



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Dairy Cottage, Heathlands Road, Wokingham, RG40 3AN

Hall Hunter Partnership (Farming)

Status	Issue	Name	Date
Draft	1	Jade Lemm BSc (Hons) DipHE, Consultant Ecologist	09-02-2024
Reviewed	1.1	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	13-02-2024
Final	2	Jade Lemm BSc (Hons) DipHE, Consultant Ecologist	14-02-2024
Amendments (new plans)	3	Jade Lemm BSc (Hons) DipHE, Consultant Ecologist	31-03-2025
Amendments (new plans)	4	Jade Lemm BSc (Hons) DipHE, Consultant Ecologist	15-04-2025
Amendments	5	Jade Lemm BSc (Hons) DipHE, Consultant Ecologist	28-04-2025

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Hall Hunter Partnership (Farming) to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Dairy Cottage, Heathlands Road, Wokingham, RG40 3AN (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing buildings and the creation of five new residential plots (hereafter referred to as “the proposed development”).

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 9 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Designated sites	There is one statutory site within 2km of the site, the closest being Heath Lake SSSI located 1.4km south from the site.	No impacts to designated sites are anticipated due to the small scale (site already used for multiple dwellings) and distance of the proposed development from such sites (1.4km south) as well as the sub-urban location of the site with surrounding physical barriers.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).
Habitats and flora	The site contains hedgerows which is listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Further notable habitats are present within 1km (hedgerows and woodland). Other habitats within the site are common and widespread and have low ecological value.	The proposed development will result in the loss of hedgerow (approximately 75m), a line of trees (LOT 1) and modified grassland. This could result in a net loss in biodiversity at the site.	To compensate for the proposed habitat losses at the site habitat creation measures should be incorporated.
Amphibians	The suitable habitats on site consist of some of the lines of trees. However, the trees are disconnected from the wider landscape. The grassland is unsuitable due to the shorter sward heights from management regimes. The suitable section of grassland with the log pile is being retained. The habitats being impacted by the development are sub-optimal for great crested newts.	The proposed development will result in the loss of 75m of hedgerow, a line of trees (LOT1), well-managed (sub-optimal) modified grassland and existing hardstanding. The optimal habitat will be retained (longer sward height grassland on the north-eastern boundary) and boundary features (line of trees). However, due to the site's close proximity to the nearest pond, despite being located on a busy road and potentially acting as a barrier to dispersal,	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction. See Table 9 for the full details.

		albeit at a low level, there is a very low risk that amphibians could be found in the vicinity of the works. These could be injured or killed without mitigation.	
Reptiles	The suitable habitats for reptiles consist of some of the lines of trees. However, the trees are disconnected from the wider landscape. The grassland is unsuitable due to the shorter sward heights from management regimes.	The likelihood of reptiles being on site is low as the site is poorly connected to the wider landscape (agricultural fragmentation). If any reptiles were present, it would only be individuals commuting through the site. However, due to the fragmentation, the removal of the modified grassland during construction is unlikely to result in the death or injury of reptiles.	Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction. See Table 9 for the full details.
Roosting bats (B1 + B3 + B4 + B5)	Buildings B1, B3, B4 and B5 have low value for roosting bats due to access features on the buildings (holes in the soffit boxes, lifted tiles and gaps around the hanging tiles).	The proposed development will result in the demolition of these buildings. This could result in the destruction of any bat roosts present (underneath the tiles or within the soffit boxes) and could cause disturbance, death or injury to bats.	One bat emergence or re-entry survey is required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost in the building. Infra-red cameras should be used as an aid. Seven surveyors are required to provide full coverage of these buildings. If the absence of a bat roost cannot be determined during the first visit, then further surveys will be required. If bat roosts are confirmed in the building two additional surveys may be required to characterise the roost and to inform an EPSL application to Natural England. Surveys should be a minimum of three weeks apart. The EPSL application requires that surveys have been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.
Roosting bats (B2 + B6 + B7 + B8)	Buildings B2, B6, B7 and B8 have negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within these buildings and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition of these buildings.	In the unlikely event that a bat or evidence of bats is discovered during the development, all work must stop, and a bat-licensed ecologist must be contacted for further advice.
Foraging and commuting bats	Hedgerows and trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of 75m of hedgerow, a line of trees (LOT1), modified grassland and existing hardstanding. This could reduce the availability of foraging or commuting resources in the locality and could also disrupt	To compensate for the proposed habitat losses at the site habitat creation measures should be incorporated.

		dispersal corridors for bats leaving or returning to roosts in the wider area.	
Badger			
Hazel dormouse	There are no suitable habitats within the impacted proposed development area (line of trees not connected to the wiser landscape, modified grassland and hardstanding) which could be used by hazel dormice for commuting and foraging.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.
Hedgehog	The suitable habitat within the site is the grassland (foraging and commuting).	The proposed development will result in the loss of 75m of hedgerow, a line of trees (LOT1), modified grassland and existing hardstanding. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitats locally. However, construction activities could result in the death or injury of hedgehogs, if present.	A precautionary working method will be implemented during construction. See Table 9 for the full details.
Otter	There are no suitably well-connected waterbodies (no suitable terrestrial habitats) within 500m for otters and is likely absent from the site.	No impacts are anticipated on otters as a result of the proposed development.	None.
Water vole	There are no suitably well-connected waterbodies (no suitable terrestrial habitats) within 500m for water voles and is likely absent from the site.	No impacts are anticipated on water vole as a result of the proposed development.	None.
Birds	The suitable habitats within the site consist of the hedgerow, scattered trees and line of trees which are assessed to provide nesting opportunities for common species of breeding birds.	The hedgerow and line of trees (LOT1) will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	The removal of the hedgerow and line of trees (LOT1) should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees and vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.

Invertebrates	The habitats within the site will have a low diversity of invertebrates due to the management of the site (well maintained).	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.
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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Hall Hunter Partnership (Farming) to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Dairy Cottage, Heathlands Road, Wokingham, RG40 3AN (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing buildings and the creation of five new residential plots (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting.

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SU 82337 66728 and has an area of approximately 1.5ha comprising buildings, trees, hedgerows and grassland. It is surrounded by solar panel farms to the north, agricultural field to the west, and residential dwellings to the south and Heathlands Road to the east. The wider landscape comprises pockets of woodland, solar panel farms and agricultural fields. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

The PEA element of this report describes the baseline ecological conditions at the site, evaluates habitats within the survey area in the context of the wider environment and describes the suitability of those habitats for notable or protected species. It identifies possible ecological constraints as a result of the proposed development and summarises the requirements for further surveys and mitigation measures to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

The PRA element of this report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species, including roosting bats.
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.

- Potential impacts on features of value, as a result of the proposed development, have been identified.
- Recommendations for further surveys and mitigation have been made.
- Opportunities for the enhancement of the site for biodiversity have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a review of the magic.gov.uk database for statutory designated sites within a 2km radius of the site. Landscape value and the presence of notable habitats as well as granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database has also been considered where these are within influencing distance of the site.

2.2 Field Survey

The survey was undertaken by Charlie Drapala (Hons) AMRSB (Accredited Agent on Natural England Bat Licence Number: 2019-41480-CLS-CLS) and Jade Lemm on 31st January 2024.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

For ease of reading, scientific names are omitted from this report for widespread, ubiquitous and well-known species. Scientific names are only included where deemed necessary in conveying correct information to the reader, for example where common names differ regionally or in specialised, notable, unusual or challenging taxa, or if there is any ambiguity in identification (e.g. where a species can only be identified to genus level).

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species.

