

**LAND AT LINDEN HOUSE,
HARE HATCH**

ECOLOGICAL APPRAISAL

DECEMBER 2024

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ECOLOGICAL APPRAISAL

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1.0 INTRODUCTION

1.1 Background

1.1.1 Aluco Ecology Ltd was commissioned to carry out an ecological appraisal of land at Linden House, Hare Hatch, Wokingham, for a proposed new dwelling.

1.1.2 An 'Ecological Appraisal' is a general investigation of the likely ecological and nature conservation issues associated with the site and its potential development. The aim of an Ecological Appraisal is to:

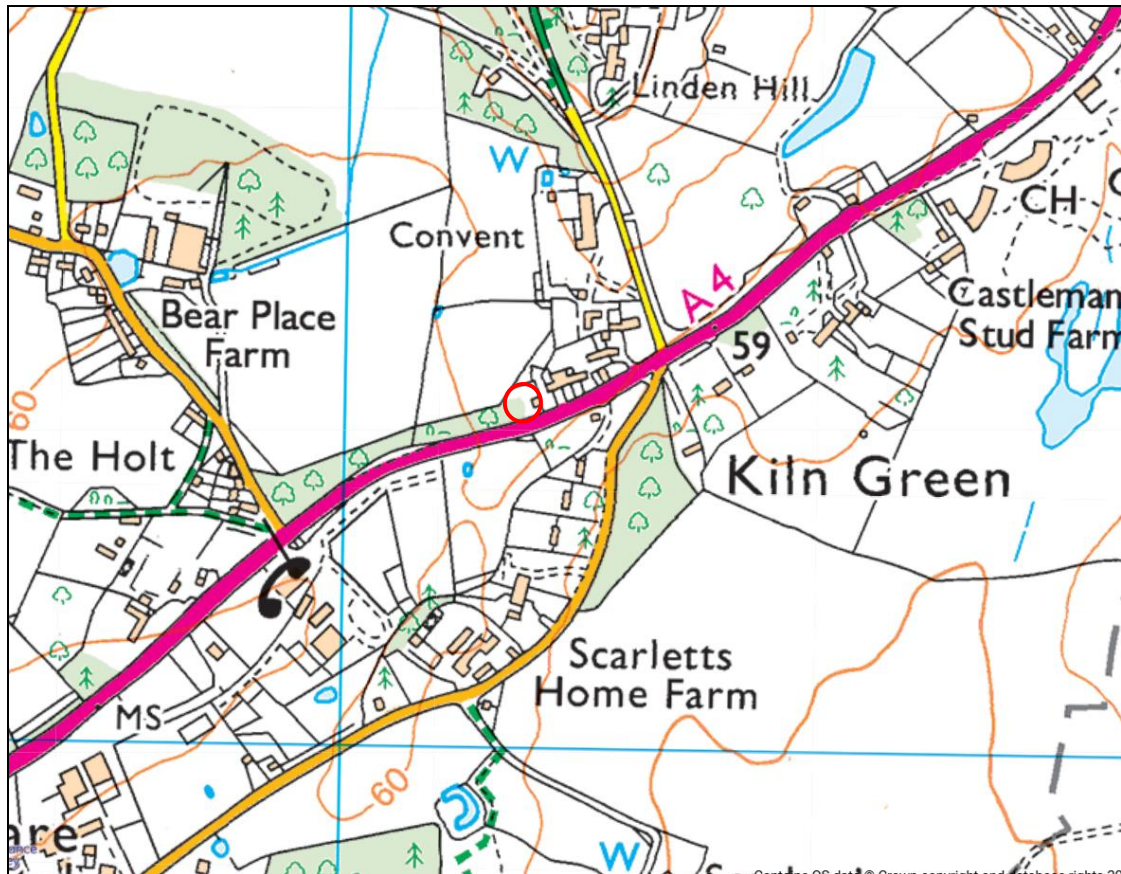
- highlight any features of particular ecological value;
- identify potential impacts to ecology as a result of the proposed works;
- identify any ecological issues that may have legal or planning implications such as the presence of protected species; and
- recommend any further work (such as targeted protected species surveys) if required in order to fully assess the value of the site.

1.1.3 The Government sets out its objectives for conserving and enhancing biodiversity in the National Planning Policy Framework (revised NPPF). The Government's objectives for planning include an environmental objective 'to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.'

1.1.4 The Framework goes on to state that at the heart of the planning system is a presumption in favour of sustainable development. Planning Practice Guidance on the Natural Environment provides information on taking biodiversity into account in planning (see Section 15 of the revised NPPF).

1.2 Outline of the Scheme and Site Location

1.2.1 The proposal is for a proposed new dwelling in the rear garden of the property of Linden House. The location of the site is shown at **Figure 1** and the proposals are shown at **Figures 2**.



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Figure 1: Site Location

1.3 Relevant Legislation and Policy

- 1.3.1 The outcomes of this Ecological Appraisal will be tested against relevant legislation and policy; namely the Conservation of Habitats & Species Regulations 2017 (as amended) in relation to the protection of European sites (Special Protection Areas SPA, and Special Areas of Conservation SAC) and European protected species (eg Bats, Dormouse, Great Crested Newts) (see **Technical Appendix 1**) and the Wildlife & Countryside Act 1981 (as amended) and Countryside & Rights of Way Act (CROW) 2000 for protected species and the designation and protection of SSSIs (see **Technical Appendix 1**). The Protection of Badgers Act 1992 gives protection to Badgers *Meles meles*.
- 1.3.2 In addition to the National Planning Policy Framework and the legislation outlined above, the strategic and local planning policies are the principal policies against which the outcomes of this ecological assessment will be considered; The Wokingham Borough Council Local Plan contains policies relating to ecology, these are outlined at **Technical Appendix 2**.
- 1.3.3 Under the Governments duty to conserve Biodiversity, through Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC, 2006) a number of Biodiversity Action Plans have been prepared for habitats and species of conservation concern, including national BAPs, the Berkshire BAP is considered in the general ecological site appraisal.

- 1.3.4 Consideration is also given to the Environment Act 2021. A core element of this is biodiversity net gain through planned development. Further information on provisions within the Environment Act 2021 are provided in **Technical Appendix 1**.

2.0 ASSESSMENT METHODOLOGY

2.1 Introduction

- 2.1.1 The methodology for this appraisal is based on the Guidelines for Ecological Impact Assessment (EcIA) in the United Kingdom published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2021). Regardless of whether a statutory Environmental Impact Assessment is required, these guidelines provide a robust framework for ecological assessment.

2.2 Site Survey Methodology

- 2.2.1 The first stage of the appraisal is a desk study of the proposed development site and associated zone of influence. The desk study provides background information on the site and local environment in order to effectively target field survey and further desk research. As part of this, a data search with the Thames Valley Environmental Records Centre has been undertaken and the results discussed in the baseline section below.
- 2.2.2 The aims of the field survey are to record land-use and broad vegetation types present on the site and in the surrounding areas, and to evaluate the ecological value of the habitats and vegetation communities, along with their potential to support protected species, species of principal importance, and any other notable species. Ecology Appraisals can be undertaken year-round, however during the winter months a limitation of survey is that the likely value of vegetation and habitats can be harder to determine. On this basis experience and knowledge of the surveyor is used to determine likely value of vegetation, habitats and potential for protected species, and degree of precaution in evaluation. Further details of the methodology used can be found in **Technical Appendix 3**.

