Ecological Impact Assessment

February 2025

Stonehouse Farm, Handcross

Prepared by
CSA Environmental

On behalf of
Lake Investments Ltd

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CSA environmental

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This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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EXECUTIVE SUMMARY

Development is proposed at Stonehouse Farm, Horsham, for which planning permission is sought. A full planning application will be submitted, for mixed use development at three areas within the Stonehouse Farm landholding (referred to as Stonehouse Business Park, Anaerobic Digester (AD) Plant and Main Livestock Building and Jackson's Ridge). The application shall include rationalisation of existing commercial buildings (Stonehouse Business Park), decommissioning and change of use of an existing Anaerobic Digestor facility (Anaerobic Digester (AD) Plant and Main Livestock Building) and demolition existing agricultural buildings and replacement with residential development of three units (Jackson's Ridge).

CSA Environmental was instructed by Lake Investments Ltd to undertake an Ecological Impact Assessment (EcIA) of the proposed developments. To inform this assessment, a desktop study followed by a suite of targeted species and habitat surveys were undertaken.

All three areas within the Application Site consist largely of existing agricultural buildings or commercial units, with small parcels of grassland or scrub habitat, bound by hedgerows and/or tree lines. The proposed schemes seek to retain hedgerows and other habitats wherever practicable, with some compensatory planting provided off-Site where necessary to meet Biodiversity Net Gain requirements.

Bat surveys completed within Stonehouse Business Park identified common species utilising the site, and a potential feeding perch within Building B4. Great crested newt have been confirmed to be present within two ponds within the dispersible distances from 'Stonehouse Business Park' and 'Anaerobic Digester (AD) Plant and Main Livestock Building'. Low potential for hazel dormice, barn owl and reptiles has been identified across the Application Area, although the potential for any adverse impacts is considered to be limited. Mitigation has been proposed to address potential impacts to these protected species to ensure compliance with applicable legislation.

Opportunities for ecological enhancement may be secured by planning condition. New habitat creation is proposed to include grassland creation, hedgerow and tree planting, and the incorporation of wildlife boxes within the schemes where possible. Off-site requirements to meet Biodiversity Net Gain obligations have been identified where applicable.

Based on successful implementation of the proposed avoidance, mitigation and enhancement, the development is not anticipated to result in any significant residual negative effects on important ecological features / protected species. The scheme is considered to accord with all relevant nature conservation legislation, as well as with the provisions of Policy 31 of the Horsham District Planning Policy Framework (2015).

1.0 INTRODUCTION

This report has been prepared by CSA Environmental on behalf of Lake Investments Ltd. It sets out the findings of an Ecological Impact Assessment (EcIA) of proposed development at Stonehouse Farm, Handcross (hereafter 'the Site'), for which planning permission is sought.

1.1 A full planning application will be submitted, consisting of three application areas within the Stonehouse Farm landholding. These are referred to as 'Stonehouse Business Park', 'Anaerobic Digester (AD) Plant and Main Livestock Building' and 'Jackson's Ridge'. A Site Wide Masterplan (CSA/6746/111/H) has been prepared to show how these proposed development areas relate to one another, and highting future aspirations for habitat creation and enhancement across the wider landholding.

1.2 The scope of this assessment has been determined with consideration of best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).

1.3 Stonehouse Farm is located at central grid reference TQ 22998 28157, to the west of Handcross, Horsham. Stonehouse Business Park occupies an area of 1.08ha within the south-east of Stonehouse Farm, and consists of several commercial units, largely surrounded by hardstanding (see Stonehouse Business Park Habitats Plan (CSA/6476/102/C). the Anaerobic Digester (AD) Plant and Main Livestock Building occupies an area of 2.64ha within the south-west of Stonehouse Farm, and consists agricultural buildings, previously used for livestock and to house an anaerobic digestor facility (no longer in current use), surrounded by hard-standing and with parcels of grassland and sparsely vegetated land (see Anaerobic Digester (AD) Plant and Main Livestock Building Habitats Plan (CSA/6476/118/B). Jackson's Ridge occupies an area of 0.49ha and consists of a complex of redundant farm buildings, surrounded by hardstanding, sparsely vegetated land and scrub (see Jackson's Ridge Habitats Plan (CSA/6746/120/B). The wider Stonehouse Farm landholding is dominated by open fields (pasture), with scattered

1.4 parcels of woodland connected by a network of field boundary hedgerows. A stream runs though the centre of the site (flowing east-west) along the valley bottom.

An initial desk study and field survey, including a UK Habitat Classification survey were undertaken for the Application Site in January 2024 as part of a Preliminary Ecological Appraisal (PEA), the findings of which are presented herein. In addition, the following further survey work was undertaken between May and July 2024:

- Detailed botanical survey (July 2024)
- Bat surveys (June 2024)
- Barn Owl survey (May 2024)

- Great crested newt survey (May 2024)

This EcIA aims to:

- Establish baseline ecological conditions at the Site.
- Determine the importance of ecological features which could be affected by the proposed scheme.

1.5

- Identify any likely significant impacts or effects of the proposed development on important ecological features, in the absence of mitigation, including cumulative impacts.
- Set out any measures necessary to effectively avoid or mitigate likely significant effects, and identify residual impacts.
- Identify any compensation measures required to offset residual impacts.
- Set out potential ecological enhancement measures that may be secured by the proposed scheme
- Confirm how proposed mitigation, compensation and enhancement measures could be secured.
- Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation, and where appropriate, to allow conditions or obligations to be imposed by the relevant authority.

1.6 An EcIA can be used for the appraisal of projects of any scale. This is a best practice evaluation process, recommended by CIEEM (2018). It is intended that the evaluation of findings presented here-in will aid the Horsham District Council in their review of the planning application.

1.7 This report should be read in conjunction with the Biodiversity Net Gain Assessment: Design Stage Report (CSA/6746/06) which details further ecological assessment undertaken for the purpose of assessing Biodiversity Net Gain (BNG), and the predicted net effect of the proposed development on biodiversity.

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

Legislation

Legislation relating to wildlife and biodiversity of particular relevance to this EcIA includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Protection of [redacted] Act 1992
- The Environment Act 2021

2.1 This legislation has been addressed, as appropriate, in the production of this report with further information provided in Appendix B.

National Planning Policy

2.2 The National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing & Communities, 2023) sets out the government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.

2.3 Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services. Further guidance in respect of statutory obligations for biodiversity conservation within the planning system is provided by Government Circular 06/2005.

Local Planning Policy

2.4 A number of local planning policies relate to ecology, biodiversity and/or nature conservation. These are summarised in Appendix B.

2.5

Standing Advice

2.6 Natural England Standing Advice regarding protected species aims to support local authorities and forms a material consideration in determining applications in the same way as any individual response received from Natural England following consultation. Standing advice has therefore been given due consideration, alongside other detailed guidance documents, in the scoping of ecological surveys and production of this report.

3.0 METHODS

Desk Study

An ecological desk study was undertaken in January 2024 comprising a review of online resources and biological records centre data as detailed below.

3.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed to identify the following ecological features (based on the Site's likely 'zone of influence' in respect of such features):

3.2

- Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
- Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR) within 3km of the Site
- Other relevant data e.g. Ancient Woodland Inventory within 1km of the Site

3.3 A review was undertaken of the location of any such designations, their distance from and connectivity with the Site, and the reasons for their designation. This information was used to determine whether they may be within the proposed development's Zone of Influence (ZoI).

3.4 Sussex Biological Records Centre (SxBRC) was contacted for details of any non-statutory nature conservation designations and records of protected/notable habitats and species. This information was requested for an area encompassing the Site and adjacent land within c. 2km of its central grid reference. This search area was selected to include the likely zone of influence of effects upon non-statutory designations and

3.5 protected or notable habitats and species.

3.6 Further online resources were reviewed for information which may aid the identification of important ecological features. The Woodland Trust's online Ancient Tree Inventory was reviewed for known ancient or veteran trees within the Site and adjacent land. Interactive online mapping provided by the charity 'Buglife' was used to determine whether the Site falls within an Important Invertebrate Area.

3.7 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography.

Where possible under the terms of the data provider, relevant desk study data are presented in Appendix C.

Field Surveys

A UK Habitat Classification ('UKHab') survey was carried out in fine and dry weather conditions on 18 and 20 December 2023 and 04 January 2024 by Clare Caudwell CEcol MCIEEM FISC[1] Level 4, Jeff Turton ACIEEM FISC Level 3 and Lydia Galbraith ACIEEM FISC Level 3 encompassing each of the three application areas, as well as the wider landholding at

3.8 Stonehouse Farm. An updated UKHab survey and Habitat Condition Assessment of Stonehouse Business Park, Anaerobic Digester (AD) Plant and Main Livestock Building, Jackson's Ridge and the wider landholding was conducted by Christian Gunn ACIEEM (Ucert in Species Identification), Lydia Galbraith and Lucy Moorhouse ACIEEM on 18 and 23 July 2024.

UKHab is a unified and comprehensive system for mapping and classifying habitats, designed to provide a simple and robust approach

3.9 to surveying and monitoring, and replaces Phase 1 Habitat survey methods. The method allows for identification of important habitat types, including habitats of Principal Importance under Section 41 (S41) of the NERC Act (2006) and Habitats Directive Annex I habitats. This method also allows for direct translation of habitats into the Statutory Biodiversity Metric (Defra, 2024).

3.10 The following parameters were adopted for the UKHab survey undertaken for this PEA:

- UKHab Professional edition (Butcher *et al*., 2020, commercial End User Licence Agreement (EULA))
- Minimum Mappable Unit (MMU):
    - 10m²/0.001ha (polygons)
    - 5m (linear)
- Primary Habitats recorded to a minimum of Level 2 (see below) with UKHab codes provided
- Mandatory secondary codes used

3.11
- Base-mapping comprising a combination of aerial imagery and topographic information

Primary Habitats are recorded to a minimum of Level 2. Where the survey

3.12 is conducted at an appropriate time of year (e.g. May to July for grassland) habitats may be recorded to Level 3, 4 or 5, only if conditions and the experience of the surveyor allow.

To assist with classification of grassland habitats quadrat samples were taken during the update UKHab survey/dedicated botanical survey of all three sites as well as the wider land holding on 18 and 23 July 2024 by Christian Gunn ACIEEM (Ucert in Species Identification), Lydia Galbraith ACIEEM FISC Level 3 and Lucy Moorhouse ACIEEM FISC Level 4. Representative sample locations were identified within each grassland parcel, spread evenly to avoid habitat transitions or ecotones, following

[1] Field Identification Skills Certificate, Botanical Society of Britain and Ireland

a 'W' shape through the parcel and a covering a minimum of five sampling locations. Both average (mean) species count per m^2 and peak species counts are reported for comparison.

Identification of habitat stands were made arbitrarily by the surveyor based upon obvious habitat structure, composition or other delineating feature (e.g. field or enclosure).

3.13 Quadrats of 1m x 1m were used, repeated four times in each sample location (i.e. 2m x 2m or $4m^2$). This technique assists, for example, with distinguishing between modified (g4) and other neutral (g3c) grasslands

3.14 (using the threshold of nine species per m^2, reporting an average of the four samples) and of lowland meadows (g3a) (using the threshold of 35 species per 2m x 2m samples).

Alongside the UKHab survey, additional field survey information was collected, comprising:

3.15

- Detailed floral species lists recorded for each identified habitat/parcel
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, [redacted] and certain invertebrates)
- Evidence of, or potential for, other notable species (including S41 Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates)
- Any other survey information relevant to ecological matters

3.16 Results of the UKHab survey are presented on the Habitats Plan in Appendix A. Appendix D provides photographs of the habitats at the Site and Appendix E provides a list of floral species recorded in each habitat parcel. Nomenclature for higher plants within this report is consistent with the fourth edition of The New Flora of the British Isles

3.17 (Stace, 2019).

<u>Habitat & Hedgerow Condition Assessment</u>

An assessment of habitat and hedgerow condition was undertaken on 18 and 23 July 2024 by Christian Gunn ACIEEM (Ucert in Species Identification), Lydia Galbraith ACIEEM (FISC Level 3) and Lucy

3.18 Moorhouse ACIEEM (FISC Level 4), in accordance with the Statutory Metric User Guide (Defra, 2024).

<u>Further Survey Work</u>

The following detailed field survey work was carried out between December 2023 and July 2024, with full methods and results provided in the relevant Appendices, as detailed in Table 1 below.

Table 1. Further surveys undertaken 2023-2024

Species	Survey report	Stonehouse Business Park	Anaerobic Digester (AD) Plant and Main Livestock Building	Jackson's Ridge
Bats	Preliminary Roost Assessment	Appendix G	n/a	Appendix K
	Emergence Surveys	Appendix H	n/a	n/a
GCN	Habitat Suitability Index & eDNA	Appendix I	Appendix J	Appendix L

Limitations

3.19 The initial UKHabitat Classification Survey and Habitat Condition Assessment were conducted outside of the optimal season for botanical surveys (December), however update surveys were conducted at an optimum time of year and in good conditions. Any limitations to species specific surveys are addressed in the relevant appendices.

Evaluation and Assessment

3.20 Ecological features are identified, evaluated and assessed in accordance with the CIEEM Guidelines for Ecological Impact Assessment (2018), with detailed methods provided in Appendix F.

3.21 It is an established principle (CIEEM, 2018) that EcIA is an iterative process. Specialist advice on the avoidance and mitigation of the potential negative effects of the proposed development has been input from an early design stage.

4.0 BASELINE ECOLOGICAL CONDITIONS

Nature Conservation Designations

Statutory

There are no statutory designations covering any part of the areas proposed for development within the Application Site or the wider landholding.

4.1 No international statutory designations were identified within 10km of the three Application Site or the wider landholding.

4.2 The Application Site falls within the catchment for the Arun Source, part of the Arun Upper Operational Catchment of the River Arun. The Environment Agency has declared the Arun Source as being having 'Poor' ecological status. The River Arun flows into the Arun Valley SPA/SAC/Ramsar site, which is downstream from the Stonehouse Farm landholding. As SPAs/SAC/ Ramsar sites are administered and designated under international legislation, these sites are considered to be important at the **International level**.

4.3

4.4 Although the Arun Valley SPA/SAC/Ramsar site is situated c.20km south-west from the Application site, the consideration of potential impacts to these designations is of relevance following the Natural England Position Statements (September 2021, February 2022) published in relation to the Sussex North Water Supply Zone, within which the Application sites are located. As such, further consideration of potential indirect impacts to the Arun Valley SPA/SAC/Ramsar is provided within Section 5.0.

4.5 One national statutory designation was identified within 3km of the Application Site, comprising the St Leonards Forest SSSI. As SSSIs are administered and designated under national legislation, these sites are considered to be important at the **National level**. Consideration of potential indirect impacts to St Leonards Forest SSSI is provided within Section 5.0.

4.6

4.7 No local statutory designations were identified within 3km of the Application Site, or wider landholding.

4.8 The above statutory designations are described in Table 1 below.

Non-Statutory

4.9 Five non-statutory designations were identified within 2km of the Application Site. These comprise Hydehill Wood & Hyde Gill LWS, Orange Gill & Homestead Wood LWS, Mill Pond LWS, St Leonards Forest and Old Deer Park. These designations are described in Table 2 below.

As LWS's are designated according to criteria applied in a county context, these sites are considered to be ecologically important at the **County level**.

Table 2. Statutory and non-statutory designations within Zone of Influence

Site Name & Designation	Distance & Direction from Survey Area	Special Interests or Qualifying Features
International Designations		
Arun Valley SPA	c. 20km south-west of all sites	The site supports the following bird species which are qualifying features: • Berwick's swan (non-breeding) • Waterbird assemblage
Arun Valley SAC	c. 20km south-west of all sites	c. 487ha of wet grassland with parcels of deciduous woodland, bogs, marshes and inland water bodies. Designated for supporting the Annex II listed ramshorn snail *Anisus vorticulus* and is considered one of the three main population centres in the UK for this species.
Arun Valley Ramsar	c. 20km south-west of all sites	The site is designated under criteria 2, 3 and 5 of the Ramsar Convention, for: • Wetland invertebrate assemblage, including the 'threatened 'swollen spire snail Pseudamnicola confuse Frauenfeld; • Wetland plant assemblage, including all five duckweed • Lemma spp., and all five watercress Rorippa spp.; • A diverse and rich assemblage of flora within the ditches intersecting the site; • Notable assemblage of 13774 waterfowl (overwintering).
National Designations within 3km		
St Leonards Woodland SSSI	c. 1.0-1.7km north-west of all sites	The Site supports remnants of formally more extensive deciduous forest on the Tunbridge Wells Sands (Hastings Beds). Examples of high forest remain, and gill streams support relic flora and bryophytes from the 'Atlantic' period. The woodland has a varied bird population, as well as a population of purple emperor *Apatura iris* and a large population of lily of the valley *Convallaria majalis*.
Non-statutory Designations within 2km		
Hydehill Wood & Hyde Gill LWS	c. 1.8km north-east of Stonehouse Business Park and c. 1.5km north-east of Jackson's Ridge	Areas of semi-natural broadleaved woodland, lowland mixed deciduous woodland, and wet woodland, with steams, spring and acid flush vegetation. The site supports notable plant species including lemon scented fern *Oreopteris limbosperma*, which is scarce in Sussex.
Orange Gill and Homestead Wood LWS	c. 1.9km east of Stonehouse Business Park	Mature oak standards, with areas of birch or beech woodland. The woodland supports at least 40 bird species including all three woodpecker *Picidae* species, woodcock *Scolopax*

		rusticola and spotted flycatcher *Muscicapa striata*.
Mill Pond LWS	c. 2.1km east of Stonehouse Business Park	Slaughton Mill Pond, a large area of open water and reedbed which is of particular importance for birds. A small woodland adjoins to the north, consisting of oak standards and hazel *Corylus avellana* coppice.
St Leonards Forest LWS	c. 1.8km north-west of Anaerobic Digester (AD) Plant and Main Livestock Building and c. 1.5km north-east of Jackson's Ridge	Large coniferous and deciduous plantation, with open heath. The area holds important breeding birds, including nightjar *Caprimulgus europeaus*, and a number of scarce butterfly and dragonfly species.
Old Deer Park LWS	c. 1.8km south of Anaerobic Digester (AD) Plant and Main Livestock Building	Area of moderately species-rich dry and wet heath and bog, and a good assemblage of woodland epiphytic lichens, including one extremely rare species

Other non-statutory

4.10 The Stonehouse Farm landholding falls within the St Leonards Watershed Biodiversity Opportunity Area (BOA), covering an area of 4057ha, and represents a priority area for the delivery of Biodiversity Action Plan (BAP) targets.

4.11 The Stonehouse Farm landholding also falls within the Horsham District Nature Recovery Networks (NRN) (Wider Horsham District Project, 2021). Nature Recovery Network areas are identified by their potential to connect areas of habitats in the wider landscape. The whole Site is classified as "High Habitat Potential", as an area that has been identified due to its location and potential to provide connectivity between other

4.12 sites.

The Stonehouse Farm landholding falls just outside of the Weald to Waves Corridor Radiant Zone. The Weald to Waves project aims to establish a nature recovery corridor from the High Weald to the Sussex coast. The Radiant Zone represents a 2km buffer either side of the Core Corridor Route, in which landholders are encouraged to pledge land to improve habitat connectivity. Parts of the wider landholding, including

4.13 part of Anaerobic Digester (AD) Plant and Main Livestock Building and Jackson's Ridge fall into this Corridor Radiant Zone.

Habitats and Flora

Habitats recorded on the three Application sites are illustrated in Appendix A and D with detailed species lists provided in Appendix E. Relevant UKHab codes are provided within parentheses for each habitat type recorded e.g. Other Neutral Grassland (g3c).

Irreplaceable Habitats

No trees on or adjacent to all three Application sites are listed on the Ancient Tree Inventory. However, it should be noted that an absence of records does not mean that there is an absence of ancient or veteran trees on the Application sites as the Inventory only supplies information on trees for which records have been submitted.

4.14 ***Stonehouse Business Park***

There is no ancient woodland, as shown on the ancient woodland inventory, covering this part of the Application Site or immediately adjacent land. The closest parcel of ancient woodland is c. 710m west of the Site.

4.15 ***Anaerobic Digester (AD) Plant and Main Livestock Building***

There is no ancient woodland, as shown on the ancient woodland inventory, covering this part of the Application Site or immediately
4.16 adjacent land. A small section of ancient woodland (c. 1.5ha) lies c. 75m north-west of the Application Site.

Jackson's Ridge

There is no ancient woodland, as shown on the ancient woodland
4.17 inventory, covering this part of the Application site or immediately adjacent land. The closest parcel of ancient woodland is c. 130m west of the Application Site.

Notable Flora Records

4.18 A total of 378 records of 57 notable plant species were identified within the search area. Those of potential relevance to the Site include stinking chamomile *Anthemis cotula*, chaffweed *Centunculus minimus*, dodder *Cuscuta epithymum*, treacle mustard *Erysimum cheiranthoides*, common eyebright *Euphrasia nemorosa*, autumn hawkweed *Hieracium sabaudum*, bastard balm *Melittis melissophyllum*, annual beard grass
4.19 *Polypogon monspeliensis*.

4.20 No invasive non-native plant species were identified during the extended habitat survey or subsequent visits to the Site.

Given that habitats found the areas proposed for development Application Site are dominated by existing buildings / hard-standing, it is considered unlikely that any rare or notable plant species, including the aforementioned will be of relevance. No notable species have been
4.21 recorded to date, during the various site visits undertaken.

Habitats

Stonehouse Business Park

Developed Land – Sealed Surface (u1b) with 'Introduced Shrub' (847)

The large majority of the Site consists of concrete and tarmac hardstanding, devoid of notable ecological features. This habitat holds no ecological value and is therefore **scoped out of further consideration.**

A linear planted bed of rosemary *Salvia spp*. and lavender *Lavandula spp*. between B4 and B5 which contains these two introduced shrubs in abundance, while neglect has also allowed colonisation of this bed by cleavers *Galium aparine*, false oat-grass *Arrhenatherum elatius*, bristly oxtongue *Helminthotheca echioides*, thistle *Cirsium spp*. Sowthistle *Sonchus spp*., garlic mustard *Alliaria petiolata* and common nettle *Urtica dioica* which were all occasional. Due to the introduced nature of these shrub species, this habitat provides little in the way of ecological value and is therefore **scoped out of further consideration.**

4.22

<u>Buildings (u1b5) with 'Vacant or Derelict Land' (82) and 'Industrial Building' (817)</u>

There are six buildings (shown as B1-B6 on the Habitats Plan at Appendix A) on Site and two Portakabin units (shown as B7-B8), as described in Table 2 below. Two additional Portakabin units (B7 and B8) which are considered to be of no further relevance were also on Site and in active use at the time of the survey. Buildings are considered to be of less than Local level importance, and therefore **scoped out of further consideration.**

4.23

An assessment of these buildings in terms of their suitability for roosting bats is provided within the 'Bats' section. Building descriptions are summarised in Table 3 below.

4.24

Table 3. Building descriptions

Building No.	Description
B1	The largest building on Site. This large, modern farm building was in active use at the time of the survey. It had a double-pitched roof of corrugated sheet metal and walls of corrugated sheet metal. This building is in current use as a busy commercial workshop.
B2	A large, modern farm building of the same structural composition as B1, but with a single-pitch roof. In current use as a site office.
B3	An irregularly shaped building complex constructed of brick and concrete in a state of poor structural repair. The main part of the complex comprises a barn with a convex roof made from corrugated metal. One wall is constructed of stacked sleeper rails. There is a side structure of a similar construction, but with a flat corrugated asbestos roof. The buildings are currently used to store vans, a Portakabin and other assorted items.
B4	A dilapidated barn of brick, concrete cinderblock and corrugated metal construction, largely open to the elements on the southern elevation. It is largely open on the south-east elevation. The southern elevation comprises a timber lean-to. The inside is used for storage; with a mezzanine covering approximately half of the main barn (not accessible for survey due to rotten staircase).
B5	B5 is similar to B1 and B2 in that this building is constructed of corrugated sheet metal. The roof is arced, convex sheet metal. Inside, the building is in active use as a carpentry workshop.
B6	B6 is cabin-like in appearance. It is constructed of brick with exterior timber cladding. The roof is double-pitched and constructed of corrugated felt. Inside, it is in active use as an office.

B7	A long Portakabin in current use as an office space.
B8	A small Portakabin used for storage.

'Modified grassland' (g4) with 'Neglected' (518) 'Tall or tussocky sward' (128) and 'Tall Forbs' (16)

This grassland is located west of the main entrance, between buildings B6 and B7. The sward was dominated by thick thatch of creeping bent *Agrostis stolonifera* which had formed tussocks. This area had been mown short during the update UKHabitat survey undertaken in July 2024.

4.25 Occasional creeping thistle *Cirsium arvense*, creeping buttercup *Ranunculus repens*, and common nettle were noted, along with rare instances of dandelion *Taraxacum spp*., false oat-grass and Yorkshire fog *Holcus lanatus*.

Another small patch of grassland is positioned behind H29 and between Buildings B2 and B4. It consisted abundant fescue *Festuca sp*. with

4.26 frequent willowherb *Epilobium spp*. and bristly oxtongue, occasional dandelion, cock's-foot *Dactylis glomerata*, creeping thistle and rare instances of cut-leaved cranesbill *Geranium dissectum*. This grassland was not tussocky in form like the previously mentioned, but had a higher abundance of tall forbs.

4.27 Modified grassland parcels on-Site are expected to provide little in the way of ecological value due to their isolation from the wider landscape and their lack of botanical diversity. As such, these parcels are considered ecologically important at **less than Local level,** and therefore **scoped out of further consideration**.

4.28 Native Hedgerow (h2a)

Under UKHab, all native hedgerows (as defined under UKHabs category 'h2a Native Hedgerow') are 'Priority Habitat' and are defined as any hedgerow consisting predominantly (i.e. 80% or more cover of at least one woody UK native species). Hedgerows with at least five native woody species within a 30m stretch are classified under the Hedgerow

4.29 Regulations (1997) as 'species-rich', and these are classified under the UKHabs category 'h2a5 Species-rich native hedgerow'.

4.30 There are four Native Hedgerows present within the Site, identified as H26a, H27a, H27b, and H29. These, along with their relevant secondary codes, are described in Table 4 below. Their position and indicative length is displayed on the Habitats Plan at Appendix A.

4.31 Hedgerows are considered to be of importance at the **Local level** due to their importance in supporting a range of flora and fauna and providing connectivity between habitats in the wider landscape.

Line of trees (33)

There are two Lines of Trees present on Site, identified as H20a and H30. These, along with their relevant secondary codes, are described in Table

3 below. Their position and indicative length is displayed on the Habitats Plan at Appendix A.

Lines of trees are considered to be of importance at the **Local level** due to their importance in supporting a range of flora and fauna and providing connectivity between habitats in the wider landscape.

Non-native and ornamental hedgerow (h2b)

4.32 'Non-native and ornamental hedgerows' are hedgerows with 20% or more canopy cover of UK non-native woody species. These are not considered Priority Habitat.

4.33 There is one 'Non-native and ornamental Hedgerow' present within the Site, identified as H20b (See Table 3).

4.34 It is considered that non-native and ornamental hedgerow are considered ecologically important at **less than Local level** due to their

4.35 non-native species assemblage, and are therefore **scoped out of further consideration.**

Table 4. Linear Features

Feature Type/ Number	Habitat Type	Description
Hedgerows		
H20b	Non-native and ornamental hedgerow (h2b) with trees (11) ('other' - non-priority)	H20 sits in along the south-western boundary, alongside the grounds of the off-site farmhouse. The shrub layer is formed of abundant hawthorn *Crataegus monogyna* which lies beneath a treeline of tall Leyland cypress *Cupressus x leylandii,* which forms the 'with trees' element of this hedgerow. Towards the southern end of this hedgerow the cypress trees with hawthorn understorey give way to frequent cotoneaster *Cotoneaster sp.* either side of the access point to the neighbouring farmhouse, abundant cherry laurel *Prunus laurocerasus* and one rare instance of a single mature silver birch *Betula pendula*.
H26a	Species-rich native hedgerow (h2a5) with trees (11) and neglected (518) (priority habitat)	H26a is located alongside the road that borders the south of the Site. Blackthorn *Prunus spinosa* was abundant here, with frequent yew *Taxus baccata* and occasional hawthorn and bramble *Rubus fruticosus*. Rare instances of ash *Fraxinus excelsior*, crack willow *Salix x fragilis*, holly *Ilex aquifolium*, beech *Fagus slyvatica*, oak *Quercus sp.*, goat willow *Salix caprea* and hybrid black poplar *Populus x canadensis* were also recorded. The mature trees along this line are very large and consist of x1 hybrid black poplar, x2 oak and x1 goat willow. The shrub layer is double planted in two rows but infrequently managed. The shrub layer is 3-4m tall and the mature trees are easily 20m tall or more. All mature trees were under thick ivy *Hedera helix* cover.
H27a	Native hedgerow (h2a)	Positioned along the north-eastern boundary of the Site, H27a is a long hedgerow of abundant goat

	with active management (516) (priority habitat)	willow, frequent hawthorn and dog rose *Rosa canina*, occasional blackthorn, crack willow and field maple *Acer campestre* and a rare instance of butterfly bush *Buddleja davidii*.
H27b	Native hedgerow (h2a), planted (201) and neglected (518) (priority habitat)	Located on the northern boundary of the Site, H27b is fairly long and consists of abundant hawthorn and frequent dogwood *Cornus sanguinea*. Cherry *Prunus spp.* and blackthorn were found occasionally and silver birch was rare. Tree guards were noted to still be in place, while the trees themselves had grown to a height of 3-5m tall. No gaps were recorded. It is not very wide and the canopy begins within 2m from the ground.
H29	Native hedgerow (h2a), neglected (518) (priority habitat)	H29 skirts the eastern edge of the central grassland and includes a section of planted shrubs to the north between B1 and B2 after a wide gap for vehicle access. In this hedgerow is found frequent beech and hawthorn, occasional field maple and hazel rarely.
Treelines		
H20a	Line of trees (33)	H20a was 'hedgerow-like' in form but had grown tall (c.5-8m) and there was no shrubby understory. Species recorded include abundant hawthorn, frequent Leyland cypress, occasional beech and hazel and a rare instance of a wayfaring tree *Viburnum lantana*.
H30	Line of trees (33)	Four mature oak trees stand in a line in the north-western part of the Site. There is no shrubby understorey.

4.36 None of the hedgerows detailed in Table 4 are considered likely to be 'important' under the Hedgerow Regulations 1997, although no formal assessment has been undertaken.

4.37 Individual Trees

4.38 Two small ornamental trees have also been planted in within the parcel of grassland, see the Habitats Plan at Appendix A.

These individual trees are considered to be ecologically important at **less than Local level** due to their isolation from the wider landscape.