Preliminary Roost Assessment

The PRA focussed on eight built structures and two lines of trees (the remainder of trees will be retained), which will be affected by the proposed development, as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the buildings for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the buildings was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

For any surveyed trees:

A visual inspection was undertaken from ground level using binoculars to identify any possible roost features.

Suitability Assessment

The built structures and trees were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 and Table 2 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Rationale for assigning bat roost value

Assigned Bat Roosting Potential	Description/ Rationale
Confirmed roost	Evidence of roosting bats within the building.
High	A structure 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.
Medium	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, condition and surrounding habitat but unlikely to support a roost of high conservation status, such as maternity and hibernation.
Low	A building with one or more potential roost sites that could be used by individual bats opportunistically at any time of 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 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.

Table 2: Features of a tree that are correlated with use by bats

Classification	Feature of tree and its context
None/ negligible	Either no potential roost features in the tree or highly unlikely to be any.
Further Assessment Required (FAR)	Further assessment required to establish if potential roost features are present in the tree.
Potential Roost Features (PRF)	A tree with at least one PRF. Where sufficient information is available, each PRF will be classified as: - PRF-I – PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats. - PRF-M – PRF is suitable for multiple bats and may therefore be used by a maternity colony.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

There were six ponds identified within 500m of the site. However, they are located on private land with no access.

There was no interior access to buildings B6 and B7. This would usually conceal potential evidence of bats or birds. However, both buildings were well sealed with no access points for bats or birds.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 3 below.

Table 3: Statutory designated sites within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural England
Heath Lake SSSI (Site of Special Scientific Interest)	1.4km south	The site consists of a small, shallow lake, surrounded by birch and pine woodland with areas of relict heathland. Heath Lake is a long-established open water habitat supporting specialist communities of native plants and animals. Of particular interest are populations of some uncommon and rare aquatic plant species.

3.2 Field Survey Results

The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 4.

Table 4: Weather conditions during the survey

Date:	31/01/2024
Temperature	7°C
Humidity	71%
Cloud Cover	100%
Wind	12mph
Rain	None

Habitats and Flora

The following habitats are present within and adjacent to the site:

- Modified grassland g4
- Other hedgerow h2a
- Bramble scrub h3
- Developed land, sealed surface u1b
- Artificial unvegetated, unsealed surface u1c
- Line of trees w1g6
- Individual trees w132

A description and photographs of each habitat are provided in Table 5. No protected or non-native invasive plant species (as listed under Schedules 8 or 9 of the Wildlife and Countryside Act 1981) were identified on the site.

Table 5: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
Modified grassland	On the north-eastern side of the site, an area of modified grassland with a sward height of approximately 4-5cm. Species composition is moderate, comprising predominantly perennial ryegrass (D) and Yorkshire fog with herbs such as dandelion (A), dock (O), common daisy (O), buttercup (O) and nettle (R). The modified grassland was in poor condition based on the amount of disturbance, diversity of species and sward height diversity. There was a pile of cut logs/tree trunks piled up adjacent the eastern boundary (TN1). On the south-eastern and north-western sections of the site, there are areas of modified grassland with a sward height of approximately 2-3cm. Species composition is low, comprising predominantly perennial ryegrass (D) and Yorkshire fog with herbs such as dandelion (A), moss (O) and primrose (R). The modified grassland was in poor condition based on the amount of disturbance, diversity of species and sward height.	

Other hedgerow	Sections (approximately 75m length x 2.5m height x 1m wide) of non-native ornamental hedgerow was present in the south of the site. Species of the hedgerow were completely dominated with leylandii cypress. The understorey composition was nettle (D), ivy (F) and bramble (O). The hedgerow was in good condition based on the amount of gapping, dimensions of the hedgerow, amount of damage and understorey species.	
Bramble scrub	On the south-eastern side of the site, sections of bramble scrub were present (approximately 20m²). The species composition was completely dominated with bramble. The understorey of the scrub had some ivy growth carpeting the floor. The bramble scrub was in poor condition based on the amount of gapping and lack of species diversity. No invasive species were found during the survey of the bramble scrub.	

Developed land, sealed surface	An area of concrete hardstanding (approximately 150m ²) was located around the main dairy house (B1) to the south of the site.	
Artificial unvegetated, unsealed surface	An area of gravel hardcore driveway (approximately 900 m2) was located to the south and north of the site (access roads).	

Line of trees	Several lines of trees divide and bound the site (LOT). Line of trees 1 (LOT1) was present in the centre of northern part of the site. The species (immature) was dominated by conifer cypress densely packed together. There was no understorey for LOT1 due to management. The line of trees was in poor condition based on the amount of human disturbance, lack of understorey vegetation and tree maturity. This line of trees will be removed in the proposed development. Line of trees 2 (LOT2) was present along the northern boundary of the site. The species (mature) was dominated by oak trees. The understorey species composition included bramble (D), ivy (F) and nettle (O). The line of trees was in moderate condition based on the maturity of trees and the small amount of undisturbed vegetation (less than 6m). This line of trees will be retained in the proposed development.
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Individual trees	There are several individual (semi-mature) trees scattered around the south of the site (T1 – T3). Tree T1 is a cherry tree of small size (approximately 3m height and diameter at breast height (DBH) 4cm). The tree has good natural form with some ivy growth and appears to be in good condition. The tree does not have any features such as holes or gaps and will be retained in the proposed development. Tree T2 is an apple tree of small size (approximately 2.5m height and diameter at breast height (DBH) 4cm). The tree has good natural form with some ivy growth and appears to be in good condition. The tree does not have any features such as holes or gaps and will be retained in the proposed development.	
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	Tree T3 is an ash tree of medium size (approximately 4-5m height and diameter at breast height (DBH) 5cm). The tree has good natural form with some ivy growth and appears to be in good condition. The tree does not have any features such as holes or gaps and will be retained in the proposed development.	
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Fauna

Bats

The results of the PRA are provided in Table 6. No evidence of roosting bats was identified during the survey.

Table 6: Assessment of the suitability of the site for bats

Feature	Description	Photographs												
Historical records	Within the MAGIC data base, there have been three EPSLs issued for bats within 2km of the site. The closest EPSL was 850m south-east. <i>Table 7: Granted EPSLs for bats within 2km of the site</i> <table> <tr> <th>EPSL reference</th><th>Bat species affected</th><th>Impacts allowed by licence</th></tr> <tr> <td>2014-4527-EPS-MIT (850m south-east)</td><td>Common pipistrelle, soprano pipistrelle, Brandts bat, brown long-eared, and whiskered bat.</td><td>Destruction of a breeding site</td></tr> <tr> <td>2018-34805-EPS-MIT (1.2km north)</td><td>Common pipistrelle and brown long-eared bat</td><td>Destruction of a resting place</td></tr> <tr> <td>2017-31789-EPS-MIT (1.9km south)</td><td>Soprano pipistrelle</td><td>Destruction of a resting place</td></tr> </table>	EPSL reference	Bat species affected	Impacts allowed by licence	2014-4527-EPS-MIT (850m south-east)	Common pipistrelle, soprano pipistrelle, Brandts bat, brown long-eared, and whiskered bat.	Destruction of a breeding site	2018-34805-EPS-MIT (1.2km north)	Common pipistrelle and brown long-eared bat	Destruction of a resting place	2017-31789-EPS-MIT (1.9km south)	Soprano pipistrelle	Destruction of a resting place	
EPSL reference	Bat species affected	Impacts allowed by licence												
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2018-34805-EPS-MIT (1.2km north)	Common pipistrelle and brown long-eared bat	Destruction of a resting place												
2017-31789-EPS-MIT (1.9km south)	Soprano pipistrelle	Destruction of a resting place												
Bat foraging and commuting habitat	There are numerous trees and hedgerow within the site that could be used for foraging bats. There are numerous agricultural fields, hedgerows and pockets of woodland in the local environment, all of which are favourable habitats for commuting bats.													

