



**The Gardener's Arms Public House,
Emmer Green, Reading, Berkshire RG4 8NA**

Preliminary Ecological Appraisal

October 2018

on behalf of Caldecotte Group

Client	Caldecotte Group
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Contents

1	Summary of Study	1
2	Introduction	2
2.1	Site Description	2
2.2	Proposed Works	2
2.3	Aims of Study	2
3	Methodology	2
3.1	Desk Study	2
3.2	Extended Phase 1 Habitat Survey	3
3.3	Preliminary Roost Assessment	3
3.3.1	Buildings	3
3.3.2	Trees	4
3.4	Bat Activity Survey	4
4	Results & Evaluation	6
4.1	Constraints to Current Study	6
4.2	Sites of Nature Conservation Importance	6
4.2.1	Statutory Sites	6
4.2.2	Non-Statutory Sites	6
4.3	Habitats	6
4.3.1	Buildings	6
4.3.2	Hard-standing	8
4.3.3	Amenity Grassland	8
4.3.4	Trees	8
4.3.5	Scrub	8
4.4	Species	8
4.4.1	Plants	8
4.4.2	Invertebrates	9
4.4.3	Bats	9
4.4.4	Birds	9
4.4.5	Reptiles	9
4.4.6	Amphibians	9
4.4.7	Badgers	10
4.4.8	Other Species	10
5	Discussion	10
5.1	Legislation & Policy Guidance	10
5.1.1	Bats	10
5.1.2	Nesting Birds	11
5.1.3	The Natural Environment and Rural Communities Act 2006	11
5.1.4	National Planning Policy Framework (NPPF)	11
5.2	Potential Impacts	12
5.2.1	Sites of Nature Conservation Importance	12
5.2.2	Habitats	12
5.2.3	Bats	12
5.2.4	Birds	13
5.2.5	Hedgehogs	13
6	Recommendations	13
6.1	Habitats	13
6.2	Bats	13
6.2.1	Timing of Works	13
6.2.2	Careful Work Practices	14
6.2.3	Enhanced Roosting Opportunities	14

6.2.4	Lighting	14
6.3	Birds	15
6.3.1	Timing	15
6.3.2	Enhanced Nesting Opportunities	15
6.4	Hedgehogs	15
6.4.1	Careful Work Practices.....	15
6.4.2	Hedgehog Houses	15
6.4.3	Provision for Movement by Hedgehogs	15
7	References.....	15
8	Appendix 1. Photographs	17
9	Appendix 2. Site Location Plans	19
10	Appendix 3. Indicative Proposals' Plan	20
11	Appendix 4. Non-Statutory Sites Map & Citations	21
12	Appendix 5. Protected/Notable Species Records	28

1 Summary of Study

- A Phase 1 Habitat Survey and Preliminary Bat Roost assessment of the Gardener's Arms Public House, Emmer Green, Reading were undertaken on the 14th August 2018.
- The buildings within the site were surveyed for bats and evidence of bats in accordance with best practice guidelines published by the Bat Conservation Trust (Collins, 2016).
- Habitats within the site were evaluated and assessed for their potential to support protected species.
- Trees and scrub habitat are considered to be the features of greatest ecological value within the site and provide suitable habitat for nesting birds.
- Other habitats are considered to be of low ecological value, and of negligible value to protected species.
- Subsequent to the preliminary roost assessment, one bat activity survey (dusk emergence watch) of the public house and bungalow was undertaken on 5th September 2018, involving four surveyors; these two buildings are assessed as having 'low' bat roost potential (Collins 2016).
- The other buildings within the site are assessed as having 'negligible' bat roost potential (Collins 2016).
- One tree was assessed as having 'low' bat roost potential
- No bats were seen to emerge from the dwelling during the emergence watch of 5th September 2018.
- With the adoption of careful works there are no foreseeable impacts on roosting bats or other protected species.
- Since significant impacts on bats and their roosts can be avoided a European Protected Species (bat) Mitigation Licence is not considered necessary in this instance.
- Recommendations for mitigation of habitat loss are made through native planting.
- Sensitive timing for the removal of vegetation is recommended to avoid impacts on nesting birds
- Careful works are recommended for the removal of an ivy-covered tree as a precautionary measure to minimise the risk to bats (although likely to be absent).
- Ecological enhancements for roosting/nesting bats and birds are also recommended.

