

Ecology Report

PROPOSED DEVELOPMENT
Land between Haverhill Road and Hinton Way,
Stapleford

March 2020



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Executive Summary

MHE Consulting Ltd were instructed to undertake and report an ecological survey and assessment of land between Haverhill Road and Hinton Way to the north-east of Stapleford in Cambridgeshire. It is proposed to construct a retirement village with associated facilities, site drainage and landscaping, and to create a 19ha Countryside Park supporting predominantly chalk grassland habitat.

Most of the application site comprises arable farmland, with hedgerows, grassy field edges, some immature trees and scrub. An existing access track off Gog Magog Way will provide a pedestrian and cycleway access route to the proposed retirement village. A fenced area of amenity grassland is present along the Hinton Way edge of the site, whilst a discrete area of Norway spruce (*Picea abies*) plantation is located within the arable field.

The surveys indicate habitats present provide limited dispersal and refuge opportunities for individual amphibians and possibly grass snake (*Natrix helvetica*), whilst hedgerows may be used by commuting and foraging bats and nesting birds. Male skylarks (*Alauda arvensis*) (Red status; S. 41 NERC List) were holding territories within the arable farmland in 2019. Badger (*Meles meles*) pathways, snuffle holes, and latrines were found around the field verge. The verges and hedgerows may be used by hedgehog (*Erinaceus europaeus*) (S. 41 NERC List) as refuge and dispersal habitat, and brown hare (*Lepus europaeus*) (S. 41 NERC List) may use the arable farmland.

In 2019, only 1 of the 2 ponds identified within 500m could be accessed for survey. It was dry at the time, though given the wet winter of 2019/20 it is anticipated that GCN presence-absence surveys could be undertaken in the coming survey season. Repeat surveys will be required to confirm no significant change in badger use of the site prior to construction works commencing.

The scheme will result mainly in the loss of low biodiversity value arable land. Minor losses of hedgerow will be required to enable access creation, whilst construction activities may pose a risk of injury, death or entrapment to small numbers of animals. Mitigation measures are proposed to reduce impacts, including timing considerations and protection measures for retained habitats.

Recommendations are made to ensure the creation of a Countryside Park, together with site drainage (SuDS), integrated wildlife features and landscape planting will maximise the significant biodiversity gains available. Mechanisms to secure the recommendations through standard planning conditions are provided. As proposed, the scheme is considered consistent with national and local biodiversity related planning policies and guidance and can deliver a significant Biodiversity Net Gain for the area.

1 Introduction

1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of a 24.37ha area of land between Haverhill Road and Hinton Way in Stapleford, Cambridgeshire (Approximate central NGR TL 47788 52758; Figure 1).

Proposals for the land include the construction of a retirement village and associated facilities, with public open space and landscaping, together with a large (19ha) Countryside Park comprising predominantly chalk grassland habitat.

The ecological survey and this report are necessary to:

- Identify the existing ecological value of the site;
- Identify the need for further (e.g. protected species) surveys;
- Assess any potential adverse impacts of the proposed development on ecological features of the site or nearby designated sites;
- Make recommendations for mitigation (if required); and
- Identify opportunities for biodiversity enhancements and, consistent with national and local planning policy, net gains.

This report will form the basis for the submission of biodiversity information with the planning application. It reflects the site at the time of the survey and should be reviewed and revised as appropriate.

1.2 SITE LOCATION AND DESCRIPTION

The development site (Figure 2) including the proposed country park comprising predominantly arable land (e.g. Photos 1 and 2) is located to the north-east of Stapleford. An existing access track (Photo 3) off Gog Magog Way is proposed as a pedestrian and cycleway access route to the proposed retirement village. Boundary hedgerows (Photos 4 to 12) with grassed field edges (e.g. Photos 4 to 6) run along the eastern, western and southern boundaries, with discrete areas of scrub and immature trees as well as a shallow dry ditch (Photo 5) present along the latter. A fenced area of amenity grassland is present along the Hinton Way edge of the site (Photo 8), whilst a discrete area of Norway spruce (*Picea abies*) plantation is located within the arable field.

2 Planning policy and legislation

2.1 INTRODUCTION

This chapter summarises the key legislation and policies relevant to assessing the biodiversity impacts of the scheme upon habitats and species.

2.2 PLANNING POLICY

2.2.1 *National Planning Policy Framework (NPPF)*

The National Planning Policy Framework was originally published in 2012 and recently revised in February 2019. The document sets out the Government's planning policies for England and provides guidance on how these policies are expected to be applied. It provides a framework for, and must be taken account of within, locally prepared plans for housing and other development, and is a material consideration in planning decisions.

An overarching objective of the NPPF, which aims to secure net gains, is to contribute to protecting and enhancing the natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

The full NPPF is available to view online using the gov.uk website: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm ent_data/file/779764/NPPF_Feb_2019_web.pdf Policies of particular relevance to development and biodiversity include 170, 175, 176 and 177.

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

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

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest (SSSI), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

176. The following should be given the same protection as habitats sites:

- a) potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC);
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

177. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

2.2.2

Local Plan

Adopted local plans provide the framework for development across England, and include policies related to conserving and enhancing the natural environment. Planning policies and supporting documents that are used to plan, deliver and monitor development across the South Cambridgeshire area can be found at <https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/>.

Key documents include The Local Plan (2018)¹ and the more recently published Greater Cambridge Sustainable Design and Construction Supplementary Planning Document (SPD) (2020)².

Relevant Local Plan policies include:

- NH/4: Biodiversity

¹ https://www.scambs.gov.uk/media/12740/south-cambridgeshire-adopted-local-plan-270918_sml.pdf

² <https://www.scambs.gov.uk/media/14406/final-greater-cambridge-sus-dc-spd.pdf>

- NH/5: Sites of biodiversity or geological importance

2.3 LEGISLATION

2.3.1

Natural Environment and Rural Communities (NERC) Act 2006

Section 40 places a duty on every public body in exercising its functions, to have regard to the purpose of conserving biodiversity; this includes restoring or enhancing populations or habitats. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and public-sector decision making. *Habitats and species of principal importance for the conservation of biodiversity in England* are those published under Section 41 (“S. 41”) of the NERC Act 2006.

2.3.2

Wildlife and Countryside Act 1981 (as amended)

Rare and scarce habitats and species are afforded varying levels of protection under the Wildlife and Countryside Act 1981 (as amended) (hereafter “WCA 1981”). Some species and groups are afforded full protection (e.g. Schedule 1 bird species, bats), whilst others receive partial protection (e.g. widespread reptiles). Section 3.1 provides further detail relevant to this scheme. Species afforded legal protection are referred to by their relevant schedule (“Sch.”) within the act, i.e. “Sch. 1” (birds), “Sch. 5” (other animals), or “Sch. 8” (plants).

Invasive plant species such as Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*) are listed on Schedule 9 of the WCA 1981. It is an offence to plant or otherwise cause these species to grow in the wild and this includes the development of sites such that the plant colonises land owned by a third party.

2.3.3

The Countryside and Rights of Way (CROW) Act 2000

The CROW Act 2000 strengthened and updated elements of the WCA 1981, and gave a statutory basis to biodiversity conservation, requiring government departments to have regard for biodiversity in carrying out its functions and to take positive steps to further the conservation of listed habitats and species. It strengthened the protection of SSSI and threatened species. Many of its provisions have been incorporated as amendments into the WCA 1981 and some have been superseded by the NERC Act 2006.

2.3.4

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitat and Species Regulations 2017 (hereafter referred to as the Habitat Regulations 2017) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), and elements of the EU Wild Birds Directive, into national law. The 2017 Regulations provide for the designation and protection of ‘European sites’ (Special Protection Areas, SPAs, and Special Areas of Conservation, SACs), the protection of ‘European Protected Species’ (“EPS”), and the adaptation of planning and other controls for the protection of European Sites. They have recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019, which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

Under the Regulations, competent authorities i.e. any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the relevant EC Directives.

2.3.5

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 (hereafter "PBA 1992") consolidates and improves upon the previous Badgers Act 1973, Badgers Act 1991, and Badgers (Further Protection) Act 1991. Under the PBA 1992 (except when holding a licence to do so) it is illegal for a person to wilfully; kill, injure, take, possess, sell, or otherwise cruelly treat a badger. It is also illegal to dig out, damage, destroy, or obstruct entry to setts (including by use of dog(s)). Further information on offences, exceptions, and penalties are listed on the PBA 1992 on legislation.gov.uk.

3 Methodology

3.1 INTRODUCTION

This document reports protected species surveys and provides an Ecological Impact Assessment. It has been produced with reference to relevant guidance, most notably:

- Guidelines for Ecological Report Writing (CIEEM, 2017);
- Biodiversity – Code of Practice for Planning and Development (BS 42020:2013³);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018); and
- Biodiversity Net Gain: good practise principles for development (CIRIA, CIEEM and IEMA, 2016).

The following sections summarise the approaches used to review existing data, and to undertake appropriate field surveys to scope and inform an Ecological Impact Assessment (EclA) for the scheme. Where further surveys are considered necessary, this is identified in section 5.