4.39 ***Anaerobic Digester (AD) Plant and Main Livestock Building***

'Buildings' (u1b5)

4.40 Two buildings are present on Site, tabled B1-B2 on the Habitats Plan (see Appendix A). They consist of two large barns, one large livestock barn, consisting of a steel structure with open-slatted timber panels, and another metal barn containing an aerobic digester facility.

4.41

These features are considered to hold no ecological importance and are therefore **scoped out of further consideration**.

An assessment of these buildings in terms of their suitability for roosting bats is provided within the 'Bats' section.

Developed Land – Sealed Surface (u1b)

The buildings on-Site are surrounded by hardstanding, including a footpath that leads to Handcross Road in the south.

These features are considered to hold no ecological importance, and are therefore **scoped out of further consideration.**

4.42 Sparsely vegetated urban land (u1f) with tall forbs (16), ruderal/ ephemeral (81)

4.43 The on-Site buildings are largely surrounded by sealed surface, with c. 50% vegetation cover where areas of debris had been colonised and have been left unmanaged. Vegetation cover consists of a number of

4.44 ruderal species including creeping buttercup, curled dock *Rumex crispus*, creeping thistle, willowherb sp., dandelion and fleabane *Pulicaria dysenterica*, alongside clover sp. *Trifolium sp*, creeping cinquefoil *Potentilla reptans* and cut-leaved cranesbill. Grass species included perennial rye *Lolium perenne*, Yorkshire fog, cock's-foot and instances of sweet vernal grass *Anthoxanthum odoratum*.

This habitat provides few ecological opportunities due to its sparse

4.45 vegetation cover, therefore they are deemed ecologically important at **less than Local level**, and therefore **scoped out of further consideration.**

Other Neutral Grassland (g3c) with Tall Herb (16)

4.46 To the north of the site is a parcel of unmanaged grassland, with an abundance of dock and clover species, grasses (including finer grasses), rushes and sedges, and relatively diverse herb assemblage. Grass species consisted common bent *Agrostis capillaris*, creeping bent, sweet vernal grass, false oat-grass, cock's-foot, Yorkshire fog, perennial rye grass, smooth meadow grass *Poa pratensis* and rough meadow grass *Poa trivialis*. Herb species include bristly oxtongue, broad-leaved willowherb *Epilobium montanum*, hairy tare *Vicia hirsuta*, white clover *Trifolium repens*, red clover *Trifolium pratense*, lesser trefoil *Trifolium dubium*, scentless mayweed *Tripleurospermum inodorum*, bird's-foot trefoil *Lotus corniculatus*, self-heal *Prunella vulgaris*, pendulous sedge

4.47 *Carex pendula*, spear thistle *Cirsium vulgare*, creeping thistle, red bartsia *Odontites vernus*, fodder vetch *Vicia villosa,* hedge woundwort *Stachys sylvatica,* and autumn hawkbit *Scorzoneroides autumnalis*.

Another small parcel of other neutral grassland is present next to Building

4.48 B2. It is located within an excavated area, which has been used for drainage from the building. Species includes those similar to nearby other neutral grassland detailed above, and a small ephemeral pond was present (see below).

Other neutral grassland parcels on-Site are relatively botanically diverse; however, they are small. Taking into context the wider landscape of grassland, other neutral grassland habitat on-Site are not considered to provide a valuable ecological resource and are therefore considered

important at **less than the Local** level and therefore **scoped out of further consideration**.

Modified grassland, cattle grazed (101)

Field F7 is a cattle-grazed field, with a short uniform grassland sward. Grassland is dominated by perennial rye grass, with abundant annual meadow grass *Poa annua*. Herbaceous species include white clover, common plantain *Plantago major*, curled dock and dandelion.

4.49 The modified grassland habitat on-Site is low in botanical diversity and current management of cattle grazing provides little variation in ecological niches. As such, it is considered ecologically important at **less than Local level**, and therefore **scoped out of further consideration.**

4.50

Standing open water (r1), pond (non-priority) (41)

A small ephemeral pond is present within the small parcel of other neutral grassland by Building B2. This pond is fed by a small outfall pipe
4.51 connected to the building. The water was relatively shallow at the time of the first survey (c. 10cm deep). The pond surface is dominated by duckweed *Lemnoidaea sp*. and is bordered by scattered buddleia *Buddleja davidii*.

4.52 The ephemeral pond habitat on-Site is shallow and dominated by duckweed, thus is considered ecologically important **at less than Local level**.

4.53 Native hedgerows (h2a)

Hedgerow H10a borders the west of the developed area and continues off-Site. It consists of oak., hawthorn, dogrose, hazel, holly, elder *Sambucus nigra*, beech, cherry *Prunus avium* and gorse *Ulex europaeus*, with instance of bracken *Pteridium aquilinum*, bramble and ivy
4.54 throughout.

Hedgerow H28 is a newly planted hedgerow, along the existing footpath
4.55 to the east of F7. It consists of dogwood, hawthorn, blackthorn and dogrose, and is largely overgrown with nettle, dock and bramble.

Hedgerow H13 was another newly planted hedgerow, on top the earth mound that divides the developed area and Field F7. This hedgerow was
4.56 present in December 2023, and consisted newly planted hazel, goat willow, oak, beech, silver birch, gorse and field rose *Rosa arvensis*. This hedgerow had appeared to have failed in during the intervening period before the update survey in July 2024.

Hedgerows are considered to be of importance at the **Local level** due to their importance in supporting a range of flora and fauna and providing connectivity between habitats in the wider landscape.

Rivers (r), seasonally wet ditch (50)

A seasonally wet ditch is present along the western boundary of the Site, associated with Hedgerow H10a. The ditch is largely overgrown with tall ruderals and bramble. It was either dry or held a very shallow amount of water during the various survey visits.

4.57 This habitat is usually dry or very shallow, offering little opportunities for aquatic species, thus, it is considered of **less than Local level** importance.

4.58 ***Jackson's Ridge***

Developed land; sealed surface' (u1b)

Parcels of hardstanding associated with the existing buildings and vehicle access. This habitat is considered to hold no ecological importance and is therefore **scoped out of further consideration.**

4.59

'Buildings' (u1b5)

4.60 Six agricultural buildings are present on Site, labelled B1-B6 on the Habitats Plan (see Appendix A) and are described in Table 5 below. An assessment of these buildings in terms of their suitability for roosting bats is provided in the 'bats' section below.

4.61 These features are considered to hold no ecological value and thus considered to be ecologically important at **less than Local level**, and therefore **scoped out of further consideration.**

Table 5. Building descriptions

Building No.	Description
B1	Temporary/mobile home. Single story with slightly pitched felt roof. Present during the initial surveys, since removed.
B2	Old Dutch barn, open sided with corrugated iron roof, partially collapsed.
B3	Portacabin.
B4	Flat roofed, brick-built hanger, with corrugated skylight sections. Open to south.
B5	Cattle/dairy shed, largely open sided making it drafty and cold (not in current use). Corrugated asbestos pitched roof, with steel girders inside, and wooden panelling and gables. Evidence of pigeon roosting.
B6	Large agricultural barn, open and breezy to the south. Breeze block and concrete on the lower half of the walls, with corrugated metal on the upper half. Corrugated asbestos roof with steel gables. Used for storage by a scaffolding company.

4.62

'Sparsely vegetated urban land' (u1f) with 'tall forbs' (16) and 'scattered scrub' (10), 'abandoned' (519)

Parcels of sparsely vegetated urban land are present in the east and west of the Site. The hardstanding has been colonised by moss species, oxeye daisy *Leucanthemum vulgare*, bristly oxtongue, common fleabane and common nettle, with occasional scattered buddleia.

This habitat on-Site provides few ecological opportunities due to its sparse vegetation cover and is deemed ecologically important at **less than Local level**, and therefore **scoped out of further consideration.**

'Modified grassland' (g4) with tall forbs (16), ruderal/ephemeral (81)

4.63 A parcel of modified grassland is present in the north-east of the Site. The sward was short (and sparse in some areas), comprising perennial rye grass, dock sp., common nettle, garlic mustard, cleavers, creeping buttercup, common fleabane, hedge bindweed *Calystegia sepium*, dandelion and yarrow *Achillea millefolium*.

4.64 A small ephemeral pooling of water is present in the north-eastern parcel of modified grassland, with some sedge sp. vegetation at the margins supported by the damp nature of the ground here.

4.65 Modified grassland habitat on-Site are isolated from the wider landscape and lack botanical diversity. As such, these parcels are

4.66 considered ecologically important at **less than Local level**, and therefore **scoped out of further consideration.**

Scrub (h3)

Bramble scrub (h3d) with ruderal/ephemeral (81)

4.67 There is a parcel of bramble scrub present to the east of the Site. This area is dominated by bramble. (>80% coverage, as defined by UKHabitat descriptions), alongside some tall ruderal species including willowherb sp.

4.68 Bramble scrub is a common and widespread habitat, and is considered to be ecologically important at a **less than Local level**, and therefore **scoped out of further consideration.**

4.69 *Mixed scrub (h3h) with ruderal/ephemeral (81)*

A small parcel of mixed scrub is present along the eastern boundary of the Site, comprising bramble interspersed with sparse willow *Salix sp.*,

4.70 buddle*ia,* cherry and tall ruderals including dock *Rumex sp.* and willowherb sp.

The mixed scrub present on Site is connected to the hedgerow network that exists within the wider landscape, and has the potential to provide opportunities for a range wildlife including breeding birds and small

4.71 mammals. However, due to the small extent of the habitat on Site, and the resource of this habitat in the wider landscape, this habitat is considered to be ecologically important at a **less than Local level**.

'Line of Trees' (33)

A tree line (Hedgerow H1) runs along the northern boundary, bordering the road with a gap allowing for access. It is dominated by mature oak *Quercus sp,* with instances of beech and holly. Ground flora is limited to some grasses and creeping buttercup (see limitations section), and no shrubby understory was present.

Lines of trees on-Site are considered to be important at the **Local level** due to their role in providing connectivity to the wider landscape and for the fauna they support.

Non-native and ornamental hedgerow (h2b)

4.72 A non-native hedgerow (H8) runs along the western boundary of the Site, consisting of cotoneaster, rhododendron and holly.

4.73 It is considered that non-native and ornamental hedgerow are considered ecologically important at **less than Local level** due to their non-native species assemblage, and are therefore **scoped out of further consideration.**

4.74

Fauna

Bats

A total of 120 bat records were identified within the search area, dating from 1985 to 2021. These include the following species: common
4.75 pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, noctule *Nyctalus noctula*, brown long-eared bat *Plecotus auratus, l*ong-eared bat sp. *Plecotus* sp, Natterer's bat *Myotis nattereri*, Daubenton's bat *Myotis* daubentoniid, *Myotis* sp. and serotine *Eptesicus serontinus*. The closest recorded roost is of an unspecified roost type c.200m south-east at Frogmore Farm in 2009 and consisted of *Pipistrellus* sp. and *Plecotus* sp. bats.

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4.76 The closest recorded roost to the Application site is of an unspecified roost type c. 200m south-east at Frogmore Farm in 2009 and consisted of pipistrelle *Pipistrellus* sp. and long-eared *Plecotus* sp. bat species.

4.77 *Preliminary Roost Assessment - Structures*

All on-site structures were assessed for their potential to support roosting bats. Of these six buildings (labelled B1-B6 on the Habitats Plan in Appendix A), three are considered to have 'Low' potential (B3, B4, B6) and all others are considered to have 'Negligible' potential. The full
4.78 results of the building inspection are provided in Appendix G.

Bat Activity

Whilst the Site is dominated by hard standing, some habitat suitable for bat foraging and commuting bats, in the form of boundary hedgerows, mature trees canopies, and small areas of rough grassland, colonising ground and planted areas, are present. Such habitat features are linked to the green infrastructure permeating the surrounding landscape, which connects to large areas of woodland to the north and south. As such, the habitat is considered to be of 'moderate' suitability for bats, as defined by the Bat Conservation Trust (BCT) Good Practice Guidelines (Collins *et al*., 2023).

A single dusk emergence survey was undertaken on 03 June 2024 to confirm the presence/likely absence of roosting bats in association with buildings B3 and B4 due to the 'low' potential for roosting bats identified.

4.79 Activity levels were dominated by common pipistrelle and soprano pipistrelle which were largely observed flying along hedgerow and treeline boundaries, as well as through barn buildings. Noctule, brown long-eared bat, and *Myotis* sp. made brief passes. No evidence of

4.80 emerging bats was identified, however individual bats were observed making a few passes through both of the buildings. Whilst no further evidence to suggest that the buildings are likely to be used by roosting bats was identified, some limited evidence of a possible feeding perch was identified within building B4 during an update inspection on 23 July 2024, although no evidence to suggest use as a feeding perch has been identified during the June 2024 emergence survey. Given the surrounding habitats within the wider landscape, it is considered that bats may be foraging in / around the barns on a sporadic basis, but no evidence to suggest a regular roosting site has been confirmed.

Bats – Assessment of Importance

4.81 In line with EcIA Guidelines (CIEEM, 2018) and the UK Bat Mitigation Guidelines (Reason and Wray, 2023) the importance of bat populations using the Application site has been assessed using a geographical frame of reference (i.e. international, national/regional, county, local and below ('site') level importance). Assessment of importance takes account of species rarity (see Table 6 below) and geographical distribution (see Table 7 below).

Table 6. Categorising bats by rarity (adapted from Reason and Wray, 2023)

Rarity Within Range*	Species
Widespread	Common pipistrelle Soprano pipistrelle Brown long-eared
Widespread in many geographies, but not as abundant in all	Whiskered Brandt's Daubenton's Natterer's Noctule
Rarer or restricted distribution	Lesser horseshoe Serotine Leisler's Nathusius' pipistrelle
Rarest Annex II species and very rare	Greater horseshoe Bechstein's Barbastelle Grey long-eared

*N.B. Only the relevant geographic location has been reproduced within the table

Table 7. Categorising Bats by Geographic Distribution and Rarity (adapted from Reason and Wray, 2023)

Geographic Location	Rarity Category			
	Widespread	**Widespread in many geographies but not all**	**Rarer or restricted distribution****	**Rarest Annex II species and very rare**
Southern England	Common*** pipistrelle Soprano pipistrelle Brown long-eared	Whiskered Brandt's Daubenton's Natterer's Noctule	Alcathoe Serotine Leisler's Nathusius' pipistrelle	Greater horseshoe Lesser horseshoe Bechstein's Barbastelle Grey long-eared

*N.B. Only the relevant geographic location has been reproduced within the table.
**Species not included in the table above are considered to be 'rarer' in line with guidance.
***Highlighted species present onsite in 2024 – excluding *Myotis/Nyctalus* genera not identified to species level.

Importance of Roost Sites

4.82 No bat roosts have been confirmed present within Stonehouse Business Park, although a possible feeding perch was identified within Building B4. Given the majority of bat activity recorded was attributed to common pipistrelle and soprano pipistrelle, and that activity from other rarer species was limited (indicating that the presence of any significant roosts may be unlikely), and the nature of the potential feeding perch identified, it is considered, in line with CIEEM's Bat Mitigation Guidelines 2023 that the geographical importance of any roost sites which may be present may be of **less than Local** level ecological importance.

4.83

4.84 Bat roosts may be present outside of the Application site within the wider landholding or areas of woodland to the north, but this is unconfirmed.

Importance of Commuting and Foraging Habitat

4.85 The assessment of the importance of commuting routes and foraging areas is noted to be inherently more difficult, due to habitat resources being used by bats at different times of year in different ways. Geographical levels of importance should not be defined by 'numbers of bats using a features' but should consider a range of factors including relative bat activity across habitats / features surveyed, landscape context, species assemblage (including rarity of species), species distribution range, proximity / connectivity to roosts (including hibernation sites), species habitat preferences, (Reason and Wray, 2023).

Habitats within Stonehouse Business Park are considered to meet the criteria of moderate suitability for commuting and foraging bats due to the boundary hedgerows and mature trees, providing connectivity to

the wider landscape. As such, habitats within the Application site are considered to be of no more than **Local level** importance for bats.

Anaerobic Digester (AD) Plant and Main Livestock Building

The closest roost records to the Anaerobic Digester (AD) Plant and Main Livestock Building are of unspecified serotine roost in 2020, located c. 60m south-east of the site, in the neighbouring barn and stables property.

4.86 *Preliminary Roost Assessment - Structures*

All on-site structures were assessed for their potential to support roosting bats. Both buildings (labelled B1-B2 on the Habitats Plan in Appendix A) were considered to have 'negligible' bat roost potential. 'Negligible'

4.87 bat potential is defined as 'no habitat features on site likely used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels' within the BCT Guidelines (2023). No internal or external PRFs were identified within Building B1, which was very exposed and windy and also considered not suitable for feeding perches. B1 had guttering along the length of the building which provided a crevice, however this was considered too wide and exposed for bats. No internal or external features were identified on Building B2. There was a slight lip between where the corrugated roof sheeting meets the top of the extension wall, however these were considered to be too wide and exposed for crevice dwelling bats. Photos of the building inspection are shown in Appendix G.

Preliminary Roost Assessment - Trees

4.88 A formal Preliminary Roost Assessment of the trees on Site was not conducted, however a number of mature oaks, including those within hedgerow and line of trees, were noted to have a number of potential bat roosting features. It is not anticipated that any trees will be impacted by the development proposals.

4.89 *Importance of Commuting and Foraging Habitat*

Habitats within Anaerobic Digester (AD) Plant and Main Livestock Building are considered to meet the criteria of moderate suitability for commuting and foraging bats due to the boundary hedgerows and mature trees, providing connectivity to the wider landscape. As such,

4.90 habitats within the Application site are considered likely to be of no more than **Local level** importance for bats.

Jackson's Ridge

The closest roost records are of unspecified pipistrelle species and brown long-eared bats roosts, recorded at Wilis Park Farm in 2000 (c. 0.3km east from the Site). The closest record of any bat is of common pipistrelle in 2015 (c. 02km west of the Site).

Preliminary Roost Assessment - Structures

All six buildings on Site were inspected for bats / evidence of bats and were assessed for their potential to support bat roosts. Buildings B1, B2, B3 and B4 were not considered to provide any potential roosting opportunities for bats. Buildings B5 and B6 were assessed to be of 'negligible' bat roost potential due to the presence of very minor

4.91 features. It is considered highly unlikely that these buildings support roosting bats (summer or hibernation). The full results of the building inspection are provided in Appendix G.

Importance of Commuting and Foraging Habitat

The bordering on-Site and off-Site hedgerows and line of trees provide suitable commuting habitat for bats, with habitats within the Application Site provide some foraging resources. Mature trees along the northern

4.92 boundary may provide some roosting opportunities for bats. The Application site is dominated by areas of hardstanding and sparsely vegetated land which offer few opportunities for bats.

Habitats within Anaerobic Digester (AD) Plant and Main Livestock

4.93 Building are considered to meet the criteria of moderate suitability for commuting and foraging bats due to the boundary hedgerows and mature trees, providing connectivity to the wider landscape. As such, habitats within the Application site are considered to be of no more than **Local level** importance for bats.

4.94 [redacted]

4.95 [redacted]

4.96 [redacted]

4.97 [redacted]

Anaerobic Digester (AD) Plant and Main Livestock Building

[redacted]

[redacted]

[redacted]

4.98 ***Jackson's Ridge***

[redacted]

4.99

[redacted]

4.100

Dormouse

4.101 A total of three records of dormouse *Muscardinus avellanarius* were identified within the search area, dating from 2018 to 2021.

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4.102 The closest record of a dormouse is c. 1.1km west from the Application site and is from 2021.

4.103 The hedgerows around the peripheries of the Application site are connected to the hedgerow network of the wider landscape, which in turn connects to areas of woodland. The hedgerows were also noted to contain fruit and nut bearing species, such as hawthorn, blackthorn and hazel, although this latter was not in much abundance around the wider Site. The habitats on Site may therefore offer some suitability for nesting

4.104 and/or foraging dormice should this species be present within connecting habitat within the wider landscape.

However, as the development proposals will not result in any indirect or indirect impacts to the hedgerow network; then no further consideration of potential impacts to this species is considered necessary. As, such,

4.105 dormice have been **scoped out of further consideration** in relation to this Application.

4.106

Anaerobic Digester (AD) Plant and Main Livestock Building

The closest record of a dormouse is c. 0.6km south-west from the Application site and dates from 2021.

Hedgerows within the wider landholding may offer some opportunities for dormice (if present within the wider landscape). Within the Anaerobic Digester (AD) Plant and Main Livestock Building area, hedgerow H10a

and line of trees H10b (off-Site but directly connected to H10a) were noted to contain some nut bearing species, including hazel, oak and beech which can provide food sources for dormice. Whilst H10a has connectivity to the woodland belt, H10b has a lack of shrubby understory and is considered suboptimal for this dormice. H28 contained some fruit-bearing species favoured by dormice (e.g. hawthorn and blackthorn), however this hedgerow is recently planted and not fully established, and is not considered to provide adequate cover for dormice. Additionally, H28 is not very well connected to the wider hedgerow network, being severed by the access road in the north and connected to sub-optimal hedgerow in the south.

4.107 As the potential for dormice to be present within hedgerows to be impacted by the proposals is considered to be very low. Dormice have therefore been **scoped out of further consideration** in relation to this Application. However, appropriate precautionary measures are recommended in relation to any Site clearance necessary, given the strong legal protection afforded to this species, as discussed in Section 5.0.

Jackson's Ridge

4.108 The closest record of dormice is c. 1.2km south-west from the Application site from 2021.

4.109 The line of trees to the north of the Application site is connected to the hedgerow network / woodland within the wider landscape. Hedgerows, together with small areas of scrub, within / adjacent to the Site may offer some opportunities for species such as dormice (if present within the wider landscape). The line of trees was noted to contain some nut bearing species, including oak and beech, although this feature has limited connectivity and lack of shrubby understory. Overall, it is considered that the habitat features present within the Site are unlikely to be able to support a variable dormouse population, but dormice may well be present within connecting habitats within the wider landscape.

4.110

4.111 However, as the development proposals will not result in any indirect or indirect impacts to the hedgerow network; then no further consideration of potential impacts to this species is considered necessary. As, such, dormice have been **scoped out of further consideration** in relation to this part of the Application.

4.112 <u>Water Vole</u>

A total of four records of water vole *Arvicola amphibius* were identified within the search area, dating from 1997 to 1998.

Stonehouse Business Park

The closest record is c. 2.4km from the Application site and is from 1998. The Application site contains no habitats suitable for water vole and are therefore considered likely absent from the Application site and have been **scoped out of further assessment** with regards to this Application.

Anaerobic Digester (AD) Plant and Main Livestock Building

The closest record of a water vole is c. 1.3km west of the Application site. The Application Site contains no suitable habitat for water vole. A seasonally wet ditch is present on along the western boundary of the Site. However, this is largely dominated by ruderals and scrub and holds only a shallow amount of water at some times of the year, and is

4.113 therefore not considered to provide suitable conditions for water vole.

A watercourse is present c. 50m off-site to the north. It is steep sided with wooded cover and a shrubby understory, and whilst a formal water vole survey has not been undertaken, the watercourse was subject to a River Condition Assessment undertaken across the wider landholding, in

4.114 which no evidence of water vole was identified.

Due to the unsuitable habitat on Site, and the distance between the Site and the stream, Water vole are considered likely absent on Site and are

4.115 **scoped out of further consideration.**

Jackson's Ridge

The closest record is c. 1.7km from the Application site. The Application

4.116 site contains no habitats suitable for water vole and are therefore considered likely absent from the Application site and have been **scoped out of further assessment** with regards to this Application.

<u>Otter</u>

4.117 The SxBRC have not returned records for [redacted] *Lutra lutra* due to the sensitive nature of these records.

4.118 ***Stonehouse Business Park***

No watercourses or riparian habitats are present within or in close proximity to the Site, and the habitats present were not considered to provide suitable conditions to support otter. Otter are **therefore scoped**

4.119 **out of further assessment.**

Anaerobic Digester (AD) Plant and Main Livestock Building

As discussed above in relation to water vole, the seasonally wet ditch present along the western boundary of the Application site is not considered to provide suitable habitat for otter, as it holds only a shallow amount of water and it largely overgrown with ruderals and scrub. The water course present c. 50m off-Site to the north of the Application site

4.120 is considered to not provide suitable conditions for otter, due to the shallow water depths. Otter are considered likely absent and therefore **scoped out of further assessment.**

Jackson's Ridge

No watercourses or riparian habitats are present within or in close proximity to the Site, and the habitats present were not considered to provide suitable conditions to support otter. Otter are **therefore scoped out of further assessment.**

Hedgehog

Two records of hedgehog *Erinaceus europaeus* were identified within the search area, dating from 2005 and 2006. An accurate grid reference was not given with the records, although are reported to have been recorded in Lower Beeding, which is c. 1.2km south-west from the Site.

All Sites

4.121 Hedgehogs are considered to be widespread in Sussex and will make use of a range of common habitats, such as hedgerows, grassy areas, woodland, scrub, etc. as well as garden habitat. The habitats recorded on all three Application sites and the wider landholding, particularly around the boundaries, may offer some suitable foraging habitat for hedgehog. Given the surrounding rural landscape and connected habitats, it is considered likely that hedgehogs would make use of the site to forage or commute.

4.122

4.123 Populations of these species are considered to be important at less than Local level and are therefore **scoped out from further assessment** in relation to all three Application sites. However, mitigation and enhancements within the fabric of the development will be provided as a matter of best practice and hedgehogs will benefit from additional suitable habitats provided by the scheme, such as hedgerow retention and buffering and grassland creation.

Birds

4.124 A total of 1110 records of 51 bird species were identified within the search area, dating from 1980 to 2022. Those of potential relevance to the Site include swift *Apus apus*, stockdove *Columba oenas*, turtle dove *Streptopelia turtur* (recorded in nearby woodland in 2012), skylark *Alauda arvensis*, yellowhammer *Emberiza citronella*, house martin *Delichon urbicum*, swallow *Hirundo rustica* (recorded in nearby woodland in 2008), grey wagtail *Motacilla cinerea*, spotted flycatcher *Muscicapa striata*, house sparrow *Passer domesticus*, tree sparrow *Passer montanus*, dunnock *Prunella modularis*, starling *Sturnus vulgaris*, song thrush *Turdus philomelos*, mistle thrush *Turdus viscivorus*, green woodpecker *Picus viridis*, barn owl (recorded in nearby woodland in 2022), red kite *Milvus milvus*, hobby *Falco subbuteo*, kestrel *Falco tinnunculus* (recorded during site visit of the wider landholding).

4.125

Stonehouse Business Park

Old and empty bird's nests were noted in H29 and in B3. In addition to this, a colony of feral pigeons was noted in and on B1, and the current occupants of the workshop confirmed to the surveyor that pigeon's nest in this building. No other incidental records of bird species were made during the Site visit. The wider land ownership and rural landscape holds a multitude of habitats suitable for a variety of bird species, and a variety of bird species could be expected to pass through the Application site throughout the year.

Due to the size of the Application site and the habitats present it is estimated that the assemblage of breeding birds within this Application site is considered to be of **less than Local level** importance. Mitigation measures have been provided as a matter of best practice.

Anaerobic Digester (AD) Plant and Main Livestock Building

4.126 Evidence of nesting pigeon was identified within Building B1 and B2. The other habitats on Site, such as the mature trees within hedgerows and treelines provide additional opportunities for nesting birds.

4.127 Due to the size of the Application Site and habitats present, it is considered that the assemblage of breeding birds within this Application site is considered to be at **less than the Local level**. Mitigation measures

4.128 have been provided as a matter of best practice.

Jackson's Ridge

Evidence of nesting pigeon was identified within Building B5. The other habitats on Site, such as the mature trees within hedgerows, treelines,

4.129 scrub habitat and large farm buildings provide additional opportunities for nesting birds.

4.130 Due to the size of the Application Site and habitats present, it is considered that the assemblage of breeding birds within this Application site is considered to be at **less than the Local level**. Mitigation measures have been provided as a matter of best practice.

Barn Owl

4.131 Ten records of a barn owl were returned within the data results, although these records have not been given to an accurate grid reference and as such cannot be placed accurately in reference to the Application sites.

4.132

Stonehouse Business Park

The Survey Area does not contain habitat considered likely to support hunting barn owl. However, the surrounding land ownership and nearby

4.133 rural areas may contain habitat barn owls could use for hunting. Building B3 is open sided and contains a mezzanine section which may be suitable to support roosting/nesting barn owl.

4.134

A targeted barn owl survey was undertaken on B3 on 22 May 2024. No evidence of barn owl, such as feathers, pellets, feeding remains or faeces were noted on the mezzanine or in any part of the building.

A single barn owl was observed perched on top of building B4 during bat surveys undertaken on 03 June for c. 2 minutes before flying off of the Application site. The owl was not seen to enter the barn. Due to the absence of evidence within buildings, barn owl are not considered to be currently using the Application site for breeding, however they are present within the wider landscape and may utilise habitats in the surrounding area for hunting and nesting.

Due to the lack of evidence of barn owl use of the Application site for breeding, they are **scoped out of further assessment.**

Anaerobic Digester (AD) Plant and Main Livestock Building

4.135 Habitats within the Application site are not considered likely to represent a significant hunting resource for barn owl, in the context of the wider landscape. However, the surrounding land ownership and nearby rural areas consist of tussocky grassland and open countryside which may provide suitable foraging habitat for barn owl.

4.136 Barn B2 is an open sided, single-skin corrugated iron structure. Though this building is relatively exposed, and therefore not ideal for nesting barn owl, there is a large mezzanine area. This could potentially provide a suitable ledge for barn owl to breed, and nesting pigeon have been observed here. It was not possible to access the mezzanine during the site survey. As such, it is concluded on a precautionary basis that barn owl could use this structure. **The presence of barn owl on site would be of at least Local level importance.** As such, should proposals require any material changes to the structure or use of B2 (currently used for livestock) then further surveys / precautionary measures may be required, as discussed in Section 5.0.

Jackson's Ridge

4.138 Habitats within the Site are not considered likely to represent a significant hunting resource for barn owl, in the context of the wider landscape. However, the surrounding land ownership and nearby rural areas may contain habitat barn owls could use for hunting.

4.139 Building B5 is open sided and contains some beams / ledges which may be suitable to support roosting/nesting barn owl. However, no field signs of barn owl (e.g. pellets, feathers, droppings etc) were observed from the ground floor level of the building during the initial survey visit on 18 December 2023 or an update detailed inspection undertaken on 31 May 2024, involving the use of a ladder to reach the upper level of this building did not record any field signs of barn owl. Due to this lack of evidence of barn owl use of the Application site for nesting, they are **scoped out of further consideration.**

4.140

<u>Reptiles</u>

4.141 A total of 43 records of four reptile species were identified within the search area including slow worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix helvetica*.

4.142

Stonehouse Business Park

The closest record of a reptile to the Application site, was a grass snake c. 670m north from 2002.