3.0 BIOPHYSICAL CHANGES AND THE ZONE OF INFLUENCE

3.1 Introduction

- 3.1.1 In order to be able to target relevant ecological survey and assess the impacts of a development, it is necessary to identify the activities that may result in biophysical changes from the development and the area these cover (i.e. the zone of influence). There are three stages of this development scheme that include activities that may have an impact on features of ecological value; namely site preparation, construction and operation / use.

3.2 Biophysical Changes associated with the Development Scheme – Determination of the Zone of Influence

- 3.2.1 The potential zone of influence of the proposal is determined from the predicted biophysical changes brought about by activities associated with construction and post-construction phases. Therefore, the zone is predicted to extend across the development footprint and locally within the scheme. The main potential influence off site is the potential for pollution derived from on-site construction and operation. Consideration is also given to indirect impacts on designated sites in the wider area.
- 3.2.2 Consequently, desk surveys have been carried out within this zone and backed up by field survey where required.

3.3 Site Preparation / Construction Activities and Biophysical Changes

- 3.3.1 During the construction phase, it is predicted that site preparation activities may include localised vegetation clearance. This phase may affect habitat suitable for wildlife, including protected and/or notable species.

3.4 Predicted Operational Activities during Use Phase and Biophysical Changes

- 3.4.1 During the operational phase it is possible that the scheme may result in changes from current site use; and this may have impacts on features of ecological value or designated sites within the wider area through indirect impacts such as disturbance and surface water run-off.

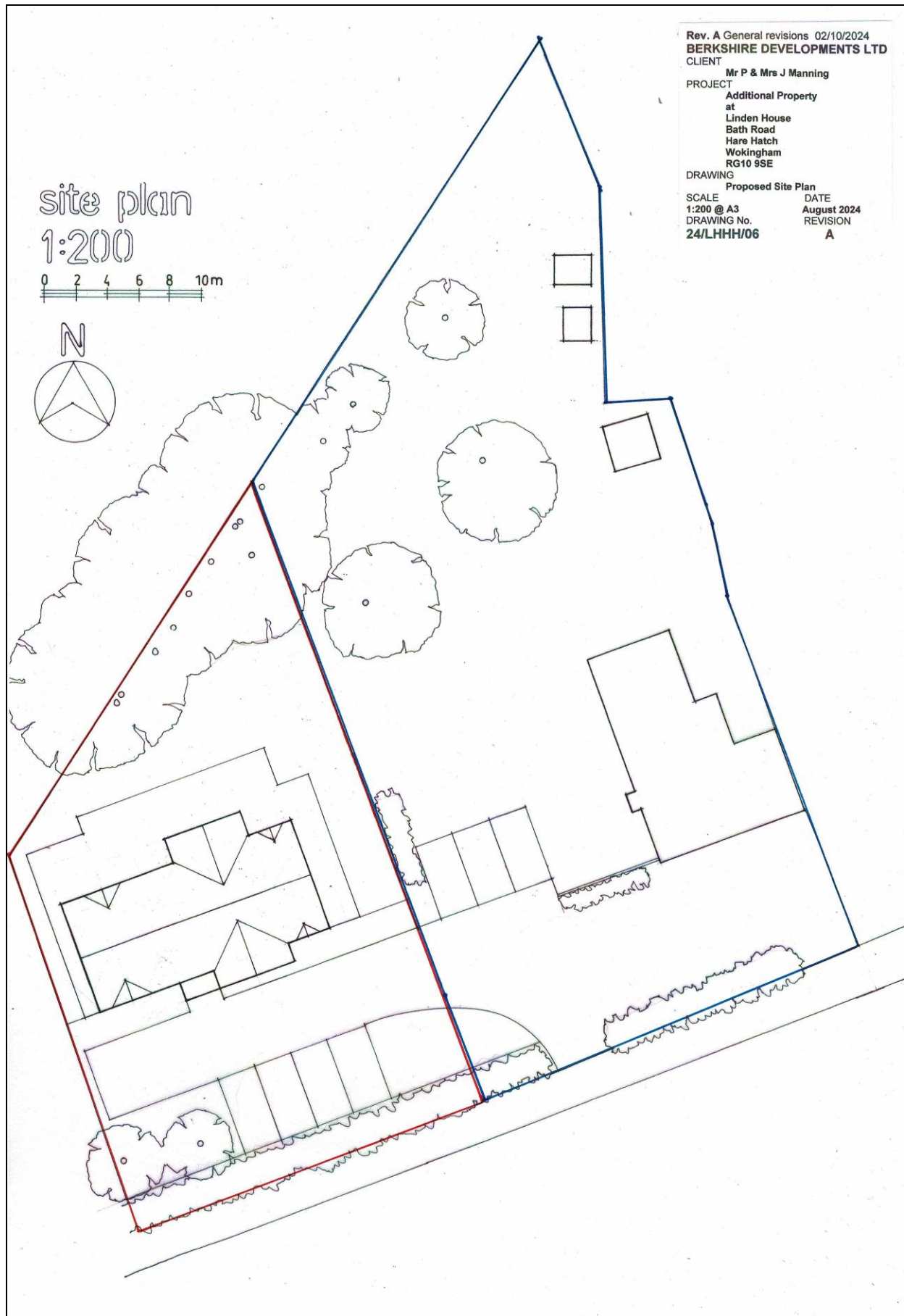


Figure 2: Proposed Development Plan

4.0 BASELINE CONDITIONS WITHIN THE ZONE OF INFLUENCE

4.1 Introduction

- 4.1.1 This ecological baseline describes the site in the context of the characteristic habitats of the area, and includes descriptions of designated sites and ecological features present within the potential zone of influence of any proposed development. This section provides the current baseline information, taking into account and summarising both field survey data and desktop data.

4.2 Statutory & Non-Statutory Designated Sites

Statutory Designated Sites

- 4.2.1 There are no Sites of Special Scientific Interest (SSSI) designated of regional to national importance present within 2km of the site. The closest is Harpsden Wood SSSI, which is at its closest point is just over c5.1km to the north west. The SSSI is designated for its ancient woodland and associated flora and fauna.
- 4.2.2 Citations and conservation objectives detailing the site's special features and operations that may damage the SSSI are downloadable from <https://designatedsites.naturalengland.org.uk/>.
- 4.2.3 A single internationally designated site is present within 10km of the site. Internationally designated sites include Special Protection Areas (SPAs), Special Areas of Conservation (SAC), and Ramsar Sites. The closest site is the Chiltern's Beechwoods SAC, which is 6.9km to the north east at its closest point. It is designated for its *Asperulo-Fagetum* beech forests and Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites), with Stag beetle *Lucanus cervus* as a qualifying feature but not primary reason for site selection.
- 4.2.4 Citations and conservation objectives detailing the sites special features are downloadable from <https://jncc.gov.uk/>.

Non Statutory Designated Sites

- 4.2.5 These are designated through the local planning process as being of value to wildlife at the county level. A number of Local Wildlife Sites are present within 1km of the site. These are predominantly designated for woodland and ancient woodland habitats and include Cuttlers Coppice, Bear Grove and Linden Hill Wood and extension, Square Wood and Scarlett's Wood. The closest, Scarlett's Wood is c480m to the south west.

4.3 Habitats and Vegetation

Introduction

4.3.1 The following description is based on a site visit carried out on 27 November 2024. The habitats are described below and in **Photos 1-9**, and **Figures 3**.

4.3.2 The site comprises the western part of the garden at Linden House. Recent felling of a number of trees in this part of the garden provides an open ground and re-vegetating grassland/lawn habitats.

