | 10%   | Dry, sunny, warm,<br>limited cloud and still    |
| Survey 7     | 16/09/2024 | 10.00am –<br>11.00am    | 23°C<br>22°C                   | 1             | 0%    | Dry, sunny, warm,<br>clear and light breeze     |

**Table 3. Summary of Weather Conditions During the Reptile Surveys****3.3.3 Survey Dates and Personnel****a) Great Crested Newt Habitat Suitability Index Assessment**

- i) The great crested newt HSI assessment of a ditch and four ponds was carried out by Natural England licensed great crested newt ecologist Dwayne Martin on the 10<sup>th</sup> June 2024.

**b) Badger Survey**

- i) Ecologist Dwayne Martin carried out the badger survey on 16<sup>th</sup> September 2024.

**c) Bat Activity/Transect Survey**

- i) The bat activity/transect survey was carried out by Natural England licensed bat ecologist Dwayne Martin and assistant Stephen Martin on 7<sup>th</sup> July 2024.
- ii) The remote bat detectors were set out on the site on 10<sup>th</sup> June 2024.

**d) Reptile Surveys**

- i) The reptile felt tiles were deployed on the site on 10<sup>th</sup> June 2024. Experienced ecologist Dwayne martin carried out the reptile surveys on the 7<sup>th</sup>, 11<sup>th</sup> and 30<sup>th</sup> July, 4<sup>th</sup> August and 3<sup>rd</sup>, 4<sup>th</sup> and 16<sup>th</sup> September 2024.

**3.3.4 Survey Limitations**

**a) Great Crested Newt HSI Assessment**

- i) There were no survey constraints for carrying out the habitat assessment.

**b) Badger Survey**

- i) The optimal time for a badger survey is February to April, when badger territories are most actively marked. However, badger surveys can be carried out at other times of the year; therefore, surveying in September was not considered to be a significant survey limitation.
- ii) The woodland and dense bramble scrub areas on the site (and close vicinity) could not be accessed fully due to dense vegetation; therefore, it is possible that further evidence of badger may have been missed in these areas (such as badger dung etc.). However, no badger setts were found on the site or within 30m of the site.

**c) Bat Activity/Transect Survey/Remote Monitoring**

- i) As per the Bat Survey Guidelines (BCT 2023) for sites comprising relatively low suitability for bats, an ecologist can make a professional judgement as to whether bat activity surveys are required. In this instance, it was considered that one bat activity/transect survey in one month and remote monitoring for a separate month in the optimal bat survey period was sufficient to determine bat species assemblage etc.
- ii) Therefore, there were no survey or timing constraints for the bat activity/transect survey.

**d) Reptiles**

- i) Reptile surveys can be carried out between April and early October in suitable weather conditions, with optimal months being April, May and September. Three of the seven surveys were carried out in September (an optimal month). Weather conditions were suitable for all seven survey visits.

## 4 SURVEY RESULTS

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### 4.1 Great Crested Newt

#### 4.2.1 Previous Results

- i) During the Extended Phase-1 habitat survey carried out in August 2023 a dead common toad (*Bufo bufo*) was found near the wet ditch on the site (see target note 1 in Figure 3, Appendix 1).
- ii) There is a pond/area of standing water and a wet ditch on the site providing some potential amphibian breeding habitat.

#### 4.2.2 Habitat Assessment

- i) The grassland, scrub and hedgerows on the site and grassland, scrub, woodland and hedgerows adjoining the site provide good potential terrestrial habitat for amphibians, providing potential cover, shelter, foraging, commuting/dispersal routes and hibernation habitat.
- ii) The piles of rubble and discarded items on the site, provide potential cover, shelter and hibernation habitat for amphibians (see target notes 3 and 4 in Figure 3, Appendix 1).
- iii) During the HSI assessment visit it was noted that the grassland adjoining to the north east of the site was wet and marshy, with an approximately 60cm depth of water in places. Juvenile common frogs (*Rana temporaria*) were recorded in the area. Therefore, this wet grassland field area could also provide potential breeding, cover and commuting habitat for amphibians (including great crested newt). Pond 2 lies on the edge of the field to the north.
- iv) The Habitat Suitability Index (HSI) scores and assessment for the ditch and ponds on and off site are provided in Tables 4 and 5 overleaf.

