

Preliminary Ecological Appraisal

Manor Farm,
Sundridge,
Dry Hill Lane,
TN14 6AA

For:

Ken Clarke

Private and Confidential

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Association of Geotechnical &
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Executive Summary

EHM Ltd understands that the development will involve the development of the site into three residential units. The site is approximately 660m² and consists of four derelict agricultural outbuildings arranged around a central courtyard. The site is located within a small steep valley. To the south east of the site runs a small stream with a bank dominated by woodland flora. Some mature trees are also located within

proximity of the site. The site is located in a rural area surrounded by agricultural land, woodland and a network of streams. The site is bordered by agricultural buildings such as barns and stables as well as private residence. The site (as shown on figure 1) is located in Kent; TQ49405419.



Species	Sites potential to support
Bat roosts- buildings.	A- Moderate B- Moderate C- Negligible D- Low E- Low
Bat roosts- mature trees	Moderate
Bat foraging/ commuting areas	Moderate
Dormice	Negligible
Small mammals	Medium
Aquatic mammals	Low
Reptiles	Low
Common Amphibians	Moderate
Great Crested Newts	Negligible
Breeding birds	High
Invertebrates	Low

Recommendation	Action
Bat survey of Buildings; A,B, D (E)	Two dusk emergent and/or dawn re-entry surveys are recommended for A and B. One dusk or dawn survey for buildings D and E. Follow BCT survey guidelines.
Protection of Bat habitat/ roosts	Avoid disturbance to potential bat foraging/ commuting habitats and roosts.
Protection of breeding birds	Carry out vegetation clearance (if required)/ building demolition outside of breeding bird season or under supervision of ecologist following a breeding bird survey
Appropriate lighting for bats	Avoid illuminating bat foraging and commuting habitat- adjacent woodland. During and post development.
Remove vegetation in stages	Cut down tall ruderal habitats in stages to reduce risk of impacting protected/ notable species.
Covering of excavations	Cover excavations or place ramp from bottom to top.
Adequate pollution control	Habitats on site should be adequately protected to ensure no polluted runoff in on site or adjacent land. All oils, fuels and chemicals should be adequately stored on site in bunded contains with appropriate spill kits and emergency procedures in place.
Inclusion of bird and bat boxes in the development/ landscaping	Place boxes in suitable locations in the grounds or on new development.
Use of native plant species during any future planting and landscaping.	Where possible select native tree and plant species in any future landscaping.
Possible further impact assessment	An EclA may be required by the council to further understand the development impacts.

1. Introduction

EHM Ltd has been commissioned to carry out an extended Phase I survey of a series of disused farm buildings located near Sundridge in Kent. This report will provide an assessment of the site reporting on the current conditions of the habitats present and their potential to support protected and notable species.

1.1. Development outline

EHM Ltd understands that the development will involve the development of the site into three residential units.

1.2 Site Description

The site is between the market town of Sevenoaks and village of Sundridge in Kent. The site is approximately 660m² and consists of four derelict agricultural outbuildings arranged around a central courtyard. The site has a disused looked with ruderal habitats established within the courtyard and some of the buildings. The site is accessed along a single track leading off Dry Hill Lane which passes through farmland and woodland. The site is bordered by other agricultural buildings as well as some domestic properties. The site is located within a small steep valley. To the south east of the site runs a small stream with a bank dominated by woodland flora. Some mature trees are also located within proximity of the site.

The site is located in a rural area surrounded by agricultural land, woodland and a network of streams. The site is bordered by agricultural buildings such as barns and stables as well as private residence.

The site (as shown on figure 1) is located in Kent; TQ49405419.

2. Methods

2.1. Site Visit

EHM undertook a site visit on the 17th of March 2020. This was to carry out a walk over of the site, determining the basic habitats present and their current condition. The potential for these habitats to support protected and notable species was also recorded. The site visit was carried out by an experienced ecologist who is able to appropriately identify habitats and assess their quality and suitability to support species.

The weather was sunny and dry with strong breeze with a temperature of 10 degrees C.

The methodology followed that of an Extended Phase 1 Habitat Survey following the methodology of JNCC (1993) as modified by IEA (1995). The Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are likely to be ecologically important.

2.2 Protected Species

The following evidence of protected species or habitats to support them was assessed;



Bats

The site was assessed for its potential to support:

- Roosting bats; and
- Foraging and commuting bats.

Features which could indicate a potential bat roost include:

- Holes and fissures in trees; and
- Gaps in buildings that could allow access to areas such as roof voids, e.g. holes in soffits, broken, loose or missing tiles, damaged lead flashing, etc.

The methodology for assessing bat roost potential followed that recommended by the Bat Conservation Trust¹.

¹ Collins, J. (ed) (2016). Bat Surveys for professional Ecologists; Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

Breeding birds

The site was assessed for its potential to support nesting and breeding birds, considering factors including sufficient habitat cover and food sources.

Dormice

The site was surveyed for suitable dormouse habitat, such as the presence of a well-connected understorey broadleaf habitat, and suitable food sources such as hazel, oak and other nut-bearing trees, fruiting trees and shrubs, flowers and invertebrates. Where hazel nut shells were found, these were inspected for evidence of dormouse feeding.

Aquatic mammals

Aquatic habitats were assessed for their potential to support aquatic mammals such as Otter or water vole. Signs including; foot prints, droppings and evidence of feeding were searched for.

Reptiles

The site was assessed for its potential to support reptile populations. Suitable habitat for reptiles includes long grass, scrub, woodland and hedgerow borders and wood/rubble piles that act as hibernacula.

Amphibians

Any aquatic habitat was assessed for its potential to support amphibian species, including Great Crested Newts. Any ponds on site were assessed, using the Habitat Suitability Index, for its potential to support Great Crested Newts. Terrestrial habitat was also assessed for its ability to support amphibians.

Other species

The site was assessed for its potential to support other notable species.

2.3 Desktop study

In conjunction with the site visit a report was compiled of relevant ecological records within 1 km of the site. This provided details of protected and notable species in the area which will help inform the potential of the site to support such species. The report from Kent & Medway Biological records Centre (KMBRC) also provides details of protected sites within a 1 km radius of the site. Magic.gov.uk was also reviewed for additional relevant protected species and habitat information.

2.4 limitations

The contents of this report are based on a single site visit and a search of the local records bureau. Though the survey and interpretations of the data were carried out by a competent ecologist there may be things that have been overlooked or missed.

2.5 Relevant Legislation and Planning policies

A full list of UK wildlife legislation and designations can be seen in the appendix. Relevant legislation implications for this site include;

- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way Act 2000;
- The Natural Environment and Rural Communities Act (NERC Act) 2006;

Planning policies, both local and national, may affect any proposed development. Relevant planning policies to this development include;

- National Planning Policy Framework (NPPF)
- Sevenoaks Core Strategy, February 2011- 5.7 Biodiversity²

² https://www.sevenoaks.gov.uk/downloads/file/356/core_strategy_adopted_version_february_2011

3. Results

3.1 Habitats

The location and extent of the habitats are shown in figure 1. TN refers to a target note and the habitat codes refer to the Phase I habitat classification. CIEEM guidance recommends that the value or potential value of an ecological resource or feature should be determined within a defined geographical context³. It recommends the following frame of reference;

- International;
- UK;
- National (i.e. England/Northern Ireland/Scotland/Wales);
- Regional;
- County (or Metropolitan - e.g. in London);
- District (or Unitary Authority, City, or Borough);
- Local or Parish; and
- Site
- Within zone of influence only (which might be the project site or a larger area).

The habitats will be assessed based on these criteria.

