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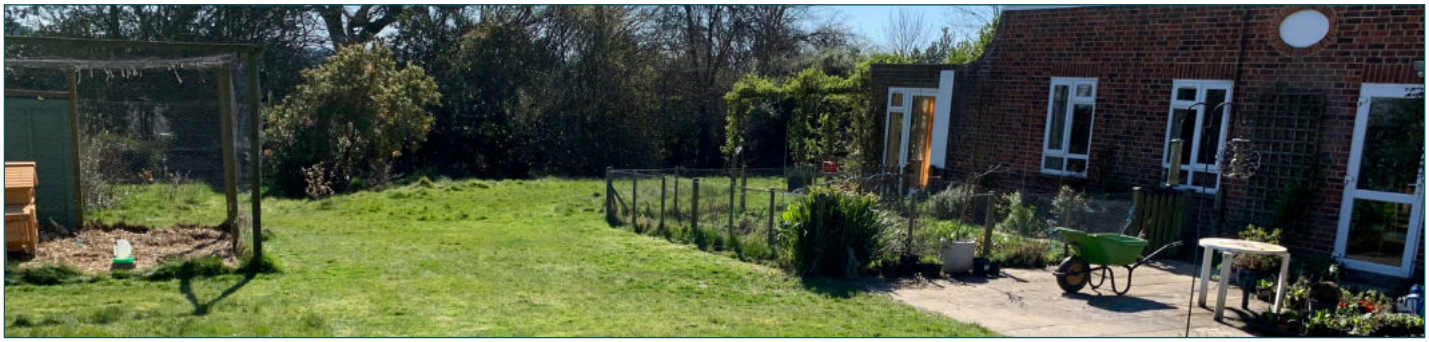

ECOLOGICAL IMPACT ASSESSMENT (ECIA)

THE VICARAGE

CRANBROOK, KENT

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Report status	Planning
Author	James Madden BSc MSc Grad CIEEM
Checked by	Amy Wright MSc BSc CEcol CIEEM
Revised	Revision A- 16th November 2022 Revision B- 23rd November 2022
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Revision issue	Revision A- Addition of revised proposed layout Revision B- Minor amendments to text

CONTENTS

1. SUMMARY

S.1 This report details an Ecological Impact Assessment (EcIA) undertaken in respect of proposed development at The Vicarage, Waterloo Road, Cranbrook, Kent, TN17 3JQ.

S.2 Proposals include the construction of 4no. residential dwellings with associated access and gardens. The existing house will not be impacted by proposals.

S.3 A Preliminary Ecological Appraisal (PEA) site visit was undertaken by Native Ecology on 25th March 2020. An update PEA site visit was undertaken on 23rd March 2022.

S.4 A reptile presence / likely absence survey was undertaken by Native Ecology in April 2020. No reptiles were found.

S.5 Natural England's District Level Licencing (DLL) scheme will be used to compensate for any potential impacts to great crested newt. A 'Conservation Payment Certificate' (CPC) document, obtained from Natural England with a countersigned agreement will be submitted with the Planning Application. On approval of Planning Permission, and prior to the start of works, the 'Conservation Payment' will be made to Natural England and a District Level Licence obtained.

S.6 Mitigation, without the requirement for further survey work, will be implemented for roosting bats (trees), foraging and commuting bats, hazel dormouse, badger, hedgehog, nesting birds and great crested newt (detailed within Section 12).

S.7 Section 13 includes appropriate biodiversity enhancement measures that will be included as part of development proposals.

S.8 Appendix 1 gives an overview of relevant legislation, which should be read in conjunction with this report. A Habitat Plan is provided in Appendix 3.

2. INTRODUCTION

2.1 This report details an Ecological Impact Assessment (EcIA) undertaken in respect of proposed development at The Vicarage, Waterloo Road, Cranbrook, Kent, TN17 3JQ (site centred TQ 77963 36382).

2.2 Figure 1, Section 3 and Figure 2, Section 4 provide site location plans.

COMMISSION

2.3 Native Ecology was commissioned by Hill-Wood & Co. Ltd in March 2020 to undertake a Preliminary Ecological Appraisal within the site and subsequent reptile presence / likely absence survey together with an Ecological Impact Assessment (EcIA) report.

APPLICATION SITE

2.4 The application site, hereafter referred to as 'the Site', comprises a single residential property, two outbuildings and associated mature gardens. Habitats comprise predominantly modified grassland, with planting beds. An area of introduced shrubs and scattered bramble scrub is present in the southern portion of the Site. A number of mature scattered trees are present within the Site and around the Site boundaries. A small lined garden pond is present in the rear garden.

2.5 The site extends to approximately 0.3ha. Figure 3, Section 5 provides an existing site plan.

PROPOSED WORKS

2.6 Proposals include the construction of 4no. residential dwellings with associated access and gardens. The existing house will not be impacted by proposals.

2.7 Figure 4, Section 6 provides an illustrative proposed site layout plan.

BACKGROUND

2.8 A Preliminary Ecological Appraisal was undertaken within the site by LaDellWood LLP on 30th July 2015 (LaDellWood, 2015). Subsequent survey work was undertaken for foraging and commuting bats and reptiles (LaDellWood, 2015a).

2.9 Two bat activity surveys were carried out in August and September 2015 showed that habitats within the site were utilised by low numbers of five bat species (LaDellWood LLP, 2015a).

2.10 A reptile presence / likely absence survey undertaken in September and October 2015 by LaDellWood LLP recorded no reptiles within the site (LaDellWood LLP, 2015a).

PURPOSE OF REPORT

2.11 This report aims to provide general advice on ecological constraints associated with proposed development within the site and includes recommendations for mitigation and further survey work, where required.

2.12 The objectives of the report are to:

- Review previous ecological surveys undertaken within the Site.
- Describe the current ecological conditions present within the site.
- Identify any key ecological constraints to the proposed development both with regards protected species and sites.
- Identify where mitigation will allow significant ecological effects to be avoided or minimised wherever possible.
- Identify any further ecological surveys required in order to assess the possible impact on protected and important / notable species.
- Recommend ecological enhancements to be incorporated into the development proposals.