B1 - overview	B1 is a brick-built residential dwelling with a hipped roof (flat concrete interlocking tiles). It has nine windows, two doors, two conservatories and two single-storey extensions. The building has wooden fascia boards and open eaves. The conservatories are constructed from wooden timbers and glass panels (attached to the southern and northern elevations). The single-storey extensions are of the same construction as the main building (attached to the western and eastern elevations).	
B1 – southern and western elevations	No evidence of bats was found during the survey of the southern and western elevations of B1. However, features were present on the exterior of B1 that were considered to be suitable for use by bats for roosting. These included the open eaves (highlighted in red) that could be utilised as access points for bats.	

	There were no suitable bat roosting features on the brick work on the southern elevation (no gaps and well sealed) and extension attached to the southern elevation (well sealed with moss covering the roof).	
B1 – eastern elevation	No evidence of bats was found during the survey of the eastern elevation of B1. However, features were present on the exterior of B1 that were considered to be suitable for use by bats for roosting. These included the open eaves (highlighted in red) that could be utilised as access points for bats.	

B1 – northern elevation	No evidence of bats was found during the survey of the northern elevation of B1. However, features were present on the exterior of B1 that were considered to be suitable for use by bats for roosting. These included the open eaves (highlighted in red) that could be utilised as access points for bats and lifted tiles (highlighted in green) that could conceal evidence of crevice dwelling bats.	
B1 – interior	There is one loft space present within the main roof void of B1. The internal loft space is constructed from timber beams with a bitumen felt lining. The roof interior of B1 was in good condition with no tears in the Bitumen lining and minimal light spill from the open eaves. No evidence of bats or birds were identified within the loft void.	

B1 – suitability assessment	B1 was considered to be of low suitability for roosting bats due to the access feature created by the open eaves and bat roosting features from the lifted tiles on the building (remainder of building is well-sealed). No evidence of birds or bats was identified during the survey of B1.	
B2 - overview	B2 was of similar construction to B1. B2 is a brick-built storage unit with a hexagonal roof (flat concrete tiles). The building had three windows, one door and the interior was vaulted (no loft void). Attached to the rear of B2 was a temporary shed constructed of wooden boards with a flat felt roof.	

B2 – southern elevation	The southern elevation of B2 was in good condition with no suitable bat access points or gaps for roosting bats (well-sealed with no brickwork or roof gaps). No evidence of bats or birds was identified.
B2 – eastern elevation	The eastern elevation of B2 was in good condition with no suitable bat access points or gaps for roosting bats (well-sealed with no brickwork or roof gaps). No evidence of bats or birds was identified.



B2 – northern and western elevations	The northern and western elevations of B2 were in good condition with no suitable bat access points or gaps for roosting bats (well-sealed with no brickwork or roof gaps). No evidence of bats or birds was identified. The temporary shed had open elevation which bats could utilise.
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B2 – interior	The interior of B2 was vaulted with no loft void and in good condition (well-sealed with no gaps). The interior was well lit due to windows. Therefore, the interior of the building is not suitable for crevice or void dwelling bats. The temporary shed interior had no void, gaps or crevices that would be suitable for bats and was damp making it unsuitable for crevice and void dwelling bats.
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B2 – suitability assessment	B2 was considered to be of negligible suitability for roosting bats due to the lack of roosting features, access points into the building (well-sealed as highlighted to the right) and evidence of bat activity. This building section provides a lack of suitability for crevice and loft dwelling bats.	
B3 - overview	B3 is a brick-built garage with a pitched roof (flat concrete tiles covered in a thick blanket of moss). It has one window, one garage door and one side door. The building has a roof extension (large soffit box) from the western elevation constructed of wood and a bitumen flat roof.	

B3 – southern and eastern elevations	No evidence of bats was found during the survey of the southern and eastern elevations of B3. However, features were present on the exterior of B3 that were considered to be suitable for use by bats for roosting. These included multiple lifted tiles that could conceal evidence of crevice dwelling bats (highlighted in red).	
B3 – northern and western elevations	No evidence of bats was found during the survey of the northern and western elevations of B3. However, features were present on the exterior of B3 that were considered to be suitable for use by bats for roosting. These included multiple lifted tiles that could conceal evidence of crevice dwelling bats (highlighted in red) and gapping above the garage door that could be used as an access point (highlighted in green).	

		
B3 – interior	There is one loft space present within the main roof void of B3. The internal loft space is constructed from timber beams with a bitumen felt lining. The roof interior of B3 was in good condition with no tears in the Bitumen lining. There was light spill from the window and gap around the garage door. There were gaps into the interior void of the roof extension (highlighted in red) for the garage that could be suitable for void and crevice dwelling bats. No evidence of bats or birds was identified within the loft void.	

B3 – suitability assessment	B3 was considered to be of low suitability for roosting bats due to the access feature created by the gap above the garage door and bat roosting features from the lifted tiles on the building (remainder of building is well-sealed). No evidence of birds or bats was identified during the survey of B3.	
B4 - overview	B4 and B5 are attached together and are of similar construction. B4 is a brick-built outbuilding with a pitched roof (concrete flat tiles with large areas of moss). The southern gable end has clay hanging tiles above a well-sealed garage door. There are four windows, two doors and wooden soffit boxes. On the western elevation is a flat roof extension.	

B4 – southern and eastern elevations	No evidence of bats was found during the survey of the southern and eastern elevations of B4. However, features were present on the exterior of B4 that were considered to be suitable for use by bats for roosting. These included multiple lifted tiles (highlighted in green) and gaps in the soffit boxes (highlighted in red) that could conceal evidence of crevice dwelling bats.	
B4 – western elevation	The western elevation of B4 was in good condition with no suitable bat access points or gaps for roosting bats (whole roof was covered in moss). There were no gaps within the mortar along the verge and no gaps in the brickwork. No evidence of bats or birds was identified.	

B4 – interior	There is one loft space present within the main roof void of B4. The internal loft space is constructed from timber beams with a bitumen felt lining. The roof interior of B4 was in good condition with no tears in the Bitumen lining. However, there was some light spill from the gap in the void floor (missing panels). No evidence of bats or birds were identified within the loft void.	
B4 – suitability assessment	B4 was considered to be of low suitability for roosting bats due to the identified features that could conceal evidence of crevice dwelling bats including lifted tiles and gaps in the soffit boxes (highlighted to the right). The remainder of building is well-sealed. No evidence of birds or bats was identified during the survey of B4.	

B5 - overview	B4 and B5 are attached together and are of similar construction. B5 is a brick-built outbuilding with a pitched roof (concrete flat tiles with large areas of moss). The building has three windows, one door, a side extension (attached to the northern elevation) and a front porch extension (attached to the eastern elevation). The side extension has a flat roof (Bitumen), and the front porch has a pitched roof (concrete flat tiles) with wooden cladding on the eastern elevation.	
B5 – eastern elevation	No evidence of bats was found during the survey of the eastern elevation of B5. However, features were present on the exterior of B5 that were considered to be suitable for use by bats for roosting. These included lifted tiles (highlighted in green) and gaps underneath the wooden cladding (highlighted in red) that could conceal evidence of crevice dwelling bats.	

B5 – northern elevation	The northern elevation of B5 was in good condition with no suitable bat access points or gaps for roosting bats (well-sealed with no brickwork or roof gaps). No evidence of bats or birds was identified.	
B5 – western elevation	The western elevation of B5 was in good condition with no suitable bat access points or gaps for roosting bats (whole roof was covered in moss). There were no gaps within the mortar along the verge and no gaps in the brickwork. No evidence of bats or birds was identified.	

