



ROBERT HITCHINS LTD

**LAND OFF KIDNAPPERS LANE  
LECKHAMPTON**

**Ecological Assessment**

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## **PLANS**

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## 1. INTRODUCTION

### 1.1. Background & Proposals

- 1.1.1. Ecology Solutions was commissioned in September 2015 to undertake an Ecological Assessment at land off Kidnappers Lane, Leckhampton (hereafter referred to as the 'Application Site') on behalf of Robert Hitchins Limited and its successors in title to the land. Ecology Solutions was subsequently commissioned by Robert Hitchins Limited in September 2018 to update the Ecological Assessment.
- 1.1.2. The proposals are for residential development with associated infrastructure, open space and landscaping (see Appendix 1).

### 1.2. Application Site Characteristics

- 1.2.1. The Application Site is situated in Leckhampton to the south of Cheltenham, Gloucestershire (see Plan ECO1). The majority of the site comprises areas of improved grassland and hardstanding with recolonised grassland, hedgerows, ruderal vegetation, scrub, debris, bare ground and a building.
- 1.2.2. Existing commercial development is adjacent to the east of the Application Site with managed agricultural land beyond. To the north, east and south of the Application Site is further managed agricultural land with residential houses.

### 1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the Application Site as a whole. The importance of the habitats present is evaluated with regard to current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)<sup>1</sup>.
- 1.3.2. Where necessary mitigation measures are recommended so as to safeguard any significant existing ecological interest within the Application Site. Specific enhancement opportunities that are available for habitats and wildlife within the Application Site are detailed where appropriate, with reference to the 'UK Post-2010 Biodiversity Framework'<sup>2</sup>. Finally, conclusions are drawn.

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<sup>1</sup>CIEEM (September 2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester

<sup>2</sup> JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) *UK Post-2010 Biodiversity Framework*. July 2012. <http://jncc.defra.gov.uk/page-6189>

## 2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

### 2.2. Desk Study

2.2.1. In order to compile up to date background information on the Application Site and its immediate surroundings Ecology Solutions contacted the Gloucestershire Centre for Environmental Records (GCER). Where appropriate this information is included within this report, although much of it is confidential and can only be made available upon request.

2.2.2. Further information on designated sites was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)<sup>3</sup> database, which utilises data provided by Natural England. This information is reproduced, where appropriate, on Plan ECO1 and at Appendix 2.

### 2.3. Habitat Survey Methodology

2.3.1. Surveys were carried out by Ecology Solutions in September 2015 in order to ascertain the general ecological value of the land contained within the boundaries of the Application Site and to identify the main habitats and associated plant species, with notes made on fauna utilising these areas.

2.3.2. In September 2015 the Application Site was subject to a detailed survey based around an extended Phase 1 survey methodology<sup>4</sup>, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail. An updated Phase 1 survey was undertaken in September 2018.

2.3.3. Using the above method, the Application Site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

2.3.4. All the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons. However, the survey work was undertaken within the optimal period for Phase 1 surveys and given the main habitats present it is considered that an accurate and robust assessment has been made.

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<sup>3</sup> <http://www.magic.gov.uk>

<sup>4</sup> Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

## 2.4. Faunal Survey

2.4.1. General faunal activity observed during the course of the surveys was recorded, whether visually or by call. Specific attention was paid to the potential presence of any protected, rare, notable or priority species. In addition, specific surveys were undertaken for bats, Badgers *Meles meles* and birds.

2.4.2. **Bats.** Field surveys were undertaken with regard to best practice guidelines issued by Natural England<sup>5</sup>, the Joint Nature Conservation Committee<sup>6</sup> and the Bat Conservation Trust<sup>7</sup>.

2.4.3. An assessment of the habitats present was undertaken with regard to bat foraging / navigational opportunities.

### *Internal / External Building Assessments*

2.4.4. In September 2015 and September 2018 all buildings within the Application Site were subject to internal and external surveys using ladders, mirrors, torches and binoculars where necessary.

2.4.5. Evidence of the presence of bats was searched for with particular attention paid to the loft voids and gaps between rafters and beams. Specific searches were made for bat droppings that can indicate present or past use and extent of use, as well as other signs to indicate the possible presence of bats e.g. feeding remains, presence of stained areas, or areas that are cobweb-free.

2.4.6. The probability of a building being used by bats as a summer roost site increases if it:

- Is largely undisturbed;
- Dates from pre 20<sup>th</sup> Century;
- Has a large roof void with unobstructed flying spaces;
- Has access points for bats (though not too draughty);
- Has wooden cladding or hanging tiles; and/or
- Is in a rural setting and close to woodland or water.

2.4.7. Conversely, the probability decreases if a building is of a modern or pre-fabricated design / construction, is in an urban setting, has small or cluttered roof voids, has few gaps at the eaves or is a heavily disturbed premises.

2.4.8. The main requirements for a winter / hibernation roost site is that it maintains a stable (cool) temperature and humidity. Sites commonly utilised by bats as winter roosts include cavities / holes in trees, underground sites and parts of buildings. Whilst different species may show a preference for one of these types of roost site, none are solely dependent on a single type.

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<sup>5</sup> Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

<sup>6</sup> Mitchell-Jones, A.J. & McLeish, A.P. (2004). *Bat Workers' Manual*. 3<sup>rd</sup> edition. Joint Nature Conservation Committee, Peterborough.

<sup>7</sup> Bat Conservation Trust (2016). *Bat Surveys for Professional Ecologist – Good Practice Guidelines 3<sup>rd</sup> Edition*. Bat Conservation Trust, London.

### *Tree Assessment*

- 2.4.9. In September 2015 and September 2018 all trees within and immediately adjacent to the Application Site were assessed for their potential use by bats. Ladders, binoculars and an endoscope were used where necessary.
- 2.4.10. For a tree to be classified as having some potential for roosting bats it must usually have one or more of the following characteristics:
- Obvious holes, e.g. rot holes and old woodpecker holes;
  - Dark staining on the tree below a hole;
  - Tiny scratch marks around a hole from bats' claws;
  - Cavities, splits and / or loose bark from broken or fallen branches, lightning strikes etc; and / or
  - Very dense covering of mature Ivy *Hedera helix* over the trunk.
- 2.4.11. **Badgers.** Specific surveys were undertaken within and adjacent to the Application Site, to search for evidence of Badgers in September 2015, November 2015 and September 2018. Such surveys comprise two main elements. The first of these is a thorough search for evidence of Badger setts. If any setts are encountered each sett entrance is noted and plotted even if the entrance appeared disused. The following information is recorded:
- i) The number and location of any well used or very active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
  - ii) The number and location of any inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
  - iii) The number of any disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.
- 2.4.12. Secondly, Badger activity such as well-worn paths and run-throughs, snagged hair, footprints, latrines and foraging signs are recorded so as to build up a picture of the use of the Application Site, if any, by Badgers.
- 2.4.13. **Birds.** The Application Site was surveyed for its suitability to support breeding birds. Potential habitat for nesting birds was recorded, along with suitable foraging areas.
- 2.4.14. In addition, any birds, bird nests or evidence of birds utilising the Application Site were recorded along with the location, in order to establish any current bird usage.

### 3. ECOLOGICAL FEATURES

3.1. The Application Site was surveyed in September 2015 and September 2018 and the following main habitat / vegetation types were identified:

- Improved Grassland;
- Recolonising Grassland;
- Hedgerows;
- Ruderal Vegetation;
- Scrub;
- Buildings and Hardstanding;
- Debris Piles; and
- Bare Ground.