Buildings (J3.6)

The site contains four buildings with a fifth building located immediately adjacent to the site; these have been labelled A-E. Building A is a two storey, likely, former farm house or cottage. This was constructed of brick and stone walls, with rubble filling the void, with a pitched tiled roof. This building was evidently in a state of disrepair and appeared to be being support by scaffolding and supports attached to the building. This building was located towards the south west of the site closest to the stream. A, likely, Swallow nest was located in the rafters of the building.

Building B is located on the western edge of the site. It is a single storey building constructed of brick and stone walls with a pitched roof of corrugated sheets (possibly asbestos). The building contained a large single room covering most of the property. On the southern end was a mezzanine level above a store room. This building was also derelict with no glass in the window frames and a number of gaps in the roof and walls. Bramble (*Rubus fruticosus*) and Ivy (*Hedera helix*) was growing within the building and through the roof.

Building C is located to the west of building A. This single storey building has lost its roof and is constructed of concrete walls. This was possibly used as a diary as the old stalls were evident. The interior contained a dense layer of soil or silt and dung which was being colonised by the ruderal habitat present across the site. Elder (*Sambucus nigra*) trees were also established

³ GUIDELINES FOR ECOLOGICAL IMPACT ASSESSMENT IN THE UNITED KINGDOM. IEEM. June 2006.

within the walls with one evidently being cut down and the cut material stored within this building.

Building D is a single storey building located in the north east corner of the site. This is arranged on an 'L' shape and constructed of brick walls with a sloping roof of corrugated (possibly asbestos) sheets. The northern section appears to be used for storage and contains a single open room which on the eastern end the roof is missing; old machinery was located in this area (TN1). An active Grey Wagtail nest was noted in a gap in the wall. The eastern sections are an old stable block. Again this building is in a state of disuse and has a number of openings.

Building E is not on the site directly but borders building B and the courtyard. This is a large open barn used for hay storage. This building is constructed of corrugated sheets on the roof and walls with wooden slats in places.

As will be discussed later on the buildings were assessed for their potential to support protected or notable species. The buildings are considered as having a value at a local level.

Hardstanding (J3.5)

The site contains large areas of hardstanding. The courtyard area contains a mixture of hardstanding that is being colonised by the ruderal habitat described below. Larger continuous blocks of concrete are located within the courtyard the area closest to building E contain large agricultural machinery. The track lead down the south western side of the site towards and alongside the stream contained a mixture of concrete and loose substrates.

The areas of hardstanding in some places contained patches of ruderal habitat but in general offered little in the way of a wildlife benefit. The hardstanding is considered as having a benefit at a zone of influence level.

Tall Ruderal (C3.1)

The site contains a number of sections of tall ruderal habitat. This is dominated by Common Nettle (*Urtica dioica*) and Broad leaved dock (*Rumex obtusifolius*) containing other floral species such as; White Clover (*Trifolium repens*), Spear Thistle (*Cirsium vulgare*), buttercup (*Ranunculus sp.*), Cow Parsley (*Anthriscus sylvestris*), and common cleavers (*Galium aparine*). Within the courtyard area the patches of ruderal habitat extend round most of the edges covering areas of hardstanding, grasses such as Meadow Fescue (*Festuca pratensis*) and Ryegrass (*Lolium perenne*) with patches of bramble (*Rubus fruticosus*) in places. This habitat has extended into the entrance of Building C.

A section of ruderal like habitat extends along the exterior wall of building C bordering the track. This contained species such as Red Dead Nettle (*Lolium purpureum*) and stitchwort (*Stellaria graminea*). A nettle dominated section of ruderal habitat is located on a bank on the southern end of building B. This area also contained White Dead Nettle (*Lamium album*), Cow Parsley and Herb Robert (*Geranium robertianum*).

The areas of tall ruderal habitat provide a structurally diverse habitat as well as providing some floral diversity. These habitats likely support some invertebrate species and provide a habitat

that may support other protected and notable species. The ruderal habitats are considered as having a benefit at a site level.

Mixed Scattered Trees (A3.3)

The site does not contain any scattered trees within the site boundary, other than a few scattered Elder within building C, however there are some scattered trees within proximity of the site. These are all Alder (*Alnus glutinosa*) trees. A large Alder tree is located on the eastern bank of the stream to the east of the site (TN2). A second mature Alder tree is located to the north west of TN1 located behind building D within a residential property (TN2). A third mature Alder tree is located towards the north of the site close to the access track (TN4).

These trees are part of a wider network of treelines, hedgerows and woodland that connect across the local landscape. The trees provide potential roosting and foraging opportunities (discussed below) for species of bats as well as nesting birds. They are considered as having an importance at a local level.

Running Water (G2)/ Bankside habitat

A small stream runs to the east of the site flowing northwards. At the time of the site visit this was shallow and fast flowing; towards the southern end was a shallow ford. On the western bank of the stream was a section of vegetation between the stream and the site. This contained some pruned rose bushes. There was a section cut into the bank, presumably to allow water to return into the stream. The flora on this bank was indicative of a woodland habitat and contained; cow parsley, nettle, Snow drops (*Galanthus sp.*), Violet (*Viols riviniana*), Ramsons (*Alium ursinum*), celandine (*Ranunculus ficaria*) with forget-me-knot (*Myosotis sp.*) and cuckoo flower (*Cardamine pratensis*) closer to the stream. A small rubble pile was note on the edge of this area (TN5)

The stream is part of a wider wetland network that feeds into the River Darent. The habitats on site likely provide some opportunities for protected and notable species. They are considered as having a benefit at a local level.

Bare Ground

The site contains an area of bare ground. This is a section of bare earth at the entrance of the courtyard. This is considered as having a benefit at a zone of influence level.

Summary

The table below summaries the habitats on site and their value within a geographical context.

Habitat	Value	Comments
Buildings	Local	The buildings are considered as having a potential to support protected and notable species.
Hard standing	Zone of influence	The areas of hard standing provide little opportunities for wildlife.
Tall Ruderal	Site	Areas of species and structural diversity.
Stream	Local	Small stream part of a wider wetland network with florally diverse bankside vegetation.
Bare Ground	Zone of influence	Patches of bare ground likely waste from drains.

Table 1: Summary of value of habitats present on site.

3.2 SPECIES

A recent biological record bureau search from KMBRC produced some records of protected and Species of Conservation Concern (SoCC) within 1 km of the site. Additionally the Natural England resource; Magic map⁴, was consulted for any granted protected species licences that may be in the area.

Table one below summarises the key species groups and protected areas within these results. A full list of the species can be seen on request.

Protected species are those listed on EC Habitats Directive- Annexes II and IV, EC Bird Directive- Annex I, Conservation (Natural Habitats) Regulations 1994- Schedules 2 & 5, NERC 2006 Section 41, Wildlife and Countryside Act 1981 (as amended)-Schedules 1, 5 & 8, Protection of Badgers Act 1992.

Notable species are categorised as being a: BAP priority National, Red list species (not least concern) and or Red status bird species, Red Data Book Species, NERC species. Legislation and BAP designation are explained in the appendix.

Group	Number
Sites and Habitats	
Statutory sites	Present
Non Statutory sites or Local Wildlife Sites	Present
Ancient Woodland	Absent
Priority Habitats	Present
Protected and Notable Species	
Amphibian/ reptile species	6 species
Insect species	1 species
Mammal Species	11 species
Plant Species	32 species
	40 Total

Table 2: Summary of protected areas and species information

⁴ www.magic.gov.uk

Mammals

Bat Commuting/ Foraging Habitat

The protected species licencing information from the Magic map produced no records of granted bat mitigation license within 2 km of the site, though there are some within 3 Km of the site. The information supplied by KMBRC includes detailed records from Kent Bat Group. This information provided records of 13 species of bat found within 5 km of the site. There are recent records of bats within the village of Sundridge.

