

**LAND TO THE REAR OF 27-43 BLENHEIM ROAD,  
CAVERSHAM, READING, BERKSHIRE**

**ECOLOGICAL IMPACT ASSESSMENT**

**Final Document**

March 2019

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Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EcIA • Management Plans  
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

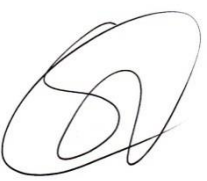
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## ECOSA Quality Assurance Record

This report has been produced in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing 2017 (CIEEM, 2017). The Ecological Impact Assessment and report has been prepared in line with the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2016) and survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance (CIEEM, 2017).

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**Map 1** Site Location Plan

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## EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by First Avenue Estates to undertake an Ecological Impact Assessment to support a planning application for the redevelopment of Land to the Rear of 27-43 Blenheim Road, Caversham. The site comprises woodland and scrub with a grass access track. The proposals entail the erection of three residential dwellings and associated garden landscaping.

The main findings of the Ecological Impact Assessment are:

- The woodland present on site comprises secondary regrowth largely comprising sycamore and non-native species. The woodland is classified as the Habitat of Principal Importance lowland mixed deciduous woodland. Other habitats comprise scattered scrub and poor semi-improved grassland;
- The site provides suitable habitat for foraging and commuting bats, resident and foraging badger, breeding birds, limited suitable habitat for reptiles and suitable habitat for foraging and hibernating European hedgehog;
- The proposals have potential to result in adverse impacts on the species / species groups listed above through harm, loss of habitat and disturbance.
- The loss of habitats on site will be suitably compensated for through the provision of native species planting and sowing of grassland;
- A precautionary method of works is recommended in respect of reptiles as a full suite of surveys is not considered necessary due to the limited extent of suitable habitat for the species group;
- Enhancement measures will be included in the form of bat roosting and bird nesting boxes and reptile hibernacula;
- Given the impacts identified, and the mitigation and compensation measures proposed it is considered that the proposals accord with all relevant local and national planning policy.
- If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 12 months of the date of the most recent relevant survey.

## **1.0 INTRODUCTION**

### **1.1 Background**

Ecological Survey & Assessment Limited (ECOSA) have been appointed by First Avenue Estates to undertake an Ecological Impact Assessment to support a planning application for the development of Land to the Rear of 27-43 Blenheim Road, Caversham, Reading, Berkshire RG4 7RT (hereafter referred to as the site).

A previous planning application was submitted to Reading Borough Council on 17<sup>th</sup> August 2018 (planning reference 181471). The previous application was for the construction of five residential units within the site. The application was supported by a Preliminary Ecological Appraisal (Calyx Environmental Limited, 2018). The application was subsequently withdrawn in part due to comments from the Reading Borough Council Ecologist who raised concerns with the proposals in part due to the 'loss of woodland and fragmentation of the block of gardens'.

The developers have considered the comments from the Reading Borough Council Ecologist and reduced the number of proposed units to reduce the pressure on surrounding woodland and adjacent residential gardens.

### **1.2 The Site**

The site is approximately 0.21 hectares and is located in Caversham, Berkshire, centred on National Grid Reference (NGR) SU 71058 75364 (**Map 1**).

The site comprises woodland with a grass access strip to the east which allows access onto Blenheim Road.

The site is situated within a residential area with dwellings to the east and west with associated garden landscaping. Residential gardens are also situated to the north and south of the site.

### **1.3 Aims and Scope of Report**

The information within this report is based on a field survey and desktop study carried out on 26<sup>th</sup> February 2019. The report describes the habitats and species (hereafter referred to as ecological features) within the site's Zone of Influence (Paragraph 3.2), and provides a detailed assessment of potential ecological effects of the proposed development of the site. It identifies the need for any measures to avoid, mitigate or compensate for significant adverse effects<sup>1</sup> on habitats and species and outlines

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<sup>1</sup> For the purposes of this assessment a 'significant' adverse effect is one which will have an adverse effect on the ecological feature at the site level or higher.

enhancements to the site's ecology to be implemented as part of the development. The objectives of the assessment are:

- To provide baseline information on ecological features within the site's Zone of Influence;
- To assess, characterise and quantify the effects on ecological features, including cumulative effects, and identify effects in the absence of any mitigation;
- To set out measures to avoid, mitigate and compensate for significant ecological effects in accordance with the 'mitigation hierarchy'<sup>2</sup>; and
- To outline opportunities for enhancement in order to achieve a net gain, where possible, for biodiversity.

#### **1.4 Site Proposals**

Proposals are for the construction of three residential units within the northern section of the site with access entering Blenheim Road to the east and associated garden landscaping. An area of open greenspace is to be located to the south of the site.

The Ecological Impact Assessment is based on the proposals plan produced by Key Land Estates, dated 6<sup>th</sup> February 2019 (Drawing No. K1751-09-103 revision B) (**Appendix 1**).

Planning permission is being sought during March 2019 with construction proposed to commence soon after permission has been granted.

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<sup>2</sup> In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2016) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

## 2.0 PLANNING POLICY CONTEXT

### 2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Reading Borough Council administrative area. This information is then used to assess the compliance of the scheme in relation to relevant planning policy and where necessary used to inform the necessary mitigation, compensation and enhancement measures (see Section 5.0).

### 2.2 Planning Policy

#### 2.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with the revised NPPF published in February 2019. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 11 of the NPPF *"Plans and decisions should apply a presumption in favour of sustainable development"*. However, Paragraph 177 goes on to state that *"The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site<sup>3</sup> is being planned or determined"*.

The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 170 states that the planning system should contribute to and enhance the natural environment by *"...minimising impacts on biodiversity and providing net gains in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures..."*.

A number of principles are set out in Paragraph 175, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Specific reference is also made to the protection of irreplaceable habitats<sup>4</sup>. Where loss to irreplaceable habitats occur planning permission would normally be refused unless there are wholly exceptional reasons and

<sup>3</sup> The NPPF defines a habitats site as *"Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites."*

<sup>4</sup> The NPPF defines irreplaceable habitats as *"Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen."*

an adequate compensation strategy is in place. Paragraph 175 also states *“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”*. Protection of sites proposed as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states *“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”*. Whilst paragraph 99 states *“it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted”*.

### **2.2.2 Local Policy**

Local planning policy for Reading Borough Council is provided by the Core Strategy (Adopted 2008, altered January 2015). A single policy makes specific reference to ecology and biodiversity:

#### *Biodiversity and Geology CS36: Biodiversity and Geology*

- Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.
- On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:
  - i. The need for development clearly outweighs the need to protect the value of the site; and
  - ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.
- Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

- Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

Within the Emerging Local Plan Policy EN12:Biodiversity and the Green Network states that:

- Permission will not be granted for development that negatively affects sites with identified interest or fragments the overall Green Network. The Green Network comprises sites with identified biodiversity interest, such as Local Wildlife Sites, Local Nature Reserves, Priority and Biodiversity Action Plan Habitats and the River Thames with all of its Tributaries, and areas with potential for biodiversity value which stitch the Green Network together.
- On all sites, development should not result in a net loss of biodiversity and should provide a net gain for biodiversity wherever possible.
- 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 avoided, mitigated or compensated then new development will provide off-site compensation to ensure that there is 'no net loss' of biodiversity.

A new local plan, which will replace the Core Strategy, Reading Central Area Action Plan and Sites and Detailed Policies Document, is currently in development.

## **3.0 METHODS**

### **3.1 Introduction**

This section details the methods used during the field survey and desktop study carried out as part of the Ecological Impact Assessment. Any significant limitations to the assessment are also considered.

### **3.2 Zone of Influence**

To define the total extent of the study area for this assessment (Zone of Influence<sup>5</sup>), the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the assessment (i.e. desktop study and field survey) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the appraisal, taking into account the characteristics of the site subject to appraisal, its surroundings and the nature and scope of the proposals.