2 Introduction

2.1 Site Description

The Gardener's Arms (hereafter referred to as 'the site') is a public house located to the north-eastern side of Surley Row in Emmer Green; a suburb of Reading, Berkshire. The approximate Ordnance Survey grid reference of the site is SU 7155 7614.

The site comprises the building of the public house, as well as a bungalow, a storage barn, a skittles alley and several caravans. Habitats surrounding the buildings include hard-standing (car park) to the south of the public house, areas of lawn and some scrub within the gardens to the rear.

The pub is located within a suburban setting. The immediate surroundings are largely residential, containing terraced and semi-detached dwellings with private gardens. A golf course is located approximately 540m to the north and connects to open countryside further to the north (approximately 1km to the north of the site).

2.2 Proposed Works

There is a proposal to demolish the existing buildings and construct nine dwellings within the site. An indicative layout plan is provided in Appendix 3.

2.3 Aims of Study

The aims of this study are to describe and evaluate the habitats present within the site and to assess the potential for the site to support protected species. This report discusses the likely impact of the proposed works on the ecology of the site and the local area and makes recommendations for appropriate mitigation/compensation measures and habitat enhancement.

One specific aim is to assess the potential for the site to support protected and notable species. The aim of the study is to survey the buildings for bats and/or evidence of bats and to assess the overall potential of the buildings to support roosting bats and other protected species, such as nesting birds. The report discusses the likely impacts of works to the buildings on bats, nesting birds and other protected species and makes recommendations for appropriate mitigation, compensation and enhancement measures in this regard.

The potential impacts are assessed in accordance with the legal protection afforded to bats under The Conservation of Habitats & Species Regulations 2017. The need for a European Protected Species (bat) licence is also discussed in light of the impact assessment.

3 Methodology

3.1 Desk Study

The Thames Valley Environmental Records Centre (TVERC) was contacted in October 2018 to gather records that it holds for protected and notable species, and sites of nature conservation importance from within a 1km radius of the site.

The Multi-Agency Geographic Information for the Countryside (www.magic.gov.uk) website was searched for information regarding internationally protected sites (e.g. Special Areas of Conservation) within 5km of the site and statutory sites of nature conservation importance (e.g. Sites of Special Scientific Interest) within a 1km radius. Other Internet resources interrogated as part of the desk study include:

- The Ordnance Survey - www.ordnancesurvey.co.uk
- Bing Maps - www.bing.com/maps
- Old Maps - www.old-maps.co.uk
- Google Earth - www.earth.google.co.uk

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, was also consulted to gather information pertaining to priority habitats and species for conservation action at the national and local level.

Aerial photography interpretation was used to place the study sites into an ecological context and to provide information on the nature of the habitats beyond the site boundary. The information gathered is used to put the site into an ecological context and to provide a baseline to the habitat assessment.

3.2 Extended Phase 1 Habitat Survey

An extended Phase 1 habitat survey was undertaken on 14th August 2018 by Jan-Piet Stuursma. A walkover of the site was conducted, and a description of the habitats present was prepared using standard Phase 1 Habitat Survey methodology (JNCC 2010).

Target notes were also prepared on features of particular ecological interest within the site and an assessment was made of the site's potential to support protected and notable species (such as species listed under Section 41 of the NERC Act 2006).

3.3 Preliminary Roost Assessment

3.3.1 Buildings

A preliminary roost assessment (initial bat survey) was undertaken on the 14th August 2018 by Jan-Piet Stuursma. Mr Stuursma holds a licence from Natural England to survey for bats within all counties of England (Licence Number: 2018-37063-CLS-CLS).

A detailed internal and external survey of the buildings was undertaken using a 1 million candle-power torch and close-focusing binoculars in order to look for bats and/or evidence of bats and to assess the potential of the buildings to support roosting bats. The external elevations of the buildings were inspected for evidence of bats including, bat droppings, urine stains, feeding remains (such as moth wings) and characteristic fur staining around access points.

