

**65 Kiln Road
Emmer Green
Reading
Berkshire
RG4 8UE**

Preliminary Ecological Appraisal

Ref: R2699/a

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1 SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by ET Planning Consultants on the behalf of the owners (Siloam Construction Limited) to undertake a preliminary ecological appraisal of land at 65 Kiln Road in Emmer Green near Reading, Berkshire in connection with a planning application to be lodged with Reading Borough Council seeking consent for the construction of a new house in to the rear of the existing.
- 1.1.2** The site is situated on the western side of Kiln Road in Emmer Green, near Reading, Berkshire. The site is currently made up of a residential dwelling, with a large garden consisting mostly of amenity grassland and introduced shrubs, with scattered fruit trees. The buildings on site include the house (B1), detached garage (B2), a simple corrugated shed (B3) and a timber summer house (B4), all set to be unaffected by the works.
- 1.1.3** The proposals include splitting the site into two, with the erection of a new residential dwelling to the rear and a new access created along the southwestern boundary; the work will involve the removal of introduced shrubs to the front of the site (refer to plans in **Appendix 5**).
- 1.1.4** The pre-existing data held by Thames Valley Environmental Records Centre (TVERC) has shown that the survey site is not statutorily or non-statutorily designated for its wildlife interest and therefore not recognised as being of international, national or county level conservation significance.
- 1.1.5** Proposed habitat and protected species mitigation measures and recommendations have been outlined including:
- Protection of retained boundary hedgerows;
 - Precautionary measures during the removal of trees and section of introduced shrubs to avoid impacts to amphibians and reptiles and prevent disturbance of nesting birds;
 - Precautionary measures during shrub removal looking for signs of large mammal activity.
- 1.1.6** The proposals present opportunities for ecological enhancements in order to achieve a net gain in biodiversity value and include:
- Incorporation of bird and/or bat boxes within the new building and surrounding trees;

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- Planting of native species of local provenance within the landscaping plan;
- Enhancement of grassland to provide species-rich neutral grasslands.

2 INTRODUCTION

2.1 Background

- 2.1.1** John Wenman Ecological Consultancy LLP was commissioned by ET Planning Consultants on the behalf of the owners (Siloam Construction Limited) to undertake a preliminary ecological appraisal of land at 65 Kiln Road in Emmer Green, near Reading, Berkshire.
- 2.1.2** The survey was commissioned in connection with a planning application to be lodged with Reading Borough Council seeking consent for the erection of a new dwelling to the rear of the existing property and the creation of new access along the southwestern boundary (Refer to proposed plans in **Appendix 4**).

2.2 Site Location and Context

- 2.2.1** The site is situated on the western side of Kiln Road in Emmer Green, Berkshire (Grid Reference: SU 72469 77296).
- 2.2.2** Surrounding the site to the north, south and west are neighbouring properties and their respective gardens. To the east of Kiln Road - approximately 30 metres from the site - is Clayfield Copse, an area of deciduous and ancient & semi-natural woodland, leading to Clayfield Copse recreation ground. There is broadleaved woodland approximately 110 metres to the west of the site, surrounded by further residential properties. In the wider area, there is open farmland and fields to the north and the east of the site.

2.3 Report Format

- 2.3.1** There follows: an overview of the protected species legislation in **Section 3** and of the national and local wildlife policy background in **Section 4**; details of the survey methods in **Section 5**; background data search findings in **Section 6**; Phase 1 habitat survey findings in **Section 7**; a discussion of the survey findings in **Section 8** and recommendations in **Section 9**. The appendices present: photographs (**Appendix 1**); a phase 1 habitat survey plan (**Appendix 2**); a list of plant species recorded during the phase 1 habitat survey (**Appendix 3**); and a proposed site layout (**Appendix 4**).

3 LEGISLATIVE BACKGROUND – PROTECTED SPECIES

3.1 Amphibians

3.1.1 The seven native species of amphibian receive protection under the Wildlife & Countryside Act 1981 (as amended). The four widespread and common amphibians (common frog, toad, smooth and palmate newts) receive limited protection – making their sale illegal.

3.1.2 Great crested newts receives full protection under the Wildlife & Countryside Act 1981 (as amended) and under the Conservation (Natural Habitats &c.) Regulations 2017 ('Habitat Regulations') (as amended). These make it illegal to:

- Intentionally or recklessly kill, injure or take a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt;
- Intentionally or recklessly disturb great crested newts; in particular, any disturbance which is likely to impair their ability to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating animals, to hibernate or migrate.

3.1.3 The great crested newt and common toad are listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, (commonly referred to as a UK Priority Species).

3.2 Reptiles

3.2.1 The four widespread reptiles most likely to be encountered (adder, grass snake, slow worm and viviparous lizard) are protected under the Wildlife & Countryside Act 1981 (as amended). The Act makes it an offence to intentionally kill, injure, possess or sell any of the species.

3.2.2 The four reptile species are listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and Rural Communities Act 2006, (commonly referred to as a UKBAP Priority Species).

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3.3 Birds

3.3.1 All wild birds are protected under the Wildlife & Countryside Act 1981 (as amended). The Act makes it an offence to kill, injure or take a wild bird or to damage or destroy the nest of a wild bird whilst in use or being built.

3.3.2 Less common bird species of conservation concern, such as the barn owl and kingfisher, are listed on Schedule 1 of the Act, which makes it an offence to disturb the birds whilst nesting also.

3.4 Bats

3.4.1 All British bat species are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a bat;
- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species;
- Deliberately kill, injure or take any bat.

3.5 Badgers

3.5.1 Badgers are protected by the Protection of Badgers Act 1992. The Act makes activities such as development that would harm or disturb badgers or damage, obstruct or destroy their setts illegal. If badgers are to be affected by the proposed development, activities can be undertaken only under a licence issued by Natural England.

3.6 Otters

3.6.1 Otters are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by an otter;
- Deliberately, intentionally or recklessly disturb otters; in particular any disturbance which is likely to impair the ability of otters to survive, breed or reproduce or nurture their young; or to affect significantly the local distribution or abundance of the species;
- Deliberately kill, injure or take any otter.

3.7 Hazel Dormice

3.7.1 Hazel dormice receive full protection under the Wildlife & Countryside Act 1981 (as amended) and under the Conservation (Natural Habitats &c.) Regulations 2017 ('Habitat Regulations') (as amended). These make it illegal to

- Intentionally or recklessly kill, injure or take a dormouse;
- Possess or control any live or dead specimen or anything derived from a dormouse;
- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a dormouse;
- Intentionally or recklessly disturb dormice; in particular any disturbance which is likely to impair their ability to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating animals, to hibernate or migrate.