### **3.3 Scoping**

Protected species considered within this appraisal are those species/species groups considered likely to be encountered given the geographical location and context of the site. These are discussed within the results section (Section 4.0) of the current report. Where such a species is unlikely to be present on site a justification for likely absence is provided. Species considered likely absent from the site are not then considered in the assessment of ecological effects and mitigation measures section (Section 5.0) of this report.

### **3.4 Desk Study**

A full biological record centre desktop study was not undertaken as part of this assessment. This was not considered necessary given the limited scale of impacts and the nature of on-site and surrounding habitats.

#### **3.4.1 Multi-Agency Geographic Information for the Countryside**

The Multi-Agency Geographic Information for the Countryside (MAGIC) (DEFRA, 2019) database was reviewed on 28<sup>th</sup> March 2019 to establish the location of statutory designated sites located within the vicinity of the site. This included a search for all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Wetlands of International Importance (Ramsar sites), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) within one kilometre of the site. Where appropriate, the desk study search area has been extended to take account of any

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<sup>5</sup> The Zone of Influence (Zoi), as defined by CIEEM, is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities.

appropriate statutory designated sites which need consideration in terms of potential in-direct effects and which support particularly mobile species<sup>6</sup>. The Impact Risk Zones (IRZ) were also obtained from MAGIC, which are used to help guide and assess planning applications for likely effects on SSSIs.

A search for Habitats of Principal Importance for the Conservation of diversity in England notified under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and as listed in the England Biodiversity List (**Appendix 4**) were searched for either within or directly adjacent to the site.

Sites within two kilometres of the site boundary where European Protected Species Mitigation (EPSM) licences have been granted were reviewed. This information allows a greater understanding of the potential for European protected species to be present in the local area.

### **3.4.2 Other Sources of Information**

Online mapping resources, at an appropriate scale, were used to identify the presence of habitats such as woodland blocks, ponds, watercourses and hedgerows, in the vicinity of the site. These habitats may offer resources and connectivity between the site and suitable habitat in the local area, which may be exploited by local species populations.

The presence of ponds or other waterbodies within a 500 metre radius of the site in particular are noted in relation to great crested newt. The 500 metre radius is a standardised search radius to assist in the assessment of the suitability of a site and its surrounding habitat to support this species, based on current Natural England guidance (English Nature, 2001)

Information has also been taken from the previous Preliminary Ecological Appraisal Report detailing the Preliminary Ecological Appraisal and endoscope survey undertaken at the site on 12<sup>th</sup> June 2018 and 28<sup>th</sup> June 2018 (Calyx Environmental Limited, 2018).

## **3.5 Field Survey**

The field survey broadly followed standard Phase 1 habitat survey methodology (JNCC, 2010) and included a search for evidence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM

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<sup>6</sup> Search areas for bat records are based upon information contained within Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London. Relevant distances for consideration of impacts on SPAs, SACs, Ramsar sites have been based on current published guidance available through web-based sources.

(CIEEM, 2017). The field survey covered all accessible areas of the site, including boundary features

### **3.6 Phase 1 Habitat Survey**

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 habitat survey methodology (JNCC, 2010)<sup>7</sup>. This involved identification of broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate. A list of characteristic plant species for each vegetation type was compiled and any invasive species<sup>8</sup> encountered as an incidental result of the survey recorded.

#### **3.6.1 Protected and Notable Species Appraisal**

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. The following species/species groups were considered during the appraisal.

##### Bats

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2016). An assessment was made of the suitability of trees on the site and immediately on the site boundary to support roosting bats based on the presence of Potential Roosting Features such as holes, cracks, splits, loose bark and ivy cladding. An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The assessment of the suitability of the site to support roosting, foraging and commuting bats is based on a four-point scale as detailed in **Appendix 5**.

##### Otter

The otter appraisal was based on an assessment of the suitability of the habitat present within the site to support otter by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), proximity of the site to freshwater and potential important feeding resources (such as fisheries), presence of habitat features which could provide opportunities for resting places and/or holts (such as tunnels, hollows at the base of trees and presence of dense, undisturbed habitat). During the survey attention was paid to the presence of evidence such as spraints, feeding remains, footprints and slides.

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<sup>7</sup> The standard JNCC Phase 1 habitat survey methodology involves the production of a Phase 1 map showing the location and extent of habitat types, however, given the limited size and complexity of the site surveyed a Phase 1 habitat map has not been produced in this instance.

<sup>8</sup> Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

### Badger

The survey involved an assessment of the suitability of the site to support badger. Evidence of the species was recorded as an incidental result of the Phase 1 habitat survey and included locating badger setts, paths, and signs of territorial activity such as latrine sites.

### Hazel Dormouse

The appraisal for the suitability of the site to support hazel dormouse was based on an assessment of habitat features that may indicate that the species is present. This includes the presence of key food sources such as hazel and bramble, or plants used as nesting material such as honeysuckle and clematis. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features in determining the suitability of the site for hazel dormouse.

### Water Vole

The water vole appraisal was based on an assessment of the suitability of the habitat present within the site to support water vole by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), bank structure and the bank side vegetation. Water voles generally require sloping banks in which to burrow and well-developed bank side vegetation to provide shelter and food. During the survey attention was paid to the presence of burrows, latrines, feeding remains, trails and footprints.

### Birds

The appraisal of breeding birds on the site was based on the suitability of habitat present to support nesting bird communities, the presence of bird species that may potentially nest within the available habitat and evidence of nesting such as old or currently active nests.

The assessment of wintering birds was based on an assessment of the suitability of the habitat on site to support important wintering bird species and populations. Particular attention was paid to the suitability for the site to support wintering farmland bird species, waders and wildfowl.

### Reptiles

The reptile appraisal was based on an assessment of the suitability of the habitat present within the site to support a population of reptiles. Reptiles particularly favour scrub and rough grassland interfaces and the presence of these is a good indication that reptiles may be present on-site. In addition, reptiles may utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

### Great Crested Newt

The appraisal of the site to support great crested newt included establishing the presence of suitable aquatic habitats such as ponds, lakes or other waterbodies within or adjacent to the site and the presence of suitable terrestrial habitat. Waterbodies that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species. The suitability of on-site ponds and terrestrial habitat is considered in relation to the presence of ponds within the wider area, as identified within the desktop study (Paragraph 3.4.2), and their suitability to be used as a network.

### Invertebrates

An assessment was made of the suitability of the site to support diverse communities of invertebrates. The assessment was based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, varied woodland structure, sunny woodland edges with a diverse flora, waterbodies and water courses and areas of free draining soil exposures. During the field survey there was no attempt made to identify species present as this is a more specialist area of ecological assessment reserved for targeted surveys.

### Other Relevant Species

An assessment was made of site suitability for other notable species such as more rarely encountered protected species, Species of Principal Importance for the Conservation of diversity in England notified under Section 41 of the NERC Act 2006 and as listed in the England Biodiversity List, and Local Biodiversity Action Plan (LBAP) species<sup>9</sup>, specific to the study region.

### Invasive Species

During the field survey any incidental records of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded. However, it should be considered that the survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

## **3.7 Field Survey Details**

The field survey was carried out by Joanne Richmond, Ecologist of ECOSA on 26<sup>th</sup> February 2019. The weather conditions were warm and dry with approximately 10% cloud cover, an ambient temperature of 14 °C and a gentle breeze.

During the survey, the surveyor was equipped with 10x40 binoculars, a high powered torch and a digital camera.

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<sup>9</sup> LBAPs identify local priorities for biodiversity conservation by translating national targets for species into effective action at the local level and identifying targets for species important to the local area.

### **3.8 Field Survey Limitations**

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The field survey has therefore not produced a complete list of plants and animals and in the absence of evidence of any particular species should not be taken as conclusive proof that the species is absent or that it will not occur in the future.