Notes were made on the relative freshness, shape and size of bat droppings and the location and quantity of any feeding remains. 'Clean' gaps and crevices within the structure of the buildings were looked for as this can indicate where bats may have gained access to the interior spaces and the fabric of the walls.

The bat survey was undertaken according to best practice guidelines published by the Bat Conservation Trust (Collins, 2016).

The study also takes into account the structure and ecological context of the buildings, including the following factors which may increase the likelihood of roosting bats being present:

- Age of the building (pre-20th Century or early 20th Century construction)
- Nature of construction; traditional brick, stone or timber construction
- Large and complicated roof void with unobstructed flying spaces
- Large (>20 cm) roof timbers with mortice/tenon joints, cracks and holes
- Entrances and gaps for bats to fly and crawl through
- Poorly maintained fabric providing ready access points for bats into roofs, walls; but at the same time not being too draughty and cool.
- Roof warmed by the sun, south-facing roofs in particular
- Weatherboarding and/or hanging tiles with gaps
- Undisturbed roof voids
- Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year
- Buildings or built structures close to good foraging habitat, in particular mature trees, parkland, woodland or wetland, especially in a rural setting.

The criteria within Table 1 are used for as guidelines for assessing the potential suitability of buildings for bats (Collins 2016).

Table 1. Criteria for the assessment of bat roost potential of buildings (Collins 2016).

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after the presence is confirmed).
High	A structure 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 habitats.

In addition to the bat survey, the buildings were checked for evidence of nesting birds including old birds' nests, bird droppings, feathers and eggs.

3.3.2 Trees

A survey of trees within site and adjacent to the site boundary was also undertaken on 14th August 2018 by Jan-Piet Stuursma in order to look for evidence of bats (such as droppings, staining and scratch marks) and to assess the potential of the trees to support roosting bats.

Trees were assessed from ground-level using close focusing binoculars and a 1 million candle-power torch and was assessed as either having high, medium, low or negligible potential to shelter roosting bats according to the criteria shown in the table below. Potential roost features were identified where present.

Table 2. Criteria for the assessment of trees for roosting bats (Collins 2016)

Potential	Features of Tree
Negligible	Negligible habitat features within a tree likely to be used by roosting bats,
Low	A tree of sufficient size and age to contain potential roost features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats.

3.4 Bat Activity Survey

One bat activity survey was conducted at dusk on 5th September 2018 by Tracy Gray BSc GradCIEEM, Owen Crawshaw BSc ACIEEM, Robbie Birkett MSci and Rob Spencer. Please refer to

Table 3 for timings and weather conditions during the bat activity survey. The public house and bungalow were the focus of this survey.

The surveyors were positioned to the north, east, south and west of the public house to watch for bats emerging from the public house itself and the bungalow to the north (see Figure 1). The surveyors watched for bats emerging at dusk and were equipped with EM Touch and Elekon Batscanner bat detectors to record and analyse bat calls.

One survey was undertaken due to the fact that the public house and bungalow were assessed as having 'low' potential to offer shelter to roosting bats. Other buildings were assessed as having negligible potential to shelter bats.

Table 3. Timings and weather conditions during the bat activity survey (dusk emergence watch) of the public house and bungalow at the Gardener's Arms, Emmer Green.

Date	Timing	Sunset	Weather
05/09/18	19:15 – 21:30	19:44	Warm (18°C throughout), dry, overcast (cloud cover 90%), calm (Beaufort Scale 0)

Dusk/dawn watches of other buildings were not considered necessary. This is due to the fact that the buildings were assessed as having negligible potential to offer shelter to roosting bats.



Figure 1. The location of the study buildings at The Gardener's Arms (site outlined in red) and the positions of the surveyors (shown as red dots) during the dusk emergence survey of the public house and bungalow (Buildings A & D). Source: <https://www.bing.com/mapreview>.

4 Results & Evaluation

4.1 Constraints to Current Study

Access into the bungalow (Building D) and the Barn (Building G) was not achieved during the inspection of 14th August 2018. This is not considered a significant constraint, given that surveyors were able to cover the bungalow during the dusk emergence survey and the barn was assessed as being unsuitable for roosting bats.