No reptiles or evidence of reptiles was found during the Site visit. The Application site itself offers very limited suitable habitat for reptiles, which is confined to the small areas of grass which are isolated from

connective habitat by hardstanding. Some additional suitable habitat may be found at hedgerow bases, at the Application site margins but these were not considered to be high quality features for reptiles. These areas are not anticipated to be affected under the proposals. The wider rural landscape offers many areas which would be suitable for reptiles, such as around or within grazing land, hedgerows, scrubby areas and at woodland edges.

4.143 Due to the lack of suitable habitat within the Application site, any reptile populations at the Site are considered important at **less than the Local level**. However, appropriate mitigation measures are recommended in relation to any Site clearance necessary, in line with legal requirements, as discussed in Section 5.0.

Anaerobic Digester (AD) Plant and Main Livestock Building

4.144 The hedgerow and treeline bases, areas of grassland, particularly those with tall forbs, and areas of made-up ground are considered to provide foraging, sheltering and dispersal routes for reptiles. The surrounding land ownership and the wider rural landscape offers many areas which would be suitable for reptiles, such as grassland, scrub, hedgerow/treeline bases and woodland edges.

4.145 The habitats on Site are not considered to provide a key resource for reptiles, and are considered to be of **Less than Local level importance**. However, appropriate mitigation measures are recommended in relation to any Site clearance necessary, in line with legal requirements, as discussed in Section 5.0.

4.146 ***Jackson's Ridge***

4.147 This part of the Application Site is dominated by hardstanding, offering negligible opportunities for reptiles. However, the treeline bases and areas of grassland are considered to provide foraging, sheltering and dispersal routes for reptiles. The surrounding land ownership offers many areas which would be suitable for reptiles.

4.148 Due to the lack of suitable habitat for reptiles within the Application site, any reptile populations at the site are deemed important at **less than the Local level importance.** However, appropriate mitigation measures are recommended in relation to any Site clearance necessary, in line with legal requirements, as discussed in Section 5.0.

<u>Widespread Amphibians</u>

A total of 24 records of five amphibian species were identified within the search area, including between 1987 and 2021 and included common toad *Bufo bufo*, common frog *Rana temporaria*, palmate newt *Lissotriton helveticus*, smooth newt *Lissotriton vulgaris* and great crested newt *Triturus cristatus*. The closest record is of smooth newt in the adjacent site to the east.

Terrestrial habitat within the wider landholding, notably the tall herbs, hedgerow /tree line bases may offer opportunities for suitable to support dispersal, refuge and foraging by amphibian species. A more detailed appraisal of the Site with regard to great crested newt is provided below.

Stonehouse Business Park

4.149 The habitats on Site provide limited opportunities to support amphibians, restricted to the hedgerow bases which may provide some dispersal routes, refuge and foraging ground for amphibians. No aquatic habitat is present on Site.

4.150

Anaerobic Digester (AD) Plant and Main Livestock Building

A small ephemeral pond is present on the Application Site, within an excavated area next to Building B2. The pond has a small area of fringing 'other neutral grassland' but is isolated from other semi-natural
4.151 grassland by hard standing / sparsely vegetated land (c. 30m to nearby grassland).

Jackson's Ridge

The habitats on Site provide limited opportunities for amphibians,
4.152 restricted to hedgerow bases and scrub which may provide some dispersal routes, refuge and foraging grounds for amphibians. No aquatic habitat is present on Site.

<u>Great Crested Newt</u>

4.153 A total of nine records of great crested newt were identified within the search area, from 1983 to 2021.

4.154

Should be noted that all Pond references numbers are a reflection of the wider landholding.

4.155

Stonehouse Business Park

4.156 The closest record of a great crested newt was recorded at Warley Barn Farm, c. 640m north-east of the Application site in 2019.

Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist. While no potential breeding ponds were identified within the Application site, four ponds (P1-P4) and adjacent reedbed areas occur
4.157 within 250m of the Application Site. In addition, a further six ponds (P5, P6, P7, P8, P10 and P14) are located within the wider landscape (between 250m and 500m from the Application Site; based on online / OS mapping).

As mentioned within the Amphibian section, terrestrial habitat is limited in both suitability and connectivity. Given the availability of higher habitat quality in closer proximity to the ponds within 500m of the Application Site, the likelihood of GCN presence on Site, dominated by buildings and hardstanding, is considered to be low. However, the

potential for this species to be present within marginal / colonising habitats cannot be ruled out.

A Habitat Suitability Index (HSI) survey of the wider landholding was conducted on 20 May 2024, alongside an eDNA survey. Table 7 below provides a summary of these surveys in regard to the Stonehouse Business Park. Results are also presented on the Stonehouse Business Park Great Crested Newt Survey Results Plan (CSA/6476/132).

4.158

Table. 7 Summary results of great crested newt surveys at Stonehouse Business Park

Pond reference	Distance to Site	HSI score	eDNA results
P1	<250m	Poor	Negative
P2	<250m	Poor	Negative
P3	<250m	Poor	Negative
P4	<250m	Average	Positive for GCN
P5	<500m	Poor	Negative
P6	<500m	Excellent	Positive for GCN
P7	<500m	Poor	Negative
P8	<500m	Excellent	Negative
P10	<500m	Pond not present	n/a
P14	<500m	Below average	Negative

4.159 Positive eDNA results from P4 (c. 150m north-east) and P6 (c. 330m east) confirm that GCN are present within the wider landscape, and populations may be of at least **Local level importance**. However, given the lack of aquatic habitat and low quality of terrestrial habitat within the Application Site, it is considered that opportunities for GCN are very limited.

4.160 ***Anaerobic Digester (AD) Plant and Main Livestock Building***

One small ephemeral pond (Pond P5) that could serve as suitable aquatic breeding habitat is present within the Application site, and a further four ponds (P1, P2, P3 and P12) appear to be present within a dispersible range of the Site (based on OS mapping). P4 is just outside of the 500m buffer area, however has been included within this assessment due to the close proximity to P1-P3 (Anaerobic Digester (AD) Plant and Main Livestock Building Great Crested Newt Survey Results Plan (CSA/6476/133)).

4.161

4.162 Whilst areas of buildings and hard-standing which dominate the northern part of the Site are not considered to be of potential value for great crested newts, fringing grassland habitats could offer foraging / dispersal opportunities, with rubbles and debris piles etc offering providing features which could be used within the hibernation period.

A Habitat Suitability Index (HSI) survey of the wider landholding was conducted on 20 May 2024, alongside an eDNA survey. Table 8 below provides a summary of these surveys in regard to Anaerobic Digester (AD) Plant and Main Livestock Building.

Table. 8 Summary results of great crested newt surveys at Anaerobic Digester (AD) Plant and Main Livestock Building

Pond reference	Distance to Site	HSI score	eDNA results
P1	On-Site	Poor	Negative
P2	<500m	Poor	Negative
P3	<500m	Poor	Negative
P4	>500m (close to P1-P3)	Average	Positive for GCN
P12	<500m	Excellent	Negative

Positive eDNA results from P4 (c. 530m west) confirm that GCN are present within the wider landscape.

4.163 Given that the on-Site ephemeral pond was negative for GCN and no positive eDNA results were returned within 500m, and the terrestrial habitat is considered to be low quality, GCN are considered to be likely

4.164 absent and therefore **scoped out of further consideration .**

Jackson's Ridge

Whilst no potential breeding ponds were identified within the

4.165 Application Site, three ponds (P11, P12 and P13) were identified within a 500m radius of the Site (based on online / OS mapping). Two additional ponds, P5 and P14 were just beyond the 500m radius, and have been included within the following assessment. P11 is no longer present as therefore is not included in the surveys (Jackson's Ridge Great Crested Newt Survey Results Plan (CSA/6476/134)).

4.166 Whilst areas of buildings / hard-standing which dominate the northern part of the Application site (farm yard / scaffolding storage unit) are not considered to be of potential value for great crested newts, fringing grassland and scrub habitats could offer foraging and dispersal opportunities, with rubbles piles etc offering providing features which

4.167 could be used within the hibernation period.

A Habitat Suitability Index (HSI) survey of the wider landholding was conducted on 20 May 2024, alongside an eDNA survey. Table 9 below provides a summary of these surveys in regard to Jackson's Ridge.

Table. 9 Summary results of great crested newt surveys at Jackson's Ridge

Pond reference	Distance to Site	HSI score	eDNA results
P5	>500m	Poor	Negative
P11	<500m	Pond not present	n/a
P12	<250m	Excellent	Negative
P13	<500m	Excellent	Negative
P14	>500m	Below average	Negative

4.168

4.169

None of the ponds within 500m returned a positive result for GCN. However, surveys conducted in relation to the other Application show that GCN are present within the wider landscape.

Given the lack of aquatic habitat on Site, and no positive eDNA results were returned within 500m, and the terrestrial habitat is considered to

be low quality, GCN are considered to be likely absent and therefore **scoped out of further consideration.**

Invertebrates

4.170 A total of 221 records of 73 notable invertebrate species were identified within the search area. Those of potential relevance to the Site include small heath *Coenonympha pamphilus*, grey dagger *Acronicta psi*, beaded chestnut *Agrochola lychnidis*, green-brindled crescent *Allophyes oxyacanthae*, mottled rustic *Caradrina morpheus*, shoulder-striped wainscoat *Leucania comma*, common wainscot *Mythimna pallens*, white Ermine *Spilosoma lubricipeda*, feathered gothic *Tholera decimalis*, cinnabar *Tyria jacobaeae*, oak hook-tip *Watsonalla binaria* and Median wasp *Dolichovespula media*.

None of the three Application sites, nor the wider landholding fall within an Important Invertebrate Area (IIA), as defined by Buglife.

4.171 The habitats present within the three Application Sites are considered to common and widespread, with the most ecological value associated

4.172 with the hedgerow/treelines that make up the boundaries of the Sites. As such, the potential for notable invertebrate assemblages is considered low, and invertebrates are **scoped out of further consideration.**

Future Baseline

4.173 Habitats within the Application Site are currently dominated by buildings and hardstanding, with any grassland on Site either under active management by grazing (parcel of F6/F7 within Anaerobic Digester (AD) Plant and Main Livestock Building) or mowing (grassland parcels within Stonehouse Business Park). Vegetation is encroaching the hardstanding within Jackson's Ridge, however signs of scrub maintenance to keep the working areas clear is present in the east. These management interventions maintain the on-Site conditions in a relatively stable state. There is no known intention to cease this management, other than to accommodate the proposed developments should planning permission be granted. As such, the future baseline status of important ecological features is not anticipated

4.174 to vary significantly from that at present.

Summary of Ecological Features

Table 10 below summarises all important ecological features identified within the respective zones of influence, together with the geographic context of their importance:

Table 10. Summary of important ecological features and their geographic context

Ecological Feature	**Geographic Context of Importance and/or Protection Status (where relevant to each application)**		
	Stonehouse Business Park	***Anaerobic Digester (AD) Plant and Main Livestock Building***	***Jackson's Ridge***
Arun Valley SPA, SAC and Ramsar	International	International	International
St Leonards Forest SSSI	National	National	National
Hydehill Wood & Hyde Gill LWS	County	-	County
Orange Gill & Homestead Wood LWS	County	-	-
Mill Pond LWS	County	-	-
St Leonards Forest LWS	-	County	County
Old Deer Park LWS	-	County	-
Native hedgerow	Local	Local	-
Line of trees	Local	-	Local
Bats	Local; Legally Protected	Local; Legally Protected	Local; Legally Protected
[redacted]	[redacted]	[redacted]	[redacted]
Dormouse	Local (if present); Legally Protected	Local (if present); Legally Protected	Local (if present); Legally Protected
Birds (including barn owl)	Less than Local; Legally Protected	Less than Local; Legally Protected	Less than Local; Legally Protected
Reptiles	Less than Local; Legally Protected	Less than Local; Legally Protected	Less than Local; Legally Protected
Great Crested Newt	Local; Legally Protected	-	-

5.0 ASSESSMENT OF EFFECTS

The Proposed Development

The full planning application will be submitted for the following:

- Stonehouse Business Park: Rationalisation and enhancement of existing commercial facilities at Stepney Commercials Site including demolition of two buildings and their replacement with new Class E and B8 facilities. Extension of existing building to form a new office and wardens' accommodation. Existing mobile home removed. The following impact assessment is based on the Site Layout Plan As Proposed (3D Architecture Ltd Ref: 2024/PL10/C).

5.1

- Anaerobic Digester (AD) Plant and Main Livestock Building: Decommissioning of the Anaerobic Digester and re-use of the existing 2no buildings for storage and office uses new (Class E and B8) and the diversion of a public footpath. The following impact assessment is based on the Site Location Plans As Existing and As Proposed' (3D Architecture Ltd; Ref: 2024/PL7/C).

- Jackson's Ridge: Residential redevelopment of the Jacksons Farm site including the demolition of existing barns to provide 3no. dwellings with access, parking, and landscaping. The following impact assessment is based on the 'Proposed Site Plan' (Lloyd Harden; Ref: 259101-110).

- The Site-Wide Masterplan (CSA/6746/111/H) shows these all three proposals in relation to one another, as well as indicative proposals for habitat creation and enhancement across the wider landholding.

5.2 Construction Phase

As detailed in the development descriptions above, the construction phase of the proposed development will result in the demolition or changed of use of some existing commercial and agricultural buildings, construction of a new commercial site office / wardens accommodation, decommissioning of the anaerobic digestor facility, footpath diversion, minor amendments to site access points and construction of three residential units, associated landscaping and infrastructure. With regards to semi-natural habitats on-site, habitat loss will be limited to some minor hedgerow loss (to facilitate amendments to site access), and minor loss of scrub habitat (to facilitate residential development).

5.3

Operational Phase

The operational phase of the proposed development will comprise occupation of new residential dwellings (Jackson's Ridge only), increase

in human activity, including use of vehicles, and the potential for increased artificial lighting and anthropogenic noise.

Assumptions

The following assumptions have been made during the assessment of potential effects of the proposed development on important ecological features. Although 'assumed' and therefore taken as part of the pre-mitigation scenario, these measures are referenced in the proceeding sections where integral to the mitigation strategy.

5.4 In accordance with BS42020:2013, it is assumed that a Construction Environmental Management Plan (CEMP) will be secured by planning condition and prepared at the detailed design stage for each Application. In addition to the construction phase impact avoidance and mitigation measures identified in the following sections, the CEMP will detail standard environmental control measures, including though not limited to the following:

- Implementation of strict protection measures for the root protection areas of retained trees and hedgerows, in accordance with BS5837:2012
- Standard best practice construction phase pollution prevention and control measures
- Sensitive working methods and timing to avoid direct impacts to nesting birds (generally vegetation removal outside nesting season of March through August)
- Updated ecological surveys, where necessary, to identify shifts in the baseline ecological condition in order that revised impact avoidance and mitigation measures can be adopted as required

5.5

5.6 In accordance with BS42020:2013, it is assumed that a Landscape and Ecology Management Plan (LEMP) will be secured by planning condition and prepared at the detailed design stage for each Application. The LEMP will set out measures for the establishment and long-term management of newly created and retained habitats to maximise benefits for biodiversity.

Potential Impacts and Ecological Effects

5.7

Designations

International Designations

The proposed Application Sites lies within the Sussex North Water Supply Zone. Inappropriate water levels are a known vulnerability of Arun Valley SAC/SPA/Ramsar site. Natural England released a Position Statement in September 2021, stating 'The Sussex North Water Supply Zone includes supplies from a groundwater abstraction which cannot, with certainty, conclude no adverse effect on the integrity of the Arun Valley SAC/SPA/Ramsar site. As it cannot be concluded that the existing

abstraction within Sussex North Water Supply Zone is not having an impact on the Arun Valley site, we advise that developments within this zone must not add to this impact. Developments within Sussex North must therefore must not add to this impact and one way of achieving this is to demonstrate water neutrality.' Horsham District Council have published a response to Natural England's Position Statement and have acknowledged that 'As part of our decision-making process an assessment of water neutrality will now be needed for many of our applications (Horsham District Council, no date).

As such, should the proposals require a public water supply, it will need to be demonstrate that they will not contribute to the impact through water abstraction or through the imposition of appropriate impact

5.8 avoidance or mitigation measures. Natural England have advised that one way of achieving this is to demonstrate water neutrality (i.e. 'water neutrality is the use of water in the supply area before the development is the same or lower after the development is in place'), and that a Water Budget calculation can be undertaken to determine this. Where water neutrality cannot be demonstrated, mitigation measures will be required (e.g. minimising water use in new builds and water off-setting).

Given that the scope of the proposals, including the proposed

5.9 residential development, a significant increase in water usage is not anticipated. In addition, it is understood that existing water uses are not covered by the Statement. However, it is recommended that due regard is given to the above guidance with regards to confirming Water Neutrality when considering water supply requirements, to ensure that likely significant effects to the Arun Valley designated sites may be screened out, in line with Habitats Regulations Assessment requirements.

5.10 *National Designations*

St Leonards Forest SSSI: Between 1.0- 1.7km north-west of all Application Sites. Given the nature of the proposed developments (commercial/business use and small-scale residential), it is considered unlikely that that the proposed development would have **no significant effects**, either directly or indirectly via recreational pressure, water or air

5.11 quality.

Non-Statutory Designations

Five non-statutory designations are present within 3km of the Applications, including Hydehill Wood and Hyde Gill LWS, Orange Gill and Homestead Wood LWS, Mill Pond LWS, St Leonards LWS and Deer Park LWS. As with the Statutory designation, it is considered that the proposed development would have **no significant effects**, either directly or indirectly via recreational pressure, water or air quality.

Habitats

Hedgerow (Priority Habitat) (h2a) and Line of Trees (33)

As mentioned within the Assumptions section, suitable protective fencing will be installed around all retained on-Site hedgerows and trees in accordance with BS 5837: 2005 and as part of an Arboricultural Methods Statement (AMS) and CEMP, therefore avoiding direct impacts to retained features during the construction phase.

5.12 ***Stonehouse Business Park***

As per 'Site Layout Plan As Proposed' (3D Architecture Ltd Ref: 2024/PL10/C), all hedgerows and treelines are to be retained alongside the development, and therefore **no significant effect** is anticipated.

5.13 ***Anaerobic Digester (AD) Plant and Main Livestock Building***

As per the 'Site Layout Plan As Proposed' (3D Architecture Ltd; Ref: 2024/PL7/C), c. 29m of Hedgerow H28, and c. 2m of H10c is proposed to
5.14 be lost to facilitate vehicular access to the development. Whilst this hedgerow is categorised as 'priority habitat', the feature is relatively recently planted and not yet fully developed. The impact is considered to represent a significant negative effect on this habitat below the Local level.

Jackson's Ridge

5.15 As per the 'Proposed Site Plan' (Lloyd Harden; Ref: 259101-110), all hedgerow and treelines are to be retained alongside the development, and therefore **no significant effect** is anticipated.

Fauna

5.16 Bats

All species of British Bats are legally protected under part 3 (Section 41) of the Conservation of Habitats and Species Regulations 2017 (as amended) and are adopted as a S41 Species in respect of the NERC
5.17 Act 2006.

Stonehouse Business Park

On-Site buildings B3, B4 and B6 were assessed to have 'low' suitability to support roosting bats. A dusk emergence survey did not confirm the presence of any roosts within these buildings, however evidence of a potential feeding perch was identified within B4. The assemblage of bats recorded during the emergence survey consisted primarily common and widespread bat species, with common pipistrelle and soprano pipistrelle contributing the highest number of passes. Less widespread species, including noctule, brown long-eared bat and *Myotis* sp contributed a limited number of passes.

Given the surrounding habitats within the wider landscape, it is considered that bats may be foraging in / around the barns on a sporadic basis, but no evidence to suggest a regular roosting site has been confirmed.

5.18 The commuting/foraging habitat was assessed to be of Local level importance, due to the boundary vegetation and connection to the wider landscape. All hedgerows, treelines and grass parcels are to be retained as part of the scheme.

5.19 Due to the quantum of the scheme, it is considered unlikely that ambient light levels will increase significantly from its current use; with PIR security lighting likely to be used on new buildings in a similar way to the current

5.20 provision. However, Building B3 is to be demolished and replaced with a commercial barn that is closer in proximity to Hedgerows H20a and H20b, of which the impacts of lighting are unknown, but have the potential to increase light spill onto a linear feature that may be utilised by bats.

5.21 The bat assemblage using the Site has been determined of Local level importance. As a result of the proposed scheme, it is considered that there will is the potential for minor adverse impacts to foraging / commuting resources, but that this would not be considered of significance above the **Site Level**.

Anaerobic Digester (AD) Plant and Main Livestock Building

5.22 The on-Site buildings were assessed to have 'negligible' suitability to support roosting bats.

5.23 The commuting/foraging habitat was assessed to be of Local level importance, due to the boundary vegetation and connection to the wider landscape. The majority of the hedgerows, except from a c. 29m length of newly planted hedgerow (H28) and c. 2m of H10c, is to be retained. Hedgerow H28 runs almost parallel to Hedgerow H10b (off-Site but within the wider landholding), which consists a mature line of trees. Whilst there will be some degree of hedgerow severance, the loss of a

5.24 portion of H28 is not considered to be detrimental, due to the retention of H10b, which forms a linear feature/green corridor from the road in the south to the woodland in the north.

5.25 As a result of the proposed scheme, it is considered that there will is the potential for minor adverse impacts to foraging / commuting resources, but that this would not be considered of significance above the **Site Level**.

Jackson's Ridge

The on-Site buildings were assessed to have 'negligible' suitability to support roosting bats.

The commuting/foraging habitat was assessed to be of Local level importance, due to the boundary vegetation and connection to the wider landscape. All hedgerows and treelines are to be retained as part of the scheme. The parcels of scrub present along the boundary of the Site are not proposed to be removed, however due to the residential nature of the scheme the retention of this habitat cannot be guaranteed long-term. Although scrub habitat may provide some foraging resource for bats, it is not considered a key resource.

5.26

Due to the residential nature of the proposals, it is anticipated that the level of ambient light may increase, particularly along Hedgerow H1.

As a result of the proposed scheme, it is considered that there will is the potential for minor adverse impacts to foraging / commuting resources, but that this would not be considered of significance above the **Site Level**.

5.27

5.28

[redacted]

5.29

[redacted]

5.30

[redacted]

5.31

Dormice

Dormice are protected under the Wildlife and Countryside Act 1981 (as amended) and under the Conservation of Habitats and Species Regulations 2017.

5.32

Anaerobic Digester (AD) Plant and Main Livestock Building

A length of hedgerow H28 (c. 29m) and c. 2m of H10c will be removed to facilitate site access proposals. H28 consists of some species known to be favoured by dormice, including hawthorn and blackthorn, however the feature is recently planted and not fully established and is not considered to provide adequate cover for dormice and has limited habitat connectivity. The potential for impacts to dormice as a result of the proposals is therefore considered to be very low. As such, **no significant effects** are not anticipated.

However, given the protection that dormice receive, appropriate precautionary measures have been set out within the 'Additional Mitigation' section below.

Birds

5.33 All wild birds are protected from killing and injury, and their nests and eggs are protected from damage and destruction, under the Wildlife and Countryside Act 1981 (as amended).

Stonehouse Business Park

5.34 Evidence of a feral pigeon colony has been recorded within Building B1, and evidence of old and empty nests (species unknown) has been recorded within Building B3.

5.35 In the absence of mitigation, the demolition of B3 could result in the damage or destruction of nests which would represent an offence under

5.36 the Wildlife and Countryside Act 1981 (as amended). This has the potential to negatively affect breeding birds at **less than the Local level** only.

Anaerobic Digester (AD) Plant and Main Livestock Building

5.37 Evidence of feral pigeon was identified within Building B1 and B2. Other habitats on-Site that provide opportunities for nesting birds, including mature trees within hedgerows and treelines are to be retained within the scheme, bar a portion of Hedgerow H28. H28 is a newly planted hedgerow which has not fully established, however does consist of some berry producing trees (hawthorn and blackthorn) and could provide nesting opportunities for some small bird species.

5.38 In the absence of mitigation, the demolition or Building B1 and B2, and the removal of a portion of H28 could result in the damage or destruction of nests which would represent an offence under the Wildlife and Countryside Act 1981 (as amended). This has the potential to negatively

5.39 affect breeding birds at **less than the Local level** only.

Jackson's Ridge

5.40 Evidence of feral pigeon nesting has been identified within Building B5. Other habitats on-Site, including hedgerow, treelines and scrub are to be retained.

5.41 Due to the residential nature of the development, it is acknowledged that predation rates could increase from domestic cats as a result of the proposed development, as well as increased recreational activity and increased lighting.

In the absence of mitigation, the demolition of B5 could result in the damage or destruction of nests which would represent an offence under the Wildlife and Countryside Act 1981 (as amended). This has the

potential to negatively affect breeding birds at **less than the Local level** only.

Barn owl

Barn owl are afforded additional protection against intentional or reckless disturbance while nesting, under Schedule 1 of the Wildlife and Countryside Act 1981.

Anaerobic Digester (AD) Plant and Main Livestock Building

5.42 Given the number of records of barn owl recorded in the local area, and the structure of B2, it is concluded on a precautionary basis that barn owl could use this structure.

5.43 In the absence of mitigation, the change of use of Building B2 could result in the damage or destruction / disturbance of barn owl nests which would represent an offence under the Wildlife and Countryside Act 1981 (as amended), if present. This has the potential to negatively affect breeding barn owl, and in the absence of mitigation this may be significant at the at the **Local level**.

5.44

Reptiles

5.45 All British reptile species are listed within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded protection against killing and injury under parts of sub-section 9(1) of the Act. In addition, all British reptile species are species of principal important under S41 of the NERC Act (2006) in England.

5.46 All Applications may result in the loss of small parcels of habitat that may be suitable for reptiles, if present within the locality. In particular, the lost of Hedgerow H28 and small parcels of grassland within Anaerobic Digester (AD) Plant and Main Livestock Building, and the loss of small parcels of grassland and rubble piles within Jackson's Ridge, need to be considered.

5.47

5.48 In the absence of mitigation, the removal of habitat has the risk of killing and injuring individual reptiles, which could represent an offence under the Wildlife and Countryside Act 1981 (as amended). This has the potential to negatively impact reptile populations (if present), resulting in adverse effects significant at **less than the Local level**.

Great crested newt

GCN are a Species of Principal Importance in accordance with the NERC Act 2006 and are afforded a high level of protection under the Conservation of Habitats and Species Regulations 2017; although they are relatively common and widespread in south-east England. This species is also of Principal Importance as listed under Section 41 of the NERC Act, 2006. GCN are legally protected from deliberate capture,

killing and injury and intentional or reckless disturbance, damage or destruction of a resting of breeding place.

Stonehouse Business Park

No ponds exist on Site, however hedgerows and tree line bases, and small parcels of grassland offer some terrestrial opportunities for GCN (and other amphibians). A number of ponds have also been identified within the dispersible distance (500m), and positive eDNA results were returned for Pond P4 (c. 150m north-east) and P6 (c. 330m east).

5.49

As a result, great crested newt populations have been considered to be of at least Local level importance. However, it is considered that the likelihood of using the site is low, given the poor-quality habitat. In addition, the retention habitats of potential value (e.g. all on-Site hedgerows), it is considered that potential to negatively affect GCN populations (if present on Site) is **less than the Local level** only.

5.50

Mitigation by Design

It is an established principle (CIEEM, 2018) that, wherever possible, potential negative effects should be avoided through 'Mitigation by Design', as this gives greater certainty over deliverability, demonstrates a well-designed scheme and ensures the correct application of the 'Mitigation Hierarchy' (as advocated by BS42020:2013, Defra 2019 and CIEEM, CIRIA & IEMA 2016).

5.51

5.52 The proposed developments across the three Applications stands to retain on-Site hedgerows and trees as far as possible, with the removal of c. 29m of Hedgerow H28 in Anaerobic Digester (AD) Plant and Main Livestock Building. New hedgerow planting is prioritised, and green corridors along boundaries of the Sites will be retained or enhanced to maintain connectivity to the wider landholding and beyond, in line with Policy 31 of the Horsham District Planning Policy Framework (2015).

5.53

Full details of the established and long-term management of these onsite habitats will be set out in the Habitat Management and Monitoring Plan (HMMP) at the detailed design stage. As such, details will include a description of the proposed habitats, their target condition, timescales over which condition will be achieved, management prescriptions, implementation responsibilities and funding mechanism.

5.54

A sensitive external lighting scheme will be prepared at the detailed design stage to minimise any further impacts above the current baseline. The lighting scheme should be developed to avoid light spill onto the retained hedgerows, scrub habitat and woodland, which could impact nocturnal fauna such as bats. The lighting scheme in regard to specific habitats and fauna is discussed further below.

The above prescriptions may be secured through appropriately worded planning conditions.

Habitats

Hedgerows (priority habitat) (h2a) and lines of trees (33)

5.55 ***Anaerobic Digester (AD) Plant and Main Livestock Building***

The proposed developments have sought to minimise the removal of hedgerow and tree lines, limited to the removal of c. 29m of Hedgerow H28.

5.56 As per the 'Site Layout Plan As Proposed' (3D Architecture Ltd; Ref: 2024/PL7/C), Hedgerow H13 will be replanted and extended south, to reduce the gap between existing on-Site linear features. A new length
5.57 of species rich native hedgerow with trees will also be planted along the southern boundary of the AD site, and well as along the western boundary of the amended access road. This planning will replace the lost hedgerow resource on Site, providing opportunities for a range of fauna including nesting birds, bats, terrestrial small mammals and invertebrates.

Fauna

Bats

Stonehouse Business Park

5.58 The proposed development has sought to minimise effects on foraging and dispersing bat species through sensitive design, maintaining and strengthening hedgerows around the boundary of the Site. No trees with roosting potential were identified on Site, and tree planting and grassland creation will be delivered to provide foraging opportunities for
5.59 bats on-Site.

In addition, proposed grassland buffers and tree planting is further likely
5.60 to encourage communities of invertebrates, which in turn will support foraging activity by bats.

Light spill onto habitat likely used by commuting and foraging bats will be minimised through design of a sensitive lighting scheme. Sensitive lighting will be implemented throughout the construction and operational phases wherever possible, unless a different standard is required by West Sussex County Council as Highways Authority for adoptable roads. Any external lighting proposals will be developed in accordance with the advice of a bat ecologist with due regard to the Bat Conservation Trust and the Institution of Lighting Professionals Guidance Note on Bats and Artificial Lighting at Night (2023).

Anaerobic Digester (AD) Plant and Main Livestock Building

The proposed development has sought to minimise effects on foraging and dispersing bat species through sensitive design, maintaining and strengthening hedgerows around the boundary of the Site where possible. Hedgerow H13 will be replanted and extended south, to reduce the gap between existing on-Site linear features, and a new
5.61 length of hedgerow with trees will be planted along the southern boundary of the site, as well as along the reconfigured access path. This will increase the hedgerow resource on Site, providing additional linear features which in turn will increase commuting and foraging resource for bats.

No trees are to be removed on-Site, and tree planting and grassland creation will be delivered to provide foraging opportunities for bats on-Site.

5.62

As discussed in relation to Stonehouse Business Park, light spill onto retained habitat likely used by commuting and foraging bats will be
5.63 minimised through design of a sensitive lighting scheme.