3.7.2 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. A licence can be issued if the following three tests have been met:

- **Regulation 55(9)(a)** - there is “no satisfactory alternative” to the derogation, and;
- **Regulation 55(9)(b)** - the derogation “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range” and;
- **Regulation 55(2)(e)** - the derogation is for the purposes of “preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”.

3.7.3 Local authorities have a statutory duty under Regulation 7(3e) of the Habitat Regulations to have regard to requirements of the Habitats Directive in the exercise of their functions. The Council must therefore consider and determine whether these three tests are likely to be satisfied by an application affecting European protected species before granting planning permission. **N.B. the requirements set out in 4.7.2 and 4.7.3 apply to development that would affect bats, great crested newts and otters, which are European Protected Species also.**

3.8 Water Voles

3.8.1 Since April 2008, water voles have received full protection under Section 9 of the Wildlife & Countryside Act 1981 (as amended). This makes it an offence to intentionally kill, injure or take water voles or to possess or control live or dead water voles or derivatives. It is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection or intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

3.8.2 The water vole is listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and Rural Communities Act 2006, (commonly referred to as a UKBAP Priority species).

3.9 Invasive Non-Native Plants

3.9.1 The Wildlife and Countryside Act 1981 (as amended) provides the primary controls on the release of non-native species into the wild in Great Britain. It is an offence under section 14(2) of the Act to ‘plant or otherwise cause to

grow in the wild' any plant listed in Schedule 9, Part II. The species listed in the Act includes Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) and himalayan balsam (*Impatiens glandulifera*).

3.10 Injurious Weeds

3.10.1 Five native plants are listed as injurious weeds under the Weeds Act 1959: common ragwort (*Senecio jacobaea*), spear thistle (*Cirsium vulgare*), creeping or field thistle (*Cirsium arvense*), broad-leaved dock (*Rumex obtusifolius*) and curled dock (*Rumex Crispus*). The Act means it is not an offence to have these weeds growing on your land and species such as ragwort have significant conservation benefits. However they must not be allowed to spread to agricultural land, particularly grazing areas or land which is used to produce conserved forage. Enforcement notices can be issued following complaints requiring landowners to take action to prevent the spread of these weeds.

3.11 Wild Mammals

3.11.1 Under the Wild Mammals (Protection) Act 1996 it is an offence to intentionally inflict unnecessary suffering, as specified by the Act, on any wild mammal.

4 POLICY BACKGROUND

4.1 National Planning Policy

4.1.1 The ODPM Circular 06/2005 provides guidance on the application of the law relating to planning and nature conservation stating that *'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'*

4.1.2 The Natural Environment and Rural Communities (NERC) Act 2006 requires all public bodies, including local authorities, to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'Biodiversity Duty'.

4.1.3 The revised National Planning Policy Framework (NPPF), published in February 2019, sets out the Government's planning policies for England and how they should be applied. Section 15 of the NPPF sets out the approach local authorities should adopt to conserve and enhance the natural environment when preparing planning policy and when considering planning applications. Paragraph 175 sets out the principles local authorities should apply when determining planning applications as follows:

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

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees)*

should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

4.2 Local Planning Policy

- 4.2.1** Planning policy within Reading Borough is defined by the policies within the Local Plan (adopted Nov 2019). The policy relevant to biodiversity and natural environment is as follows:

EN12: BIODIVERSITY AND THE GREEN NETWORK

a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:

- Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and*
- Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.*

New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.

b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:

- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and*
- Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*

In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for

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on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

5 SURVEY METHOD

5.1 Phase 1 Habitat Survey

5.1.1 A walkover survey was undertaken on the 15th December 2020 by a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and an assistant ecologist. During the survey key features of the site were photographed (**Appendix 1**) and plotted on a site plan using target notes (**Appendix 2**). The habitats present were noted and plotted on the site plan (**Appendix 2**) using definitions based on the standard phase 1 ecological survey definitions (JNCC 2010).

5.1.2 Any features of ecological importance were recorded, and plant species observed during the survey noted (**Appendix 4**). Particular attention was given to any evidence of the presence of protected species and the site's potential to support such species and those of principle importance for nature conservation (as defined within Section 41 of the NERC Act 2006).

5.2 Building Inspection

5.2.1 An external inspection of the buildings on site was undertaken by an ecologist registered under Natural England Class Licence CL18 and assistant ecologist on the 15th December 2020.

5.2.2 Signs of occupation by bats and features that could offer potential roosting sites following standard survey guidelines were looked for (Collins 2016; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004).

5.2.3 The following may indicate the presence of a bat roost within a building:

- Bat droppings (these can be found externally, especially in sheltered areas such as window sills, underneath roost entrances or internally within a roof space);
- Piles of insect remains e.g. moth wings (these are indicative of regular feeding sites used by species such as brown long eared bat);
- Staining at roost entrances or within the roost (urine and oil from fur can leave stains on timbers when bats are gathered for long periods);
- Bats (live or dead).

5.2.4 Residential properties may offer potential roosting sites in a number of locations, favoured locations include:

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- Under roof and ridge tiles, especially when loose or missing tiles are present or sections of mortar are missing;
- At the eaves – gaining access via gaps between the soffits and wall;
- At the gable ends – access is typically gained at the roof apex via gaps in the soffits or under roof tiles;

5.3 Background Ecological Data Search

5.3.1 The Thames Valley Environmental Records Centre (TVERC) was commissioned to undertake a search of pre-existing ecological data (notable or protected species and statutorily or non-statutorily designated sites) held by the Centre for the survey sites and land within a 1 kilometre radius.

5.3.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website was referred to for pre-existing data on habitats of principal importance (UK Priority Habitats; as defined under Section 41 of the NERC Act 2006) and to understand the nature of the surroundings.

5.4 Survey Constraints

5.4.1 The ecological survey had no access constraints; however, all ecological survey is subject to seasonal constraints because not all plant and animal species are visible throughout the year and therefore the report represents a snapshot of the site at the time of the survey only. The plant species list presented should not be considered a comprehensive list of species present.

6 BACKGROUND DATA SEARCH FINDINGS

6.1 Habitats and Site Designations

6.1.1 The site was shown not to be designated for its wildlife value by the search of existing databases. There are no nationally or internationally important wildlife sites within the search area. The closest statutory site, which is of local importance is Clayfield Copse Local Nature Reserve (LNR), which is situated approximately 30 metres to the east of the site.