Grassland

4.3.3 The lawns on site are an area of grassland managed as formal garden. They are a mixture of grasses with Common Bent *Agrostis capillaris*, and Yorkshire Fog *Holcus lanatus*, noted. Herb diversity is low to moderate, with White Clover *Trifolium repens*, Daisy *Belis perennis*, Creeping Buttercup *Ranunculus repens*, Germander speedwell *Veronica chamaedrys*, Selfheal *Prunella vulgaris* and Smooth Hawksbeard *Crepis capillaris* noted.

4.3.4 The western/south western half of the site is a ruderal/developing habitat from recent tree felling works in the garden. This area includes bare ground and a number of colonising species of disturbed relatively nutrient rich ground such as Cleavers *Galium aparine*, Nettles *Urtica dioica*, Herb Robert *Geranium robertianum*, Groundsel *Senecio vulgaris*, Wood Avens *Geum urbanum*, Cock's-foot *Dactylis glomerata* and Yorkshire Fog *Holcus lanatus*. A couple of young Elm *Ulmus cf. procera* are present.

4.3.5 The northern/north western boundary is fenced with chestnut paling. A line of mature trees is present along this boundary with Sycamore *Acer pseudoplatanus* and Oak *Quercus robur*. Elm, Ash *Fraxinus excelsior* and Cherry Laurel *Prunus laurocerasus* are also present.

4.3.6 A very small section of Beech *Fagus sylvatica* 'hedge' is present along the internal boundary of the garden. The southern boundary is a roadside hedge with garden fencing on the inner side. This is becoming a line of trees with Ash, Oak, Beech, Birch *Betula sp.*, Elm, Garden Privet *Ligustrum cf. ovalifolium* and Bramble *Rubus fruticosus agg.*

4.3.7 The western/south western boundary is also fenced with chestnut paling, and adjoins a tree belt of mature secondary woodland, which comprises Beech, Oak, Ash, Sycamore and Lawson's Cypress. It is about 75% broad-leaved, but with some mature firs at the eastern end towards the garden boundary. The recent felling from the garden is likely to have been a similar mix of species.

Hardstanding

4.3.8 The site is accessed from the existing gravel driveway to Linden House.

Watercourses and Ponds

4.3.9 No watercourses or ponds are present on site. Off-site waterbodies are present in the wider landscape, and these are discussed in more detail in relation to Amphibians, see below.

Buildings

- 4.3.10 A single storey garage is present on site.

Flora

- 4.3.11 No notable species were recorded. A number of mature trees are present along the boundaries of the site.

Evaluation

- 4.3.12 The grassland habitats on site are of **value within the zone of influence**, being typical garden lawn habitats. The tree lined boundaries and woody vegetation, including recently felled woody vegetation are of **local value**, being ecologically valuable habitats of continuity. The woodland belt to the west of the site is listed in the national habitat inventory as Lowland mixed deciduous woodland BAP priority habitat, and this includes about half of the site, where recent felling has taken place.



Photo 1: Lawn area of site, from northern boundary looking south



Photo 2: Ruderal habitat developing from recent tree felling



Photo 3: Northern boundary line of trees



Photo 4: Southern roadside boundary



Photo 5: Secondary woodland tree belt off site to west



Photo 6: Single storey and pre-fabricated garage



Photo 7: Internal garage space – checked for evidence of roosting bats with no evidence noted



Photo 8: Occasional gap between soffit board and pre-fab wall – no bat evidence noted



Photo 9: Front of garage and existing gravel drive entrance

4.4 Protected Species

Birds

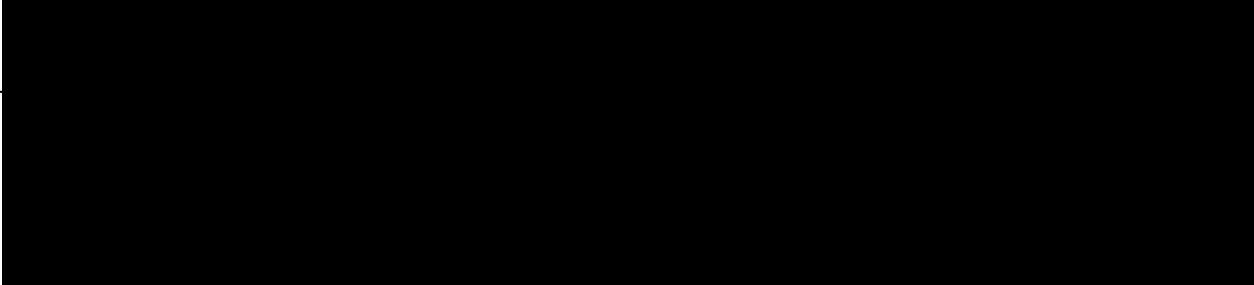
- 4.4.1 Nesting birds are protected under the Wildlife & Countryside Act, with certain species given additional protection (see **Technical Appendix 1**). Species of conservation concern (Stanbury *et al*, 2021) recorded in the zone of influence during the site visit included Song Thrush *Turdus philomelos*, and Dunnock *Prunella modularis*. The Schedule 1 species Red Kite *Milvus milvus* was noted in the wider zone of influence.
- 4.4.2 The majority of habitats on site provide only limited opportunities for commoner widespread bird species and are considered to be of **value within the zone of influence**. The boundaries contain slightly more varied woody habitat, and nesting habitat for a range of commoner species.

Bats

- 4.4.3 Bats are protected under the Wildlife & Countryside Act and the Habitat Regulations (see **Technical Appendix 1**). The data search has returned a number of records of bats within 1km of the site, including Common & Soprano Pipistrelle *Pipistrellus pipistrellus* & *P. pygmaeus*, and Brown Long-eared Bat *Plecotus auritus*, Whiskered Bat *Myotis mystacinus* and Noctule Bat *Nyctalus noctula*.
- 4.4.4 The site visit considered the potential for roosting bats on site and likely value of the site for foraging bats. The site contains a single building, a small garage that comprises pre-fabricated single skin walls, with a flat wooden roof that has a corrugated metal roof covering on top. There is a small wooden fascia. The majority of the building is well sealed with no potential gaps for roosting bats. There are a couple of small areas along the fascia where there is a gap where the fascia has come away from the wall, and this allows access internally into the garage over the doorway. There is also horizontal gaps between the wooden board and the corrugated roof from the corrugation. There are no roof voids in the building.
- 4.4.5 The building was examined for evidence of bat roost presence, including looking for droppings and staining internally. No evidence of bats was noted internally or externally (see also **Photos 6-9**). The survey was carried out during a window of time and therefore the survey has provided a snapshot of the sites use. Since bats regularly move between different roost sites, particularly to satisfy their varying requirements at different times of the year and weather conditions. External building dropping evidence can be washed and blown away during periods of wet weather and during the late autumn/winter period, but during warm weather in summer can remain for long periods. Due to these survey limitations an assessment using professional judgement has been used to interpret the findings with a precautionary approach to the assessment of the bat population utilising the building and to carrying out the proposed work. Timing a survey to co-inside with the peak bats presence in the building is not always possible or practical..
- 4.4.6 The trees present on site are now restricted to the boundaries, and the scheme does not require removal of any of these trees. Therefore, they were not examined in detail for potential bat roost features. They are generally relatively young mature trees, however.

- 4.4.7 The habitats on sites are likely to be of **local value** to bats populations as part of the network of foraging resource in the local landscape. The garage is considered to be of **negligible value** as a roost potential for bats on account of the nature of the building, lack of evidence and lack of potential roost features for bats.