Jackson's Ridge

The proposed development has sought to minimise effects on foraging
5.64 and dispersing bat species through sensitive design, maintaining the treeline along the northern boundary. Due to the residential nature of the proposed Site, habitat creation that will benefit bats cannot be guaranteed. However, vegetated gardens have the potential to encourage communities of invertebrates, which in turn will supporting foraging activity by bats.

5.65

As discussed above in relation to the other application sites, light spill onto retained habitat likely used by commuting and foraging bats will be minimised through design of a sensitive lighting scheme.

5.66 <u>Nesting birds</u>

Stonehouse Business Park

5.67

The proposed development will result in the loss of Building B3, in which evidence of bird nesting has been identified.

The retention of boundary habitats, and the provision of additional tree planting will serve to increase the availability of suitable nesting and
5.68 foraging habitat for a number of bird species, and provide additional cover opportunities to reduce risk of disturbance from the use of the commercial development.

Anaerobic Digester (AD) Plant and Main Livestock Building

The proposed development will result in the retention of the buildings, in which nesting pigeon have been recorded.

The retention of boundary habitats, and the provision of grassland habitat, hedgerow and tree planting will serve to increase the availability of suitable nesting and foraging habitat for a number of bird species, and provide additional cover opportunities to reduce risk of disturbance from the use of the commercial development.

5.69 ***Jackson's Ridge***

The proposed development will result in the loss of Building B5, in which evidence of bird nesting has been identified.

The retention of the treeline along the northern boundary and the scrub
5.70 habitat in the east of the Site (not proposed to be removed within the scheme), will serve to retain suitable nesting and foraging habitat for a
5.71 number of bird species, and provide cover opportunities to reduce the risk of disturbance/potential predation by domestic cats that may rise from the residential nature of the development.

Reptiles

Anaerobic Digester (AD) Plant and Main Livestock Building

The proposed development seeks to retain grassland habitat and
5.72 hedgerow bases that may be utilised by reptiles (if present) on Site. The retention of the hedgerow habitats, the replanting and extension of Hedgerow H13, and the planting of new hedgerow habitat along the north-eastern boundary will serve to increase foraging, refuge and commuting reptiles. In addition, the retention and extension of the other neutral grassland habitat around the peripheries of the Site will serve to increase foraging and basking opportunities.

Great crested newt

5.73 ***Stonehouse Business Park***

The proposed development seeks to retain (in the long-term) grassland habitat and hedgerow bases that may be utilised by amphibians (including great crested newt, if present) on Site. The retention of hedgerow habitats, and new hedgerow planting will serve to increase foraging, refugee and commuting amphibians. In addition, the creation
5.74 of a SuDS feature will provide aquatic breeding opportunities for amphibians, including great crested newt if present.

Anaerobic Digester (AD) Plant and Main Livestock Building

The proposed development seeks to retain grassland habitat and hedgerow bases that may be utilised by amphibians (including great crested newt, if present) on Site. The retention of the hedgerow habitats, the replanting and extension of Hedgerow H13 and the planting of new hedgerow habitat along the north-eastern boundary will serve to increase foraging, refuge and commuting amphibians. In addition, the retention and extension of the other neutral grassland habitat around the peripheries of the Site will serve to increase foraging opportunities.

The ephemeral pond is to be retained, which will continue to provide new aquatic opportunities for amphibians, including great crested newt is present.

Additional Mitigation

5.75 **Habitats**

Hedgerows (priority habitat) (h2a) and tree lines

All Sites

All retained hedgerows, tree lines and trees will be protected during construction by appropriate fencing in line with BS 5837: 2012 Trees in relation to design, demolition and construction- Recommendations (BSI,
5.76 2012). These measures will be detailed within a Tree Protection Plan (TPP) to be agreed by Horsham District Council as part of detailed planning consent.

Bats

All Sites

No trees are proposed to be removed to facilitate development. If
5.77 proposals are to change, and it was necessary to remove trees to accommodate the proposals, surveys would be required in order to confirm the presence or likely absence of roosting bats, such that mitigation can, if necessary, be secured.

Stonehouse Business Park

5.78 Timescales for demolition of B3 and B4 are unknown at present; however it is recommended that should proposed works be delayed for more than a year from the date of the roost survey undertaken, that an update survey (comprising in the first instance of an inspection survey; with an update emergence survey being undertaken if considered necessary) be undertaken to establish the presence / absence of any further evidence of the buildings being used by roosting bats.

5.79 [redacted]

5.80 [redacted]

Hedgehogs

5.81 Hedgehogs are a Species of Principal Importance listed of Schedule 41 of the NERC Act 2006 (S41 species).

Anaerobic Digester (AD) Plant and Main Livestock Building

5.82 As some hedgerow clearance is proposed, this will need to take place in winter so as to avoid impacts to other ecological features mentioned herein. However, if clearance works to hedgerows would take place in winter, a thorough check for hibernating hedgehogs should be undertaken beforehand, with any hedgehogs found relocated to suitable alternative habitat on site.

5.83

Jackson's Ridge

As scrub removal may be necessary (although not currently proposed within the scheme), this too will need to be subject to a thorough check for hibernating hedgehogs if removal is to take place in winter.

5.84

Dormice

Anaerobic Digester (AD) Plant and Main Livestock Building

During hedgerow clearance, the potential for direct impacts to dormice and therefore contravention of legislation is considered to be low. No further survey for this species is considered to be required; however it is recommended that a precautionary approach be taken to hedgerow clearance (as set out for other protected species above). It is considered that it would be appropriate to under the works under a non-licenced method statement. In line with The Dormouse Conservation Handbook (English Nature, 2006). In the event that a dormouse, or any suspected dormouse nest be identified during habitat clearance,

habitat removal would need to cease and a European Protected Species (EPS) licence from Natural England would need to be sought.

Birds

All sites

Demolition of any buildings with nesting potential, and any clearance of nesting habitat (including buildings) or features required to facilitate the development should avoid the period between March and August (inclusive) when nesting birds are most likely to be present. If this is not

5.85 possible, habitat and buildings will need to be checked for nesting birds by a suitably qualified ecologist prior to clearance with works only proceeding if no nesting evidence or behaviour are observed.

There is the scope for the inclusion within the planting scheme of plant species of known wildlife value to birds, to increase foraging

5.86 opportunities. As for bats, an ecologically sensitive lighting strategy will be designed in regards to each Application Site, with the aim to minimise light spill onto the retained vegetation suitable to support nesting birds.

Barn Owl

Anaerobic Digester (AD) Plant and Main Livestock Building

5.87 Given the number of records of barn owl recorded in the local area, and the structure of B2, it is recommended that two presence/absence surveys for barn owls are undertaken in March – August, if any disturbance from the change of use is anticipated, and prior to any works to B2 commencing.

5.88

If evidence of active barn owl nesting is identified mitigation for the loss / disturbance of a nest site will need to be considered. Suitable mitigation may include provision of a new nest site (to be provided within 200m of the building to be lost, 60 – 90 days prior to any works starting).

5.89 *Reptiles*

All Sites

In order to avoid the potential direct killing/injury of reptiles during

5.90 construction, Reasonable Avoidance Measures (RAMs) should be adhered to reduce the risk of any individuals present on the Site, secured within the CEMP and implemented during construction.

Such measures will include sensitive habitat degradation during the appropriate season, to encourage reptiles to disperse away from working areas prior to construction. This will include grassland and scrub to be gradually cut back with hand tools only (e.g. strimmer) to c. 200mm above ground level under ecological supervision. The cutting would be in a systematic manner, working from a central point of the construction working area to encourage dispersal of any reptiles present to the boundaries. All refugia found, in particular in relation to Jackson's

Ridge, will be removed by hand and any animals present moved to the boundaries. A second cut to ground level will be undertaken 24 hours after the first cut, again under ecological supervision. Semi-permanent reptile fencing will then be installed along the perimeter of the construction area (where necessary) to prevent reptiles recolonising these areas. The vegetated habitats on the Site will need to be maintained at ~200mm until construction begins. The exclusion fencing will remain in place for the duration of the construction phase, and only removed under ecological supervision.

All RAMs (vegetation clearance, refugia removal and exclusion fencing installation/removal) will only be undertaken during the active season for reptiles (April- September inclusive).

5.91 Amphibians

In order to avoid the potential direct killing/injury of amphibians (including GCN) during construction, Reasonable Avoidance Measures
5.92 (RAMs) should be adhered to reduce the risk of any individuals present on the Site, secured within the CEMP and implemented during construction.

Any clearance of any suitable habitat should be supervised under an
5.93 ecological watching brief, amphibians would benefit from this precautionary measure also. Any amphibians (other than great crested newt, discussed further below) found during clearance work can be moved to nearby suitable habitat such as hedgerow bases which would be buffered and protected from development edge effects. The timing of any such clearance work should be informed by an ecologist to ensure other ecological features of the site are also considered.

Great crested newt

5.94 ***Stonehouse Business Park***

Great crested newt are known to be present within the wider landholding, and positive eDNA results have been recorded within 500m
5.95 of Stonehouse Business Park. GCN are assumed to be present and using the wider Site.

However, suitable habitat within the Stonehouse Business Park Site is very limited, with hedgerow bases / disused barns potentially provide some refuge resources. Small areas of modified grassland to be temporarily impacted by SUDs creation is considered to be of limited value to GCN. It is not considered that the proposed development will have a significant effect on the favourable conservation status of GCN locally, however it is recommended that precautionary measures are in place to avoid any direct impacts such as killing/injury of during demolition / site clearance works to ensure compliance with relevant legislation.

As it is considered that the proposals are unlikely to have a significant effect on the availability of foraging/resting/dispersal habitat within the site, a non-licensable approach to the works is considered reasonable. A non-licensable method statement, detailing precautionary measures outlined above in relation to reptiles and other amphibian species, being closely monitored by a suitably experienced ecologist, licenced to handle great crested newts (i.e. in order to ensure that no direct impacts such as killing / injury occur). However, should any great crested newt be found during the works, habitat removal / demolition would need to cease and a European Protected Species (EPS) licence from Natural England would need to be sought.

5.96

Based on the implementation of the mitigation measures outlined above, no significant residual effects on the local population of GCN are anticipated.

5.97

Residual Effects

Table 11 below summarises the assessment of potential impacts on each important ecological feature, proposed mitigation and the assessed residual effects.

5.98

Table 11. Summary of effects for Stonehouse Business Park, Anaerobic Digester (AD) Plant and Main Livestock Building and Jackson's Ridge

Application	Important Ecological Feature	Potential Impacts and Effects	Avoidance & Mitigation Measures	Mechanism by which Measures are Secured	Residual Effects
Anaerobic Digester (AD) Plant and Main Livestock Building	Hedgerows and trees	Removal of hedgerow sections for vehicular access	Re-instate failed hedgerow and lengthen.	HMMP secured through Planning Condition	No significant effect
All Sites	Bats	Potential development edge effects from artificial lighting causing disturbance of foraging bats Loss of commuting habitat	Retention and strengthening of boundary habitats Sensitive lighting strategy	Lighting Strategy secured through Planning Condition	No significant effect
All Sites	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Application	Important Ecological Feature	Potential Impacts and Effects	Avoidance & Mitigation Measures	Mechanism by which Measures are Secured	Residual Effects
Anaerobic Digester (AD) Plant and Main Livestock Building	Dormice	Damage to /destruction of nests and/or killing / injury of dormice during removal of hedgerow	Non-Licensable Methods Statement Habitat creation and long-term management	Secured by planning permission Landscape proposals and HMMP	No significant effect
All Sites	Birds / Barn Owl	Potential damage or destruction of nests and eggs	Sensitive timing of works / nest checks by ecologist	CEMP secured through Planning Condition	No significant effect
All Sites	Reptiles	Potential injury or killing of individuals Loss of commuting habitat	Sensitive timing of works Habitat creation and long-term management	CEMP and landscape proposals secured by Planning Condition	No significant effect
Stonehouse Business Park	Great crested newt	Potential injury or killing of individuals Loss of commuting habitat	Non-Licensable Methods Statement Habitat creation and long-term management	Secured by planning permission CEMP and landscape proposals secured by Planning Condition	No significant effect

5.99 Subject to the implementation of the above mitigation, no significant residual effects on any important ecological features are anticipated to result from the construction or operation of the proposed developments at the three Application Sites, with exception to the loss of hedgerow resource within Application, in which a significant negative effect is anticipated, at less than Local level only.

5.100

Cumulative Effects

5.101 Due to the scale and nature of the proposed developments, a detailed assessment of potential cumulative effects with other schemes within the local area has not been undertaken.

Cumulative effects of development proposals across the three areas within the Application Site have however been considered in relation to each other. Consideration of future Habitat Bank proposals across the wider landholding (as shown on the Site-Wide Masterplan (CSA/6746/111)) have also been considered.

No significant effects are expected from any of the application areas individually, in regard to habitats or protected species. Due to the scope of each of the proposals and the predicted minimal impacts, it is also considered unlikely that there will be a cumulative effect as a result of the Application as a whole.

5.102 As previously mentioned, there is an intension that the wider landholding will be registered as a Habitat Bank in the future, and used to provide off-set habitats for future development proposals (either on-or off-site). Indicative proposals for the Habitat Bank (CSA/6476/111) show habitat

5.103 creation, including new parcels of scrub, woodland, neutral grassland and hedgerows across Stonehouse Farm as well as habitat to buffers to existing hedgerow and woodland. This habitat creation and long-term management would provide enhanced opportunities for fauna, including the aforementioned species in the immediate surroundings of the proposed development areas, and overall a positive effect for local biodiversity.

Compensation

As detailed above in 'Mitigation by Design' the proposed development

5.104 will, however, provide an opportunity to secure the following elements of habitat creation within the Application boundaries. The following should be read in conjunction with the Biodiversity Net Gain Report (CSA/6746/06/A), which covers the BNG requirements for Anaerobic Digester (AD) Plant and Main Livestock Building and Jackson's Ridge. The following demonstrates that alongside development that each application can accommodate:

Stonehouse Business Park

- Modified grassland (c. 0.135ha equating to 0.29 Habitat Units)

5.105
- Urban trees (c. 0.0326ha or c. 8 trees equating to 0.10 Habitat Units)

Stonehouse Business Park is anticipated to achieve a net gain of 0.33 (+166.07% Net Gain) for Habitat Units, and a net gain of 0.78 (+18.59%) Hedgerow Units, using on-Site provisions only.

Anaerobic Digester (AD) Plant and Main Livestock Building

- Other neutral grassland (c. 0.264ha equating to 1.08 Habitat Units)
- Modified grassland (0.336 ha equating to 0.71 Habitat Units)
- Urban trees (c. 0.0692ha or c. 17 small trees, equating to 0.21 Habitat Units)
- Sustainable Drainage System (c. 0.03ha equating to 0.21 Habitat Units)
- Native hedgerow (c. 0.022km equating to 0.09 Hedgerow Units)
- Species rich native hedgerow with trees (0.094km equating to 0.91 Hedgerow Units)

- Species rich native hedgerow (c. 0.104km equating to 1.65 Hedgerow Units)

Anaerobic Digester (AD) Plant and Main Livestock Building is anticipated to achieve a net gain of 0.77 Habitat Units (+18.37% Net Gain) for Habitat Units, and a net gain of 1.70 Hedgerow Units (+25.10%), using on-Site provisions only.

5.106 ***Jackson's Ridge***

- Vegetated garden (c. 0.279ha equating to 0.59 Habitat Units)

Jackson's Ridge is anticipated to achieve a net loss -0.52 Habitat Units (-46.58%), and a trading error for scrub habitat, and a Net Zero (0%) for Hedgerow Units. Whilst removal of the scrub habitat isn't proposed
5.107 during construction, due to the residential nature of the plot the retention of this habitat long-term cannot be guaranteed, and therefore has to be presumed lost. To compensate for this loss of scrub habitat, off-Site provision has been suggested in the form of mixed scrub in good condition (c. 0.09ha equating to 0.65 Habitat Units), and native hedgerow in good condition (c. 0.015km equating to 0.06 Hedgerow Units). Including off-Site provision, Jackson's Ridge would be anticipated to achieve a net gain of 0.12 Habitat Units (+10.59%).

5.108 Off-site Habitat and Hedgerow Units could be delivered at Stonehouse Farm as part of the proposed Habitat Bank, or through purchase from another off-site provider. Off-Site Habitat creation will be detailed within a Habitat Management & Monitoring Plan (HMMP) and appropriate application of a planning condition or legal condition (for each part / phase of the Application Site).

5.109 Full details on the establishment and long-term management of these habitats will be set out in the HMMP at the detailed design stage. Such details will include a description of the proposed habitats, their target condition, timescales over which condition will be achieved, management prescriptions, implementation responsibilities and funding
5.110 mechanisms.

Enhancement

5.111 The development proposals include some landscape planting enhancements that will make positive contributions to on-site biodiversity.

New habitat creation will provide opportunities for species confirmed to be present on-site at baseline, such as nesting birds. In addition to these enhancements which are embedded into development proposals, a range of additional ecological enhancement measures will be delivered as part of the proposed development, as identified below.

Further details will be set out in a LEMP at the detailed design stage, however as an indicative guide:

- Inclusion of plant species of known wildlife value within the landscaping scheme, including night-scented varieties to benefit bats, particularly within Jackson's and Stonhouse Business Parks.

- Provision of new bat roosting opportunities: At least 2 no. bat boxes will be erected on mature trees or new builds within Stonehouse Business Park and Anaerobic Digester (AD) Plant and Main Livestock Building sites; with 3no. bat boxes being erected at Jackson's Ridge (one within each residential plot). These will be a purpose-built, durable and long-lasting variety such as available from Schwegler or Habibat.

- Provision of new bird nesting opportunities: At least 6 no. bird nesting boxes (2 boxes in each Application site) will be provided in retained planting to benefit generalist bird species.

- Creation of log piles: At least 2 log piles will be provided within Anaerobic Digester (AD) Plant and Main Livestock Building for wildlife benefit. These will be sited within boundary vegetation where they will be least disturbed.

Monitoring

5.112 No post-development monitoring of important ecological features is proposed. However, there will be ongoing monitoring of newly established and enhanced habitats as part of the proposals. This commitment will be made, and further detail provided, within the HMMP for each part / phase of development to be prepared at the detailed design stage.

6.0 CONCLUSIONS

6.1 In the absence of any mitigation measures, the proposed development would have the potential to result in negative effects significant to less than the Local level. However, with the implementation of some straightforward mitigation and precautionary measures as proposed here, and the inclusion of off-Site habitat creation within the wider landholding, the development is not anticipated to result in any significant residual negative effects on important ecological features.

6.2 The development proposals for Stonehouse Business Park, Anaerobic Digester (AD) Plant and Main Livestock Building and Jackson's Ridge demonstrate the potential to deliver net benefits for wildlife in the form of additional habitats, with the opportunity to provide additional biodiversity enhancement measures alongside the new proposals.

6.3 The measures set out herein can be secured through appropriate conditions attached to any planning consent, and the development may therefore be delivered without harm to nature conservation interests. Specifically, it is anticipated that planning conditions would be used to secure:

- Construction Environmental Management Plan (CEMP): In addition to wider environmental controls and best practice construction management, the CEMP will set out construction-phase impact avoidance measures with respect to nesting birds, [redacted] reptiles and amphibians.

- Habitat Management and Monitoring Plan (HMMP): The HMMP will detail the establishment and long-term management of retained and newly created habitats to maximise benefits for wildlife (for Anaerobic Digester (AD) Plant and Main Livestock Building and Jackson's Ridge, where Biodiversity Net Gain is applicable).

- Lighting Strategy: A sensitive lighting strategy is recommended, ensuring that dark corridors are maintained, and minimising light spill to retained and newly created habitats.

6.4
- Non-Licensable Methods Statement: A method statement will detail the non-licensable works required for habitat clearance in regards to dormice, reptiles and great crested newt (as required for each application area).

Based on the successful implementation of avoidance, mitigation and enhancement measures set out herein, the scheme is considered to accord with all relevant nature conservation legislation, as well as with the provisions of Policy 31 of the Horsham District Planning Policy Framework (2015).

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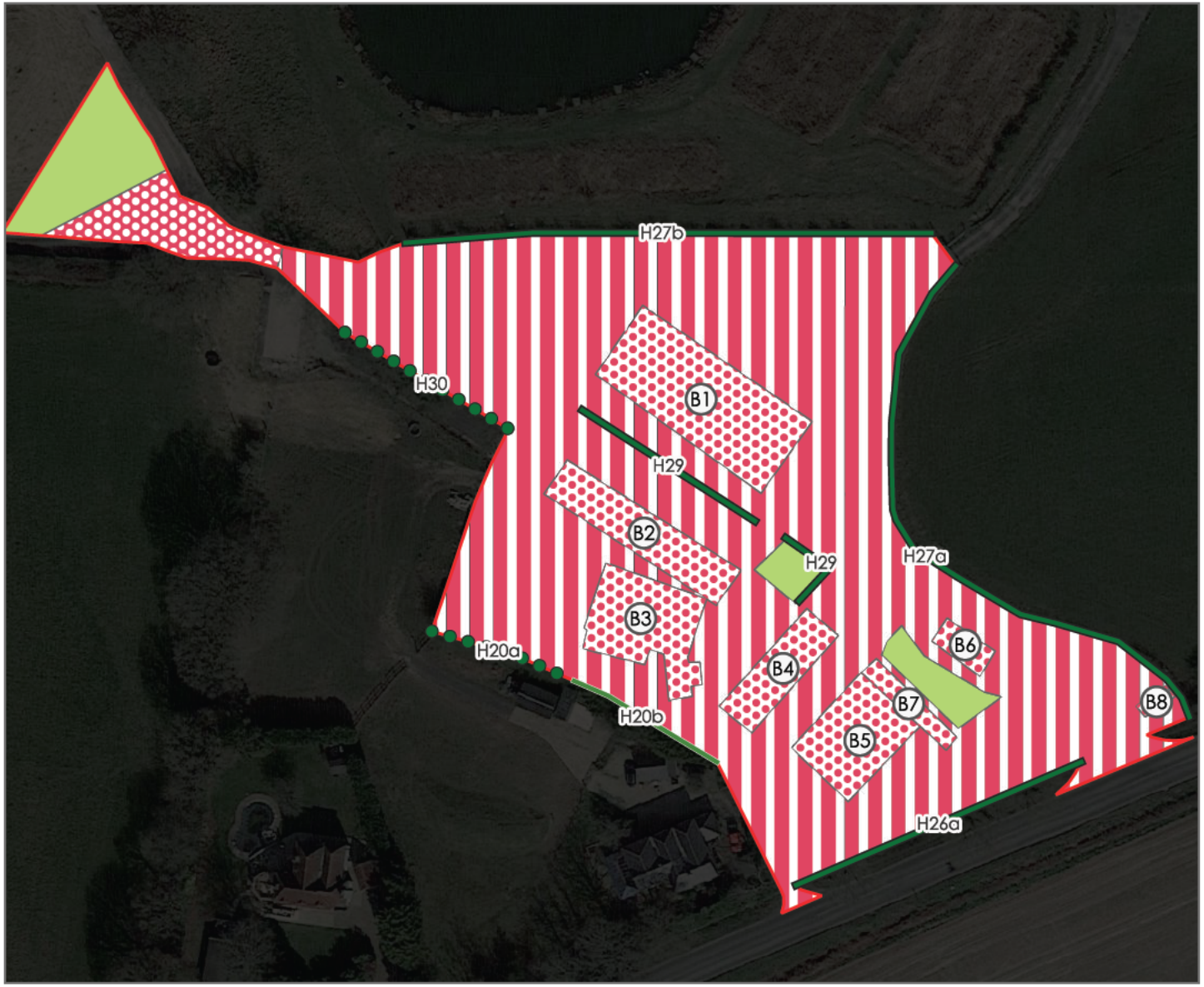
Appendix A

Habitats Plans



N

- Site boundary
- Modified grassland (g4)
- Developed land. sealed surface (u1b)
- Buildings (u1b5)
- Artificial unvegetated unsealed surface (u1c)
- Building reference
- Hedgerows (Priority Habitat) (h2a)
- Other Hedgerows (h2b)
- Line of trees (33)

0 25 50 m

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Project	Stonehouse Farm, Handcross	Date	Feb 2025	Drawing No.	CSA/6746/102
Drawing Title	Stonehouse Business Park, Habitats Plan	Scale	Refer to scale	Rev	C
Client	Lake Investment Ltd.	Drawn	LG	Checked	CC

N

- Site boundary
- Other neutral grassland (g3c)
- Modified grassland (g4)
- Developed land. sealed surface (u1b)
- Buildings (u1b5)
- Sparsely vegetated land (u1f)
- Pond (r, 41)
- Field/ Building reference

0 100 200 m

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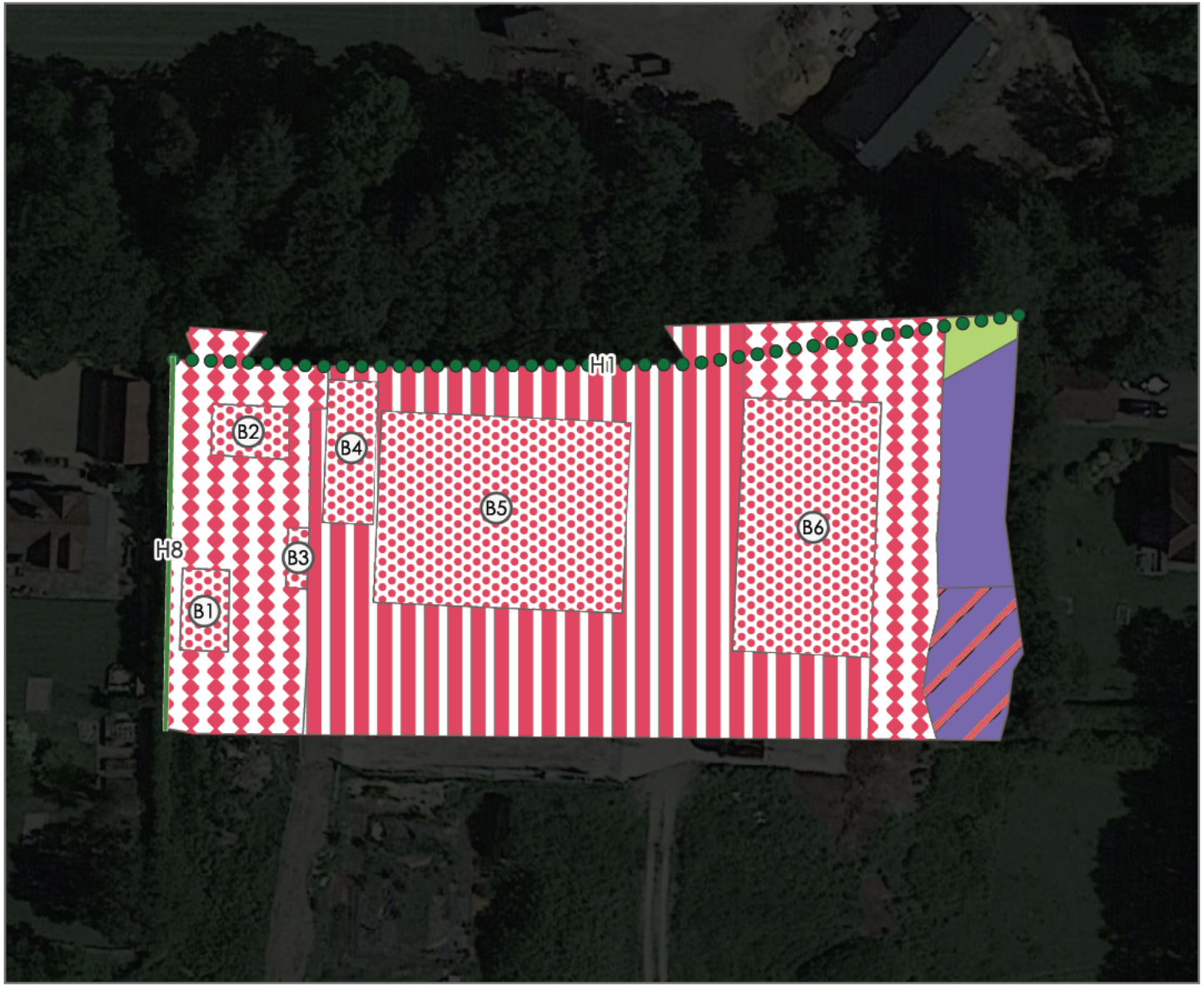
Project	Stonehouse Farm, Handcross	Date	Feb 2025	Drawing No.	CSA/6746/118
Drawing Title	Anaerobic Digester (AD) Plant and Main Livestock Building Habitats Plan	Scale	Refer to scale	Rev	C
Client	Lake Investment Ltd.	Drawn	LG	Checked	CC



N

- Site boundary
- Modified grassland (g4)
- Bramble scrub (h3d)
- Mixed scrub (h3h)
- Developed land. sealed surface (u1b)
- Buildings (u1b5)
- Sparsely vegetated land (u1f)
- Other Hedgerows (h2b)
- Line of trees (33)
- Building reference

0 25 50 m

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Project	Stonehouse Farm, Handcross	Date	Feb 2025	Drawing No.	CSA/6746/120
Drawing Title	Jackson's Ridge Habitats Plan	Scale	Refer to scale	Rev	B
Client	Lake Investment Ltd.	Drawn	LG	Checked	CC

Appendix B

Legislation and Planning Policy

1.1. The **Conservation of Habitats and Species Regulations 2017** (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.

1.2. The **Wildlife and Countryside Act 1981** (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. [redacted]

1.3. The **Environment Act 2021** received Royal Assent in November 2021. Through an amendment to the Town and Country Planning Act 1990 the Environment Act introduced a mandatory requirement for all planning permissions to be conditional upon the submission of a Biodiversity Gain Plan for approval by the Local Planning Authority. The Plan will need to demonstrate a net gain of at least 10% in the biodiversity value of the development site.

1.4. Section 40(1) of the **Natural Environment and Rural Communities (NERC) Act 2006** (as amended) states that each public authority, "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving and enhancing biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications, with particular regard to the Section 41 (S41) lists of 56 habitats and 943 species of principal importance. The UK Biodiversity Action Plan (BAP) has been superseded by the Biodiversity 2020 Strategy, however Local BAPs continue to influence biodiversity management and conservation effort, including through the spatial planning system, at the local scale.

1.5. The **National Planning Policy Framework (2023)** (NPPF) sets out the government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 180, states that the planning system and planning policies should minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

1.6. Paragraph 186 sets out the principles that local planning authorities should apply when determining planning applications:

- 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.
- 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.
- 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.
- 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.

1.7. Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular, the PPG promotes the delivery of measurable Biodiversity Net Gain through the creation and enhancement of habitats alongside development.

1.8. The **Government Circular 06/2005**, which is referred to within the NPPF, defines statutory nature conservation sites and protected species as a material consideration in the planning process.