Online mapping resources provide an indication of habitat features present in the wider area, but do not provide a detailed assessment of habitat types.

It is not always possible to provide definitive assessments of a species' presence/likely absence at a site and so in the absence of direct evidence, assessments and recommendations are based on the presence of suitable habitat within/adjacent to a site and the results of species records within the desk study data.

The survey was undertaken at a time of year when many species of plant and animal are either dormant, not visible above ground or simply not present in the UK (such as migratory birds). Therefore, the survey was based upon an assessment of the habitat present on site and the suitability of this habitat to support protected species. However, the previous Preliminary Ecological Appraisal (Calyx Environmental Limited, 2018) was undertaken in June 2018 and therefore, species recorded on site during this time have been included.

The dense scrub on site may have obscured evidence of protected species on site such as badger setts.

## **4.0 BASELINE ECOLOGICAL CONDITIONS**

### **4.1 Introduction**

This section details the results of the field survey and desktop study undertaken as part of the Ecological Impact Assessment for the site. It assesses the baseline ecological conditions of the site at the time the desktop study was completed and based on the ecological features recorded during the field survey carried out on 26<sup>th</sup> February 2019.

### **4.2 Statutory Designated Sites**

There are no statutory designated sites of nature conservation interest situated within one kilometre of the site boundary. The closest designated site is Clayfield Copse LNR located approximately 1.9 kilometres north-east of the site.

### **4.3 Habitats**

#### **4.3.1 Desktop Study Results**

Consultation with MAGIC revealed that the Habitat of Principal Importance, lowland mixed deciduous woodland, is present within the western section of the site. The invasive species Virginia creeper *Parthenocissus quinquefolia* was recorded within the site during the previous Preliminary Ecological Appraisal survey (Calyx Environmental Limited, 2018).

#### **4.3.2 Field Survey Results**

Habitats are described in general terms using standard Phase 1 habitat survey terminology. The main habitats recorded on site during the Phase 1 habitat survey were as follows:

##### *Broadleaved Woodland*

The site is dominated by secondary deciduous woodland, species within the site are semi-mature and largely comprise sycamore *Acer pseudoplatanus* with individual ash *Fraxinus excelsior*, Leyland cypress *Cupressocyparis x leylandii*, hazel *Corylus avellana* and cherry laurel *Prunus laurocerasus* (**Figure 1** and **Figure 2**).

The understorey of the woodland comprises scrub with bramble *Rubus fruticosus* aggregate, ivy *Hedera helix* and cotoneaster *Cotoneaster* species (**Figure 3**). Other species recorded include common nettle *Urtica dioica*, holly *Ilex aquifolium*, cleavers *Galium aparine*, primrose *Primula vulgaris*, herb Robert *Geranium robertianum* and daffodil *Narcissus* species (**Figure 4**).

No evidence of recent management of the broadleaved woodland was recorded within the site.



**Figure 1:** Secondary broadleaved woodland dominated by sycamore



**Figure 2:** Secondary broadleaved woodland



**Figure 3:** Bramble scrub within western section of site



**Figure 4:** Scrub to eastern section of site

#### Poor Semi-Improved Grassland

Poor semi-improved grassland is present to the east of the site along the access track adjoining the site to Blenheim Road (**Figure 5**) and forming a buffer between the residential gardens to the east (**Figure 6**). Species recorded within areas of poor semi-improved grassland include, perennial rye-grass *Lolium perenne*, red fescue *Festuca rubra*, dandelion *Taraxacum officinale* aggregate, daisy *Bellis perennis*, red clover *Trifolium pratense*, herb Robert and spear thistle *Cirsium vulgare*.



**Figure 5:** Poor semi-improved grassland access track



**Figure 6:** Poor semi-improved grassland eastern boundary

### Other Habitats

A brick outbuilding is present within the north-east corner of the site the roof of this building and one of the walls have collapsed. Rubble piles were recorded to the north-west of the site. Large amounts of litter and evidence of fly-tipping was recorded across the site, concentrated to the boundaries adjacent to the off-site gardens.

### Summary

The secondary deciduous woodland largely comprises sycamore with occasional hazel and cherry laurel. The ground flora is dominated by bramble and ivy and the site is considered to be of limited ecological value in the local area.

## **4.4 Notable and Legally Protected Species**

### **4.4.1 Bats**

#### Desktop Study Results

Consultation with MAGIC identified a total of 11 granted EPSM licences in respect of bats within a two-kilometre radius of the site. These licences were granted for the destruction and damage to resting places and breeding sites of common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus* and Daubenton's bat *Myotis daubentonii*. The closest of these licences is located approximately 300 metres south-west of the site.

#### Building Assessment

The brick outbuilding located within the north-eastern corner was assessed during the previous Preliminary Ecological Appraisal (Calyx Environmental Limited, 2018). The building was assessed to be of low suitability for roosting bats due to the presence of gaps between bricks. An endoscope inspection was undertaken on 28<sup>th</sup> June 2018 and no evidence of bats was found and therefore no further recommendations were considered necessary. As the endoscope assessment was undertaken within the most recent survey season no further surveys for roosting bats are required and therefore, roosting bats within the building are not considered further.

#### Tree Assessment

The trees on site are generally semi-mature or saplings and do not contain suitable features for tree roosting bats such as cracks, splits or lifted bark. Therefore, the on-site trees were assessed as being of negligible suitability for tree roosting bats.

#### Foraging and Commuting Habitat

The habitats on site provide suitable foraging and commuting habitat for bats within the local area. The site is connected to gardens to the north, south, east and west which likely provide a corridor for foraging and commuting individuals however, given the

limited size of the site it likely only contains low numbers of bats. Therefore, the site is considered to be of moderate suitability for foraging and commuting bats.

#### **4.4.2 Otter**

##### Field Survey Results

No suitable habitat for otter *Lutra lutra*, such as streams and water courses are present on-site and therefore the site is unsuitable for otter and the species is not considered further in this report.

#### **4.4.3 Badger**

##### Field Survey Results

No direct evidence of resident or foraging badger *Meles meles* was recorded within the site. However, the site is considered suitable for both resident and foraging individuals and is connected to further suitable habitat in the wider area including residential gardens and woodland.

#### **4.4.4 Hazel Dormouse**

##### Desktop Study Results

Consultation with MAGIC did not reveal any EPSMs in respect of hazel dormouse *Muscardinus avellanarius* within a two kilometre radius of the site.

##### Field Survey Results

The woodland and scrub present on site are considered to provide suitable habitat for hazel dormouse. However, given the limited size of the site and lack of connectivity to further suitable habitat within the wider area the site alone is not considered sufficient in size to provide habitat for the species. Therefore the species is not considered further in this report.

#### **4.4.5 Water Vole**

##### Field Survey Results

The site does not provide suitable habitat for water vole *Arvicola amphibius*, including streams and ditches and therefore the species is not considered further in this report.

#### **4.4.6 Birds**

##### Desktop Study Results

During the Preliminary Ecological Appraisal of 12<sup>th</sup> June 2018 (Calyx Environmental Limited, 2018) blackcap *Sylvia atricapilla*, wood pigeon *Columba palumbus*, robin *Erithacus rubecula*, blue tit *Cyanistes caeruleus* and song thrush *Turdus philomelos*

were all recorded singing within or adjacent to the site. Of these species song thrush is a red listed species of conservation concern<sup>10</sup>.

#### Field Survey Results

During the survey blue tit, great tit *Parus major*, dunnoek *Prunella modularis*, long-tailed tit *Aegithalos caudatus*, robin, blackbird *Turdus merula* and woodpigeon were all recorded on-site while red kite *Milvus milvus* and magpie *Pica pica* was recorded flying over the site. A number of disused woodpigeon nests were recorded within sycamore trees on-site.

The on-site vegetation provides suitable nesting habitat for a range of common and widespread bird species.