4.4



Dormouse

- 4.4.9 Dormouse *Muscardinus avellanarius* and their habitats are protected under the Wildlife & Countryside Act, and the Habitat Regulations.
- 4.4.10 The habitats on site contains limited potentially suitable woody habitat for use by Dormice, and this is predominantly present along boundaries of the site, especially the northern and southern boundaries, although both contain gaps in linkage as a corridor of habitat. This on-site potential habitat is part linked in the local landscape via the woodland tree belt to the west. The data search has not returned any records of Dormice from within 1km of the site, and no licence returns are noted within 5km of the site, with the nearest known populations likely to be on the Chilterns escarpment to the north.

Other Mammal Species

- 4.4.11 There is potential for use of the site by Hedgehog *Erinaceus europaeus* and Fox *Vulpes vulpes*.

Reptiles

- 4.4.12 Commoner reptile species are protected from harm under the Wildlife & Countryside Act. The site contains limited suitable reptile habitat, on the edges of the woody boundaries. The data search has returned records for Grass Snake *Natrix helvetica* and Slow Worm *Anguis fragilis* from within 1km of the site.
- 4.4.13 The more suitable habitats, as described above, are considered to be of **value within the zone of influence** for reptile populations.

Amphibians

- 4.4.14 Great Crested Newt *Triturus cristatus* (GCN) is afforded protection under the Habitat Regulations (see **Technical Appendix 1**). The site contains limited suitable amphibian habitat, predominantly at the bases of the hedges on site.
- 4.4.15 The data search has returned a number of Great Crested Newt records from within 1km of the site, including a number of records from a waterbody about 480m south of the site. A District Licensing scheme for Wokingham is in place, and maps for GCN presence have been

prepared (www.naturespaceuk.com). The risk map shows the site is within an amber and red impact zone, where GCN are likely to be present.

- 4.4.16 Ordnance Survey (OS) mapping and aerial photography was consulted for ponds within 500m of the scheme. A number of waterbodies have been identified within 500m of the site. These are described in **Table 1** below. None were able to be assessed during the site visit as they were all on private land.

Table 1: Waterbodies within 500m of the site

Waterbody	Approx. distance to site	Description
1	120m	Field boundary pond – likely to be small
2	240m	Two garden ponds in large private garden
3	420m	Large tree lined field pond with aquatic vegetation
4	490m	Pond in grounds of Bear Place Farm – around 500m mark
5	400m	Mature garden pond in large garden along Scarlett's Lane – south of A4.
6	480m	Horseshoe shaped pond adjacent to Scarlett's Copse, south of A4. A known GCN population

- 4.4.17 Waterbodies 1-3 may have potential to contain populations of GCN that could use the terrestrial habitats on site. The remaining waterbodies are both well away from the habitats on site, have significant barriers to movement (the A4) and/or contain more suitable terrestrial habitat closer to the pond than the habitats on site, such that any populations of GCN from these waterbodies are unlikely to be present on site.

Invertebrates

- 4.4.18 The site contains some semi-natural habitats that are suitable for invertebrates, including permanent pasture with mature woody boundaries, and a minor watercourse. The data search has returned a number of records of invertebrate species listed on Section 41 of the NERC (2006) Act, including a single record of White-letter Hairstreak *Satyrrium w-album* butterfly from close to the site. The legally protected Stag Beetle *Lucanus cervus* occurs locally.
- 4.4.19 The habitats on site are considered to be of **value in the zone of influence** for invertebrates.

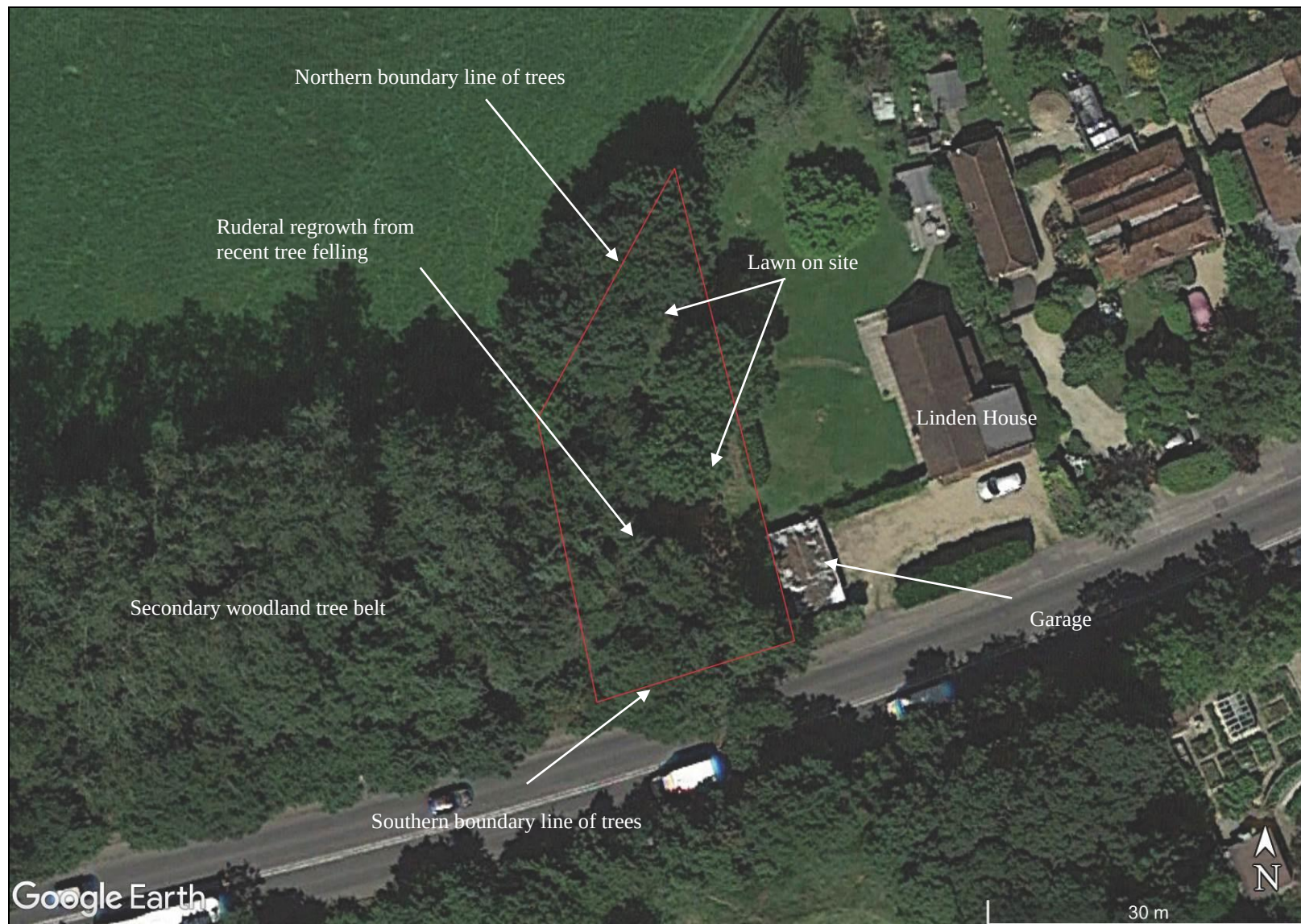


Figure 3: Habitats on Site

(Aerial Imagery copyright Google Earth)

5.0 ASSESSMENT OF LIKELY IMPACTS AND POTENTIAL FOR MITIGATION

5.1 Introduction

- 5.1.1 In view of the predicted activities and the resultant biophysical changes associated with the proposal, as described in Sections 2 and 3, this section identifies potential ecological impacts within the predicted zone of influence on features highlighted in Section 4. Mitigation recommendations are then provided.