1.9. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

Table 1. Summary of regional and local planning policy relating to ecology

Policy	Summary
Horsham District Planning Framework (excluding South Downs National Park) 2015	
Strategic Policy: The Natural Environment and Landscape Character	The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats will be protected against inappropriate development. The Council will support development proposals which: 1. Protects, conserves and enhances the landscape and townscape character, taking into account areas identified as being of landscape importance, the individual settlement characteristics, and maintains settlement separation. 2. Maintain and enhances the Green Infrastructure Network and addresses any identified deficiencies in the District. 3. Maintains and enhances the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, and ensures no net loss of wider biodiversity and provides net gains in biodiversity where possible. 4. Conserve and where possible enhance the setting of the South Downs National Park.
Policy 26 Strategic Policy: Countryside Protection	Outside built-up area boundaries, the rural character and undeveloped nature of the countryside will be protected against inappropriate development. Any proposal must be essential to its countryside location, and in addition meet one of the following criteria: 1. Support the needs of agriculture or forestry; 2. Enable the extraction of minerals or the disposal of waste; 3. Provide for quiet informal recreational use; or 4. Enable the sustainable development of rural areas. In addition, proposals must be of a scale appropriate to its countryside character and location. Development will be considered acceptable where it does not lead, either individually or cumulatively, to a significant increase in the overall level of activity in the countryside, and protects, and/or conserves, and/or enhances, the key features and characteristics of the landscape character area in which it is located, including; 1. The development pattern of the area, its historical and ecological qualities, tranquillity and sensitivity to change; 2. The pattern of woodlands, fields, hedgerows, trees, waterbodies and other features; and 3. The landform of the area.

Policy 31 Green Infrastructure and Biodiversity	Green Infrastructure and Biodiversity 1. Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss, and ensures that the ecosystem services of the area are retained. 2. Development proposals will be required to contribute to the enhancement of existing biodiversity, and should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks. 3. Where felling of protected trees is necessary, replacement planting with a suitable species will be required. 4. a) Particular consideration will be given to the hierarchy of sites and habitats in the district as follows: i. Special Protection Area (SPA) and Special Areas of Conservation (SAC) ii. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above. b) Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that: i) The reason for the development clearly outweighs the need to protect the value of the site; and, ii) That appropriate mitigation and compensation measures are provided. 5. Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan.
Horsham District Local Plan 2023-2040. Regulation 19 (December 2023 Draft)	
Strategic Policy 9: Water Neutrality	1. All development within the Sussex North Water Resource Zone (WRZ) will need to demonstrate water neutrality through water

	efficient design and offsetting of any net additional water use of the development. This is to be achieved by ensuring that: Water Efficient Design a) New residential development is designed to utilise no more than 85 litres of mains supplied water per person per day; b) New non-domestic buildings to achieve a score of 3 credits within the water (WAT01 Water Consumption) issue category for the BREEAM Standard or an equivalent standard set out in any future update; and Offsetting Water Use c) Development proposals must demonstrate that having achieved water efficient design, any mains-supplied water use from the development is offset such that there is no net increase in mains-supplied water use within the WRZ compared with pre-development levels. Water Neutrality Statement 2. A water neutrality statement will be required to demonstrate how policy requirements have been met in relation to water efficient design and offsetting. The statement shall provide, as a minimum, the following: a) baseline information relating to existing water use within a development site; b) full calculations relating to expected water use within a proposed development; and c) full details of how any remaining water use will be offset. Offsetting Schemes 3. A local authority-led water offsetting scheme will be introduced to bring forward development and infrastructure supported by Local and Neighbourhood Plans. The authorities will manage access to the offsetting scheme to ensure that sufficient water capacity exists to accommodate planned growth within the plan period. 4. Development proposals are not required to utilise the local authority-led offsetting scheme and may bring forward their own offsetting schemes. Any such development 51 proposals will need to have regard to the local authority-led offsetting scheme and associated documents. 5. Offsetting schemes can be located within any part of the Sussex North Water Resource Zone, with the exception that offsetting will not be accepted within the Bramber/Upper Beeding area identified in the Policies Map, unless the application site is located within the Bramber/Upper Beeding area. Alternative Water Supply 6. Where an alternative water supply is to be provided, the water neutrality statement will need to demonstrate that no water is utilised from sources that supply the Sussex North WRZ. The wider acceptability and certainty of delivery for alternative water supplies will be considered on a case-by-case basis.

	Area of Water Stress 7. Should the need to demonstrate water neutrality no longer be required, new residential development must be designed to utilise no more than 110 litres of mains supplied water per person per day, as per the Building Regulations optional requirement for tighter water efficiency. Should tighter national standards be introduced during the Local Plan period applicable for areas of serious water stress, they will be applied.
Strategic Policy 13: The Natural Environment and Landscape Character	The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats, will be protected against inappropriate development. The Council will expect development proposals to be landscape-led from the outset so that they clearly inform the design and layout. Proposals will also be required to: 1. Protect, conserve and enhance the landscape and townscape character, taking into account features / areas identified as being of landscape importance and the individual settlement characteristics, and maintain settlement separation; 2. Maintain and enhance the Green Infrastructure Network, the Local Nature Recovery Strategy and national Nature Recovery Network and, where practicable, help to address any identified needs and deficiencies in these networks across the District; 3. Maintain and enhance the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, and secure measurable net gains in biodiversity; and 4. Incorporate SuDS into a scheme in an optimal location for their purpose whilst also securing landscape and biodiversity enhancements and delivering high-quality green spaces. Proposals will be expected to provide details to demonstrate that the whole life management and maintenance of the SuDS are appropriate, deliverable and will not cause harm to the natural environment and/or landscape.
Strategic Policy 16: Protected Landscapes	1. Development proposals within and adjacent to the High Weald AONB must demonstrate how their development proposals conserve and enhance the natural beauty of the AONB, having appropriate regard to the setting and views into and out of the AONB, the High Weald AONB Management Plan, any updates and any other relevant documents. Proposals will be required to set out any proposed mitigation or compensation measures needed to address any harm. 2. Small scale development that helps to support the social and economic well-being of the AONB will be supported, provided that the scheme is compatible with the purpose of the designation. 3. Major development within the AONB will only be permitted in exceptional circumstances. Applicants will be required to demonstrate why the proposal is in the public interest and what alternatives to the proposal have been considered.

	4. Proposals within land that contributes to the setting of the South Downs National Park should be consistent with National Park purposes and have regard to the South Downs Local Plan, the South Downs Integrated Landscape Character Assessment, the South Downs Partnership Management Plan and any other relevant document and updates. In particular, proposals should not cause harm to the special qualities (including dark skies), local distinctiveness or sense of place, by negatively affecting views into and out of the National Park. Proposals will be required to set out any proposed mitigation or compensation measures needed to address any harm.
Strategic Policy 17: Green infrastructure and Biodiversity	**Green Infrastructure** 1. Development will be supported where it can demonstrate that it maintains and enhances the existing network of green infrastructure and contributes to the delivery of public open space, the Local Nature Recovery Strategy, Nature Recovery Network, natural capital, ecosystem services and / or biodiversity. Green Infrastructure should be integral to the design and layout of development, and new provision, including green linkages, should be provided taking into account Natural England's green infrastructure guidance and the council's green infrastructure strategy. Provision should seek to optimise public access to open space and nature via foot, bicycle, wheeling, and also horse as appropriate. 2. Proposals that would result in any loss, degradation or harmful impacts to green infrastructure, or core areas of the Local Nature Recovery Strategy and Nature Recovery Network will be resisted unless it can be demonstrated that new opportunities will be provided that appropriately mitigates and / or compensates for the respective harm and ensures that the ecosystem services of the area are retained and enhanced. Development proposals will be expected to remove invasive species. 3. Proposals will be expected to retain and enhance existing priority habitats and trees, and accord with the aims and objectives of the Green Infrastructure and Local Nature Recovery Strategies. Habitat enhancement including additional hedgerow and tree planting must take account of the local landscape and habitat context. It should seek to optimise biodiversity, ecological connectivity and function, and climate change resilience. 4. Development likely to affect a watercourse and its associated corridor should seek to conserve and enhance its ecological, landscape and recreational value. This should include providing adequate natural buffer zones to the watercourse. **Biodiversity** 5. The Council will support appropriate new development which delivers at least 12% biodiversity net gain and: a) Retains and enhances significant features of nature conservation value on development sites;

	b) Makes a positive contribution to biodiversity and accords with the aims and objectives of the Green Infrastructure and Local Nature Recovery Strategies, through the creation of appropriate green spaces, that provide linkages between habitats to create local and regional ecological networks that enable the movement of wildlife through development sites; and / or c) Following the principle of 'right habitat in the right place', significantly increases woodland or other habitats for the purpose of appropriately enhancing biodiversity, carbon sequestration, pollution control, and / or flood mitigation. 6. **Relevant development proposals will be expected to deliver 12% biodiversity net gain** and must submit Biodiversity Net Gain information to show how this will be achieved using the mandated Biodiversity Metric or the Small Sites Metric as appropriate and must abide by the metric trading rules. Submissions must make clear what will be provided to meet no net loss and what will deliver net gains. The net gain must be achieved through the delivery of appropriate on-site biodiversity net gain or, where this is not practicable, through off-site net gain within the District especially areas, as suitable to the habitats subject to gain, identified in the District's Green Infrastructure Strategy or the Local Nature Recovery Strategy, or as agreed by the Council. All such schemes, excluding any respective element using statutory biodiversity credits, must submit for approval by the Council a funded maintenance and management plan, including monitoring / reporting and appropriate enforcement processes, that secures the biodiversity net gains for at least 30 years. 7. All other development proposals must seek to demonstrate how measurable biodiversity net gains will be delivered. **Protected Sites and Species** 8. Proposals must give appropriate consideration to protected and notable species. They will be expected to protect priority species and seek to aid their recovery, and must conserve, restore and enhance priority habitats, and should create and manage appropriate new habitats, taking into account pollination, where practicable. 9. Particular consideration will be given to the hierarchy of sites and habitats, including buffer areas, within the District, or functionally linked to, as follows: a) Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites; b) Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Veteran Trees, Ancient Woodland and other irreplaceable habitats; c) Local Wildlife Sites (LWS), Local Nature Reserves (LNRs) and any areas of priority habitats including traditional orchards, local geodiversity, Core Sites in the emerging NRN and other irreplaceable habitats not already identified in a & b above.

	10. An appropriate buffer around woodland will be required, this will be at least 15m around Ancient Woodland or greater in accordance with good practice, and consideration should be given to the potential for protected species, such as bats, and impacts on hydrology. Around ancient and veteran trees a minimum buffer zone of at least 15 times larger than the diameter of the tree, or 5 metres from the edge of the tree's canopy whichever is the larger, will be required. 11. Where the felling of a tree is necessary, for example due to disease, replacement planting with a suitable tree species, age and location to retain and enhance the link with the wider network of habitats and Green Infrastructure, will be required. 12. Where development is anticipated to have a direct or indirect adverse impact on sites or features of importance to nature conservation, development will be refused unless it can be demonstrated that: a) The mitigation hierarchy has been applied and the objectives of a site's designation, where applicable, and integrity of the area will not be undermined; b) The reason for the development clearly outweighs the likely impact to notified features and / or the need to protect the value of the site; and c) Appropriate mitigation and compensation measures will be provided alongside the delivery of measurable biodiversity net gain as relevant. 13. Any development with the potential to impact the Arun Valley SPA / SAC / Ramsar site, The Mens SAC and / or Ebernoe Common SAC will be subject to a Habitats Regulation Assessment to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the Habitat Regulation Assessment of this Plan.
Strategic Policy 18: Local Green Space	1. Local green and open spaces should be protected. Areas designated as Local Green Space, as identified on the Policies Map, will be safeguarded from development unless it can be demonstrated that: a) Development is proposed to enhance Local Green Space functions, for example through improvements to access, recreation and wildlife; or b) It is required for a statutory utility infrastructure purpose, for example water, gas, electricity or telecommunications provision. 2. Within Neighbourhood Plans, the creation of new areas of Local Green Space will be supported providing it is within reasonably close proximity to the community it serves, is local in character and is not an extensive track of land. It must also meet the relevant criteria, as set out in any relevant national planning guidance documents, in relation to scale, beauty, historic significance, recreational value, tranquillity and ecological value, and does not conflict with the strategic policies of this Local Plan.

Appendix C

Desk Study Information

Ecological Data Search SxBRC/23/704 - Summary Report

An ecological data search was carried out for land at Stonehouse Farm, Handcross on behalf of Lydia Galbraith (CSA Environmental Ltd) on 20/12/2023.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	2km
Protected, designated and invasive species	Yes	2km

Summary of results

Sites and habitats

Statutory sites	1 SSSI / 1 AONB
Non-statutory sites	6 LWS / 1 Designated Road Verge
Section 41 habitats	3 habitats
Ancient and/or ghyll woodland	Present

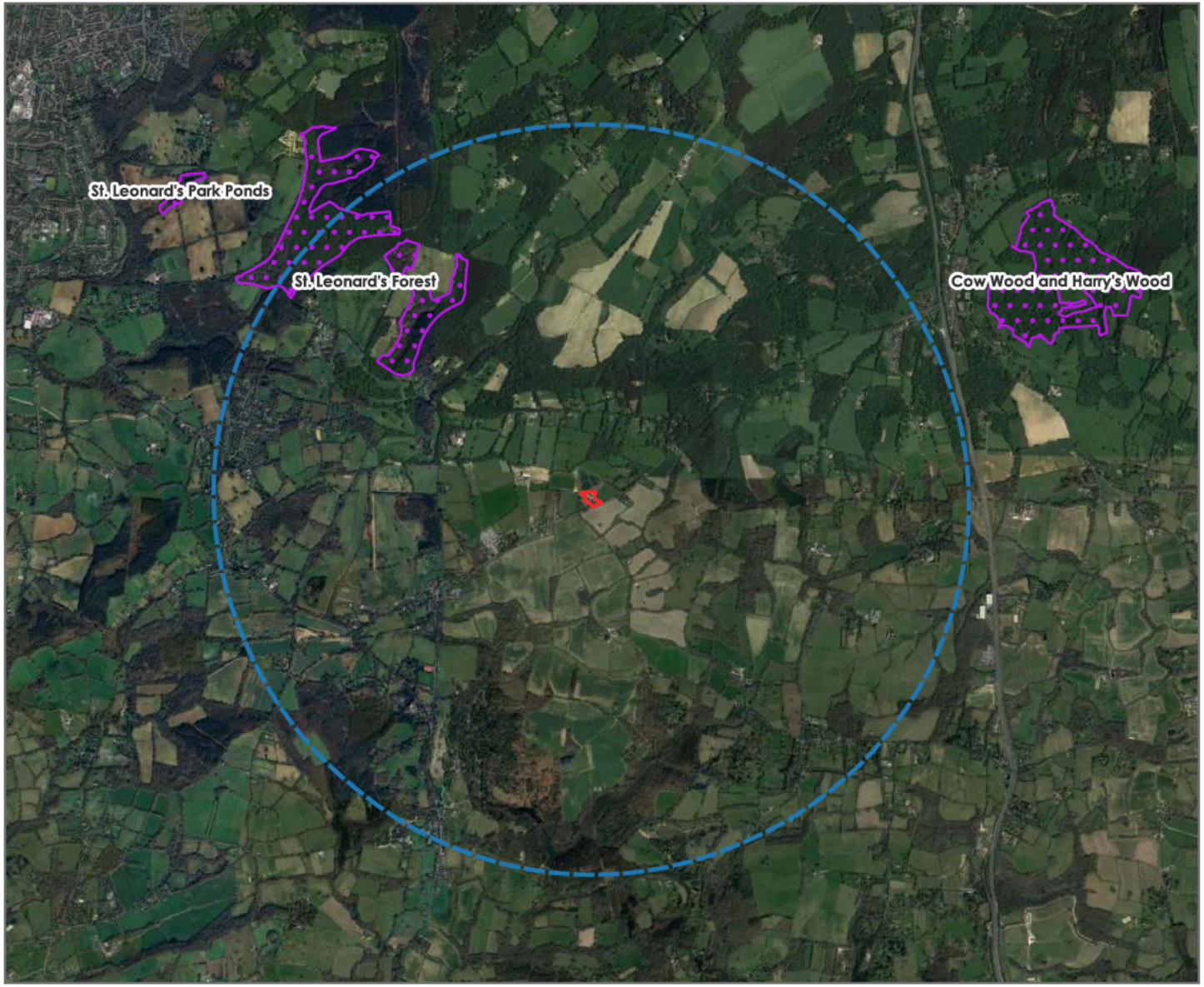
Protected and designated species

International designations	28 species	288 records
National designations	106 species	2,512 records
Other designations	235 species	5,382 records
Total	**253 species**	**5,595 records**
Invasive non-native	33 species	373 records

The report is compiled using data held by Sussex Biodiversity Record Centre (SxBRC) at the time of the request. SxBRC does not hold comprehensive species data for all areas. Even where data are held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there – the area may simply not have been surveyed.

This summary page may be published.
The full report and maps may not be published or otherwise shared.

The data search report is valid until 20/12/2024 for the site named above.



N

Application Boundary

3km buffer

Site of Special Scientific Interest (SSSI)

0 1,500 3,000 m

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Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/135
Drawing Title	Stonehouse Business Park 3km National Designations Search	Scale Refer to scale	Rev -
Client	Lake Investment Ltd.	Drawn LG	Checked CC

Site boundary SBP

10km buffer

0 2,500 5,000 m

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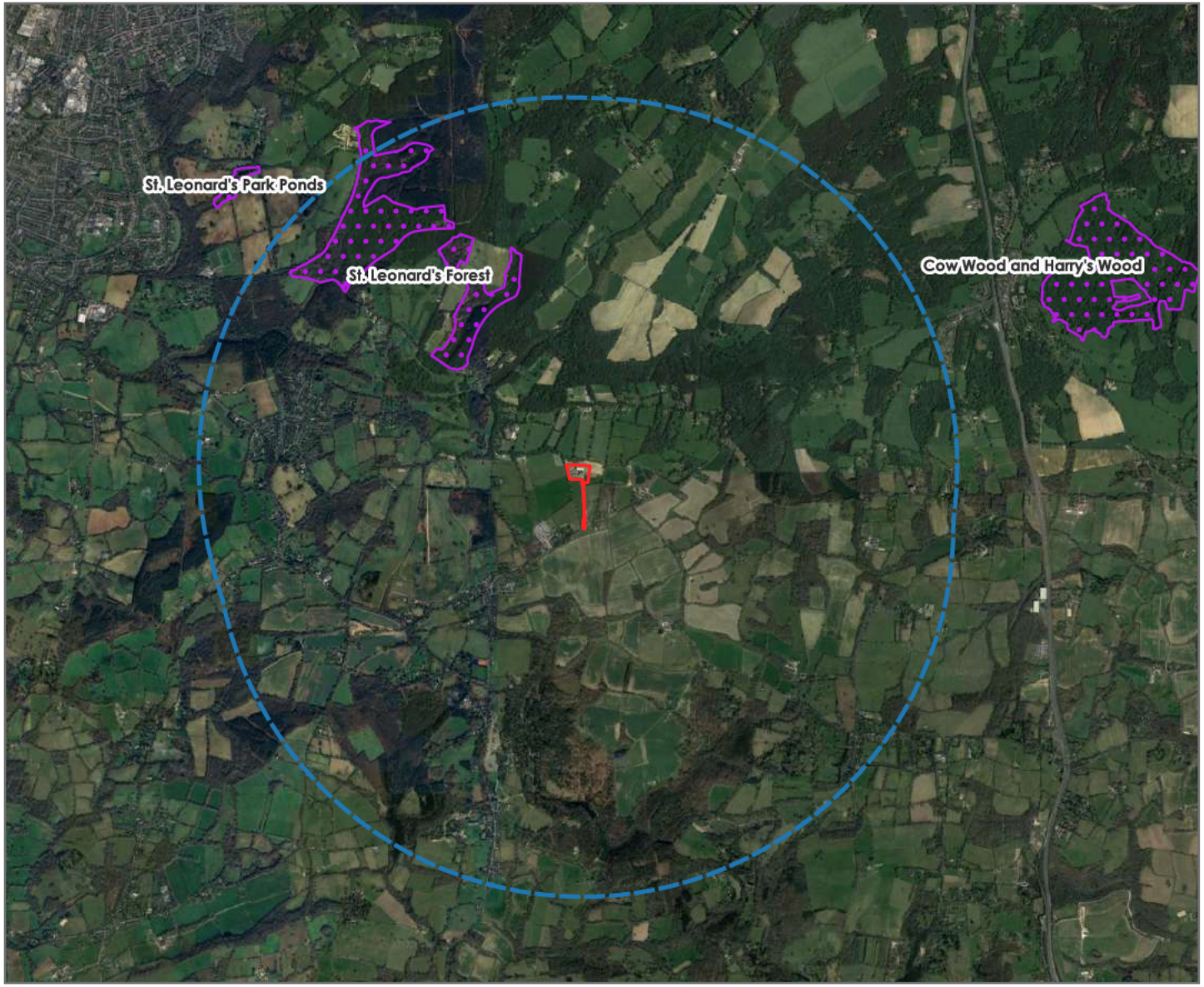
Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/135
Drawing Title	Stonehouse Business Park 10km International Designations Search	Scale Refer to scale	Rev -
Client	Lake Investment Ltd.	Drawn LG	Checked CC



N

Application Boundary

Site of Special Scientific Interest (SSSI)

3km buffer

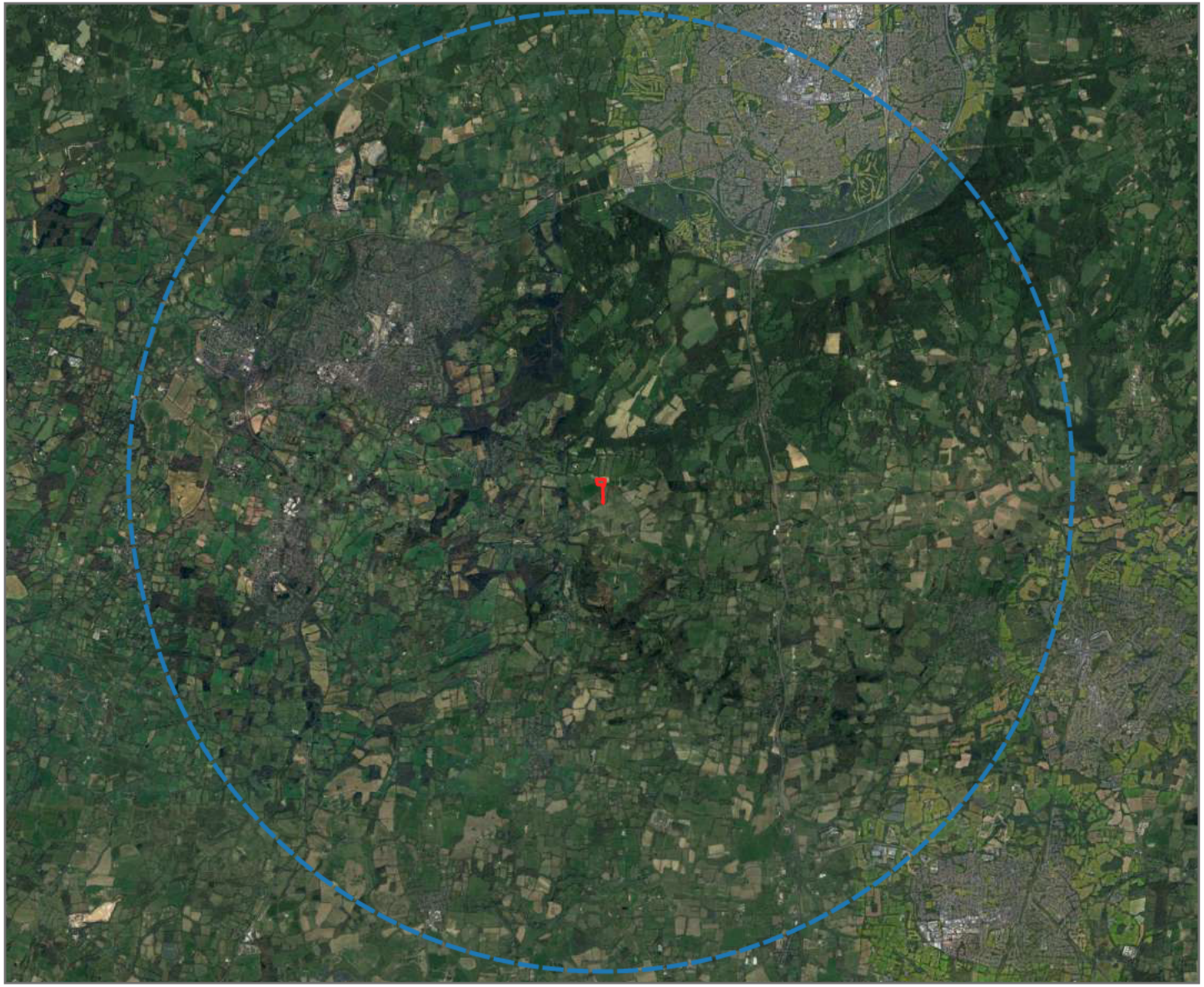
0 1,500 3,000 m

CSA environmental

Office 20, Citibase, 95 Ditchling Road, Brighton BN1 4ST

t 01273 573871
e brighton@csaenvironmental.co.uk
w csaenvironmental.co.uk

Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/117
Drawing Title	Jackson's Business Park 3km National Designations Search	Scale Refer to scale	Rev -
Client	Lake Investment Ltd.	Drawn LG	Checked CC



Application Boundary

10km buffer

0 2,500 5,000 m

CSA environmental

Office 20, Citibase, 95 Ditchling Road, Brighton BN1 4ST

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e brighton@csaenvironmental.co.uk
w csaenvironmental.co.uk

Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/121
Drawing Title	Jackson's Business Park 10km International Designations Search	Scale Refer to scale	Rev -
Client	Lake Investment Ltd.	Drawn LG	Checked CC

N

Application boundary

3km buffer

Site of Special Scientific Interest (SSSI)

0 1,500 3,000 m

CSA environmental

Office 20, Citibase, 95 Ditchling Road, Brighton BN1 4ST

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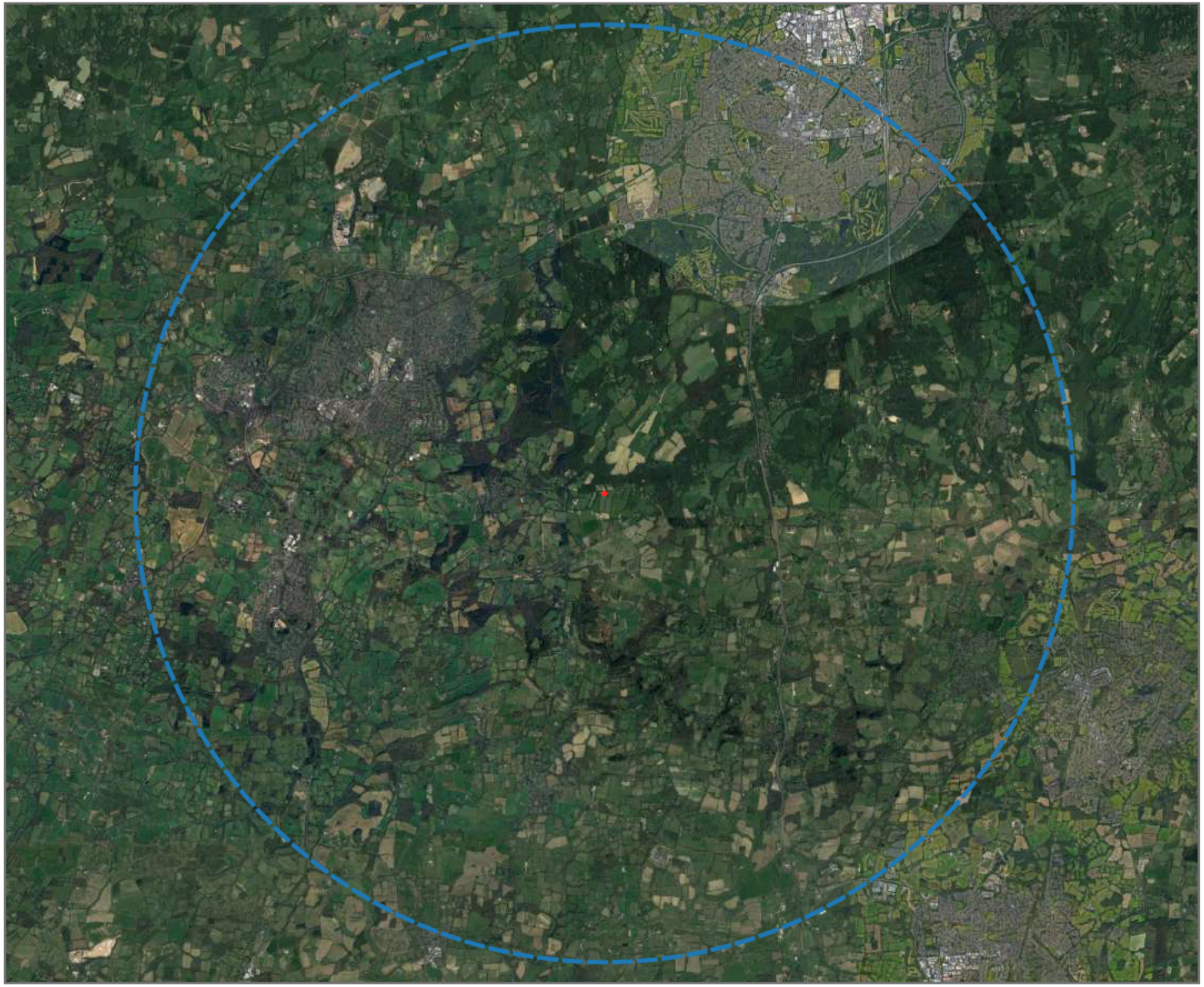
Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/122
Drawing Title	Jackson's Ridge 3km National Designations Search	Scale Refer to scale	Rev -
Client	Lake Investment Ltd.	Drawn LG	Checked CC



Application boundary

10km buffer

0 2,500 5,000 m

CSA environmental

Office 20, Citibase, 95 Ditchling Road, Brighton BN1 4ST

t 01273 573871
e brighton@csaenvironmental.co.uk
w csaenvironmental.co.uk

Project	Stonehouse Farm, Handcross	Date	Feb 2025	Drawing No.	CSA/6746/121
Drawing Title	Jackson's Ridge 10km International Designations Search	Scale	Refer to scale	Rev	-
Client	Lake Investment Ltd.	Drawn	LG	Checked	CC

Appendix D

Photographs

Photograph 1. Stonehouse Business Park- Building B1.

Photograph 2. Stonehouse Business Park- Building B2.

Photograph 3. Stonehouse Business Park- Building B3.

Photograph 4. Stonehouse Business Park- Building B4.

Photograph 5. Stonehouse Business Park- Building B6.