The site offers limited suitable habitat for supporting wintering birds and may support small numbers of overwintering thrushes such as redwing *Turdus iliacus* and fieldfare *Turdus pilaris* and therefore, wintering birds are not considered further.

### **4.4.7 Reptiles**

#### Field Survey Results

The site is of limited suitability for reptiles due to the woodland shading. It is likely that if reptiles are present within the wider area these are situated within the residential gardens bounding the site as these provide more suitable habitat for the species group. The rubble piles present to the north-west of the site may provide limited suitable habitat for hibernating individuals however, this habitat is limited in its extent. If reptiles are present on-site it is likely that they enter from the surrounding residential gardens.

### **4.4.8 Great Crested Newt**

#### Desktop Study Results

A review of online 1:25,000 OS mapping and aerial photography did not identify any ponds within a 500-metre radius of the site.

#### Field Survey Results

No ponds are located within the site and as no ponds are located within a 500-metre radius of the site great crested newt *Triturus cristatus* are therefore considered absent and are not considered further within this report.

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<sup>10</sup> The UK's birds are split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Red List criteria include species which are: globally threatened; have been subject to historical population decline in UK during 1800–1995; are in severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period, or; subject to severe (at least 50%) contraction of UK breeding range over last 25 years, or longer-term period.

#### **4.4.9 Invertebrates**

##### Field Survey Results

The vegetation on site largely comprises semi-mature sycamore woodland with bramble and ivy scrub. The site likely contains common species and assemblages of invertebrates. As the site is considered unlikely to support notable species or assemblages of invertebrates the species group is not considered further in this report.

#### **4.4.10 Other Relevant Species**

##### Field Survey Results

The site provides suitable habitat for foraging and commuting European hedgehog *Erinaceus europaeus* and individuals likely use the site as a foraging corridor between residential gardens. In addition, the on-site scrub and woodland likely provides suitable habitat for hibernating individuals.

#### **4.5 Summary of Key Ecological Features**

The following features are those that lie within the site's Zone of Influence:

- The Habitat of Principal Importance, lowland mixed deciduous woodland is present on-site;
- The non-native species, including Virginia creeper, cherry laurel and cotoneaster are present on site;
- Suitable habitat for foraging and commuting bats;
- Suitable habitat for badger;
- Suitable habitat for breeding birds;
- Limited suitable habitat for reptiles; and
- Suitable habitat for both foraging and hibernating hedgehog.

## **5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ENHANCEMENT MEASURES**

### **5.1 Introduction**

This section assesses the ecological effects of the proposed development scheme on the identified ecological features as identified in Section 4.0. Methods for addressing potential impacts and effects on ecological features have been approached in accordance with the mitigation hierarchy<sup>11</sup> with avoidance of impacts prioritised where possible. Where significant adverse effects cannot be avoided other forms of mitigation are prioritised over compensation. Enhancement measures have been detailed, where relevant, in order to not only minimise the impacts on biodiversity but also to provide enhancement in accordance with Paragraph 170 of the NPPF (Paragraph 2.2.1). It is anticipated that mitigation, compensation and enhancement measures will be secured through the planning process.

### **5.2 Scheme Design**

The proposed development entails the construction of three residential units to the north of the site with associated residential gardens to be included to the west. Access is to come from Blenheim Road to the east, along the existing access. The southern part of the site is to be undeveloped and will form an area of open greenspace.

The potential ecological impacts and effects of these proposals, in the absence of mitigation, are described for each ecological feature below. For each ecological feature, measures to mitigate and/or compensate for significant effects are described.

### **5.3 Designated Sites**

#### **5.3.1 Potential Impacts and Effects**

Due to the lack of designated sites within a one-kilometre radius of the site no impacts on designated sites are considered likely.

#### **5.3.2 Mitigation and Compensation Measures**

As no impacts on designated sites is considered likely no mitigation and compensation measures are recommended for designated sites.

#### **5.3.3 Enhancement**

No enhancement recommendations are required for designated sites.

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<sup>11</sup> In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2016) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

## 5.4 Habitats

### 5.4.1 Potential Impacts and Effects

The site comprises approximately 811 metres squared of low quality secondary deciduous woodland, approximately 405 metres squared of which is to be lost as part of the development, see **Appendix 2**. This woodland has been classified as the Habitat of Principal Importance lowland mixed deciduous woodland. This habitat has been classified by Natural England and was likely done using remote sensing, not a survey of the site. Lowland mixed deciduous woodland is generally classified of woodland with a variety in the species composition of the canopy layer and ground flora. Canopy species include field maple *Acer campestre*, lime *Tilia platyphyllos x cordata*, hornbeam *Carpinus betulus*, ash, and oak species but predominantly pedunculate oak *Quercus robur* (JNCC, 2016).

The surveys undertaken on-site by ECOSA and Calyx Environmental Limited concluded that the on-site woodland is of limited value with the presence of non-native species. As a result, it does not conform to the classification of lowland mixed deciduous woodland.

In addition to this, fly-tipping regularly occurs within the site from surrounding residential properties. This is likely to continue without intervention.

Boundary trees to the north, south and east are to be retained. In addition, development will result in the loss of 0.16 hectares of scrub and approximately 335 metres squared of poor semi-improved grassland.

The site contains non-native cherry laurel, cotoneaster and Virginia creeper which will be removed from the site as part of the proposals. Virginia creeper is listed as a Schedule 9 invasive species, see **Appendix 4**.

### 5.4.2 Mitigation and Compensation Measures

The cherry laurel, cotoneaster and Virginia creeper plants are to be removed from the site. All works will follow protective measures in line with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction*. This document outlines the use of tree protection barriers to be used for the duration of the construction phase.

In order to compensate for the loss of woodland on site tree planting is to be undertaken along the eastern boundary of the site and scattered trees are to be planted across the rest of the site. Trees to be planted within the site will comprise native trees rather than cultivars including, pedunculate oak, ash, beech *Fagus sylvatica*, holly, field maple, silver birch *Betula pendula*, hazel and wild cherry *Prunus avium*. Although there will be

a net-loss of woodland habitat post-development the newly planted habitats will develop into higher quality habitat than the secondary woodland currently present.

Post-development approximately 890 metres squared of newly sown grassland is to be included on-site within the residential gardens and undeveloped area to the south of the site. This will compensate for the loss of grassland within the site as a result of the development. New areas of grassland will comprise native wildflower lawn mixtures, such as Emorsgate EL1 Flowering Lawn Mixture within the residential gardens and Emorsgate EM2 Standard General Purpose Meadow Mixture within the open greenspace.

An Ecological Mitigation and Management Plan will be required to fully detail the required mitigation on site and will be secured through a planning condition.

#### **5.4.3 Enhancement**

As an enhancement measure it is recommended that a native species hedgerow is planted along the western boundary of the site, this will provide a buffer between the site and residential gardens to the west. Species to be included within this hedgerow will include field maple, hazel, hawthorn, and blackthorn *Prunus spinosa*.

### **5.5 Bats**

#### **5.5.1 Potential Impacts and Effects**

New external lighting may disturb foraging and commuting bats, if light spill occurs onto boundary vegetation within the site and off-site vegetation. In addition, there will be a loss of suitable foraging and commuting habitat on-site due to the removal of on-site woodland.

In England, bats and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, all bat species are protected under the Conservation of Habitats and Species Regulations 2017. Refer to **Appendix 4** for details.

#### **5.5.2 Mitigation and Compensation Measures**

Lighting to be installed on the new development should comprise hooded luminaires directed away from vegetation, particularly the boundary habitats and residential gardens. Ideally the bulbs will be LED and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on wildlife<sup>12</sup>. The new lighting will be task related, associated with specific entrance/exit points of the development. The lux level will be as low as possible to allow the task to be carried out safely and effectively. Guidance on task related

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<sup>12</sup> *Wildlife and Artificial Lighting Seminar*, 21<sup>st</sup> – 22<sup>nd</sup> March 2014, Arup London, Bat Conservation Trust.

lighting levels and mitigation options as described within the Bats and Artificial Lighting in the UK report will be followed (Institution of Lighting Professionals, Bat Conservation Trust, 2018).

