FOUR OAKS,

HEADCORN, KENT

Protected Species Report

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CORYLUS ECOLOGY

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CHAPTER 1: INTRODUCTION

1.1 Corylus Ecology has undertaken a suite of protected species surveys of land at Four Oaks in Headcorn, Kent, hereinafter referred to as 'the Site'. The Site is located at OS Grid Reference TQ 81246 4547, covers 0.53ha and consists of three agricultural buildings and a disused roundel with a hard standing access road and small areas of grassland and overgrown vegetation. Immediately to the north, east and west of the Site is an arable field, to the south-east is a residential dwelling and a pond and to the south is Four Oaks road. The wider landscape is dominated by agricultural fields with a low number of areas of woodland and a good network of ponds.

1.2 The proposals for the Site involve the demolition of the three agricultural buildings and disused roundel to allow for five residential dwellings with associated landscaping. Access for the development is proposed along the existing access road and point which is adjacent to Four Oaks road.

1.3 The following protected species surveys were recommended in the 'Preliminary Ecological Appraisal Report' (Corylus Ecology, May 2020):

- Reptile presence/likely absence surveys
- Great crested newt (GCN) Habitat Suitability Index (HSI) assessments and, for suitable ponds, GCN presence/absence surveys
- Bat presence/likely absence surveys

1.4 Each of the protected species survey results and impact assessment is discussed in its own chapter in this report, outline mitigation strategies are discussed in Chapter 5 and conclusions are provided in Chapter 6.

CHAPTER 2: REPTILE PRESENCE/LIKELY ABSENCE SURVEYS

2.1 METHODOLOGY

2.1.1 For a presence/likely absence reptile survey, Froglife recommend that a minimum of seven survey visits are undertaken in favourable weather conditions. To achieve a satisfactory degree of confidence in a negative result, the surveys are spread over a minimum of 30 days to demonstrate an appropriate level of effort has been achieved.

2.1.2 Reptile surveys are, as a matter of good practice, undertaken between the months of March and October, with the best results tending to be achieved during April, May and September (Froglife, 1999). The Herpetofauna Groups of Britain and Ireland (HGBI) guidance suggests that optimum survey conditions are when temperatures are between 9°C and 18°C, with an absence of wind and rain. These conditions tend to coincide with surveys being conducted between 8.30am and 11.00am and between 4.00pm and 6.30pm. Optimal survey periods can, however, vary depending on the prevailing weather with. peak counts often occurring outside the above times, particularly immediately after rain. The surveys were therefore timed to utilise the best available weather conditions for each survey event.

2.1.3 The standard survey guidance for reptiles (Froglife, 1999) recommends ten heat traps per hectare. For this survey, a total of 18 heat traps were placed throughout the Site in areas considered suitable for reptiles, these being the long grass in the north-eastern corner and the overgrown areas of vegetation and areas of spoil along the northern and western boundaries of the Site. The Site area is approximately 0.53ha, therefore a density of greater than ten heat traps per ha was achieved. Heat traps consisted of heavy gauge green mineral roofing felt cut into approximately 0.7m x 1m rectangles which were placed following linear margins and orientated to receive the maximum amount of sunshine.

2.1.4 To date, five survey visits were undertaken between 1st July and 29th July 2020; the time and conditions of each visit are set out in Appendix 1. The surveys are ongoing and a minimum of two more are required to comply with guidelines and to enable an accurate population estimate to be made. These will be undertaken in suitable weather conditions and at an appropriate time of year.

Reptile Evaluation Methodology

2.1.5 Froglife has established criteria for identifying Key Reptile Sites and the criteria is also used in the designation process for Local Wildlife Sites, see Table 1 below. The scoring system is based upon the maximum number of adult animals (all animals recorded excluding hatchlings and juveniles), seen under artificial refugia (placed at a density of a minimum of 10 per hectare) or by general observation by one person, during a single survey event.

Table 1 – Evaluation of Reptile Population Status

Species	Low Population Score 1	Good Population Score 2	Exceptional Population Score 3
Adder	<5	5-10	>10
Grass Snake	<5	5-10	>10
Common Lizard	<5	5-20	>20
Slow Worm	<5	5-20	>20

2.1.6 A Key Reptile Site is identified when a site meets any of the following thresholds:

- Supports three or more reptile species; or
- Supports two snake species; or
- Supports an exceptional population of any one species; or
- Supports an assemblage of species scoring ≥4 points using the above system; or,
- Supports a population of adder scoring >1.

2.1.7 Any other species noted under the refugia were also recorded, principally any amphibian species in terrestrial phase.

2.2 RESULTS

2.2.1 To date, one species of reptile, grass snake *Natrix natrix helvetica,* has been recorded within the Site during the ongoing presence/likely absence surveys. A peak count of one adult grass snake was recorded on one occasion in in the north-east of the Site, in the area of tall grassland adjacent to the arable field (see Figure 1). The full data including weather conditions are included in Appendix 1.

2.3 EVALUATION AND RECOMMENDATIONS

2.3.1 A reptile presence/likely absence survey is being undertaken at Four Oaks in Headcorn, Kent between July and August 2020.

2.3.2 To date, five surveys have been undertaken between 1st and 29th July 2020 and a peak count of one adult grass snake has been recorded on one occasion. The grass snake was recorded in the north-east of the Site which supports tall grassland. No other reptiles have been recorded during the five surveys that have been completed.

Grass Snake Ecology

2.3.3 Grass snakes have an estimated average population density of around three per hectare and the home range of grass snake has been recorded at up to 33ha (*Beebee and Griffiths, 2000*). Population size and densities are limited by available resources and typical individual home ranges and therefore the peak

count of one adult grass snake is likely to represent a maximum of one home range. It is considered likely that there is a Low population of grass snake in the vicinity.

2.3.4 The surveys are ongoing and a minimum of two more are required to comply with guidelines and to enable an accurate population estimate to be made and to ensure no other reptile species are present in the Site.

2.3.5 In terms of assessing an ecological impact, it is not considered likely that a Good or Large population of grass snake or any other reptile species are present in the Site. The five reptile surveys have been completed in suitable weather conditions and during the reptile active period therefore if grass snake, or any other reptile species, are present in high numbers it is likely that these would have been detected. The following has been determined by the survey results at the time of writing, however it is considered to provide an accurate impact assessment for the Site.

Impacts Assessment

2.3.6 The proposals will result in the permanent loss of the tussocky grassland in the north-east and areas of overgrown scrub and spoil piles around the boundaries to allow for the development of the residential houses with surrounding gardens. The Site covers 0.53ha however 0.2ha of the Site is not suitable habitat for reptiles consisting of buildings and an access road. The latest proposed site layout plan shows that suitable reptile habitat will be retained through the development; in the south-west there will be an area of species-rich, tussocky grassland (wildlflower meadow) and the margins of the pond P1 will be retained and enhanced. The proposals will therefore result in the permanent loss of *circa.* <0.33ha of reptile habitat.

2.3.7 As reptile habitat will be lost to the development and all common reptile species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) against intentional death or injury then a reptile mitigation strategy is required. This would follow best practice guidance and would need to tie in with the programme for the scheme. An outline of the likely requirements for a mitigation strategy are set out in Chapter 5 of this report. A detailed mitigation strategy will be drawn up once the full suite of surveys have been completed.