3.2. The location of these habitats is shown on Plan ECO2.

3.3. Each habitat present is described below with an account of the representative plant species present.

#### 3.4. Improved Grassland

3.4.1. The Application Site comprises an area of managed improved grassland that is subject to regular cutting (see Plan ECO2). The grassland is dominated by Cock's Foot *Dactylis glomerata* and False Oat Grass *Arrhenatherum elatius* with Creeping Bent *Agrostis stolonifera*, Red Fescue *Festuca rubra*, Tufted Hair-grass *Deschampsia cespitosa* and Crested Dogs-tail *Cynosurus cristatus*. Herbaceous species present are limited and include Creeping Buttercup *Ranunculus repens*, Creeping Thistle *Cirsium arvense*, Hogweed *Heracleum sphondylium*, Broad-leaved Dock *Rumex obtusifolius*, Common Mouse-ear *Cerastium fontanum*, Dandelion *Taraxacum officinale* agg., Doves-foot Cranes-bill *Geranium molle*, Mugwort *Artemisia vulgaris*, Common Vetch *Vicia sativa* subsp. *segetalis* and Cow Parsley *Anthriscus sylvestris*.

3.4.2. The margins of the grassland are more overgrown with a higher ruderal content comprising Common Nettle *Urtica dioica*, Horse-radish *Armoracia rusticana*, Common Ragwort *Senecio jacobaea*, Greater Willowherb *Epilobium hirsutum*, Broad-leaved Willowherb *Epilobium montanum*, Black Bryony *Tamus communis*, Cow Parsley, Field Horsetail *Equisetum arvense*, Black Medick *Medicago lupulina* and Spear Thistle *Cirsium vulgare*.

3.4.3. In the northeast corner of the improved grassland, the water table is evidently higher and provides damper conditions. This wet area is dominated by Soft Rush *Juncus effuses*, Hard Rush *Juncus inflexus* and Bulrush *Typha latifolia*.



### 3.5. Recolonising Grassland

- 3.5.1. An area of recolonising grassland is located on the southeast boundary of the site. Species present include Fat-hen *Chenopodium album*, Butterfly Bush *Buddleja davidii*, Herb Robert *Geranium robertianum*, Ribwort Plantain *Plantago lanceolata*, Common Mallow *Malva sylvestris*, Spear Thistle, White Clover *Trifolium repens*, Lesser Trefoil *Trifolium dubium*, Oxeye Daisy *Leucanthemum vulgare*, Bristly Oxtongue *Picris echioides*, Greater Willowherb, Creeping Thistle, Bramble *Rubus fruticosus*, Garden Fleabane *Erigeron speciosus*, Field Horsetail, St. John's Wort *Hypericum* sp., Greater Plantain *Plantago major*, Mayweed *Matricaria* sp. and Fox-and-cubs *Pilosella aurantiaca*.

### 3.6. Hedgerows

- 3.6.1. There are three hedgerows within the Application Site, each of which is described individually below and shown on Plan ECO2.
- 3.6.2. Hedgerow H1 is unmanaged and situated along the east boundary of the Application Site. The hedgerow is located along a post and wire fence and is dominated by Blackthorn *Prunus spinosa* with Elder *Sambucus nigra*, Hawthorn *Crataegus monogyna*, Bramble and *Prunus* sp. Ivy and Hedge Bindweed *Calystegia sepium* are also trailing through the hedgerow.
- 3.6.3. Hedgerow H2 is unmanaged and situated along the west boundary of the Application Site and is gappy in nature. The hedgerow is located along a post and wire fence and is dominated by Leyland Cypress *X Cupressocyparis leylandii*.
- 3.6.4. Hedgerow H3 is unmanaged and situated along the south boundary of the Application Site. The hedgerow includes Elder, Hawthorn, Ash *Fraxinus excelsior*, Dog-rose *Rosa canina*, Hazel *Corylus avellana* with Bramble, Ivy and Hedge Bindweed *Calystegia sepium* trailing through and Common Nettle and Garlic Mustard *Alliaria petiolata* in the ground flora.

### 3.7. Trees

- 3.7.1. A group of trees comprising Sycamore *Acer pseudoplatanus* and Poplar *Populus* sp. is located towards the south east of the Application Site. Another group of trees is located in the north east corner of the Application Site and comprise Pedunculate Oak *Quercus robur* and Ash. In addition, a Crimson King *Acer platanoides* is located adjacent to the southwest boundary of the Application Site.

### 3.8. Ruderal Vegetation

- 3.8.1. Areas of ruderal vegetation are located throughout the site. Species present include Broad-leaved Dock, Creeping Thistle, Common Nettle, Hogweed, Common Ragwort, Cleavers, Green Alkanet, Butterfly Bush, Purple Toadflax *Linaria purpurea*, Bristly Oxtongue *Picris echioides*, Herb Robert, Redshank *Persicaria maculosa* and Field Forget-me-not *Myosotis arvensis*.

### 3.9. **Scrub**

- 3.9.1. Areas of scrub are located throughout the Application Site. Species present include Spear Thistle *Cirsium vulgare*, Bramble, Ash saplings and Butterfly Bush.
- 3.9.2. A clump of Bamboo *Phyllostachys* sp. is located along the south west boundary of the Application Site.

### 3.10. **Buildings and Hardstanding**

- 3.10.1. Building B1 is a single storey small prefabricated storage building constructed of concrete with a pitched corrugated metal roof. There are no internal voids within the building and multiple windows are present causing a light interior. The building is surrounded by hardstanding and areas of hardstanding are located throughout the Application Site.

### 3.11. **Debris Pile**

- 3.11.1. The material from the demolished greenhouses and other buildings has been left in a pile within the Application Site.

### 3.12. **Bare Ground**

- 3.12.1. Areas of bare ground where buildings have been demolished are located throughout the Application Site. Some areas are starting to recolonise with Cleavers, Common Nettle, Dandelion and Creeping Thistle.

### 3.13. **Background Records**

- 3.13.1. GCER returned no record of protected species within the site. The closest record was for a record of the Schedule 8 listed plant species Bluebell *Hyacinthoides non-scripta* (sale only) located approximately 0.3km northeast of the site, in 1995. During the surveys, no evidence of Bluebells was recorded within the Application Site.

#### 4. WILDLIFE USE OF THE APPLICATION SITE

4.1. During the surveys undertaken in 2015 and 2018 general observations were made of any faunal use of the Application Site, with specific attention paid to the potential presence of protected or notable species. In addition, specific surveys were undertaken with regard to bats, Badgers and birds.

##### 4.2. Bats

4.2.1. The building within the Application Site lacks suitable features for bats and no evidence of bats was recorded within the building. The majority of the trees lack suitable features for roosting bats although the mature Oak in the north east corner is considered to have low potential to support bats by virtue of its size/age, although there were no obvious features for roosting bats to utilise (see Plan ECO2).

4.2.2. The hedgerows offer some limited foraging opportunities for bats albeit these features are generally fragmented, limited to site boundaries and of poor structure or (in the case of hedgerow H2) dominated by non-native species, thus limiting their value to bats. Indeed, there are more extensive and optimum opportunities available in the wider area.

4.2.3. **Background Records.** Information received from GCER returned no records of any bats from within the Application Site. The closest roost record return was for a *Pipistrellus* sp. tree roost located 120m east of the Application Site in 2015. The closest field record was for a *Nyctalus* sp. located 120m southeast of the Application Site in 2015.