B5 – interior	The roof interior of B5 was in good condition with no tears in the Bitumen lining and no light spill (well-sealed loft void). No evidence of bats or birds were identified within the loft void.	
B5 – suitability assessment	B5 was considered to be of low suitability for roosting bats due to the identified features that could conceal evidence of crevice dwelling bats including lifted tiles and gaps underneath the wooden cladding (highlighted to the right). The remainder of building is well-sealed. No evidence of birds or bats was identified during the survey of B5.	

B6 - overview	B6 is a temporary mobile home with a side extension. The building is constructed of corrugated metal sheeting with a pitched (well-sealed metal roof). A side extension has been added for further storage, this is a temporary prefabricated unit as well constructed of metal sheeting with wooden cladding and a flat bitumen roof. This building is used daily and has regular disturbances to the building. The exterior of B6 is in exceptional condition with no gaps or holes due to the type of building/structure it has to be well sealed to withstand extreme weather conditions.	
B6 – southern and eastern elevations	The southern and eastern elevations of B6 were in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed due to the type of structure). The extension of B6 was well sealed with no gaps or holes in the cladding (unsuitable for roosting bats).	

		
B6 – northern elevation	The northern elevation of B6 were in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed).	

B6 – western elevation	The western elevation of B6 were in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed).	
B6 – suitability assessment	B6 was considered to be of negligible suitability for roosting bats due to the lack of roosting features, access points into the building (well-sealed as highlighted to the right) and evidence of bat activity. This building provides a lack of suitability for crevice and loft dwelling bats.	

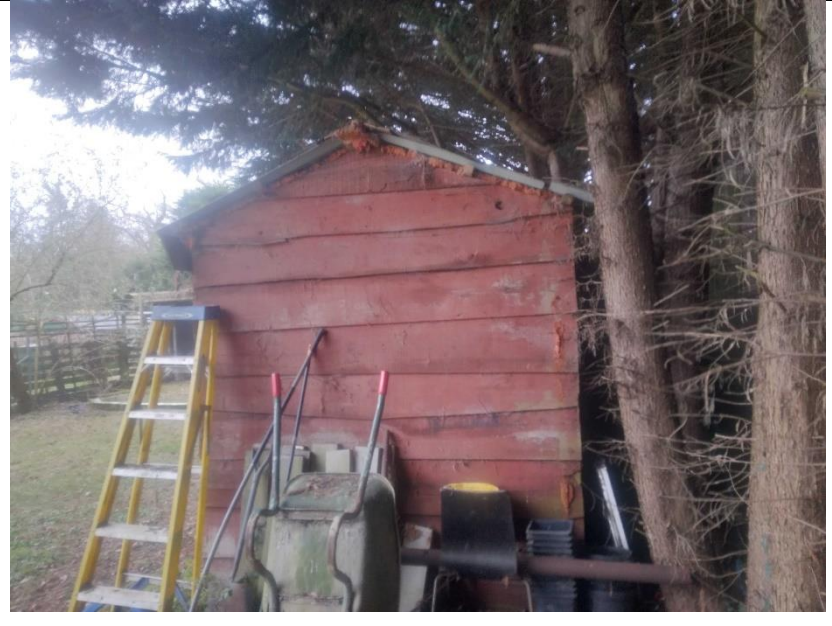
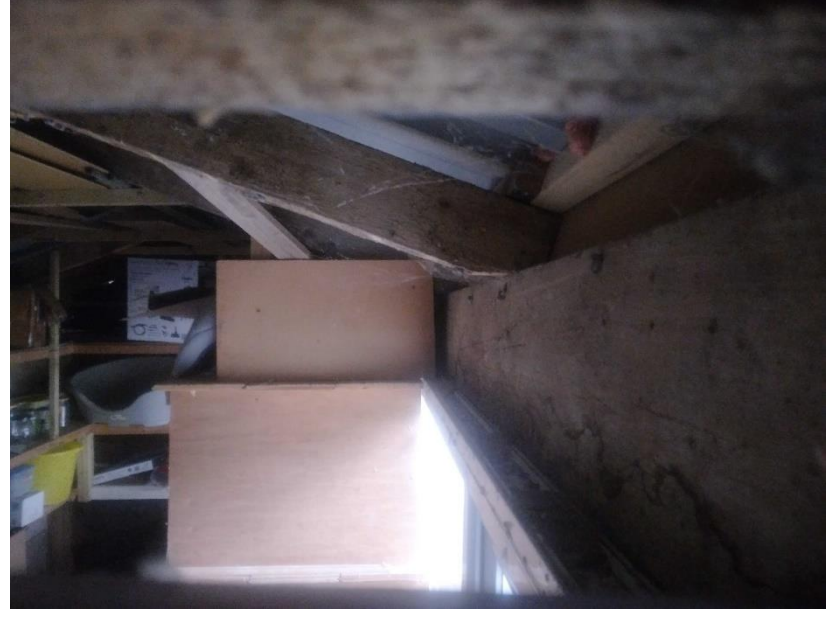
B7 - overview	B7 is a temporary mobile home. The building is constructed of corrugated metal sheeting with a flat (well-sealed metal roof). The mobile home's exterior has had wooden cladding laid over the top of the structure. B7 is used daily and has regular disturbances to the building. The exterior of B7 is in exceptional condition with no gaps or holes due to the type of building/structure it has to be well sealed to withstand extreme weather conditions.	 A photograph showing the side of a mobile home with horizontal wooden cladding. A white-framed window is visible. The building is surrounded by greenery, including a large evergreen tree in the foreground and bare trees in the background.
B7 – southern elevation	The southern elevation of B7 was in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed cladding with no gaps).	 A photograph showing the southern elevation of the mobile home. It features horizontal wooden cladding and a white-framed window. A satellite dish is mounted on the roof. The building is situated on a grassy area with trees in the background.

B7 – eastern elevation	The eastern elevation of B7 was in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed corrugated metal sheeting).	
B7 – northern elevation	The northern elevation of B7 was in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed cladding with no gaps).	

B7 – western elevation	The western elevation of B7 was in exceptional condition with no suitable bat access points or gaps for roosting bats (well-sealed cladding with no gaps). The ivy was a thin coverage on the exterior of the western elevation, and you could see the cladding below the ivy. No features were identified below the ivy.
B7 – suitability assessment	B7 was considered to be of negligible suitability for roosting bats due to the lack of roosting features, access points into the building (well-sealed as highlighted to the right) and evidence of bat activity. This building provides a lack of suitability for crevice and loft dwelling bats.



B8 - overview	B8 is a small wooden shed in the centre of the site next to the line of trees (LOT1). The building is a single storey (wood built) shed with a pitched roof (corrugated metal roof). The building has a single door and a large window on the eastern elevation.	
B8 – southern and eastern elevations	No evidence of bats was found during the survey of the southern and eastern elevations of B8. However, a gap above the door could give access for roosting bats (highlighted in red). The remainder of the elevation was well-sealed (gaps had been filled with expanding foam).	

B8 – northern and western elevations	The western elevation of B8 was in good condition with no suitable bat access points or gaps for roosting bats (gaps have been filled with expanding foam). There were no gaps within the mortar along the verge and no gaps in the brickwork. No evidence of bats or birds was identified.	
B8 – interior	The roof of B8 was unlined and was in good condition with no suitable gaps. The roof is corrugated metal sheeting which will make the internal temperature fluctuate throughout the year. The interior was well lit with no suitable crevices (well-sealed), making it unsuitable for void-dwelling bats.	