CHAPTER 3: GREAT CRESTED NEWT SURVEYS

3.1 METHODOLOGY

3.1.1 There are no waterbodies within the Site and eleven mapped ponds are present within a 250m radius (see Table 2 and Figure 2). Landowner searches were undertaken of all these ponds and, where possible, permission sought to assess ponds for their suitability to support great crested newts *Triturus cristatus* (GCN).

3.1.2 Permission was granted for pond P1, P4, P6, P7, P8 and P11 (see Figure 2).

Table 2 - Ponds within a 250m radius of Four Oaks, Headcorn

Pond	Distance	Direction
P1	1m	SE
P2	50m	S
P3	65m	S
P4	83m	W
P5	94m	S
P6	133m	SE
P7	175m	SE
P8	196m	SE
P9	150m	S
P10	205m	SW
P11	220m	W

Great Crested Newt Habitat Suitability Index (HSI)

3.1.3 Ponds P1, P4, P6, P7, P8 and P11 were assessed in terms of their suitability for GCN using the Habitat Suitability Index (HSI) assessment methodology on 18th June 2020. This survey follows guidance published by the Amphibian and Reptile Groups (ARG, 2010) and is a field and desk-based assessment of waterbodies for their potential to support great crested newts. It involves examining ten "Factors" associated with GCN pond occupancy, which are:

- Location (in Britain);
- Pond area;
- Desiccation rate (years out of ten that pond dries);
- Water quality (subjective assessment);
- Percentage of pond shaded;

- Number of waterfowl;
- Fish population (subjective assessment);
- Number of ponds within 1km;
- Terrestrial habitat quality; and
- Percentage macrophyte cover.

3.1.4 Each factor is given a numerical score and is entered into a weighted calculation to ascertain a single value, the HSI, which is a value between 0.00 and 1.00. The resulting value is then compared to a categorical scale, to establish the potential for encountering GCN:

Table 3 –HSI Scores and Assessment Level

HSI Score	Assessment Level
< 0.5	Poor
0.5 – 0.59	Below Average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

Presence/likely Absence Survey - environmental DNA (eDNA)

3.1.5 Ponds P1, P4, P6, P7, P8 and P11 were subject to GCN eDNA testing. This survey technique can help determine the presence or likely absence of GCN in ponds but cannot determine population size. The survey detects GCN DNA within ponds which have been deposited through shed skin cells, urine, faeces and saliva. eDNA can persist in water for several weeks, indicating recent occupation. The survey can be undertaken between 15th April and 30th June.

3.1.6 The eDNA survey was undertaken of the ponds on 24th June 2020. The survey was undertaken in line with eDNA sampling protocol by licenced surveyors Louise Ryan (licence number 2016-23278-CLS-CLS) and Joshua Daniels of Corylus Ecology. An egg search of the vegetation in the ponds was also carried out during the course of the sampling.

3.2 RESULTS

Habitat Suitability Index (HSI) Assessments

P1

3.2.1 Pond P1 is immediately adjacent to the Site's eastern boundary and is located between a residential property, arable field and Four Oaks road. It is a large oval shaped shallow-sided pond with a wide margin of yellow flag iris *Iris pseudacorus* and bulrush *Typha typha* around its eastern, southern and western

perimeter. There is suitable GCN terrestrial habitat immediately surrounding the pond in the form of dense scrub and occasional mature trees, however beyond this the residential plot and arable field which provide low quality habitat, and the road is not suitable. The resulting HSI score is 0.69 indicating 'Average' suitability for GCN. The HSI results table is shown in Appendix 5.

P4

3.2.2 Pond P4 is located within the ancient woodland to the east of the Site; ancient woodland provides optimal GCN terrestrial habitat. It is a large circular pond with shallow-sided banks. Immediately around the pond is scrub and semi-mature trees including hazel *Corylus avellana*, ash *Fraxinus excelsior*, willow *Salix* sp. and pedunculate oak *Quercus robur*. There is a lack of emergent vegetation within the pond and this is likely as a result of the pond being heavily shaded. This pond received a HSI score of 0.66 which equates to 'Average' suitability for GCN.

P6

3.2.3 Pond P6 is located within a residential plot: Plumtree road is immediately to the north and there are small areas of mown grassland to the south and west. Along the northern edge of the pond is dense scrub in the form of hawthorn *Cratageus monogyna* and willow *Salix* sp. The margins of the pond comprise a wide margin (2m) of dense yellow flag iris. Nesting mallard ducks are present however there are no signs of these ducks impacting on the pond vegetation. This pond receives a HSI score of 0.75, which translates to 'Good' suitability for GCN.

P7

3.2.4 Pond P7 is also within a residential plot with Plumtree road immediately to the north and a residential garden with tussocky grassland to the south. Pond P8 is immediately to the east of P7 and the two ponds are connected via a small stream that does not have a flow. The garden to the south provides suitable foraging, commuting and potentially refuge habitat for GCN in the form of tall grassland and small areas of scrub and ornamental flower beds. There is a good margin of yellow flag iris around the margins of the pond, and this has not been impacted by the ducks present. Overall this pond receives a score of 0.75 which equates to 'Good' suitability for GCN.

P8

3.2.5 Pond P8 is immediately to the east of P7 and is situated within residential gardens with Plumtree road to the north. Around the western and southern edge is dense scrub consisting of beech *Fagus sylvatica*, hawthorn and goat willow. The residential gardens to the south support suitable GCN terrestrial habitat in the form of tall areas of grassland and ornamental planting. The only emergent vegetation is limited to the eastern margin of the pond and species include yellow flag iris and willow herb. There are also ducks present in this pond. The resulting HSI score for this pond is 0.71 which equates to 'Good' suitability.

P11

3.2.6 P11 is also located within the ancient woodland to the east of the Site. P11 is considered likely to be an ephemeral pond and held a shallow amount of standing water during the surveys (<10cm deep). The pond does not support any vegetation and there is a dense layer of leaf litter and debris. Overall this pond has a HSI score of 0.52 or 'Below Average' suitability for GCN.

GCN Presence/likely Absence Surveys - eDNA

3.2.7 The eDNA survey of P6 recorded a positive eDNA result, indicating that GCN have been present in this pond during the 2020 breeding season (see Figure 2). No GCN eggs were found in this pond during the eDNA survey.

3.2.8 The eDNA surveys of P1, P4, P7 and P8 returned a negative eDNA result, indicating that GCN have not been present in these ponds during the 2020 breeding season. No GCN eggs were found in these ponds during the eDNA survey.

3.2.9 The eDNA survey of P11 returned an 'inconclusive' eDNA result. P11 is considered likely to be an ephemeral pond and held a shallow amount of water and dense layer of debris at the time of the survey. Suspended solids, algae sediment etc. can make pond samples more prone to an 'inconclusive' result.

3.2.10 Figure 2 shows the location of the ponds and the confirmed GCN pond P6. Table 4 below summarises the results of the HSI and eDNA surveys.