3. SITE LOCATION PLAN

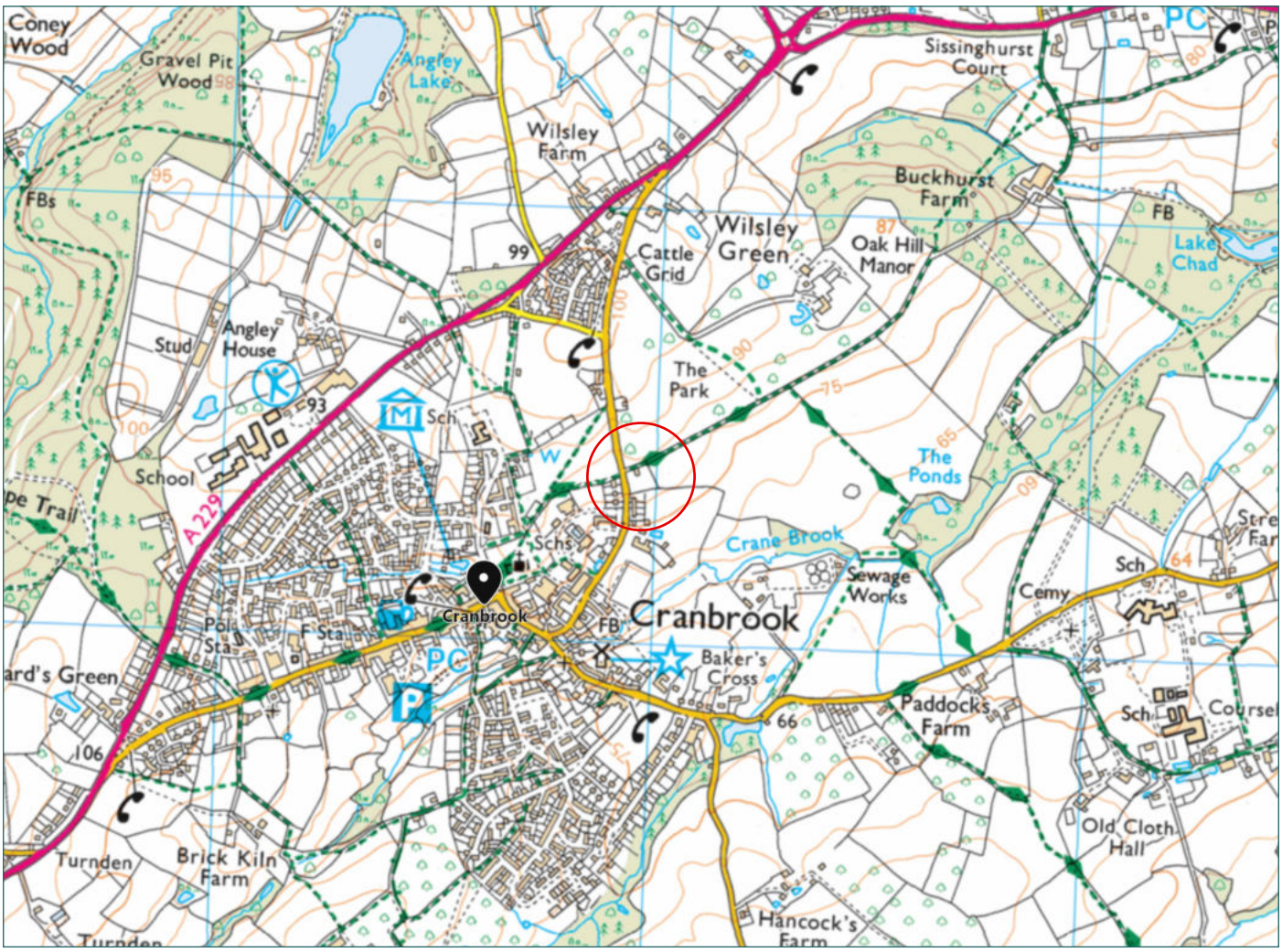

Figure 1: Location of development site. Reproduced from OS Explorer 136 1:25,000 Ordnance Survey © Crown copyright and database rights [2015] (Site centred TQ 77963 36382).

4. SITE LOCATION PLAN SHOWING APPLICATION SITE BOUNDARY

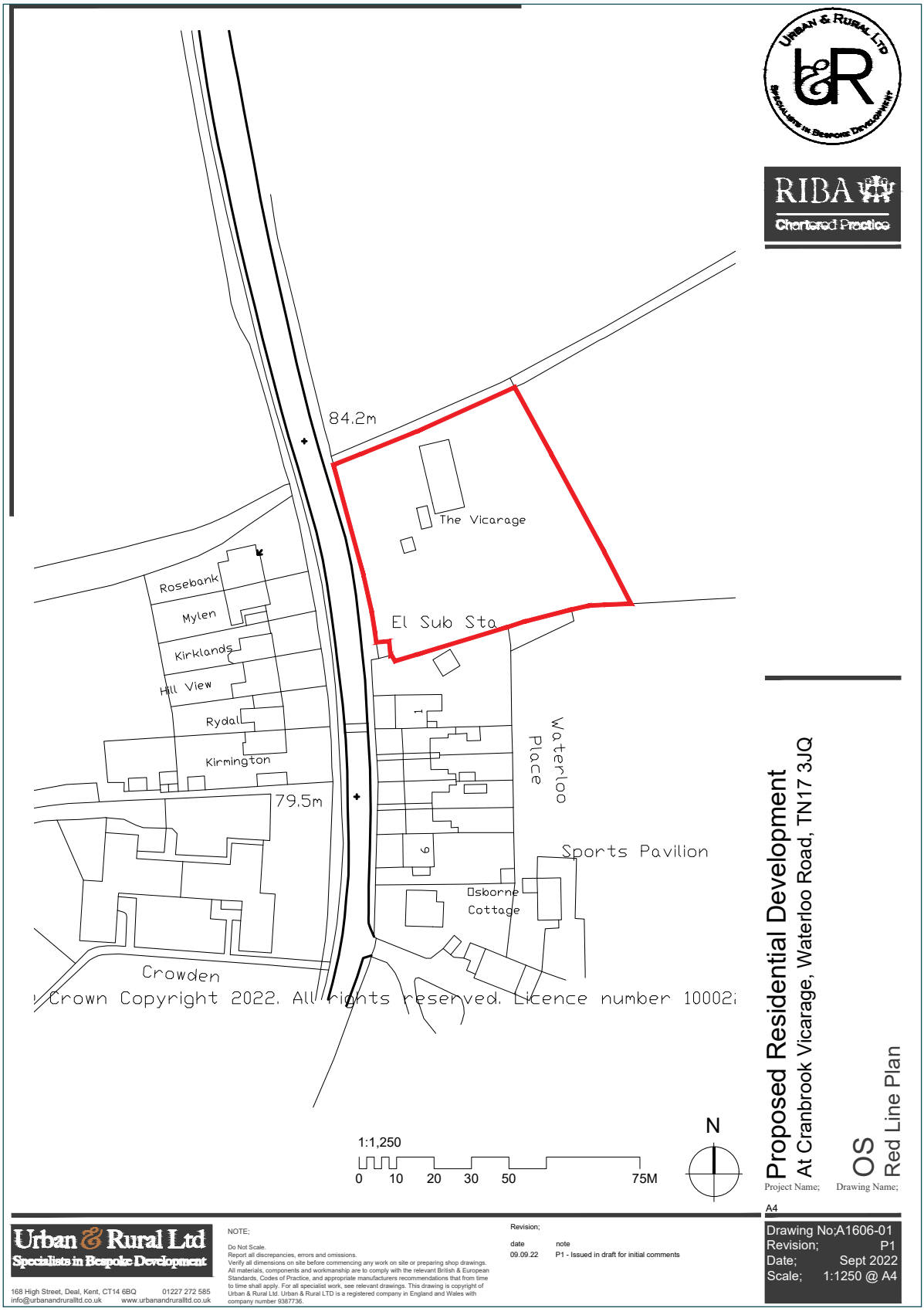

Figure 2: Site location plan showing application site boundary (Urban & Rural Ltd., Drawing no. A1606-01 P1, dated Sept 2022).