Planting recommendations as stated in Paragraphs 5.4.2 and 5.4.3 will mitigate for the loss of suitable foraging and commuting habitats on-site.

### **5.5.3 Enhancement**

As an enhancement measure it is recommended that two 1FR Schwegler Bat Tubes, or a similar alternative are incorporated into the newly constructed buildings on-site. In addition, one Schwegler 2F and one Schwegler 1FF, or suitable alternatives, will be erected onto suitably mature retained trees on-site.

## **5.6 Badger**

### **5.6.1 Potential Impacts and Effects**

No badger setts were identified during the survey. However, the site provides suitable habitat for foraging and commuting individuals which may become trapped in excavations during construction.

Badger are protected from killing and injury, and their setts protected from damage and interference, under the Protection of Badgers Act 1992. Refer to **Appendix 4** for details.

### **5.6.2 Mitigation and Compensation Measures**

In the unlikely event that a badger becomes trapped in excavations during construction works, a timber ramp should be inserted to allow the animal to escape of its own accord.

### **5.6.3 Enhancement**

No enhancement measures are considered necessary in respect of badger.

## **5.7 Birds**

### **5.7.1 Potential Impacts and Effects**

Any vegetation removal undertaken during the nesting bird season may result in the destruction of bird nests and may result in the killing or injury of individuals or result in the abandonment of the site as a nesting area for bird species.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981 (as amended). Refer to **Appendix 4** for details.

### **5.7.2 Mitigation and Compensation Measures**

Any vegetation removal should be undertaken outside the breeding bird season which extends from March to August, inclusive. If this is not possible, an ecologist will be

present immediately prior to clearance to inspect the building and vegetation. Active nests will be left with a suitable buffer until nesting ends. If nesting birds are present during construction activities delays may occur.

The inclusion of native species planting, as recommended in Paragraphs 5.4.2 and 5.4.3 will compensate for the loss of suitable nesting habitat on-site.

### **5.7.3 Enhancement**

A range of bird nest boxes will be erected across the site. It is recommended that a total of two WoodStone Built-in House Sparrow Nest boxes included on site and two Schwegler 2H open fronted nest boxes, or boxes of a similar design, are erected onto suitably mature retained trees.

## **5.8 Reptiles**

### **5.8.1 Potential Impacts and Effects**

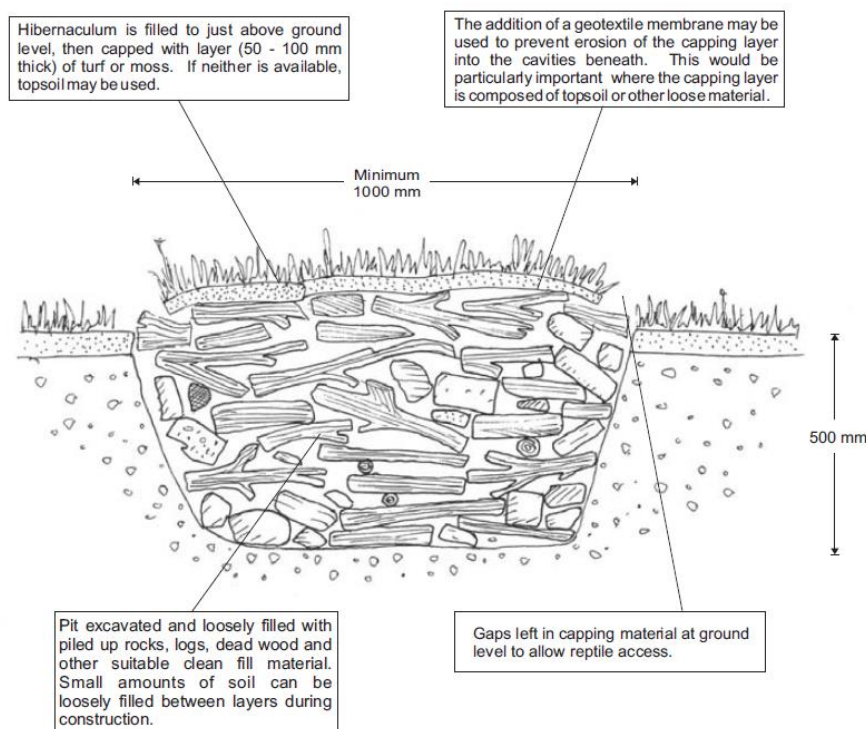
The site provides limited suitable habitat for individual reptiles however, is well connected to suitable habitat in the surrounding area. If reptiles are present on-site during clearance works there is potential that individuals may be killed or injured.

Widespread reptile species (slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, grass snake *Natrix natrix* and adder *Vipera berus*) are protected under the Wildlife and Countryside Act 1981 against harm. Refer to **Appendix 4** for details.

### **5.8.2 Mitigation and Compensation Measures**

Due to the limited extent of suitable reptile habitat on site, a full survey is not considered necessary. Therefore, a precautionary method of works will be adopted. This will involve the removal of rubble piles on-site under the supervision of a suitably qualified ecologist. The removal of rubble piles will be undertaken when reptiles are active between April and October. A suitably qualified ecologist will also supervise the clearance of ground flora on-site. In the unlikely event that reptiles are found they will be moved to the south of the site where no development is to be undertaken. Following these works, vegetation will be kept as short as possible to prevent reptiles from returning to site prior to the commencement of construction.

As an enhancement measure two hibernacula (**Figure 7**) will be created on site within the proposed area of open greenspace to provide hibernation features for reptiles present within the site. Locations of these log piles will be agreed with an ecologist prior to installation.



**Figure 7:** Reptile hibernaculum (Highway Agency, 2005)

### 5.8.3 Enhancement

Provision of grassland, tree planting and hedgerows as recommended in Paragraphs 5.4.2 and 5.4.3 will enhance the site for reptiles overall.

## 5.9 Other Relevant Species

### 5.9.1 Potential Impacts and Effects

The erection of the residential dwellings proposed on-site and erection of fence lines will result in the fragmentation and isolation of suitable European hedgehog habitat.

The European hedgehog is a species of principal importance in England, see **Appendix 4** for details.

### 5.9.2 Mitigation and Compensation Measures

Where areas are fenced it is recommended that these areas consist of post and rail fencing rather than close board. This will allow continued permeability for European hedgehog. If it is necessary to provide close board fencing this should include suitable passing holes. Hedgehog passing holes consist of small ground level gaps in fencing measuring at least 25 centimetres wide by 15 centimetres high.

During tree felling activities, log piles will be created within the site in order to provide hibernation features for European hedgehog on-site.

### **5.9.3    *Enhancement***

The inclusion of native species planting, as recommended in Paragraphs 5.4.2 and 5.4.3 will enhance the site for European hedgehog overall.

### **5.10    *Cumulative Effects***

Given the mitigation and compensation measures outlined above, no significant cumulative impacts are anticipated on any of the species considered. Therefore, there will be no cumulative effects on local populations of bats, birds, badgers, reptiles and European hedgehogs as a result of the development.

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## **6.0 CONCLUSIONS**

### **6.1 Conclusion**

The site contains low value secondary deciduous woodland, which has been identified by Natural England as the Habitat of Principal Importance lowland mixed deciduous woodland. However, it is not considered that the woodland on-site merits its designation as a Habitat of Principal Importance. The inclusion of native species tree and hedgerow planting will compensate for the loss of this woodland habitat.

The site has been assessed as having moderate suitability to support foraging/commuting bats and suitability to support badger, breeding birds, reptiles and European hedgehog. Adverse impacts on these species/species groups have been identified and appropriate mitigation and compensation measures proposed.