Table 4 - Summary of GCN survey results 2020, Four Oaks, Headcorn

Pond	Distance	HSI	eDNA result
P1	1m	Average	Negative
P2	50m	-	-
P3	65m	-	-
P4	83m	Average	Negative
P5	94m	-	-
P6	**133m**	**Good**	**Positive**
P7	175m	Good	Negative
P8	196m	Good	Negative
P9	150m	-	-
P10	205m	-	-
P11	220m	Below Average	Inconclusive

N.B Bold = GCN Pond

3.3 EVALUATION AND RECOMMENDATIONS

3.3.1 GCN surveys, including HSI assessments and a presence/likely absence surveys, have been undertaken of six ponds (P1, P4, P6, P7, P8 and P11) within a 250m radius of land Four Oaks in Headcorn, Kent in June 2020.

3.3.2 The results of the presence/likely absence surveys returned a positive eDNA result for P6, indicating that GCN have been present in this pond during the 2020 breeding season. No evidence of GCN breeding in this pond was found during the egg search survey.

3.3.3 GCN have been confirmed likely absent from P1, P4, P7 and P8 during the 2020 breeding season. Regarding P11, the result was inconclusive therefore the presence of GCN in this pond during the 2020 breeding season is not known.

Pond Network and Metapopulations

3.3.4 GCN are surveyed at a landscape scale because they often form a series of sub-populations or metapopulations across suitable ponds and habitats (English Nature, 2001). There are 11 ponds within a 250m radius of the Site, and six of these, including P1 which is adjacent to the Site's boundary, were surveyed. GCN presence was only recorded in P6, which is 133m to the south of the Site boundary. GCN were not recorded in the nearest pond (P1) or P4, which is within 100m of the Site. GCN were also not recorded in P7 and P8, which are between 170 – 196m of the Site.

3.3.5 The 2020 survey data therefore indicates the presence of GCN within 100 - 133m of the Site.

Terrestrial Habitat

3.3.6 The terrestrial habitat between the Site and P6 includes a minor road and an arable field with hedgerows; the hedgerows provide good habitat corridors for newts and it is not considered that the road would be a major barrier to GCN therefore there is potential for newts to be dispersing between this pond and the Site.

Impacts Assessment

3.3.7 GCN have been confirmed present in P6, which is approximately 133m to the south of the proposed development location. GCN are fully protected under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. The protection afforded to GCN is such that the animals, their eggs and the habitats they use for rest or shelter are protected, including both aquatic and terrestrial habitats. Therefore, the presence of a population of GCN in the local landscape,

including in the proposed development site, itself needs to be considered in relation to the impacts of the development proposals.

3.3.8 The total Site area covers approximately 0.53ha however 0.2ha of the Site includes the access road and buildings which are not suitable GCN habitat. Suitable GCN habitat will be retained/created through the development; in the south there will be an area of species-rich, tussocky grassland and the margins of P1 will be retained and enhanced. The proposals will therefore result in the permanent and/or temporary loss of *c*.0.33ha of high quality GCN habitat in the form of tussocky grassland, tall ruderal vegetation, dense scrub and spoil piles. These habitats provide opportunities for foraging, commuting and potentially hibernating GCN.

3.3.9 No ponds will be lost to the proposals, but the proposals will result in the permanent and/or temporary loss of suitable terrestrial GCN habitat. There is also a risk of encountering individual newts during the development works therefore there is potential for the proposals to accidentally kill/injure newts. Taking into account the local pond network it is not considered that the proposals would result in any habitat fragmentation.

Licence Risk Assessment

3.3.10 The Natural England great crested newt licencing service includes a section referred to as a "Licence Risk Assessment". This provides a way of assessing the amount of habitat to be lost in proximity to any breeding pond and whether an offence is likely without any licenced mitigation, depending on the distance and area of habitat affected. This is in recognition of the terrestrial movements of GCN and the increased probability of encountering animals closer to breeding ponds.

3.3.11 This exercise has been carried out and reproduced below (Table 5), based on 0.33ha of GCN terrestrial habitat within 150m of the confirmed GCN pond (P6) being affected. It is assumed that the works can be completed without any licenced mitigation, but using precautionary methods.

Table 5 - Natural England Licence Risk Assessment for ponds between 100 and 250m of the Site

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)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

3.3.12 Using the risk assessment, it can be seen that the risk of committing an offence is considered 'Green' or 'Highly Unlikely'. In addition, the licence risk assessment has been run on the basis that individual GCN would not be harmed/killed during the works as it is considered that these potential impacts of the development on the chance of any amphibians that may be using the Site can be mitigated for by implementing a non-licenced detailed mitigation strategy.

3.3.13 Overall, taking all factors into account, and if a detailed mitigation strategy is implemented, then it is not considered that any further population surveys or a European Protected Species Mitigation (EPSM) licence from Natural England is required to complete the works. It is considered that the potential impacts of the development on any amphibians including GCN that may be using the Site can be mitigated for by implementing a detailed mitigation strategy to limit harm to GCN and other amphibians in the unlikely event that they may be present on-Site.

3.3.14 The mitigation strategy will include a non-licenced method statement and this will detail Natural England's Risk Avoidance Measures (RAM) to be followed to prevent encountering GCN during the works. This has been outlined in Chapter 5 of this report. It is considered that, if the mitigation strategy is implemented, the favourable conservation status of the GCN population present in the landscape can be maintained through the development.

3.3.15 It should be noted that if GCN are found during any part of the scheme the works should stop and the project ecologist notified; a Natural England licence may be required to continue the works.

CHAPTER 4: BAT EMERGENCE SURVEYS

4.1 METHODOLOGY

Evening Emergence Surveys

4.1.1 Two evening emergence surveys have been undertaken of one building within the Site, the roundel structure B4, in July and August 2020. The surveyors were Louise Ryan (2018-37694-CLS-CLS) and Emma Waller (licence no. 2020-45876-CLS-CLS) of Corylus Ecology and Peter Scrimshaw (licence no. 2015-11711-CLS-CLS) of Hesperus Ecology.

4.1.2 The surveys commenced 15 minutes before sunset and continued until 1hr 30 minutes after sunset. Elekon Batloggers were used and the calls were subsequently uploaded to *BatExplorer* software for analysis. The surveyors used headphones during the survey and two-way radios for communication.

4.1.3 The sonograms were analysed and compared to identification parameters given in Russ (2012) and also compared with library recordings made by the surveyors. It should be noted that it is not always possible to identify each bat pass to species level due either to non-echolocation, poor recordings of their echolocations or the similarities between echolocations of bat species. The *Myotis* genus is generally the hardest to separate to species level due to the plasticity of the calls and overlapping of call characteristics between the different species. Where species identification has not been possible, the genus of bat has been provided based on call parameters.

4.2 RESULTS

21st July 2020 – sunset 20:59

4.2.1 There was no breeze (BF 0) during the survey, a temperature of 20°C at the start of the survey dropping to 13°C by the end and 20% cloud cover. The two surveyors were positioned around the building complex: one was to the north-east and one was to the south-west.