##### 4.3. Badgers

4.3.1. No evidence of Badger such as any setts, latrines, snagged hairs, foraging marks or footprints were recorded within or immediately adjacent to the Application Site. One mammal path was recorded along the north boundary (see Plan ECO2) although it could not specifically be attributed to Badgers and a number of Roe Deer *Capreolus capreolus* were recorded within the adjacent field.

4.3.2. **Background Records.** GCER returned no records of Badgers from within the Application Site. The closest record returned was from 1994 located approximately 0.3km northeast of the Application Site.

##### 4.4. Other Mammals

4.4.1. **Background Information.** GCER returned no records of other mammals from within the site. The closest record is of a Hedgehog *Erinaceus europaeus* from 2011 located approximately 30m northwest of the site. The closest record for a Hazel Dormouse *Muscardinus avellanarius* was located approximately 0.5km southwest of the site in 2016.

4.4.2. The site is considered to provide limited habitat for Hedgehogs and it is considered Hedgehogs would not be reliant on the site given the surrounding suitable habitat within the local area. In any event suitable habitat for this species would be present post-development e.g. gardens and areas of open space.

- 4.4.3. The hedgerows are considered suboptimal for Dormice, given they are regularly managed, fragmented, have relatively poor structures and support very limited Hazel and Bramble. Therefore, given the distance of the closest record and that the hedgerows are sub-optimal for Dormice, it is not considered that Dormice would be present in the site. In any case, the hedgerows are to be retained as part of the proposed development and new hedgerow planting along the boundary of the site will enhance opportunities for these species.

#### 4.5. Birds

- 4.5.1. The Application Site offers some limited opportunities for nesting birds in terms of the hedgerows, scrub and trees, although greater opportunities are available within the wider area.

- 4.5.2. During the survey work a House Sparrow *Passer domesticus*, Blackbird *Turdus merula* and Robin *Erithacus rubecula* were recorded within the Application Site.

- 4.5.3. **Background Records.** GCER returned no records of any notable / protected bird species (Schedule 1, Red List and BAP Priority Species) from within the Application Site. The closest records returned were for House Sparrow *Passer domesticus* (Red List – 2005) and Common Starling *Sturnus vulgaris* (Red List – 2005) located approximately 35m north of the Application Site.

- 4.5.4. GCER returned a number of 1km grid square records from the two 1km grid squares (SO9419 and SO9319) cover the Application Site:

- Eurasian Wryneck *Jynx torquilla* (Schedule 1 – 2014)
- Yellow Hammer *Emberiza citrinella* (Red List - 2003)
- Lesser Redpoll *Acanthis cabaret* (BAP – 2013)
- Skylark *Alauda arvensis* (Red List - 2014)
- Tree Pipit *Anthus trivialis* (BAP and Red List - 2015)
- Bullfinch *Pyrrhula pyrrhula* (BAP – 2013)
- Marsh Tit *Poecile palustris* (BAP – 2015)
- Mistle Thrush *Turdus viscivorus* (Red List - 2013)
- Brambling *Fringilla montifringilla* (Schedule 1 – 2002)
- Common Linnet *Carduelis cannabina* (Red List – 2015)
- Fieldfare *Turdus pilaris* (Schedule 1 and Red List – 2012)
- Lesser Spotted Woodpecker *Dendrocopos minor* (Red List – 2003)
- Red Wing *Turdus iliacus* (Schedule 1 and Red List – 2012)
- Song Thrush *Turdus philomelos* (Red List – 2012)

- 4.5.5. It is considered that the site offers some suitable opportunities for the species above. However, it is not considered that any of these species would be reliant on the habitats present within the site given the surrounding suitable habitat within the local area.

#### 4.6. Reptiles

- 4.6.1. **Background Records.** GCER contained no records for any reptile species from within the Application Site. The closest record returned was

for a Slow Worm *Anguis fragilis* located approximately 0.4km southeast of the Application Site from 2013.

- 4.6.2. The Application Site is not considered suitable for reptile and the improved grassland is not considered to have potential to support reptile species on account of its management (subject to cutting) and short sward height. Therefore, reptiles are not considered to be present within the Application Site and no further consideration for the group is given within this document.

#### 4.7. **Great Crested Newts**

- 4.7.1. **Background Records.** Information received from GCER contained no records of any Great Crested Newts from within the Application Site. The closest Great Crested Newt record returned was located approximately 0.7km northwest of the Application Site from 1998. This record is separated from the Application Site by agricultural land, as well as residential development and roads which are considered to be a significant dispersal barrier.
- 4.7.2. No ponds are located within the Application Site itself and analysis of local OS maps indicates that no other ponds are located within 250m of the Application Site boundary, which are not separated by significant dispersal barriers.
- 4.7.3. It is considered that the vast majority of the habitats within the Application Site are unlikely to support Great Crested Newts during their terrestrial phase (areas of improved grassland managed by cutting and hardstanding) and therefore this species would not be considered as likely to be present within the Application Site. Therefore, no further consideration is given to Great Crested Newts within this document.

#### 4.8. **Invertebrates**

- 4.8.1. The Application Site is expected to support a limited range of common invertebrate species, but there is no evidence to suggest that any protected or notable species are likely to be present. The habitats present and the management regimes both reduce the Application Site's suitability for this group.
- 4.8.2. **Background Records.** GCER returned no records of any notable invertebrate species from within the Application Site. The closest specific record returned was for a White Hairstreak *Satyrrium w-album* located approximately 0.7km southeast of the Application Site in 1994. The larval foodplant for the White Hairstreak is Elm *Ulmus* sp. and Wych Elm *Ulmus glabra* and no Elm was recorded within the Application Site, therefore it is not considered the site provides suitable habitat for this species.

#### 4.9. **Other Species**

- 4.9.1. Given the habitats present and records from the local area, there is no evidence from site surveys or desk studies to suggest that any other protected or notable species would be present within the site or affected by the proposed development.

## 5. ECOLOGICAL EVALUATION

### 5.1. The Principles of Site Evaluation

- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM proposes an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe<sup>8</sup>. These are broadly used across the United Kingdom to rank Sites, so priorities for nature conservation can be attained. For example, current Site of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with a comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Gloucestershire BAP currently lists a number of Priority habitats and species.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the International level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

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<sup>8</sup> Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of Sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

## ***Habitat Evaluation***

### **Designated Sites**

- 5.1.9. **Statutory Sites.** There are no statutory designated sites of nature conservation interest within the Application Site. The nearest statutory designated site is Leckhampton Hill and Charlton King Common SSSI, which is situated approximately 1.4km southeast of the Application Site and is designated for its unimproved Jurassic limestone grassland and due to it supporting a variety of insects (see Plan ECO1).
- 5.1.10. Given the distance of Leckhampton Hill and Charlton King Common SSSI from the Application Site (1.4km) and the fact it is separated by large areas of agricultural land and roads, it is not considered that there will be any adverse impacts (either direct or indirect) to this SSSI as a consequence of the development at the Application Site.
- 5.1.11. The Application Site is located within the potential Impact Risk Zones (IRZ) of for Leckhampton Hill and Charlton King Common SSSI. However, the IRZ details that residential development is not considered to have any potential impact on this SSSI.
- 5.1.12. **Non-Statutory Sites.** There are no non-statutory sites of nature conservation interest within the Application Site. The nearest non-statutory site is the Shurdington Grove Key Wildlife Site (KWS), which is located approximately 1.7km to the southwest of the Application Site (see Plan ECO1).
- 5.1.13. Given the relative small scale nature of the proposed development, the fact that the Application Site and the KWS are separated by agricultural land and roads, and given the distance of this KWS from the Application Site (1.7km), it is not considered that there will be any adverse impacts (either direct or indirect) to this KWS as a consequence of any development at the Application Site.
- 5.1.14. On this basis, it is not considered that any detrimental effects will arise as a result of residential proposals at the Application Site to any statutory or non-statutory site of nature conservation interest.
- 5.1.15. Leckhampton Green Unconfirmed Site covers the northern half of the site and is detailed as improved, arable, orchards and semi-improved meadows and hedges. It is important to note that an Unconfirmed Site does not constitute a formal ecological designation and simply identifies an area that is recommended for specific ecological survey effort. Ecology Solutions' surveys over the course of a number of years represents such a survey and confirms that the habitat within the Unconfirmed site is not of any particular intrinsic ecological importance and largely comprises improved grassland. The proposed development will result in the loss of this habitat, although new boundary hedgerows, areas of open space and an attenuation feature will offset the loss of this habitat.