4.2 Sites of Nature Conservation Importance

4.2.1 Statutory Sites

There are no statutory sites of nature conservation importance, such as Sites of Special Scientific Interest (SSSIs) within 1km of the site, or sites of international conservation importance within 5km of the site.

4.2.2 Non-Statutory Sites

A summary of non-statutory sites within 1km of the site is provided in Table 4, please refer to Appendix 4 for a map of non-statutory sites and full citations.

Table 4. Summary of non-statutory sites of nature conservation importance (Local Wildlife Sites) within a 1km radius of the site.

Non-Statutory Site Name	Distance & Direction from Site	Description
Old Cemetery, Victoria Road Local Wildlife Site (LWS)	560m SW	Cemetery with numerous wildflowers (ancient woodland and unimproved grassland indicator species) and mature trees.
Hemdean Bottom LWS	600m WNW	Significant areas of Lowland Meadow (priority habitat) encompassed by mature tree belts.
Furzeplat LWS	590m NNW	Lowland Mixed Deciduous Woodland (priority habitat) containing bluebells (protected species).
Rotherfield Way Copse LWS	140m E	Lowland Mixed Deciduous Woodland (priority habitat) containing bluebells and Butcher's broom (protected species).
Highdown Wood LWS	240m W	Lowland Beech and Yew Woodland (priority habitat) containing bluebells (protected species). Also noted for its breeding bird assemblage which includes: red kite, lesser spotted woodpecker and bullfinch (protected/priority species).

4.3 Habitats

4.3.1 Buildings

Public House – A

The public house is understood to have been constructed circa 1930, with sections added to its rear (north-eastern) elevation at a later date. The main sections of the building are arranged over two levels and are set on a brick plinth. The walls are created from half-timbered facades with concrete render in-fill. These are in a good state of repair with no visible gaps or crevices. The footprint of the

structure is created by a rectangular two-storey section, with gables located to the southern and eastern corners and a hipped end at the northern corner.

Single-storey sections are present at the south-western elevation (lean-to pent roof), north-western elevation (pitched roof) and north-eastern elevation (flat roof). Exposed rafters are set within puttock holes at the eaves of the building with wooden bargeboards set away from the wall plate at the gable ends. The roof-wall junctions are well-sealed with no visible gaps.

The majority of the building's roof sections are covered within modern machine-made clay tiles which are close-fitting with no gaps. A number of broken/missing tiles were observed at several locations including the south-eastern aspect (main roof and bay window) and south-western aspect (main roof), these features create accessible crevice features. The flat-roof section to the north-eastern elevation of the building is covered by bitumen and hessian roofing felt. A total of five brick chimney stacks are arranged throughout the various roof sections and are sealed at their base by lead flashing.

Two accessible loft spaces exist within the public house: a larger void within the roof of the building's two-storey section, and a smaller void above the single-storey section at the north-western side of the building. The larger of the two spaces has an approximate floor-ridge height of 1.5m and is created by timber rafters which meet at a single timber ridge board. The ridge of the space is heavily cobwebbed, the roof is lined on the south-western aspect by plastic sheeting whereas is unlined on its opposite side. The loft within the north-western section has an approximate floor-ridge height of 1m and is of similar construction with a combination of plastic lining and roof tiles fitted directly to the timber rafters.

The public house is assessed as having 'low' bat roost potential (Collins 2016) due to the presence of a small number of gaps created by broken/missing roof tiles.

Mobile Caravan – B

A fibreglass mobile caravan. The structure has 'negligible' bat roost potential.

Static Caravan – C

A metal static caravan. The structure has 'negligible' bat roost potential.

Bungalow – D

The bungalow is created from brick walls with external cladding of wooden weather-boarding. The roof of the building is hipped and covered with machine-made clay tiles. The roof tiles are in a good state of repair with no slipped/missing tiles or naturally occurring gaps. Internal access into the bungalow was not achieved during the building inspection.

The bungalow is assessed as having 'low' bat roost potential due to the covering of wooden weatherboarding and the fact that the roof space could not be accessed during the survey.