4.2.2 No bats emerged from B4 during the survey. The first bat recorded was a common pipistrelle *Pipistrellus pipistrellus* at 21:11hrs, some 12 minutes after sunset. This bat was seen flying into the Site from the south-west before flying north-east. At 21:30hrs, a second common pipsitrelle bat was seen flying into the Site at the south-eastern corner and then this bat flew north-west. A soprano pipistrelle *P. pygmaeus* was heard but not seen at 21:30hrs. A low number of pipistrelle bats were seen foraging around the building and beneath the canopy of the mature trees immediately to the east of the building for the duration of the survey. No other bat species were recorded during the survey.

Incidental Sightings

4.2.3 At 21:53hrs, a barn owl *Tytos alba* was seen flying north to south along the treeline to the north-east of the Site and then fly south-east across the arable field to the east.

4th August 2020, sunset 20:39hrs

4.2.4 During this survey there was a light breeze (BF1) a temperature of 17.7°C dropping to 15.8°C by the end of the survey and 30% cloud cover. The surveyors were stood in the same positions as the previous survey.

4.2.5 No bats emerged from B4 during the survey. The first bat heard was a common pipistrelle at 21:32hrs, some 53 minutes after sunset. The first soprano pipistrelle was heard at 21:35hrs and there was a single pass by a *Myotis* sp., at 21:39hrs. Overall bat activity during this survey was very low.

Incidental Sightings

4.2.6 At the start of the survey three kestrel *Falco tinnunculus, i*ncluding two fledglings were recorded: two were seen perching on a telephone wire immediately to the north-west of the Site and all three birds were seen flying into the Site. One of these birds was seen flying out of the metal agricultural barn B3 and bird splashing was noted on the exterior of the building.

4.3 EVALUATION AND RECOMMENDATIONS

4.3.1 The bat surveys undertaken of the disused roundel in July and August 2020 have confirmed that bats are not using the building as a summer roost. The surveys were undertaken during the key maternity period for bats (May – August) and in good weather conditions.

4.3.2 No further surveys or recommendations regarding summer roosting bats are considered necessary for the building.

4.3.3 However, the building has been assessed to have 'Low' potential for hibernating bats during the winter months due to the cavities between the brick walls creating a stable and humid environment. Hibernation surveys have not been recommended over the winter period as it is considered it would not be possible to thoroughly survey the cavity walls for hibernating bats using standard methods such as an endoscope and high powered torch due to the extent of the wall cavity therefore the surveys would not give confidence in a negative result.

Impact Assessment

4.3.4 The proposals involve the demolition of the building B4 to allow the development of five residential units. The proposals have the potential to result in the permanent loss of a potential hibernation roost within the

cavity walls of the building. No bat roost has been confirmed in B4 therefore an EPSM licence is not required to permit the development works. However, mitigation and compensation for the loss of a potential hibernation roost will be required. A mitigation strategy has been outlined in Chapter 5 of this report.

Incidental Sightings – Birds

4.3.5 During the bat surveys, barn owl and kestrel were recorded using habitats immediately adjacent and within the Site. The sensitive lighting that has been recommended for the Site (Chapter 5) in relation to bats will mitigate any potential indirect impacts of the development on any barn owl using the surrounding habitats.

4.3.6 Regarding kestrel, one adult and two fledglings were seen on a telephone wire immediately adjacent to the Site and one bird was seen flying from B3. Bird splashing was noted on the exterior of the building. All wild birds, including eggs and chicks, are protected against injury or killing and their nests are protected against damage or destruction when in use by the Wildlife and Countryside Act (1981). In addition, Kestrel is included on the British Trust for Ornithology's Amber list of Bids of Conservation Concern (BoCC 4), and its population has significantly decreased and distribution contracted over the last 25 years. It is therefore recommended that mitigation is provided to maintain the interest of the Site for kestrel.

4.3.7 The PEA report recommended that the demolition of all the buildings (B1 – B4) and clearance of any vegetation within the Site is completed out the core bird breeding season, limited this work to the period 1st September to 1st March. It is recommended that the buildings and vegetation are checked for active birds nest by a suitably experienced ecologist prior to demolition/clearance. Measures to retain the suitability of the Site for birds under the National Planning Policy Framework (NPPF) were also provided in the PEA report and this included installing bird boxes that are suitable for songbirds within the new houses (Corylus Ecology, 2020). Regarding building B4, the demolition of this building will need to take into account hibernating bats (which has been detailed in Chapter 5 of this report). The best time to demolish the building B4 would therefore be between September to early October (weather permitting).

4.3.8 The compensation for kestrel will be in the form of a similar feeding perch built into one of the new buildings. The perch should be sheltered and in an unlit and discreet location on the building to avoid disturbance. If this is not possible then it is recommended that a kestrel box (Schwegler 2TF) is mounted on a nearby tree prior to works on the building commencing. The box should be installed a minimum height of 5m, on north-eastern elevation of the tree to avoid prevailing winds and disturbance from adjacent residential houses.

5.0 MITIGATION STRATEGIES

5.1 GCN and Reptile Mitigation Strategy and Works Method Statement

Summary

5.1.1 The mitigation strategy for both reptiles and GCN are similar and overlap in terms of habitat requirements and compensation therefore the mitigation strategy for each species is combined, where appropriate, below.

5.1.2 The following measures incorporate Natural England's Risk Avoidance Measures. It should be noted that in the unlikely event that a GCN is found during any part of the scheme then works should stop and the project ecologist notified; a Natural England Licence may be required to continue.

5.1.3 Regarding reptiles, the following is based on the current survey results. A detailed mitigation strategy with specific instructions for habitat enhancement and translocation will be drawn up once the results of the further surveys are known and a population size has been estimated.

Timings – GCN and Reptiles

5.1.4 The works should take place during the active season for amphibians and reptiles, avoiding the hibernation period between mid-November and the end of February.

Site Induction – GCN and Reptiles

5.1.5 All contractors working on the project will be briefed on the potential presence of GCN and presence of reptiles by the Site manager or project ecologist prior to work commencing. This method statement will be used as a brief with a copy of the GCN and Reptile ID card, Appendix 6. The project ecologist's contact details will be left on site and should any GCN and reptiles be found then the project ecologist will be contacted for advice on how to proceed. If any GCN are found then works should stop and Natural England Licence may be required to continue.

Proposed Receptor Area - Reptiles and GCN

5.1.6 It is proposed that the ecology area in the south of the development, which is to be a wildflower meadow and grassy corridor, is the receptor area for any animals caught (see Figure 3). This area is near to the pond P1, and the surrounds of this pond will be retained and enhanced for wildlife. Enhancements around the margins of the pond will include the installation of log piles to provide places for refuge.

Habitat Creation and Connectivity - Reptiles and GCN

5.1.7 In addition to the receptor area described above, native hedgerows are proposed around the development and it is recommended that a margin of tussocky grassland is provided at the base of these hedgerows to create habitat corridors for newts and reptiles moving around the development and through the landscape.

Log piles and one hibernacula should be created in the north-eastern corner of the Site where new tree planting is proposed.

Relocation - Reptiles

5.1.8 Prior to any development works commencing, relocation of reptiles may be required to move them out the development area. The survey data available at the time of writing shows that there is a Low population of grass snake within the local landscape. Due to the size of grass snake home ranges relative to the size of this site, in combination with the low numbers recorded to date, a period of trapping is not considered necessary.