### **Habitats**

- 5.1.16. The habitats within the Application Site are generally not considered to be of any particular ecological importance. Although, the hedgerows and

trees are of some greater ecological value in the context of the Application Site.

#### Improved Grassland

- 5.1.17. The improved grassland is not considered to be of ecological value, being subject to regular management (cutting) and not supporting a diverse species complement.
- 5.1.18. **Mitigation/Enhancement.** Areas of improved grassland are to be lost to the proposed development and it is recommended that areas of open space and the attenuation feature are oversown with a native wildflower seed mix where possible and subject to appropriate management, creating a habitat that is of greater biodiversity interest than that which is currently present and helping to achieve an ecological enhancement post-development.

#### Hedgerows

- 5.1.19. The majority of the hedgerows within the Application Site do not support a diverse species complement. Nonetheless, they provide cover and dispersal habitats for mammals and nesting habitat for birds.
- 5.1.20. **Mitigation/Enhancement.** The hedgerows are to be retained and additional hedgerows are to be planted around the boundary of the Application Site improving structure and wildlife connectivity. The retained and new hedgerows would provide foraging areas, nesting habitat and commuting routes for Badgers, birds and bats. It is recommended that the new hedgerows be planted with a diverse mix of native species or those of known benefit to wildlife.
- 5.1.21. It is recommended that the retained hedgerows within the Application Site are fenced at canopy width (as required) according to the current British Standards before construction work commences, to protect roots from compaction. Fences should remain in place until construction work is complete within the vicinity of the hedgerows.

#### Trees

- 5.1.22. A number of trees are present within the Application Site, which are of relatively greater ecological value.
- 5.1.23. **Mitigation/Enhancement.** The trees are to be retained within the development proposals. Should the loss of any trees occur, this will be offset through the proposed new hedgerow and tree planting.
- 5.1.24. The retained tree within the Application Site should be fenced at canopy width (as required) according to the current British Standards before construction work commences, to protect roots from compaction. Fences should remain in place until construction work is complete within the vicinity of the trees.



### Building, Hardstanding, Bare Ground and Debris Pile

- 5.1.25. The Application Site includes a building and debris pile, with areas of hardstanding and bare ground, which is of negligible ecological value and would likely be lost to the proposed development.

**Mitigation/Enhancement.** It is considered that no specific mitigation measures would be required for the loss of this habitat.

### Scrub, Ruderal Vegetation and Recolonising Grassland

- 5.1.26. The Application Site includes areas of scrub, ruderal vegetation and an area of recolonising grassland, which are of limited ecological value and would likely be lost to the development proposals.

- 5.1.27. **Mitigation/Enhancement.** The proposed areas of open space, new boundary hedgerow planting and landscape planting would offset the loss of this habitat. As an enhancement, it is recommended that landscape planting within the Application Site comprise a mix of native species and those species of known value to wildlife, in order to further increase biodiversity and create an ecological enhancement post-development.

## ***Faunal Evaluation***

### **5.2. Bats**

- 5.2.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (“the Habitats Regulations”). These include provisions making it an offence to:

- Deliberately kill, injure or take (capture) bats;
- Deliberately disturb bats in such a way as to be likely to significantly affect:-
  - (i) the ability of any significant group of bats to survive, breed or rear or nurture their young; or to hibernate; or
  - (ii) to affect significantly the local distribution or abundance of the species concerned;
- Damage or destroy any breeding or resting place used by bats;
- Intentionally or recklessly obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).

- 5.2.2. The words ‘deliberately’ and ‘intentionally’ include actions where a court can infer that the defendant knew ‘the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.

- 5.2.3. The offence of damaging (making it worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.

- 5.2.4. In accordance with the Habitats Regulations the licensing authority (Natural England) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:

1. the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
  2. there must be no satisfactory alternative; and
  3. the favourable conservation status of the species concerned must be maintained.
- 5.2.5. Licences can usually only be granted if the development is in receipt of full planning permission (and relevant conditions, if any, discharged).
- 5.2.6. Seven species of bat are Priority Species, these are *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, Noctule, Soprano Pipistrelle, Brown Long-eared, Greater Horseshoe *Rhinolophus ferrumequinum*, and Lesser Horseshoe *Rhinolophus hipposideros*.
- 5.2.7. **Application Site usage.** The building within the Application Site lack suitable features for bats and no evidence of bats was recorded within the buildings. The majority of the trees lack suitable features for roosting bats although the mature Oak in the north east corner is considered to have low potential to support bats by virtue of its size/age, although there were no obvious features for roosting bats to utilise.
- 5.2.8. The hedgerows offer some limited sub-optimal foraging opportunities, although more extensive and optimum opportunities are available in the wider area.

#### *Mitigation/Enhancement*

- 5.2.9. The mature Oak tree will be maintained as part of the proposed development and will be buffered from development with by an area of open space and attenuation feature. Therefore, any roosting potential for bats would be maintained.
- 5.2.10. The hedgerows and trees are being retained as part of the proposals. New hedgerow planting will enhance foraging and commuting opportunities for bats within the Application Site. New landscape planting will also take place within the Application Site and it is recommended native species are utilised, to maintain and enhance opportunities for bats post development.
- 5.2.11. If deemed necessary, a sympathetic lighting regime associated with the new proposals could be used to minimise light spillage into key areas, such as the bat potential tree and the retained and new hedgerows, in order to retain the suitable foraging and navigation opportunities for bats. A sympathetic lighting regime could be achieved through the use of sodium or warm and white spectrum LED lights, which produce less light spillage than other types of lighting and have no low / no UV content (or UV-filtered lights). In addition, the spillage of the light can be reduced further through the use of low-level lights, the employment of lighting 'hoods' which will direct light below the horizontal plane, preferably with no upwards tilt and the use of short-timer motion sensors for any external lighting.
- 5.2.12. As an enhancement, it is recommended that bat boxes, such as Schwegler bat boxes (see Appendix 3 for suitable examples), are erected on suitable retained trees. These models of bat box are known to be attractive to a number of the smaller bat species, including Pipistrelle

(known from the local area). This measure will provide enhanced roosting opportunities within the site.