| Pond Ref                  | Pond 1      | Pond 2      | Pond 3      | Pond 4      | Ditch       |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| SI1 - Location            | 1           | 1           | 1           | 1           | 1           |
| SI2 - Pond area           | 0.15        | 0.6         | 0.88        | 0.18        | 0.08        |
| SI3 - Pond drying         | 0.1         | 0.5         | 1           | 0.1         | 0.1         |
| SI4 - Water quality       | 0.67        | 1           | 0.67        | 0.33        | 0.33        |
| SI5 - Shade               | 1           | 1           | 1           | 0.2         | 0.5         |
| SI6 - Fowl                | 1           | 1           | 0.67        | 1           | 1           |
| SI7 - Fish                | 1           | 1           | 0.67        | 1           | 1           |
| SI8 - Ponds               | 1           | 1           | 1           | 1           | 1           |
| SI9 - Terrestrial habitat | 1           | 1           | 0.67        | 0.67        | 0.67        |
| SI10 - Macrophytes        | 0.8         | 0.8         | 0.6         | 0.4         | 0.3         |
| <b>HSI</b>                | <b>0.62</b> | <b>0.87</b> | <b>0.80</b> | <b>0.45</b> | <b>0.44</b> |

**Table 4. HSI Score**

| Pond   | HSI Score | Pond Suitability |
|--------|-----------|------------------|
| Pond 1 | 0.62      | Average          |
| Pond 2 | 0.87      | Excellent        |
| Pond 3 | 0.80      | Excellent        |
| Pond 4 | 0.45      | Poor             |
| Ditch  | 0.44      | Poor             |

**Table 5. Pond Suitability Assessment**

## 4.2 Badger

- 4.2.1 The survey results were the same as for the previous results in 2023. Fresh and old badger dung was found along the former access road, near the proposed forest school structure location and within the woodland (see target note 2 in Figure 3, Appendix 1). In addition, fresh badger dung was also found on some of the reptile felts on the site. Mammal paths were recorded through vegetation on the site.
- 4.2.2 No badger setts were recorded on the site or within 30m of the site.
- 4.2.3 The scrub and hedgerows on the site and scrub, hedgerow and woodland adjoining the site provide good potential badger sett building habitat
- 4.2.4 The grassland on the site (particularly the shorter areas along the former access road) provides some potential badger foraging opportunities.

## 4.3 Bats

### 4.3.1 Bat Activity/Transect Survey

- a) A summary of the bat activity/transect survey results is shown in Table 6 below. During the bat activity/transect survey, two species of bat were recorded in the survey area, i.e. common pipistrelle bat (*Pipistrellus pipistrellus*) and noctule bat (*Nyctalus noctula*).
- b) Noctule bat was recorded most frequently during the survey, with a likely bat roost present in the woodland adjoining the site, as the bats were observed emerging from this area. A single common pipistrelle bat pass was recorded along the woodland edge.

| Survey Visit            | Common Pipistrelle Bat | Noctule Bat | Total Number of Bat Passes |
|-------------------------|------------------------|-------------|----------------------------|
| July                    | 1                      | 4           | 5                          |
| Total No. of Bat Passes | 1                      | 4           | 5                          |

**Table 6. Summary of Number of Bat Passes During Bat Activity/Transect Survey in July**

### 4.3.2 Bat Remote Monitoring

- a) A summary of the remote monitoring data is provided in Table 7 below. During the remote monitoring period, five species of bat were recorded in the survey area, i.e. common pipistrelle bat, soprano pipistrelle bat (*Pipistrellus pygmaeus*), *myotis* bat species, noctule bat and brown long-eared bat (*Plecotus auritus*).
- b) Common pipistrelle bat, soprano pipistrelle bat and noctule bat were recorded most frequently during the remote monitoring period and *myotis* bat species and brown long-eared bat were recorded less frequently. The hedgerow closest to the school building was used most frequently for foraging and commuting bats.