3.2 DESK SURVEY

The following data sources were consulted to assess the potential for the application site to support protected or notable habitats/species:

- Aerial photos, Ordnance Survey maps, and the MAGIC website (<http://magic.defra.gov.uk/>): These were used to identify habitat types including priority habitats, suitability for particular species/groups, and the locality of nationally and internationally designated sites;
- Natural England's great crested newt (GCN) (*Triturus cristatus*) class licence return data; and
- Historical biological records: species and locally designated site records within 2km of the site were provided by the Cambridgeshire and Peterborough Environmental Records Centre (CPERC).

From this exercise, it was concluded that the following legally protected species/groups may be present on the site and/or land immediately adjacent to it:

- Amphibians⁴ and reptiles⁵ including widespread species such as toads (*Bufo bufo*) and grass snake (*Natrix helvetica*);
- Mammals including badgers (*Meles meles*)⁶ and bats⁴;
- Breeding birds⁷ including Red and Amber status⁸ species; and
- S. 41⁹ list habitats such as hedgerows, and species such as hedgehog (*Erinaceus europaeus*) and brown hare (*Lepus europaeus*).

In the context of the landscape setting, scale of the application site, and unknown nature of the development, the 'Zone of Influence' of the scheme is considered

³ BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.

⁴ GCNs and all species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.

⁵ Widespread reptiles and amphibians receive partial protection under the WCA 1981.

⁶ Badgers and their setts are afforded protection by the PBA 1992.

⁷ All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

⁸ The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 4 (Eaton *et al.*, 2015).

⁹ S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

restricted to habitats on the site and species within 500m of the site boundary unless identified otherwise.

3.3 FIELD SURVEY

An initial site walkover was undertaken on the 17th April 2019 to 1) record habitats present, and 2) assess the value of the habitats present for protected and notable species. A list of vascular plants and a description of the vegetation was made, including the location and extent of any Schedule 9 (WCA 1981) plants.

Photos of the habitats and any field present signs are provided in Appendix A1.

3.3.1 *Habitats and vascular plants*

The site was walked with all distinct vegetation and habitat types as well as any features of interest identified using the Phase 1 Habitat Survey methodology (JNCC, 2010). Care was taken to record as many species as possible.

3.3.2 *Amphibians and reptiles*

a) Amphibians

The terrestrial habitat suitability of the site was assessed with respect to refugia and foraging habitat based on the known preferences of GCN and widespread amphibians such as common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), and common toad (*Bufo bufo*).

No ponds are present on site though two ponds are recorded within the 500m Zone of Influence buffer (P1 and P2; Figure 3). Land access permission for P1 was granted, though it was observed to be dry (tenant *pers. comm.*) and no assessment was carried out. Landowner access for P2 could not be secured.

b) Reptiles

Habitats on and around the application site were assessed with respect to the known foraging and refuge preferences of widespread reptile species.

3.3.3 *Bats*

a) Tree Roost Assessment

Existing trees were visually checked to assess their suitability for supporting roosting bats using the following criteria:

1. All Potential Roosting Features (PRFs) (e.g. natural cavities, rot holes, woodpecker holes, splits, peeling bark) were inspected from the ground, using binoculars where necessary;
2. All potential niches would be assigned a category according to Bat Conservation Trust (BCT) protocols (Collins, 2016). These categories are listed below:
 - High Suitability: Trees 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;
 - Moderate Suitability: Trees 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;
 - Low Suitability: A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential. However, the tree(s) are of a size and age that elevated

surveys may result in features being found; or features which may have limited potential to support bats; and

- Negligible Suitability: Trees with negligible bat roost potential.
3. Where potential niches existed, niches below 5m high were physically inspected, using ladders where appropriate. Any cavities with the potential to support roosting bats were inspected with a SeeSnake endoscope and/or a small LED torch as necessary; and
 4. All potential roosting niches were checked for the presence of bats (alive or dead), faecal staining, fur and/or scratch marks around the entrance and droppings within the cavities or attached to the trunk/bough below the entrance.

b) Foraging and commuting habitat

Consideration was given to the value of any potential foraging and commuting habitats (i.e. hedgerows and grassland) on or close to the application site (Collins, 2016).

3.3.4 *Nesting birds*

The value of the site was assessed in relation to nesting birds. This was supplemented with field records of birds seen or heard within the site, or nests observed.

3.3.5 *Badger*

The application site and adjacent habitats were surveyed for evidence of badger activity including setts, day beds, latrines, diggings/snuffle holes, paths/runs, scratching posts, hair, and footprints. Any potential sett found was then assessed for evidence of recent use by badger and classified as per current guidance (Scottish Badgers, 2018).

3.3.6 *S.41 habitats and species*

The site was surveyed to determine the presence of any S. 41 habitats such as native species-rich hedgerows. The site's suitability for S. 41 list species such as hedgehog and brown hare was assessed based on their habitat preferences.

3.3.7 *Non-native invasive plant species*

The site was inspected for Schedule 9 species such as Japanese knotweed and giant hogweed.

3.4 SURVEY CONSTRAINTS

Given the nature of the site and previous ecology report available, the timing of the survey visit was considered appropriate for this report.

The drought of 2018 combined with dry weather during spring 2019 meant pond P1 was dry during the survey window for GCNs. Access to pond P2 was not secured.

3.5 SURVEYOR

Christian Whiting BSc (Hons) MSc MCIEEM MEECW has over 19 years' experience working as an ecologist and holds NE survey licences for barn owl (CL29/00213), bats (2015-14745-CLS-CLS - Bat Survey Level 2, and great crested newts (Class A licence 2015-17633-CLS-CLS). He is a Registered Consultant (Registration RC089) on NE's Bat Low Impact Class Licence. He is registered on the NE water vole (*Arvicola amphibius*) Developers Class Licence CL31 (Intentional disturbance of water voles and damage/destruction of water vole burrows by means of 'Displacement') and the Environment Agency's and IDB water vole organisational and class licences

respectively. His main areas of expertise are bats, vascular plants, amphibians and reptiles, otter (*Lutra lutra*) and water vole.

Darren Storey Mzool (Hons) MSc GradCIEEM has over two years' experience working as a professional ecologist and holds a level 1 Natural England survey licence for GCNs. He is experienced in amphibian, reptile, bat, water vole, and Phase 1 habitat surveying as well as in GIS.

3.6

ASSESSMENT

Impacts and effects upon habitats and species are assessed with reference to the CIEEM Guidelines for Ecological Impact Assessment (2018) and are reported in Section 5, based on the baseline conditions reported in Section 4.

The assessment includes potential impacts upon habitats and species during the construction and operational phases of the scheme. It considers positive and negative impacts, their extent, magnitude and duration, frequency and timing, and reversibility.

4 Results

4.1 INTRODUCTION

This chapter summarises the results of the desk and field surveys.

4.2 BASELINE ECOLOGICAL CONDITIONS - DESK STUDY

4.2.1 *Designated sites*

Locally designated sites (e.g. County Wildlife Sites [CWS]) within 2km (Appendix A2), nationally designated sites within 5km, and internationally designated sites within 13km of the application site are listed in Table 4.1.

Table 4.1 Relevant designated sites

Site name and designation
The Beechwoods Local Nature Reserve (LNR)
Dernford Farm Grassland CWS
Hedgerow West of Babraham Road City Wildlife Site (CiWS)
Hobson's Brook South CiWS
Lime Kiln Road Verge and Hedge CiWS
Netherhall Farm Meadow CWS
Nine Wells LNR
Red Cross Lane Drain CiWS
River Cam CWS
River Greta CWS
The Beechwoods LNR
Wandlebury CWS
Wort's Causeway RSV
Protected Road Verge (PRV) C3
Cherry Hinton Pit SSSI
Gog Magog Golf Course SSSI
Roman Road SSSI
Sawston Hall Meadows SSSI
Whittlesford – Thriplow Hummocky Fields SSSI
Eversden and Wimpole Woods SSSI and SAC *

* Listed on England's Ancient Woodland Inventory

Locally designated sites

The Beechwoods LNR was planted in the 1870s with original mature beech (*Fagus sylvatica*) trees with a varied structure. An area of secondary woodland was planted in 1992. Ground flora includes white helleborine orchid (*Cephalanthera damasonium*).

Dernford Farm Grassland CWS supports a population of a Nationally Scarce plant species. Additionally, it supports type 10B waterbodies with beds of stoneworts (e.g. charophytes).

The City Wildlife Sites associated with Cambridge City including Hedgerow West of Babraham Road, Hobson's Brook South, Lime Kiln Road Verge and Hedge, and Red Cross Lane Drain are four small sites that are notable for a range of characteristics including a species-rich hedgerow, a moderately undamaged chalk stream, and species-rich neutral grassland.

Netherhall Farm Meadow CWS is notable for supporting a small amount of CG3 Upright brome (*Bromus erectus*) calcareous grassland.

The Nine Wells LNR is a mixture of woodland and scrub with water provided by the nine springs from which the site takes its name.

The River Cam CWS is a major river with adjacent semi-natural habitat that has not been grossly modified by canalisation and/or poor water quality. Additionally, it has areas with concentrations of mature willow (*Salix spp*) pollards.

River Greta CWS is a major river not grossly modified by pollution or canalisation. Additionally, it supports concentrations of mature willow pollards.