Photograph 6. Stonehouse Business Park- General urban profile of the Site.

Photograph 1. Anaerobic Digester (AD) Plant and Main Livestock Building- Sparsely vegetated land around buildings.

Photograph 2. Anaerobic Digester (AD) Plant and Main Livestock Building- Hedgerow H10a.

Photograph 3. Anaerobic Digester (AD) Plant and Main Livestock Building- Hedgerow 10b and Field F7 grassland.

Photograph 4. Anaerobic Digester (AD) Plant and Main Livestock Building- Storage units and hardstanding around buildings.

Photograph 5. Anaerobic Digester (AD) Plant and Main Livestock Building- Building B1.

Photograph 6. Anaerobic Digester (AD) Plant and Main Livestock Building- Building B1.

Photograph 1. Jackson's Ridge- Building B6.

Photograph 2. Jackson's Ridge- Building B5.

Photograph 3. Jackson's Ridge- Building B5 and underground slurry pit (TN4).

Photograph 4. Jackson's Ridge- Sparsely vegetated urban land.

Photograph 5. Jackson's Ridge- Line of Trees H1 heading east.

Photograph 6. Jackson's Ridge- Line of Trees H1 heading west.

Appendix E

Habitats and Flora Species Lists

Site Name	Stonehouse Business Park, Stonehouse Farm, Plummers Plain, Horsham		
Survey Date and Surveyor(s)	18/12/2023, 20/12/2023, 04/01/2024, 18/07/24, 23/07/24 CC, LG, CG & LM		
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type	
		Built up areas and gardens (u1)	Grassland parcel (g4)
Herb Species			
Alliaria petiolata	Garlic mustard	X	
Cirsium sp.	Thistle sp.	X	
Cirsium arvense	Creeping thistle		X
Epilobium sp.	Willowherb		X
Galium aparine	Cleavers	X	
Geranium dissectum	Cut-leaved crane's-bill		X
Helminthotheca echioides	Bristly oxtongue	X	X
Lavandula angustifolia	Lavender	X	
Ranunculus repens	Creeping buttercup		X
Salvia sp.	Rosemary	X	
Sonchus arvensis	Perennial sowthistle	X	
Taraxacum agg.	Dandelion		X
Urtica dioica	Common nettle	X	X
Grasses			
Agrostis stolonifera	Creeping bent		X
Arrhenatherum elatius	False oat-grass	X	X
Dactylis glomerata	Cock's-foot		X
Festuca rubra	Red fescue		X
Festuca sp.	Fescue		X
Holcus lanatus	Yorkshire-fog		X
Lolium perenne	Perennial rye-grass		X

References

Stace, C. A., 2019. *New Flora of the British Isles* . 4th ed. Suffolk: C & M Floristics.

Site Name	Stonehouse Business Park, Stonehouse Farm, Plummers Plain, Horsham						
Survey Date and Surveyor(s)	18/12/2023, 20/12/2023, 04/01/2024, 18/07/24, 23/07/24 CC, LG, CG & LM						
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type					
		H20b (h2b)	H26a (h2a)	H27a/b (h2a)	H29 (h2a)	H20a (33)	H30 (33)
Herb Species							
Cotoneaster sp.	Cotoneaster	X					
Woody Species							
Coniferous							
Cupressus × leylandii	Leyland cyrpress	X				X	
Taxus baccata	Yew		X				
Broadleaved							
Acer campestre	Field maple			X	X		
Betula pendula	Silver birch	X					
Buddleja davidii	Butterfly-bush			X			
Corylus avellana	Hazel				X	X	
Crataegus monogyna	Hawthorn	X	X	X	X	X	
Fagus sylvatica	Beech		X		X	X	
Fraxinus excelsior	Ash		X				
Ilex aquifolium	Holly		X				
Populus sp.	Poplar		X				
Prunus laurocerasus	Cherry laurel	X					
Prunus spinosa	Blackthorn		X	X			
Quercus sp.	Oak		X				X
Rosa canina sp.	Dog-rose			X			
Rubus fruticosus agg.	Bramble		X				
Salix caprea	Goat willow		X	X			
Salix x fragilis	Crack willow		X	X			
Viburnum lantana	Wayfaring-tree					X	

References

Stace, C. A., 2019. *New Flora of the British Isles*. 4th ed. Suffolk: C & M Floristics.

Site Name	Jackson's Business Park, Handcross Road, Plumbers Plain, Horsham			
Survey Date and Surveyor(s)	18/12/2023, 20/12/2023, 04/01/2024, 18/07/24, 23/07/24 CC, LG, CG & LM			
		Habitat Parcel Number/Habitat Type		
Scientific Name	Common Name	Spasely vegetated land	Other neutral grassland (F8)	Modified grassland (F7)
Herb Species				
Cirsium arvense	Creeping thistle	X	X	
Cirsium vulgare	Spear thistle		X	X
Epilobium montanum	Broad-leaved willowherb		X	
Epilobium sp.	Willowherb	x		
Geranium dissectum	Cut-leaved crane's-bill	x		
Helminthotheca echioides	Bristly oxtongue		X	X
Lotus corniculatus	Common bird's-foot-trefoil		X	
Odontites vernus	Red bartsia		X	
Plantago major	Greater plantain			x
Potentilla reptans	Creeping cinquefoil	x		
Prunella vulgaris	Selfheal		X	
Pulicaria dysenterica	Common fleabane	x		
Ranunculus repens	Creeping buttercup	x	X	
Rumex crispus	Curled dock	X		X
Rumex obtusifolius	Broad-leaved dock		X	
Scorzoneroides autumnalis	Autumn hawkbit		X	
Stachys sylvatica	Hedge woundwort		X	
Taraxacum agg.	Dandelion	X		X
Trifolium dubium	Lesser trefoil		X	
Trifolium pratense	Red clover		X	
Trifolium repens	White clover		X	X
Trifolium sp.	Clover	X		
Tripleurospermum inodorum	Scentless mayweed		X	X
Tussilago farfara	Colt's-foot			
Urtica dioica	Common nettle			X
Vicia hirsuta	Hairy tare		X	
Vicia villosa	Fodder vetch		X	
Sedges and Rushes				
Carex pendula	Pendulous sedge		X	
Juncus effusus	Soft-rush		X	
Grasses				
Agrostis capillaris	Common bent		X	
Agrostis stolonifera	Creeping bent		X	
Alopecurus pratensis	Meadow foxtail		X	
Anthoxanthum odoratum	Sweet vernal-grass	X	X	
Arrhenatherum elatius	False oat-grass		X	
Dactylis glomerata	Cock's-foot	X	X	
Holcus lanatus	Yorkshire-fog	x	X	
Lolium perenne	Perennial rye-grass	x	X	X
Poa annua	Annual meadow-grass			X
Poa pratensis	Smooth meadow-grass		X	
Poa trivialis	Rough meadow-grass		X	

References

Atherton, I., Bosanquet, S. and Lawley M., 2010. *Mosses and Liverworts of Britain and Ireland - a field guide* . British Bryological Society.

Site Name	Jackson's Business Park, Handcross Road, Plumbers Plain, Horsham			
Survey Date and Surveyor(s)	18/12/2023, 20/12/2023, 04/01/2024, 18/07/24, 23/07/24 CC, LG, CG & LM			
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type		
		H10a	H13	H28
Herb Species				
Rumex sp.	Dock			x
Urtica dioica	Common nettle			x
Woody Species				
Broadleaved				
Betula pendula	Silver birch		x	
Cornus sp.	Dogwood			x
Corylus avellana	Hazel	x	x	
Crataegus monogyna	Hawthorn	x		x
Fagus sylvatica	Beech	x	x	
Ilex aquifolium	Holly	x		
Prunus avium	Cherry	x		
Prunus spinosa	Blackthorn			x
Quercus sp.	Oak	x	x	
Rosa arvensis	Field-rose		x	
Rosa canina sp.	Dog-rose	x		x
Salix caprea	Goat willow		x	
Sambucus nigra	Elder	x		
Ulex europaeus	Gorse	x	x	

References

Atherton, I., Bosanquet, S. and Lawley M., 2010. *Mosses and Liverworts of Britain and Ireland - a field guide* . British Bryological Society.

Stace, C. A., 2019. *New Flora of the British Isles* . 4th ed. Suffolk: C & M Floristics.

Site Name	Jackson's Ridge, Hammerpond Road, Plummbers Plain, Horsham				
Survey Date and Surveyor(s)	18/12/2023, 20/12/2023, 04/01/2024, 18/07/24 23/07/24 CC, LG, CG & LM				
		Habitat Parcel Number/Habitat Type			
Scientific Name	Common Name	Modified grassland (g4)	Sparsley vegetated urban land (u1f)	Mixed scrub (h3h)	Developed land; sealed surface (u1b) with tall forbs (16)
Herb Species					
Chenopodium sp.	Goosefoot				X
Epilobium sp.	Willowherb		X	X	
Geranium robertianum	Herb Robert	X	X		
Helminthotheca echioides	Bristly oxtongue		X		
Leucanthemum vulgare	Oxeye daisy		X		
Lotus corniculatus	Common bird's-foot-trefoil		X		
Plantago lanceolata	Ribwort plantain	X			
Plantago major	Greater plantain		X		
Pulicaria dysenterica	Common fleabane		X		X
Ranunculus repens	Creeping buttercup	X	X		
Rumex sp.	Dock		X		X
Sisymbrium officinale	Hedge mustard				X
Sonchus arvensis	Perennial sowthistle		X		
Taraxacum agg.	Dandelion	X	X		
Tripleurospermum inodorum	Scentless mayweed		X		
Urtica dioica	Common nettle		X		X
Verbascum sp.	Mullein sp.		X		
Sedges and Rushes					
Carex pendula	Pendulous sedge		X		
Juncus inflexus	Hard rush		X		
Grasses					
Agrostis stolonifera	Creeping bent	X	X		
Arrhenatherum elatius	False oat-grass	X			
Holcus lanatus	Yorkshire-fog	X			
Lolium perenne	Perennial rye-grass	X			
Poa sp.	Meadow-grass	X			
Woody Species					
Broadleaved					
Buddleja davidii	Butterfly-bush		X		X
Cornus sp.	Dogwood		X		
Rubus fruticosus agg.	Bramble			X	
Salix caprea	Goat willow			X	

References

Atherton, I., Bosanquet, S. and Lawley M., 2010. *Mosses and Liverworts of Britain and Ireland - a field guide* . British Bryological Society.

Stace, C. A., 2019. *New Flora of the British Isles* . 4th ed. Suffolk: C & M Floristics.

Site Name	Jackson's Ridge, Hammerpond Road, Plummbers Plain, Horsham		
Survey Date and Surveyor(s)	18/12/2023, 20/12/2023, 04/01/2024, 18/07/24, 23/07/24 CC, LG, CG & LM		
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type	
		H8 (h2b)	H1 (33)
Herb Species			
Ranunculus repens	Creeping buttercup		X
Rhododendron sp.	Rhododendron	X	
Woody Species			
Broadleaved			
Fagus sylvatica	Beech		X
Ilex aquifolium	Holly	X	X
Quercus sp.	Oak		X

References

Atherton, I., Bosanquet, S. and Lawley M., 2010. *Mosses and Liverworts of Britain and Ireland - a field guide* . British Bryological Society.

Stace, C. A., 2019. *New Flora of the British Isles* . 4th ed. Suffolk: C & M Floristics.

Appendix F

Evaluation & Assessment Methods

1.1. Ecological features are evaluated and assessed in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) 2018 Guidelines for Ecological Impact Assessment (EcIA). For clarity, the evaluation and assessment process adopted within this EcIA is set out below.

Establishing Potentially Important Ecological Features

1.2. Ecological features are assessed where they are considered to be important, and where they may be impacted by a proposed development. A feature may be considered important for a variety of reasons, such as quality, extent, rarity and/or statutory protection. Table 1 below sets out a non-exhaustive list of ecological features that are typically considered, along with key examples:

Table 1. Potentially important ecological features (adapted from CIEEM 2018)

Potentially Important Ecological Features	Typical examples
Statutory designated sites under international conventions or European Legislation	Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA)
Statutory designated sites under national legislation	Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR, Local Nature Reserves (LNR)
Non-statutory, locally designated wildlife sites	Local Wildlife Sites (LWS), County Wildlife Sites (CWSs), Sites of Importance for Nature Conservation (SINCs)
National biodiversity lists	Habitats or Species of Principal Importance for the Conservation of Biodiversity (Section 41, NERC Act 2006), Ancient Woodland Inventory
Local biodiversity lists	Local Biodiversity Action Plan (BAP) priority species or habitats
Red Listed / Rare Species	Species of conservation concern, Red Data Book (RDB) species, Birds of Conservation Concern, nationally rare and nationally scarce species
Legally Protected Species	E.g. species listed under Sch.5 of the W&C Act 1981, or Sch.2 of the Hag. Regs. 2017
Legally Controlled Species	E.g. species listed under Sch.9 of the W&C Act 1981

1.3. It should also be noted that the social, community, economic or multi-functional importance attributed to ecological features are not assessed as they fall outwith the scope of this assessment.

Establishing Likely Zone of Influence

1.4. 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 project and associated activities. The project's zone of influence varies across different ecological features, which have different vulnerabilities and

sensitivities. For the purposes of this assessment, the following zones were considered:

- International statutory nature conservation designations up to 10km from the Site
- National and local statutory nature conservation designations up to 3km from the Site
- Non-statutory locally designated wildlife sites up to 1km from the Site

1.5. These arbitrary distances are considered sufficient for identifying the nature conservation designations which could be subject to significant effects. However, it is acknowledged that in certain circumstances effects beyond these distances are possible and should be considered as far as is reasonably practicable to do so.

1.6. For other ecological features, such as habitats and species, the appropriate zone of influence is described and justified as appropriate within the report, depending on their respective sensitivity to an environmental change.

1.7. The results of professionally accredited or published scientific studies have been used and referenced, where available, to establish the spatial and temporal limits of the biophysical changes likely to be caused by specific activities, and to justify decisions about the zone of influence.

Geographic Context and Significance Criteria

1.8. The importance of ecological features, as well as the significance of any likely impacts and their effects, are considered here within a defined geographic context:

- International
- National
- Regional
- County
- Local

1.9. While higher geographic tiers correspond to clearly defined areas, local context is subjective and will vary on a case-by-case basis. It will range from the Site and its surroundings, to ecologically connected environs, to the scale of the District/Borough, according to the professional judgement of the author.

1.10. The size, conservation status and the quality of features are all relevant in determining their importance and assigning this to the geographic scale. Where the importance of a feature is considered to fall below the Local scale, they are scoped out of detailed assessment.

1.11. Impacts and their effects are taken to be significant where they support or undermine biodiversity conservation objectives, with the scale of significance defined according to the above geographic context. Where an impact or effect is unlikely to be perceptible at a Local scale, this is taken to be not significant.

Characterising Ecological Impacts and their Effects

1.12. Where likely significant ecological impacts and effects are identified in connection with the proposed project, these are considered and described with reference to the following characteristics (where this is helpful in accurately portraying the ecological effect and determining the scale of significance):

- Positive or negative (i.e. does the anticipated change accord with nature conservation policies and objectives?)
- Extent (i.e. the spatial area over which the impact or effect may occur)
- Magnitude (i.e. the quantified size, amount, intensity or volume)
- Duration (i.e. the timeframe over which the impact or effect may occur, in both human and ecological terms)
- Frequency and timing (i.e. the number of times an activity occurs, where this is likely to influence the effect)
- Reversibility (i.e. is spontaneous recovery possible or may the effect be counteracted by mitigation?)

Appendix G

Preliminary Roost Assessment Report (Stonehouse Business Park)

1.0 Introduction

1.1 This report has been prepared by CSA Environmental on behalf of Hunter Development Holdings Ltd. Its sets out the findings of a Preliminary Roost Appraisal (PRA) an existing Commercial Yard at Stonehouse Farm, Plumbers Plain, Horsham (hereafter referred to as 'the Site'). The 'Survey Area' covers the whole of the existing Commercial Yard. However, it is understood that the scope of proposed development will be limited to demolition of existing dilapidated buildings (B3 and B4, as identified on the Habitats Plan), removal of temporary portacabins (B7 and B8) and construction of a new commercial unit (largely on the footprint of B3) as part of a new Business Park, for which planning permission will be sought.

2.0 Legislation

2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:

- Deliberately capture, injure, or kill a bat
- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
- Damage or destroy a breeding site or resting place used by bats

2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection

2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is commented irrespective of whether the causal act was deliberate or otherwise.

2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural England to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

3.0 Methods

3.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 4th edition (Collins, 2023).

Preliminary Roost Assessment (PRA)

Structures

3.2 A detailed external and internal inspection of all buildings on-site was completed on 18 December 2023, using a high-powered torch, as appropriate. The survey was carried out by Jeff Turton ACIEEM (Natural England Class Licence WLM-A34, Registration Number 2021-53470-CLS-CLS).

3.3 External inspection focused on identifying potential bat access points to the interior of each structure and any external features that could potentially be used by crevice-dwelling species. Particular attention was given to window sills, window panes, weatherboarding, and pitch/ridge tiles; as evidence is typically found in these locations.

3.4 The internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains within the buildings.

3.5 A description of the structures was made, including construction, condition (in respect of roosting, rather than building or structural integrity) and age (where known).

3.6 The aim of this inspection is to record direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of structures to support bats whilst in hibernation.

Assessing 'Potential' of Buildings to Support Roosting Bats

3.7 All structures were assigned to one of four categories in respect of their 'potential' to support roosting bats, or the confirmation of any bat roosts identified. 'Potential' in this context is taken to be the broad suitability of features to support roosting bats, based upon the nature, condition or structure of such features, in the absence of confirmed evidence of roosting.

3.8 Assigning the following categories is intended to determine the effort of any further targeted survey or inspections which are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features.

3.9 The following categories are assigned to structures herein:

- ***Confirmed Roost*** – where one or more bat roosts are identified during PRA inspections, either through direct sightings of bats, and/or indirect evidence such as bat droppings.
- ***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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
- ***Moderate*** – A structure 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, such as maternity and hibernation – the categorisation described here is made irrespective of species conservation status, which is established after presence is confirmed).
- ***Low*** – A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
- ***Negligible*** – No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
- ***None*** – No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

3.10 The potential of a tree or structure to support roosting bats is often influenced by its age and construction, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat - particularly woodland, parkland and wetland- as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Limitations

4.0 The survey, which was conducted in dry and overcast conditions, was conducted at a sub-optimum time of year as evidence of bats may have been washed/blown away, especially given the open-sided structure of some of the buildings.

4.1 There was no internal access to Building B2 at the time of the survey as it was locked.

5.0 Results

Preliminary Roost Assessment (PRA)

Context

5.1 The Site, while primarily containing urban/industrial habitats and features, is located in a rural area. The boundary hedgerows and treelines connect to a wider network of green corridors which connect with open farmland, woodland and aquatic features.

Structures

5.2 The results of the building inspections are described in Table 1 below. Photos are provided in Appendix F.1.

6.0 Summary

6.1 Six building on Site were inspected for bats and evidence of bats and were assessed for their potential to support bat roosts by the structural features of each. Buildings B3, B4 and B6 were assessed to be of 'low' bat roost potential and further emergence surveys of these buildings is required if they are to be impacted under the proposals. The scope of these further surveys would consist of one survey visit at dusk per building, in line with BCT guidelines (2023)

Table 1. Preliminary Roost Assessment Results

Building No.	Building description	Bat roosting features and evidence	Bat Roost Suitability
B1	The largest building on Site. This large, modern farm building was in active use at the time of the survey. It had a double-pitched roof of corrugated sheet metal and walls of corrugated sheet metal. This building is in current use as a busy commercial workshop.	Due to the construction of this building there were clearly no voids or cavities in the roof or walls. A slight lip forms on the top of the external walls, behind the guttering, but this is too wide and exposed to attract roosting bats. There are no external or internal features of potential use to bats. Furthermore, this is a busy workshop with a lot of vehicle movement. The metal construction of the more modern units (B1, B2 and B5) is unlikely to offer thermal stability and would not be favourable roosting or hibernating sites.	Negligible
B2	A large, modern farm building of the same structural composition as B1, but with a single-pitch roof. In current use as a site office.	There were no external features that could be used by bats, nor were there any features that may grant bats access to interior spaces. There was no internal access, but likely to be negligible due to the similarity of the building to other buildings on Site.	Negligible
B3	An irregularly shaped building complex constructed of brick and concrete in a state of poor structural repair. The main part of the complex comprises a barn with a convex roof made from corrugated metal. One wall is constructed of stacked sleeper rails. There is a side structure of a similar construction, but with a flat corrugated asbestos roof. The buildings are currently used to store vans, a Portakabin and other assorted items.	The external brick walls of B3 are single skin and cracked in places. There are no doors, so there is free access to the inside. Inside, one wall forms a cavity feature where render and brickwork has fallen away, although this feature is fairly low to the ground (c.1m high). This feature could be fully explored and no signs of roosting bats were recorded. This feature was not considered likely to offer hibernation potential as it would likely be subject to frequent temperature fluctuations. The building was inspected for droppings and feeding remains. None were found, but the open-sided structure of the building is still considered to potentially offer bats access to use this area as a feeding perch. Some of the other features noted may also be used on a transitory basis. This building is not considered suitable as a potential hibernation site due to it's lack of suitable features and exposure to light/elements.	Low
B4	A dilapidated barn of brick, concrete cinderblock and corrugated metal construction, largely open to the elements on the southern elevation. It is largely open on the south-east elevation. The southern elevation comprises a timber lean-to. The inside is used for storage; with a mezzanine covering approximately half of the main barn (not accessible for survey due to rotten staircase).	Like B3, B4 is largely open (on the SE facing side). There are no external roosting features. On the inside, the timber joinery that could be accessed was inspected for crevice features but none were found. The lean-to has no bat roost potential. The assessment of 'low' is due to the potential for this structure to be used as a feeding perch, although no evidence such as discarded moth wings were found. This building is not considered suitable as a potential hibernation site due to it's lack of suitable features and exposure to light/elements.	Low
B5	B5 is similar to B1 and B2 in that this building is constructed of corrugated sheet metal. The roof is arced, convex sheet metal. Inside, the building is in active use as a carpentry workshop.	There were no external features that could be used by roosting bats, and no features that may provide access to internal spaces. Furthermore, the interior was noted to be very disturbed.	Negligible

B6	B6 is cabin-like in appearance. It is constructed of brick with exterior timber cladding. The roof is double-pitched and constructed of corrugated felt. Inside, it is in active use as an office.	The timber cladding around the exterior of this building was fully inspected and was noted to be flush and tightly fitting all the way around. However, the soffit box at the eaves on the northern and southern aspects was coming away in places, leaving gaps wide enough for bat access, although this is not considered to be a good quality roosting feature, Lead flashing was also noted beneath the windows, but on full inspection none of this was found to be lifted such that a bat might get beneath it. The building was subjected to an internal inspection, but the building is in daily use as an office and there are no undisturbed voids bats may use. There were no points of access into the internal areas, unless within the soffit boxes. This building is not considered suitable as a potential hibernation site due to it's lack of suitable features and as it would likely be subject to temperature fluctuations.	Low
B7	A long Portakabin in current use as an office space.	This temporary structure had no features that could be used by bats and no means of internal access.	None
B8	A small Portakabin used for storage.	This temporary structure had no features that could be used by bats and no means of internal access.	None

Appendix F.1

PRA Photos

Photograph 1. B1 external from south.

Photograph 2. B1 interior.

Photograph 3. B2 exterior from east. No internal access.

Photograph 4. Southern aspect of B3.

Photograph 5. Interior of B3.

Photograph 6. External wall of B3 forming crack crevice.

Photograph 1. Interior wall of B3 that has crumbled.

Photograph 2. Crumbled wall forms a dry crevice.

Photograph 3. B4 viewed from the south

Photograph 4. B4 viewed from the north

Photograph 5. Interior of B4 and inaccessible first floor

Photograph 6. Building B6 viewed from the north.

Photograph 1. Interior of B6. Open hatch leads to a storage area. All well sealed from exterior.

Photograph 2. Warped plywood coming away from soffit box on B6.

Photograph 3. Long Portakabin on Site. B5 in the background.

Photograph 4. Small Portakabin in the south-east corner of the Site.

Appendix H

Bat Survey Report (Stonehouse Business Park)

1.0 Introduction

1.1 This report has been prepared by CSA Environmental on behalf of Hunter Development Holdings Ltd. Its sets out the findings of a bat surveys at an existing Commercial Yard at Stonehouse Farm, Plumbers Plain, Horsham (hereafter referred to as 'the Site'). The 'Survey Area' covers the whole of the existing Commercial Yard. However, it is understood that the scope of proposed development will be limited to demolition of existing dilapidated buildings (B3 and B4, as identified on the Habitats Plan), removal of temporary portacabins (B7 and B8) and construction of a new commercial unit (largely on the footprint of B3) as part of a new Business Park, for which planning permission will be sought.

1.2 Following the results of the Preliminary Roost Assessments, buildings B3 and B4 were subject to a single emergence survey.

2.0 Legislation

2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:

- Deliberately capture, injure, or kill a bat
- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
- Damage or destroy a breeding site or resting place used by bats

2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection

2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is commented irrespective of whether the causal act was deliberate or otherwise.

2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural England to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

3.0 Methods

3.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 4th edition (Collins, 2023).

Preliminary Roost Assessment (PRA)

Structures

3.2 A detailed external and internal inspection of all buildings on-site was completed on 18 December 2023, using a high-powered torch, as appropriate. The survey was carried out by Jeff Turton ACIEEM (Natural England Class Licence WLM-A34, Registration Number 2021-53470-CLS-CLS), with an update survey undertaken alongside other sites surveys (i.e. barn owl surveys) on 22 May 2024 by Nancy Inman ACIEEM and Clare Caudwell MCIEEM CEcol (Natural England Class Licence WML-CL18, Registration Number 2015-15073-CLS-CLS) and 23 July by Lucy Moorehouse ACIEEM (Natural England Class Licence WML-CL17, Registration number 2020-50481-CLS-CLS), and Lydia Galbraith ACIEEM.

3.3 External inspection focused on identifying potential bat access points to the interior of each structure and any external features that could potentially be used by crevice-dwelling species. Particular attention was given to window sills, window panes, weatherboarding, and pitch/ridge tiles; as evidence is typically found in these locations.

3.4 The internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains within the buildings.

3.5 A description of the structures was made, including construction, condition (in respect of roosting, rather than building or structural integrity) and age (where known).

3.6 The aim of this inspection is to record direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of structures to support bats whilst in hibernation.

Assessing 'Potential' of Buildings to Support Roosting Bats

3.7 All structures were assigned to one of four categories in respect of their 'potential' to support roosting bats, or the confirmation of any bat roosts identified. 'Potential' in this context is taken to be the broad suitability of features to support roosting bats, based upon the nature, condition or structure of such features, in the absence of confirmed evidence of roosting.

3.8 Assigning the following categories is intended to determine the effort of any further targeted survey or inspections which are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features.

3.9 The following categories are assigned to structures herein:

- ***Confirmed Roost*** – where one or more bat roosts are identified during PRA inspections, either through direct sightings of bats, and/or indirect evidence such as bat droppings.
- ***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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
- ***Moderate*** – A structure 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, such as maternity and hibernation – the categorisation described here is made irrespective of species conservation status, which is established after presence is confirmed).
- ***Low*** – A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
- ***Negligible*** – No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
- ***None*** – No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

3.10 The potential of a tree or structure to support roosting bats is often influenced by its age and construction, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat - particularly woodland, parkland and wetland- as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Limitations

3.11 The survey, which was conducted in dry and overcast conditions, was conducted at a sub-optimum time of year as evidence of bats may have been washed/blown away, especially given the open-sided structure of some of the buildings.

3.12 There was no internal access to Building B2 at the time of the survey as it was locked.

Roost Surveys

3.13 One dusk emergence survey was undertaken on 03 June to confirm the presence/likely absence of roosting bats in association with the on-site buildings. In addition, the surveys aim to determine the character of any identified roosts, namely species present, number of roost bats and roost type (i.e. day, night feeding, maternity and transitory).

3.14 The dusk emergence survey was undertaken for approximately two hours following British Summer Time (BST) sunset, with due consideration for the BCT good practice guidelines. The survey was carried out by Jeff Turton ACIEEM (Natural England Class Licence WLM-A34, Registration Number 2021-53470-CLS-CLS), Jude Potter and Will Campbell in suitable weather conditions (see Table 1).

Table1. Bat roost survey timings and weather conditions

Survey Date	Sunset Time	Start Time	End Time	Temp. (°C)		Cloud Cover (oktas)		Wind (Beaufort Scale)		Precipitation
				Start	End	Start	End	Start	End	
03/05/24	21:08	20:53	22:53	17	15	3	1	0	0	None

3.15 During the survey, the surveyors watched for any bats leaving or entering parts of the buildings and using key flight lines. Surveyors were equipped with Batlogger detectors which allowed for recording and analysis of bat contacts. A note was made of all bat passes, along with the time, species and any information regarding behaviour, including direction of flight, and activity e.g. foraging/commuting.

3.16 To assist surveyors and allow for reliable observations of the buildings for the duration of the survey, Night Vision Aids (NVA) were used to film any bats emerging from buildings B3 and B4. Night Vision Aids comprised two Canon XF100 HD camcorders, one Canon XA10 Camcorders and one Nightfox Monocular camera, each illuminated by a 96 LED infrared illuminator lamp and two Nightfox XB5 infrared torches used to provide additional IR illuminance. Batlogger detectors were attached to these rigs to record calls and assist with later species identification.

3.17 Night Vision Aids were deployed around the buildings to ensure that all aspects were recorded. A still shot from each NVA was taken at the beginning and end of the survey to provide evidence of the camera coverage/field of view at the darkest point of the survey and appropriate level of illuminance, as required in line with best practice guidance.

3.18 The positions of the surveyors and the Night Vision Aids around the buildings during the survey are illustrated on the Bat Roost Survey Plan (CSA/6746/116) at the end of this report.

5.0 Results

Preliminary Roost Assessment (PRA)

Context

5.1 The Site, while primarily containing urban/industrial habitats and features, is located in a rural area. The boundary hedgerows and treelines connect to a wider network of green corridors which connect with open farmland, woodland and aquatic features.

Structures

5.2 The results of the building inspections are described in Table 1 below. Photos are provided in Appendix F.1.

5.3 No potential for roosting bats was identified in relation to building B6 and B7, with negligible potential identified in relation to building B1, B2, B5.

5.4 Low potential or roosting bats was identified in relation to B3, B4 and B6. No evidence of roosting bats was identified within these buildings during the inspection surveys undertaken. Although a small number of moth wings (which can indicate use as a night feeding perch used by long-eared bat *Plecotus* species) were noted under the mezzanine in B4 during an update inspection on 23 July 2024.

Roost Surveys

5.5 Buildings B3 and B4 were subject to a single roost emergence survey, due to the 'low' potential for roosting bats identified. Building B6 was not included in the survey as no impacts to this building are proposed.