5. EXISTING SITE PLAN

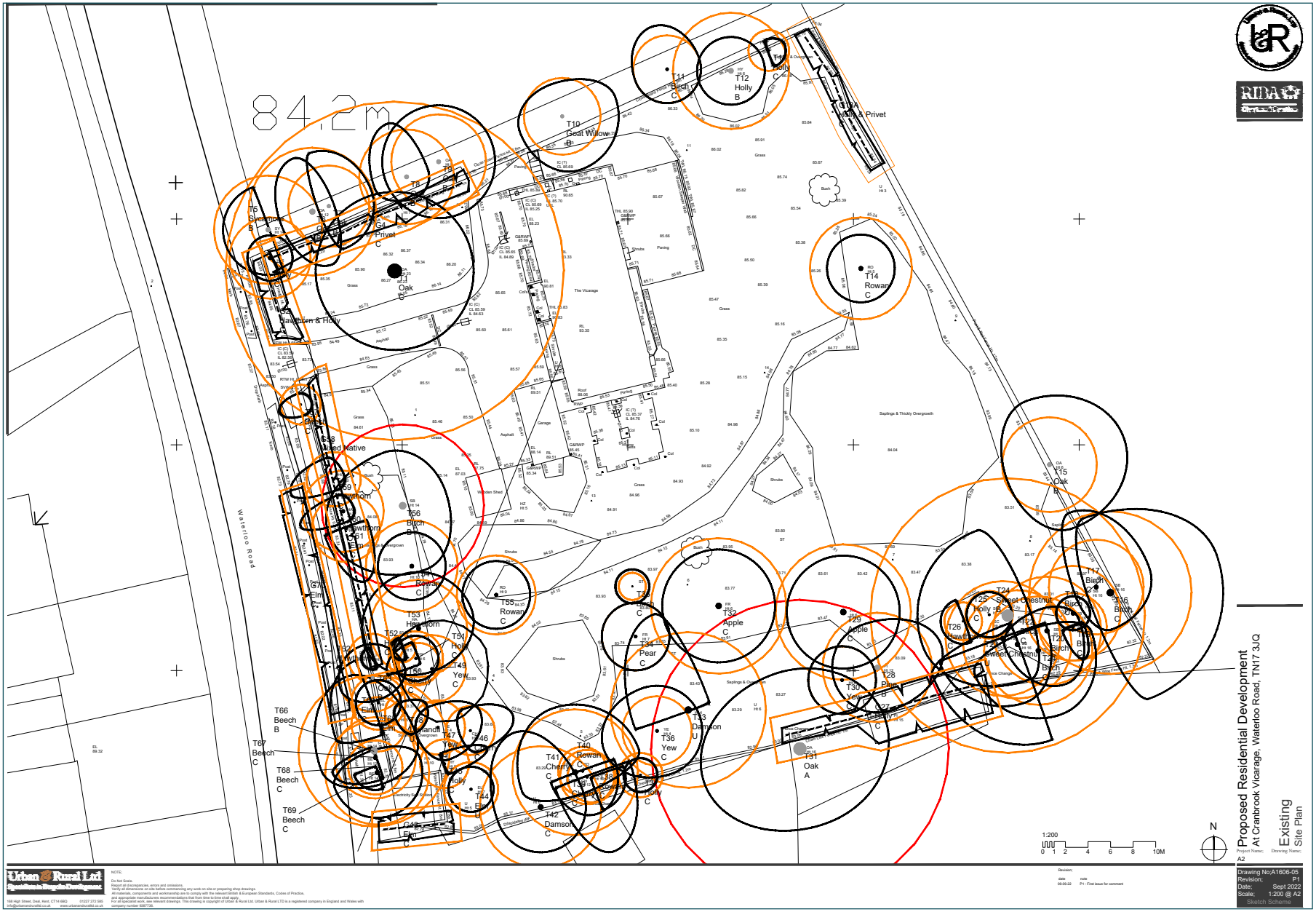

Figure 3: Existing site plan (Urban & Rural Ltd., Drawing no. A1606-05 P1, dated Sept 2022).

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6. PROPOSED SITE PLAN

Figure 4: Illustrative site plan (Urban & Rural Ltd., Drawing no. A1606-10 P3, dated Aug 2022).

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7. METHODOLOGY

PRELIMINARY ECOLOGICAL APPRAISAL

7.1 A Preliminary Ecological Appraisal site visit was undertaken by James Madden BSc MSc Grad CIEEM of Native Ecology on 25th March 2020.

Table 1. Survey details

Survey date	25th March 2020
Surveyor	James Madden BSc MSc Grad CIEEM
Time on site	11:50 - 13:00
Weather	11°C, 0% cloud cover, light breeze, no rain, ground dry

7.2 An update PEA site visit was undertaken by James Madden BSc MSc ACIEEM of Native Ecology on 23rd March 2022.

Table 2. Survey details

Survey date	23rd March 2022
Surveyor	James Madden BSc MSc ACIEEM
Time on site	11:40 - 12:30
Weather	13°C, 0% cloud cover, light breeze, no rain, ground dry

Zone of Influence

7.3 The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities (CIEEM, 2017a).

7.4 This report provides an assessment of the effects of a proposed development on protected or ecologically valuable sites, habitats or species where these effects extend beyond the development boundary of the site.

Designated sites

7.5 Potential impacts to designated sites, including Natura sites and SSSIs, have been considered.

7.6 The Multi Agency Geographic Information for the Countryside (MAGIC) website was used to obtain information about statutory designated sites of international importance such as Special Protection Areas (SPA) within 6km of the survey site.

7.7 Information was obtained about statutory designated sites of national importance such as Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) within 2km of the survey site and ancient woodland within 1km of the survey site.

7.8 Kent Landscape Information System (KLIS) was used to identify Local Sites, such as Local Wildlife Sites (LWS), located within 1km of the survey site.

UK Habitat Classification

7.9 Habitats within the Site were mapped and classified in accordance with the The Professional Edition of the UK Habitat Classification.

7.10 There are 5 levels of hierarchy, which provide an increasing level of detail. For the purpose of this assessment, habitats have been mapped for Primary Habitats up to Level 4.

7.11 Secondary codes have been assigned, where appropriate. In some cases, habitat types are defined by Secondary Code only, where Primary Habitats do not sufficiently represent the habitat present. These Secondary Codes allow recording of additional information, linked to the Primary Habitats.

Protected species and habitats

7.12 During the survey the species and habitats identified within the application site were recorded. An assessment was also made as to the presence or potential presence of protected, important or Nationally Rare species.

7.13 Protected species and habitats considered include those listed under the Schedules of the Conservation of Habitats and Species Regulations 2017 and of the Wildlife and Countryside Act 1981.

7.14 In addition, an assessment has been made as to the possible impacts of the proposed development on nature conservation interests, in accordance with information relevant to the National Planning Policy Framework and Local Planning Policy.

Preliminary Roost Assessment (bats)

7.15 A systematic search of the exterior of buildings to be impacted by proposals within the site was undertaken to identify potential bat access points and roosting places and to locate any evidence of bats such as bat droppings, urine staining and fur-oil staining. The inspection included exterior features of the buildings, such as sills, window panes, walls and the ground beneath potential access points to look for signs of bats, such as droppings.

7.16 The suitability of foraging and commuting habitat within the site was assessed following recommendations provided within Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition, Bat Conservation Trust (Collins, 2016).

Ground level preliminary roost assessment (trees)

7.17 A ground level preliminary roost assessment of trees was undertaken by Tara Hall BSc (Hons) ACIEEM of Native Ecology on 10th November 2022. The assessment included those trees to be removed to facilitate development proposals. The survey was undertaken in good weather conditions with no limitations to the survey.

Badger

7.18 During the site survey any badger field signs observed were recorded and mapped. These included:

- sett entrances;
- latrines;
- pathways;
- snuffle holes;
- footprints; and
- pushthroughs.

Reptiles

7.19 The suitability of habitats within the Site to support reptiles was assessed during the Preliminary Ecological Appraisal site visit. Any incidental sightings were recorded.

Great crested newt

7.20 The level of survey effort and data collection required to support a Planning Application or European Protected Species Mitigation (EPSM) Licence for great crested newts is relative to the potential impact. For EPSM Licence applications, typically ponds within 250m of the construction zone are surveyed for the presence (and population assessment) of great crested newts.

7.21 Following the guidance of Natural England (2015) waterbodies located beyond 250m from the development are only surveyed if all of the following conditions are met:

- ponds have potential to support a large great crested newt population;
- the development footprint contains particularly favourable habitat, especially if it constitutes the majority available locally;
- the development would have a substantial negative effect on that habitat; and
- there is an absence of dispersal barriers.

7.22 Based on the listed criteria above, a proportionate survey area for the Site includes the assessment of any ponds within 250m of the construction zone.

7.23 Ordnance survey maps, the Multi Agency Geographic Information for the Countryside (MAGIC) website and aerial images were used to identify waterbodies within 250m of the survey site boundary. MAGIC Map was also used to obtain information on locations where European Protected Species Mitigation (EPSM) Licences for great crested newt have been issued by Natural England within 1km of the Site.

Habitats and Species of Principal Importance

7.24 An assessment was made as to the likely presence of Habitats and Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and birds on the Red and Amber lists of birds of conservation concern.

REPTILE PRESENCE / LIKELY ABSENCE SURVEY

7.25 A presence / likely absence survey for reptiles was undertaken in April 2020.

7.26 Reptiles are ectothermic and use their immediate environment to regulate their body temperature. In order to raise their body temperature they either bask in direct sunlight in sloped and sunny positions within suitable habitat or they seek out objects that provide indirect radiation.

7.27 Artificial cover objects (ACOs), comprising bitumen roofing felt, corrugated coruline sheets and tins, were deployed within the Site and within any vegetation considered to provide suitable habitat for reptiles.

7.28 The thermal properties of the ACOs encourage basking reptiles and therefore provide an appropriate and quantitative method on which to base surveys.

7.29 14 ACOs were distributed within the Site on 25th March 2020 and left to 'bed in' prior to the first survey on 7th April 2020 (ACO locations shown in Figure 4, Section 9).

7.30 The ACOs, suitable basking spots and any other potential refugia within the Site were then checked for the presence of basking and sheltering reptiles during suitable weather conditions, with no precipitation.

7.31 Table 3 provides details of the dates and weather conditions for each survey. Surveys, were carried out by experienced surveyors with good knowledge of reptile identification and understanding of survey protocol.