All bat species in the UK eat insects and forage along habitats such as hedgerows, woodlands, grasslands and waterways⁵. Bats use woodland edges, hedgerows, rivers and other linear features like tree-lined footpaths as corridors to commute from one area of countryside to another⁶. The site itself does not contain optimal foraging habitat though the ruderal areas will generate some invertebrates for bat species to forage. The site is surrounded by suitable foraging and commuting habitats, that are connected to the wider landscape, which mean bats are likely to be seen on site.

The presence of foraging/ commuting habitat is considered **moderate**.

Bat roosts

As discussed bats are predicted to be within the vicinity of the site and may use habitats on site for foraging and commuting.

Buildings are known to provide suitable roosting opportunities for a number of bat species⁷. An external and internal inspection of the buildings on site was carried out to assess their potential to support bat roosts, following Bat conservation trust guidelines⁸. An internal inspection was undertaken where possible inspecting all roof voids and potential roosting locations with a high powered torch looking for signs of bats in the form of staining, droppings, feeding remains and the bats themselves. This was followed by an external inspection of the buildings looking for potential ingress points through soffits, eaves, missing roof tiles/slates and brickwork and windows. Gaps in the ridge line of the roof were noted.

The exterior of Building A contained a number of potential access points; window frames did not contain any glass and doors were missing allow access to the interior. The tiles on the roof appeared to be in relatively good condition though there were gaps where the roof joined with the walls of the building. The interior was also inspected for any evidence of bats. The upper floor was not accessible at the time of the visit. The ground floor was partly used for storage. The interior of the roof was viewed through a gap in the ceiling of the ground floor. The roof

⁵ <https://www.bats.org.uk/about-bats/where-do-bats-live/bat-habitats/foraging-habitats>

⁶ <https://www.bats.org.uk/about-bats/where-do-bats-live/bat-habitats/commuting-habitats>

⁷ Bats and Buildings. Bats and the Build Environment Series. Bat Conservation Trust. January 2012.

⁸ Collins, J. (ed) (2016). Bat Surveys for professional Ecologists/; Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

was constructed of wooden beams and joists there was no backing to the roof tiles. No direct evidence of bats were seen the building contained areas that bats could use for roosting such as behind roost beams.

Building A contains a number of access points and potential roosting features for bats to use. No evidence of bats were seen, though a full inspection of the upper floor was not possible, the interior of the building is partly exposed to the elements. The likelihood of roosts being present is considered **moderate**.

Building B is of a similar construction to building A though the roof is formed of corrugated sheets instead of tiles. Again the building contained a number of gaps and access points into the interior of the building. As well as missing windows there are was a large gap in the gable end to the south of the building, the roof contained a number of small gaps. The interior of the main part of the building was covered in old straw and droppings. The roof was of wooden construction with no backing to the panels. The southern section contained a separate room with an upper floor that let into the main room. The upper floor section contained dense areas of bramble and ivy growing through the roof. The interior of the building had potential roost features in the roof. No droppings or evidence of bats were seen though the nature of the floor made detecting droppings difficult.

Building B contained a number of access points and potential roosting features. This building is considered as having a **moderate** potential to contain bat roosts.

Building C was missing its roof. The entire interior of the building was exposed to the elements. No potential roosting features were noted or evidence of bats found. This building is considered as having a **Negligible** potential to support bat roosts.

Building D also contained a number of access points into the interior of the building. A section of the roof in the northern part of the building is missing (TN1) as well as the door way being open. There were also gaps in the brick wall allowing access into the building. The southern section still retained the stable doors in places and though the windows contained some wire mesh this was missing in places. The interior of the northern section was being colonised by Bramble, Nettle and Herb Robert by the main door. The roosting potential is limited and the building is relatively exposed no evidence of bats were seen. The southern section is a former a stables with old straw and dung on the floor. The roof contained areas of wire netting on the interior and ivy was growing on one section.

Building D is relatively exposed with little roosting opportunities though there is access into the interior it may be possible for bats to use the building. The potential of bat roosts being present is considered **low**.

Building E though not being developed was also assessed. This is a large barn open on three sides that was being used to store hay. The interior was large with no obvious roof void there is likely a certain amount of disturbance and there was exterior flood lighting. The building contained a few small voids that bats could use such as between the roof beams and the roof or

on the exterior where cladding on the roof overlaps the walls. The likelihood of bat roosts being present in building E is considered **Low**.

The three trees on the periphery of the sites were also assessed for any Potential Roost Features (PRFs). The bat conservation trust provides information regarding features that may be present in trees that bats could potentially use for roosting (see figure 4)⁹. All the trees on the periphery of the site were assessed for any PRFs that may be present. All three trees contained a small number of PRFs such as rott holes or split limbs. They are considered as having a **low** potential to support bats.

Dormouse

No evidence of dormice (*Muscardinus avellanarius*) activity, such as feeding remains or nests was observed on site. Across its range dormice prefer the successional stage of woody vegetation; this is the new growth that arises after woodland management such as coppicing, ride widening, thinning or glade creation, they may also occur in scrubby habitat¹⁰. The site does not contain any optimal habitat for this species. The likelihood of dormouse being present is considered **negligible**.

Small mammals

Hedgehogs prefer habitats such as woodland edges and hedges as well as suburban areas¹¹. The KMBRC data provides local records of this species, other small mammals such as Weasel (*Mustela nivalis*) and Stoat (*Mustela ermine*) were also noted in the local biological records data. The habitats on site may provide some refuge and foraging opportunities for these species and the surrounding areas contain suitable habitats. Therefore the likelihood of the presence of small mammals is considered **low**.

Aquatic Mammals

Though the site does not contain any suitable water courses its is located within proximity of a small stream. There are historic records for Water Vole (*Arvicola amphibious*) within the data from KMBRC. Water voles prefer habitats with stable water depths, c. 1m in depth, with wide

⁹ http://www.bats.org.uk/pages/bat_roosts.html#TreeRoosts

¹⁰ <https://ptes.org/get-informed/facts-figures/hazel-common-dormouse-muscardinus-avellanarius/>

¹¹ http://www.mammal.org.uk/sites/default/files/factsheets/hedgehog_complete_0.pdf

emergent vegetation and established banks side vegetation¹². The section of stream habitat running close to the site did not contain optimal habitat for this species being relatively shallow at the time of the visit and lacking the required emergent vegetation. No obvious sign such as burrows, feeding remains or latrines were noted. The likelihood of water voles being present is considered **low**.

REPTILES AND AMPHIBIANS

Reptiles

There are a number of records for common reptiles including Slow Worm (*Anguis fragulis*), Common Liard (*Zootoca vivipara*) and Grass Snakes (*Natrix helvetica*) within 1 km of the site. Reptiles prefer sites with a diversity of habitats containing a number of micro habitats that provide suitable foraging and refuge sites¹³. The site contains some suitable habitat for these species, the ruderal habitats within the site provide some suitability for these species as does the bankside habitat and rubble pile along the stream. There is connectivity across the wider landscape for reptiles which means it is possible that they will be present on site. The likelihood of reptiles being present is considered **low**.

Amphibians

The European protected species Great Crested Newt (*Triturus cristatus*) require both suitable aquatic habitats for breeding and terrestrial habitats to forage and shelter during the active season and hibernate over winter¹⁴. There are no recent records of GCN in the local area in the provided KMNRC data though there are historic, from 1985, records from Sundridge. The European protected species information from Natural England (magic.gov.uk) shows no granted licences for GCN within 1 km of the site. The site does not contain any aquatic habitats. The terrestrial habitat for this species is contains some suitability though this is limited. The likelihood of GCN being present is considered **negligible**.