| Monitoring Visit        | Common Pipistrelle Bat | Soprano Pipistrelle Bat | Noctule Bat | <i>Myotis</i> Bat Species | Brown Long-eared Bat | Total Number of Bat Passes |
|-------------------------|------------------------|-------------------------|-------------|---------------------------|----------------------|----------------------------|
| June                    | 346                    | 312                     | 129         | 38                        | 42                   | 867                        |
| Total No. of Bat Passes | 346                    | 312                     | 129         | 38                        | 42                   | 867                        |

**Table 7. Summary of Number of Bat Passes During Remote Monitoring**

## 4.4 Reptiles

- 4.4.1 The grassland (including a mixture of short and long, fine and rank) and edges of scrub and hedgerows on the site, provide good potential habitat for reptiles, providing potential cover, shelter, foraging, commuting/dispersal routes and hibernation habitat. The shorter grassland areas and bare ground provide potential reptile basking habitat.
- 4.4.2 The piles of rubble and discarded items on the site, provide potential cover, shelter and hibernation habitat for reptiles (see target notes 3 and 4 in Figure 3, Appendix 1).
- 4.4.3 No reptiles were recorded on or under the deployed refugia during the surveys or observed anywhere else on site.
- 4.4.4 Twelve common toads of various age groups were recorded under the felts during the surveys, along with voles, mice and shrews.

## 5. EVALUATION AND IMPACTS

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### 5.1 Great Crested Newt (and Other Common Amphibians)

- 5.1.1 The HSI score indicates 'Excellent', 'Average' and 'Poor' breeding potential for great crested newt for the ditch and ponds (with the ditch on the site being 'Poor' and the pond on the site being 'Average'). Although there are no previous records for great crested newt from within the 2km study area, it is possible they are under-recorded in the area.
- 5.1.2 The habitats present on the site and in the vicinity suggest that the site could potentially be used to a degree by any local amphibian populations in the vicinity. Common frog and common toad have been recorded on the site.
- 5.1.3 Due to the nature of the habitats on and surrounding the site, the presence of great crested newt on the site cannot be ruled out. The site could potentially be used for great crested newt breeding, cover, shelter, commuting, foraging and hibernation.
- 5.1.4 If great crested newts were present in the ditch/ponds on the site and in the vicinity of the site, then the site provides potential terrestrial habitat for this species, including for cover and shelter.
- 5.1.5 According to the Natural England Rapid Risk Assessment tool (see overleaf) the proposed loss/damage of habitats (more than than approximately 1ha of terrestrial

habitat on the site) within 100m and 100m to 250m of breeding ponds and killing or injuring of individual great crested newts this results in 'Red: Offence Highly Likely'. This is because the proposed development may cause the loss of a potential breeding pond and loss of vegetation that could potentially provide habitat for great crested newt, and if great crested newts are present the animals could be harmed/injured.

| Component                                | Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom) | Notional offence probability score |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Great crested newt breeding pond(s)      | Damaged or destroyed                                                                                                                                | 1                                  |
| Land within 100m of any breeding pond(s) | >1 ha lost or damaged                                                                                                                               | 0.9                                |
| Land 100-250m from any breeding pond(s)  | 1 - 5 ha lost or damaged                                                                                                                            | 0.4                                |
| Land >250m from any breeding pond(s)     | No effect                                                                                                                                           | 0                                  |
| Individual great crested newts           | Killing or injuring newts                                                                                                                           | 0.8                                |
| Maximum:                                 |                                                                                                                                                     | 1                                  |
| Rapid risk assessment result:            |                                                                                                                                                     | <b>RED: OFFENCE HIGHLY LIKELY</b>  |

5.1.6 As great crested newts and their breeding and terrestrial habitat are fully protected under European wildlife legislation (from harm, injury, disturbance, loss and damage), there could be adverse impacts to individual great crested newts and some loss/damage to their breeding and terrestrial habitat. Therefore, it would be required to confirm the presence/absence of great crested newts in the ditch and pond on the site and three further ponds within 500m of the site (in the optimal survey period from March to June) **or an application may be made to Natural England under the District Level Licencing scheme for great crested newts**, whereby further full great crested newt surveys of the ditch/ponds would not be required. It is considered that great crested newts could constrain development proposals. **The client has agreed to apply for the District Level licencing Scheme (see Sections 6.1.2 and 6.4.1 below).**