5.2 Impacts on Designated Sites

- 5.2.1 The scale of the development proposals and size of the site, combined with the distance of designated sites from the site, suggest that there are unlikely to be any significant impacts on the designated sites from a scheme.

5.3 Impacts on Habitats & Species on Site

Potential Impacts on Habitats and Vegetation

- 5.3.1 The grassland habitats on site are generally of lower intrinsic value, being relatively species poor amenity grasslands that are heavily managed. The boundary woody vegetation is proposed to be retained in situ, and the boundaries are buffered from the development proposals by grassland areas. Construction activities should ensure that boundary and retained vegetation is fenced from works areas to ensure there are no impacts.
- 5.3.2 The site includes recently felled trees that were within an area marked as lowland mixed deciduous woodland on the national inventory, and were likely an edge of woodland/edge of garden divide that has been further intensified as garden habitat. This loss of woodland edge and mature trees cannot be fully mitigated for in the proposed scheme on site. Where space allows additional tree planting of the northern boundary is recommended and the eastern boundary, also where possible. A native mixed species hedge with at least 6 species in it should also be considered on these boundaries as understorey to the line of trees. The species should include locally native species such as Hawthorn, Holly, Hazel *Corylus avellana*, Field Maple *Acer campestre*, Buckthorn, Dog-rose or Field-rose *Rosa canina/R. arvensis*, and Elm. To be managed as a wildlife feature, a hedgerow should be cut late winter and be allowed to grow greater than 1.5m wide and high when cut.

Potential Impacts on Birds

- 5.3.3 Woody habitats are likely to be used by local bird populations. If such habitat were to be removed during the breeding season there is potential to destroy bird nests, which would be contrary to Section 1 of the Wildlife and Countryside Act 1981 (as amended). Regard should also be had to potential for birds nesting in the building and shed on site.
- 5.3.4 Mitigation measures for birds include carrying out works on any woody vegetation at an appropriate time of year, usually considered to be between September to February. If the building is proposed for demolition in the bird nesting season, this should be undertaken with

checks for nesting birds prior to demolition. Where an active bird nest is located, demolition work should not impact or disturb the nest until the birds have finished nesting.

- 5.3.5 New bird nesting features should be incorporated into the new building design, and this should include a Swift *Apus apus* brick in an appropriate location (north facing) on the new building (see **Figure 4** below). New bird boxes could potentially be located on boundary trees as well to provide additional biodiversity gain.

Potential Impacts on Bats

- 5.3.6 The building on site is considered to be of negligible potential for bat roosts. It is proposed to be removed as part of the access to the new dwelling. In the unlikely event of any bats being found during demolition, all work must stop immediately, and the bat ecologist and Natural England must be contacted. Additional information is available on the Bat Conservation Trust website at <https://www.bats.org.uk/advice/im-working-on-a-building-with-bats/ive-found-a-bat-during-works>.
- 5.3.7 The site contains woody boundary boundary habitat, all of this habitat is to be retained and buffered from the development proposals. Further recommendations are made above regarding enhancing the value of this boundary habitat.
- 5.3.8 Inbuilt bat roosting features should be installed on the new building, and potentially boundary trees to provide additional biodiversity gain. A proposed location of mitigation is provided at **Figure 4**.
- 5.3.9 Any external lighting of the site, and changes as a result of the scheme should consider potential for impacts on retained boundary woody features, and aim to keep dark corridors on these boundary features, having regard to best practice guidance on lighting and bats (ILP & BCT, 2023).

Potential Impacts on Mammals

- 5.3.10 The following measures are recommended to minimise impacts from construction on mammals:
- trenches in excess of one metre in depth should be covered or secured and a means of escape provided for any animal that does fall in (a suitable escape can be provided by wooden planks placed at a 45 degree angle);
 - any temporarily exposed open pipe system should be capped in such a way as to prevent mammals gaining access;
 - any chemicals and fuels should be stored carefully and as far away from any setts and badger paths as possible, and in accordance with the Code of Construction Practice; and
 - any security lighting (if required) should be directed away from any identified sett or sensitive protection zones.
- 5.3.11 Where woody habitat is impacted, the potential for Hedgehog and Fox to be present should be considered and sensitive vegetation clearance undertaken having regard to hibernating

Hedgehog potential in timings and breeding potential at other times of year. Any new boundary fencing should provide a hedgehog 'highway' or ensure there are sufficient gaps to allow continued use of and movement through the proposed site.

Potential Impacts on Reptiles & Amphibians

5.3.12 There is only limited potential herpetofauna habitat present, predominantly along the edges of the woody boundaries on site. This habitat is mostly due to be retained in situ, therefore there should be no impact on the more suitable existing reptile or amphibians habitat from the proposed scheme. However, as Great Crested Newt (GCN) are known to be present in the local area, there is potential for impacts on individuals from construction works. On this basis the following options are provided:

- phase 2 survey work on waterbodies 1-3 and review any other waterbodies as part of this process, to determine whether GCN are present in the waterbodies where likely to use the terrestrial habitats on site. This should include gaining access to waterbodies on private land, where granted and Habitat Suitability Index (HSI) assessment, followed by either eDNA or traditional survey during the spring period. Mitigation and licensing may be required, depending upon the findings of further survey;
- Enter the District Licence scheme with Naturespace. Given the site location, lack of impact on a waterbody, and zone of impact, a low impact licence approach via the District Licence scheme may be possible.

5.3.13 Further recommendations are made above regarding enhancing the value of the boundary habitat retained within the scheme, and this should provide additional habitat enhancements for herpetofauna.

5.3.14 With further survey/assessment and/or mitigation put in place via either of the options above, there should be no significant adverse impact on GCN from the scheme.

Potential Impacts on Invertebrates

5.3.15 Provision of new native woody boundary habitat, will provide additional habitats for populations of invertebrates in the zone of influence. It is recommended that native Elm is planted in the boundaries, as it is the food plant of the caterpillar of White-letter Hairstreak, which is known locally.

5.4 Biodiversity Net Gain

5.4.1 The proposed development is proposed to be a self-build development so is exempt from Biodiversity Net Gain assessment. Measures are provided above in relation to ecological benefits that could be incorporated into the garden design.