Wandlebury CWS is listed as important in the bryophyte register for Cambridgeshire, and as a grade C site in the JNCC invertebrate site register. It is a Country Park with existing public access.

Wort's Causeway RSV is a verge which supports at least six calcareous grassland indicator species including a Nationally scarce species.

PRV C3 is noted for species-rich neutral and calcareous grassland.

Nationally designated sites

Cherry Hinton Pit SSSI supports four nationally uncommon plants as well as areas of herb-rich chalk grasslands. Hedgerows, scrub and woodland also provide biodiversity value for the site.

Gog Magog Golf Course SSSI supports calcareous grassland with rough areas characterised by numerous grasses and herbs including the nationally rare moon carrot (*Seseli libanotis*).

Roman Road SSSI is an elongated species-rich calcareous grassland with hedgerows and copses running along its length. It is rich with grass and herb species and supports a variety of invertebrates.

Sawston Hall Meadows SSSI is an area of spring-fed peat over chalk meadow. The site comprises a gradient of marshy grassland to dry calcareous grassland with a range of sedges, rushes, grasses and other species. The site is additionally noted for the presence of the nationally rare umbellifer *Selinum carnifolia* and of saw wort (*Serratula tinctoria*) and the great fen-sedge (*Cladium mariscus*).

Whittlesford-Thriplow Hummocky Fields SSSI support the nationally rare grass poly (*Lythrum hyssopifolia*) in ice lens depressions. Various other flora are supported in these habitats adding additional value to the site. Fairy shrimp (*Chirocephalus diaphanus*) are also present.

The application site falls within a SSSI Impact Risk Zone. The proposed scheme will not meet any specific risk criteria, though the Risk Zone notation states “*New housing developments will require an assessment of recreational pressure on relevant SSSIs*”

and measures to mitigate adverse impacts e.g. alternative open space provision. For further advice contact Natural England's Discretionary Advice Service.

Internationally designated sites

Eversden and Wimpole Woods SAC is an ancient woodland designated for barbastelle (*Barbastella barbastellus*) bats, located c. 12.2km to the west of the application site.

Where a development or project may, alone or in combination, have a 'likely significant effect' upon the features of the Natura 2000 or Ramsar site, the Habitats Regulations 2017 require a Habitats Regulations Assessment (HRA) to be undertaken.

HRAs are undertaken by a "competent authority" (CA), which in the case of Local Plans and most planning applications is the LPA.

Given the nature of the proposals, in particular the creation of recreational space incorporating extensive chalk grassland, no significant negative impacts are anticipated upon the features of locally, nationally or internationally designated sites as a result of the proposed development. None the less consultation with the LPA and NE should be used to confirm this conclusion as well as the need (or not) for an HRA.

4.2.2 *Priority habitats*

Priority habitats recorded within the 500m zone of influence include several areas of deciduous woodland as well as an orchard (confirmed during surveys) and an area of Lowland Meadow (known to be an area of grazed horse paddock). As no priority habitats are present within the application site boundary, no impacts are anticipated.

4.2.3 *Greenbelt land*

The application site falls within the green belt area. It is expected that the proposed landscaping along with creation of c. 19ha of chalk grassland will make a positive contribution to semi-natural habitats present in the area.

4.2.4 *CPERC Species Records*

No records exist within the application site boundary. Table 4.2 identifies relevant species records for within 500m (where geographical precision is < 1km) as indicated by **BOLD** text, and 2km of the application site boundary.

Table 4.2 Protected/notable species within 2km and 500m of the application site

Scientific Name	Common name	Legal/conservation status
<i>Bufo bufo</i>	Common toad	Sch. 5; S. 41
<i>Rana temporaria</i>	Common frog	Sch. 5
<i>Triturus cristatus</i>	Great crested newt	EPS; Sch. 5; S. 41
<i>Natrix helvetica</i>	Grass snake	Sch. 5; S. 41
<i>Zootoca vivipara</i>	Viviparous lizard	Sch. 5; S. 41
<i>Alauda arvensis</i>	Skylark	Red Status; S. 41
<i>Apus apus</i>	Swift	Amber Status
<i>Circus aeruginosus</i>	Marsh harrier	Amber Status; Sch. 1
<i>Emberiza calandra</i>	Corn bunting	Red Status; S. 41
<i>Emberiza citrinella</i>	Yellowhammer	Red Status; S. 41
<i>Falco peregrinus</i>	Peregrine	Sch. 1

<i>Linaria cannabina</i>	Linnet	Red Status, S. 41
<i>Muscicapa striata</i>	Spotted flycatcher	Red Status; S. 41
<i>Passer domesticus</i>	House sparrow	Red Status; S. 41
<i>Perdix perdix</i>	Grey partridge	Red Status; S. 41
<i>Streptopelia turtur</i>	Turtle dove	Red Status; S. 41
<i>Sturnus vulgaris</i>	Starling	Red Status; S. 41
<i>Turdus philomelos</i>	Song thrush	Red Status; S. 41
<i>Turdus pilaris</i>	Fieldfare	Red Status; Sch. 1
<i>Tyto alba</i>	Barn owl	Sch. 1
<i>Vanellus vanellus</i>	Lapwing	Red Status; S. 41
<i>Barbastella barbastellus</i>	Barbastelle bat	EPS; Sch. 5; S. 41
<i>Eptesicus serotinus</i>	Serotine bat	EPS; Sch. 5
<i>Myotis daubentoni</i>	Daubenton's bat	EPS; Sch. 5
<i>Myotis nattereri</i>	Natterer's bat	EPS; Sch. 5
<i>Nyctalus noctula</i>	Noctule bat	EPS; Sch. 5; S. 41
<i>Pipistrellus pipistrellus</i>	Common pipistrelle bat	EPS; Sch. 5
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle bat	EPS; Sch. 5; S. 41
<i>Plecotus auritus</i>	Brown long-eared bat	EPS; Sch. 5; S. 41
<i>Erinaceus europaeus</i>	Hedgehog	S. 41
<i>Lepus europaeus</i>	Brown hare	S. 41
<i>Arvicola amphibius</i>	Water vole	Sch. 5; S. 41
<i>Lutra lutra</i>	Otter	EPS; Sch. 5; S. 41
<i>Meles meles</i>	Badger	PBA 1992
<i>Mustela putorius</i>	Polecat	S. 41
<i>Coenonympha pamphilus</i>	Small heath	S. 41
<i>Scotopteryx chenopodiata</i>	Shaded broad-bar	S. 41
<i>Spilosoma lubricipeda</i>	White ermine	S. 41
<i>Helix pomatia</i>	Roman snail	Sch. 5

4.2.5

GCN records

A small number of Natural England Class licence return records (2015) and CPERC records (2004) are found within 500m of the application site (Figure 3; note data accuracy is not precise but indicative). They are presumed to relate to nearby ponds or associated habitat.

4.3

BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY

4.3.1

Habitats and vascular plants

Descriptions of the habitats (Figure 2) and the characteristic plants species present are provided below with photos provided in Appendix A1.

a) Arable field

Most of the site is arable field with a cereal crop present at the time of survey (Photos 1, 2 and 8). Such habitat is typically of low biodiversity value, though rare arable weeds may be present; given the nature of the proposed development including the creation of an extensive area of chalk grassland with localised areas of disturbance (e.g. around footpaths), no impacts are anticipated and this feature is scoped out.

b) Amenity grassland and fencing

An area of fenced amenity grassland present to the north-western end of the site appeared to be used for recreation/exercising dogs (Photo 8).

c) Grassed field edge

Grassed field edges (e.g. Photos 4 to 6) exist around the boundaries of the arable field with grasses as well as cow parsley (*Anthriscus sylvestris*), ribwort plantain (*Plantago lanceolata*), daisy (*Bellis perennis*), dandelion (*Taraxacum* sp.), cat's ear (*Hypochaeris radicata*), hairy willowherb (*Epilobium hisutum*), bristly oxtongue (*Picris echioides*), ragwort (*Jacobaea vulgaris*), spear thistle (*Cirsium vulgare*) cut-leaved crane's-bill (*Geranium dissectum*), common nettle (*Urtica dioica*), cleavers (*Galium aparine*), broad-leaved dock (*Rumex obtusifolius*), curled dock (*R. crispus*), creeping cinquefoil (*Potentilla reptans*), common mallow (*Malva neglecta*) and lords and ladies (*Arum maculatum*).

d) Hedgerows

Hedgerows are present around multiple boundaries of the site (Figure 2):

Hedgerow H1 (Photo 4) is an intact native species-poor hedge comprising common hawthorn (*Crataegus monogyna*), elm (*Ulmus* sp) and privet (*Ligustrum ovalifolium*) with some dead sections of elm.

Hedgerow H2 (Photo 5) is a recently planted and gappy species-rich hedgerow comprising hawthorn, field maple (*Acer campestre*), hazel (*Corylus avellana*), common dogwood (*Cornus sanguinea*), ash (*Fraxinus excelsior*) and elder (*Sambucus nigra*).

Hedgerow H3 (Photo 6) is an intact species-poor hedge with hawthorn, blackthorn (*Prunus spinosa*) and elder as well as bramble (*Rubus fruticosus* agg.).