5.1.7 Common toad and common frog were recorded on the site. Common toad is listed as a Species of Biological Importance on Section 41 of the NERC Act 2006 and a Priority Species on the national Biodiversity Action Plan (BAP). Both common toad and common frog are widespread species that although reasonably common are declining in abundance. They are given some legal protection under the WCA 1981 (as amended), in respect of Section 9 (5) which prohibits sale, transportation or advertising for sale.

5.1.8 Therefore, mitigation is recommended for amphibians to avoid/minimise the risk of harming individual animals (see Section 6.1.3 below).

## 5.2 Badger

- 5.2.1 Fresh badger dung was found throughout the site and therefore, it is evident that badgers use the site for passage, commuting and potentially foraging.
- 5.2.2 As no badger setts were recorded on the site/close vicinity (within 30m), adverse impacts to setts and badgers within setts (i.e. from disturbance) should be avoided.
- 5.2.3 Five previous records for badger were revealed by the desk study, with the closest record being approximately 171m away from the site.
- 5.2.4 Grassland and woodland adjoin the site and therefore, badgers will still be able to use these habitats and commute to and from these habitats. There will be no loss of connectivity between habitats for badgers.
- 5.2.5 Mitigation measures are recommended to avoid harm to badgers during the proposed development works (see Section 6.1.4 below).

## 5.3 Bats

- 5.3.1 The results indicate that during the present survey/monitoring carried out five bat species are using the proposed development site for foraging and commuting. The boundary features, comprising hedgerow and adjoining woodland were used most extensively. During the bat transect survey only low numbers/an individual bat were recorded on the site boundaries.
- 5.3.2 All bat species recorded are common bat species in the UK, apart from noctule bat which is considered to be relatively uncommon (Battersby 2005). Brown long-eared bat, soprano pipistrelle bat and noctule bat are listed as Species of Principal Biological Importance on the NERC Act (2006) and Priority Species on the national BAP. All bat species are listed as species of conservation concern on the county BAP.
- 5.3.3 The results indicate that there is a medium level of use of the proposed development site/site boundaries by common pipistrelle bat, soprano pipistrelle bat and noctule bat and low level use of the site/boundaries by *myotis* bat species and brown long-eared bat
- 5.3.4 For each survey visit, the highest concentration of recordings was of bats foraging and commuting along a boundary hedgerow and tree features/woodland edge.
- 5.3.5 Therefore, the bat survey and remote monitoring have shown that the habitats on the edge of the proposed development site are used by bats and are of value for bat foraging and commuting by common bat species and an uncommon bat species. Further

more extensive and suitable foraging and commuting habitat occurs beyond the site (comprising adjoining mature woodland to the south and mature hedgerows to the north, east, south and west). In addition, the hedgerows and trees around the proposed development site boundaries will be retained, with only a limited section of hedgerow proposed for removal. Therefore, adverse impacts to foraging and commuting bats due to habitat loss should not be significant. There will be additional native hedgerow, tree and shrub planting on the site, which will provide further potential bat foraging and commuting habitat.