The KMBRC data provides records of common amphibians such as Common Frog (*Rana temporaria*). The terrestrial habitats on site provide some opportunity for common amphibians such as this. The likelihood of common amphibians being present is considered **low**.

Birds

The site contains suitable habitat for nesting birds, all bird nests are protected whilst they are in use. Bird nests were noted in some of the buildings including Grey Wagtail and Swallow nests. The site's potential to support breeding birds is considered **high**.

¹² Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The water vole mitigation handbook (Mammal Society Mitigation Series). Eds Fiona Matthews and Paul Chanin. Mammal Society London.

¹³ Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and reptile Conservation, Bournemouth

¹⁴ Great crested newt mitigation guidelines. August 2001. English Nature.

Plants

The KMBRC results produced a number of records of notable plant species including bluebell (*Hyacinthoides non-scripta*) and Bee Orchid (*Ophrys apifera*). The habitats on site are unlikely to support notable plant species though it is possible plants such as Bluebell will be found within proximity to the site. No notable species were seen during the site visit. The likelihood of notable species being present is considered **low**.

Invertebrates

The local records only contains records of one notable invertebrate species; Roman Snail (*Helix (Helix) pomatia*). However in discussion with local residents EHM understands that a large number of local moth records, including notable species, have been recorded within proximity of the site over the last few years. The site in general lacks the habitat mosaics to support notable invertebrate species though these may be in the local area. The potential for notable invertebrates to be present is considered **low**.

3.3 Summary

Table 3 below summarises the sites potential for protected and notable species. Designations for potential are as follows;

- High- Definite signs of species identified on site and habitat considered suitable
- Medium/ moderate- habitat considered suitable but obvious signs not necessarily detected
- Low- no obvious signs and habitat considered sub-optimal. Though species may be present
- Negligible- highly unlikely that species is present

Species	Sites potential to support	Justification
Bat roosts-buildings.	F- Moderate G- Moderate H- Negligible I- Low J- Low	All buildings inspected the majority of the buildings were assessed as having suitable access to the interior and potential roosting features.
Bat roosts-mature trees	Moderate	Three mature trees located on the edge of the site contained potential roost features.
Bat foraging/commuting areas	Moderate	Suitable habitat on site with connectivity to wider landscape.
Dormice	Negligible	No evidence of dormouse seen. Site does not contain suitable habitat to support this species.
Small mammals	Medium	The ruderal habitats on the site provide some potential to support small mammals.
Aquatic mammals	Low	Stream located close to the site provides limited potential to support water voles.
Reptiles	Low	Some suitable habitats on site though this is limited. Proximity to suitable habitat in local area.
Common Amphibians	Moderate	No water bodies on site. Limited terrestrial habitat on site.
Great Crested Newts	Negligible	No aquatic habitat on site and terrestrial habitat is considered sub-optimal.
Breeding birds	High	The buildings on site contained active bird nests.

Invertebrates	Low	The site provides some limited suitability for invertebrate species.
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Table 3: Summary of sites potential to support certain protected and notable species.

3.4 Protected Areas

Statutory protected Areas

The site lies within the Kent Downs Area of Outstanding Natural Beauty (AONB). This covers the majority of the surrounding landscape.

Non statutory protected areas

Within 1 KM of the site there is a single Local wildlife Reserve called Hill Water Bottom Wood located to the south west of the site.

Priority Habitats

There are areas of priority habitat within 1 km of the site. This is predominately woodland habitats including ancient semi-natural and plantation woodland. The closest section is located close to the site to the north.

A map of the location of the protected areas is shown in the appendix.

4 Predicted Development Impacts

This below summary is not intended as a full impact assessment but as a summary of potential impacts on protected and notable species to help provide suitable recommendations for additional surveys and mitigation as necessary.

EHM Ltd believes the project will involve the removal of the current buildings on site and the development of new residential units. This will result in the disruption of some of the habitats on site.

5 Discussion and Recommendations

The conclusions and recommendations below are derived from the findings of the survey and desktop study.

5.2 Habitats

Buildings

All buildings, apart from Building E, will be modified as part of the development; building A is to be converted, one bay of building C will be demolished and the rest converted, building B is to be converted, building D (the stables) will be demolished and used for parking and storage.. All buildings were inspected and found to have bat roost potential, apart from building C. Additional bat surveys will be required. The buildings support nesting birds and should be removed outside of nesting bird season if possible (see below).

Tall ruderal

The areas of tall ruderal habitats on site have a low potential to support reptiles and amphibians. These areas should be maintained at as a short sward or cut down in stages (see below) to reduce the likelihood of an impact to these species.

Wider habitats

The site lies within proximity of areas of priority habitat and wetland habitats. These areas should be protected during construction by excluding construction personnel and materials. Adequate pollution control measures should be in place to ensure these areas are not impacted, particularly nearby wetland habitats and mature trees.

5.3 Species

Bats

As discussed the majority of the buildings on site are considered as having low and moderate roost suitability, therefore additional surveys are required. The number of surveys required corresponds to the potential for bats to be present. A building with low potential to support roosting bats requires only a single visit to be confident in a null result, moderate potential two, and high potential three. The site has been identified as having Low- moderate potential and therefore requires the following number of surveys;

- Building A- Two dusk/ dawn surveys
- Building B- Two dusk/ dawn surveys
- Building C- No surveys required
- Building D- One dusk or dawn survey
- Building E (if required)- one dusk or dawn survey

This number may be increased if a bat roost is identified during these surveys. The surveys may only be carried out during the active season for bats (**May – September**, inclusive) and in suitable weather conditions. Surveys need to be at least two weeks apart. This follows the BCT guidelines.

It is recommended that the trees and wider habitats around the site it is important to avoid disrupting the potential bat foraging/ commuting habitat;

- Avoid illuminating the wider habitats on site, particularly the mature trees, at dusk or night time- Guidelines provided by the Bat Conservation trust and ILP should be followed¹⁵
- Limit work to daylight hours
- Limit noise disturbance and other forms of pollution such as dust
- Maintain the wider habitats on site
- Lighting should also be considered post-development with any external lighting positioned so as not to illuminate potential foraging or commuting habitats.

Additional planting could be used to increase the foraging and commuting habitat on site and bat boxes could be included within the landscaping or buildings.

Small mammals

The Tall ruderal habitat should be cleared in stages down to ground by hand, preferably leaving the lower section in situ overnight. Remove any piles of garden waste or brush by hand.

¹⁵ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Aquatic Mammals

The site does not contain any suitable waterbodies though a stream is located within proximity of the site. Suitable pollution control measures should be in place to avoid polluting or impacting water courses.

Amphibians/ Reptiles

The site has a potential to support reptiles/ amphibians. The tall ruderal habitats should be maintained at ground level. If a longer sward develops then this should be cut down in the following way;

Stage

Reduce to a height 150-200mm using hand tools (e.g. strimmers). It is recommended that cutting commences in the centre of the site, radiating outwards to allow any remaining animals to escape.

All cuttings to be removed from the site by licenced waste carriers.

Stage 2

After a period of at least two days has passed a second vegetation cut should be undertaken to ground level. Again, it is recommended that this second-stage cutting commences in the centre of the site, radiating outwards towards the retained areas All cuttings to be removed from the site by licenced waste carriers. The site can then be completely cleared and worked upon as necessary.

Birds

To ensure breeding birds are not impacted any buildings, trees or shrubs that may require removal should be removed outside of the breeding bird season, this typically runs from March to September. If vegetation/ buildings require removal during the nesting bird season the area should be subjected to a survey by an experienced ecologist. If there are any nest sites located within the work area a suitable exclusion zone will have to be established until the chicks have fledged. All bird nests are protected in the Wildlife and Countryside Act (see appendix).