B8 – suitability assessment	B8 was considered to be of negligible suitability for roosting bats due to the lack of roosting features (well-sealed as highlighted to the right) and well-lit internal space. This building provides a lack of suitability for crevice and loft dwelling bats.	
T1 – suitability assessment	Tree T1 is a cherry tree of small size (approximately 3m in height and diameter at breast height (DBH) 4cm). The tree does not appear to have any suitable roosting features. T1 roosting value: None.	

T2 – suitability assessment	Tree T2 is an apple tree of small size (approximately 2.5m in height and diameter at breast height (DBH) 4cm). The tree does not appear to have any suitable roosting features. T2 roosting value: None.	
T3 – suitability assessment	Tree T3 is an ash tree of medium size (approximately 4-5m in height and diameter at breast height (DBH) 5cm). The tree does not appear to have any suitable roosting features. T3 roosting value: None.	

T4 – suitability assessment	Tree T4 is an oak tree of extra-large size (approximately 6m in height and diameter at breast height (DBH) >90cm). The tree does not appear to have any suitable roosting features. T3 roosting value: None.	
LOT1 – suitability assessment	Line of Trees 1 (LOT1) was present in the centre of the northern part of the site. The species (immature) was dominated by conifer cypress densely packed together. The line of trees does not appear to have any suitable roosting feature due to the maturity, the densely packed nature and the nature of conifer trees (straight with small limbs). This line of trees will be removed in the proposed development. LOT1 roosting value: None.	

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 8.

Table 8: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability
Amphibians	Using the NatureSpace Impact Risk Zone Map, the site falls within a 'green' area of 'moderate habitat suitability' for great crested newts (NatureSpace Partnership, 2023). The habitats within the site are restricted to the boundaries of the site for sheltering opportunities (line of trees on the boundary). However, the line of trees is not well connected to the surrounding landscape. The hedgerow is poorly connected in the centre of the site. The development footprint consists of modified grassland, which is sub-optimal due to the short sward height from regular management. The proposed development will be built solely on the modified grassland and hardstanding, which is unsuitable for great crested newts due to the risk of predation. The north-eastern grassland provides a longer sward height and a log pile, which could provide some shelter. However, this area will be retained for the proposed development. Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). Aerial imagery identified six ponds within 500m of the site. However, the ponds were located on private land with no access (the closest pond is 50m east). The ponds were located 50m east (P1), 60m east (P2), 100m north-east (P3), 220m north-east (P4), 250m south (P5) and 400m south-east (P6). P3 and P4 are local fisheries so will be unsuitable for breeding newts. All of the ponds are separated from the site by urban infrastructure, including tarmac roads, buildings, and extensively managed grassland. These landscape features are suboptimal for great crested newts due to a lack of refuge from predation. As a result, given the sub-optimal habitats on site and the landscape features (busy road (high mortality risk) and well-managed amenity gardens (higher predation risk) are likely to represent a barrier to dispersal, significantly reducing connectivity to the site for great crested newts.
Reptiles	Similarly, to great crested newts, the habitats being impacted by the proposed development (modified grassland and hardstanding) provide no sheltering opportunities from predators due to the management of the site. So, it is likely that reptiles are absent from the development footprint. If any reptiles were present, it would only be individuals commuting through the site.
Badgers	
Hazel Dormouse	From the survey and aerial imagery, the habitats identified within the proposed development site provide some suitable habitats (line of trees and hedgerow), thus providing suitable foraging opportunities for hazel dormice. There is a 100ha woodland located 500m south-west of the site. However, there are no connective features such as hedgerows linking the proposed development and the woodland together. Therefore, it is considered that dormice are likely absent from the development site.
Hedgehog	Habitats recorded on site are assessed to provide foraging, commuting, and refuge opportunities for hedgehogs, in the form of modified grassland and hedgerows. However, no evidence indicating the presence of hedgehogs was recorded during the site survey, access to on-site habitats is available for hedgehogs from the wider landscape and their future presence for transient periods cannot be discounted.

Otter	No evidence of otters was identified during the survey. There was negligible suitable habitat for resting places or foraging (modified grassland). A brook (Emm Brook) is located 300m north-east of the site, however there are no suitable terrestrial habitat connecting the site and brook (separated by urban agriculture). Therefore, it is considered that otters are likely absent from the site.
Water Vole	No evidence of water voles was identified during the survey. There was negligible suitable habitat for resting places or foraging (modified grassland). A brook (Emm Brook) is located 300m north-east of the site, however there are no suitable terrestrial habitat connecting the site and brook (separated by urban agriculture). Therefore, it is considered that water voles are likely absent from the site.
Birds	No evidence of nesting birds was identified during the survey. Although, the site has plenty of suitable nesting opportunities within the trees (as well as the abundance of other suitable habitat, including residential dwellings in the surrounding area). There is a lack of ground-nesting opportunities due to the well-managed shorter sward height of the modified grassland.
Invertebrates	The majority of the site has a low diversity of invertebrates due to the types of habitats on site and the management of these habitats (modified grassland and hardstanding).

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Likelihood of the Presence of Protected Species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Where this report supports a planning application, the ecological interest of the study area (i.e. the area covered by the desk study and field survey) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity.

A summary of the relevant legislation and planning policies is provided in Appendix 7.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 9 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will comprise the demolition of the existing buildings and the creation of three new residential plots.

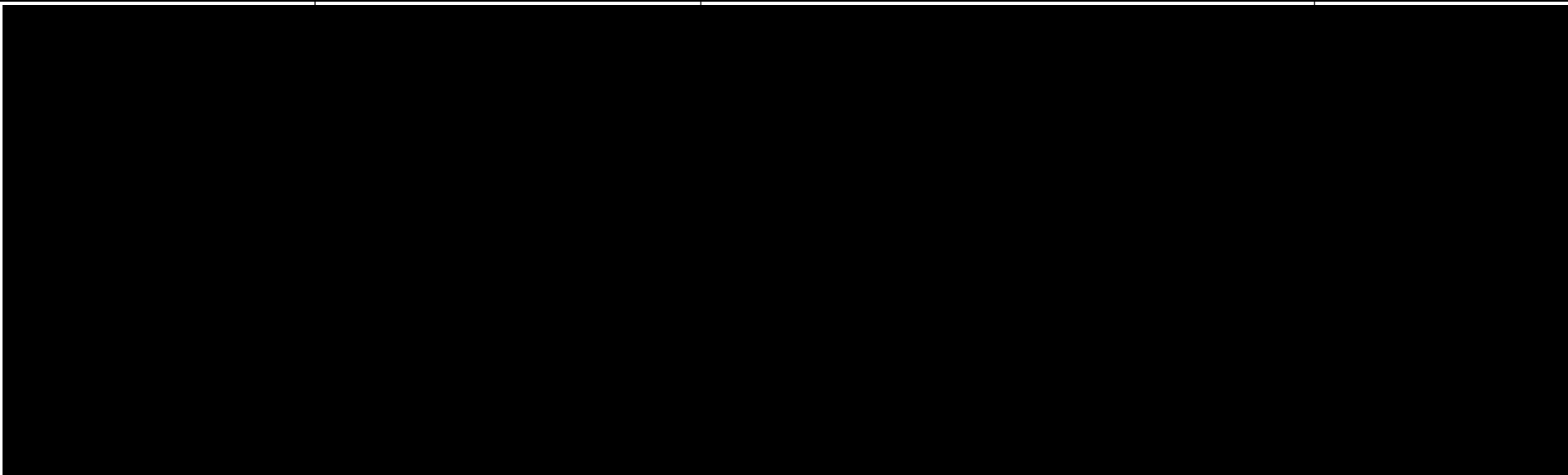
Table 9: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	There is one statutory site within 2km of the site, the closest being Heath Lake SSSI located 1.4km south from the site.	No impacts to designated sites are anticipated due to the small scale (site already used for multiple dwellings) and distance of the proposed development from such sites (1.4km south) as well as the sub-urban location of the site with surrounding physical barriers.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).	None.
Habitats and flora	The site contains hedgerows which is listed as a habitat of principal importance under	The proposed development will result in the loss of hedgerow (approximately 75m), a line of trees (LOT 1) and	To compensate for the proposed habitat losses at the site, the following habitat creation measures should be incorporated: 75m of native hedgerow	The following habitat creation and enhancement