Hedgerow H4 and H5 (Photo 7) along the north-east boundary comprises two continuous sections of intact species-poor hedgerow comprising common hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), beech, hornbeam (*Carpinus betulus*), privet with standing dead elm (*Ulmus* sp.) and ivy (*Hedera helix*).

Hedgerow H6 (Photo 8) along the north-western roadside is a dense intact species-poor hedge comprising common hawthorn, blackthorn (*Prunus spinosa*), privet and elder with a soft edge of bramble (*Rubus fruticosus* agg.) scrub (Photo 1).

Hedgerow H7 to H9 (Photos 9 to 11) comprise some sections with trees and some gappy sections and H3 to H5 are intact species-poor hedgerow and comprise blackthorn, elder and ash (*Fraxinus excelsior*) with bramble (Photos 3 to 5). H8 is slightly gappy.

Hedgerows H10 to H12 (Photo 12) extends along the south side of the arable field where the country park is proposed and comprises some continuous and gappy sections with a similar species mix to H2 comprising mostly of hawthorn with some elm and elder.

e) Scattered trees

Several semi-mature ash trees are present along hedgerow H3. A few ash and sycamore (*Acer pseudoplatanus*) trees are scattered around the north-east corner of

the site along hedgerow H4. Other trees present within the hedgerows include sycamore, walnut (*Juglans regia*), lime (*Tilia sp*), beech and Norway spruce.

f) Plantation woodland

A small area of Norway spruce (*Picea abies*) exists in the arable field in the north-west corner (Figure 2).

g) Scattered scrub

Numerous areas of discrete scattered bramble scrub are present along the south-western edge of the site.

h) Dry ditch

A dry ditch is present to the south-west of the site (Photo 5).

4.3.2

Amphibians and reptiles

a) Amphibians

Terrestrial

Most of the proposed retirement village site is unsuitable for amphibians, lacking permanent cover and being subject to regular disturbance. Hedgerows and adjacent grassy field edges offer some limited dispersal and refuge opportunities, providing connectivity to the wider landscape.

Ponds

Pond P1 (approximate NGR TL 47594 51915) is a moderately shaded pond within a horse paddock. The landowner and tenant were contacted for access permission in spring 2019, but the tenant confirmed that the pond was not holding water at the time, therefore it was not surveyed. It is likely to hold water currently following the exceptionally wet autumn/winter in 2019/20 and could be suitable for breeding and foraging amphibians when it holds water.

Pond P2 (approximate NGR TL 48082 52822) located within a large garden to the north of the site (not on OS maps but shown on aerial photos) was not surveyed or assessed as landowner details could not be obtained to enable a survey.

b) Reptiles

Generally, the application site is unsuitable for reptiles, though hedgerows and their adjacent grass verges offer some limited dispersal and refuge opportunities to e.g. individual grass snake moving between ponds when foraging.

4.3.3

Bats

a) Tree Roost Assessment

Hedgerow trees as well as the Norway spruce plantation were assessed as having *Negligible* BRP.

b) Foraging/commuting habitat

The foraging and commuting value of habitats on site was assessed as being *Low* overall (Collins, 2016). The arable field offers *Negligible* foraging potential whilst the hedgerows provide *Moderate* value for common species such as common and soprano pipistrelles; the hedgerows though make up a small proportion of the application site.

4.3.4

Nesting birds

Male skylarks (Red Status; S. 41) were observed calling in several locations over the proposed retirement village and country park sites during the walkover survey, indicating potential nesting in 2019. Given the potential for predators, skylarks tend to nest within the centres of fields well away from the field edge where e.g. badgers may forage along well-worn paths.

The hedgerows have the potential to support dunnock (*Prunella modularis*) (Amber Status), wren (*Troglodytes troglodytes*) and yellowhammer (*Emberiza citrinella*) (Red Status; S. 41).

4.3.5

Badger

Badger snuffle holes, runs (Photo 13) and a badger latrine (Photo 14) were observed during surveys, the latter found around the verge of the Haverhill Road site where an access will be created; latrines are produced to mark the badger clan's territory boundary.

4.3.6

S. 41 habitats and species

a) Habitats

Hedgerows on site qualify as S. 41 hedgerow habitats.

b) Species

The application site boundary habitats offer some potential for hedgehog dispersal, refuge and foraging use, whilst brown hare are likely present in the wider area.

4.3.7

Non-native invasive plants

No non-native invasive species were recorded within the application site boundaries.

4.4

GEOGRAPHIC CONTEXT

The geographic context of a feature is a useful consideration within an assessment of impacts. For this report, the geographic frames of reference for the habitats and species present on sites are provided in Table 4.3; values are based upon the criteria in Table A4.1 and expert best judgements.

Table 4.3 Feature value based on geographic context

Feature	Value
Arable farmland, grassland, plantation woodland, hedgerows, scattered trees, scrub and ditch.	Local
Amphibians and reptiles	Local
Bats	Local
Badger	Local
Nesting birds	Local
S. 41 habitats and species	Local

5 Assessment and recommendations

5.1 INTRODUCTION

The following section provides a summary description of the proposed development, with an assessment of associated impacts and likely significant effects upon biodiversity.

The assessment and recommendations are based on use of the mitigation hierarchy, which in the first instance aims to avoid impacts. Where impacts cannot be avoided, they should be minimised (through mitigation). Only where impacts cannot be avoided or minimised should there be compensation for biodiversity harm.

Ecological enhancements are suggested, and consideration is given to individual as well as overall net gains or losses of biodiversity.

5.2 DESCRIPTION OF PROPOSED DEVELOPMENTS

Outline planning permission is being sought for the construction of a retirement village and associated facilities on arable land to the south-west of the site, with site landscaping, access and drainage attenuation. Works will result in the loss of predominantly arable land, with minor losses of hedgerow for access creation. The scheme will also deliver the creation of a large (19ha) Countryside Park comprising predominantly chalk grassland habitat. The latter will result in a significant biodiversity gain, consistent with national and local planning policy.

The assessment and recommendations below provide recommendations for mitigation, compensation and enhancements for the proposed development based on drawings available at the time of writing and should be updated accordingly if the scheme is subsequently amended.

5.3 FURTHER SURVEYS REQUIRED

Depending on the timing of works in relation to establishment of the Countryside Park and any local hedgerow removal, further breeding bird surveys may be required to ensure no nests are destroyed.

No amphibian breeding or significant areas of suitable terrestrial habitat will be impacted as a result of the proposed scheme (rather, significant gains in suitable habitat will result). None the less presence-absence (including potentially eDNA) surveys are recommended to enable a GCN Rapid Risk Assessment to be undertaken ahead of scheme progression to inform any reserved matters. Alternatively, depending on the timing of scheme progression, it may be feasible to use Natural England's GCN District Level Licensing.

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results remain valid for approximately 12 – 18 months (CIEEM, 2019). Exceptions include where mobile species are/may be present, where site management practices cease or change, or where existing guidance indicates otherwise. For the current site, it is recommended that badger surveys are repeated in the weeks before the scheme commences, to confirm no significant change in animal use of the site and no setts have been established within the development footprint.

5.4 ASSESSMENT OF IMPACTS

The EclA assessment process (CIEEM, 2018) involves:

- Identifying and characterising impacts and their effects;
- Incorporating measures to avoid and mitigate negative impacts and effects;
- Assessing the significance of any residual effects after mitigation;
- Identifying appropriate compensation measures to offset significant residual effects;
and
- Identifying opportunities for ecological enhancement.

The emphasis in EclA is on the assessment of 'significant effects' i.e. an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. In broad terms significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species including extent, abundance and distribution.

The ecological features to be subject to detailed assessment in this report are those judged to be important and potentially affected by the project; protected species are included where the development will result in a potential breach of legislation.

5.5 HABITATS AND VASCULAR PLANTS

a) *Potential impacts*

Vegetation clearance, ground-breaking and construction operations may have negative ecological effects on features of the application site including hedgerows, trees and grassed field edges. At the scale indicated on drawings, with the retention/enhancement of the majority of boundary features, this is considered unlikely to be ecologically significant.

The creation of the Countryside Park habitat together with a site Sustainable Drainage System (SuDS) and on-site landscaping within the retirement village will result in significant positive effects upon the extent of habitats present (enhancement recommendations for those features are made in section 5.13).

b) *Mitigation*

Detailed landscape designs will retain boundary vegetation wherever possible, with infill planting used to strengthen green corridors. All losses will be offset with native species as part of landscape planting and habitat creation. Retained features will be protected with temporary e.g. Heras fencing and root protection areas (RPAs) during construction.

c) *Residual effects*

The scheme and in particular the creation of the Countryside Park will result in a significant positive effect upon the extent of semi-natural habitats and in particular chalk grassland within the local area.

5.6 AMPHIBIANS AND REPTILES

a) *Potential impacts*

Vegetation clearance, ground-breaking and construction operations could result in negative effects through the fragmentation of movement corridors and the injury or

death of small numbers of individuals. Inappropriate drainage (Muir, 2012) during the operational phase could result in the entrapment of individual amphibians.