### 5.3. Badgers

- 5.3.1. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the southwest.
- 5.3.2. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. ‘Current use’ of a Badger sett is defined by Natural England as “how long it takes the signs to disappear, or more precisely, to appear so old as to not indicate “current use”.<sup>9</sup>
- 5.3.3. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’ of a Badger.
- 5.3.4. Work that disturbs Badgers is illegal without a licence. Natural England has developed guidelines on the types of the activity it considers should be licensed within certain distances of sett entrances. For example, using heavy machinery within 30m of any entrance to an active sett, and lighter machinery within 20m, or light work such as hand digging within 10m, all may require a licence.
- 5.3.5. ‘Interim guidance’ issued by Natural England in September 2007 specifically states *“it is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.”*
- 5.3.6. More recent guidance produced by Natural England in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts. However, Natural England’s guidance continues by stating that any activity that will, or is likely to cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.
- 5.3.7. In addition, this latest guidance no longer makes reference to any 30m/20m/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires / chemicals within 20m of a sett should specifically be avoided.
- 5.3.8. This guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and

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<sup>9</sup> [http://www.naturalengland.org.uk/Images/WMLG17\\_tcm6-11815.pdf](http://www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf)

therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30m-exclusion zone to the north.

- 5.3.9. It should be noted that a licence cannot be issued until a site is in receipt of a full and valid planning permission and that generally licences are not granted between December and June inclusive to avoid disruption to the Badger breeding cycle.
- 5.3.10. Local authorities are therefore obliged to consult Natural England over any work which is considered likely to adversely affect Badgers.
- 5.3.11. **Site Usage.** No evidence of Badger such as any setts, latrines, snagged hairs, foraging marks or footprints were recorded within or immediately adjacent to the Application Site but this species is known in the local area. One mammal path was recorded along the northern boundary (see Plan ECO2) although these could not specifically be attributed to Badgers and Roe Deer were recorded within in the adjacent field.

#### *Mitigation/Enhancement*

- 5.3.12. It is recommended that all contractors working on the Application Site are briefed regarding the potential presence of Badgers in order to ensure no impacts occur to this species during the construction phase. Any trenches or deep pits within the Site that are to be left open overnight should be covered or provided with a means of escape should a Badger enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface.
  - 5.3.13. Any trenches or pits should be inspected each morning to ensure no Badgers have become trapped overnight. Should a Badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, forming a temporary sett. Should a trapped Badger be encountered Ecology Solutions will be contacted immediately for further advice.
  - 5.3.14. The storage of topsoil or other 'soft' building materials on site should be given careful consideration. Badgers will readily adopt such mounds as setts, which would then be afforded the same protection as established setts. Such mounds should be regularly inspected to check for use by Badgers.
  - 5.3.15. The creation of new hedgerows and areas of open space would maintain foraging opportunities for Badgers, while the planting of new trees including fruit / berry-bearing species would provide additional seasonal foraging resources for this species.
- 5.4. **Birds**
- 5.4.1. **Legislation.** Section 1 of the Wildlife and Countryside Act 1981 (as amended) is concerned with the protection of wild birds, whilst Schedule 1 lists species that are protected by special penalties. All species of birds receive general protection whilst nesting.

- 5.4.2. **Application Site usage.** The Application Site offers some limited opportunities for nesting birds in terms of the hedgerows, although better opportunities are available within the wider area.
- 5.4.3. During the survey work a House Sparrow, Blackbird and Robin were recorded within the Application Site.

*Mitigation/Enhancement*

- 5.4.4. It is recommended that any areas of new planting incorporate native species of local provenance and berry producing species in order to enhance the opportunities for birds post-development.
- 5.4.5. As a precaution and to avoid a possible offence, it is recommended that should any removal of suitable nesting habitat be proposed, it is undertaken outside of the bird breeding season (March – July inclusive) or checked for nesting birds by a trained ecologist immediately prior to removal. Where any nesting birds are recorded within the Application Site, no work should take place in that location until the young have left the nest.
- 5.4.6. To create a further enhancement, it is recommended that a number of Schwegler bird boxes are placed on suitable trees and/or buildings within the Application Site in order to provide additional nesting opportunities for birds post-development (see Appendix 4 for suitable examples). These bird boxes should be located away from potential predators and adjacent to potential foraging opportunities where possible.

**5.5. Invertebrates**

- 5.5.1. **Application Site usage.** Given the habitats present it is likely an assemblage of common invertebrate species would be present within the Application Site.

*Mitigation/Enhancement*

- 5.5.2. It is recommended that log piles created e.g. from tree and hedgerow management, would provide suitable opportunities for the Black-head Cardinal Beetle, as their Larvae live under loose bark. Also, inclusion of wildflower grassland would also provide foraging opportunities for the Black-head Cardinal Beetle, which perch on flowers while search for prey.
- 5.5.3. Additional hedgerow planting will also provide potential habitat for the Centre-barred Sallow Moth.
- 5.5.4. The creation of new areas of species-rich grassland and the planting of new native trees and hedgerows would likely provide new opportunities for a range of invertebrates. The implementation of other measures recommended above would also likely provide knock-on benefits for invertebrates.

## 6. PLANNING POLICY CONTEXT

6.1. The planning policy framework that relates to nature conservation at the Application Site is issued nationally through the National Planning Policy Framework (NPPF) and locally through policies within the Cheltenham Borough Council Local Plan, which will eventually be replaced by the Local Development Framework and the Joint Core Strategy.

### 6.2. National Policy

#### *National Planning Policy Framework*

6.3. The National Planning Policy Framework (NPPF) sets out the Government's requirements for the planning system and was subsequently revised on the 24th July 2018.

6.4. The key element of the NPPF is that there should be 'a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking' (paragraph 11).

6.5. The revised NPPF is broadly comparable to the previous version, including reference to minimising impacts on biodiversity and provision of net gains to biodiversity wherever possible (paragraph 170) and ensuring that Local Authorities afford appropriate weight to statutory and non-statutory nature conservation designations, protected species and biodiversity.

6.6. The NPPF also considers the strategic approach which local authorities should adopt with regard to the protection, enhancement and management of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.

6.7. Paragraph 175 of the NPPF comprises a number of principles which Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments, provision for refusal of planning applications if significant harm cannot be avoided, mitigated or as a last resort compensated for, applying the protection given to European sites to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on 'habitats sites' (as defined within the NPPF), and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.

6.8. National policy therefore implicitly recognises the importance of biodiversity and that, with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

## 6.9. Local Policy

### Cheltenham Borough Local Plan 2<sup>nd</sup> Review

- 6.9.1. The Cheltenham Borough Local Plan 2<sup>nd</sup> Review (adopted July 2006) is the current document in use for planning control purposes. There are three policies within this document that relate in whole or in part to nature conservation, Policies **NE1**, **NE2** and **NE3**. Policy NE1 is concerned with protecting the habitat of any legally protected species, unless mitigation measures are put in place for the species protection. Policy NE2 is concerned with the protection of nationally designated conservation sites, whilst Policy NE3 is concerned with the protection of sites of local importance as well as the protection of areas significant to wildlife.

### Gloucester, Cheltenham and Tewkesbury Joint Core Strategy

- 6.9.2. The Joint Core Strategy, is a partnership between Gloucester City Council, Cheltenham Borough Council and Tewkesbury Borough Council, supported by Gloucestershire County Council, which will be an integral part of the Local Development Framework for the area, is still in preparation and has yet to be adopted.
- 6.9.3. The Joint Core Strategy contains one Policy that relates to nature conservation, Policy SD10 which relates to biodiversity and refers to the protection/enhancement of internationally, nationally and locally designated sites and protected species.