Table 3: Survey details and weather conditions for survey of the Site.

Survey no.	Survey date	Surveyor	Survey time		Weather conditions	
			Start	End	Start	End
1	07.04.20	Kari Mcsherry	10:45	11:00	15°C, light air, 0 % cloud cover, ground damp, no rain	15°C, light air, 0 % cloud cover, ground damp, no rain
2	09.04.20	Kari Mcsherry	10:15	10:25	16.5°C, light breeze, 0 % cloud cover, damp ground, no rain	16.5°C, light breeze, 0 % cloud cover, damp ground, no rain
3	15.04.20	Kari Mcsherry	14:50	15:05	15°C, light breeze, 0 % cloud cover, dry, no rain	15°C, light breeze, 0 % cloud cover, dry, no rain
4	17.04.20	Kari Mcsherry	10:00	10:10	13°C, light breeze, 40 % cloud cover, damp ground, no rain	13°C, light breeze, 40 % cloud cover, damp ground, no rain
5	20.04.20	Kari Mcsherry	11:10	11:20	14.5°C, light breeze, 0 % cloud cover, damp ground, no rain	14.5°C, light breeze, 0 % cloud cover, damp ground, no rain
6	22.04.20	Kari Mcsherry	14:00	14:20	18°C, light breeze, 0 % cloud cover, damp ground, no rain	18°C, light breeze, 0 % cloud cover, damp ground, no rain
7	27.04.20	Kari Mcsherry	13:05	13:40	17.5°C, light breeze, 100 % cloud cover, damp ground,	18°C, light breeze, 80 % cloud cover, damp ground,

LIMITATIONS

7.32 In accordance with CIEEM guidance, consideration should be given to the validity of survey data after a period of 12 month from the date of the survey. This may require a site visit to assess whether ecological conditions within the site have changed and may require further ecological survey work due to the transient nature of some protected species.

7.33 Although the reptile presence / likely absence survey was undertaken in April 2020, the results are considered to be valid as the habitat conditions within the Site were found to have not significantly changed when the site was revised in March 2022. Reptiles are unlikely to have colonised the Site since April 2020 and no further survey work is required.

7.34 An internal inspection was not undertaken as part of the preliminary ecological appraisal site visit due to restrictions relating to the Covid-19 pandemic and therefore the suitability of the interior of the buildings for roosting bats could not be fully assessed. This is not considered a significant limitation as the house will not be impacted by proposals and the two outbuildings provide negligible suitability.

8. CURRENT ECOLOGICAL CONDITIONS

DESIGNATED SITES

Statutory Sites of International Importance

8.1 There are no statutory sites of international importance within 6km of the site boundary.

Statutory Sites of National Importance

8.2 There is one statutory sites of national importance within 2km of the Site:

- Crane Valley Local Nature Reserve (LNR) lies 0.7km south west of the site boundary.

8.3 The LNR comprises an area of a woodland and wet meadow supporting important and rare species such as large bittercress (*Cardamine amara),* ragged robin *(Lychnis flos-cuculi)*, long-horn bee (*Eucera longicornis*) and stone loach (*Barbatula barbatula)*.

8.4 It is unlikely that the proposed development will impact the LNR either directly or indirectly due to the distance between the sites and the small scale nature of the proposals. No further assessment or mitigation is proposed in relation to statutory sites.

Non-statutory sites

Local Sites

8.5 There are no Local Sites, such as Local Wildlife Sites (LWS), located within 1km of the site. No further assessment or mitigation is proposed in relation to non-statutory sites.

Ancient Woodland

8.6 There are no areas of ancient woodland located within 1km of the site boundary. No further assessment or mitigation is proposed in relation to ancient woodland.

HABITATS WITHIN THE SITE

Habitats of Principal Importance

8.7 There are no habitats of principal importance located within the Site.

Other habitats

8.8 Table 4 overleaf describes the habitats present within the Site in accordance with UK Habitat Classification. A Habitat Plan is provided in Appendix 3.

Table 4. Habitat types present within the Site, including level (UKHab), size and description.

Habitat Type				Description
Level 2 label	Level 3 label	Level 4 label	Secondary codes	
Grassland	Modified grassland	n/a	Mown Garden	The majority of the Site comprises short sward length, regularly mown, modified grassland (lawn). Species present include cock's-foot (*Dactylis glomerata*), perennial rye grass (*Lolium perenne*), ribwort plantain (*Plantago lanceolata*), creeping buttercup (*Ranunculus repens*), lesser celandine (*Ficaria verna*), dandelion (*taraxacum officinale agg.*) and ragwort (*Senecio jacobaea*). A section of the grassland within the southern portion of the Site comprises longer sward, less frequently cut grassland of the same type.
	n/a	n/a	Trees (within habitat parcel)	A mature oak (*Quercus sp.*) is located within the north-western corner of the site. Apple (Malus sp.) trees are present near to the southern Site boundary.
Heathland and shrub	Dense scrub	Bramble scrub	Scattered	A limited area of scattered bramble (*Rubus fruticosus*) scrub is present in the south-east corner of the Site.
	n/a	n/a	Trees (within habitat parcel)	Trees present in the southern portion of the site include sweet chestnut (*Castanea sativa*), oak, holly (*Ilex aquifolium*) and silver birch (*Betula pendula*).
Urban	Built-up areas and gardens	Developed land; sealed surface	Buildings	There are three buildings present within the site (for descriptions, see section relating to bats overleaf).
			Other developed land	There are areas of hard standing within the site associated with the buildings.
		n/a	Flower bed	Flower beds are present around the house.
			Introduced shrub	There are a number of introduced shrubs located within the site. Species include cherry laurel (*Prunus laurocerasus*), rhododendron, lonicera and buddleia (*Buddleia davidii*).
			Trees (within habitat parcel)	Trees present in the southern portion of the Site include sweet chestnut, oak, holly and silver birch.

Other habitat features

Compost pile

8.10 There is a compost pile located near to the southern Site boundary.

SURROUNDING HABITATS

8.11 The Site is located towards the north-eastern extents of the village of Cranbrook. The Site is bounded to the west by Waterloo Road, to the north by an area of parkland with scattered trees and to the south by housing with gardens and arable land. Arable land bounds the Site to the west.

8.12 The wider surrounding area comprises predominantly arable land bounded by hedgerows, with woodland patches. The residential area of Cranbrook lie to the south-west.

PROTECTED AND NOTABLE SPECIES

Bats - Roosting habitat

Buildings

8.13 There are three buildings present within the application site.

8.14 Building 1, comprising a two-storey brick-built house, will not be impacted by proposals and was not assessed for its suitability to support roosting bats.

8.15 Building 2 comprises a brick-built garage with a simple pitch, ceramic tiled roof. Plastic soffits are present on all elevations, including gable ends. The buildings possesses no potential roosting features and there are no access points. The building is assessed as providing roosting habitat of negligible suitability for bats.

8.16 Building 3 comprises a small timber shed. The roof comprises a plastic sheet. This structure is assessed as providing negligible suitability for roosting bats.

Trees

8.17 Proposals include the removal of a number of trees as detailed within the Tree Report submitted with the planning application (Tree ventures, BS5837 Tree Report, Ref: L830AIA dated 28/10/2022).

8.18 The ground level preliminary roost assessment found that none of the trees possessed potential roost features of greater than low suitability for bats (see Table 5 below).

Table 5: Results of ground level preliminary roost assessment of trees (continued overleaf).

Tree no.	Species	PRF	Suitability	Recommendations
32	Apple	None	Negligible	No mitigation required
34	Pear	None	Negligible	No mitigation required

Tree no.	Species	PRF	Suitability	Recommendations
35	Birch	None	Negligible	No mitigation required
36	Yew	None	Negligible	No mitigation required
41	Cherry	None	Negligible	No mitigation required
55	Rowan	None but Dense ivy obscuring main stem	Low	Precautionary measures when felling.
57	Beech	None	Negligible	No mitigation required
18	Birch	None but Dense ivy obscuring main stem	Low	Precautionary measures when felling.
23	Sweet chestnut	None but Dense ivy obscuring main stem	Low	Precautionary measures when felling.
33	Damson	Hollow stem approx 1m off ground. Horizontal feature, 50+cm long.	Low	Precautionary measures when felling.
44	Elm	None	Negligible	No mitigation required
48	Leyland cypress	None	Negligible	No mitigation required
62	Hawthorn	None	Negligible	No mitigation required

8.19 Roosting bats in trees are considered further in Section 11.

Foraging and commuting habitat

8.20 Bat activity survey work undertaken by LaDellWood LLP in August and September 2015 found habitats within the site were utilised by low numbers of five bat species (LaDellWood LLP, 2015a).