Skittle Alley – E

The structure is relatively modern and constructed from solid brick walls with tight-fitting wooden bargeboards fitted at the roof-wall junctions. The structure has a flat-roof of bitumen and hessian roofing felt.

The skittle alley is assessed as having 'negligible' bat roost potential.

Shed – F

The shed is composed of two sections: a brick section with a pitched roof of modern clay tiles, and a wooden-slatted shelter with a flat roof of bitumen and hessian felt. There are no roof voids within the structure.

The shed is assessed as having 'negligible' bat roost potential.

Barn – G

The barn is created from walls of solid red brick with overlapping wooden boarding at its north-western and south-eastern elevations. The boarding does not create suitable crevices for bats. The roof of the building is pitched and covered with tight-fitting machine-made clay roof tiles. Although internal access into the building was not achieved during the survey the barn is not considered to contain any roof voids.

The barn is assessed as having 'negligible' bat roost potential.

4.3.2 Hard-standing

Tarmacked hard-standing is present to the south and north of the public house in the form of a car park and an access drive respectively. Additional areas of hard-standing are created by footpaths leading around the peripheries of the public house and a children's play area within the rear gardens. These areas are of negligible ecological value.

4.3.3 Amenity Grassland

A small area of amenity grassland is present to the western side of the public house, with a larger area of lawn present in the rear gardens to the eastern side of the building. The habitat is managed as lawn and maintained at a short sward height (<4cm). Species present include white clover *Trifolium repens*, dandelion *Taraxacum officinale* and daisy *Bellis perennis*.

The grassland is species-poor and does not meet the criteria of any priority grassland habitats, such as those listed in Section 41 of the NERC Act 2006. The habitat is of negligible ecological value.

4.3.4 Trees

A small tree belt is located to the western side of the public house. Species present include elm *Ulmus* sp., elder *Sambucus nigra*, hawthorn *Crataegus monogyna*, maple *Acer* sp., ash *Fraxinus excelsior*, hazel and cherry *Prunus* species. Several young/semi-mature trees exist amongst an area of scrub to the rear (north-east of the bungalow), these include western red cedar *Thuja plicata* and sycamore. These trees are considered to be of ecological value within the context of the site, but are not considered to be of significant value within the wider context.

4.3.5 Scrub

An area of dense scrub is present to the rear (north-east) of the bungalow. The habitat is largely dominated by bramble *Rubus fruticosus* and stinging nettle *Urtica dioica* with some elder also present. Scrub is considered to be of low ecological value, as it is dominated by very common and widespread plant species.

4.4 Species

The following sections collate data collected during the site survey of 14th August 2018 with the species data held by the Local Records Centre (TVERC) in order to assess the suitability of the habitats within the study for protected species.

There are no records of protected/notable species from within the site. The TVERC holds records of protected/notable plant, invertebrate, reptile, bird and mammal species from within a 1km radius of the site. A summary of the most pertinent species, given the nature of the habitats within the site and the surrounding landscape, are provided below.

Full details of protected/notable species records can be found in Appendix 5.

4.4.1 Plants

Bluebells *Hyacinthoides non-scripta* and butcher's broom *Ruscus aculeatus* have been recorded from Rotherfield Way Copse LWS, located approximately 140m to the east of the site. Both bluebells and butcher's broom are woodland species and are not present within the site. Other notable plants returned within the data search include wild strawberry *Fragaria vesca*, hoary plantain *Plantago*

media, field scabious *Knautia arvensis* and sanicle *Sanicula europaea*. The amenity grassland and scrub habitats within the site are unsuitable for rare/uncommon species of plant.

4.4.2 Invertebrates

Small heath butterfly *Coenonympha pamphilus* and small blue *Cupido minimus* butterfly have been recorded from gardens of Emmer Green in the early 1990s. These species inhabit species-rich grassland and chalk downland where their larval stages feed on fine grasses and kidney vetch (in the case of the small blue). Habitats within the site are not considered suitable for rare/uncommon species of butterfly.