The creation of the Countryside Park habitat together with SuDS and on-site landscaping within the retirement village will result in significant positive effects upon the extent of cover, foraging and refuge habitat for amphibians and reptiles.

b) Mitigation

Avoidance and mitigation measures as per section 5.5 will be implemented. Further mitigation detail will be determined by the results of any subsequent presence-likely absence surveys that confirm GCNs are present and a site level licence is required or if the District Level Licensing is employed, but measures will include:

- Any hedgerow or trees that must be removed should be cut ~150mm above ground level in the autumn or spring (excluding November to February) to prevent harm to any wildlife and left for at least two days prior to removal of the roots;
- All other vegetation should be lowered using a two-stage cut, with the first cut to no lower than 150mm, with at least 1 hour before being cut to ground level;
- During the construction phase, trenches will be filled on the same day as excavation where possible. Trenches left overnight must be covered with ply/OSB sheets and any gaps filled with damp sharp sand, or mammal ramps/ladders (wooden planks set at an angle at the edge of the trench) placed and all trenches checked daily;
- Footings and concrete slabs will be poured during the morning to ensure they have hardened off prior to evening to reduce the risk of animals encountering wet concrete, or covered with ply boarding or membrane overnight;
- Any hand mixing of mortar or concrete will be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;
- Any excess cement/concrete will be poured into a concrete skip, so it can then set to prevent animals coming into contact.
- All building materials will be stored on bare ground or hard standing, or stored off the ground on pallets;
- Any waste or spoil stored on site temporarily will be stored in skips to prevent amphibians or reptiles from seeking refuge;
- Should any e.g. toads be encountered they should be allowed to disperse or be carefully moved into retained habitat (e.g. boundaries). An ecologist must be called immediately if any suspected GCNs are encountered;
- Downpipes taking water off the roofs should discharge into a sealed downpipe gully pot or discharge into a hopper with a small diameter grate (holes <6mm). If bigger diameter grates are required, then the gully pot should be raised off the ground by 150mm to prevent amphibians climbing into the gully pot; and
- Any installed highway gully pots must be situated ≥ 100 mm from roadside; OR a wildlife-kerb¹⁰ must be installed adjacent to each gully pot; OR a gully pot ladder¹¹ placed into each gully pot.

c) Residual effects

The creation of habitats suitable for use by amphibians and reptiles will result in significant positive effects for local amphibian and reptiles.

¹⁰ <https://www.aco.co.uk/products/wildlife-kerb>

¹¹ <https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder>

5.7

BATS

Vegetation clearance and/or accidental damage to hedgerows could negatively affect commuting routes locally.

During the construction phase inappropriate lighting could result in negative effects upon local bat foraging behaviour, whilst woven modern breathable roofing membranes (BRMs) may result in entanglement and injury or death to individuals (Waring *et al.* 2013).

In combination, the above impacts have the potential to result in a significant negative effect upon the conservation status of bats at a local level.

The creation of the Countryside Park habitat together with SuDS and on-site landscaping within the retirement village will result in significant positive effects upon the extent of foraging habitat available, and therefore potentially the conservation status of bats locally.

b) Mitigation

Avoidance and mitigation measures as per section 5.5. will be implemented.

Exterior lighting design will be made with reference to published guidance¹² and will consider:

1. *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. LED lights should be used preferentially, using the warm white spectrum with peak wavelengths >550nm (~3000°K). UV elements and metal halide, fluorescent sources must be avoided; and
2. *Lighting design*: Lighting should be directed to where it is needed, with no horizontal spillage towards retained or planted trees and hedgerows. This can be achieved by restricting the height of the lighting columns and the design of the luminaire as follows:
 - Light columns in general should be as short as possible as light at a low level reduces the ecological impact.
 - Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e. with no upward tilt.
 - If taller columns (> 8m) are required, and as a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill.
 - The use of asymmetric beam floodlights (as opposed to symmetric) orientated so that the glass is parallel to the ground will ensure that the light is cast in a downward direction and avoids horizontal spillage; and
 - PIR movement sensors and timers should be used to minimise the 'lit time' (up to 1 minute).

If slates or concrete interlocking tiles are to be used in the roofs, then breathable membranes could potentially be used if no gaps >4mm are created between the tiles. BRMs should not be used under handmade or reclaimed pantiles or clay peg/plain tiles; traditional Type 1F roofing felt or a breathable sarking board (e.g. Hunton Sarket or Pavatex Isolair) must be used instead.

¹² <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

c) Residual effects

With mitigation implemented, the creation of habitats suitable for use by foraging bats will result in a significant positive effect for local bat populations through an increase in the extent of foraging habitat.

5.8

NESTING BIRDS

a) Potential impacts

Vegetation clearance in particular of hedgerow and arable habitats during the breeding bird season (generally considered to be March to August inclusive) has the potential to impact nesting birds, whilst the potential introduction of an increased number of cats could result in predation. Disturbance by dog walkers could negatively affect breeding success of ground nesting birds. All would be considered negative effects during the relevant phases of the scheme.

The creation of the Countryside Park habitat together with on-site landscaping within the retirement village will maintain the extent of nesting habitat for farmland associated species and will result in significant positive effects upon the extent of suitable nesting habitats for passerine species.

b) Mitigation

Retained hedgerows and trees should be protected with temporary fencing as per section 5.5. Vegetation clearance must take place outside of the nesting bird season. If for any reason this is not feasible then a suitably experienced ecologist should check for nesting birds prior to vegetation removal works or ploughing.

Predation impacts will be offset as a result of landscape planting and habitat creation. Within the country park, fencing could be used to prevent disturbance (e.g. by dogs) to skylark nesting habitat, or a fenced area could be provided for off leash dog exercise with dogs required on leashes on the rest of the site. Alternatively, skylark plots could be established on adjacent arable farmland.

c) Residual impact

Negative impacts will be avoided, whilst the creation of suitable habitats will result in a significant positive effect for nesting birds locally.

5.9

BADGER

a) Potential impacts

Construction activities have the potential to result in the entrapment and/or injury of badgers, considered a significant negative effect.

The creation of the Countryside Park habitat together with on-site landscaping within the retirement village will result in significant positive effects upon the quality and extent of foraging habitats available.

b) Mitigation

During the construction phase, trenches will be filled on the same day as excavation where possible. Trenches left overnight must be covered with ply/OSB sheets and any gaps filled with damp sharp sand, or mammal ramps provided through edge profiling of trenches/excavations or by using planks placed into them at the end of each working day. Open pipework greater than 150 mm outside diameter will be blanked off at the end of each working day.

c) Residual effects

Once planting has matured, there will be a significant positive impact upon the extent of foraging habitat present for the species.

5.10

OTHER S. 41 LIST HABITATS AND SPECIES

Habitats

a) Potential impacts

Vegetation clearance of hedgerows will result in the loss of small lengths of hedgerow.

The creation of the Countryside Park habitat together with on-site landscaping within the retirement village will result in significant positive effects upon the extent of habitats present (see enhancement recommendations for those features in section 5.13).

b) Mitigation

Retention, protection and infill planting of hedgerows as per section 5.5.

c) Residual effects

Once planting has matured, there will be a significant positive impact upon the extent of habitat present.

Species

a) Potential impacts

Vegetation clearance, ground-breaking, and construction activities may lead to entrapment, injury and mortality of individual hedgehogs and brown hare due to presence of trenches as well as caustic and building materials. Removal of trees and hedgerows and any scrub understorey may result in injury or death of individual nesting hedgehog.

The creation of the Countryside Park habitat together with on-site landscaping within the retirement village will result in significant positive effects upon the extent of habitats suitable for hedgehog (and hare), which in comparison to arable fields will likely have a significant positive effect at the population level locally.

b) Mitigation

Hedgerows (including any understorey ruderal and scrub vegetation) should not be cleared during the winter (November to February inclusive) to avoid impacting hibernating hedgehogs (and amphibians as above). If clearance is required in the spring to avoid nesting bird issues, vegetation should be retained to no lower than 300mm above ground level to avoid injury or harm to hibernating hedgehog until temperatures are regularly (six consecutive days/nights) maintained above 6°C. At other times supervision will be undertaken by an experienced and qualified ECoW ahead of and during cutting.

During the construction phase, trenches will be filled on the same day as excavation where possible. Trenches left overnight must be covered with ply/OSB sheets and any gaps filled with damp sharp sand, or mammal ramps or ladders (as per section 5.9 above) placed and all trenches checked daily.

Footings and concrete slabs will be poured during the morning to ensure they have hardened off prior to evening to reduce the risk of animals encountering wet concrete, or will be covered with ply boarding or membrane overnight.

Any hand mixing of mortar or concrete will be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact.

Any excess cement/concrete will be poured into concrete skips, so it can then set to prevent animals coming into contact.

c) Residual effects

The creation of Countryside Park habitat as well as site landscaping within the retirement village will result in significant positive effects upon S. 41 habitats and species locally.

5.11

COMPENSATION

Given the extent of habitat creation proposed, no further compensation is considered necessary. Additional biodiversity enhancements are recommended in section 5.12 below.