8.21 Habitats within the Site, including mature trees and introduced shrubs around the Site boundaries offer suitable foraging habitat for bats.

8.22 Foraging and commuting bats are considered further in Section 11.

Hazel dormouse

8.23 The mature trees, scattered bramble scrub and introduced shrubs within the southern portion of the Site provide a limited area of habitat suitability for dormice. These habitats are connected to other suitable habitat in the surrounding area by a tree and hedge line extending to the east.

8.24 This habitat is considered sub-optimal as the understorey below the tree canopies comprises predominantly cherry laurel and Rhododendron. There are records of dormouse within 2km of the site (LaDellWood, 2015).

8.25 Hazel dormouse are considered further in Section 11.

Riparian mammals

8.26 There is no habitat suitable for otter, beaver or water vole within, or in close proximity the site. No further survey work or mitigation is required for riparian mammals.

Badger

8.27 During the survey, no badger setts were recorded within the Site or within the accessible 30m of the Site boundary. During the reptile survey work, a badger latrine was found within the wooded area along the southern Site boundary.

8.28 Badger are considered further in Section 11.

Hedgehog

8.29 Habitats within the Site and surrounding area provide foraging and sheltering opportunities for hedgehog.

8.30 Hedgehog are considered further in Section 11.

Birds

8.31 Due to the habitats present, no Schedule 1 birds are expected to nest within the Site.

8.32 The Site includes areas of introduced shrubs and bramble scrub, which provides suitable nesting habitat for common and widespread bird species, as well as those listed as Red and Amber within the Birds of Conservation Concern, such as song thrush and dunnock. The presence of nesting birds within the timber garden shed cannot be ruled out.

8.33 Nesting birds are considered further in Section 11.

Reptiles

8.34 A reptile presence / likely absence survey undertaken in September and October 2015 by LaDellWood LLP recorded no reptiles within the Site (LaDellWood LLP, 2015a).

8.35 The areas of longer sward grassland and edge of scrub habitat within the Site, particularly within the south-eastern portion, continue to provide suitable reptile habitat.

Presence likely absence survey

8.36 No reptiles were found during the survey undertaken in April 2020, which was undertaken in good weather conditions within the survey season. Therefore, reptiles are likely absent from the site. A reptile survey plan is provided in Section 10.

8.37 Although the reptile presence / likely absence survey was undertaken in April 2020, the results are considered to be valid as the habitat conditions within the Site were found to have not significantly changed when the site was revised in March 2022. Reptiles are unlikely to have colonised the Site since April 2020 and no further survey work or mitigation is required.

Great crested newt

8.38 A small, recently excavated, lined garden pond is present within the south-eastern corner of the Site. (see Photograph 6, Section 9).

8.39 There are no waterbodies present within the Site boundary. According to OS maps and Magic Map there are two waterbodies (WB) located within 250m of the application site:

- WB1 is located approximately 100m south of the site within the grounds of Cranbrook School.
- WB2 is located approximately 170m south-west of the site within the grounds of Cranbrook School.

8.40 Habitats within the Site comprising scrub, shrub planting beds and grassland provide suitable habitat for great crested newt, if present.

8.41 Great crested newt are considered further in Section 11.

Invertebrates

8.42 The habitats within the Site provide suitable habitat to support a range of common and widespread invertebrates. Protected or rare invertebrates are unlikely to be present.

8.43 No further survey work or mitigation is recommended for invertebrates.

Flora

8.44 Due to the past and present management of the Site, the areas of habitat are unlikely to support protected plant species. No evidence of Schedule 9 plants was found during the Site survey.

8.45 No further survey work or mitigation is recommended for flora.

9. PHOTOGRAPHS

Photograph 1: Building 2 (brick-built garage).

Photograph 2: Building 3 (timber shed).

Photograph 3: Short, regularly cut modified grassland (lawn).

Photograph 4: Longer sward length grassland in southern portion of site.

Photograph 5: Compost pile, apple tree and introduced shrub near southern site boundary.

Photograph 6: Lined garden pond in south-east corner of Site.

10. REPTILE SURVEY PLAN

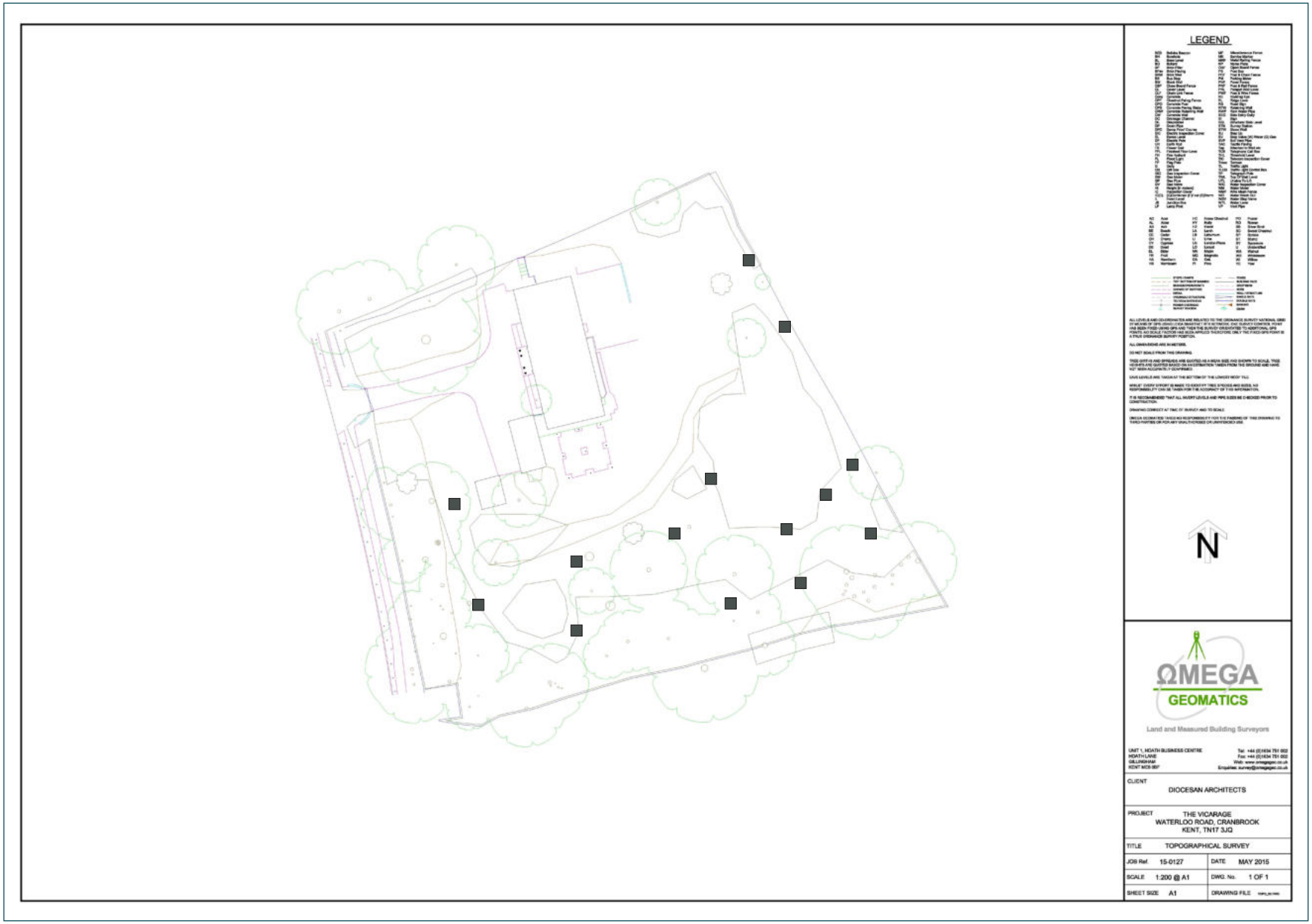

Figure 5: Reptile survey plan showing ACO locations in grey (Omega Geomatics Ltd, Dwg No. 15.0127_1 of 1, dated May 2015).