No residual or cumulative impacts are anticipated. As such it is considered that the proposals will accord with all relevant national and local planning policy in relation to ecology including Policy CS36 of the Reading Borough Council Core Strategy, Emerging Local Plan Policy EN12 and the NPPF (see Section 2.0).

### **6.2 Updating Site Survey**

If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 12 months of the date of the most recent relevant survey.

## 7.0 REFERENCES

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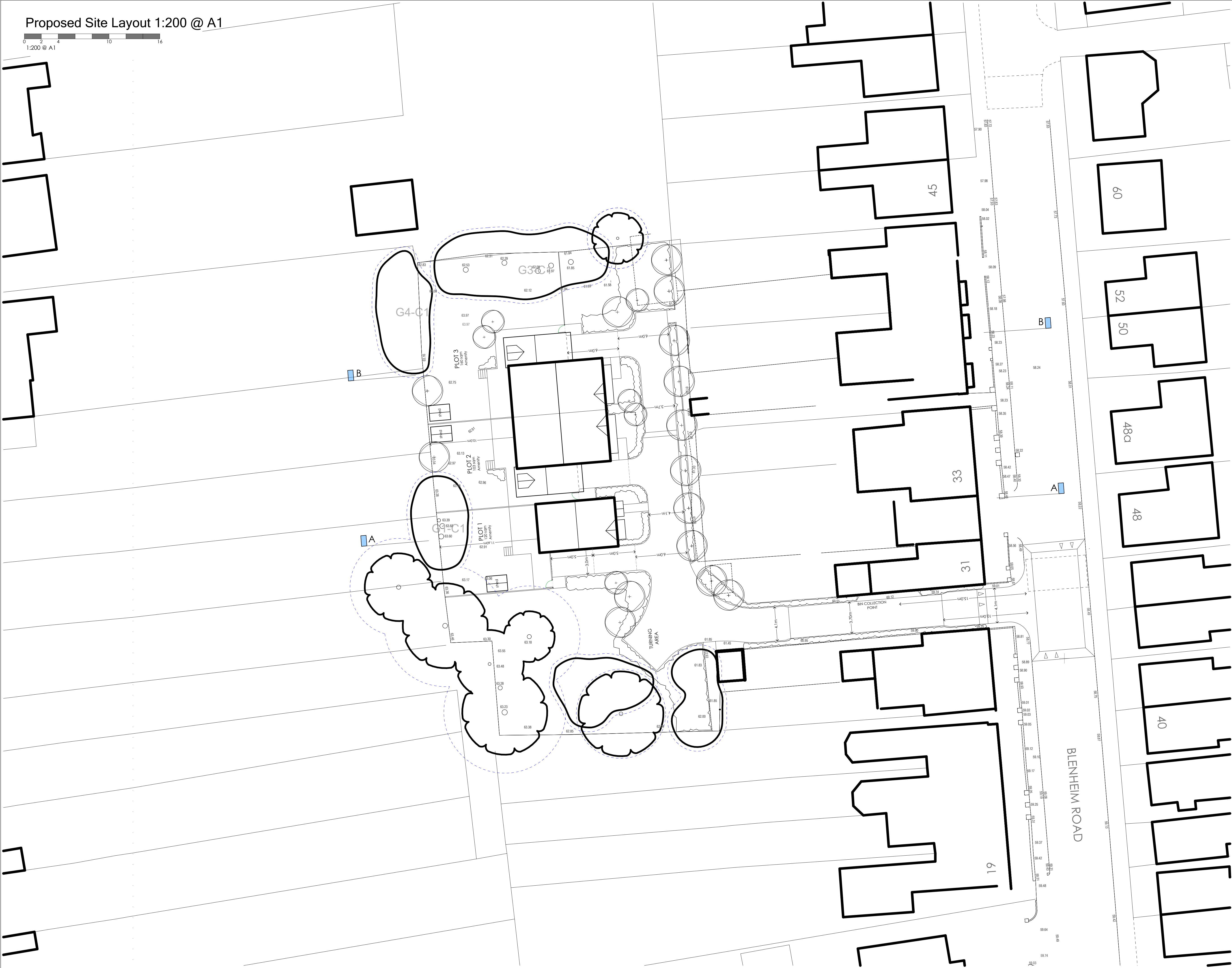
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## **Map 1** Site Location Plan



## **Appendix 1**    Site Proposals Plan



**CDM NOTES:**  
CDM 2015 : DESIGNERS NOTES ON SIGNIFICANT RESIDUAL RISKS

In preparing this design Hester Architects have attempted to avoid using materials and techniques which could cause future hazards whilst constructing, using, maintaining or de-commissioning the building. The following risks could not be designed out and should be carefully monitored on site during the construction period and during any future maintenance of the structure.

These notes relate solely to information shown on this drawing. Only significant risks which are considered to be unusual, or unlikely to be obvious to a competent contractor or other designer will be highlighted. This information is subject to revision as the design develops.

Particularly hazardous areas are highlighted with a symbol on the drawing and noted.

No residual risk identified at this stage

0 2 4 10 16  
1:200 @ A1

Scale Bars - shown in metres

Tree retained showing RPA

Hedgerows retained showing RPA

Tree to be removed

Proposed new trees

**FOR MORE DETAILS PLEASE REFER TO THE DETAILED LANDSCAPE DRAWINGS**

**PLANNING**

| Rev | Date     | Notes          |
|-----|----------|----------------|
| B   | Feb 2019 | Layout Revised |
| A   | Feb 2019 | Layout Revised |

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for  
First Avenue Estates Ltd