- 5.3.6 The bat species roosting in the vicinity (e.g. possible noctule bat roost in the adjoining woodland) will use the entire landscape where there is suitable commuting routes, including hedgerows, tree lines, woodland/copses and grassland fields etc., all of which are in abundance in the close and wider vicinity of the site. Bats will use the site and habitats in the close and wider vicinity.
- 5.3.7 Therefore, it is considered there will be no adverse impacts to commuting bats due to habitat loss on the proposed development site and there will be no severance of connectivity to habitats in the close and wider area, due to the proposed development.
- 5.3.8 The habitat enhancements recommended for the proposed development site, including native tree, shrub and species-rich hedgerow planting will provide potential positive impacts for commuting bats on the site and in the vicinity. Also, the proposed created habitats including native trees and shrubs and wildflower grassland, will provide enhanced opportunities for insects on the site and thus increased opportunities for foraging bats. In addition, with the proposed creation of bat roosting habitat on the new buildings on the site, it is considered the proposed development will provide enhanced opportunities for bat roosting, foraging and commuting.
- 5.3.9 As the proposed development site is used by bats for foraging and commuting, we recommend mitigation is carried out to minimise any adverse impacts to foraging and commuting bats, particularly with regard new lighting, as brown long-eared bat, is particularly light averse (see Section 6.1.5 below). Enhancement measures are also recommended (see Section 6.3.2 below).
- 5.3.10 The bat survey/bat remote monitoring were carried out according to best practice guidelines and during optimal weather conditions; therefore, it is considered sufficient survey effort was carried out to determine the current bat species assemblage and relative abundances on the site. As per the Bat Survey Guidelines for sites comprising relatively low suitability for bats, an ecologist can make a professional judgement as to whether bat activity surveys are required. In this instance, it was considered that one bat activity/transect survey in a month and bat remote monitoring in a separate month in the optimal bat survey period was sufficient to determine bat species assemblage etc.

## 5.4 Reptiles

- 5.4.1 As no reptiles were recorded on the site, adverse impacts to reptiles should be avoided due to the proposed development works. No specific mitigation measures for reptiles are required.

## 6. RECOMMENDATIONS

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### 6.1 Mitigation

#### 6.1.1 Habitats

- a) Habitat mitigation recommendations are provided in the PEA report (Udall-Martin Associates Ltd. November 2023).
- b) The proposed habitat mitigation, compensation and enhancement measures will provide continued badger foraging and sett building habitat, bat foraging and commuting habitat, amphibian cover and sheltering habitat and nesting bird habitat on the site.

#### 6.1.2 Great Crested Newt (Mitigation)

- a) If full great crested newt surveys of the ditch/pond on the site and the ponds in the vicinity are not to be carried out in spring 2025, then the **Natural England District Level Licensing Scheme for great crested newts would be applied for**. This will allow works to be carried out which may impact great crested newts and their habitat. No further great crested newt surveys of the ditch/ponds would be required for the application, although it would require an enquiry fee, licence fee and a conservation payment to be made.

Further details can be found at:

<https://www.gov.uk/guidance/great-crested-newts-district-level-licensing-for-local-planning-authorities>

- b) **According to Niell Bayes (SRA architecture), the client has agreed to apply for the District Level Licensing Scheme for the proposed development.**

#### 6.1.3 Amphibians (and Hedgehog) (Mitigation)

- a) Prior to site clearance trim the grassland and tall ruderal vegetation and the base of the hedgerow (to be affected by the proposed works) and check for any amphibians and

hedgehogs. Allow any animals present to disperse naturally. Therefore, the site clearance works will start the day after strimming.

- b) If any common amphibians or hedgehogs are found during site clearance works, the site worker will carefully remove the animal by hand (with thick gloves for hedgehogs) and place them under hedgerows outside the proposed development works area.
- c) If any great crested newts are found during the site clearance, works will stop and Udall-Martin Associates telephoned to provide advice (T: 07968 030448/07954 160468). It is likely a licensed newt ecologist would visit the site and move the animals to a safe place outside the proposed development works area.

#### **6.1.4 Badger (Mitigation)**

- a) A further pre-site clearance and development works badger survey is required (see Section 6.4.2 below).
- b) If any trenches dug during works activities are left open over night, they will be left with a sloping end or ramp to allow any badgers or other animal that may fall in to escape.
- c) Any development works excavations holes will be covered over at night to prevent badgers and other animals from falling in and being unable to escape.
- d) Also, any pipes over 200mm in diameter will be capped off at night to prevent animals entering and being unable to escape.