## 6.10. Discussion

- 6.10.1. The development proposals will have no adverse effects on any statutory or non-statutory designated sites and as such it is considered that the proposals will accord with Policy NE2 and NE3 of the Local Plan, and Policy SD10 of the emerging Joint Core Strategy and the principles laid down in the NPPF.
- 6.10.2. There will be no loss to the hedgerow network and the proposed hedgerows planting and new tree planting will enhance the site ecological value and as such it is considered the proposals accord with Policy NE3 of the Local Plan.
- 6.10.3. The development proposals will have no adverse effects on any protected species or Priority Species, and as such it is considered that the proposals will accord with Policy NE1 of the Local Plan.
- 6.10.4. In conclusion, implementation of the measures set out in this report would enable development of the site to accord with national and local planning policy for ecology and nature conservation.

## 7. SUMMARY AND CONCLUSIONS

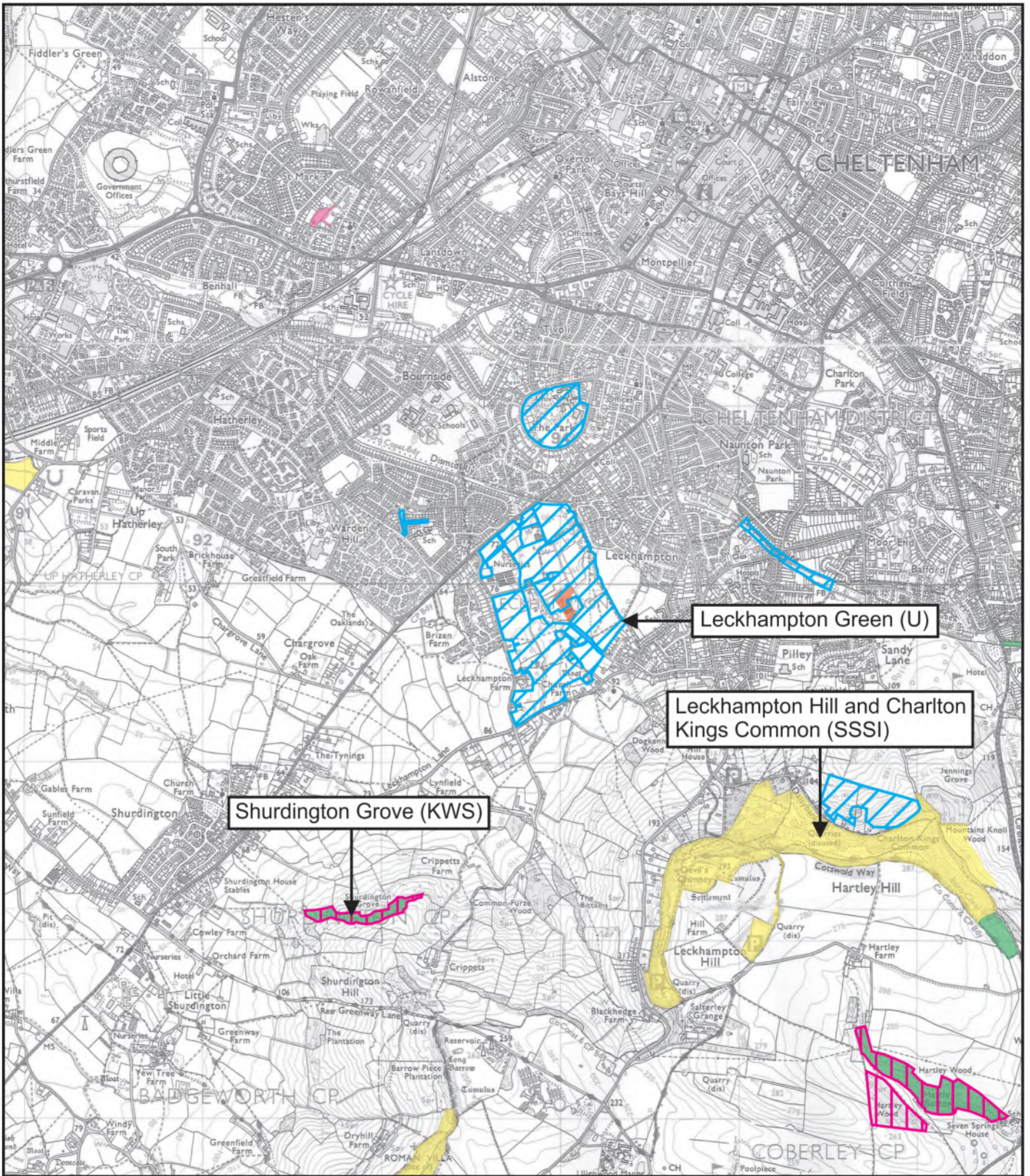
- 7.1. Ecology Solutions was commissioned in September 2015 to undertake an Ecological Assessment at land off Kidnappers Lane, Leckhampton on behalf of Robert Hitchins Limited and its successors in title to the land. Ecology Solutions was subsequently commissioned by Robert Hitchins Limited in September 2018 to update the Ecological Assessment.
- 7.2. The proposals are for residential development with associated infrastructure, open space and landscaping.
- 7.3. The Application Site was surveyed based around extended Phase 1 survey methodology, as recommended by Natural England in September 2015 and September 2018. In addition, specific surveys were undertaken within the Application Site in respect of bats, Badgers and birds.
- 7.4. There are not considered to be any significant adverse effects on any statutory and non-statutory sites of nature conservation interest from the development proposals.
- 7.5. Retention of the existing hedgerows, together with new hedgerows and tree planting and creation of open space within the development proposals will provide continued and enhanced foraging and navigational opportunities for bats. It is recommended that new planting consists of species of known value to wildlife. The inclusion of bat boxes within the site will provide new roosting opportunities for bats.
- 7.6. No evidence of Badger such as any setts, latrines, snagged hairs, foraging marks or footprints were recorded within or immediately adjacent to the Application Site. One mammal path was recorded along the northern boundary although these could not specifically be attributed to Badgers and a number of Roe Deer were recorded within the adjacent field.
- 7.7. The retention of the majority existing hedgerows and landscape planting throughout the proposals will provide enhanced opportunities for birds, while the erection of bird boxes within the site will also provide new nesting opportunities for birds. Safeguards for nesting birds during vegetation clearance are recommended.
- 7.8. Further recommendations have been made to safeguard other protected and notable species present within the Application Site. Recommendations have also been made to achieve ecological enhancements for such protected/notable species wherever possible.
- 7.9. In conclusion, through the implementation of the safeguards and recommendations set out within this report it is considered that any development proposals will accord with planning policy with regard to nature conservation at all administrative levels.