5.1.9 The relocation exercise for reptiles will include habitat manipulation to encourage animals to move out of those areas of suitable habitat which is to be lost. Habitat manipulation will involve two a two-step cutting process: the first cut will be to a minimum height of 150mm and then 100mm seven days later. A sustained period of cutting pressure should be maintained until the ground works start to ensure animals are displaced from the affected areas.

Supervised Dismantling of Refuge Areas – Reptiles and GCN

5.1.10 Prior to the development works and outside the hibernation period (i.e. from 1st March to 1st October) areas of suitable GCN and reptile habitat, including the spoil piles (S1 – S6 on Figure 1) and areas of dense scrub should be destructively searched under the supervision of a suitably experienced ecologist. Any animals found will be relocated to the proposed receptor area in the south. If any GCN are found then works should stop and a Natural England EPSM Licence may be required to continue.

Careful Design of Construction Zone

5.1.11 The Site compound and construction zone itself should be kept as small as possible and located on hardstanding where possible.

5.1.12 During the demolition and construction period, care should be taken to avoid creating artificial habitats and temporary resting places within works areas, such as turf, spoil and rubble piles. Stored materials will need to be isolated from areas of vegetation by locating them on hardstanding or bare ground and raising them off the ground by using storage bags on pallets. Before moving materials which have been stored on the ground, the area should be carefully checked for animals. Any waste piles should be moved off site, stored in skips or temporarily stored on areas of isolated hardstanding / bare ground.

5.1.13 Any trenches which are left open overnight during construction works should have planks of wood placed in them to provide an exit ramp for any animals which may fall into them. As a precaution each morning

any ditches or holes will be checked by the site manager. Trenches should be checked for animals before they are infilled.

Habitat Management – Post Development

5.1.14 The receptor area and margins of the boundary features should be managed on an infrequent basis, being cut in August/September, to no lower than 150mm.

5.1.15 It is recommended that the log piles and hibernacula are checked every five years and replenished, if required.

5.2 Bat Outline Mitigation Strategy

Summary

5.2.1 No bat roost has been confirmed in the building therefore an EPSM licence is not required to permit the development works. The following measures are recommended as it is considered it would not be possible to thoroughly survey the cavity walls for hibernating bats using standard methods such as an endoscope and high powered torch due to the extent of the wall cavity therefore the surveys would not give confidence in a negative result.

5.2.2 If any bats are found during the demolition works then Natural England will need to be contacted and an EPSM licence will be applied for.

Timings

5.2.3 The timing of the demolition works would need to be restricted to certain times of the year when bats are less vulnerable to disturbance meaning 1st March to 1st October to avoid disturbance to bats during the hibernating periods. However, depending on ambient temperatures in late-September and October there may be potential to extend the works into October. The building also has potential to support breeding birds during the main breeding bird period (March – August), therefore the works need to take into account breeding birds. The best time to demolish the building would therefore be between September to early October (weather permitting).

Mitigation

5.2.4 Prior to any works starting on the building all personnel would be given a tool box talk by the project ecologist or a suitability experienced ecologist to ensure that the appropriate methods and level of care is taken when carrying out the work.

5.2.5 An endoscope survey of the cavity walls will also be undertaken, where possible, by a licenced ecologist prior to any demolition works.

Hibernation Roosts

5.2.6 Roost compensation for the loss of potential hibernation roosts will be included in the new development. A bat hibernation box, such as the Schwegler 1FW Hibernation Bat Box, should be installed on a retained tree, preferably one of the retained oak trees in the north-east of the Site as this is near to the existing potential hibernation site (see Figure 3). The box should be installed on the northern side of the tree, at a minimum height of 3m.

Lighting

5.2.7 It was noted during the surveys that the Site is particularly dark. To maintain the suitability of the Site for bats, it is recommended that a sensitive lighting design is devised. This should ensure that there is no high levels of artificial lighting near to the hibernation box. The following recommendations take into account current best practice guidance which should be incorporated into the lighting design (*Guidance Note 8: Bats and Artificial Lighting, 2018*).

Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires:

- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- Low level or bollard lighting can often cause unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition. Therefore, the use of specialist bollard or low-level downward directional luminaires should only be considered if their use is directed by a lighting professional.
- The height of columns should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used – See ILP Guidance for the Reduction of Obtrusive Light.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1 minute) timers.

- As a last resort to minimise, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Planting

5.2.8 The proposal layout plans shows that there will be generous native planting, including the creation of a wildflower meadow, native hedgerows and new tree planting and enhancements to the pond edge. These new habitats to be created will provide better quality foraging habitat for bats than is currently present in the Site.

CHAPTER 6: CONCLUSIONS

Reptiles

6.1 A presence / likely absence survey is currently being undertaken to inform mitigation or management that may be required. An impact assessment has been provided in Chapter 2 of this report and an outline reptile mitigation strategy has been provided in Chapter 5 based on the current survey results. A detailed mitigation strategy with specific instructions for habitat enhancement and translocation will be drawn up once the results of the further surveys are known and a population size has been estimated.

Great crested newt

6.2 GCN has been confirmed present within one pond (P6) within a 100 - 150m radius of the Site. The risk of committing an offence is considered low due to the distance of the ponds and size of suitable of habitat on Site therefore no further population surveys of P6 or an EPSM licence from Natural England are required. However it is considered that the potential for injury/disturbance of GCN (as well as other amphibians that may be present) should be reduced and mitigated by implementing Natural England's Risk Avoidance Measures (RAM). A mitigation strategy has been provided in Chapter 5.

Bats

6.3 Two bat evening emergence surveys have been undertaken of the disused roundel B4 during the key maternity period (May – August) and no bat summer roost has been recorded in the building. No further recommendations in relation to summer roosting bats are considered necessary.

6.4 The roundel B4 has 'Low' potential for hibernating bats however it would not be possible to thoroughly survey the cavity walls for hibernating bats using standard methods such as an endoscope and high powered torch due to the extent of the wall cavity therefore the surveys would not give confidence in a negative result. No bat roost has been confirmed in the building therefore an EPSM licence is not required to permit the development work, however, mitigation and compensation for the loss of a potential hibernation roost will be required. A mitigation strategy has been outlined in Chapter 5 of this report.

Birds

6.5 Advice to avoid disturbance of breeding birds during the main breeding period (1st March-1st September) has been provided, relating to clearance of the vegetation and outbuildings. It is recommended that the building is checked for active birds nest by a suitably experienced ecologist prior to demolition. Mitigation for nesting birds has also been provided in this report, and this relates to the appropriate time of year to demolish the buildings. Kestrel, including fledgings, have been recorded using habitats within and adjacent to the Site therefore mitigation and compensation should be incorporated into the development through the provision of a feeding perch in one of the dwellings of a nest box on a retained tree.