6.1.2 There are three Local Wildlife Sites within one kilometre of the site: Clayfield Copse, approximately 30 metres east of the site and Reading Golf Course (east), approximately 900 metres to the west of the site, both Berkshire LWS's, and Oxfordshire LWS Blackhouse Woodland, approximately 270 metres southeast of the site. There is also Clayfield Copse Proposed Extension, a Berkshire Proposed Local Wildlife Site Extension, approximately 245 metres to the southeast of the site and Chambers Copse, a Oxfordshire Proposed Local Wildlife Site, approximately 800 metres west of the site. Approximately 720 metres to the west of the site is the Chilterns Dipslope and Plateau, a Conservation Target Area (CTA), that consists of chalk grassland and remnants of woodland and heathland.

6.2 Protected and Notable Species

6.2.1 The Record Centre's database holds no records of protected or notable species specifically for the survey site; however, there are many contemporary records (within the last 10 years) from inside the 1 kilometre search radius.

6.2.2 There is one contemporary record of common frog (*Rana temporaria*) from 2013 situated approximately 200 metres to the south of the site.

6.2.3 There are numerous contemporary records (<10 years old) of protected and notable birds inside the 1 kilometre search radius, including: brambling (*Fringilla montifringilla*), common crossbill (*Loxia curvirostra*), peregrine (*Falco peregrinus*), firecrest (*Regulus ignicapilla*), fieldfare (*Turdus pilaris*), redwing (*Turdus iliacus*), and red kite (*Milvus milvus*) – all species which are protected under Schedule 1 of the Wildlife & Countryside Act 1981 (as amended). Other notable records comprise: grey wagtail (*Motacilla cinerea*), lesser redpoll (*Acanthis cabaret*), lesser spotted woodpecker

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(*Dendrocopos minor*), marsh tit (*Poecile palustris*), mistle thrush (*Turdus viscivorus*), ring ouzel (*Turdus torquatus*), spotted flycatcher (*Muscicapa striata*), woodcock (*Scolopax rusticola*) and yellowhammer (*Emberiza citrinella*) – all species on the Birds of Conservation Concern Red List (exc. Schedule 1 species).

6.2.4 At least 10 bat species have been recorded within a 1 kilometre radius of the survey site: Daubenton's (*Myotis daubentonii*), Natterer's (*Myotis nattereri*), noctule (*Nyctalus noctula*), Leisler's (*Noctula leisleri*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), serotine (*Eptesicus serotinus*), Western Barbastelle (*Barbastella barbastellus*) and brown long-eared (*Plecotus auritus*). A European Protected Species Licence was granted approximately 132 metres to the north of the site for the destruction of a known resting site for soprano pipistrelle in 2017 (2017-32046-EPS-MIT). A licence was also granted approximately 250 metres south of the site for the destruction of a known resting site for the following bat species; brown long-eared, Daubenton's and Natterer's bat.

6.2.5 There are multiple contemporary records of badger (*Meles meles*); the closest record - approximately 420 metres east of the site- dates from 2010 and is for a badger sett in Blackhouse Woods. The most recent record is from 2012 and was of a badger sett in Clayfield Copse, approximately 470 metres east from the site. There are contemporary local records of hedgehog (*Erinaceus europaeus*) from 2014 approximately 425 metres east of the site, and from 2018 approximately 720 metres south of the site.

7 PHASE 1 HABITAT SURVEY FINDINGS

7.1 Site Description and Context

7.1.1 The site comprised of amenity grassland to the front and rear, overgrown introduced shrub beds along the front and both sides of the boundary, and scattered scrub along the rear boundary, with scattered fruit trees present to the rear of the site. The buildings on site included a pitched roof bungalow (B1), a detached garage with a corrugated sheet roof (B2), a simple corrugated shed (B3) and a wooden summer house (B4).

7.2 Habitat Overview

7.2.1 The following phase 1 habitat types were observed during the survey: amenity grassland, introduced shrubs, scattered scrub, scattered broadleaved-trees, bare ground, hard standing and buildings.

7.2.2 The habitat types are described below in detail; its distribution is shown on the site plan with associated target notes in **Appendix 2** and the site photographs are in **Appendix 1**.

7.3 Buildings (B1 – B4)

7.3.1 There were four buildings onsite, none of which are to be impacted by the proposed works. These included a bungalow with a half-hipped roof that had some features of moderate potential for bats, with some broken and lifted roof tiles, gaps underneath hipped tiles where the mortar was missing on the front elevation and lifted lead flashing around the chimney (**B1: Photograph 1 & 2**). There was also a detached garage with corrugated asbestos sheet roofing (**B2: Photograph 3**) a simple corrugated shed (**B3: Photograph 4**) and a wooden panelled summer house (**B4**); all with minimal potential for bats.

7.4 Hard standing (HS1 & HS2) & Other Habitat (OH1)

7.4.1 To the front of the site there was a concrete driveway (**HS1**), which connected to a stone slab pathway that ran between the house (**HS1; Photograph 3**) and detached garage (**B2**) and continued to a large patio to the rear of the house (**HS2; Photograph 5**). To the side of the patio (**HS1**), on the southwestern boundary there was an area of rubble (**OH1: Photograph 6**).

7.5 Amenity Grassland (AM1, AM2 & AM3)

7.5.1 There were multiple areas of amenity grassland present on site. There was a section in the front garden (**AM1; Photograph 7**), which was separated from the driveway by a short brick wall (**TN1**). Species present within the grass sward included perennial ryegrass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca rubra*), cocks foot (*Dactylis glomerata*) and creeping softgrass (*Holcus mollis*), with a few herbaceous species including speedwell (*Veronica* sp.), yarrow (*Achillea millefolium*), dandelion (*Taraxacum officinale*), daisy (*Bellis perennis*), creeping buttercup (*Ranunculus repens*) and greater plantain (*Plantago major*), and high amounts of springy turf-moss (*Rhytidiadelphus squarrosus*). In the middle of the grassland to the front of the house there was a common cotoneaster (*Cotoneaster integerrimus*) shrub (**TN2; Photograph 7**).

7.5.2 There was a second area of amenity grassland to the southern side of the house (**B1**), with similar species present as AM1, and also included false oat grass (*Arrhenatherum elatius*) and white clover (*Trifolium repens*) (**AM2; Photograph 8**). The rear of the site consisted of a large area of amenity grassland (**AM3; Photograph 9**), that was made up of similar grass species as AM2, with a higher percentage of herbaceous species and included the following; ribwort plantain (*Plantago lanceolata*), wood avens (*Geum urbanum*) and occasional ivy (*Hedera helix*). There were scattered mature apple (*Malus* sp.) trees around the edge of the grassland (**SBW1; Photograph 10 & 11**), with two tree stumps (presumed to be apple trees due to the evidence of fallen apples around the stumps) in the middle of the grassland (**TN3; Photograph 12**) with ivy (*Hedera helix*) as the dominate species of the ground cover, signifying the grassland had been heavily shaded by the trees before they were felled.