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

	Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Further notable habitats are present within 1km (hedgerows and woodland). Other habitats within the site are common and widespread and have low ecological value.	modified grassland. This could result in a net loss in biodiversity at the site.		opportunities could be incorporated into the proposed development: 80m of native hedgerow Species-specific enhancement opportunities are detailed later in the Biodiversity Net Gain assessment.
Amphibians	The suitable habitats on site consist of some of the lines of trees. However, the trees are disconnected from the wider landscape. The grassland is unsuitable due to the shorter sward heights from management regimes. The suitable section of grassland with the log pile is being retained. The habitats being impacted by the development are sub-optimal for great crested newts.	The proposed development will result in the loss of 75m of hedgerow, a line of trees (LOT1), well-managed (sub-optimal) modified grassland and existing hardstanding. The optimal habitat will be retained (longer sward height grassland on the north-eastern boundary) and boundary features (line of trees). However, due to the site's close proximity to the nearest pond, despite being located on a busy road and potentially acting as a barrier to dispersal, albeit at a low level, there is a very low risk that amphibians could be found in the vicinity of the works. These could be injured or killed without mitigation.	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: - Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. - In the unlikely event that a great crested newt is identified, works must cease and advice must be sought from a suitably qualified ecologist.	None.
Reptiles	The suitable habitats for reptiles consist of some of the lines of trees. However, the trees are disconnected from the wider landscape. The grassland is unsuitable due to the shorter	The likelihood of reptiles being on site is low as the site is poorly connected to the wider landscape (agricultural fragmentation). If any reptiles were present, it would only be individuals commuting through	Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:	None.

	sward heights from management regimes.	the site. However, due to the fragmentation, the removal of the modified grassland during construction is unlikely to result in the death or injury of reptiles.	- Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.	
Roosting bats (B1 + B3 + B4 + B5)	Buildings B1, B3, B4 and B5 have low value for roosting bats due to access features on the buildings (holes in the soffit boxes, lifted tiles and gaps around the hanging tiles).	The proposed development will result in the demolition of these buildings. This could result in the destruction of any bat roosts present (underneath the tiles or within the soffit boxes) and could cause disturbance, death or injury to bats.	One bat emergence or re-entry survey is required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost in the building. Infra-red cameras should be used as an aid. Seven surveyors are required to provide full coverage of these buildings. If the absence of a bat roost cannot be determined during the first visit, then further surveys will be required. If bat roosts are confirmed in the building two additional surveys may be required to characterise the roost and to inform an EPSL application to Natural England. Surveys should be a minimum of three weeks apart. The EPSL application requires that surveys have been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.	This will be confirmed upon completion of the surveys.
Roosting bats (B2 + B6 + B7 + B8)	Buildings B2, B6, B7 and B8 have negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within these buildings and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition of these buildings.	In the unlikely event that a bat or evidence of bats is discovered during the development, all work must stop, and a bat-licensed ecologist must be contacted for further advice.	This will be confirmed upon completion of the surveys.
Foraging and commuting bats	Hedgerows and trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of 75m of hedgerow, a line of trees (LOT1), modified grassland and existing hardstanding. This could reduce the availability of foraging or commuting resources in the locality and could also disrupt dispersal corridors for	To compensate for the proposed habitat losses at the site, the following habitat creation measures should be incorporated (like for like): - Ten native trees 75m native hedgerow	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats:

		bats leaving or returning to roosts in the wider area.		• Ten native trees • 75m native hedgerow
Badger				
Hazel dormouse				
	There are no suitable habitats within the impacted proposed development area (line of trees not connected to the wider landscape, modified grassland and hardstanding) which could be used by hazel dormice for commuting and foraging.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	The suitable habitat within the site is the grassland (foraging and commuting).	The proposed development will result in the loss of 75m of hedgerow, a line of trees (LOT1), modified grassland and existing hardstanding. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitats locally. However, construction activities could result in the death or injury of hedgehogs, if present.	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	None.

			If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.	
Otter	There are no suitably well-connected waterbodies (no suitable terrestrial habitats) within 500m for otters and is likely absent from the site.	No impacts are anticipated on otters as a result of the proposed development.	None.	None.
Water vole	There are no suitably well-connected waterbodies (no suitable terrestrial habitats) within 500m for water voles and is likely absent from the site.	No impacts are anticipated on water vole as a result of the proposed development.	None.	None.
Birds	The suitable habitats within the site consist of the hedgerow, scattered trees and line of trees which are assessed to provide nesting opportunities for common species of breeding birds.	The hedgerow and line of trees (LOT1) will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	The removal of the hedgerow and line of trees (LOT1) should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees and vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	To be confirmed upon completion of the surveys.
Invertebrates	The habitats within the site will have a low diversity of invertebrates due to the management of the site (well maintained).	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	None.

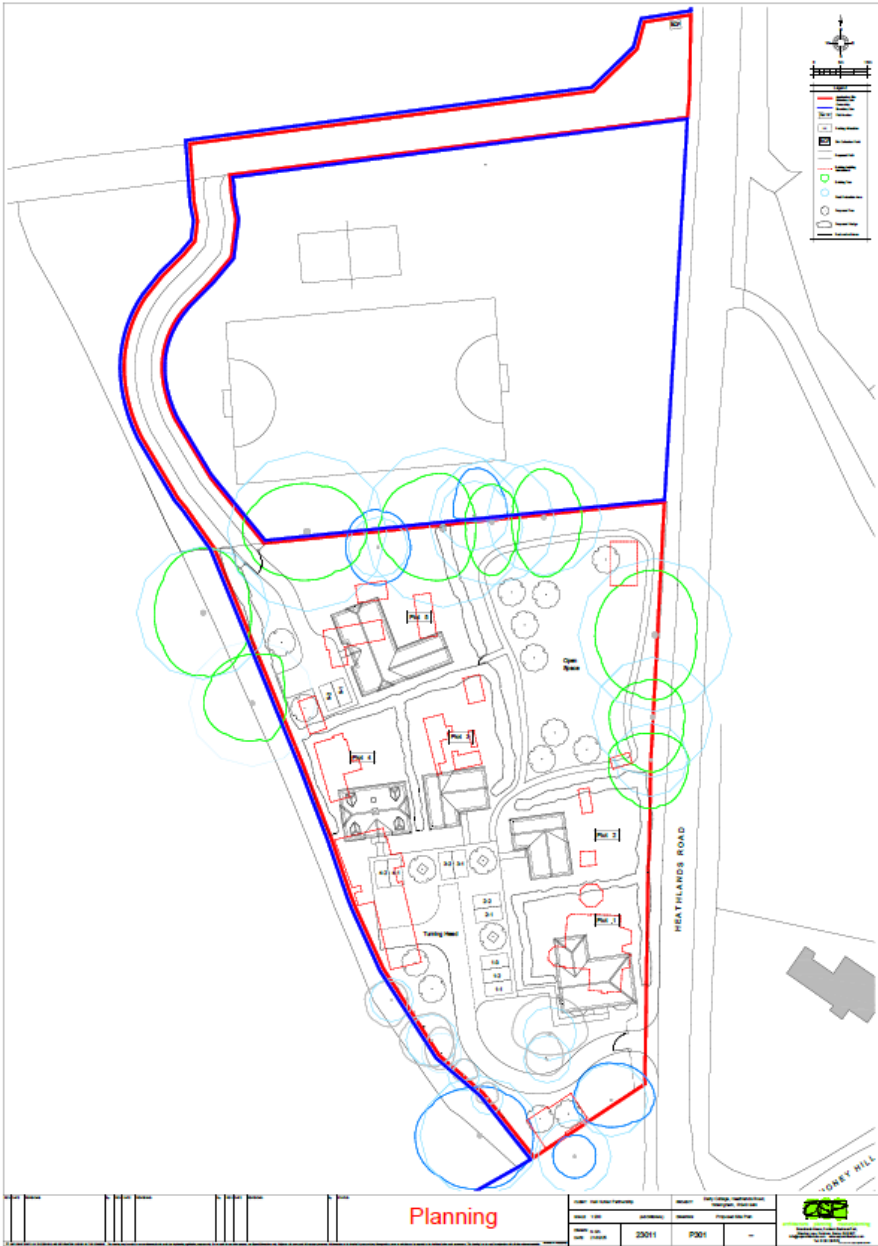
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Appendix 1: Proposed Development Plan