5.12

CUMULATIVE EFFECTS

The South Cambridgeshire planning website was searched (22nd March 2020) for previously submitted applications of potential relevance dating back two years. Several applications were returned:

- S/2338/18/OL 59 London Road Stapleford Cambridge Cambridgeshire CB22 5DG. Planning granted to demolish 59 – 61 London Road and build 4 detached dwellings. No ecology report was submitted.
- S/4426/17/DC 33 Bar Lane Stapleford Cambridge Cambridgeshire CB22 5BJ. Demolition of existing house and erection of one replacement dwelling and two new dwellings. No ecology report was submitted.
- S/1782/19/FL 9 Bar Lane Stapleford, Cambridgeshire CB22 5BJ. Demolition of an outbuilding and construction of a detached dwelling. An ecology report as submitted for a previous application S/1630/17/FL for the site supported this application.
- S/1630/17/FL Erection of a new Public House building along with a pair of residential dwellings following demolition of existing buildings on the site. 9 Bar Lane Stapleford Cambridge Cambridgeshire CB22 5BJ. A bat survey report was submitted with the application, but no ponds within 250m of the site were surveyed.
- S/0042/17/FL Demolition of the existing 3 bed bungalow and redevelopment of the site to provide 1no. 4 bed dwelling. 13 Gog Magog Way Stapleford Cambridgeshire CB22 5BQ.
- S/4352/18/FL 7 Greenfield Close Stapleford Cambridge Cambridgeshire CB22 5BT. Two storey side extension. The extension will tie into the existing roof line and could conceivably impact roosting bats, but no ecology report submitted with the application or requested by the LPA. Planning permission was granted.
- S/3759/18/DC and S/0520/07/F Erection of 18 Affordable Dwellings. Hill Farm Gog Magog Way Stapleford Cambridgeshire. Due to the age of the application no ecology reports are available on the planning portal.
- S/4426/17/FL Demolition of existing house and erection of one replacement dwelling and two new dwellings 33 Bar Lane Stapleford Cambridge Cambridgeshire

CB22 5BJ. A bat survey report was submitted with the application, but no ponds within 250m of the site were surveyed.

- S/0306/17/FL Erection of 2-bedroom bungalow to the rear of 3 & 5 Aylesford Way, Stapleford Cambridge Cambridgeshire CB22 5DP. No ecology report submitted.

Based on the reports provided, the nature of the applications and the mitigation measures proposed in this report, no significant cumulative effects are anticipated.

5.13

ENHANCEMENT OPPORTUNITIES

As proposed, the scheme will result in the delivery of a significant biodiversity net gain. In order to maximise gains, the following measures are recommended:

Countryside Park

As detailed designs are progressed for the Countryside Park, it has been agreed that a suitably experienced ecologist will liaise with the landscape designer to maximise biodiversity benefits delivered as part of the scheme. Relevant features will include:

- Retention (and in-fill planting as necessary) of all existing boundary features;
- The provision of at least one wide boundary corridor running between Haverhill Road and Hinton Way, with ecotone habitat (a tall, wide hedge transitioning through scrub to tall herb layer and then chalk grassland). This feature will maximise habitat heterogeneity and provide a movement corridor connecting to the wider landscape;
- Establishment and management of chalk grassland will be based on local soil chemistry, with advice taken from other local schemes e.g. the Magog Trust;
- Consideration will be given to site management including localised fencing to provide areas of minimal disturbance/maximum biodiversity benefit e.g. for ground nesting birds within the site;
- An Ecological Design Strategy and/or Landscape and Ecological Management Plan (LEMP) or equivalent document(s) will be used to provide and secure detailed prescriptions for habitat establishment and ongoing management, monitoring and remediation if required; and
- Funding for the creation and ongoing management of the site, as well as identifying and agreeing the relevant parties and their roles and responsibilities, will be agreed ahead of scheme commencement, to secure biodiversity gains for the longer term.

Sustainable Drainage Strategy

The brief for the SuDS design for the site will include instruction to maximise biodiversity features and benefit where possible. Features to consider include the establishment of permanent pond features¹³ with suitable bank profiles and native planting along margins, as well as suitably planted (e.g. damp, wildflower meadow mix) and managed swales. Details of planting and habitat management will be provided in the LEMP for the site.

Site landscaping

Site landscaping across both the retirement village and Countryside Park will use species-rich, mixed native species planting to maximise biodiversity benefits.

¹³ <https://freshwaterhabitats.org.uk/wp-content/uploads/2013/09/PUBLICACCESS1.pdf>

Monotone lawns will be avoided within the retirement village area, with use of wildflower meadow and/or low-flowering¹⁴ and/or species rich lawns¹⁵.

Native honeysuckle (*Lonicera periclymenum*) and/or traveller's joy (*Clematis vitalba*), together with some nectar rich ornamental climbers will be planted along hedgerows and/or buildings.

All the above features will be incorporated into the detailed landscape design drawings for the scheme. Species mixes proposed will be agreed with a suitably experienced ecologist ahead of inclusion within finalised proposals.

Any woody material generated e.g. during access creation will be used to create a habitat pile within the Countryside Park area. A grass cutting heap will be established and maintained in a sunny position within the Countryside Park to provide grass snake egg laying opportunities, with location and maintenance specified in the LEMP for the scheme.

Bat and bird boxes

Integrated swift boxes¹⁶ will be incorporated into the buildings on the retirement village site. Detailed locations will be specified within a Biodiversity Method Statement or equivalent document once detailed designs are available, as well as construction drawings, positioned to avoid windows and doorways below and at adequate heights/appropriate positions to prevent cat predation impacts. All equipment and guidance necessary to maximise the likelihood of use by swift will be provided as part of the scheme.¹⁷

Sparrow terraces will be erected under the eaves of ancillary buildings within the retirement complex, away from doors, windows and footpaths. Detailed locations will be specified within a Biodiversity Method Statement or equivalent document, as well as construction drawings, once detailed designs are available. Ongoing maintenance will be specified within the LEMP or equivalent document

At least two pole-mounted barn owl and/or kestrel boxes will be erected within the Countryside Park. The design and location of the boxes will be specified within the Biodiversity Method Statement for the scheme, with ongoing maintenance specified within the LEMP or equivalent document.

Pole or tree mounted bat boxes will be erected along the ecotone boundary feature established within the Countryside Park. The number and type to be used will be specified within the Biodiversity Method Statement for the scheme, erected by suitably experienced ecologists, with ongoing maintenance specified within the LEMP (or equivalent document) for the scheme.

5.14

CONCLUSIONS

The scheme proposed will result in a significant Biodiversity Net Gain as a result of landscape proposals; habitat losses are restricted in the main to arable land of low

¹⁴ <https://www.bostonseeds.com/products/wildflowers-seed/wildflower-seed-mixtures-20/bs12m-low-growing-wildflower-meadow-seeds.html>

¹⁵ <https://www.wildflowerturf.co.uk/products/wildflower-turf/species-rich/>

¹⁶ <https://www.swift-conservation.org/Leaflet%20-%20-%20Swift%20Nest%20Bricks%20-%20installation%20&%20suppliers-small.pdf>

¹⁷ <https://www.swift-conservation.org/2016-08-23%20EquipmentListforusingtheMP3versionoftheSwiftCalls.pdf> and <https://www.swift-conservation.org/Shopping!.htm> and <https://www.swift-conservation.org/2014-06-21%20swiftcallsinstructions.pdf>

biodiversity value. The proposed Countryside Park will be designed to maximise the biodiversity value of the Public Open Space and will result in an increase in the extent of chalk grassland within the area connecting wider landscape features, whilst designs for the residential development will incorporate enhancements through SuDS design as well as integration of native landscape planting and provision of bird and bat boxes. The proposals are therefore considered to be consistent with biodiversity related national and local planning policies and guidance including the NPPF, Local Plan (in particular item 2 of policy NH/4), SPD and the Natural Cambridgeshire Doubling Nature Vision; if required, net gains could be formally quantified through the application of the Biodiversity Metric 2.0.

It is recommended that the measures proposed to secure mitigation and biodiversity gain should be secured through appropriate planning conditions as per the British Standard (BS 42020:2013¹). These could include, for example:

- BS 42020:2013 D.2.1 to provide a Biodiversity Method Statement to detail mitigation and enhancement measures;
- BS 42020:201 D.3.2.1 to protect breeding birds;
- BS 42020:2013 D.3.3 to protect badger;
- BS 42020:2013 D.3.5 to limit lighting design impacts upon bats;
- BS 42020:2013 D.3.7 and D.3.8 to ensure mitigation and enhancement measures are successfully implemented; and
- BS 42020:2013 D.4.3 and D.4.5 to ensure maximum Biodiversity Gains are delivered as part of the Countryside Park creation.