## **PLANS**

## **PLAN ECO1**

Application Site Location & Ecological Designations



**KEY:**

-  APPLICATION SITE
-  SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
-  KEY WILDLIFE SITE (KWS)
-  LOCAL NATURE RESERVE (LNR)
-  UNCONFIRMED SITE (U)
-  ANCIENT WOODLAND



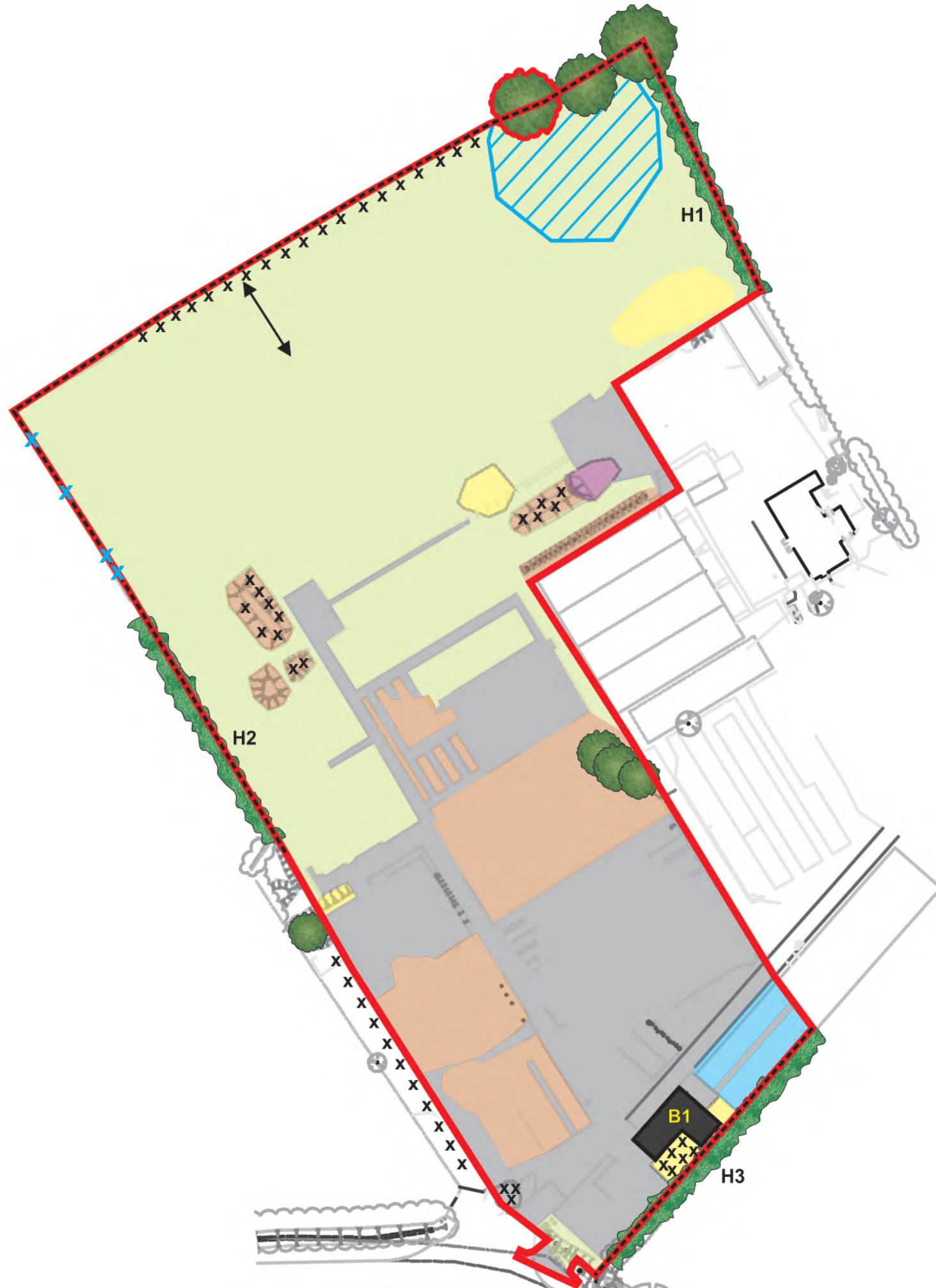
ecology solutions ltd

















6898: LAND OFF KIDNAPPERS LANE,  
LECKHAMPTON

PLAN ECO1:  
APPLICATION SITE LOCATION &  
ECOLOGICAL DESIGNATIONS

## **PLAN ECO2**

Ecological Features



- KEY:**
-  APPLICATION SITE BOUNDARY
  -  IMPROVED GRASSLAND
  -  WET AREA
  -  SCRUB
  -  RUDERAL VEGETATION
  -  BARE GROUND
  -  RECOLONISING GRASSLAND
  -  HEDGEROW
  -  TREE
  -  TREE WITH BAT POTENTIAL
  -  BUILDING
  -  HARDSTANDING
  -  DEBRIS PILE
  -  BAMBOO SCRUB
  -  MAMMAL PATH
  -  POST & WIRE FENCE



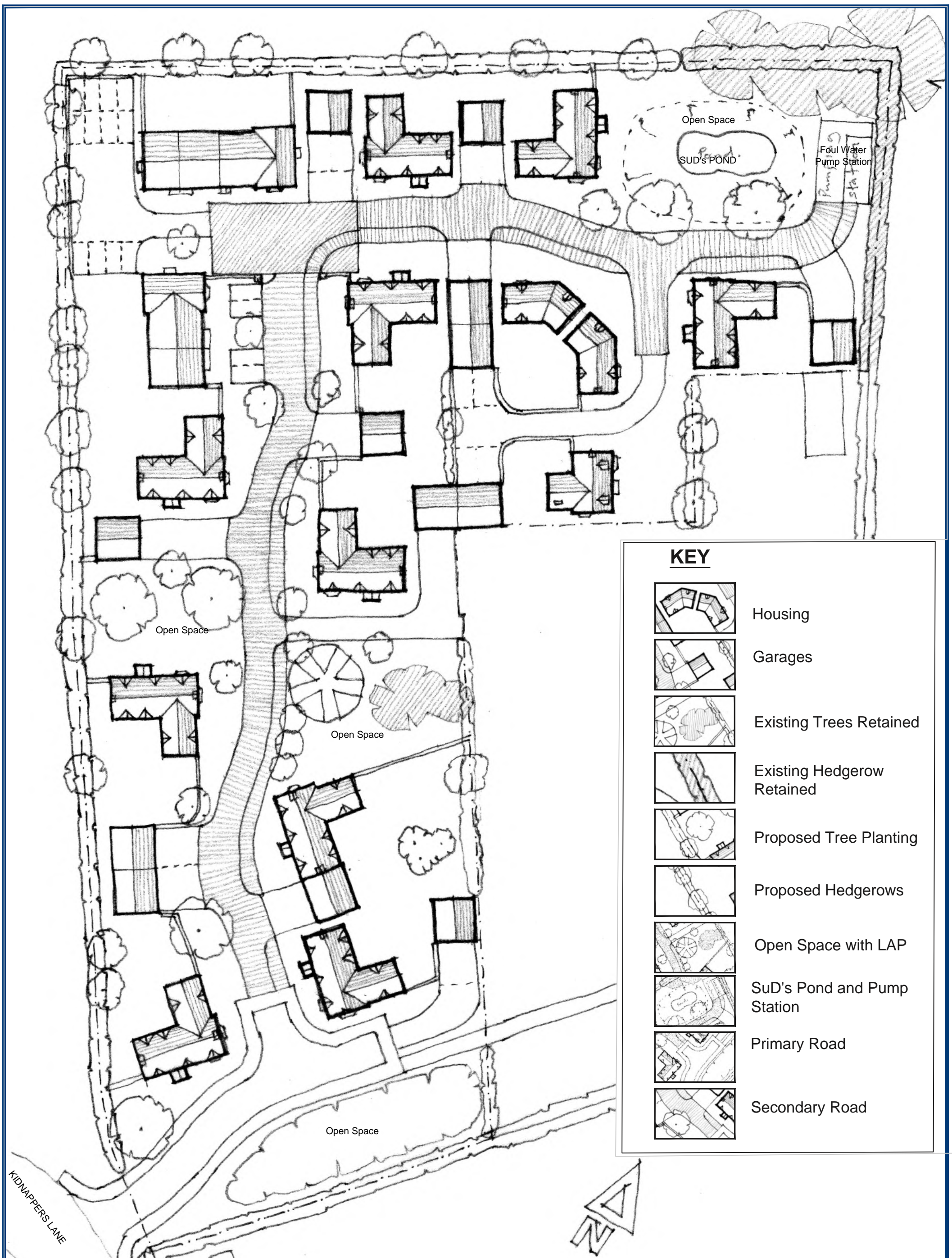
6898: LAND OFF KIDNAPPERS LANE, LECKHAMPTON