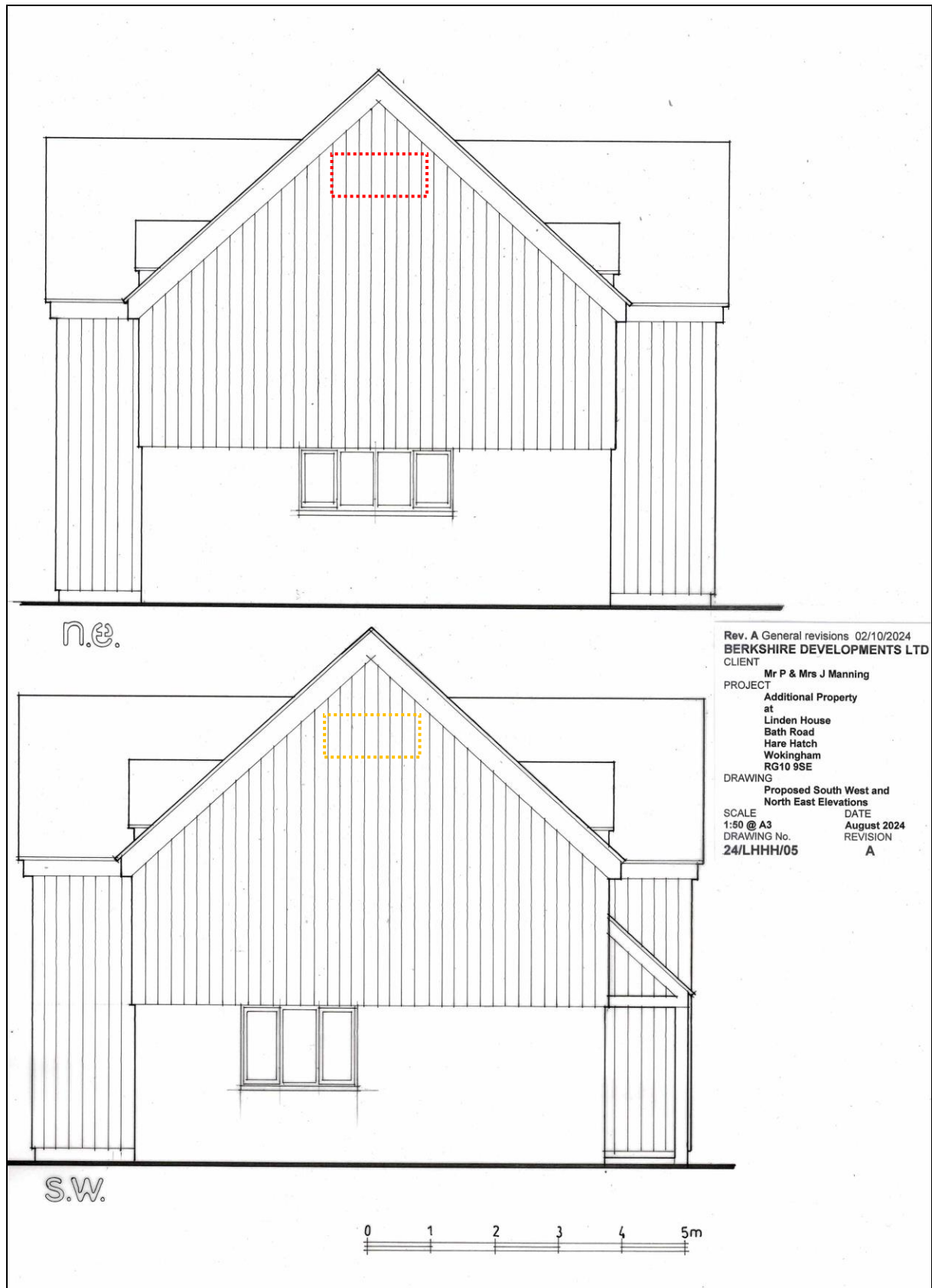


Figure 4a: Bird and Bat brick locations

Figure 4b: Examples of Bird & Bat Opportunities for buildings**Swift Nesting Brick –**

It needs to be positioned near Apex or high up – position advised by ecologist.

Designs shown are from Istock Bricks:

<https://www.istockbrick.co.uk/kevington/eco-products/>

S Brick Action for Swifts:

<https://www.actionforswifts.com/galvanised-steel-s-brick>

Manthorpe Swift Brick:

<https://www.nhbs.com/manthorpe-swift-brick>

Birdbrickhouses:

<https://www.birdbrickhouses.co.uk/products/bird-brick-houses/>

see also:

<https://www.rspb.org.uk/globalassets/downloads/documents/conservation--sustainability/help-swifts/swift-bricks.pdf>

**Schwegler Bat Roost Unit 2FR**

This Tube system meets the characteristic behavioural requirements of the types of bats that inhabit buildings. Made with Schwegler wood-concrete, the design maintains excellent climatic conditions inside the roost unit allowing the animals to either hang onto the wooden rear or onto the wood-concrete front. The box, once installed is maintenance free and self cleaning.

The roost unit can be installed within any external walls (brick, block or panelling) either flush or beneath the wall surface (with suitable entrance ramp extension)

Dimensions: height 47.5 x width 20 x depth 12.5 cm, Entrance: width 15 x height 2 cm, Weight: ca. 9,8 kg



Within Brick, can also be placed within cavity with only entrance visible



Birdbrickhouses:

Bat boxes (also referred to as bat tubes) can be supplied in brick fronted, half bond and quarter bond brickwork or alternatively with a stainless steel mesh fitted to the front. The mesh is designed for optimum adhesion in render and stonework applications. A basic version can be fitted directly behind weatherboarding or into studwork.

See:

<https://www.birdbrickhouses.co.uk/products/bat-brick-houses/>



6.0 CONCLUSIONS

- 6.1 An Ecological Appraisal was undertaken of the site, with a site visit in November 2024. The site comprises an area of garden in the property of Linden House. Habitats include lawn and ruderal vegetation from recent tree works on site. The boundaries contain mature lines of trees, and a secondary woodland tree belt is west of the site. Potential for protected species and species of conservation has been considered and the zone of influence contains a number of ecological features and protected species, including potential for nesting birds, foraging and commuting habitat for bats. There is potential for Great Crested Newt, as populations are present within 500m of the site, and the site lies within the amber and red zones of the District licence scheme. Potential for impacts are highlighted on protected species and habitats of value, and recommendations are provided for mitigation and enhancements.

7.0 REFERENCES

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Technical Appendix 1

Wildlife & Countryside Act Habitats Regulations and Schedule 2 Species Natural Environment & Rural Communities Act 2006 Environmental Act 2021

WILDLIFE & COUNTRYSIDE ACT 1981 (AS AMENDED)

The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principle legislation in Britain for the protection and conservation of our wildlife and its habitats of national importance. The legislation adopts a habitat and species based approach to nature conservation. Habitats and some species are protected in designated Sites of Special Scientific Interest (SSSI). Other species are afforded some protection from harm or disturbance by way of inclusion in either Section 1 (birds), Schedule 1 (specially protected birds), Schedule 5 (specially protected animals) or Schedule 8 (specially protected plants).

Protection Afforded to SSSIs

The presence of an SSSI on or near to a development is a material consideration, and this is discussed further in planning policy (see National Planning Policy Framework)

Law Relating to Protected Species

The WCA provides protection to such species in Part 1 of the Act. These sections provide protection from intentionally:

- killing, injuring or taking any wild bird or taking, damaging or destroying the nest or eggs of a wild bird
- disturbing any wild bird in Schedule 1 whilst building, on or near a nest, or disturbing dependant young of such birds
- damaging, destroying or obstructing access to any structure or place of shelter or protection of a schedule 5 animal, or disturbs any such animal whilst it is occupying a structure or place it uses for that purpose
- killing, injuring or taking any animal listed in Schedule 5
- Having in possession or control any live or dead wild bird or egg, or any wild animal in Schedule 5, or trading in any animal under Schedule 5.
- Damage to plants listed in Schedule 8 or uprooting of wild plants unless an authorised person.

Exemption and licences for development can be obtained in certain circumstances. Protected species are also a material consideration in planning applications.

Disturbance & Recklessness

The Countryside and Rights of Way Act 2000 (CRoW Act 2000) adds to protected species legislation in the WCA. The lesser test of 'Recklessness' is added to the protection from disturbance in three circumstances. These are:

- disturbance to Schedule 1 birds and their nests, eggs and dependant young,
- disturbance to Schedule 5 animals in their place of shelter/protection, and
- disturbance to the places of shelter/protection of Schedule 5 animals.