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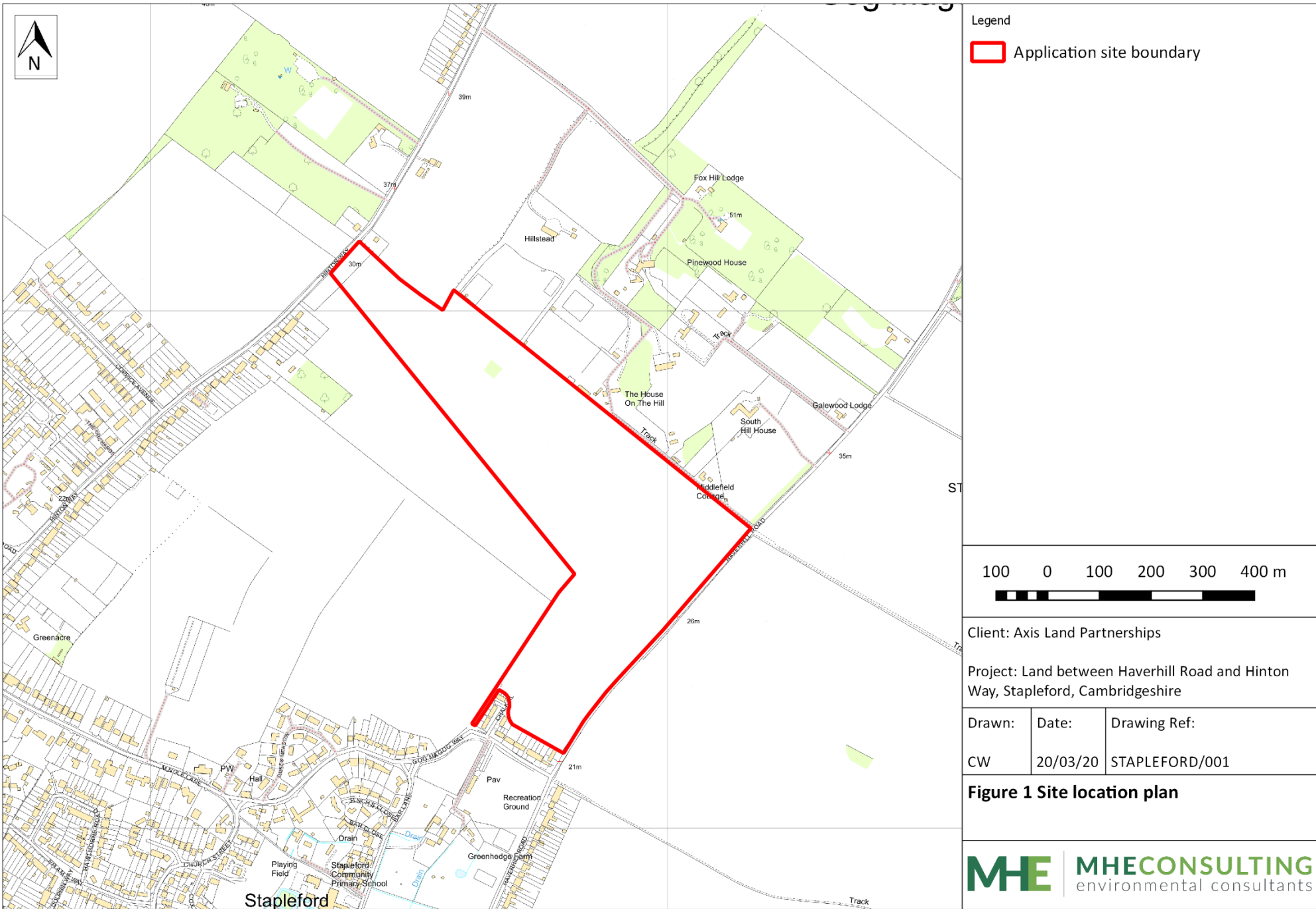
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Figures



Legend

Application site boundary

100 0 100 200 300 400 m



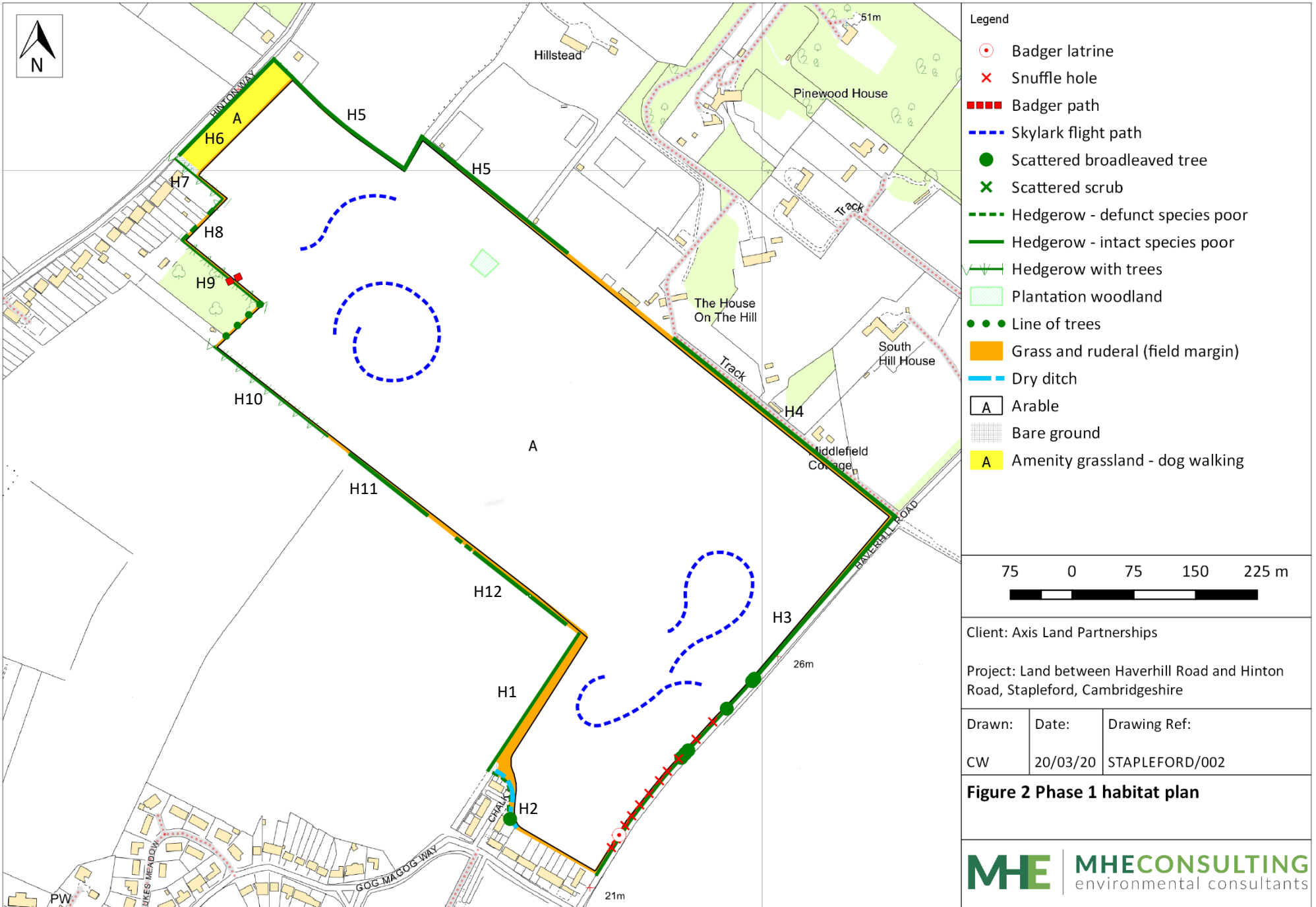
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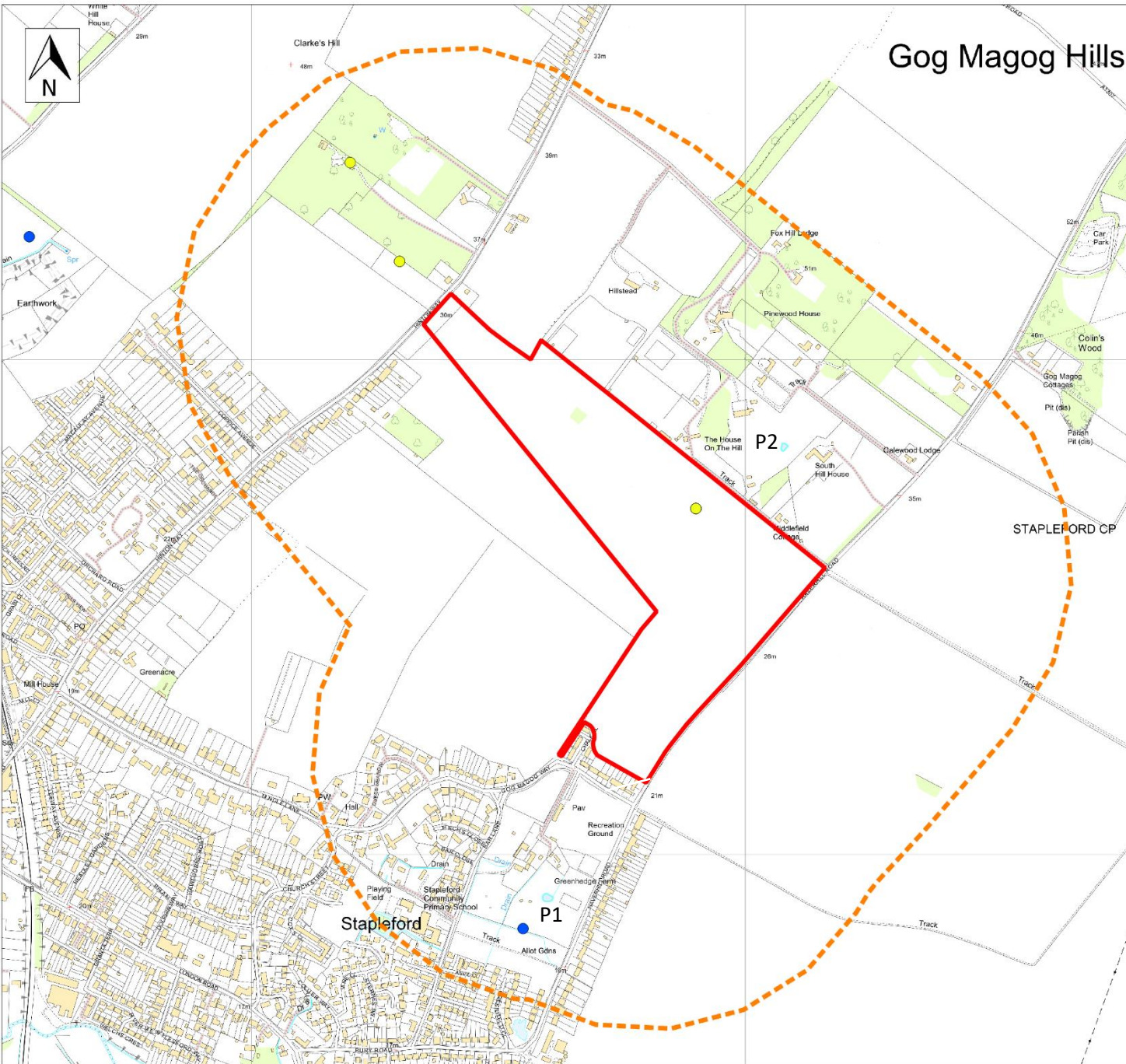
Project: Land between Haverhill Road and Hinton Way, Stapleford, Cambridgeshire