5.6 A total of five bat species were recorded during the emergence survey, including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pipistrellus*, noctule *Nyctalus noctula*, *Myotis sp*., and brown long-eared bat *Plecotus auritus*. Additional records of *Nyctalus sp*., and *pipistrellus sp.*, were recorded, however these could not be identified to species level.

5.7 Activity levels were dominated by common pipistrelle and soprano pipistrelle which were largely observed flying along hedgerow and treeline boundaries, as well as into the farmhouse garden and directly through the barn buildings. Noctule appeared to fly directly overhead only, and both *Myotis sp*., and brown-long eared bats were 'heard but not seen' and activity is thought to consist of brief passes overhead.

5.8 No bats of any species were seen by the surveyor or filmed by the NVAs to emerge during the survey. Bats recorded flying into the open areas within both buildings, appeared to forage for up to 30 seconds before exiting the structure(s). Bat calls recorded during these times are of common pipistrelle. During the survey of building B4 an unidentified bat species was seen to enter at 21:42hrs (c.34 minutes after sunset) before foraging for approximately 30 seconds. The bat was not seen to leave the building, however it is considered likely to have flown out of the other side of the building.

Table 1. Preliminary Roost Assessment Results

Building No.	Building description	Bat roosting features and evidence	Bat Roost Suitability
B1	The largest building on Site. This large, modern farm building was in active use at the time of the survey. It had a double-pitched roof of corrugated sheet metal and walls of corrugated sheet metal. This building is in current use as a busy commercial workshop.	Due to the construction of this building there were clearly no voids or cavities in the roof or walls. A slight lip forms on the top of the external walls, behind the guttering, but this is too wide and exposed to attract roosting bats. There are no external or internal features of potential use to bats. Furthermore, this is a busy workshop with a lot of vehicle movement. The metal construction of the more modern units (B1, B2 and B5) is unlikely to offer thermal stability and would not be favourable roosting or hibernating sites.	Negligible
B2	A large, modern farm building of the same structural composition as B1, but with a single-pitch roof. In current use as a site office.	There were no external features that could be used by bats, nor were there any features that may grant bats access to interior spaces. There was no internal access, but likely to be negligible due to the similarity of the building to other buildings on Site.	Negligible
B3	An irregularly shaped building complex constructed of brick and concrete in a state of poor structural repair. The main part of the complex comprises a barn with a convex roof made from corrugated metal. One wall is constructed of stacked sleeper rails. There is a side structure of a similar construction, but with a flat corrugated asbestos roof. The buildings are currently used to store vans, a Portakabin and other assorted items.	The external brick walls of B3 are single skin and cracked in places. There are no doors, so there is free access to the inside. Inside, one wall forms a cavity feature where render and brickwork has fallen away, although this feature is fairly low to the ground (c.1m high). This feature could be fully explored and no signs of roosting bats were recorded. This feature was not considered likely to offer hibernation potential as it would likely be subject to frequent temperature fluctuations. The building was inspected for droppings and feeding remains. None were found, but the open-sided structure of the building is still considered to potentially offer bats access to use this area as a feeding perch. Some of the other features noted may also be used on a transitory basis. This building is not considered suitable as a potential hibernation site due to it's lack of suitable features and exposure to light/elements.	Low
B4	A dilapidated barn of brick, concrete cinderblock and corrugated metal construction, largely open to the elements on the southern elevation. It is largely open on the south-east elevation. The southern elevation comprises a timber lean-to. The inside is used for storage; with a mezzanine covering approximately half of the main barn (not accessible for survey due to rotten staircase).	Like B3, B4 is largely open (on the SE facing side). There are no external roosting features. On the inside, the timber joinery that could be accessed was inspected for crevice features but none were found. The lean-to has no bat roost potential. The assessment of 'low' is due to the potential for this structure to be used as a feeding perch, although no evidence such as discarded moth wings were found. This building is not considered suitable as a	Low

		potential hibernation site due to it's lack of suitable features and exposure to light/elements. No evidence of bats (e.g. droppings / feeding remains) were observed during the initial inspection undertaken on 18 December 2023 or 22 May 2024. A small number of moth wings (less than 5) were recorded underneath the mezzanine area in the eastern extent of the building, against the wall, on 23 July 2024. However, no bat droppings / other evidence of bats was observed.	
B5	B5 is similar to B1 and B2 in that this building is constructed of corrugated sheet metal. The roof is arced, convex sheet metal. Inside, the building is in active use as a carpentry workshop.	There were no external features that could be used by roosting bats, and no features that may provide access to internal spaces. Furthermore, the interior was noted to be very disturbed.	Negligible
B6	B6 is cabin-like in appearance. It is constructed of brick with exterior timber cladding. The roof is double-pitched and constructed of corrugated felt. Inside, it is in active use as an office.	The timber cladding around the exterior of this building was fully inspected and was noted to be flush and tightly fitting all the way around. However, the soffit box at the eaves on the northern and southern aspects was coming away in places, leaving gaps wide enough for bat access, although this is not considered to be a good quality roosting feature, Lead flashing was also noted beneath the windows, but on full inspection none of this was found to be lifted such that a bat might get beneath it. The building was subjected to an internal inspection, but the building is in daily use as an office and there are no undisturbed voids bats may use. There were no points of access into the internal areas, unless within the soffit boxes. This building is not considered suitable as a potential hibernation site due to it's lack of suitable features and as it would likely be subject to temperature fluctuations.	Low
B7	A long Portakabin in current use as an office space.	This temporary structure had no features that could be used by bats and no means of internal access.	None
B8	A small Portakabin used for storage.	This temporary structure had no features that could be used by bats and no means of internal access.	None

6.0 Summary

6.1 Six buildings on Site were inspected for bats and evidence of bats and were assessed for their potential to support bat roosts by the structural features of each. No evidence of roosting bats (e.g. droppings) was identified during the inspection surveys. Buildings B3, B4 and B6 were assessed to be of 'low' bat roost potential. Building B6 is to be retained under current proposals and therefore was excluded from further survey.

6.2 A single dusk emergence survey was undertaken on 03 June 2024 on buildings B3 and B4. No evidence of emerging bats was identified, however individual bats were observed making a few passes through the buildings. Whilst no further evidence to suggest that the buildings are likely to be used by roosting bats was identified, some limited evidence of a possible feeding perch was identified during an update inspection on 23 July 2024. Given the surrounding habitats within the wider landscape, it is considered that bats may be foraging in / around the barns on a sporadic basis, but no evidence to suggest a regular roosting site has been confirmed.

Appendix F.1

PRA Photos

Photograph 1. B1 external from south.

Photograph 2. B1 interior.

Photograph 3. B2 exterior from east. No internal access.

Photograph 4. Southern aspect of B3.

Photograph 5. Interior of B3.

Photograph 6. External wall of B3 forming crack crevice.

Photograph 1. Interior wall of B3 that has crumbled.

Photograph 2. Crumbled wall forms a dry crevice.

Photograph 3. B4 viewed from the south

Photograph 4. B4 viewed from the north

Photograph 5. Interior of B4 and inaccessible first floor

Photograph 6. Building B6 viewed from the north.

Photograph 1. Interior of B6. Open hatch leads to a storage area. All well sealed from exterior.

Photograph 2. Warped plywood coming away from soffit box on B6.

Photograph 3. Long Portakabin on Site. B5 in the background.

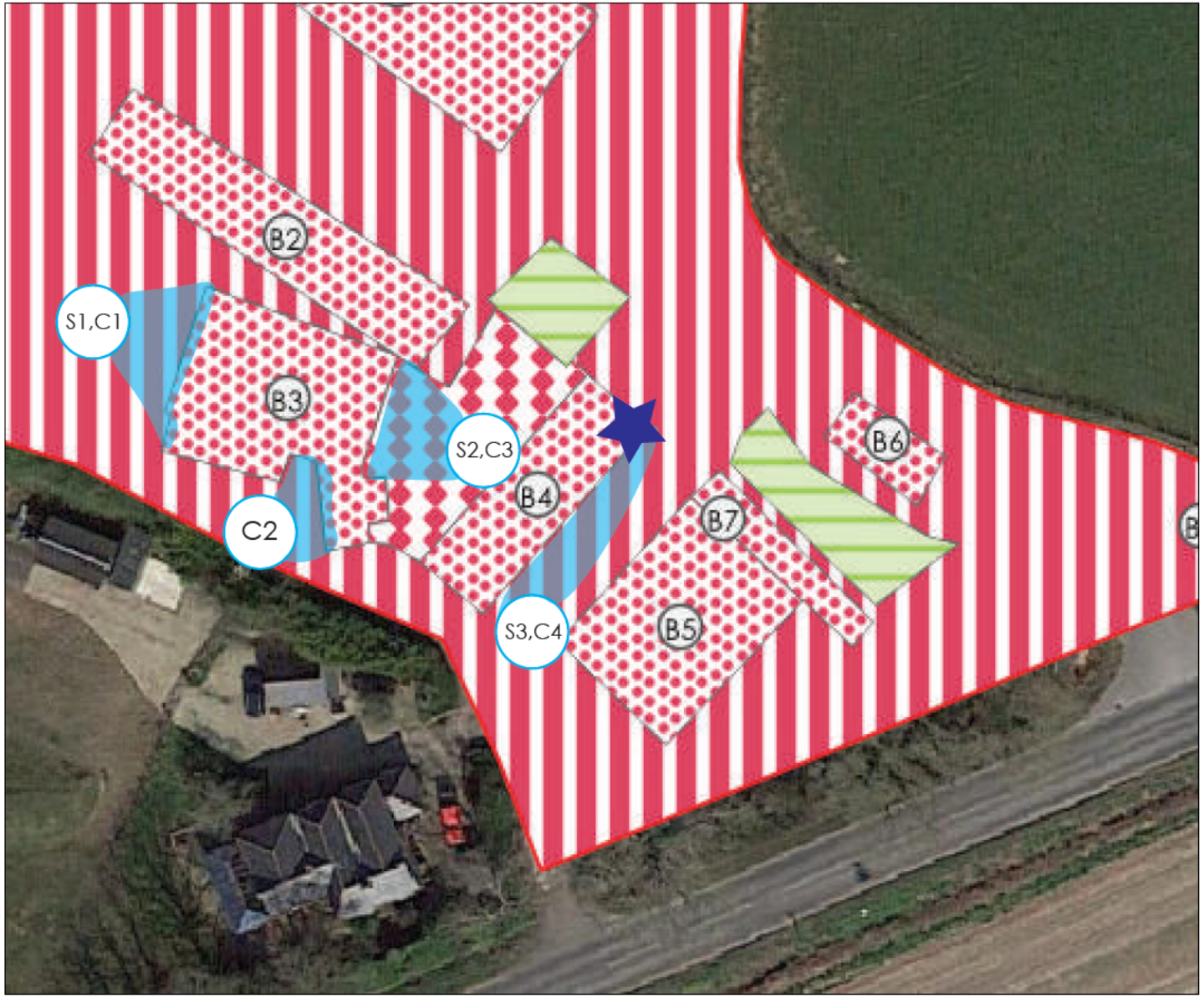
Photograph 4. Small Portakabin in the south-east corner of the Site.

Photograph 5. Moth wings against wall in eastern extent of B4.

Photograph 6. Insect wings against wall in eastern extent of B4.

Appendix F.2

Surveyor Location Plan (CSA/6746/116)



N

Site boundary

Bn — Building number

Sn — Surveyor number

Cn — Camera number

Camera/surveyor field of vision

Feeding remains

CSA environmental

Office 20, Citibase, 95 Ditchling Road, Brighton BN1 4ST

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w csaenvironmental.co.uk

Project	Commerical Yard, Stonehouse Farm, Plummers Plain, Horsham	Date August 2024	Drawing No. CSA/6746/116
Drawing Title	Bat Survey Plan	Scale Not to scale	Rev -
Client	Hunter Development Holdings Ltd	Drawn NI	Checked CC

Appendix I

Great Crested Newt Survey Report (Stonehouse Business Park)

1.0 Introduction

1.1 This report has been prepared by CSA Environmental on behalf of Hunter Development Holdings Ltd. It sets out the findings of Habitat Suitability Index (HIS) assessment and eDNA surveys of ponds within 500m of Commercial Yard, Stonehouse Farm, Plumbers Plain, Horsham (hereafter 'the Site').

2.0 Legislation

2.1 Great crested newts *Triturus cristatus* are legally protected as European Protected Species (EPS) under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. These Regulations make it an offence to:

- Deliberately capture, injure, kill or capture a great crested newt
- Deliberately disturb great crested newts, impairing their ability to survive, breed, reproduce or rear/nurture their young
- Damage or destroy a breeding site or resting place used by a great crested newt

2.2 Great crested newts are also fully protected under the Wildlife & Countryside Act 1981 (as amended), making it an offence to:

- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place of shelter or protection
- Intentionally or recklessly obstruct access to any structure or place of shelter or protection

2.3 Disturbance of great crested newts is covered by both the 2017 Regulations and the 1981 Act. Disturbance that impairs survival or successful reproduction would be covered by the Regulations, while less significant acts of disturbance may only be covered by the Act.

2.4 It is important to note that great crested newts and their habitats (such as breeding ponds) are protected throughout the year, regardless of whether or not newts are present at the time.

2.5 Great crested newts are also listed as a species of principal importance for the conservation of biodiversity in England, under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. The S41 species list is used to guide decision-makers, including planning authorities, in implementing their duty under Section 40 of the NERC Act to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Licensing

2.6 Where development is proposed that would result in an offence under the Habitats and Species Regulations, a statutory derogation licence may be granted by Natural England to permit an act that would

otherwise be unlawful. To obtain an EPS licence for development, it must be demonstrated that the purpose of the act to be licensed is for:

- "preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment" (Regulation 55(2)(e))

2.7 In addition, Natural England will not grant an EPS licence unless they are satisfied that:

- "There is no satisfactory alternative" (Regulation 55(9)(a))
- "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" (Regulation 55(9)(b))

3.0 Methods

Desk Study

3.1 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken in January 2024 to identify ponds within 500m of the Site which may have potential to support breeding great crested newts, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography. 500m is the generally accepted typical maximum dispersal range of this species, with great crested newt most likely to use terrestrial habitat within 250m of breeding ponds. The results of this desk study can be found in the pond plan as appended (CSA/6746/132).

Habitat Suitability Index (HSI) Assessment

3.2 Where ponds were situated within an 500m radius and connected to the Site by traversable terrestrial habitats, access permission was requested to undertake a Habitat Suitability Index (HSI) assessment, using the standard approach set out by Oldham *et al*. (2000). These assessments were undertaken on 22 May 2024 by Nancy Inman ACIEEM (Natural England Class Licence WML-CL08 – Registration Number 2022-10384-CL08-CLS-CLS) and Caudwell MCIEEM CEcol (Natural England Class Licence WML-CL08 – Registration Number 2015-16920-CL08-CLS-CLS).

Environmental DNA (eDNA) Sampling

3.3 Environmental DNA (eDNA) sampling was used to determine the presence/ likely absence of great crested newts from all ponds within 500m of the Site (P1, P2, P3, P4, P5, P6, P7a/P7b, P8 and P14) as shown on the Pond Plan (CSA/6746/132). This method has been shown to be a highly effective in detecting the presence of great crested newts (Biggs *et al*., 2014).

3.4 Water samples were collected from all ponds within 500m of the Site on 22 May 2024 by Nancy Inman and Clare Caudwell. Appropriate

biosecurity measures were taken to avoid cross contamination of great crested newt eDNA. Subsequently the samples were sent to ADAS for DNA analysis.

4.0 Results

Desk Study

4.1 The desktop search for ponds and subsequent site visits identified twelve water bodies occurring within 500m of the Site. These ponds are identified on the Pond Plan (CSA/7476/132). Pond P10 and P11 were found to no longer exist and therefore no surveys were possible.

Habitat Suitability Index (HSI) Assessment

4.2 Full results of the surveys are included in Table 1 below. Ponds P1, P2, P3, P5, P7a and P7b were found to be of 'poor' suitability for GCN. Pond P14 was of 'below average' suitability, P4 and P9 are of 'average' suitability and P6, P8 and P12 are of 'excellent' suitability.

Environmental DNA (eDNA) Sampling

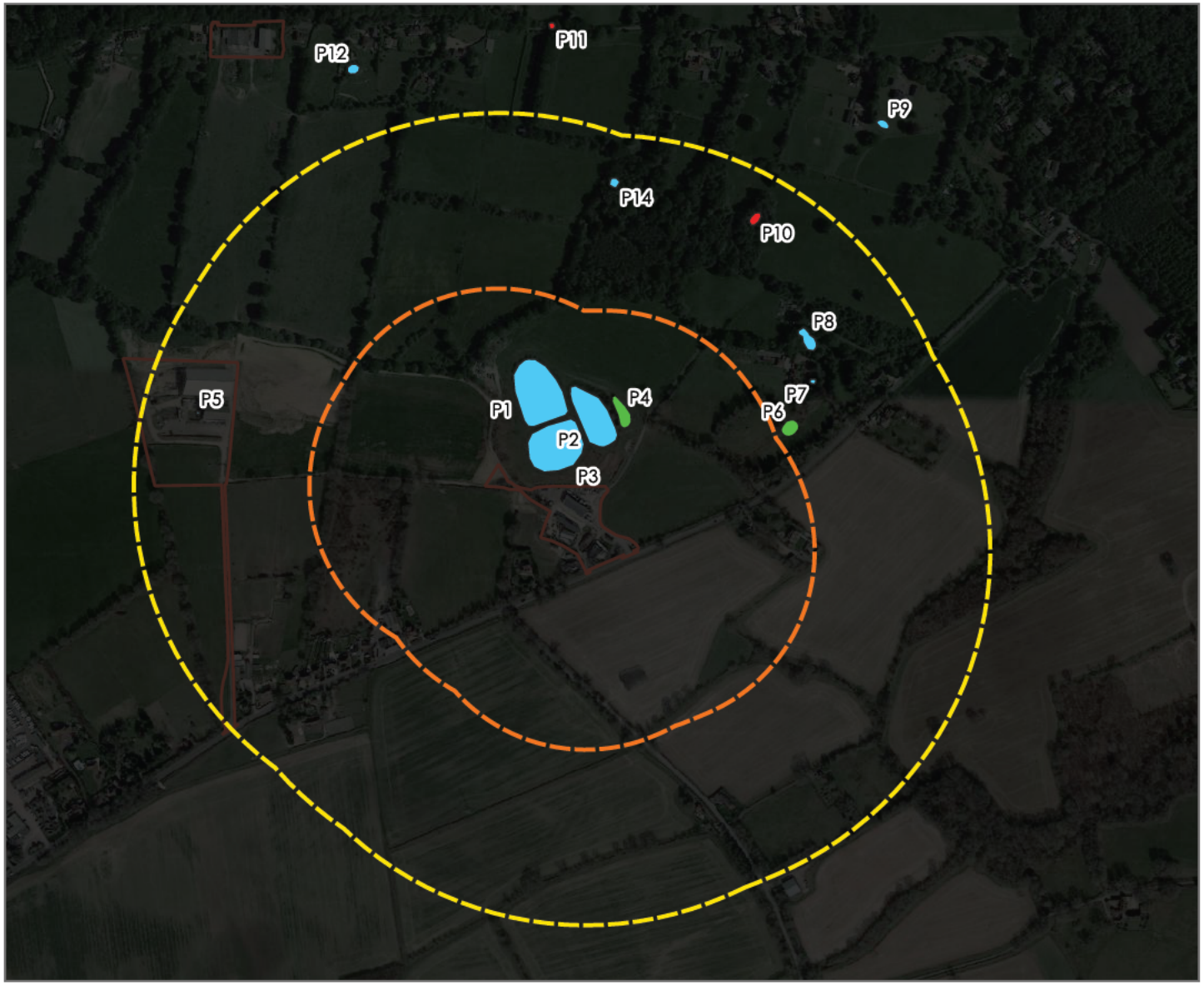
4.3 The eDNA results were positive for GCN in ponds P4 and P6, and negative in the remaining ponds.

5.0 Summary

5.1 Great crested newt have been confirmed as present within two of the ten surveyed ponds. One of which, (P4), falls within 250m of the Site, P6 falls within 500m of the Site. GCN are therefore considered likely present within the surrounding landscape.

Table 1. HSI Results

Habitat Suitability Factors:		1	2	3	4	5	6	7a	7b	8	14
Map location	Category	Zone A	Zone A	Zone A	Zone A	Zone A	Zone A	Zone A	Zone A	Zone A	Zone A
	SI Value	1	1	1	1	1	1	1	1	1	1
Pond area in m²	Category	>2000m2	>2000m2	>2000m2	350m2	<50m2	250m2	50-100m2	100m2	375m2	<50m2
	SI Value				0.7	0.05	0.5	0.1	0.2	0.75	0.05
Permanence / Desiccation	Category	Never Dries	Never Dries	Never Dries	Never Dries	Dries Annually	Never Dries	Never Dries	Never Dries	Never Dries	Dries Annually
	SI Value	0.9	0.9	0.9	0.9	0.1	0.9	0.9	0.9	0.9	0.1
Water quality	Category	Moderate	Moderate	Moderate	Poor	Bad	Good	Good	Good	Good	Good
	SI Value	0.67	0.67	0.67	0.33	0.01	1	1	1	1	1
Percentage perimeter shade to at least 1m from shore	Category	0-60%	0-60%	0-60%	0-60%	0-60%	0-60%	0-60%	0-60%	0-60%	0-60%
	SI Value	1	1	1	1	1	1	1	1	1	1
Waterfowl impact (excluding moorhen)	Category	Major	Major	Major	Minor	Absent	Minor	Absent	Absent	Minor	Absent
	SI Value	0.01	0.01	0.01	0.67	1	0.67	1	1	0.67	1
Fish presence	Category	Major	Major	Major	Possible	Absent	Absent	Major	Major	Absent	Absent
	SI Value	0.01	0.01	0.01	0.67	1	1	0.01	0.01	1	1
Number of ponds within 1km not separated by barriers	Category	>12	>12	>12	>12	>12	>12	>12	>12	>12	>12
	SI Value	1	1	1	1	1	1	1	1	1	1
Terrestrial habitat	Category	Moderate	Moderate	Moderate	Moderate	Poor	Good	Poor	Poor	Good	Good
	SI Value	0.67	0.67	0.67	0.67	0.33	1	0.33	0.33	1	1
Percentage of pond surface occupied by aquatic vegetation (March – May)	Category	1-5%	1-5%	<1%	<1%	<1%	46-50%	1-5%	<1%	21-25%	16-20%
	SI Value	0.35	0.35	0.3	0.3	0.3	0.8	0.35	0.3	0.55	0.5
HSI Suitability		**Poor**	**Poor**	**Poor**	**Average**	**Poor**	**Excellent**	**Poor**	**Poor**	**Excellent**	**Below average**



N

- Application Site boundary
- 250m buffer
- 500m buffer
- Pond and reference number
- Pond no longer present
- Pond with positive eDNA result

Pond ref	HSI Score	eDNA result
P1	Poor	Negative
P2	Poor	Negative
P3	Poor	Negative
P4	Average	Positive for GCN
P5	Poor	Negative
P6	Excellent	Positive for GCN
P7	Poor	Negative
P8	Excellent	Negative
P10	N/A	Negative
P14	Below average	Negative

0 250 500 m

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Project	Stonehouse Farm, Handcross	Date	Feb 2025	Drawing No.	CSA/6746/132
Drawing Title	Stonehouse Business Park Great Crested Newt Survey Results	Scale	Refer to scale	Rev	A
Client	Lake Investment Ltd.	Drawn	LG	Checked	CC

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Sample ID: ADAS-5390	Condition on Receipt: Good	Volume: Passed
Client Identifier: P7A, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

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[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5392	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P8, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	05/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	05/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	05/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5395	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P14, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5399	Condition on Receipt: Good	Volume: Passed
Client Identifier: P3, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	05/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	05/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	05/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5400	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P4, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	4 of 12 (GCN positive)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
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Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5401	Condition on Receipt: Good	Volume: Passed
Client Identifier: P2, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5402	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P6, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	12 of 12 (GCN positive)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
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Position:	Director: Biotechnology	Position:	MD: Biotechnology
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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5403	Condition on Receipt: Medium Sediment	Volume: Passed
Client Identifier: P5, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5404	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P1, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Appendix 1: Interpretation of results

Sample Condition

Upon sample receipt we score your samples according to quality: good, low sediment, medium sediment, high sediment, white precipitate, and presence of algae.

There are three reasons as to why sediment should be avoided:

1. It is possible for DNA to persist within the sediment for longer than it would if it was floating in the water which could lead to a false positive result i.e. in this case GCN not recently present but present a long time ago
2. In some cases sediment can cause inhibition of the PCR analysis used to detect GCN eDNA within samples which could lead to an indeterminate result.
3. In some cases sediment can interfere with the DNA extraction procedure resulting in poor recovery of the eDNA which in turn can lead to an indeterminate result.

Algae can make the DNA extraction more difficult to perform so if it can be avoided then this is helpful.

Sometimes samples contain a white precipitate which we have found makes the recovery of eDNA very difficult. This precipitate can be present in such high amounts that it interferes with the eDNA extraction process meaning that we cannot recover the degradation control (nor most likely the eDNA itself) at sufficient levels for the control to be within the acceptable limits for the assay, therefore we have to classify these type of samples as indeterminate.

What do my results mean?

A positive result means that great crested newts are present in the water or have been present in the water in the recent past (eDNA degrades over around 7-21 days).

A negative result means that DNA from the great crested newt has not been detected in your sample.

On occasion an inconclusive result will be issued. This occurs where the DNA from the great crested newt has not been detected but the controls have indicated that either: the sample has been degraded and/or the eDNA was not fully extracted (poor recovery); or the PCR inhibited in some way. This may be due to the water chemistry or may be due to the presence of high levels of sediment in samples which can interfere with the DNA extraction process. A re-test could be performed but a fresh sample would need to be obtained. We have successfully performed re-tests on samples which have had high sediment content on the first collection and low sediment content (through improved sample collection) on the re-test. If water chemistry was the cause of the indeterminate then a re-test would most likely also return an inconclusive result.

The results will be recorded as indeterminate if the GCN result is negative and the degradation result is recorded as:

1. evidence of decay - meaning that the degradation control was outside of accepted limits
2. evidence of degradation or residual inhibition - meaning that the degradation control was outside of accepted limits but that this could have been due to inhibitors not being removed sufficiently by the dilution of inhibited samples (according to the technical advice note)

Appendix J

Great Crested Newt Survey Report (Anaerobic Digester (AD) Plant and Main Livestock Building)

1.0 Introduction

1.1 This report has been prepared by CSA Environmental on behalf of Hunter Development Holdings Ltd. It sets out the findings of Habitat Suitability Index (HIS) assessment and eDNA surveys of ponds within 500m of Lot 8A, Stonehouse Farm, Handcross (hereafter 'the Site').

2.0 Legislation

2.1 Great crested newts *Triturus cristatus* are legally protected as European Protected Species (EPS) under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. These Regulations make it an offence to:

- Deliberately capture, injure, kill or capture a great crested newt
- Deliberately disturb great crested newts, impairing their ability to survive, breed, reproduce or rear/nurture their young
- Damage or destroy a breeding site or resting place used by a great crested newt

2.2 Great crested newts are also fully protected under the Wildlife & Countryside Act 1981 (as amended), making it an offence to:

- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place of shelter or protection
- Intentionally or recklessly obstruct access to any structure or place of shelter or protection

2.3 Disturbance of great crested newts is covered by both the 2017 Regulations and the 1981 Act. Disturbance that impairs survival or successful reproduction would be covered by the Regulations, while less significant acts of disturbance may only be covered by the Act.

2.4 It is important to note that great crested newts and their habitats (such as breeding ponds) are protected throughout the year, regardless of whether or not newts are present at the time.

2.5 Great crested newts are also listed as a species of principal importance for the conservation of biodiversity in England, under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. The S41 species list is used to guide decision-makers, including planning authorities, in implementing their duty under Section 40 of the NERC Act to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

<u>Licensing</u>

2.6 Where development is proposed that would result in an offence under the Habitats and Species Regulations, a statutory derogation licence may be granted by Natural England to permit an act that would

otherwise be unlawful. To obtain an EPS licence for development, it must be demonstrated that the purpose of the act to be licensed is for:

- "preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment" (Regulation 55(2)(e))

2.7 In addition, Natural England will not grant an EPS licence unless they are satisfied that:

- "There is no satisfactory alternative" (Regulation 55(9)(a))
- "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" (Regulation 55(9)(b))

3.0 Methods

Desk Study

3.1 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken in January 2024 to identify ponds within 500m of the Site which may have potential to support breeding great crested newts, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography. 500m is the generally accepted typical maximum dispersal range of this species, with great crested newt most likely to use terrestrial habitat within 250m of breeding ponds.

Habitat Suitability Index (HSI) Assessment

3.2 Where ponds were situated within an 500m radius and connected to the Site by traversable terrestrial habitats, access permission was requested to undertake a Habitat Suitability Index (HSI) assessment, using the standard approach set out by Oldham *et al*. (2000). These assessments were undertaken on 22 May 2024 by Nancy Inman ACIEEM (Natural England Class Licence WML-CL08 – Registration Number 2022-10384-CL08-CLS-CLS) and Caudwell CEcol MCIEEM (Natural England Class Licence WML-CL08 – Registration Number 2015-16920-CL08-CLS-CLS).

Environmental DNA (eDNA) Sampling

3.3 Environmental DNA (eDNA) sampling was used to determine the presence/ likely absence of great crested newts from ponds within 500m of the Site comprising P1, P2, P3, P4, P5 and P12. This method has been shown to be a highly effective in detecting the presence of great crested newts (Biggs *et al*., 2014).

3.4 Water samples were collected from ponds P1, P2, P3, P4, P5 and P12 on 22 May 2024 by Nancy Inman and Clare Caudwell. Appropriate biosecurity measures were taken to avoid cross contamination of great

crested newt eDNA. Subsequently the samples were sent to ADAS for DNA analysis.

4.0 Results

Desk Study

4.1 The desktop search for ponds and subsequent site visits identified one on-Site pond (P5), in addition to four water bodies occurring within 500m of the Site (P1, P2, P3 and P12), and one additional pond (P4) just beyond the 500m buffer, but closely associated with ponds P1-P3. These ponds are identified on the Pond Plan (CSA/6746/133).