7.6 Introduced Shrubs (IS1-4)

7.6.1 There was a shrub bed on the north-eastern boundary of the site alongside the driveway (**IS1; Photograph 13**), made up of predominantly cherry laurel (*Prunus laurocerasus*) which also featured lesser perrywinkle (*Vinca minor*), toadflax (*Linaria vulgaris*), cleavers (*Galium aparine*), Himalayan honeysuckle (*Leycesteria formosa*), rush (*Juncus* sp.) and false oat grass (*Arrhenatherum elatius*). To the front of the site and continuing along the south-western boundary, there was an introduced shrub bed (**IS2;**

Photograph 14) with the following species recorded; cherry laurel (*Prunus laurocerasus*), hebe (*Hebe* sp.), hellebore (*Helleborus* sp.), japanese honeysuckle (*Lonicera japonica*), herb-robert (*Geranium robertianum*), Aaron's beard (*Hypericum calycinum*), clematis (*Clematis* sp.), shrubby honeysuckle (*Lonicera* sp.), cyclamore (*Cyclamen persicum*), willowherbs (*Epilobium* sp.), redclaws (*Escialonia* sp.), rosemary (*Salvia rosmarinus*), spindle (*Euonymus* sp.), and dog rose (*Rosa canina*), with a group of cotoneaster (*Cotoneaster* sp.) in the southern corner of the site (**TN4; Photograph 15**). There were also scrub species in the bed, including; hazel (*Corylus avellana*), ivy (*Hedera helix*), pear (*Pyrus* sp.), blackthorn (*Prunus spinosa*), creeping bent (*Agrostis stolonifera*), buddleia (*Buddleja davidii*) and bramble (*Rubus fruticosus*). There was also evidence of a mammal run, from the southern corner of the shrub bed, over the amenity grassland (AM1), through the shrub bed heading west along the boundary and over the amenity grassland (AM2) (**TN5; Photograph 8 & 16**).

7.6.2 Between the house and the garage there was a small shrub bed with a large magnolia tree (*Magnolia grandiflora*) in the middle of the bed (**IS3 & TN6; Photograph 17**) surrounded by violets (*Viola* sp.), red current (*Ribes rubrum*), false oat grass (*Arrhenatherum elatius*) and rose (*Rosa* sp.). Around the shed (B3) and summer house (B4) there was a large section of cotoneaster (*Cotoneaster* sp.) (**TN7; Photograph 18**). Surrounding the patio (**HS2**) there were introduced shrub beds (**IS4; Photograph 19 & 20**) that continued along the boundaries either side of the amenity grassland to the rear of the site (**AM3**). These were overgrown and were made up of the following species: hawthorn (*Crataegus monogyna*), St John's wort (*Hypericum perforatum*), ivy (*Hedera helix*), toadflax (*Linaria vulgaris*), garden privet (*Ligustrum ovalifolium*), wood avens (*Geum urbanum*), dogwood (*Cornus* sp.), shrubby honeysuckle (*Lonicera* sp.), hebe (*Hebe* sp.) and bramble (*Rubus fruticosus*).

7.7 Scattered Scrub (SS1)

7.7.1 The rear boundary of the site consisted of a wooden fence with a strip of light scattered scrub in front of it (**SS1; Photograph 21**) consisting of ash saplings (*Fraxinus excelsior*), hazel (*Corylus avellana*), sycamore (*Acer pseudoplatanus*), oak sapling (*Quercus robur*), bramble (*Rubus fruticosus*), and holly (*Ilex aquifolium*) with a ground cover of ivy (*Hedera helix*).

8 DISCUSSION

8.1 Assessment of Existing Ecological Value

Habitats

- 8.1.1** The survey site - which during a search of pre-existing data has been shown not to be statutorily and non-statutorily designated for its wildlife interest and therefore not of recorded international, national or county level conservation importance - comprised predominantly of amenity grassland bordered by introduced shrubs and scattered mature fruit trees. These habitats supported a relatively low diversity of commonly occurring plants of no conservation importance typical of residential garden habitats throughout lowland England, and as such the site was considered to be of negligible ecological value.
- 8.1.2** The site featured areas of overgrown introduced shrub beds to the front and along the boundaries of the site that have some local ecological value, offering nesting opportunities for birds, cover and foraging for mammals, and potential cover for reptiles and amphibians. The scattered fruit trees towards the rear of the site offer foraging opportunities for birds and bats and form a part of a connected corridor to neighbouring gardens and the nearby Clayfield Copse woodland to the east of the site.
- 8.1.3** Garden habitats can support protected and notable reptile and amphibian species, but the habitats present on site i.e., the hard standing, amenity grassland and introduced shrub, provided limited habitats of value to reptiles and amphibians in their current condition.

Bats

- 8.1.4** At least ten bat species have been recorded within 1 kilometre of the site, indicating their likely presence in the near vicinity of the site. The overgrown introduced shrub beds and scattered trees onsite offer suitable commuting and foraging habitat for bats; however, in the context of nearby woodland habitats, are of negligible importance to local bat populations. the majority of the trees will be retained, and the removal of a few trees will not dramatically reduce the foraging opportunities for bats. The shrubs to be removed along the southwestern boundary of the site offered limited opportunities for roosting bats.

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The bungalow (**B1**) was assessed to have moderate bat roosting potential due to the presence of external features,.

Hazel Dormice

- 8.1.5** The introduced shrub bed eastern and southwestern boundary, offers potential foraging and nesting habitat for hazel dormouse (*Muscardinus avellanarius*) due to the presence of hazel (*Corylus avellana*) stools. However, the shrub bed is fragmented and is separated from Clayfield Copse woodland to the east by a main road. There are no records of hazel dormice within a 1 kilometre radius of the site, and therefore the likelihood of their presence on site is considered to be negligible.

Amphibians

- 8.1.6** There are no waterbodies on site or within 500 metres of the site. TVERC holds a contemporary record for the common frog (*Rana temporaria*) and historical records of common toad (*Bufo bufo*) but no records for the presence of great crested newts within a 1 kilometre radius of the site. Terrestrial habitat suitable for amphibians on site is limited to the shrub beds around the boundary and patio, which provide poor habitats for amphibians currently.