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11. ECOLOGICAL CONSTRAINTS

11.1 The potential impacts of the proposed development on those Ecological Features that have not been scoped out in Section 8 are considered below.

PROTECTED AND NOTABLE SPECIES

Bats - Roosting habitat (trees)

11.2 Trees T18, T23, T33 and T55 were found to provide low suitability for roosting bats. As these trees are to be removed to facilitate development, precautionary mitigation will be implemented as detailed in Section 12.

Foraging and commuting bats

11.3 Proposals do not include the severance of any potential foraging or commuting corridors for bats.

11.4 Habitats, including boundary trees, introduced shrub and scattered bramble scrub provide low suitability for foraging and commuting bats. The Site is relatively small with larger areas of suitable habitat, including woodland and hedgerows, present within the surrounding area, notably to the east. With the retention and enhancement of boundary vegetation, any potential impacts to foraging and commuting bats can be minimised.

11.5 Mitigation will be implemented to avoid impacts through the careful design of lighting (detailed within Section 12).

Hazel dormouse

11.6 The majority of suitable dormouse habitat within the Site will not be impacted by proposals. However, development proposals will result in the clearance of a small area of introduced shrubs, scattered bramble scrub around the southern edge of the construction area and a number of scattered trees within the Site. The majority of the construction area lies within the area of short, regularly cut grassland (lawn).

11.7 The removal of a small area of suitable habitat will not sever any habitat corridors, or impact habitat connectivity for dormice, if present within the locality. The removal of a small area of suitable dormouse habitat is very unlikely to impact the Favourable Conservation Status of dormice within the locality and the planting of native species hedgerows around the site boundary will ensure continued ecological functionality of habitat within the Site.

11.8 In the absence of suitable mitigation, indirect impacts to dormice through post-development external lighting are possible.

11.9 No further survey work is required for dormice. However, mitigation will be implemented to avoid impacts to retained habitats, minimise impacts during the removal of small patches of vegetation and avoid post development impacts through the use of external lighting (detailed in Section 12).

11.10 Section 13 outlines the ecological enhancement of the existing vegetation with native species hedgerow planting.

Badger

11.11 During the reptile survey, signs of badger, including a latrine, were found within the Site. No disused or active setts are present within the Site.

11.12 However, badger are a mobile species and may dig setts within the site or within 30m of the site boundary in the future. Therefore, precautionary mitigation will be implemented for badger pre-development and during construction to include a site walkover by an ecologist within three months of the start of works to check for the presence of active badger setts (detailed within Section 12).

Hedgehog

11.13 Development proposals are unlikely to impact on local hedgehog populations and therefore no further survey work is required. However, in the absence of suitable mitigation, individual hedgehogs may be harmed during works.

11.14 Precautionary mitigation will be implemented to reduce the risk of killing or injuring individual hedgehog (detailed within Section 12).

Nesting birds

11.15 The boundary trees, scrub, shrubs and buildings within the Site provide suitable nesting habitat for both common and widespread bird species as well as those included on Red and Amber lists within the Birds of Conservation Concern.

11.16 Given the relative small area of suitable bird nesting habitat within the site and the presence of significant areas of nesting habitat within the wider surrounding area, it is unlikely that development proposals will impact bird populations within the locality.

11.17 No further survey work for nesting birds is recommended.

11.18 Mitigation measures will be implemented to avoid impacts to nesting birds through the retention and enhancement of suitable nesting habitat as well as through timing of works (detailed within Section 12).

Great crested newt

11.19 The small garden pond present within the Site, although recently excavated, provides suitable aquatic habitat for great crested newt. In addition, two ponds are located within 250m of the Site boundary that may provide suitable aquatic habitat to support great crested newts.

11.20 Following the breeding season (March - June) when great crested newts congregate in ponds, they typically disperse throughout suitable habitat that is within 250m.

11.21 Due to the presence of a suitable within the Site, the presence of ponds within the surrounding landscape and the suitable terrestrial habitat within the Site, the presence of great crested newt within the Site cannot be ruled out.

11.22 Conventionally, presence / likely absence surveys would be required to determine whether the proposed development would impact on great crested newts. However, in March 2019 Natural England introduced the District Level Licence Scheme (DLL) in Kent for great crested newts. The DLL scheme removes the responsibility of site-specific survey and mitigation for great crested newts and instead provides off-site compensation with the aim of maintaining the Favourable Conservation Status of great crested newts on a District Scale.

11.23 Natural England's District Level Licencing (DLL) scheme will be used to compensate for any potential impacts to great crested newt. A 'Conservation Payment Certificate' (CPC) document, obtained from Natural England with a countersigned agreement will be submitted with the Planning Application. On approval of Planning Permission, and prior to the start of works, the 'Conservation Payment' will be made to Natural England and a District Level Licence obtained.

11.24 In addition, precautionary mitigation will be implemented to reduce the risk of the killing or injury of great crested newt during the construction phase (detailed in Section 12).

12. MITIGATION MEASURES

12.1 The mitigation measures detailed below will be implemented as part of development proposals to minimise any potential impacts to Ecological Features.

PROTECTED AND NOTABLE SPECIES

Bats - Roosting habitat (trees)

12.2 Precautionary mitigation is detailed below for the removal of trees T18, T23, T33 and T55 that will reduce the risk of the destruction of a bat roost or the killing or injury of individual bats from low to negligible.

- An endoscope inspection will be undertaken for the cavity at approximately 1m above ground level in T33 by a licenced bat ecologist immediately prior to felling to check for the presence of bats.
- The arborist who is to carry out works under the instruction of the Client will be alerted to the possibility of bats being present.
- The arborist will liaise with an appropriate Ecological Clerk of Works (ECoW) with respect to the need for vigilance during felling activities.
- Tree removal will be undertaken between late August and early October or between March and April (depending on the presence of nesting birds).
- Work will be undertaken in a sensitive manner. Any potential roost features identified will not be sawn. Any potential roost features within limbs will be lowered to the ground and left at the base of the tree for at least 48 hours.
- In the unlikely event that a bat is found during works, arboricultural works will cease and a licenced bat ecologist contacted immediately.

Foraging and commuting bats

12.3 In order to reduce a low potential, indirect impact on foraging and commuting bat to negligible, mitigation to reduce any effects of artificial lighting will be implemented, where applicable, in accordance with guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals (ILP, 2018).

- The boundary habitats, including the trees and introduced shrub along the southern site boundary will not be illuminated so that dark flight corridors for bats are retained. No additional lighting that illuminates the existing house will be installed.
- Any external lighting will be operated with motion sensors, where health and safety allows.
- Metal halide and fluorescent sources will not be used.
- A warm white spectrum (ideally 2700Kelvin) will be adopted to reduce the blue light component.
- LED luminaires will be used which have a sharp cut off and lower intensity to avoid light trespass.
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaries in close proximity to windows will be recessed, where possible, to reduce external glare and light spill.

- Column heights will be as low as possible to avoid unnecessary light spill.
- Luminaires will be mounted on the horizontal to avoid upward spill.
- Accessories such as baffles, hoods and louvres will be used to further reduce any light spill and direct it to where it is needed.

Hazel dormouse

12.4 In order to reduce any potential impacts to dormice from low to negligible, the following mitigation measures will be implemented:

- The retained trees and scrub that lines the southern Site boundary will be protected by Heras fencing (or similar) throughout the duration of construction works.
- A toolbox talk to site contractors by a suitably experienced ecologist will be undertaken at the start of any works.
- The small area of introduced shrubs and bramble scrub will be cut back in the period November - February to a height of 30cm from ground level during the hibernation period for dormice but prior to the bird nesting season.
- The remaining vegetation will then be cleared to ground level between Late May and September.
- Vegetation clearance will be carried out by hand and in a sensitive manner to minimise the potential harm to individual dormice and under supervision of a licenced dormouse ecologist (or their accredited agent).