This addition means that any person who deliberately takes an unacceptable risk or fails to notice an obvious risk is falls under the Section irrespective of intention. The CRoW Act also provides greater protection to SSSIs from operations (and non operations) of owners, occupiers and third party users of the SSSI.

For further information see: <https://www.legislation.gov.uk/ukpga/1981/69>

HABITAT REGULATIONS 2017***General***

The Conservation of Habitats and Species Regulations 2017 ('The Habitat Regulations') consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

European Protected Species

Species listed under Annex II of the Habitats Directive were formally afforded protection by the Habitat Regulations. European protected species include the great crested newt, dormice and all species of bats. The provision relating to wild animal offences is reproduced below:

Protection of certain wild animals: offences

43.—(1) A person who—

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
 - (b) deliberately disturbs wild animals of any such species,
 - (c) deliberately takes or destroys the eggs of such an animal, or
 - (d) damages or destroys a breeding site or resting place of such an animal,
- is guilty of an offence.

(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely—

- (a) to impair their ability—
 - (i) to survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;

or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(3) It is an offence for any person—

(a) to be in possession of, or to control,

(b) to transport,

(c) to sell or exchange, or

(d) to offer for sale or exchange,

anything to which this paragraph applies.

(4) Paragraph (3) applies to—

(a) any live or dead animal or part of an animal—

(i) which has been taken from the wild, and

(ii) which is of a species or subspecies listed in Annex IV(a) to the Habitats Directive;

and

(b) anything derived from such an animal or any part of such an animal.

(5) Paragraphs (1) and (3) apply regardless of the stage of the life of the animal in question.

(6) Unless the contrary is shown, in any proceedings for an offence under paragraph (1) the animal in question is presumed to have been a wild animal.

(7) In any proceedings for an offence under paragraph (3), where it is alleged that an animal or a part of an animal was taken from the wild, it is presumed, unless the contrary is shown, that that animal or part of an animal was taken from the wild.

(8) A person guilty of an offence under this regulation is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine, or to both.

(9) Guidance as to the application of the offences in paragraph (1)(b) or (d) in relation to particular species of animals or particular activities may be published by—

(a) the appropriate authority; or

(b) the appropriate nature conservation body, with the approval of the appropriate authority.

(10) In proceedings for an offence under paragraph (1)(b) or (d), a court must take into account any relevant guidance published under paragraph (9).

(11) In deciding upon the sentence for a person convicted of an offence under paragraph (1)(d), the court must in particular have regard to whether that person could reasonably have avoided the damage to or destruction of the breeding site or resting place concerned.

Section 44 provides certain defences to the above.

The granting of a licence under Part 5 Section 55 of the Habitat Regulations

In order to carry out a lawful operation (e.g. development work which has full planning permission) that may result in any of the offences above, it is necessary to obtain a licence from Natural England to allow the operation to proceed.

However, in accordance with the requirements of the Habitats Regulations, a licence can only be issued after the following conditions have been satisfied:

- that there is no satisfactory alternative, and
- that the action authorized will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

- that the action is required in preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;

Full planning permission is required to apply for a Natural England licence (where such a consent is necessary for the work to be carried out). In addition, a method statement which details the survey results, methodology of work to be undertaken, mitigation and compensation measures, must be submitted to Natural England with the licence application.

Plans and Projects & Designated Sites

The Regulations provide procedure whereby designated SAC or SPA and other European Protected Sites are afforded protection from plans and projects that may be likely to have a significant effect on the Features for which these sites are designated. Where a significant effect is considered likely in combination with other projects an appropriate assessment is required to be undertaken. Details of this procedure can be found at Part 6 of the Act onwards, see link below.

For Full details of the 2017 Habitat Regulations see:

http://www.legislation.gov.uk/ukxi/2017/1012/pdfs/ukxi_20171012_en.pdf

NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006

This Act places a specific duty to conserve biodiversity on all public bodies, including Local Planning Authorities. In order to aid with this process Section 41 of the Act requires the Secretary of State to publish lists of living organisms and habitats which are of principal importance for the purpose of conserving biodiversity. These are the national Biodiversity Action Plan (BAP) lists, and BAP projects are also undertaken at a County, Borough or District level.

For further information see: <https://www.legislation.gov.uk/ukpga/2006/16/part/3>

ENVIRONMENT ACT 2021

Royal Assent 9 November 2021

The Environment Act 2021 has recently received Royal Assent and will introduce a number of nature conservation initiatives. These include Biodiversity Net Gain assessments. The following measures are part of the Act (see www.gov.uk, 2021):

- Strengthened biodiversity duty;
- Biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Conservation Covenants;
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation;

- Requires regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system;
- Long-term targets to improve air quality, biodiversity, water, and waste reduction and resource efficiency;
- A target to halt the decline of nature by 2030;
- Environmental Improvement Plans, including interim targets;
- A cycle of environmental monitoring and reporting;
- Environmental Principles embedded in domestic policy making;
- Office for Environmental Protection to uphold environmental law;
- Air and Water pollution measures.

For further information see:

https://www.legislation.gov.uk/ukpga/2021/30/pdfs/ukpga_20210030_en.pdf

Biodiversity Net Gain under the Environment Act

Mandatory biodiversity net gain in England is likely to become law in 2023 (through amendments to the Town & Country Planning Act). The key measures include (see eg www.gov.uk & www.local.gov.uk):

- Minimum 10% gain required using Biodiversity Metric;
- Habitat secured for at least 30 years via obligations/ conservation covenant;
- Habitat can be delivered on-site, off-site or via statutory biodiversity credits;
- Creation of a national register for net gain delivery sites;
- Continued use of mitigation hierarchy - avoid, reduce, off-set (mitigation and compensation);
- Will apply to Nationally Significant Infrastructure Projects (NSIPs)
- Will not apply to marine development;
- Works alongside existing legal environmental and wildlife protections.

Technical Appendix 2

Local Planning Biodiversity Policy

Wokingham Borough Council Local Plan

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:

- A) Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or
- B) 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, or
- C) 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, and:

- i) Mitigation measures can be put in place to prevent damaging impacts; or
- ii) Appropriate compensation measures to offset the scale and kind of losses are provided.

CP8 - Thames Basin Heaths Special Protection Area

Development which alone or in combination is likely to have a significant effects on the Thames Basin Heaths Special Protection Area will be required to demonstrate that adequate measures to avoid and mitigate any potential adverse effects are delivered.

Technical Appendix 3

Ecological Appraisal Method

Introduction

The methodology for this appraisal is based on the Guidelines for Ecological Impact Assessment (EcIA) in the United Kingdom published by the Chartered Institute of Ecology and Environmental Management (IEEM June 2006, CIEEM 2016). Regardless of whether a statutory Environmental Impact Assessment is required, these guidelines provide a robust framework for ecological assessment at any scale.

Desk Study

The first stage of the appraisal is a desk study of the proposed development site and associated Zone of Influence. This provides background information on the site and local environment so as to more effectively target field survey and further desk research.

The Multi Agency Geographical Information for the Countryside (MAGIC) database is searched for information regarding nationally or internationally designated sites within proximity of the development site.

The National Biodiversity Network (NBN) data base is searched to provide background information on local protected species records. The NBN provides access to a substantial volume of biodiversity data for the UK. Although rarely site specific, it does provide valuable background information on the local occurrence of protected species.