Drawn: Date: Drawing Ref:

CW 20/03/20 STAPLEFORD/001

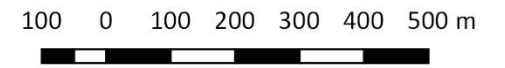
Figure 1 Site location plan





Legend

- GCN Class Licence Record
- GCN NE eDNA record
- GCN CPERC Record
- 500m Buffer
- Site boundary



Client: Axis Land Partnerships

Project: Land between Haverhill Road and Hinton Road, Stapleford, Cambridgeshire

Drawn:	Date:	Drawing Ref:
CW	20/03/20	STAPLEFORD/003

Figure 3 Ponds location plan

Appendices

Appendix A1 Photos



Photo 1 Arable field where the retirement village is proposed



Photo 2 Arable field where the country park will be located



Photo 3 Existing access track that will provide access to the proposed retirement village



Photo 4 Hedgerow H1, grass field edge next to the arable field



Photo 5 Hedgerow H2 and dry ditch – adjacent to properties at Chalk Hill



Photo 6 Haverhill Road – hedgerow H3



Photo 7 Hedgerow H5 and arable field – view towards Hinton Way



Photo 8 Fenced amenity grassland with Hedgerow H6 (left) adjacent to Hinton Way



Photo 9 Hedgerow H7



Photo 10 Hedgerow H8 and arable field



Photo 11 Hedgerow H9 and arable field



Photo 12 Hedgerow H12



Photo 13 Badger run across arable field



Photo 14 Badger latrine at Haverhill Road.

Appendix A2 EclA criteria

A2.1 General criteria for geographic context/value

Designation	Example
International	<ul style="list-style-type: none"> • SPA, SAC and Ramsar sites and the features that they have been designated for. • A sustainable area of habitat listed in Annex I of the Habitats Directive or smaller areas of such habitat which are essential to maintain the viability of a larger whole. • A sustainable population of an internationally important species e.g. UK Red Data Book (RDB) species or European Protected Species (EPS) of unfavourable conservation status in Europe (e.g. Annex II species: bats, GCNs etc.), of uncertain conservation status or of global conservation concern in the UK BAP.
National	<ul style="list-style-type: none"> • SSSI or a discrete area that meets the selection criteria for designation. • A sustainable area of priority habitat identified included on the S. 41 NERC Act list or smaller areas of such habitat that are essential to maintain the viability of a larger whole. • A sustainable population of priority species (listed under S. 41 of the NERC Act 2006). • A sustainable population of a nationally important species i.e. RDB species not included in above category but which is listed on Schedules 5 or 8 of the WCA 1981 (as amended). Also, sites supporting a breeding population of such species or supplying a critical element of their habitat requirements. • A sustainable population of uncommon or threatened Annex IV EPS species at a UK level. • A nationally scarce species (occurs in 30-100 10km squares in the UK) that has its main UK population within the district.
County	<ul style="list-style-type: none"> • A viable area of habitat identified in the county BAP. • A County Wildlife Site. • A sustainable population of common or non-threatened Annex IV EPS species at a UK level. • A Nationally Scarce species that does not have its main population within the county. • A sustainable population of a BAP species not included in the 'national' category above for which a county Action Plan exists.
Local	<ul style="list-style-type: none"> • Individual members of local populations of priority or other nationally/internationally important species which are not in themselves key for maintaining a sustainable population (e.g. individual dog otter passing through area with no holts or resting sites). • Other habitats and species not in the above categories but are considered to have some value at the district/borough level.

Appendix A3 CPERC Data map

Designated Sites Map

for MHE Consulting Ltd.

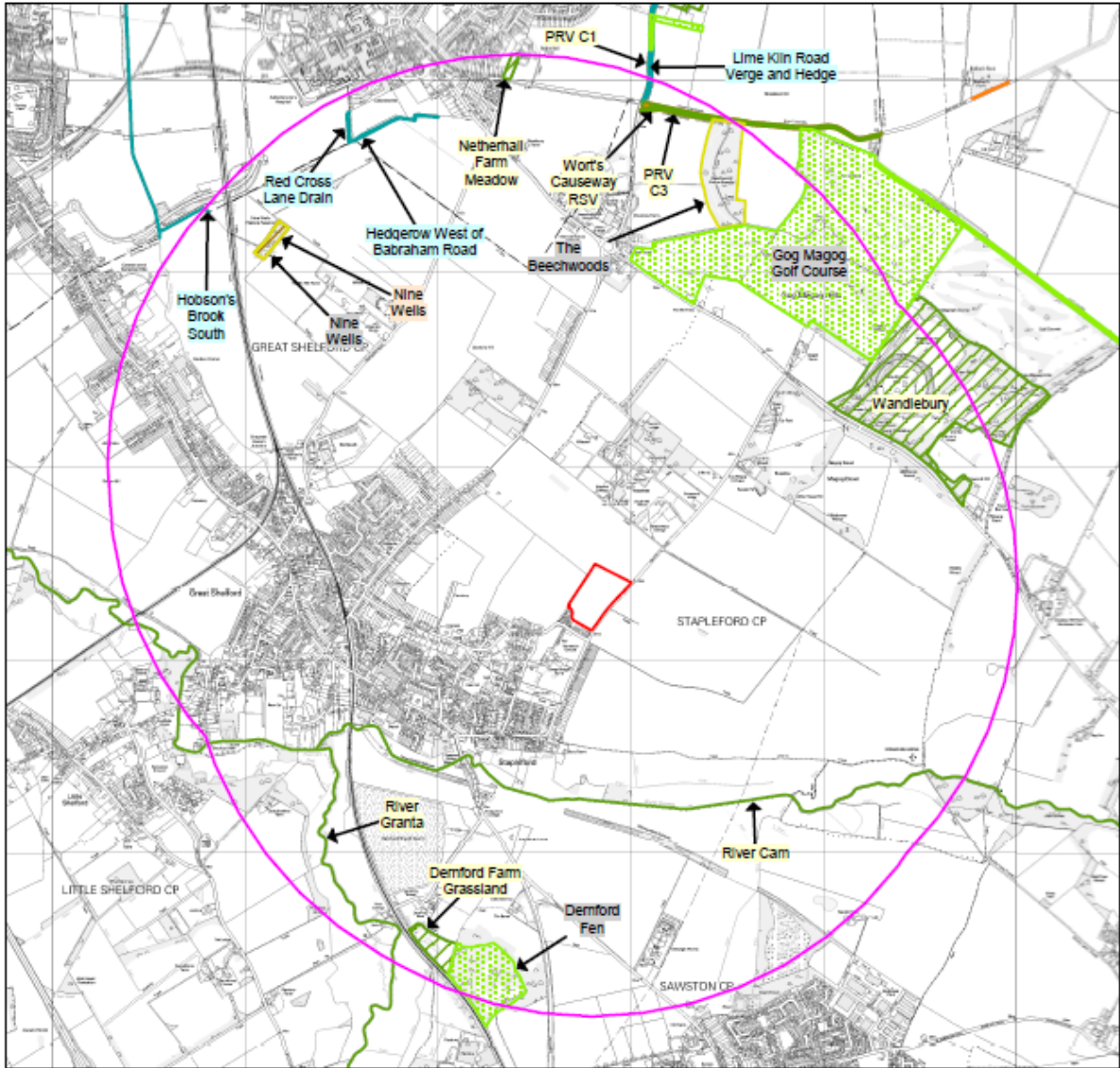
Stapleford

29/04/2019

1:30,000

CPERC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 8DH

C P E R C
CAMBRIDGESHIRE & PETERBOROUGH
ENVIRONMENTAL RECORDS CENTRE



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Cambridgeshire County Council 100023205 (2019)