12.5 Given that the area of vegetation clearance is small, if the above timetable of works is not possible then, as an alternative, works could be carried out during late September - October (outside of peak breeding season and prior to the hibernation period) as follows:

- The removal of vegetation will be carried out on successive days when dormice are active and able to respond immediately.
- The clearance works will be carried out by hand and will be combined with a search for nests.
- In the unlikely event that a dormouse nest is found, all works that may impact dormice will cease and an EPSM Licence from Natural England sought prior to the re-commencement of works.

12.6 To avoid potential post development impacts caused by lighting, the following mitigation will be implemented:

- Any external artificial lighting will be directed away from boundary vegetation.

Badger

12.7 The following mitigation will be implemented pre-construction works to ensure proposals do not impact badger setts:

- An ecologist should undertake a site walkover of the application site, to include suitable accessible land within 30m of the construction zone (access permitting), to check for any newly dug badger setts.
- If an active badger sett is found, it may be necessary to obtain a badger mitigation licence from Natural England prior to the start of works.

12.8 The following mitigation will be implemented during construction works to avoid harm to individual badgers:

- All holes and excavations will be covered over each night to prevent animals from being trapped or injured.
- If this is not possible, a structure/plank will be placed into the hole to enable animals to escape.

Hedgehog

12.9 The following mitigation will be implemented for hedgehog during the clearance of vegetation within the application site in order to avoid harm to individual animals:

- Care must be taken when clearing vegetation to avoid harming hedgehog that may be sheltering within the site:
  - If a hedgehog is found (without young) within the site between April and October inclusive then it should be carefully relocated to an area outside the development site that offers immediate shelter.
  - If a nesting hedgehog with young is found between May and October inclusive (breeding season) then an ecologist should be contacted immediately for advice.
  - If a hibernating hedgehog is found between November and March inclusive (hibernation season) then an ecologist should be contacted immediately for advice.

12.10 The following mitigation will be implemented for hedgehog during the construction phase:

- All holes and excavations will be covered over each night to prevent animals from being trapped or injured.
- If this is not possible, a structure/plank will be placed into the hole to enable animals to escape.
- Any removal of building materials or other debris, will be undertaken with care to prevent harm to hedgehog.
- If any hedgehogs are found during the construction phase they will be carefully relocated to an area outside the development site that offers immediate shelter.

12.11 The following mitigation will be implemented for hedgehog post-development:

- Any close board fencing to be used will be fitted with small openings within gravel boards to allow hedgehogs access throughout the Site. At least one entrance hole will be fitted into each boundary.

Nesting birds

12.12 The following mitigation will be implemented to avoid impact to nesting birds:

- Works to any vegetation and demolition of buildings will be undertaken outside of the bird nesting season where ever possible.

12.13 Should impacts to vegetation and buildings be unavoidable between March and September, then the following mitigation will be undertaken:

- A nesting bird survey will be undertaken by a suitably experienced ecologist within at least 48hours prior to any impacts to vegetation.
- A watching brief will be carried out by a suitably experienced ecologist during any works that impact suitable vegetation within the site.
- If nesting/nest-building birds are found, no works will commence/continue that are likely to damage or significantly disturb a nest until the young have fully fledged.

Works undertaken during the bird nesting season may result in significant delays to the development programme should activities need to cease due the presence of an active nest. It should be noted that some bird species, such as blackbirds and robins are multiple brooders and may therefore nest within the Site for a number of months.

Great crested newt

12.14 It is recommended that the following precautionary mitigation (in addition to the DLL) is implemented to reduce the risk of killing or injuring great crested newt during the construction phase from very low to negligible:

- The grass within the construction zone should continue to be regularly mown at a short sward height prior to and during the construction phase.
- Ground works should be completed in as short a time-scale as possible so that spoil heaps are not left on-site for long periods.

13. ECOLOGICAL ENHANCEMENT MEASURES

13.1 The following ecological enhancement measures are included within the proposals, in addition to the retention of boundary tree and scrub habitats.

HEDGEROW CREATION

13.2 Native species-rich hedgerows will be created along Site boundaries and around boundaries of properties. Species could include hazel, hawthorn, spindle, holly, yew, privet, field rose, dog rose and guelder rose.

13.3 Flowering species, such hawthorn, privet and rose would provide opportunities for nectar feeding invertebrates, such as bumblebees, hover flies and butterflies. Creation of these habitat feature will also benefit bats by providing additional foraging habitat and birds through additional nesting habitat.

NATIVE AND NECTAR RICH PLANTING PLAN

13.4 Planting plans around new buildings will include native, flower rich species, including those that flower in the late and early seasons to enhance the biodiversity value of the site.

13.5 The inclusion of climbing plants will add sheltering opportunities for invertebrates and birds. They can also produce nectar rich flowers for butterflies, bees and hover flies and fruit for birds and small mammals.

13.6 The inclusion of herbs, such as lavender and sage, will provide nectar for an array of invertebrate species, including bees, butterflies and moths. Providing a range of herb plants will ensure flowering throughout the seasons. The inclusion of plants that produce scent at night will attract night flying invertebrates and as such may also provide foraging opportunities for bats.

BAT BOXES

13.7 Development provides an opportunity to enhance the site for bats via provision of roosting opportunities.

13.8 4no. integrated bat boxes, such as a 1FR Schwegler Bat Tube, or similar, will be installed on new buildings within the site (one per building). Integrated bat boxes will be primarily located on the south and west facing aspects but can also be installed on different elevations to provide a variety of different environmental roost conditions.

BIRD BOXES

13.9 4no. boxes suitable for garden birds (1B Schwegler nest box) and open nest boxes (Schwegler open fronted robin box) will be installed, at a height of at least 2m on suitable retained vegetation. Boxes with different sized holes will encourage different species to occupy the boxes. In addition, 4no. house sparrow terraces (one per building) will integrated into new houses.

14. REFERENCES

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- Institute of Lighting Professionals & Bat Conservation Trust (2018). Bats and artificial lighting in the UK. Bats and the built environment series. Guidance Note 08/18.
- LadellWood LLP (2015). Preliminary Ecological Appraisal. LaDellWood LLP, dated 16th October 2015.
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- UK Habitat Classification Working Group (2018). UK Habitats Classification - Habitat Definitions V1.0 at http://ecountability.co.uk/ukhabitatworkinggroup-ukhab.
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- UK Biodiversity Action Plan; Priority Habitat Descriptions. BRIG (ed. Ant Maddock) 2008.

15. APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION

15.1 Species afforded protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 are also known as European Protected Species. European Protected Species include all species of bats, hazel dormice and great crested newt.

15.2 European Protected Species relate to those listed within the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and are afforded the highest level of protection. These species are also protected under the Wildlife and Countryside Act 1981. Taken together this level of protection makes it an offence to:

- deliberately capture, injure or kill any wild animal of a European protected species,
- deliberately disturb wild animals of any such species
- deliberately take or destroy the eggs of such an animal
- damage or destroy a breeding site or resting place of such an animal

15.3 Disturbance of animals includes in particular any disturbance which is likely:

- to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or
- in the case of animals of a hibernating or migratory species, impair their ability to hibernate or migrate
- to affect significantly the local distribution or abundance of the species to which they belong

15.4 The legislation requires that any derogation be dealt with by licencing through an appropriate licencing body (Natural England in England). In determining whether a licence can be granted the licencing body must apply the requirements of Regulation 53, and in particular, the three tests:

1. Regulation 55(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment".

2. Regulation 55(9) states: The relevant licensing body must not grant a licence under this regulation unless it is satisfied—
(a) that there is no satisfactory alternative; and
(b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

PLANTS

15.5 A number of plant species are protected under Schedule 8 of the Wildlife and Countryside Act 1981. This Schedule lists plant species that are protected under Section 13, which protects from picking and sale of plants or parts of plants listed in Schedule 8.

BIRDS

15.6 All nesting birds are protected under the Wildlife and Countryside Act 1981. With certain exceptions, it is an offence to:

- Kill, injure or take wild birds;
- Take, damage or destroy the nest of wild birds while in use or being built;
- Take or destroy the eggs of wild birds;
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Birds of Conservation Concern

15.7 After reviewing the status of all bird species in the UK, the leading non-governmental bird conservation organisations agreed priorities for bird conservation. This lead to the publication of a list of Birds of Conservation Concern. Bird species are either listed as red, amber or green, depending on their status and conservation objectives. Birds listed as red require urgent, effective conservation action.