Where appropriate, the local environmental/biological records centre is consulted to provide information regarding locally identified sites and records of protected and/or notable species within the zone of influence of the proposed development.

Site Survey Methodology

The aims of the survey are to record land-use and broad vegetation types present on the site and in the surrounding areas, and to evaluate the habitats and vegetation communities ecological value along with the potential to support protected species, species of principal importance, and any other notable species.

Where relevant, habitat immediately adjacent to the site is also assessed as this can have a bearing on the possible presence of protected species on the site and the ecology of adjacent areas can be affected by development nearby.

Habitats and Vegetation

Habitats and vegetation communities are recorded on a broad scale by visually noting contrasting land uses, vegetation zones and landscape features, such as hedgerows and trees. Dominant plant species are recorded in each of the areas identified, as are any notable plant species, such as protected species and habitats or notifiable weeds.

Protected Species

Many plant and animal species are legally protected in the UK. Some, such as bats, badger, water vole and great crested-newt are commonly encountered on development sites.

Case law has established (Regina vs. The Cornwall County Council ex parte Hardy 2001) that “It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

For the most regularly encountered protected species, a brief summary of methods follows:

Bats

Bats use buildings and trees for roosting and breeding, and so the potential for any of these features on site to support bats was considered, as was the sites potential for providing bat foraging habitat. An Appraisal survey will consider potential features that could support a Bat roost, and this may include external inspections of the trees and buildings on site. The Appraisal survey will also consider bat habitats in relation to foraging and commuting potential, with semi-natural vegetation features considered and evaluated.

Where an inspection is undertaken this will look for the presence of bats as well as signs of their presence such as Bat droppings, e.g. within cavities and buildings; Staining at potential roost access points; Lack of bat evidence cannot be taken to mean the lack of use by bats because of a number of potential limitations:

- Signs of bats can be easily washed off by wind or rain;
- Droppings are hard to see where rubble and other floor debris may obscure them;
- Low numbers of droppings can easily be missed especially where they may become damp and deteriorate;
- Evidence of bats may not be apparent where bats roost out of view, such as in tree cavities etc.

Dormice

The Appraisal survey will consider the potential for presence of Dormouse on or near the site, principally through habitat suitability, combined with data on occurrence within the area from the data search. Where suitable habitat occurs, further survey for feeding signs on hazel nuts where Hazel occurs, and searches for arboreal nests. If a site is considered suitable, further Phase 2 survey work may be required.

Other Mammals

Consideration is also given in an Appraisal survey to the potential for habitats to support other legally protected mammals, and those of nature conservation significance. Where waterbodies and

watercourses occur on or near to the site, the potential presence of species including Water Vole *Arvicola amphibious* and Otter *Lutra lutra* are considered. Depending upon the geographic location consideration is also given to species such as Red Squirrel.

Breeding Birds

Any notable bird species seen during the Appraisal survey are recorded. The type and quality of breeding, foraging and roosting habitats available for birds is also considered and interpreted with particular reference to protected or notable bird species, and birds of conservation concern.

Consideration is given to any features which could support nesting birds, including buildings and other structures, and areas of vegetation that may be affected by a development.

Reptiles

Any areas of habitat considered suitable for supporting reptiles are noted (for example, areas of rough grassland and scrub, banks, burrows, and rubble piles, compost heaps). If a site is considered suitable, further Phase 2 survey is usually required if an impact from the development or project is considered likely.

Great Crested Newt

An Appraisal Survey considers habitat suitability, through the occurrence of suitable ponds and/or terrestrial habitat, and this will be combined with knowledge on their distribution from biological records for the area. If a site is considered suitable, further Phase 2 survey is usually required if an impact from the development or project is considered likely.

Invertebrates

A very small proportion of invertebrates are afforded legal protection under the Wildlife and Countryside Act 1981 (as amended), although a relatively high number of invertebrates are included within the UK and local BAPs, and many more species are identified as being Nationally Scarce. Most invertebrates require specialist knowledge in order to identify them, although some groups, including butterflies and dragonflies, can be readily identified by generalists. Therefore, apart from recording any species of these readily identifiable groups, an Appraisal Survey concentrates on recording the presence of any key habitats of nature conservation importance considered suitable for supporting more scarce and restricted invertebrates, for example bare ground, dead wood and botanically rich habitats.

Survey Constraints and Limitations

An Appraisal survey is carried out during a brief window of time. Therefore the survey can only provide a snapshot of the range of plants and animals that might be present. However, professional judgement is used to interpret the habitat features recorded, and their likely value for supporting protected and notable species, including species of principal importance. Survey can also be restricted through land access as it is unusual to have a landowner owning land surrounding that which is being surveyed.

Assessment Guidelines

Introduction

The IEEM guidelines (2006) and updated in 2016 (CIEEM, 2016) provide three principal reasons for an ecological feature being valued and therefore included: biodiversity value, social/community value, and economic value.

The evaluation and assessment undertaken assigns one of a number of value labels based on a geographic scale as follows:

- International
- National
- Regional
- County
- District
- Local (Parish)
- Within the zone of influence

Value is determined with reference to the following factors:

- level of designation (sites) or biodiversity-based protection (legal and policy);
- biodiversity value (e.g. inclusion in Biodiversity Action Plans, rarity, position in ecosystem, assemblages and communities, size and diversity);
- social and economic value;
- legal issues (eg protected sites).

All impacts of the scheme on features of local importance or greater are assessed in the impact assessment stage

Assessment of Likely Impacts

The ecological impact assessment methodology used is based on the following considerations.

Characterisation of Likely Impacts

The potential impacts identified as a result of the proposals are characterised according to the following parameters:

- Positive or negative
- Magnitude (and extent if not synonymous)
- Duration
- Reversibility
- Timing and frequency

Significance of Impact

A significant impact on a valued ecological feature (whether negative or positive) is defined in CIEEM's guidelines as an impact on the integrity of a defined site or ecosystem, and/or the

conservation status of habitats or species within a given geographical area. These terms are defined below.

Integrity

Integrity is defined as follows. ‘*The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.*’ A site or ecosystem that achieves this is considered to be at favourable conservation status.

Conservation Status

For habitats, conservation status is determined by the sum of the influences acting on the habitat and its typical species, which may affect its long-term distribution, structure and functions as well as the long-term survival of its typical species within a given geographical area.

For species, conservation status is determined by the sum of the influences acting on the species, which may affect the long-term distribution and abundance of its populations within a given geographical area.

Impact Prediction

For guidance as to whether an impact is likely to result in an adverse effect on the integrity or conservation status of a feature, reference has been made to the conservation objectives for that feature where they are available, for example in habitat and species action plans. Otherwise professional judgement has been made based on available information.

The confidence in the prediction that an activity will give rise to a significant adverse impact on a valued ecological feature is given based on a four point scale:

- Certain (or near-certain);
- Probable;
- Unlikely; and
- Extremely unlikely

Drawing Assessment Together

The above factors – value, integrity and conservations status of the feature, prediction and characterisation of the impact and overall significance of the impact is brought together in the final assessment. This is done without additional mitigation measures that may be proposed. An impact is then summarised as significant or not.

Mitigation, Compensation and Enhancement

Where impacts are characterised as significant mitigation or compensation may be offered to prevent, reduce or offset such impacts. In addition enhancement measures may be built into a scheme to ensure that the scheme is compliant with the proactive measures outlined in the latest Government policy on nature conservation (National Planning Policy Framework).