Badgers and other mammals

- 8.1.7** There were local records of badgers (*Meles meles*) within 1 kilometre of the site, with setts present in Clayfield Copse and Blackhouse Woods to the east of the site; however, no badger sett entrances were found on site.
- 8.1.8** There was a regularly used mammal run (**TN5**) present along the southwestern side of the site, seen starting from the southern corner, traveling through the introduced shrub bed (**IS2**), continuing over the amenity grassland (**AM1 & AM2**) to the front and side of the bungalow and towards the introduced shrub bed in the middle of the site (**IS4**). The introduced shrubs offer some foraging habitat for small mammals including species of principal importance for conservation such as the hedgehog (*Erinaceus europaeus*).

Nesting birds

- 8.1.9** The scattered trees and shrubs provide nesting and foraging opportunities for common and widespread bird species, including the potential for notable species, such as the locally recorded firecrest (*Regulus ignicapillus*).

Reptiles

- 8.1.10** The hard standing and amenity grassland covering most of the site do not provide a habitat suitable for reptiles. The introduced shrubs offer very limited potential foraging and sheltering opportunities for reptiles such as slow worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and common lizard (*Zootoca vivipara*), which are Species of Principle Importance (SPI) and legally protected. Furthermore, there are no pre-existing reptile records within the 1 kilometre search radius of the site.

8.2 Impact of Proposals

Statutory Designated Sites

- 8.2.1** The site is 30 metres from Clayfield Copse and Blackhouse Woods— both LWS. The proposals will have no impact on these locally important sites.
- 8.2.2** Harpsden Woods – a SSSI – is located 4.5 kilometres to the north east of the site. Given the distance from the SSSI, it is predicted that no significant direct impacts on this SSSI will occur during the construction phase of the proposed development. The site falls within the edge of the SSSI Impact Risk Zone but the specific details of likely impacts within the Zone indicates that rural residential development is unlikely to have an adverse impact on the SSSI.

Habitats

- 8.2.3** The proposals will result in the clearance of amenity grassland, introduced shrubs, a few scattered trees and scattered scrub towards the rear of the site. with a new site access created through the introduced shrub bed on the southwestern boundary.
- 8.2.4** The grassland and planted shrubs had very limited ecological value, and therefore the development is considered highly unlikely to have any impact on habitats of conservation importance.

Bats

- 8.2.5** The bungalow, which is moderate bat roost potential, will not to be impacted by the proposed works.
- 8.2.6** The small amount of introduced shrubs and scattered trees on the site to be removed, are not thought to have a negative impact on bats' foraging and commuting potential. The scattered fruit trees to be removed on the north eastern boundary had no suitable features for use by bats.
- 8.2.7** Artificial lighting has been shown to alter the activity of nocturnal species and certain bat species have been found to be especially averse to lighting and actively avoid lit areas. Bats that emerge later in the evening, such as *Plecotus* and *Myotis* species, have a reduced tolerance to lighting. As the intensity of light increases, even species that are relatively light tolerant, such as *Pipistrellus* species, are delayed in their emergence from their roosts (Fure 2006). Pipistrelle bats can cope with light levels above 14 lux whilst light-sensitive species such as Daubenton's bat struggle with light levels above 1 lux (Fure 2006). The proposals are likely to lead to a slight increase in light levels; however, there would be scope to avoid and mitigate any impacts with appropriate lighting (refer to recommendations in **Section 9.2**).

Hazel Dormice

- 8.2.8** Dormice are highly unlikely to be present on site and therefore the development is considered highly unlikely to have an impact on dormice.

Amphibians and Reptiles

- 8.2.9** The site does not have any waterbodies and only limited terrestrial habitat suitable for amphibians and reptiles and is likely to only be used by individual animals to traverse the site along the introduced shrubs, therefore adverse impacts on reptiles are considered to be highly unlikely. The works are small in scale and in the long-term, the ecological functionality of local reptile populations would not be adversely impacted by the works; a precautionary approach to any hedgerow removal is recommended to avoid any harm to individual animals (refer to recommendations in **Section 9**).

Badgers and mammals

- 8.2.10** There was a well-trodden mammal run observed along the southwestern boundary; however, there was no further evidence of badgers found. Given local records of their presence near the site, badgers are likely to use the introduced shrubs and fruit trees as a foraging resource. However, the removal of a section of hedgerow for access to the new building would not result in the disturbance of a sett. As mammals have been found to use the site boundary, precautions must be adhered to avoid disturbance of any individuals using the site (refer to **Section 9**).

Nesting birds

- 8.2.11** The scattered trees and introduced shrubs on site can provide nesting opportunities for common and widespread bird species. The length of shrubs proposed for removal could reduce the nesting opportunities for birds on site. Timing precautions for the removal of the trees and shrubs must be adhered to in order to avoid disturbing nesting birds (refer to recommendations in **Section 9**).

9 RECOMMENDATIONS

9.1 Habitats

- 9.1.1** The cotoneaster (*Cotoneaster* sp.) shrubs on site (TN4 and TN7) should be removed and destroyed correctly, either dug up and chipped or burnt on site, or removed to licensed landfill as controlled waste, to prevent the spread of the species (which is listed under Schedule 9 of the Wildlife and Countryside Act, which makes it illegal to distribute or allow the spread of cotoneaster species into the wild).

9.2 Bats

- 9.2.1** During construction, lighting should be kept to a minimum and if security lighting is required, this should be controlled by passive infra-red motion-sensors with no light spillage on to any existing linear features likely used by bats, such as the existing hedgerow and scattered trees.

- 9.2.2** The site should avoid external lighting, but if lighting is essential, dark corridors should be retained along boundaries thereby maintaining foraging and commuting corridors for bats across the site. Methods to limit the impact of any external lighting should be used including using low intensity lighting with low UV lamps e.g., warm white LEDs, using infra-red motion-sensors so that lighting is only operated when required. If brighter lighting is required luminaires or other directional light accessories should be used to ensure that light spillage, particularly onto hedgerows and areas of proposed planting/landscaping, is avoided (BCT and ILE, 2008). Turning off lighting at night will avoid extended periods of time when areas would be lit and this can be tailored to suit human health and safety as well as wildlife needs.

9.3 Amphibians and Reptiles

- 9.3.1** In order to avoid contravening the legislation and harming individual animals during the works, the following precautionary avoidance measures should be adopted during the course of the construction:
- The areas of grassland within the construction area should be kept short prior to the commencement of site work to minimise the likelihood of amphibians and reptiles being present during excavations.