#### **6.1.5 Bats (Precautionary Mitigation)**

- a) Any new lighting for the proposed development will conform to Bat Conservation Trust (ILP and BCT 2023) guidelines. Any new lighting will be sympathetic to the needs of roosting, foraging and commuting bats and other nocturnal wildlife such as badgers.
- b) The woodland and hedgerows near the site boundaries and existing hedgerow and any new hedgerow, tree and shrub planting on the site will be left in darkness, as these habitats provide potential bat foraging and commuting opportunities. Also, as it is considered likely a noctule bat roost is present within the adjoining woodland.
- c) If lighting is required for security on the site, shrouded down lights will be used on the exterior walls of the new buildings (below any new bat roosting boxes) and any other exterior lighting positioned on posts or bollards that are closer to the ground and

directed downwards. The lights will be activated by a time sensor with a low movement sensitivity, so as not to be triggered by wildlife.

- d) The following measures are recommended:
- All external lighting to be on timer switches, so lights go off after 'X' seconds.
  - There will be no lighting near hedgerows, woodland and trees as these are especially important for bat commuting/foraging.
  - Use high quality infra-red lighting if security cameras are to be installed rather than actual lighting.
  - As low a Lux level as possible.
- e) All lighting on the development will support the Dark Skies initiative (DEFRA/NPPF Guidance 2013).

#### **6.1.6 Nesting Birds (Mitigation)**

- a) We recommend any hedgerow, tree or shrub/dense scrub removal is carried out outside the bird breeding season (which runs from March to September, inclusive), to avoid adverse impacts to nesting birds. However, if works are carried out during the bird breeding season, firstly a nesting bird check would be required by an ecologist (see Section 6.4.3 below).

## **6.2 Compensation Recommendations**

### **6.2.1 Habitats**

- a) Habitat compensation recommendations are provided in the PEA report (Udall-Martin Associates Ltd. November 2023).
- b) The proposed habitat mitigation, compensation and enhancement measures will provide continued badger foraging and sett building habitat, bat foraging and commuting habitat, amphibian cover and sheltering habitat and nesting bird habitat.

### **6.2.2 Great Crested Newts**

- a) District Level Licencing Scheme for great crested newts is to be applied for.

### **6.2.3 Birds**

- a) We recommend a variety of general bird nesting boxes are installed on the new buildings on the site.

- b) The bird nesting boxes will be positioned on the new buildings at least 3m above the ground and facing north or north east, to avoid direct sunlight.
- c) Bird box details and specifications are provided in Appendix 6 of the PEA report (Udall-Martin Associates Ltd. 2023).

## **6.3 Enhancement Recommendations**

### **6.3.1 Habitats**

- a) Habitat enhancement recommendations are provided in the PEA report (Udall-Martin Associates Ltd. November 2023).
- b) The proposed habitat mitigation, compensation and enhancement measures will provide continued badger foraging and sett building habitat, bat foraging and commuting habitat, amphibian cover and sheltering habitat and nesting bird habitat.

### **6.3.2 Bats**

- a) We recommend an integrated bat roosting box is built into the exterior walls of each of the proposed new buildings on the site. These would enhance the biodiversity of the site. However, no exterior lighting would be permitted above or below the bat roosting box to ensure that no light spill on the bat box which would deter usage.
- b) The bat boxes should be installed at least 4m to 5m above the ground on a south or south west facing aspect.
- c) Bat box details and specifications are provided in Appendix 6 of the PEA report (Udall-Martin Associates Ltd. November 2023).

### **6.3.3 Birds**

- a) We recommend artificial bird nest boxes suitable for house sparrow and house martin are installed on each of the proposed new buildings on the site.
- b) The bird boxes should be positioned high under the eaves facing north or north east, to avoid direct sunlight.
- c) Bird box details and specifications are provided in Appendix 6 of the PEA report (Udall-Martin Associates Ltd. November 2023).

### 6.3.4 Hedgehog

- a) Install two hedgehog boxes in the bases of the retained hedgerows on the site.
- b) Hedgehog box details and specifications are provided in Appendix 6 of the PEA report (Udall-Martin Associates Ltd. November 2023).

## 6.4 Further Survey/Work Recommendations

### 6.4.1 Great Crested Newts

- a) As full great crested newt surveys of the ditch/ponds on the site and in the vicinity are not to be carried out, then the **Natural England District Level Licensing Scheme for great crested newts would be applied for**. This will allow works to be carried out which may impact great crested newts and their habitat. No further great crested newt surveys of the ditch/ponds would be required for the application. The District Licence would incur an enquiry fee, licence fee and a conservation payment.