Habitat Suitability Index (HSI) Assessment

4.2 Full results of the surveys are included in Table 1 below.

Habitat Suitability Factors:		Pond Number and Grid Reference					
		1	2	3	4	5	12
Map location	Category	Zone A	Zone A	Zone A	Zone A	Zone A	Zone A
	SI Value	1	1	1	1	1	1
Pond area in m^2	Category	>2000m2	>2000m2	>2000m2	350m2	450m2	450m2
	SI Value	0	0	0	0.7	0.9	0.9
Permanence / Desiccation	Category	Never Dries	Never Dries	Never Dries	Never Dries	Rarely Dries	Rarely Dries
	SI Value	0.9	0.9	0.9	0.9	1	1
Water quality	Category	Moderate	Moderate	Moderate	Poor	Moderate	Moderate
	SI Value	0.67	0.67	0.67	0.33	0.67	0.67
Percentage perimeter shade to at least 1m from shore	Category	0-60%	0-60%	0-60%	0-60%	0-60%	0-60%
	SI Value	1	1	1	1	1	1
Waterfowl impact (excluding moorhen)	Category	Major	Major	Major	Minor	Minor	Minor
	SI Value	0.01	0.01	0.01	0.67	0.67	0.67
Fish presence	Category	Major	Major	Major	Possible	Absent	Absent
	SI Value	0.01	0.01	0.01	0.67	1	1
Number of ponds within 1km not separated by barriers	Category	>12	>12	>12	>12	>12	>12
	SI Value	1	1	1	1	1	1
Terrestrial habitat	Category	Moderate	Moderate	Moderate	Moderate	Good	Good
	SI Value	0.67	0.67	0.67	0.67	1	1
Percentage of pond surface occupied by aquatic vegetation (March – May)	Category	1-5%	1-5%	<1%	<1%	66-80%	66-80%
	SI Value	0.35	0.35	0.3	0.3	1	1
Product		1.41404	1.41404	1.21203	0.01875	0.000004	0.40401
HSI Score		0.28917	0.28917	0.28426	0.671912	0.29475	0.91335
HSI Suitability		Poor	Poor	Poor	Average	Poor	Excellent

Environmental DNA (eDNA) Sampling

4.3 The eDNA results were negative for GCN eDNA in ponds P1, P2, P3, P5 and P12, and positive for GCN eDNA in pond P4.

5.0 Summary

5.1 All ponds within 500m of the Site were subject to HSI and eDNA surveys. Of all the ponds surveys, P4 returned a positive result for great crested newt. Pond P4 was just beyond the 500m buffer of the Site, but is closely associated with ponds P1-P3. Though pond P12 was considered to provide 'excellent' suitability for GCN following an HSI assessment, all other ponds returned negative eDNA results. Is it therefore considered conceivable that great crested newt could make use of terrestrial habitat within 500m of the Site.

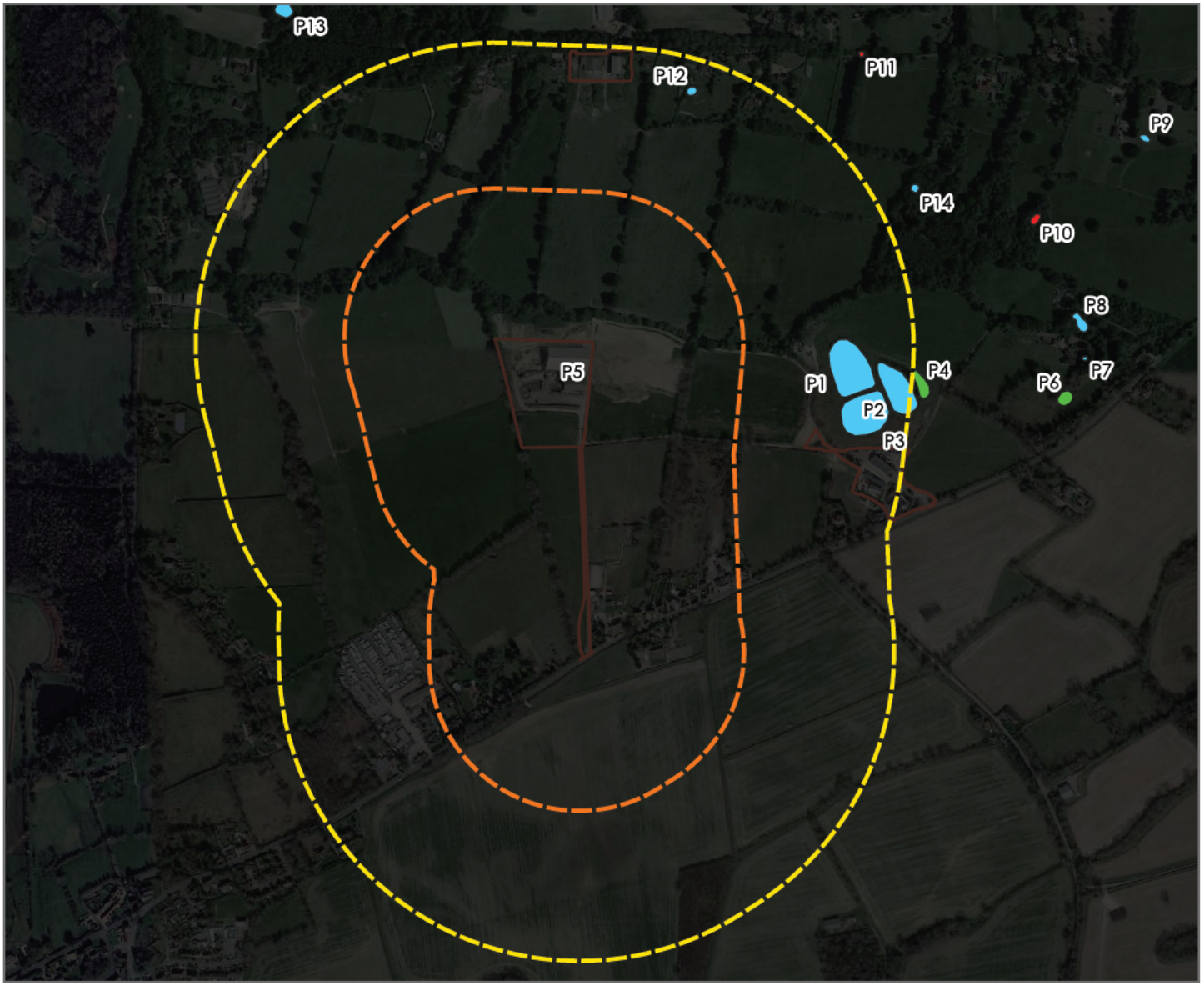
5.2 Further discussion of great crested newt is detailed within the Preliminary Ecological Appraisal (CSA/67496/04).

6.0 References

Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F., 2014. *Analytical and methodological development for improved surveillance of the Great Crested Newt*. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Oxford: Freshwater Habitats Trust.

English Nature, 2001. *Great Crested Newt Mitigation Guidelines.* Peterborough: English Nature.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M., 2000. Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.



Application Site boundary

Pond no longer present

Pond and reference number

Pond with positive eDNA result

Pond ref	HSI Score	eDNA result
P1	Poor	Negative
P2	Poor	Negative
P3	Poor	Negative
P4	Poor	Positive for GCN
P5	Poor	Negative
P12	Average	Negative

0 250 500 m

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Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/133
Drawing Title	Anaerobic Digester (AD) Plant and Main Livestock Building Great Crested Newt Survey Results	Scale Refer to scale	Rev A
Client	Lake Investment Ltd.	Drawn LG	Checked CC

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Sample ID: ADAS-5390	Condition on Receipt: Good	Volume: Passed
Client Identifier: P7A, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5391	Condition on Receipt: Good	Volume: Passed
Client Identifier: P9, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN
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Sample ID: ADAS-5392	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P8, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	05/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	05/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	05/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Sample ID: ADAS-5393	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P13, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Sample ID: ADAS-5394	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P12, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	05/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	05/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	05/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Sample ID: ADAS-5395	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P14, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5399	Condition on Receipt: Good	Volume: Passed
Client Identifier: P3, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	05/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	05/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	05/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5400	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P4, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	4 of 12 (GCN positive)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5401	Condition on Receipt: Good	Volume: Passed
Client Identifier: P2, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5402	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P6, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	12 of 12 (GCN positive)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5403	Condition on Receipt: Medium Sediment	Volume: Passed
Client Identifier: P5, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

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Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5404	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P1, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Appendix 1: Interpretation of results

Sample Condition

Upon sample receipt we score your samples according to quality: good, low sediment, medium sediment, high sediment, white precipitate, and presence of algae.

There are three reasons as to why sediment should be avoided:

1. It is possible for DNA to persist within the sediment for longer than it would if it was floating in the water which could lead to a false positive result i.e. in this case GCN not recently present but present a long time ago
2. In some cases sediment can cause inhibition of the PCR analysis used to detect GCN eDNA within samples which could lead to an indeterminate result.
3. In some cases sediment can interfere with the DNA extraction procedure resulting in poor recovery of the eDNA which in turn can lead to an indeterminate result.

Algae can make the DNA extraction more difficult to perform so if it can be avoided then this is helpful.

Sometimes samples contain a white precipitate which we have found makes the recovery of eDNA very difficult. This precipitate can be present in such high amounts that it interferes with the eDNA extraction process meaning that we cannot recover the degradation control (nor most likely the eDNA itself) at sufficient levels for the control to be within the acceptable limits for the assay, therefore we have to classify these type of samples as indeterminate.

What do my results mean?

A positive result means that great crested newts are present in the water or have been present in the water in the recent past (eDNA degrades over around 7-21 days).

A negative result means that DNA from the great crested newt has not been detected in your sample.

On occasion an inconclusive result will be issued. This occurs where the DNA from the great crested newt has not been detected but the controls have indicated that either: the sample has been degraded and/or the eDNA was not fully extracted (poor recovery); or the PCR inhibited in some way. This may be due to the water chemistry or may be due to the presence of high levels of sediment in samples which can interfere with the DNA extraction process. A re-test could be performed but a fresh sample would need to be obtained. We have successfully performed re-tests on samples which have had high sediment content on the first collection and low sediment content (through improved sample collection) on the re-test. If water chemistry was the cause of the indeterminate then a re-test would most likely also return an inconclusive result.

The results will be recorded as indeterminate if the GCN result is negative and the degradation result is recorded as:

1. evidence of decay - meaning that the degradation control was outside of accepted limits
2. evidence of degradation or residual inhibition - meaning that the degradation control was outside of accepted limits but that this could have been due to inhibitors not being removed sufficiently by the dilution of inhibited samples (according to the technical advice note)

Appendix K

Preliminary Roost Assessment (Jackson's Ridge)

1.0 Introduction

1.1 This report has been prepared by CSA Environmental on behalf of Hunter Development Holdings Ltd. Its sets out the findings of a Preliminary Roost Appraisal (PRA) an existing farmyard at Stonehouse Farm, located off Hammerpond Road, Plumbers Plain, Horsham (hereafter referred to as 'the Site'). Residential development is proposed at the Site, for which planning permission will be sought. The 'Survey Area' assessed herein, includes the area proposed for residential development (comprises the existing farmyard) and fringing land to the south.

2.0 Legislation

2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:

- Deliberately capture, injure, or kill a bat
- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
- Damage or destroy a breeding site or resting place used by bats

2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection

2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is commented irrespective of whether the causal act was deliberate or otherwise.

2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural England to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

3.0 Methods

3.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 4th edition (Collins, 2023).

Preliminary Roost Assessment (PRA)

Structures

3.2 A detailed external and internal inspection of all buildings on-site was completed on 18 December 2023, using a high-powered torch, as appropriate. The survey was carried out by Clare Caudwell CEcol MCIEEM (Natural England Class Licence WLM-A34, Registration Number 2015-15070-CLS-CLS).

3.3 External inspection focused on identifying potential bat access points to the interior of each structure and any external features that could potentially be used by crevice-dwelling species. Particular attention was given to window sills, window panes, weatherboarding, and pitch/ridge tiles; as evidence is typically found in these locations.

3.4 The internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains within the buildings.

3.5 A description of the structures was made, including construction, condition (in respect of roosting, rather than building or structural integrity) and age (where known).

3.6 The aim of this inspection is to record direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of structures to support bats whilst in hibernation.

Assessing 'Potential' of Buildings to Support Roosting Bats

3.7 All structures were assigned to one of four categories in respect of their 'potential' to support roosting bats, or the confirmation of any bat roosts identified. 'Potential' in this context is taken to be the broad suitability of features to support roosting bats, based upon the nature, condition or structure of such features, in the absence of confirmed evidence of roosting.

3.8 Assigning the following categories is intended to determine the effort of any further targeted survey or inspections which are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features.

3.9 The following categories are assigned to structures herein:

- ***Confirmed Roost*** – where one or more bat roosts are identified during PRA inspections, either through direct sightings of bats, and/or indirect evidence such as bat droppings.
- ***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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
- ***Moderate*** – A structure 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, such as maternity and hibernation – the categorisation described here is made irrespective of species conservation status, which is established after presence is confirmed).
- ***Low*** – A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
- ***Negligible*** – No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
- ***None*** – No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

3.10 The potential of a tree or structure to support roosting bats is often influenced by its age and construction, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat - particularly woodland, parkland and wetland- as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Limitations

4.0 The survey, which was conducted in dry and overcast conditions, was conducted at a sub-optimum time of year to detect summer roosts as evidence of bats may have been washed/blown away, especially given the open-sided structure of some of the buildings. However, the survey was completed within the period within which bat hibernation roosts may be confirmed. All buildings were accessed during the survey visit.

5.0 Results

Preliminary Roost Assessment (PRA)

Context

5.1 The Site, while primarily containing farm/industrial habitats and features, is located in a rural area. The boundary hedgerows and treelines connect to a wider network of green corridors which connect with open farmland, woodland and aquatic features.

Structures

5.2 The results of the building inspections are described in Table 1 below. Photos are provided in Appendix F.1.

6.0 Summary

6.1 Six building on Site were inspected for bats / evidence of bats and were assessed for their potential to support bat roosts. Buildings B1, B2, B3 and B4 were not considered to provide any potential roosting opportunities for bats. Buildings B5 and B6 were assessed to be of 'negligible' bat roost potential due to the presence of very minor features. It is considered highly unlikely that these buildings support roosting bats (summer or hibernation). No further surveys of these buildings are required at this time, in line with BCT guidelines (2023). However, this assessment should be updated should no development works occur within 12 moths of this assessment.

Table 1. Preliminary Roost Assessment Results

Building No.	Building description	Bat roosting features and evidence	Bat Roost Suitability
B1	A static caravan / temporary dwelling. Single storey with shallow pitched roof with no enclosed loft space. Roof covering is felt; and is boarded out with tongue and groove internally.	Due to the construction of this building there were no voids or cavities in the roof or walls. No external features (e.g. lifted soffits etc) were observed, with the exterior being well sealed. No evidence / potential for roosting bats was identified within the interior.	None
B2	A small 'Dutch' barn with a corrugated metal roof, with only one gable end wall remaining (west). This barn is dilapidated in parts, with the roof partially collapsed and open to the elements.	There were no external or internal features that could be used by bats, given the exposed nature of the structure. No evidence of use by bats (e.g. droppings / feeding remains) were observed.	None
B3	A portacabin / temporary building. Flat roof with no enclosed loft space. Roof covering is felt.	Due to the construction of this building there were no voids or cavities in the roof or walls. No external features (e.g. lifted soffits etc) were observed, with the exterior being well sealed. No evidence / potential for roosting bats was identified within the interior.	None
B4	A flat roofed ' hanger', adjoining B5 (cattle barn) to the east. External walls are brick built, with a flat corrugated asbestos roof, with some clear plastic sections. Open to the south and exposed to the elements. No enclosed roof space and very light and drafty.	No voids or cavities in the roof or walls noted. No external features (e.g. soffits / flashing) were observed which could create suitable roosting features. No evidence / potential for roosting bats was identified within the interior.	None
B5	A large cattle / dairy barn, with a concrete frame construction and pitched corrugated asbestos roof (with clear plastic skylight sections). Largely open-sided, with some woodland panelling walls (brick below) at either gable end (north and south). Plastic / metal barge boards at gables ends towards the ridge. Main barn very light and drafty, and open to the elements. Small, enclosed section in the north-west corner, comprising some single storey storerooms constructed within the building from breeze block / concrete. Silo adjacent. No enclose roof space within the building / rooms; these areas are dark and cold. No access to mezzanine area over the storage rooms.	The main barn is not considered to offer suitable roosting opportunities for bats, given the very draft and exposed nature of the building (poor thermal regulation). Any gaps between the concrete beams / asbestos roof were not considered to offer good opportunities for bats as were too large / exposed. Wooden panelling on the gable ends was not overlapping or continuous and did not create any suitable roost features. No significant crevices were noted where bargeboard overlap the wooden panelling. No suitable roosting features (e.g. cracks / missing brickwork etc) were noted within the enclosed storage areas, and no evidence of use by bats (e.g. droppings / feeding remains) were observed. It is not considered that these areas would provide suitable summer or hibernation roosting areas. Doors were kept closed; as such no suitable access points were noted.	Negligible
B6	A large, modern agricultural barn, in current use by a scaffolding company for materials / vehicle storage. Constructed of corrugated metal above, and breeze block below. Pitched corrugated asbestos roof; on steel frame. Metal girders exposed, and no enclosed loft space present. Open to the southern elevation, creating light and exposed conditions. Metal barge boards at gables ends.	No significant external or internal features which could be used by roosting bats. Very narrow and shallow cracks between some concrete wall panels internally, but not considered to offer good opportunities for roosting bats (summer / hibernation). No evidence of used by bats (cracks inspected were dusty / cobwebby); and no bat droppings / feeding remains noted within area of the barn which could be accessed. No significant crevices were noted where bargeboard overlap corrugated metals walls externally; and the thermal properties of these areas will be poor.	Negligible.

Appendix F.1

PRA Photos

Photograph 1. B1 external from south-east.

Photograph 2. B1 interior.

Photograph 3. B2 exterior from north-east.

Photograph 4. B2 exterior from south.

Photograph 5. B3 (right in distance), B4 (western exterior wall)

Photograph 6. Exterior B4 (left) and B5 (right).

Photograph 7. Interior wall of B4, open to south.

Photograph 8. B5 Exterior, from south-east.

Photograph 9. B5 interior, from south.

Photograph 10. B5 exterior (left) and B4 (right), from north.

Photograph 11. B5 interior (ground floor, north)

Photograph 12. B5 interior (ground floor, north)

Photograph 1. B6 exterior, from the north-east.

Photograph 2. B6 exterior, from the south.

Photograph 3. B6 interior, from the south

Photograph 4. B6, limited extent of expansion gaps between concrete panels on internal walls.

Appendix L

Great Crested Newt Survey Report (Jackson's Ridge)

1.0 Introduction

1.1 This report has been prepared by CSA Environmental on behalf of Hunter Development Holdings Ltd. It sets out the findings of Habitat Suitability Index (HIS) assessment and eDNA surveys of ponds within 500m of Land at Hammerpond Road, Plummers Plain, Horsham (hereafter 'the Site'). Residential development is proposed at the Site, for which planning permission is sought.

2.0 Legislation

2.1 Great crested newts *Triturus cristatus* are legally protected as European Protected Species (EPS) under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. These Regulations make it an offence to:

- Deliberately capture, injure, kill or capture a great crested newt
- Deliberately disturb great crested newts, impairing their ability to survive, breed, reproduce or rear/nurture their young
- Damage or destroy a breeding site or resting place used by a great crested newt

2.2 Great crested newts are also fully protected under the Wildlife & Countryside Act 1981 (as amended), making it an offence to:

- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place of shelter or protection
- Intentionally or recklessly obstruct access to any structure or place of shelter or protection

2.3 Disturbance of great crested newts is covered by both the 2017 Regulations and the 1981 Act. Disturbance that impairs survival or successful reproduction would be covered by the Regulations, while less significant acts of disturbance may only be covered by the Act.

2.4 It is important to note that great crested newts and their habitats (such as breeding ponds) are protected throughout the year, regardless of whether or not newts are present at the time.

2.5 Great crested newts are also listed as a species of principal importance for the conservation of biodiversity in England, under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. The S41 species list is used to guide decision-makers, including planning authorities, in implementing their duty under Section 40 of the NERC Act to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Licensing

2.6 Where development is proposed that would result in an offence under the Habitats and Species Regulations, a statutory derogation licence

may be granted by Natural England to permit an act that would otherwise be unlawful. To obtain an EPS licence for development, it must be demonstrated that the purpose of the act to be licensed is for:

- "preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment" (Regulation 55(2)(e))

2.7 In addition, Natural England will not grant an EPS licence unless they are satisfied that:

- "There is no satisfactory alternative" (Regulation 55(9)(a))
- "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" (Regulation 55(9)(b))

3.0 Methods

Desk Study

3.1 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken in January 2024 to identify ponds within 500m of the Site which may have potential to support breeding great crested newts, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography. 500m is the generally accepted typical maximum dispersal range of this species, with great crested newt most likely to use terrestrial habitat within 250m of breeding ponds. The results of this desk study can be found in the pond plan as appended (CSA/6746/134).

Habitat Suitability Index (HSI) Assessment

3.2 Where ponds were situated within an 500m radius and connected to the Site by traversable terrestrial habitats, access permission was requested to undertake a Habitat Suitability Index (HSI) assessment, using the standard approach set out by Oldham *et al*. (2000). These assessments were undertaken on 22 May 2024 by Nancy Inman ACIEEM (Natural England Class Licence WML-CL08 – Registration Number 2022-10384-CL08-CLS-CLS) and Caudwell MCIEEM CEcol (Natural England Class Licence WML-CL08 – Registration Number 2015-16920-CL08-CLS-CLS).

Environmental DNA (eDNA) Sampling

3.3 Environmental DNA (eDNA) sampling was used to determine the presence/ likely absence of great crested newts from ponds P5, P12 and P13. This method has been shown to be a highly effective in detecting the presence of great crested newts (Biggs *et al*., 2014).

3.4 Water samples were collected from ponds P5, P12 and P13 on 22 May 2024 by Nancy Inman and Clare Caudwell. Appropriate biosecurity measures were taken to avoid cross contamination of great crested

newt eDNA. Subsequently the samples were sent to ADAS for DNA analysis.

4.0 Results

Desk Study

4.1 The desktop search for ponds and subsequent site visits identified four water bodies occurring within 500m of the Site. These ponds are identified on the Pond Plan (CSA/7476/134). Pond P11 however was found to no longer exist and therefore no surveys were possible.

Habitat Suitability Index (HSI) Assessment

4.2 Full results of the surveys are included in Table 1 below.

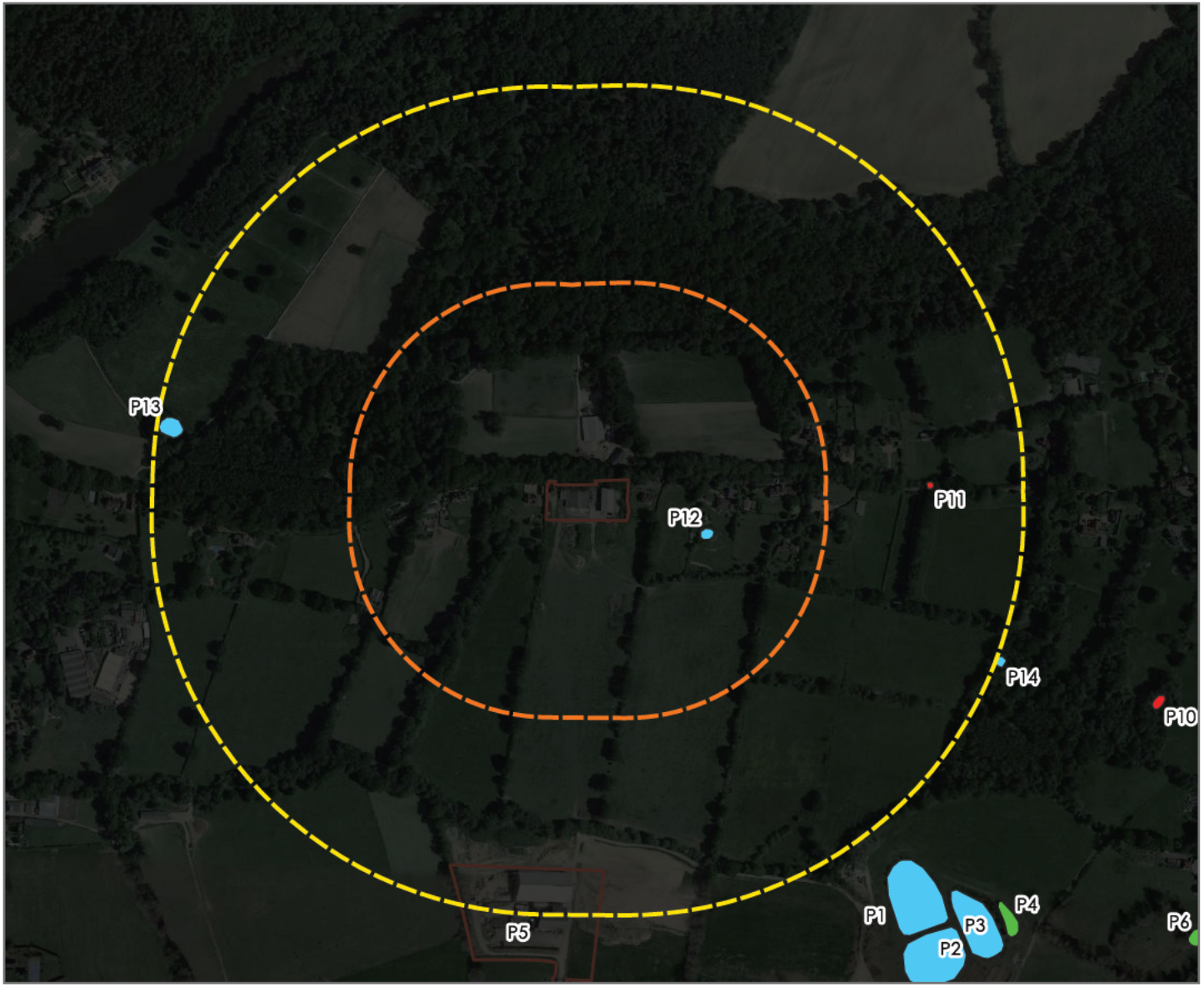
Habitat Suitability Factors:		Pond Number and Grid Reference		
		5	12	13
Map location	Category	Zone A	Zone A	Zone A
	SI Value	1	1	1
Pond area in m²	Category	<50m2	450m2	500-700m2
	SI Value	0.05	0.9	1
Permanence / Desiccation	Category	Dries Annually	Rarely Dries	Sometimes Dries
	SI Value	0.1	1	0.5
Water quality	Category	Bad	Moderate	Good
	SI Value	0.01	0.67	1
Percentage perimeter shade to at least 1m from shore	Category	0-60%	0-60%	0-60%
	SI Value	1	1	1
Waterfowl impact (excluding moorhen)	Category	Absent	Minor	Minor
	SI Value	1	0.67	0.67
Fish presence	Category	Absent	Absent	Absent
	SI Value	1	1	1
Number of ponds within 1km not separated by barriers	Category	>12	>12	>12
	SI Value	1	1	1
Terrestrial habitat	Category	Poor	Good	Good
	SI Value	0.33	1	1
Percentage of pond surface occupied by aquatic vegetation (March – May)	Category	<1%	66-80%	26-30%
	SI Value	0.3	1	0.6
Product		0.00000495	0.40401	0.201
HSI Score		0.294754551	0.913354161	0.851764638
HSI Suitability		**Poor**	**Excellent**	**Excellent**

Environmental DNA (eDNA) Sampling

4.3 The eDNA results were negative for GCN eDNA in all surveyed ponds.

5.0 Summary

5.1 All ponds within 500m of the Site were subject to HSI and eDNA surveys. Though ponds P12 and P13 were considered to provide 'excellent' suitability for GCN following an HSI assessment, all ponds returned negative eDNA results. Great crested newt are therefore considered likely absent from the Site.



N

- Application Site boundary
- Pond no longer present
- Pond and reference number
- Pond with positive eDNA result

Pond ref	HSI Score	eDNA result
P5	Poor	Negative
P11	N/A	Negative
P12	Excellent	Negative
P13	Excellent	Negative
P14	Below average	Negative

0 250 500 m

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Project	Stonehouse Farm, Handcross	Date Feb 2025	Drawing No. CSA/6746/134
Drawing Title	Jackson's Ridge Great Crested Newt Survey Results	Scale Refer to scale	Rev -
Client	Lake Investment Ltd.	Drawn LG	Checked CC

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Sample ID: ADAS-5393	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P13, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
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Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

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[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

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Sample ID: ADAS-5394	Condition on Receipt: Low Sediment	Volume: Passed
Client Identifier: P12, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	05/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	05/06/2024
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Sample ID: ADAS-5403	Condition on Receipt: Medium Sediment	Volume: Passed
Client Identifier: P5, 6746	Description: pond water samples in preservative	
Date of Receipt: 31/05/2024	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	04/06/2024
Degradation Control[§]	Within Limits	Real Time PCR	04/06/2024
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	04/06/2024
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	05/06/2024	Date of issue:	05/06/2024

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Appendix 1: Interpretation of results

Sample Condition

Upon sample receipt we score your samples according to quality: good, low sediment, medium sediment, high sediment, white precipitate, and presence of algae.

There are three reasons as to why sediment should be avoided:

1. It is possible for DNA to persist within the sediment for longer than it would if it was floating in the water which could lead to a false positive result i.e. in this case GCN not recently present but present a long time ago
2. In some cases sediment can cause inhibition of the PCR analysis used to detect GCN eDNA within samples which could lead to an indeterminate result.
3. In some cases sediment can interfere with the DNA extraction procedure resulting in poor recovery of the eDNA which in turn can lead to an indeterminate result.

Algae can make the DNA extraction more difficult to perform so if it can be avoided then this is helpful.

Sometimes samples contain a white precipitate which we have found makes the recovery of eDNA very difficult. This precipitate can be present in such high amounts that it interferes with the eDNA extraction process meaning that we cannot recover the degradation control (nor most likely the eDNA itself) at sufficient levels for the control to be within the acceptable limits for the assay, therefore we have to classify these type of samples as indeterminate.

What do my results mean?

A positive result means that great crested newts are present in the water or have been present in the water in the recent past (eDNA degrades over around 7-21 days).

A negative result means that DNA from the great crested newt has not been detected in your sample.

On occasion an inconclusive result will be issued. This occurs where the DNA from the great crested newt has not been detected but the controls have indicated that either: the sample has been degraded and/or the eDNA was not fully extracted (poor recovery); or the PCR inhibited in some way. This may be due to the water chemistry or may be due to the presence of high levels of sediment in samples which can interfere with the DNA extraction process. A re-test could be performed but a fresh sample would need to be obtained. We have successfully performed re-tests on samples which have had high sediment content on the first collection and low sediment content (through improved sample collection) on the re-test. If water chemistry was the cause of the indeterminate then a re-test would most likely also return an inconclusive result.

The results will be recorded as indeterminate if the GCN result is negative and the degradation result is recorded as:

1. evidence of decay - meaning that the degradation control was outside of accepted limits
2. evidence of degradation or residual inhibition - meaning that the degradation control was outside of accepted limits but that this could have been due to inhibitors not being removed sufficiently by the dilution of inhibited samples (according to the technical advice note)

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