Although the potential presence of other protected species was considered to be low, it is not impossible that they could occur on the site. If any are encountered, works should be temporarily halted and an ecologist consulted.

Invertebrates

The site may support notable invertebrates though this is likely limited. It is likely that notable moth species are present in the area by protecting the wider habitats this will help protect habitats for these species. Additional enhancements may also be possible to help benefit invertebrates.

5.4 Potential Enhancements

The development offers the potential for additional ecological enhancements. These are made as simple recommendations and not intended as prescriptive actions.

Bird and Bat Boxes

Bird and bat boxes, could be added to the site either in suitable locations on site or incorporated into the new building. In particular swallow nest boxes would help compensate for the loss of nesting habitat.

Planting

Native trees and plants could be added to the landscaping to further enhance the site and compensate for the loss in habitats on site. This would also help to provide additional habitat for the moth species in the area and therefore provide a benefit for bats and other species.

Protected Areas

By protecting the wider habitats on site this will help limit potential impacts to the priority habitats and protected areas within vicinity of the site. As the site is within an AONB the development will likely have to ensure that it does not cause in adverse effects to the AONB.

Please note additional recommendations may be required following the completion of the bat surveys.

EclA

A letter from the Kent County Council Biodiversity Officer dated 4th March 2020 suggests that an Ecological Impact Assessment (EclA) report may be required, following the results of a Preliminary Ecological Assessment. The detail set out in this report provides the necessary initial Ecological Assessment and it may be that the Council will require a more detailed impact assessment including and details of ecological protection and enhancement measures.

5.5 Summary of Recommendations

The recommendations are made in reference to protected/ notable species, ensuring the construction is compliant, and to ensure features that are likely to be providing an ecological resource are protected. These recommendations are prescribed following the information gained during the site visit and desktop study. These recommendations are not intended as an exhaustive list but those that are reasonable with the information available.

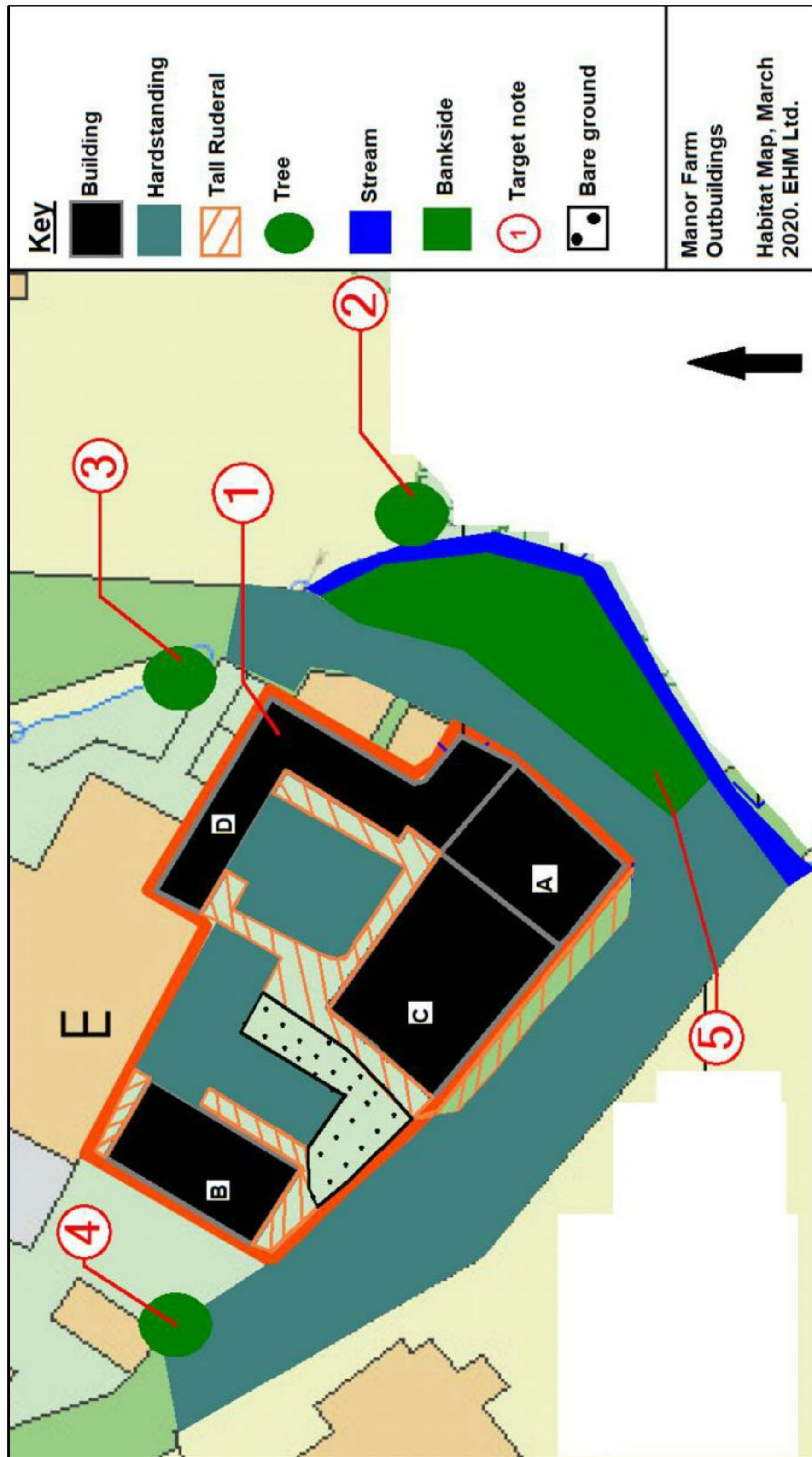
Recommendation	Action	Justification
Bat survey of Buildings; A,B, D (E)*	Two dusk emergent and/or dawn re-entry surveys are recommended for A and B. One dusk or dawn survey for buildings D and E. Follow BCT survey guidelines.	This will provide information on the presence/ absence of bat roosts.
Protection of Bat habitat/ roosts*	Avoid disturbance to potential bat foraging/ commuting habitats and roosts.	This will ensure that legally protected bats roosts are not disturbed.
Protection of breeding birds*	Carry out vegetation clearance (if required)/ building demolition outside of breeding bird season or under supervision of ecologist following a breeding bird survey	The buildings are likely providing several opportunities for breeding birds.
Appropriate lighting for bats*	Avoid illuminating bat foraging and commuting habitat-adjacent woodland. During and post development.	This will help limit disturbance to bat species in the longer term.
Remove vegetation in stages*.	Cut down tall ruderal habitats in stages to reduce risk of impacting protected/ notable species.	This will allow small mammals, reptiles or amphibians, if present to leave the area safely.
Covering of excavations	Cover excavations or place ramp from bottom to top.	This will stop badgers becoming potentially trapped.
Adequate pollution control	Habitats on site should be adequately protected to ensure no polluted runoff in on site or adjacent land. All oils, fuels and chemicals should be adequately stored on site in bunded contains with appropriate spill kits and emergency procedures in place.	This will protect habitats on site and those in the nearby landscape.
Inclusion of bird and bat boxes in the development/ landscaping	Place boxes in suitable locations in the grounds or on new development.	This would benefit local bird and bat populations on the site and within the local area. .
Use of native plant species during any future planting and landscaping.	Where possible select native tree and plant species in any future landscaping.	This will provide a greater longer term benefit for wildlife.
Possible further impact assessment	An EclA may be required by the council to further understand the development impacts.	This may be required by the council.

Table 4: Summary of recommendations.