- During construction, any open excavations and trenches should be backfilled before nightfall, or alternatively, escape ramps be installed to allow animals to escape if they become trapped;
- Any building materials or materials excavated during the development that need to be stored on site prior to use/disposal should be positioned on hard standing and raised off the ground on pallets or in skips to avoid them providing temporary resting places or hibernation sites for amphibians or reptiles.

9.4 Mammals

- 9.4.1** Prior to the removal of the section of introduced shrubs (IS2 and IS4), the area should be checked for mammal entrances to confirm that there has been no change in the activity of mammal's onsite. If any mammal entrances are found, an ecologist should be called to site to provide further advice. If there has been a change in the status and location of activity on site, clearance and construction should begin only once the ecologist has provided further written advice, and if necessary, a Natural England badger mitigation licence has been secured.

9.5 Nesting Birds

- 9.5.1** The section of introduced shrubs to be removed to allow for a new site access and any trees and shrubs should be removed outside of the bird nesting season (March to August) or if unavoidable should be carried out after an ecologist has inspected the trees and shrubs and confirmed an absence of nesting birds.

9.6 Proposed Ecological Enhancements and Creation

- 9.6.1** The development proposals provide opportunities for the enhancement of the site's biodiversity value to achieve a net gain. The inclusion of the following recommendations would be of ecological benefit and be in line with the National Planning Policy Framework (NPPF):

- The plans for areas of new landscaping should seek to enhance the ecological value of the site by making use of native plant species of local provenance. Additionally, the aim of the landscaping should be to increase the structural and species diversity of the site by planting native woody species in hedging and shrub beds;

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- The new building could include features suitable wildlife associated with suburban areas such as nesting birds and roosting bats by including purpose built boxes within the walls for example;
- If fencing is to be used to subdivide the site, it should be open such as post and rail or have gaps beneath at least (13cm square) to allow the continued free movement of wildlife such as hedgehogs and other wildlife;
- Trees to be planted across the site, to increase the structural and species diversity of the site, should make use as much as possible of native plant species of local provenance; and
- The site's landscaped grounds could include features that provide foraging opportunities and cover for small mammals, amphibians and reptiles such as rockeries and partially buried log piles.

10 REFERENCES

Bat Conservation Trust and Institute of Lighting Engineers (ILE) (2018). *Bats and Artificial Lighting in the UK*. Bats and the Built Environment Series. Guidance Note 08/18.

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Mitchell-Jones, A. J. (2004). *Bat mitigation guidelines*. English Nature, Peterborough.

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APPENDIX 1 – SITE PHOTOGRAPHS



1. The front elevation of the bungalow, featuring a half-hipped eastern gable (B1).



2. The rear elevation of the bungalow (B1), featuring a hipped roof with broken and lifted roof tiles.



3. Detached garage (B2) with corrugated roof sheeting; concrete driveway and pathway between the house and the garage (HS1).



4. Simple corrugated shed (B3) to the rear of the garage.



5. Large patio to the rear of the bungalow (HS2).



6. Area of bare ground (BG1) to the side of the patio (HS2), with stone and brick rubble.



7. Amenity grassland to the front of the site, a small brick wall separating it from the driveway and a cotoneaster shrub in the middle (AM1, TN1 & TN2).



8. Amenity grassland to the side of the bungalow (AM2); introduced shrub along the southwestern boundary (IS2); mammal run path (TN5).



9. Amenity grassland to the rear of the site (AM3).



10. Scattered apple trees around the western side of the amenity grassland (SBW1).



11. Scattered apple trees around the amenity grassland (SBW1).



12. Tree stumps remaining from felled apple trees in the middle of the amenity grassland to the rear of the site (TN3).



13. Introduced shrub bed along the north eastern boundary to the front of the site (IS1).



14. Introduced shrub bed to the front of the site and continuing along the southwestern boundary (IS2).



15. Patch of cotoneaster (*Cotoneaster sp*) within IS2, in the southern corner of the site (TN4).



16. Well-trod mammal track going from the southern corner of the site, across the introduced shrub bed (IS2) and amenity grassland (AM1) (TN5).



17. Small introduced shrub bed to the front of the bungalow (IS3); mature magnolia tree in the middle (TN6).



18. Large area of cotoneaster beside the patio (HS2), and between the shed (B3) and summer house (B4).



19. Introduced shrub around the patio (HS2).



20. Introduced shrub (IS4) viewed from the west, around the amenity grassland (AM3).



21. Scattered scrub along the fence line to the rear of the site (SS1).

APPENDIX 2 - PHASE 1 HABITAT MAP AND HABITAT DESCRIPTIONS



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Habitat Descriptions and Target Notes