Drawing Title  
**Proposed Site Layout Plan**

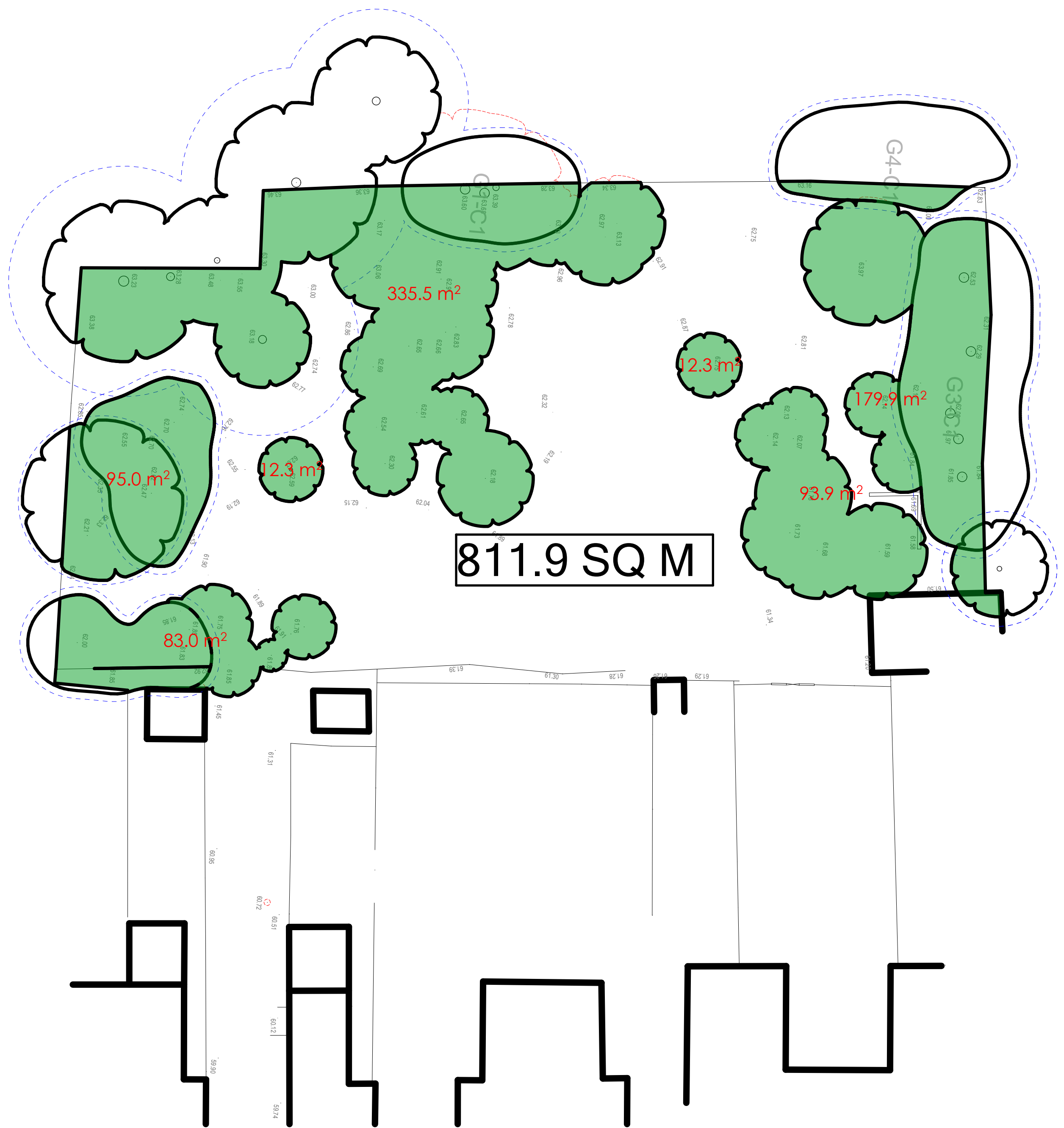
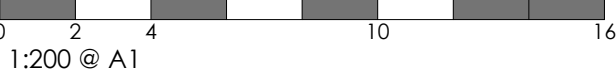
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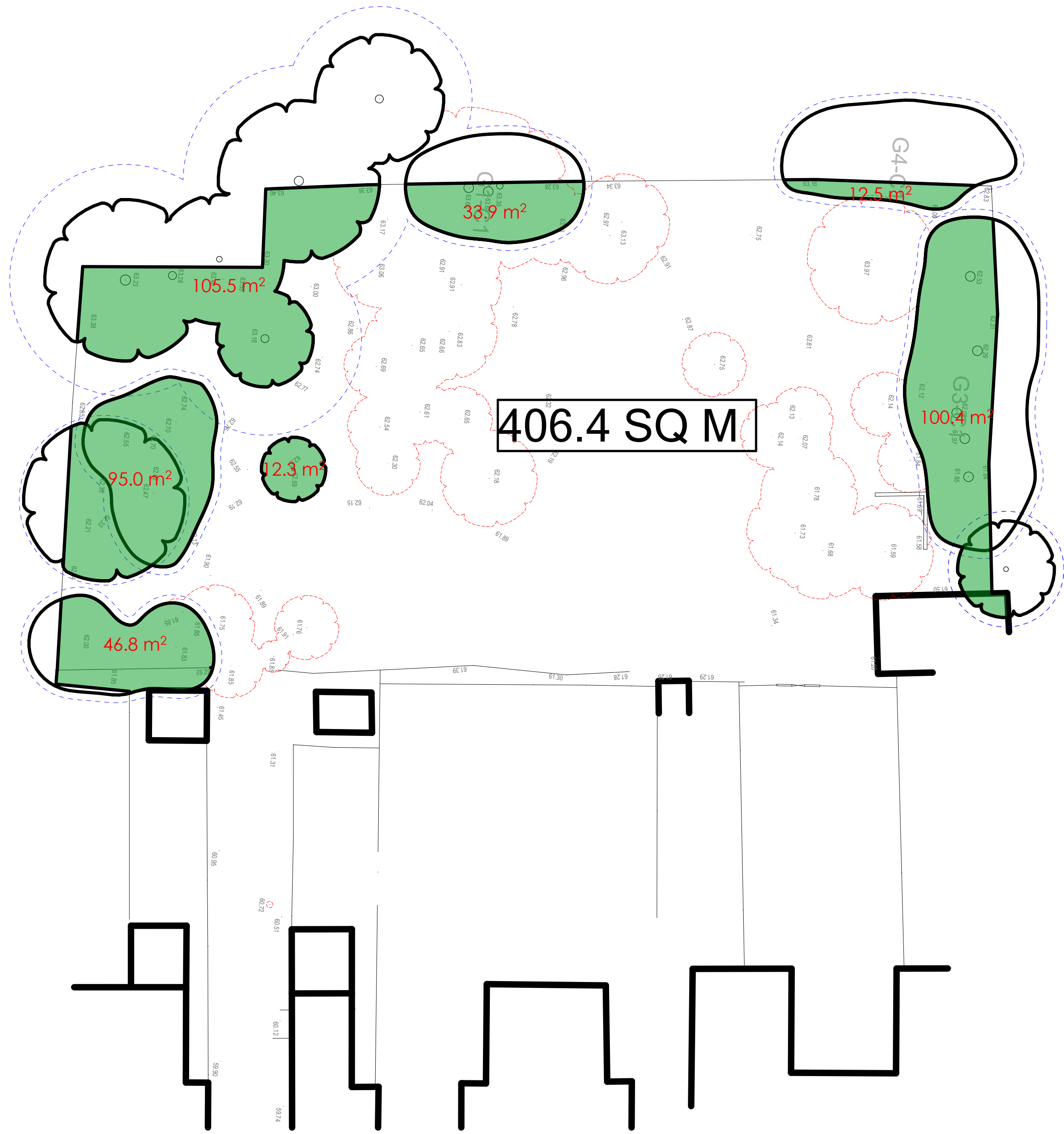
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| K1751   | K1751 - 03 - 103 | B    |

## **Appendix 2** Existing and Retained Trees

Existing and Retained Tree Canopy areas 1:200 @ A1



EXISTING



RETAINED

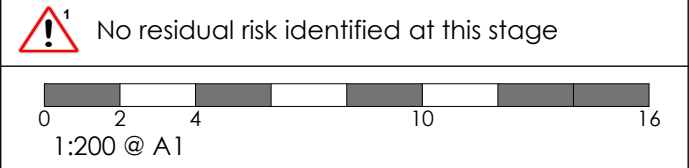
Showing existing trees only - proposed planting not shown