* Indicates recommendation to avoid impact to legally protected species.

7. Figures

7.1 Figure 1: Phase I Habitat Map



7.2 Figure 2: Proposed development outline



PENTAR DESIGN
PARTNERSHIP
CHEQUERS BARN
CHEQUERS HILL
EDENBRIDGE
KENT TN9 7PD

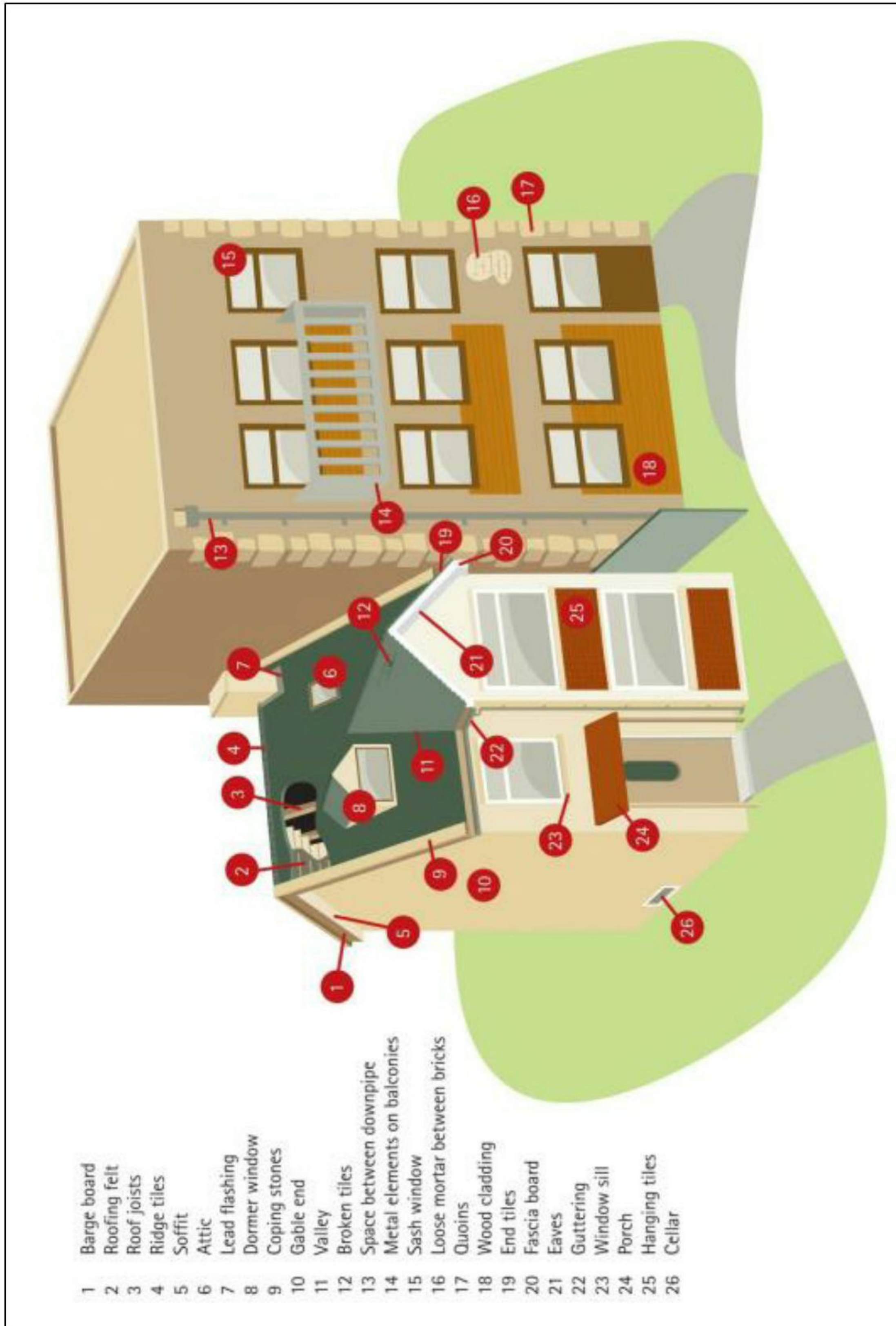
PROPOSED SITE PLAN

MANOR FARM, SUNDRIDGE, DRY HILL LANE, TN14 6AA
CONVERSION OF REDUNDANT AGRICULTURAL BUILDINGS

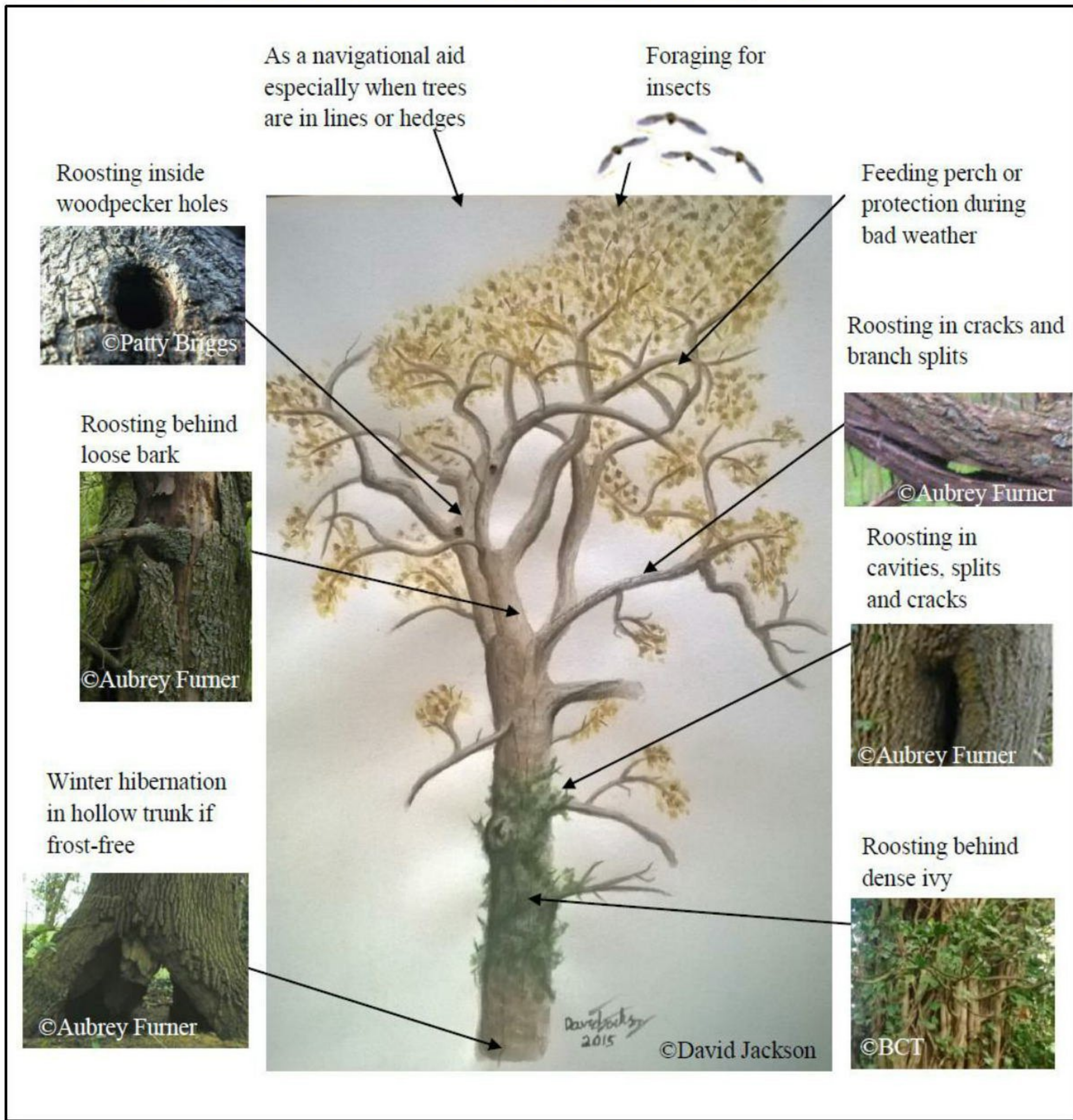
3493.12

T. 0044 (0) 1732 863845
E. info@pentardesign.co.uk
www.pentardesign.co.uk

7.3 Figure 3: POTENTIAL BAT ROOST FEATURES ON BUILDINGS (BCT)



7.4 Figure 3: POTENTIAL ROOST FEATURES IN TREES (BCT)



8. APPENDIX

8.2 Appendix 1: Photos



Photo 1: Building A. Showing possible entry points in roof and windows.