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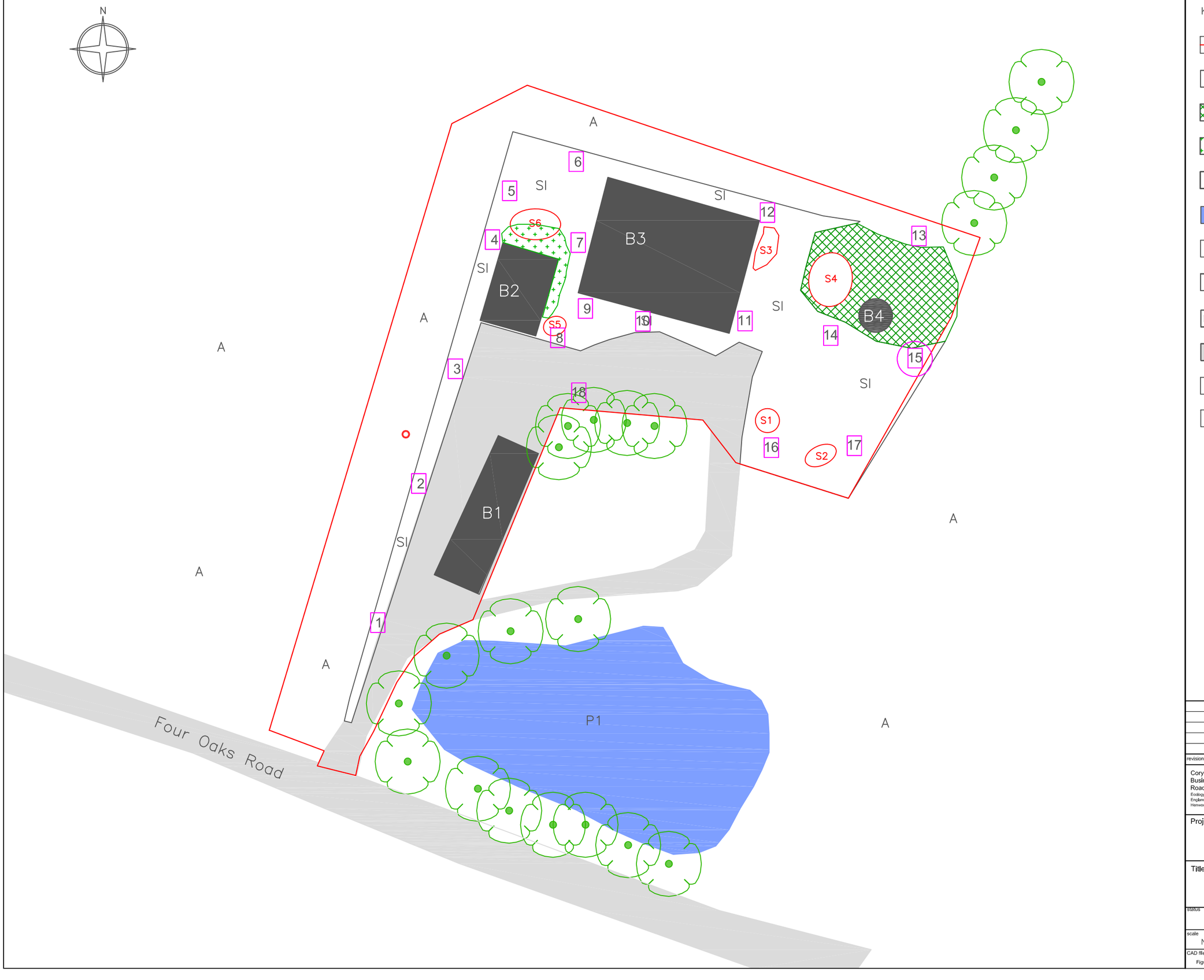


Key

- Site Survey Area
- Tree
- Dense Scrub
- Scattered Scrub
- SI — Semi-Improved Grassland
- Waterbody
- S — Spoil
- A — Arable Field
- Building
- Hard Standing
- 14 — Reptile Felt
- 14 — Reptile Record

revision	description	date	checked by

Corylus Ecology Ltd, Unit A3, Speldhurst Business Park, Went Farm, Langton Road, Speldhurst, Kent TN3 0NR Corylus Ecology is the trading name of Corylus Ecology Ltd registered in England, No 5005553, Registered Office: Henwood House, Henwood, Ashford, Kent TN24 8DH

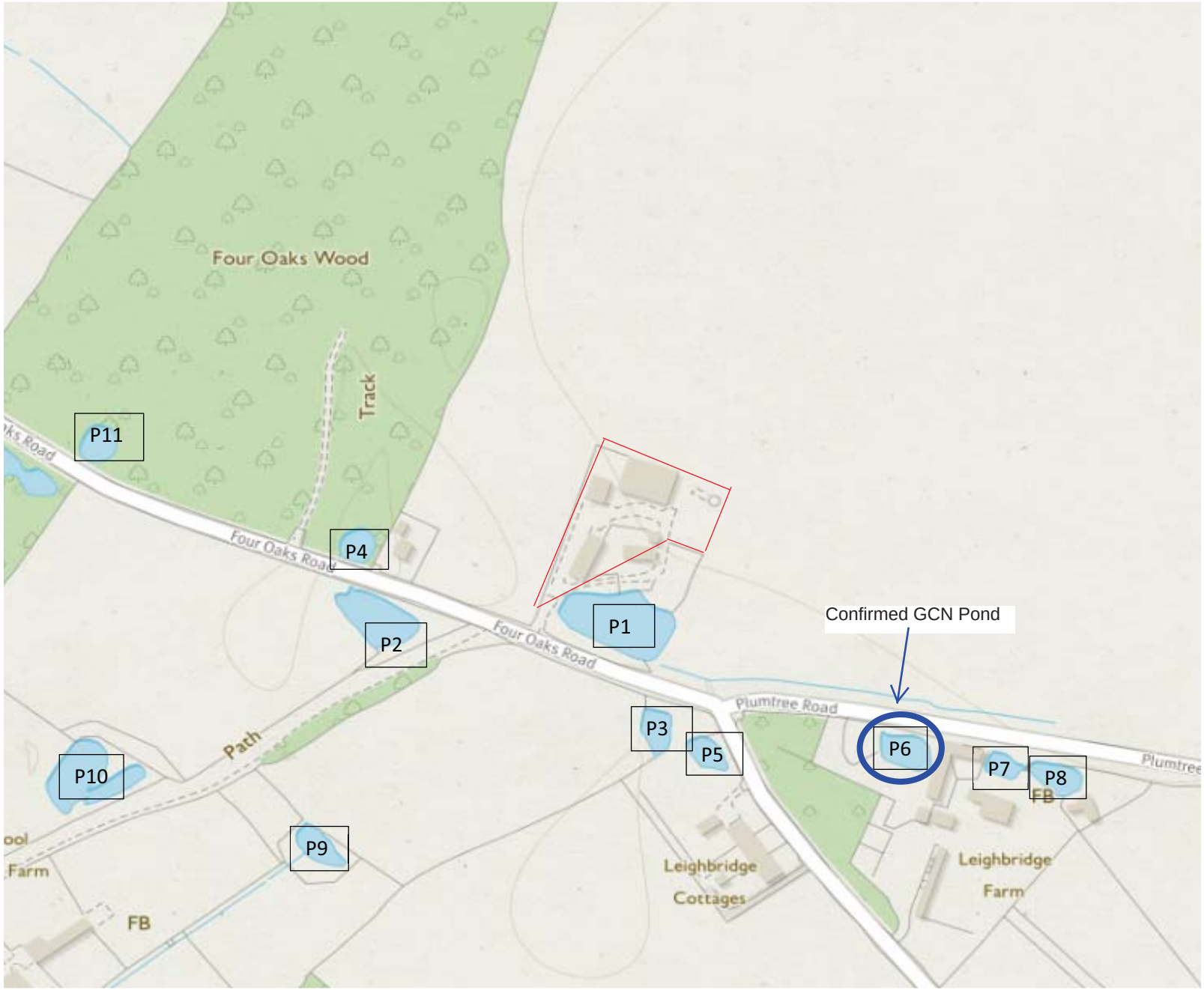
Project:
18056 Four Oaks Road, Headcorn

Title:
Reptile Plan

status	drawing no.			
	Figure 1			
scale	size	date	drawn	checked
NTS	A3	13.08.2020	LR	AW