PLAN ECO2:  
ECOLOGICAL FEATURES

## **APPENDICES**

## **APPENDIX 1**

### Illustrative Masterplan



**KEY**



Housing



Garages



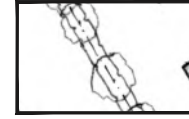
Existing Trees Retained



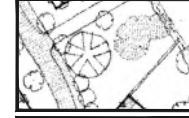
Existing Hedgerow Retained



Proposed Tree Planting



Proposed Hedgerows



Open Space with LAP



SuD's Pond and Pump Station



Primary Road



Secondary Road

Site Name:  
Land off Kidnappers Lane, Leckhampton

Drawing Number:  
300.P.3

Revision:  
K

Drawing Title:  
Illustrative Masterplan

Drawn By:  
POK

Date:  
20.08.18

Scale:  
1:500@A3



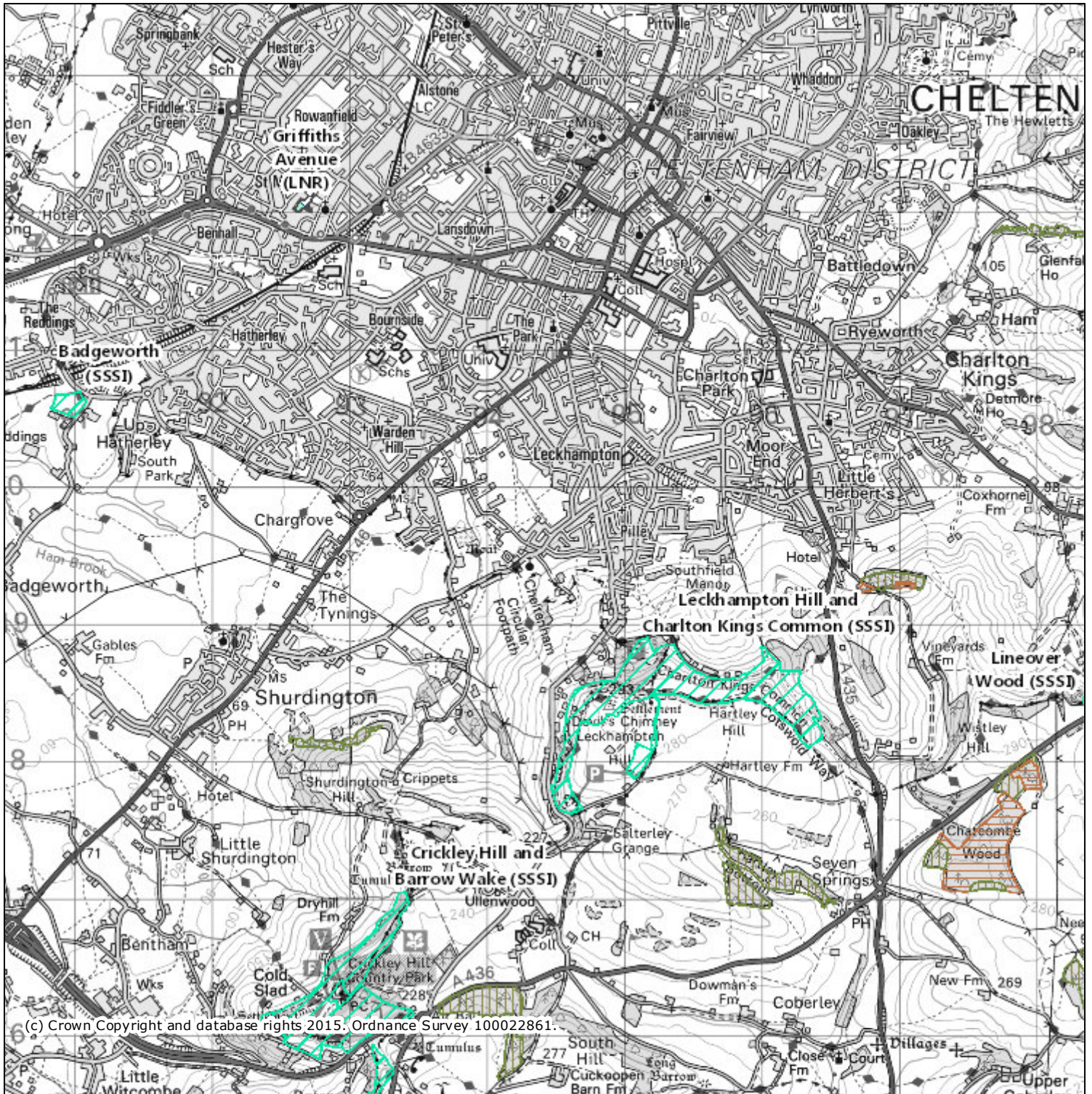
The Manor, Boddington, Cheltenham, Gloucestershire, GL51 0TJ  
Tel: 01242 680694  
www.robert-hitchins.co.uk

DO NOT SCALE FROM THIS PLAN



## **APPENDIX 2**

Information obtained from MAGIC



## Legend

-  Local Nature Reserves (England)
-  National Nature Reserves (England)
-  Ramsar Sites (England)
-  Sites of Special Scientific Interest (England)
-  Special Areas of Conservation (England)
-  Special Protection Areas (England)
-  Ancient and Semi-Natural Woodland
-  Ancient Replanted Woodland

Projection = OSGB36

xmin = 386900

ymin = 215200

xmax = 401900

ymax = 223900

Map produced by MAGiC on 16 October, 2015.

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## **APPENDIX 3**

Suitable Examples of Bat Boxes

# Bat Boxes

Schwegler bat boxes are made from 'woodcrete' and have the highest rates of occupation of all types of box.

The 75% wood sawdust, clay and concrete mixture is ideal, being durable whilst allowing natural respiration and temperature stability. These boxes are rot and predator proof and extremely long lasting.

Boxes can be hung from a branch near the tree trunk or fixed using 'tree-friendly' aluminum nails.



## 1FF Bat Box

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

*Woodcrete (75% wood sawdust, concrete and clay mixture)*

*Width: 27cm*

*Height: 43cm*

*Weight: 8.3kg*

## 2FN Bat Box

A large bat box featuring a wide access slit at the base as well as an access hole on the underside. Particularly successful in attracting Noctule and Bechstein's bats.

*Woodcrete construction, 16cm diameter, height 36cm.*



## 2F Bat Box

A standard bat box, attractive to the smaller British bat species. Simple design with a narrow entrance slit on the front.

*Woodcrete construction, 16cm diameter, height 33cm.*



## **APPENDIX 4**

Suitable Examples of Bird Boxes

# Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box.

They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting.

Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.

## 2GR Nest Box

Because of the special design of the large nesting area and front panel, this box is especially well protected against predators.

*Available as shown with three 27mm holes for small tits or with a single oval entrance hole.*

*Nesting area 14cm x 19cm.*



## 1B Bird Box

This is the most popular box for garden birds and appeals to a wide range of species. The box can be hung from a branch or nailed to the trunk of a tree with a 'tree-friendly' aluminium nail.

*Available in four colours and three entrance hole sizes. 26mm for small tits, 32mm standard size and oval, for redstarts.*