Habitat Code	Comments
AM1 and TN1 & TN2	Amenity grassland (Photograph 7) – Area of grassland to the front of the bungalow with introduced shrubs on the eastern and southern sides and the concrete driveway on the north side. Species present within the grass sward including: perennial ryegrass (<i>Lolium perenne</i>), Yorkshire fog (<i>Holcus lanatus</i>), red fescue (<i>Festuca rubra</i>), cocks foot (<i>Dactylis glomerata</i>) and creeping softgrass (<i>Holcus mollis</i>), with a few herbaceous species including speedwell (<i>Veronica</i> sp.), yarrow (<i>Achillea millefolium</i>), dandelion (<i>Taraxacum officinale</i>), daisy (<i>Bellis perennis</i>), creeping buttercup (<i>Ranunculus repens</i>) and greater plantain (<i>Plantago major</i>), and high amounts of springy turf-moss (<i>Rhytidiadelphus squarrosus</i>).
AM2	Amenity grassland (Photograph 8) – To the southern side of the house there was a small area of amenity grassland between introduced shrub beds. Species present included: perennial ryegrass (<i>Lolium perenne</i>), Yorkshire fog (<i>Holcus lanatus</i>), red fescue (<i>Festuca rubra</i>), cock's foot (<i>Dactylis glomerata</i>), creeping softgrass (<i>Holcus mollis</i>), yarrow (<i>Achillea millefolium</i>), dandelion (<i>Taraxacum officinale</i>), false oat grass (<i>Arrhenatherum elatius</i>) and clover (<i>Trifolium repens</i>) and springy turf-moss (<i>Rhytidiadelphus squarrosus</i>).
AM3, TN3 & SBW1	Amenity grassland – (Photographs 9, 10, 11 & 12) – The rear of the site consisted of amenity grassland (AM3), with scattered fruit trees around the grassland (SBW1), with a higher coverage of ivy (<i>Hedera helix</i>) surrounding two tree stumps in the centre (TN3). The grassland had the following species present in the sward; perennial ryegrass (<i>Lolium perenne</i>), Yorkshire fog (<i>Holcus lanatus</i>), red fescue (<i>Festuca rubra</i>), cock's foot (<i>Dactylis glomerata</i>), ribwort plantain (<i>Plantago lanceolata</i>), wood avens (<i>Geum urbanum</i>) and occasional ivy (<i>Hedera helix</i>).
B1	Building – Bungalow (Photographs 1 & 2) – Hipped roof building, with a half-hipped front gable. Moderate bat potential under lifted and broken roof tiles, under missing mortar beneath hipped tiles and under lead flashing around the chimney.
B2	Building – Garage (Photograph 3) – Rendered blockwork detached garage with corrugated asbestos sheet roofing. Low bat potential.
B3	Building – Simple corrugated shed (Photograph 4). No bat potential.
B4	Building – Wooden summer house. Tight wooden cladding, with tight fitted bitumen roofing felt. No bat potential.
HS1 & HS2	Hard standing – (Photographs 3 and 5). Concrete driveway to the front of the site, which connected to a stone slab pathway that ran between the house and detached garage and continued to a large patio to the rear of the house.
IS1	Introduced shrubs - (Photograph 13) . Along the northern side of the driveway (HS1) there was a section of introduced shrub. Species present included predominantly cherry laurel (<i>Prunus laurocerasus</i>) with lesser perrywinkle (<i>Vinca minor</i>), toadflax (<i>Linaria vulgaris</i>), cleavers (<i>Galium aparine</i>), Himalayan honeysuckle (<i>Leycesteria formosa</i>), rush (<i>Juncaceae</i> sp.) and false oat grass (<i>Arrhenatherum elatius</i>).
IS2 and TN4	Introduced shrubs – (Photograph 14 & 15) . To the front of the site and continuing along the south-western boundary, there was an introduced shrub bed (IS2) with the following species recorded; cherry laurel (<i>Prunus laurocerasus</i>), hebe (<i>Hebe</i> sp.), hellebore (<i>Helleborus</i> sp.), japanese honeysuckle (<i>Lonicera japonica</i>), herb-robert (<i>Geranium robertianum</i>), Aaron's beard (<i>Hypericum calycinum</i>), clematis (<i>Clematis</i>), shrubby honeysuckle (<i>Lonicera</i> sp.) <i>Cyclamen persicum</i> , willowherbs (<i>Epilobium</i> sp.), redclaws (<i>Escalonia</i> sp.), rosemary (<i>Salvia rosmarinus</i>), spindle (<i>Euonymus</i> sp.), hazel (<i>Corylus avellana</i>), ivy (<i>Hedera helix</i>), pear (<i>Pyrus</i> sp.), blackthorn (<i>Prunus spinosa</i>), creeping bent (<i>Agrostis stolonifera</i>), buddleia (<i>Buddleja davidii</i>), bramble (<i>Rubus fruticosus</i>) and dog rose (<i>Rosa canina</i>), with a group of cotoneaster (<i>Cotoneaster</i> sp.) in the southern corner of the site (TN4).
IS3 and TN6	Introduced shrubs - (Photograph 17) . Between the house (B1) and the garage (B2) there was a small shrub bed (IS3) with a large magnolia tree (<i>Magnolia grandiflora</i>) in the middle of the bed (TN6) surrounded by violets (<i>Viola</i> sp.), redcurrent (<i>Ribes rubrum</i>), false oat grass (<i>Arrhenatherum elatius</i>) and rose (<i>Rosa</i> sp.).
IS4	Introduced shrubs - (Photograph 19 & 20) . Surrounding the patio (HS2) there were introduced shrub beds (IS4) that continued along the boundaries either side of the amenity grassland to the rear of the site (AM3). These were overgrown and were made up of the following species: hawthorn (<i>Crataegus monogyna</i>), St John's wort (<i>Hypericum perforatum</i>), ivy (<i>Hedera helix</i>), toadflax (<i>Linaria vulgaris</i>), garden privet (<i>Ligustrum ovalifolium</i>), wood avens (<i>Geum urbanum</i>), dogwood (<i>Cornus</i> sp.), shrubby honeysuckle (<i>Lonicera</i> sp), hebe (<i>Hebe</i> sp.) and bramble (<i>Rubus fruticosus</i>).