CAD filename
Figure_1.dwg

Figure 2. Ponds within 250m of Site



OS Licence Number: 100050443

Figure 3. Migation Plan for Reptiles, GCN and Bats

Proposed Site Layout Plan
1:500 @ A3

0 5 10 15 20 25
Metres (1:500)

Key Plan

N

PLOT 1...3 Bed semi detached cottage
(2 No car spaces incl car barn)
PLOT 2...3 Bed semi detached cottage
(2 No car spaces incl car barn)
PLOT 3...4 Bed stables
(2 No car spaces incl car barns)
PLOT 4...4 Bed barn
(2 No car spaces incl car barn)
PLOT 5...4 Bed oast house
(2 No car spaces incl car barns)

EXISTING AGRICULTURAL BUILDINGS TO BE DEMOLISHED

Rev:	Reason:	Date:
B	Revisions at LPA request	JULY 2020
A	Access verge reduction	21.05.2020

Client:
MR R HAWKES & MS L ALEXANDER

Project:
FOUR OAKS, FOUR OAKS ROAD, HEADCORN, KENT, TN27 9PB

Title:
PROPOSED SITE LAYOUT PLAN

Drawing No:	Rev:	Scale:	Date:
DHA/14140/11	B	1:500	APR 2020

Eclipse House, Eclipse Park. Sittingbourne Road
Maidstone, Kent. ME14 3EN
t: 01622 776226 f: 01622 776227
e: info@dhaplanning.co.uk w: www.dhaplanning.co.uk

CAD Reference: DHA_13771_FOUR OAKS ROAD_CF08 A3

Appendix 1 - Reptile Legislation

All British reptiles are afforded legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) largely as a consequence of a national decline in numbers due to habitat loss. Under the terms of the Act, it is an offence to intentionally kill or injure a reptile and accordingly in order to avoid committing an offence under the Act, appropriate mitigation techniques need to be incorporated for reptiles occurring within development sites. Mitigation methods for reptiles may include trapping and relocation of animals to a suitable receptor site, combined with the exclusion of the development site through the use of reptile fencing. Measures to enhance habitats for reptiles include the provision of hibernacula and appropriate management to improve foraging areas may also be required.

Mitigation for the more common British reptiles and amphibians does not require a licence from Natural England but would typically be agreed in consultation with the local planning authority.

Despite the range of their distribution and the diversity of habitats in which they may be found, the national status of the slow worm is not considered favourable. The slow worm is considered to have undergone a long term decline since the 1930's. Currently the largest threat has been identified as loss of habitat, in particular, due to a shift in planning policy towards the development of brown field sites (English Nature, 2004).

Appendix 2 - Reptile Survey Results

Date	Species	Slow worm	Common Lizard	Grass Snake	Other	Weather conditions	
01/07/2020	Male					Time	15:00
	Female					Temp	19
	Adult Unknown					Cloud %	50%
	Sub					Rain	Dry
	Juv					Wind	BF2
	TOTAL	0	0	0			
	PEAK	0	0	0			
06/07/2020	Male					Time	15:10
	Female					Temp	18
	Adult Unknown					Cloud %	80%
	Sub					Rain	Dry
	Juv					Wind	BF1
	TOTAL	0	0	0			
	PEAK	0	0	0			
10/07/2020	Male					Time	15:40
	Female					Temp	18
	Adult Unknown					Cloud %	50%
	Sub					Rain	Dry
	Juv					Wind	BF1
	TOTAL	0	0	0			
	PEAK	0	0	0			
21/07/2020	Male					Time	09:45:00
	Female					Temp	17
	Adult Unknown					Cloud %	0%
	Sub					Rain	Dry
	Juv					Wind	BF0
	TOTAL	0	0	0			
	PEAK	0	0	0			
29/07/2020	Male					Time	10:20:00
	Female					Temp	17
	Adult Unknown			1		Cloud %	50%
	Sub					Rain	Dry
	Juv					Wind	BF2
	TOTAL	0	0	1			
	PEAK	0	0	1			
	Male					Time	
	Female					Temp	
	Adult Unknown					Cloud %	
	Sub					Rain	
	Juv					Wind	
	TOTAL	0	0	0			
	PEAK	0	0	0			
	Male					Time	
	Female					Temp	
	Adult Unknown					Cloud %	
	Sub					Rain	
	Juv					Wind	
	TOTAL						
	PEAK						

Appendix 3 – Amphibian Legislation

All British amphibian species receive legal protection in the United Kingdom though the degree to which different species are protected varies. The Wildlife and Countryside Act 1981 (WCA) (as amended) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The 1981 Act was recently amended by the Countryside and Rights of Way (CRoW) Act 2000 and the more recent Conservation Regulations (2007). The great crested newt is listed under Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt [Section 9(1)];
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9(2)]
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)];
- Intentionally or recklessly obstruct access to any structure or place which a great crested newt uses for shelter or protection [Section 9(4)(c)]Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell a great crested newt [section 9(5)]

The other more common amphibian species are protected against sale (Section 9(5)) only. In all cases, the legislation applies to all life stages including spawn, eggs, juveniles and adults.

The great crested newt is also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the UK ratifying this directive, the great crested newt is protected under The Conservation of Habitats and Species Regulations 2017 (The Conservation Regulations). Annex IV of the Habitats Directive requires member states to construct a system of protection as outlined in Article 12, this is done through Part 3 of the Regulations whereby Regulation 41 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 41(1)(a)];
- Deliberately disturb great crested newts in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young, OR ii) the local distribution of that species. [Regulation 41(1)(b) and 41(2)];
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 41(1)(d)].