Photo 2: interior of Building A showing gap in ground floor ceiling to first floor and roof.





Photo 3: Showing exterior of Building B with potential entry points.



Photo 4: Interior of Building B





Phot 5: Building C exterior looking into the interior with ruderal habitat and tree cuttings piled up.



Phot 6: Interior of Building C showing missing roof.





Photo 7: Exterior of Building D showing potential access points and tree growing in corner section.



Photo 8: Interior of the stable section of building D





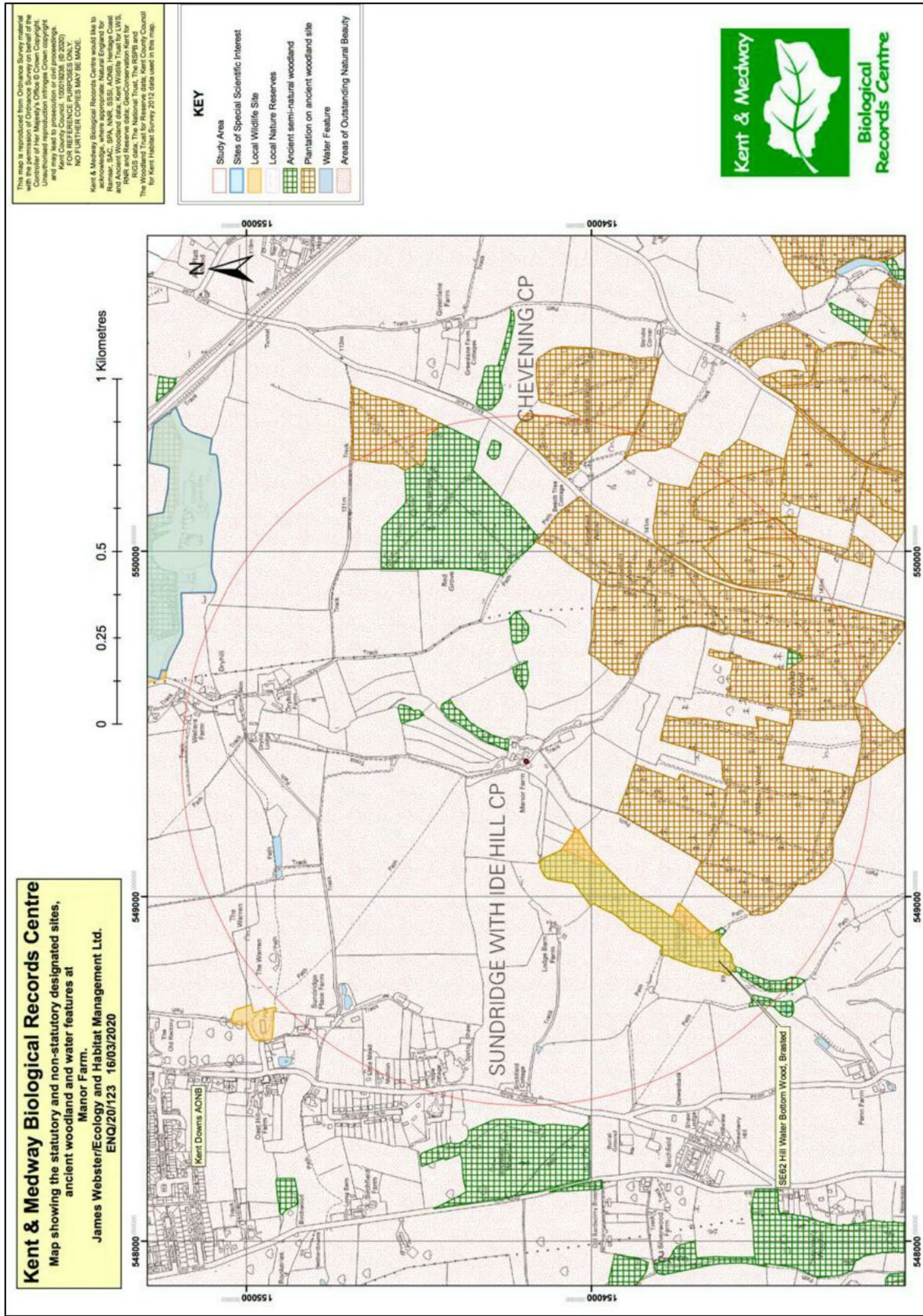
Photo 9: Grey wagtail nest in building D



Photo 10: Stream Habitat adjacent to the site, mature Alder tree in back ground.



8.2 Appendix 2: Protected Area location



8.3 Appendix 3: Legislation

Protected species have protection under national legislation such as the Wildlife and Countryside Act 1981 and European legislation such as the Habitats Directive.

Please note the following:

- (1) If there is no record of a particular protected species, this does not signify that the species is absent from the site in question. It may mean that it has not been recorded, that the site has not been surveyed for this species, or that data relating to its presence has not been made available to us.
- (2) The presence of a protected species record does not mean that the species is still present. It means that the species was recorded at that time and place. The implications of the record should be further evaluated, and a survey to establish the current status may be required.
- (3) The following summary of legislation is designed purely as a basic guide, if any action is to be taken regarding any of the protected species listed, then it is imperative that the full relevant legislation be consulted.

WILDLIFE PROTECTION LEGISLATION IN ENGLAND

Legislation that protects wildlife in England exists at the European and national level.

European Law

The Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) was aimed at ensuring conservation and protection of all wild plants and animals, increasing cooperation between states, and affording special protection to the most vulnerable or threatened species. It was implemented by the EC Birds Directive (Council Directive 79/409/EEC) and the EC Habitats Directive (Council Directive 92/43/EEC).

The Bonn Convention on Migratory Species of Wild Animals (1979 & 1994) requires the protection of migratory animals. It was implemented by the EC Birds Directive (Council Directive 79/409/EEC) and the EC Habitats Directive (Council Directive 92/43/EEC).

The EC Habitats Directive aims to establish a network of protected areas in order to maintain the distribution and the abundance of threatened species and habitats. A number of species are listed in the annexes.

Annex II lists animals and plants whose conservation requires the designation of Special Areas of Conservation (SACs).

Annex IV lists animals and plants in need of strict protection. For the animals, this prohibits deliberate capture, killing, disturbance (especially during breeding period), destruction or taking of eggs from wild, and destruction or deterioration of breeding sites or resting places. For the plants, this prohibits deliberate picking, collecting, uprooting, cutting, destruction, and trade in entire plants or parts, at all stages of life.