### 6.4.2 Badger

- a) A badger survey of the site will be carried out approximately two to three weeks prior to site clearance/development works commencing to ascertain whether badgers have dug setts on the site in the intervening period.
- b) The survey would follow standard methodology (Hill *et. al.* 2005). The following field signs would be searched for: footprints, dung pits, latrines, snuffle holes, runs through vegetation, hairs caught on fences and hedgerows and setts. Any setts found would be classified as well used, partly used or disused.

### 6.4.3 Nesting Bird Check

- a) If any hedgerow, tree or shrub/dense scrub removal is carried out during the bird breeding season, a nesting bird survey must firstly be carried out by a qualified ecologist prior to works going ahead to ensure that no active nests will be affected. If active nests are found then work will have to be delayed in that area until all young have fledged.

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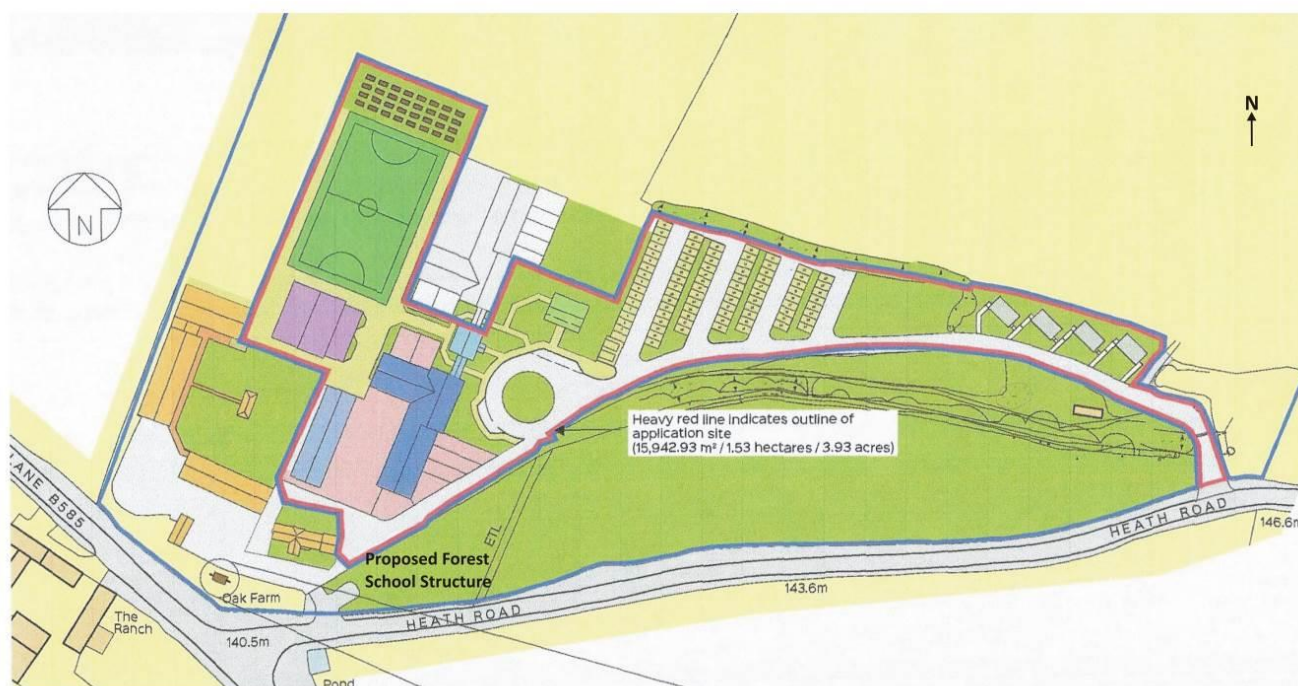
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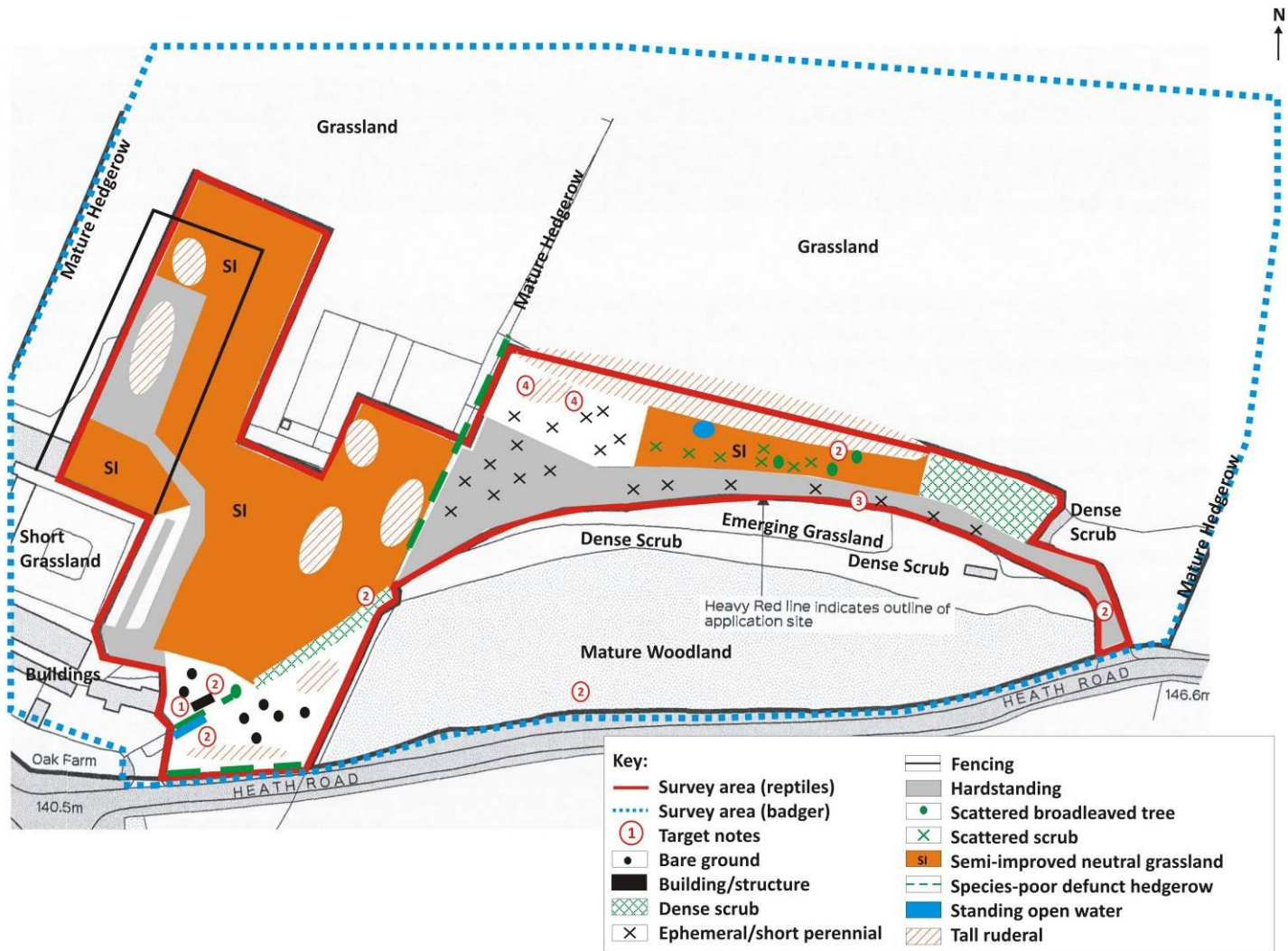
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## Appendix 1: Figures

**Figure 1: Location of Site and Ditch/Ponds within 500m and Proposed Development Works**



**Figure 2: Proposed Development Phase 2 Expansion Project**

**Figure 3: Extended Phase-1 Habitat, Badger and Reptile Survey Area and Survey Results**

**Figure 4: Bat Activity/Transect Route and Static Listening and Remote Monitoring Points**