Appendix 4 - HSI Results of Ponds within 250m

Pond 1

Location	1	1
Pond area	152	0.3
Pond drying	Rarely	0.9
Water quality	Moderate	0.67
Shade	70%	0.8
Fowl	Absent	1
Fish	Minor	0.33
Ponds	>12	1
Terr'l habitat	Moderate	0.67
Macrophytes	50%	0.8
HSI	average	0.69

P4

Location	1	1
Pond area	234	0.4
Pond drying	Sometimes	0.5
Water quality	Moderate	0.67
Shade	90%	0.4
Fowl	Absent	1
Fish	Absent	1
Ponds	>12	1
Terr'l habitat	Good	1
Macrophytes	0%	0.3
HSI	average	0.66

P6

Location	1	1
Pond area	414	0.8
Pond drying	Rarely	1
Water quality	Moderate	0.67
Shade	40%	1
Fowl	Minor	0.67
Fish	Possible	0.67
Ponds	>12	1
Terr'l habitat	Poor	0.33
Macrophytes	40%	0.7
HSI	good	0.75

P7

Location	1	1
Pond area	185	0.4
Pond drying	Rarely	0.9
Water quality	Moderate	0.67
Shade	70%	1
Fowl	Minor	0.67
Fish	Possible	0.67
Ponds	>12	1
Terr'l habitat	Moderate	0.67
Macrophytes	50%	0.8
HSI	good	0.75

P8

Location	1	1
Pond area	310	0.5
Pond drying	Never	0.9
Water quality	Moderate	0.67
Shade	60%	1
Fowl	Minor	0.67
Fish	Possible	0.67
Ponds	>12	1
Terr'l habitat	Moderate	0.67
Macrophytes	5%	0.35
HSI	good	0.71

P11

Location	1	1
Pond area	65	0.1
Pond drying	Sometimes	0.5
Water quality	Poor	0.33
Shade	100%	0.3
Fowl	Absent	1
Fish	Absent	1
Ponds	>12	1
Terr'l habitat	Good	1
Macrophytes	0%	0.3
HSI	below average	0.52

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

Report: 101542-1 Order number: 101542

Great Crested Newt eDNA Results

Company:	Corylus Ecology
Project code|Task code:	Four Oaks, Headcorn
Date of Report:	15 July 2020
Number of samples:	6

Thank you for sending your sample(s) for analysis by NatureMetrics. Your sample(s) have been processed in accordance with the protocol set out in Appendix 5 of Biggs et al. (2014).

DNA was precipitated via centrifugation at 14,000 x g and then extracted using Qiagen Blood and Tissue extraction kits.

qPCR amplification was carried out in 12 replicates per sample, using the primers and probe described by Biggs et al. (2014), in the presence of both positive and negative controls.

Results indicate GCN presence in 'P6'. No GCN were detected in 'P1 ', 'P4', 'P7' and 'P8'. All controls performed as expected and so the results are conclusive. Inhibition was detected in 'P11 ', which was not resolved with multiple rounds of DNA dilution as prescribed by Biggs et al. (2014), we therefore return this result as inconclusive.

Results are based on the samples as supplied by the client to the laboratory. Incorrect sampling methodology may affect the results. Note that a negative result does not preclude the presence of Great Crested Newts at a level below the limits of detection.

Sample	Pond ID	Arrived	Inhibition	Degradation	Score	GCN status
1987	'P1 '	01-Jul	No	No	0	Negative
1989	'P4'	01-Jul	No	No	0	Negative
1992	**'P6'**	**01-Jul**	**NA**	**No**	**1**	**Positive**
1990	'P7'	01-Jul	No	No	0	Negative
1988	'P8'	01-Jul	No	No	0	Negative
1991	'P11 '	01-Jul	Yes	No	0	Inconclusive

Amphibian Identification Sheet Appendix 6

GREAT CRESTED NEWTS (GCN)

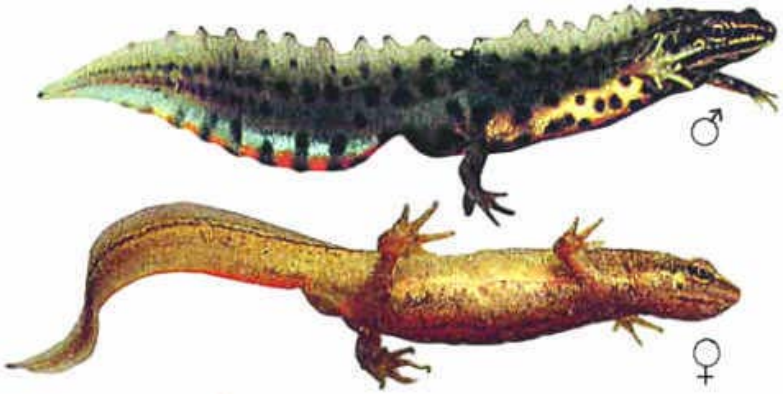
They measure up to 15cm in length. They have black skin and orange spotty bellies.

Male GCN have a white stripe on the tail. The females have an orange stripe.

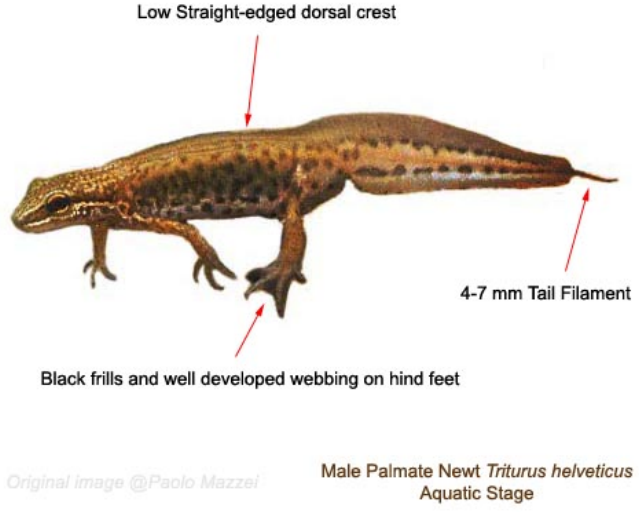
SMOOTH NEWTS

They measure up to 10cm in length. They tend to be more brown in colour but can vary from light, sandy brown to a darker grey.

Males have a crest like male GCN and tend to be more spotted.



PALMATE NEWTS



Palmate newts have a filament at the tip of their tail. They have bigger back feet.

COMMON TOAD

Common toads are more warty and dry-looking than frogs

COMMON FROG

Common frogs are a range of colours but are shiny looking

Toad

Juvenile GCN (black)

Smooth newt

Appendix 7 - Bat Legislation

All British bat species receive legal protection in the United Kingdom. The Wildlife and Countryside Act 1981 (WCA) (as amended) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The 1981 Act was recently amended by the Countryside and Rights of Way (CRoW) Act 2000 and the more recent Habitats Regulations amendments (2010). All British bat species are listed under Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure or take a bat [Section 9(1)];
- Possess or control any live or dead specimen or anything derived from a bat [Section 9(2)]
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)];
- Intentionally or recklessly obstructs access to any structure or place which a bat uses for shelter or protection [Section 9(4)(c)]
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell a bat [section 9(5)]

Bats are also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the UK ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2010 (The Conservation Regulations). Annex IV of the Habitats Directive requires member states to construct a system of protection as outlined in Article 12, this is done through Part 3 of the Regulations whereby Regulation 41 makes it an offence to:

- Deliberately capture, kill or injure a bat [Regulation 41(1)(a)];
- Deliberately disturb a bat in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young, OR
  ii) the local distribution of that species. [Regulation 41(1)(b) and 41(2)];
- Damage or destroy a breeding site or resting place of a bat [Regulation 41(1)(d)].

Under the law, a roost is any structure or place used for shelter or protection. This could be any structure, for example, any building or mature tree. Bats use many roost sites and feeding areas throughout the year. These vary according to bat age, condition, gender and species, as well as season and weather. Since bats tend to re-use the same roosts for generations, the roost is protected whether the bats are present or not.