Annex V lists animals and plants for which taking in the wild may be subject to management measures

National Law

Wildlife and Countryside Act The Wildlife and Countryside Act 1981 (as amended) is the main source of legal protection for wildlife in England and was strengthened by the Countryside and Rights of Way Act 2000. A statutory five-yearly review of Schedules 5 and 8 (protected wild animals and plants) is undertaken by the relevant authorities. Species protection is provided under Schedules 1, 5, 6 and 8:

Schedule 1 lists bird species that are rare, endangered, declining or vulnerable. The Schedule is divided into two parts. Part I lists birds which receive special protection; these birds receive additional protection from disturbance at the nest. Part II lists birds that receive the same level of special protection, but only during the breeding season.

Schedule 5 protects animal (other than bird) species from certain actions, according to the sections of the Act under which they are listed:

S9 (1) prohibits the intentional killing, injury or taking. S9 (2) protection is limited to possessing and controlling. S9 (4a) prohibits the damaging, destroying or obstructing access to any place used by the animal for shelter or protection. S9 (4b) prohibits disturbing the animal while it is occupying any structure or place which it uses for shelter or protection. S9(5) prohibits the selling, offering for sale, possessing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from such an animal. Species on this Schedule do not appear on the PSI.

Schedule 6 lists animals that may not be killed by certain methods. Even humane trapping for research requires a licence.

Schedule 8 lists plant species for which it is prohibited to intentionally pick, uproot, destroy, trade in, or possess (for the purposes of trade).

Under the Wildlife and Countryside Act, all wild plants in Britain are protected from intentional uprooting by an unauthorised person. Landowners, land occupiers, persons authorised by either of these, or persons authorised in writing by the Local Authority for the area are exempt from this, except for Schedule 8 species.

Conservation Regulations the Conservation of Habitats and Species Regulations 2010 (as amended) transpose the EC Habitats Directive into national law. In addition to enabling the designation of SACs, the regulations also provide species protection:

Schedule 2 protects the listed animals from deliberate capture, killing, disturbance or trading in.

Schedule 4 protects the listed plants from picking, collecting, uprooting, destroying or trading in.

These actions can be made lawful through the granting of licences by the appropriate authorities. Licences may be granted for a number of purposes, but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild the population of the species concerned.

International and European Obligations

In the UK, species receiving protection under international legislation and agreements are protected through the Wildlife and Countryside Act, so are not shown separately in the BMERC notable species lists. For reference, the relevant categories are shown below.

Bern Convention on the Conservation of European Wildlife and Natural Habitats the Bern Convention aims to ensure the conservation of wild flora and fauna species and their habitats.

- Appendix 1 (strictly protected flora) - Plants for which contracting parties will prohibit deliberate picking, collecting, cutting or uprooting.
- Appendix 2 (strictly protected fauna) - Animals for which contracting parties will prohibit deliberate capture, possession, killing, damage to or destruction of breeding or resting sites, disturbance or destruction or taking of eggs. Appendix 3 (protected fauna) - Animals for which contracting parties will include closed seasons and regulate their sale, keeping for sale, and transport for sale or offering for sale of live and dead wild animals. (Not included in Notable Species List).

Bonn Convention on Migratory Species the Bonn Convention aims to conserve terrestrial, marine and avian migratory species throughout their range.

- Appendix 1 (migratory species threatened with extinction) - Species for which contracting parties will strictly protect and endeavour to conserve or restore the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them.
- Appendix 2 (migratory species that need or would benefit from international co-operation) - Species for which contracting parties will be encouraged to conclude global or regional agreements for the conservation and management of individual species or, more often, of a group of species. (Not included in Notable Species List).

The EC Council Directive on the Conservation of Wild Birds the Birds Directive provides a framework for the conservation and management of all wild birds in Europe. As well as designating important sites for birds as Special Protection Areas, birds are generally protected from deliberate killing or capture and destruction of or damage to their nests or eggs, and deliberate disturbance. Allowances are made for game birds.

5. UK BAP & notable species

UK Biodiversity Action Plan and Section 41 Species

Biodiversity, or biological diversity, is the whole variety of life on Earth. The Convention on Biological Diversity (CBD) came about as a result of the 1992 Earth Summit. As one of 168 countries to sign up to the CBD, the UK was required to develop a national strategy for the conservation of biodiversity; the UK Biodiversity Action Plan (UKBAP) was born.

The UKBAP is the result of contributions involving a wide range of people and organisations, enabling the identification of species and habitats that are listed as priorities for conservation action. A 2007 review of the UKBAP has resulted in 1149 species and 65 habitats being listed as conservation priorities. For more information see www.ukbap.org.uk.

In addition to the national priorities and targets, action is also being taken at local level. The Essex Biodiversity Project is responsible for implementing the Essex Biodiversity Action Plan, which has 28 priority species and 15 priority habitats currently listed. For more information see www.essexbiodiversity.org.uk.

The UK BAP

(From Explanatory Note by Defra and Natural England on Section 41 of the Natural Environment and Rural Communities

(NERC) Act 2006 - Habitats and Species of Principal Importance in England)

The England Biodiversity List has been developed to meet the requirements of Section 41 of the Natural Environment and Rural Communities Act (2006). This legislation requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity.

The S41 list will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions. In particular:

- Regional Planning Bodies and Local Planning Authorities will use it to identify the species and habitats that should be afforded priority when applying the requirements of National Planning Policy framework (NPPF) and PPS9 Circular to maintain, restore and enhance species and habitats.
- Local Planning Authorities will use it to identify the species and habitats that require specific consideration in dealing with planning and development control, recognising that under NPPF and PPS9 Circular the aim of planning decisions should be to avoid harm to all biodiversity.
- All Public Bodies will use it to identify species or habitats that should be given priority when implementing the NERC Section 40 duty.

Habitats of Principal Importance Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that have been identified as requiring action in the UK Biodiversity Action Plan (UK BAP). They range from habitats such as upland hay meadows to lowland mixed deciduous woodland and from freshwater habitats such as ponds to marine habitats such as subtidal sands and gravels.

Species of Principal Importance There are 943 species of principal importance included on the S41 list. These are the species found in England which have been identified as requiring action under the UK BAP. In addition, the Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

Relationship with the UK Biodiversity List of Species and Habitats the UK BAP list of priority species and habitats is an important reference source and will be the focus for conservation action across the UK over the next decade. It has been used to draw up the species and habitats of principal importance in England under S41 of the NERC Act.

The revised UK BAP list of priority species and habitats can be downloaded from the UK Biodiversity Website: <http://www.ukbap.org.uk/NewPriorityList.aspx>

Relationship with the biodiversity duty under Section 40 of the NERC Act There is a general biodiversity duty in the NERC Act (Section 40) which requires every public body in the exercising of its functions to 'have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'.

There is no direct relationship between the Section 41 duty on the Secretary of State to publish the list and promote the taking of steps to conserve the habitats and species on it, and the Section 40 duty on public bodies to have regard to the purpose of conserving biodiversity. Importantly:

(a) Biodiversity, as covered by the Section 40 duty includes all biodiversity and not just the habitats and species of principal importance. However, there is an expectation that public bodies would refer to the S41 list when complying with the section 40 duty.

(b) The duty on the Secretary of State to promote the taking of steps by others is not restricted to public bodies.

Defra guidance for local authorities and public bodies on implementing the biodiversity duty in the NERC Act draws attention to the S41 list, emphasising that local authorities and public bodies have a role to play in ensuring the protection of these species and habitats. Copies of the guidance can be downloaded from:

<http://archive.defra.gov.uk/environment/biodiversity/documents/pa-guid-english.pdf>

The overall aim of the Essex Biodiversity Project is to protect, conserve and enhance the variety of wildlife species and habitats in Essex through the successful implementation of the Essex Biodiversity Action Plan.