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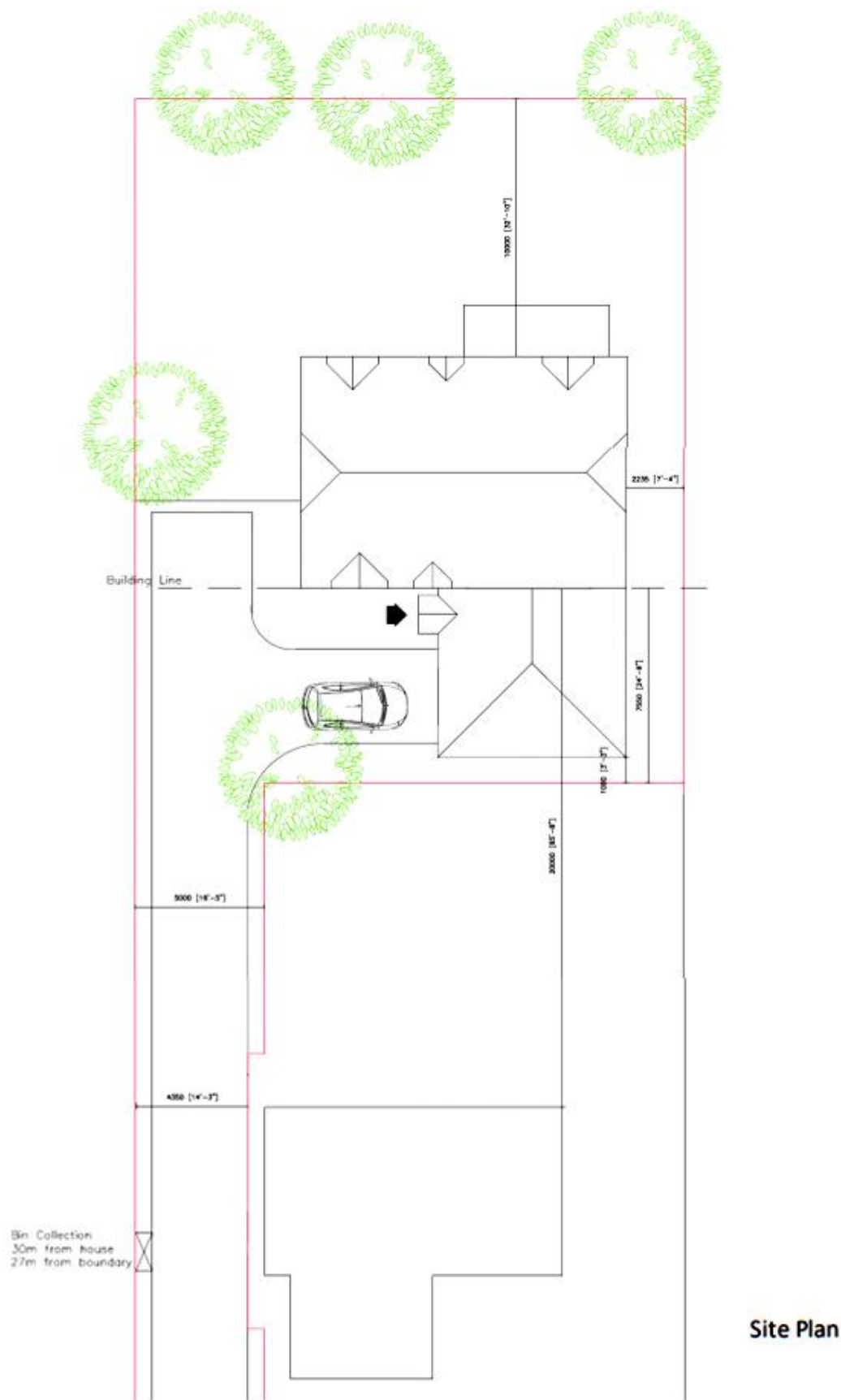
SS1	<u>Scattered Scrub</u> - (Photograph 21). The rear boundary of the site consisted of a wooden fence with a strip of light scattered scrub in front of it (SS1) consisting of ash saplings (<i>Fraxinus excelsior</i>), hazel (<i>Corylus avellana</i>), sycamore (<i>Acer pseudoplatanus</i>), oak sapling (<i>Quercus robur</i>), bramble (<i>Rubus fruticosus</i>), and holly (<i>Ilex aquifolium</i>) with a ground cover of ivy (<i>Hedera helix</i>).
OH1	<u>Other Habitats</u> – (Photograph 6). Area of stone and brick rubble.
TN5	<u>Target note</u> - (Photograph 8 & 16).
TN7	<u>Target note</u> – (Photograph 18). A large section of cotoneaster (<i>Cotoneaster sp</i>) adjacent to the patio (HS2).

APPENDIX 3 - PLANT SPECIES LIST RECORDED ON SITE

Plant common name	Scientific name
Aaron's beard	<i>Hypericum calycinum</i>
Apple	<i>Malus</i> sp.
Ash	<i>Fraxinus excelsior</i>
Blackthorn	<i>Prunus spinosa</i>
Bramble	<i>Rubus fruticosus</i> agg.
Buddleia	<i>Buddleja davidii</i>
Cherry laurel	<i>Prunus laurocerasus</i>
Cleavers	<i>Galium aparine</i>
Clematis	<i>Clematis</i> sp.
Clover	<i>Trifolium repens</i>
Cocks foot	<i>Dactylis glomerata</i>
Cotoneaster	<i>Cotoneaster</i> sp.
Creeping bent	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping softgrass	<i>Holcus mollis</i>
Cyclamore	<i>Cyclamen persicum</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Dog rose	<i>Rosa canina</i>
Dogwood	<i>Cornus</i> sp.
Elm	<i>Ulmus procera</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Garden privet	<i>Ligustrum ovalifolium</i>
Greater plantain	<i>Plantago major</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Hebe	<i>Hebe</i> sp.
Hellebore	<i>Helleborus</i> sp.
Herb-robert	<i>Geranium robertianum</i>
Himalayan honeysuckle	<i>Leycesteria formosa</i>
Holly	<i>Ilex aquifolium</i>
Ivy	<i>Hedera helix</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Lesser perrywinkle	<i>Vinca minor</i>
Magnolia tree	<i>Magnolia grandiflora</i>
Oak	<i>Quercus robur</i>
Pear	<i>Pyrus</i> sp.
Perennial ryegrass	<i>Lolium perenne</i>
Red fescue	<i>Festuca rubra</i>
Redclaws	<i>Escialonia</i> sp.
Redcurrent	<i>Ribes rubrum</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rose	<i>Rosa</i> sp.
Rosemary	<i>Salvia rosmarinus</i>
Rush	<i>Juncaceae</i> sp.
Shrubby honeysuckle	<i>Lonicera</i> sp.
Speedwell	<i>Veronica</i> sp.
Spindle	<i>Euonymus</i> sp.
Springy turf-moss	<i>Rhytidiadelphus squarrosus</i>
St John's wort	<i>Hypericum perforatum</i>
Sycamore	<i>Acer pseudoplatanus</i>
Toadflax	<i>Linaria vulgaris</i>
Violets	<i>Viola</i> sp.
White clover	<i>Trifolium repens</i>
Willowherbs	<i>Epilobium</i> sp.
Wood avens	<i>Geum urbanum</i>
Yarrow	<i>Achillea millefolium</i>
Yew	<i>Taxus baccata</i>
Yorkshire fog	<i>Holcus lanatus</i>

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APPENDIX 4 – PROPOSED SITE LAYOUT



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Notes:
 1. All dimensions are to the face of the work unless otherwise stated.
 2. The drawings are to be used for information only and are not to be used for construction.



FRONT ELEVATION 1:100

SIDE ELEVATION 1:100



REAR ELEVATION 1:100

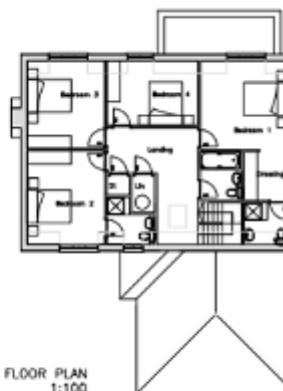
SIDE ELEVATION 1:100



GROUND FLOOR PLAN 1:100



FIRST FLOOR PLAN 1:100



LAND TO REAR OF
 65 KILN ROAD
 READING
 BERKS

SILAM CONSTRUCTION

PRELIMINARY DRAWING

SCALE 1:100 DATE 14.09.2020



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PROJECT 135 DWG. 01

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 17/01/2021