BADGERS

15.8 Badgers are protected under the Protection of Badgers Act 1992. Under this legislation it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so).
- Cruelly ill-treat a badger.
- Dig for a badger.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.
- Cause a dog to enter a badger sett.
- Disturb a badger when it is occupying a sett.

COMMON REPTILES

15.9 All common and widespread reptiles, which include viviparous lizard, slow worm, grass snake and adder are protected under the Wildlife and Countryside Act 1981. This makes it an offence to:

- Intentionally or recklessly kill or injure reptiles
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell any reptile.

INVERTEBRATES

15.10 A small number of invertebrates are protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, relating to the designation of SACs, including white-clawed crayfish and Desmoulin's whorl snail.

15.11 A number of invertebrate species also protected under the Wildlife and Countryside Act, such as the heath fritillary and fairy shrimp. Species listed under Schedule 5 are protected from one, some or all of the following:

- Intentional killing, injuring, taking
- Possession or control (live or dead animal, part or derivative)
- Damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection
- Disturbance of animal occupying such a structure or place
- Offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative)
- Advertising for buying or selling live or dead animal, part or derivative

STATUTORY PROTECTED SITES

15.12 Special Protection Areas and Special Areas of Conservation are protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

15.13 Sites of special scientific interest (SSSIs) are protected under the Wildlife and Countryside Act 1981. Natural England is responsible for notifying SSSIs, ensuring they are managed appropriately and assessing and monitoring their condition.

15.14 National Nature reserves are created to protect important wildlife habitats, while also providing a resource for scientific research and recreation. Declared under the National Parks and Access to the Countryside and the Wildlife and Countryside Act 1981.

NON-STATUTORY PROTECTED SITES

Ancient Woodland

15.15 Land with continuous woodland cover since at least 1600AD. Ancient woods are recognised in UK planning policy, but do not have statutory protection.

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT 2006

15.16 Following consultation with Natural England, the Secretary of State identified species and habitats considered to be of principal importance for the conservation of biological diversity in England. These species and habitats are listed under Section 41 of the Act . The list is to be kept under review and revisions are made as necessary as part of the progress reports on the Biodiversity Strategy for England.

15.17 Following the Biological Diversity in Japan, 2012, a new initiative in England, ‘Biodiversity 2020’, replaced the former UK Biodiversity Action Plan Species aiming to reinforce the protection of Section 41 habitats and species.

THE NATIONAL PLANNING POLICY FRAMEWORK

15.18 The National Planning Policy Framework was revised in July 2021 and sets out the Government's planning policies for England and how these are expected to be applied. Within this document, Chapter 15 is titled Conserving and Enhancing the Natural Environment.

15.19 Of particular relevance within this chapter are the following statements:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*

To protect and enhance biodiversity and geodiversity, plans should:

- *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*

When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

16. APPENDIX 2: SUITABILITY ASSESSMENT OF ROOSTING HABITAT (STRUCTURES AND TREES)

Table 6: Assessing potential suitability of roosting habitat (structures and trees) for bats and survey effort required. Adapted from Bat Surveys for Professional Ecologists, Good Practice Guidelines 3rd Edition (Collins, 2016).

Suitability	Description of roosting habitat	Survey effort* and timing
Negligible	Negligible habitat features on site likely to be used by roosting bats.	None required.
Low	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	**Buildings/structures:** One survey visit. One dusk emergence or dawn re-entry survey. Timing: May to August. **Trees:** None required.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. Surveys should be spaced a minimum of two weeks apart. Timing: May to September with at least one survey undertaken between May - August.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. Surveys should be spaced a minimum of two weeks apart. Timing: May to September with at least two surveys undertaken between May - August.

* Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures and trees.

17. APPENDIX 3: HABITAT PLAN

See overleaf

TARGET NOTES

T1 Building 1 (house).

T2 Building 2 (garage).

T3 Building 3 (shed).

T4 Garden pond.

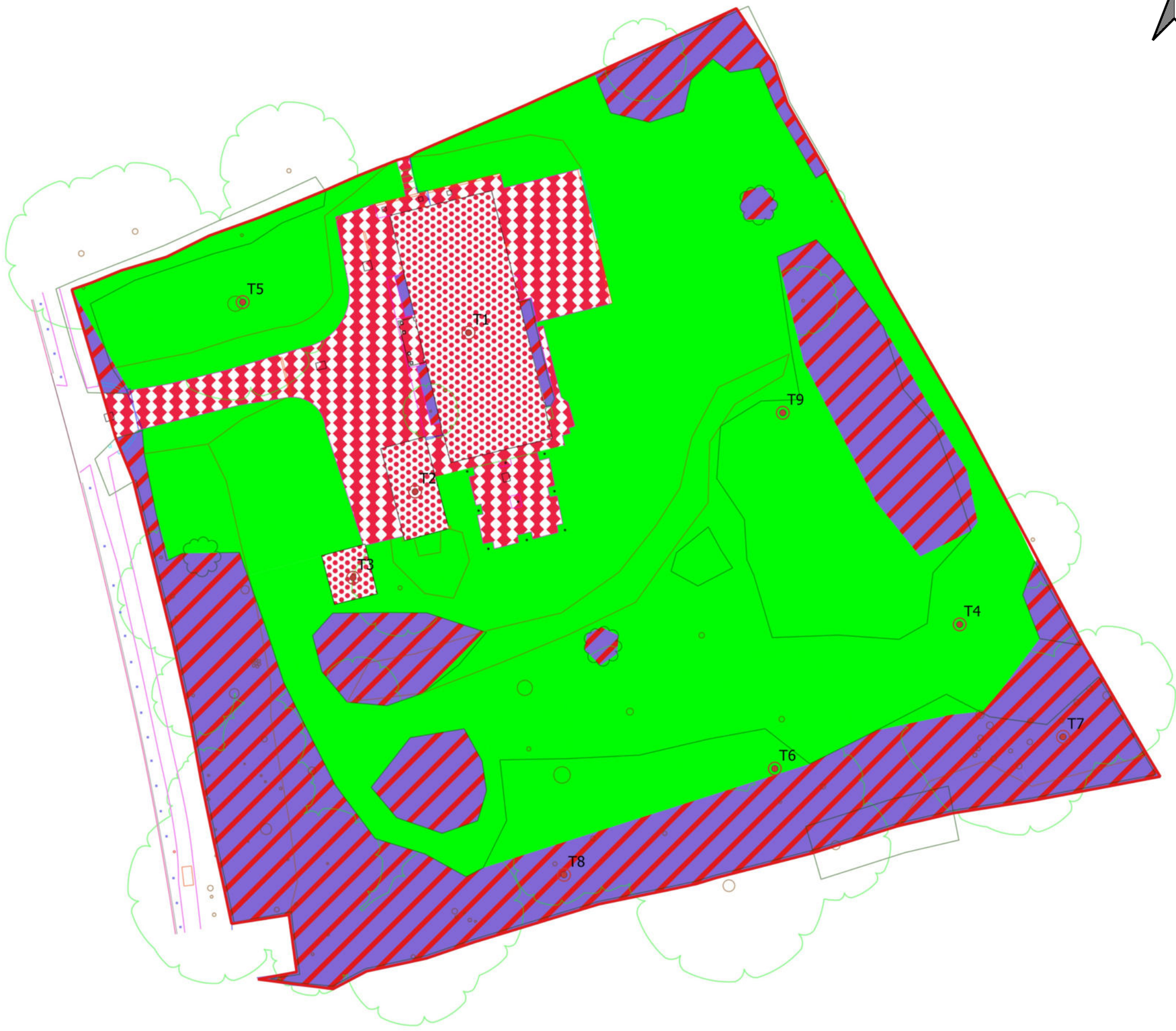
T5 Mature oak.

T6 Compost piles.

T7 Area of scattered bramble scrub.

T8 Introduced shrubs under mature tree canopies.

T9 Chicken coup.



Legend:

- g4 - Modified grassland
- Dense scrub and introduced shrub
- u1b5 - Buildings
- u1b6 - Other developed land
- Target note
- Site boundary

native ecology

Habitat Plan

The Vicarage
Waterloo Road
Cranbrook, Kent

Drawing ref:	0482_DR01_REV A
Revision:	-
Date:	23/11/2022
Scale:	1:300
Paper size:	A3