**CDM NOTES:**  
CDM 2015 : DESIGNERS NOTES ON SIGNIFICANT RESIDUAL RISKS

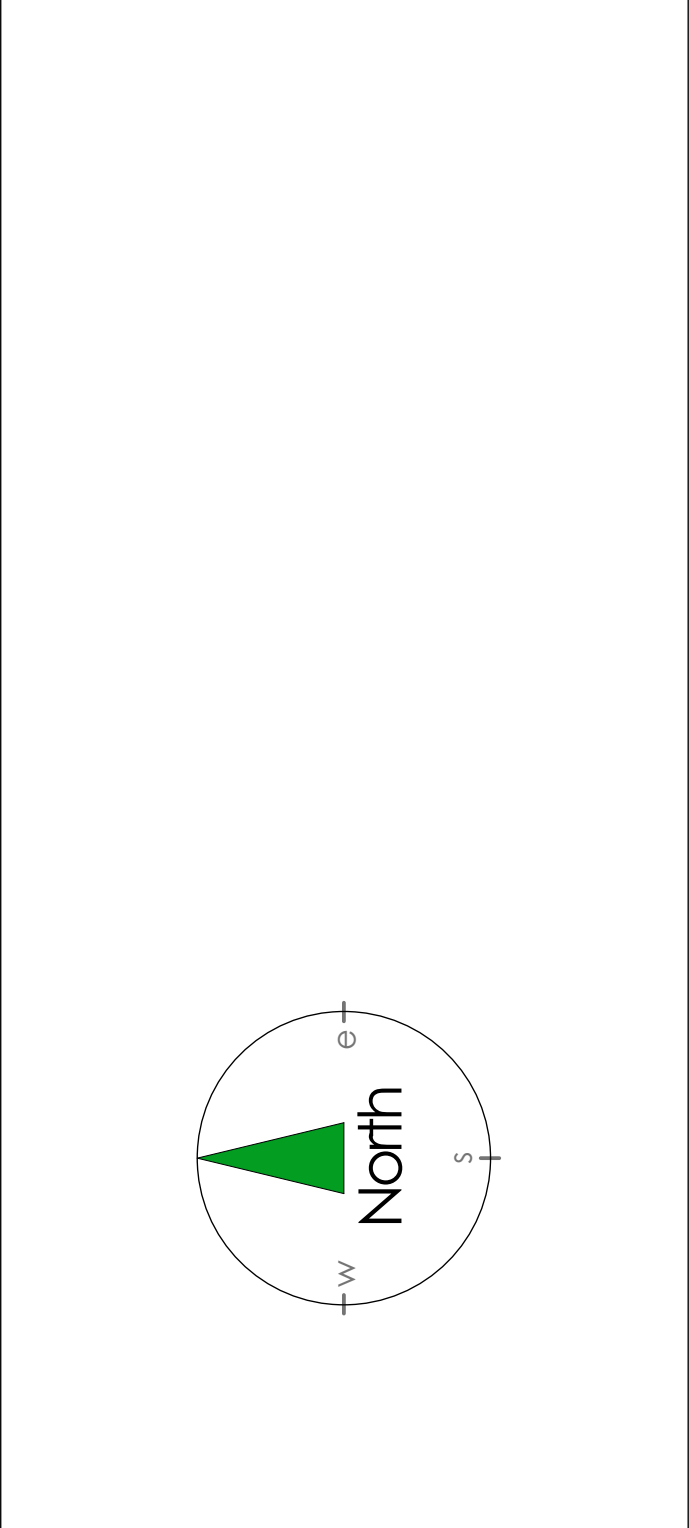
In preparing this design Hester Architects have attempted to avoid using materials and techniques which could cause future hazards whilst constructing, using, maintaining or de-commissioning the building. The following risks could not be designed out and should be carefully monitored on site during the construction period and during any future maintenance of the structure.

These notes relate solely to information shown on this drawing. Only significant risks which are considered to be unusual, or unlikely to be obvious to a competent contractor or other designer will be highlighted. This information is subject to revision as the design develops.

Particularly hazardous areas are highlighted with a symbol on the drawing and noted.



Scale Bars - shown in metres



Rev Date Notes  
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for  
First Avenue Estates Ltd

Drawing Title  
**Tree Canopy Areas**

Scale 1:200 @ A1

|                   |                                 |         |
|-------------------|---------------------------------|---------|
| Drawn by<br>P.K.B | Date<br>05 March 2019           | Checked |
| Job No.<br>K1751  | Drawing No.<br>K1751 - 03 - 110 | Rev.    |

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## **Appendix 3     Sites Designated for Nature Conservation**

### **Statutory Sites**

#### ***Internationally Designated Sites - Ramsar Sites, Special Areas of Conservation and Special Protection Areas***

Special Protection Areas (SPA) and Special Areas of Conservation (SAC) form a network of protected sites across the European Union called Natura 2000 sites. In the United Kingdom the primary legislative protection is afforded to these sites under the Conservation of Habitats and Species Regulations 2017 (as amended).

Ramsar sites are designated as wetlands of international importance which are afforded similar legislative protection to Natura 2000 sites.

SACs are sites which support internationally important habitats or internationally important assemblages or populations of species. SPAs are designated for supporting internationally important populations of birds listed in the annexes of the Birds Directive. SACs, SPAs and Ramsar sites are generally also designated as Sites of Special Scientific Interest.

Under Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (as amended) there is a legal requirement that competent authorities, such as local planning authorities, need to consider whether plans or projects are likely to have a significant adverse effect on Natura 2000 sites or Ramsar sites, either alone, or in combination with other plans or projects. In the event that a likely significant effect cannot be ruled out, on the basis of objective information, then the competent authority must undertake an “Appropriate Assessment” to fully assess the plan or project against the site’s conservation objectives. Unless certain defined derogation tests can be met, the competent authority may not authorise nor undertake any plan or project which adversely affects the integrity of a Natura 2000 site or Ramsar site.

#### ***Nationally Designated Sites – Sites of Special Scientific Interest and National Nature Reserves***

Sites of Special Scientific Interest (SSSI) receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Such sites are designated to protect specific areas of biological or geological interest of national importance. Such sites also generally receive strict protection through the planning system.

National Nature Reserves (NNR) are also usually designated as SSSIs and are specifically managed for their wildlife value. They receive legal protection through the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). As with SSSIs, these sites generally receive strict protection through the planning system.

### ***Locally Designated Sites – Local Nature Reserves***

Local Nature Reserves (LNR) are designated by local authorities under the National Park and Access to the Countryside Act 1949. These are generally designated not only for their local wildlife value but also for education, scientific and recreational purposes. These sites generally receive protection from development through the planning system.

## Appendix 4 Relevant Legislation

### Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
  - To impair its ability to survive, breed, or rear or nurture their young;
  - To impair its ability to hibernate or migrate;
  - To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Bechstein's bat *Myotis bechsteinii*;
- Barbastelle *Barbastella barbastellus*; and
- Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

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## Badger

The Protection of Badgers Act 1992 consolidates previous legislation (including the Badgers Acts 1973 and 1991 Badgers (Further Protection) Act 1991). It makes it an offence to:

- Kill, injure or take a badger;
- Attempt to kill, injure or take a badger; or
- To damage or interfere with a sett.

The 1992 Act defines a badger sett as 'any structure or place which displays signs indicating current use by a badger'.

## Breeding Birds

With certain exceptions, all wild birds, their nests and eggs are protected by Section 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- Intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls. Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- Intentionally or recklessly disturb the dependent young of any such bird.

## Reptiles

The four widespread species of reptile that are native to Britain, namely common or viviparous lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded limited protection under Section 9 of this Act. This makes it an offence to:

- Intentionally kill or injure any of these species.

The remaining native species of British reptile (sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) receive a higher level of protection via inclusion under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations (in England and Wales only) and

the Wildlife and Countryside Act 1981 (as amended). The distribution of these species are restricted to only a few sites in England.

### **Species of Principal Importance in England**

The Natural Environment and Rural Communities (NERC) Act came into force on 1<sup>st</sup> October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The England Biodiversity List is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. There are currently 56 habitats and 943 species of principal importance included on the England Biodiversity List.

### **Schedule 9 Invasive Species**

Virginia Creeper is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This makes it illegal to plant or otherwise cause the species to grow in the wild. It is also classed as a 'controlled waste' under the Environmental Protection Act 1990 (EPA). As such it must be disposed of safely at a licensed landfill site according to the EPA (Duty of Care) Regulations 1991.

## Appendix 5 Appraisal Criteria for Bats

The criteria used to assess the suitability of roosting and foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 1**<sup>13</sup>.

**Table 1:** Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

| Suitability       | Description of roosting habitats                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Commuting and foraging habitats                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High</b>       | A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.                                                                                                                                                                                                                                                                             | <p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p> |
| <b>Moderate</b>   | A structure of tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.                                                                                                                                                                                                                                                                                                                       | <p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>                                                                                                                                                                                    |
| <b>Low</b>        | <p>A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p> <p>A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.</p> | <p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat).</p> <p>Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch or scrub.</p>                                                                                                                                    |
| <b>Negligible</b> | Negligible habitat features on site likely to be used by roosting bats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Negligible habitat features on site likely to be used by commuting or foraging bats.                                                                                                                                                                                                                                                                                                                                                                                                      |

<sup>13</sup> Table adapted from (Collins, 2016)