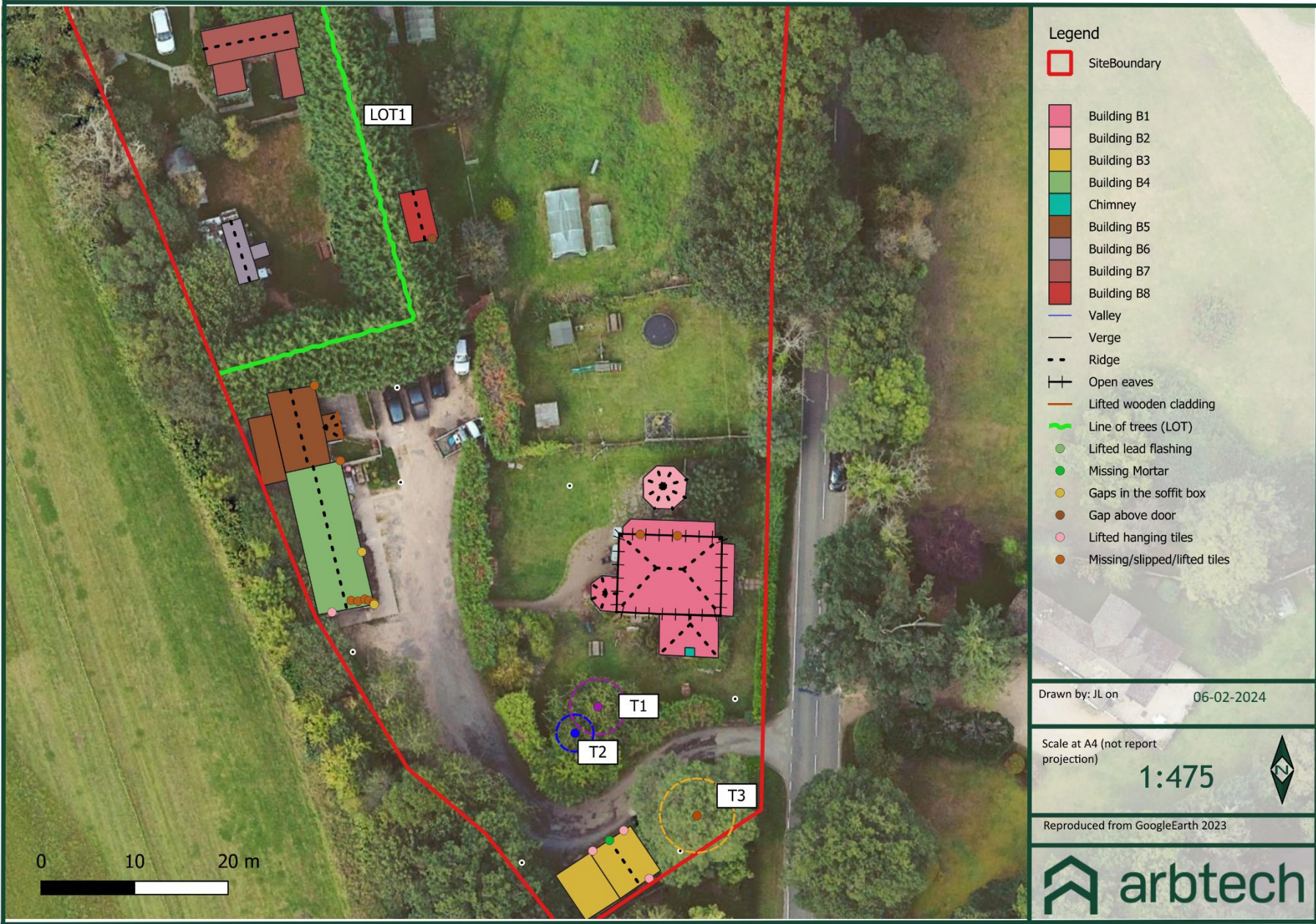
Appendix 2: Site Location Plan



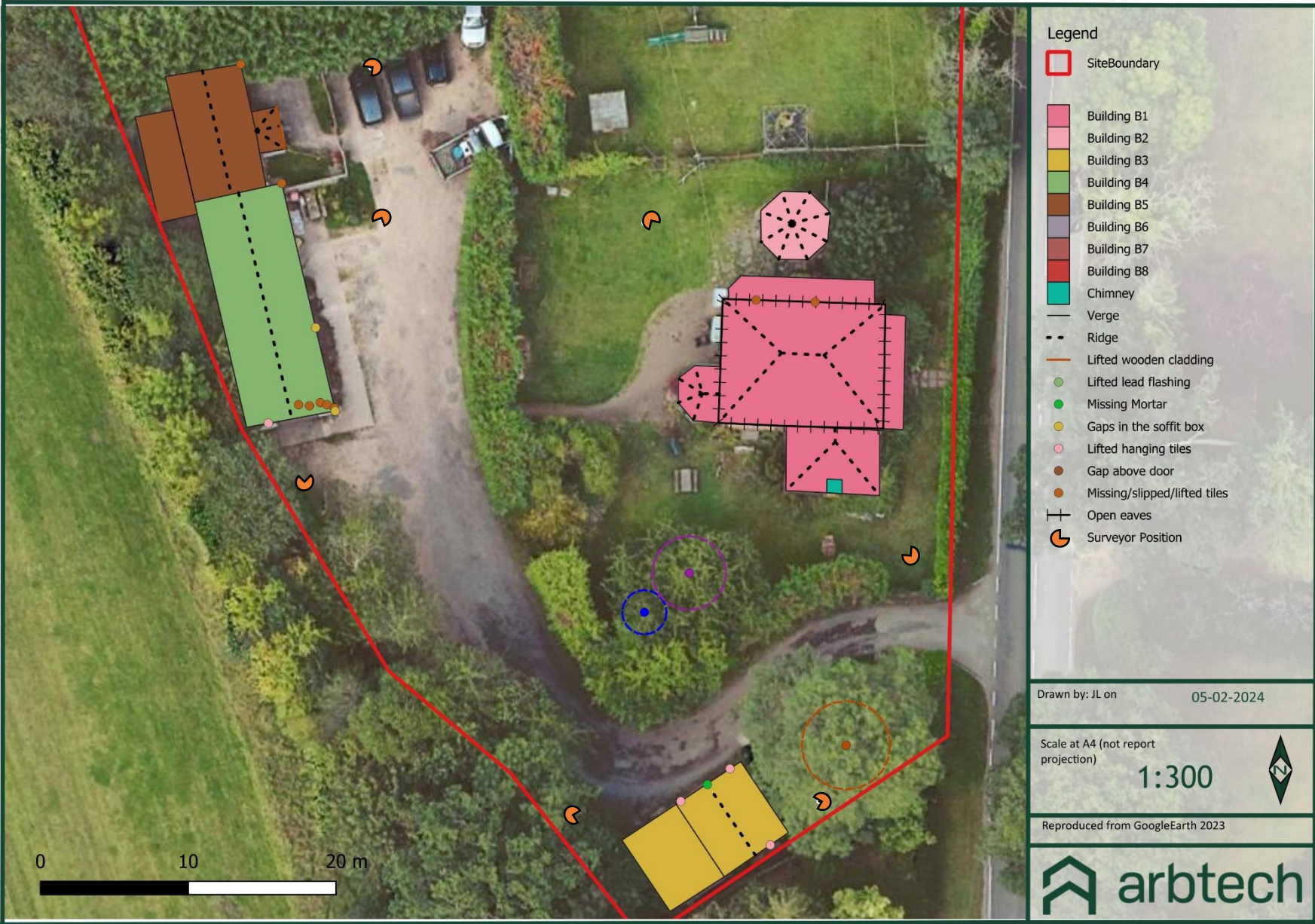
Appendix 3: Habitat Survey Plan



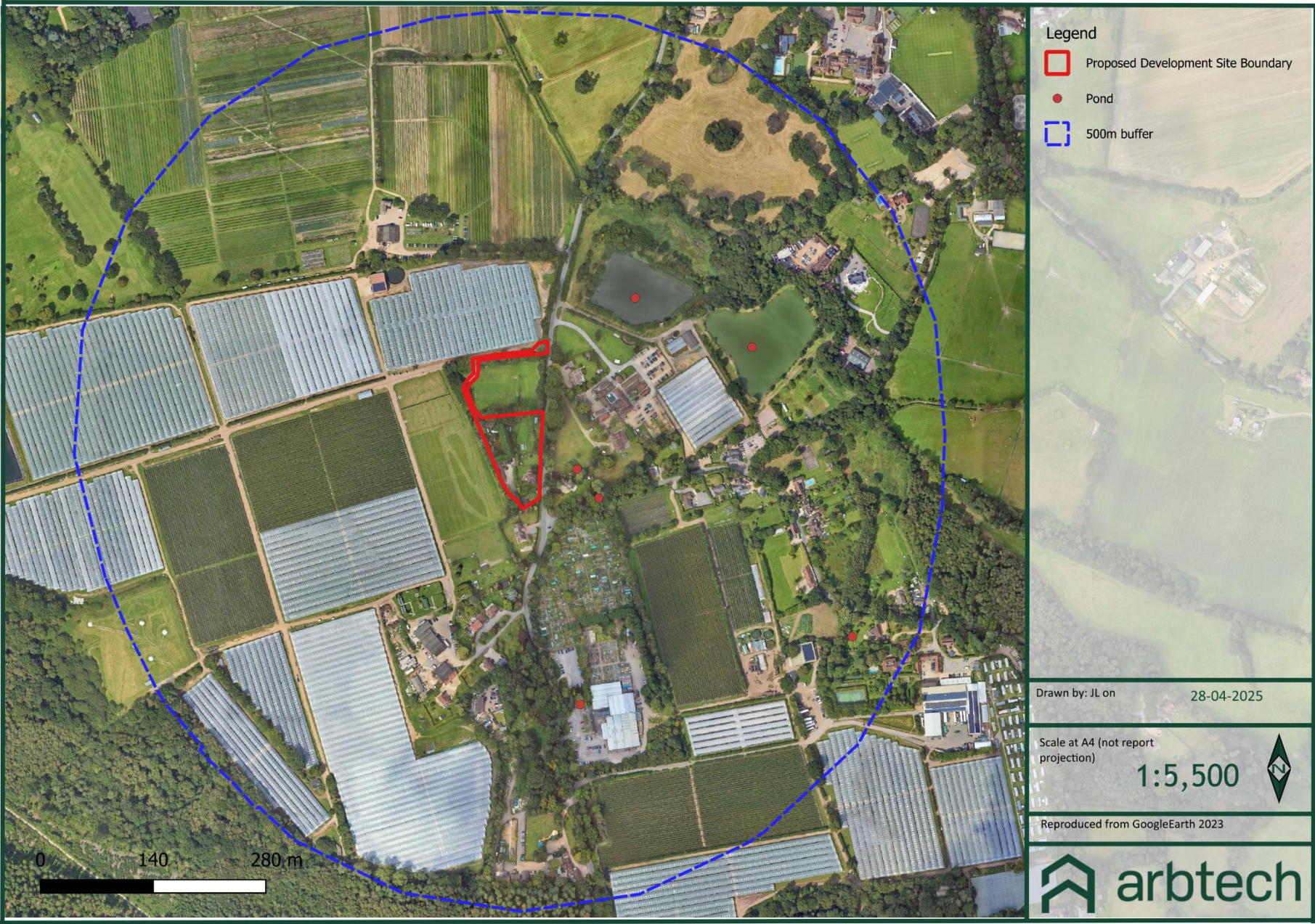
Appendix 4: PRA Plan



Appendix 5: Proposed BERS Plan



Appendix 6: Pond Location Plan



Appendix 7: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds (the Wild Birds Directive) respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as Sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many Annex II species): a strict protection regime must be applied across their entire natural range, both within and outside Natura 2000 sites.

Annex V species (over 90): their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*”.

However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites.

The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species***The Conservation of Habitats and Species Regulations 2017 (as amended)***

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A development licence will be required from the relevant countryside agency (i.e. Natural England) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agencies to define what would constitute a licensable activity. It is not possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works should be planned to avoid the possibility of killing or injuring any wild bird or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water Voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works likely to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSL. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Hazel Dormice

Hazel dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate

- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking
- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

The relevant countryside agency (i.e. Natural England) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation Afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally picking, uprooting or destruction of any wild Schedule 8 species
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural England) for works which are likely to affect species of plants listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England to plant or cause to grow in the wild due to their impact on native wildlife.

Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any landowner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY***Environment Act 2021***

The Environment Act 2021 (EA 2021) received Royal Assent on 9 November 2021 and is expected to become fully mandated within the next couple of years. The Act principally creates a post Brexit framework to protect and enhance the natural environment. Through amendments to the Town and Country Planning Act 1990, the Act will require all planning permissions in England (subject to exemptions which is likely to include householder applications) to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity net gain plan. This will ensure the delivery of a minimum of 10% measurable biodiversity net gain. The principal tool to calculate this will be the Defra Biodiversity 3.0 Metric. Works to enhance habitats can be carried out either onsite or offsite or through the purchase of 'biodiversity credits' from the Secretary of State. However, this flexibility may be removed (subject to regulations) if the onsite habitat is 'irreplaceable'. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development (which period may be amended).

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANNING POLICY***Wokingham Borough Local Development Framework (January 2010)***

The Wokingham Borough Local Development Framework can be viewed here: <https://www.wokingham.gov.uk/planning-policy/planning-policy-information/local-plan-and-planning-policies/>

The following planning policies have implications in relation to biodiversity and the proposed development:

- CP7: Biodiversity – Sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance. Development: Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly. Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly. That compromises the implementation of the national, regional, county, and local biodiversity action plans will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need. Mitigation measures can be put in place to prevent damaging impacts. Appropriate compensation measures to offset the scale and kind of losses are provided.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to ‘local populations’ of EPS and not individuals/site populations.