The records centre holds numerous records of stag beetle *Lucanus cervus* from within the local area. Stag beetles are saproxylic requiring deadwood to complete their lifecycle. This species is unlikely to occur within the site, given the lack of woodland habitats, dead wood and dead stumps.

4.4.3 Bats

Evidence of Bats – 14th August 2018

No bats or evidence of bats were found during the initial bat survey. In particular, no bat droppings were noted within the loft space of the public house.

The public house and the bungalow are assessed as having 'low' bat roost potential, whereas all other buildings are assessed as having 'negligible' roost potential.

The semi-mature cherry *Prunus* sp. tree within the tree belt to the west of the public house was assessed as having 'low' bat roost potential due to a dense coverage of ivy *Hedera helix*.

Bat Activity – 5th September 2018

No bats were seen to emerge from the public house or the bungalow during the dusk emergence survey on 4th September 2018. Levels of bat activity were considered to be low, and there was no indication of bats emerging from any of the buildings.

Species of bat observed/recorded foraging and commuting within the site included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus* and noctule *Nyctalus noctula*. Records of other species held by TVERC include Daubenton's bat *Myotis daubentonii*, Leisler's bat *Nyctalus leisleri*, brown long-eared bat *Plecotus auritus* and Nathusius' pipistrelle *Pipistrellus nathusii*.

4.4.4 Birds

No evidence of nesting birds was recorded within buildings during the inspection of 14th August 2018.

A number of bird records from the local area are held by TVERC (see Appendix 4). The breeding bird assemblage within the site is likely to consist of common and widespread species of garden bird, with nesting opportunities limited to trees and scrub.

4.4.5 Reptiles

Slow worm *Anguis fragilis* have been recorded from gardens in Emmer Green on several occasions in the past. The species typically inhabits rough grassland with a thatched sward. The hard-standing and amenity grassland habitats are not considered to be suitable for slow worm and other reptiles, as they offer no obvious shelter. The dense bramble scrub is also considered unsuitable for reptiles.

4.4.6 Amphibians

There are no ponds within the site. The hard-standing and amenity grassland habitats are not considered to be suitable for amphibians whilst on land, as they offer no obvious shelter. There are no records of amphibians including the great crested newt *Triturus cristatus* from within 1km of the site and it is considered that amphibians are absent from the site.

4.4.7 Badgers

No badger *Meles meles* setts, or evidence of badger activity, were noted within the site.

4.4.8 Other Species

The dense bramble scrub provides potential sheltering for hedgehogs *Erinaceus europaeus*.

5 Discussion

5.1 Legislation & Policy Guidance

5.1.1 Bats

As with many animal species within the UK, declines in the abundance and distribution of many bat species have been documented through recent decades. The reasons for these declines are various and complex but it is considered that the major factors are changes in land use and agriculture, the loss of woodlands and hedgerows and the loss of suitable roosting sites.

Bats are particularly sensitive to human activity due to the fact that they roost within buildings, trees and underground structures such as mines, and the availability of suitable roost sites is considered to be a key factor in the conservation of bats within the UK. As a consequence, all species of bat and their roost sites are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and under The Conservation of Habitats and Species Regulations 2017. Taken together, these make it an offence to:

- (a) Deliberately capture or intentionally take a bat
- (b) Deliberately or intentionally kill or injure a bat
- (c) To be in possession or control of any live or dead wild bat or any part of, or anything derived from a wild bat
- (d) Damage or destroy a breeding site or resting place of such an animal or intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection
- (e) Intentionally or recklessly disturb any wild bat while it is occupying a structure or place that it uses for shelter or protection
- (f) Deliberately disturb any bat, in particular any disturbance which is likely
 - to impair their ability;
 - (i) to survive, breed, reproduce or to rear or nurture their young; or
 - (ii) in the case of hibernating or migratory species, to hibernate or migrate; or
 - to affect significantly the local distribution or abundance of the species to which they belong

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to re-use the same roost sites, current legal opinion is that a bat roost is protected whether or not the bats are present at the time.

Although the law provides strict protection to bats, it also allows this protection to be set aside (derogation) under The Conservation of Habitats and Species Regulations 2017 through the issuing of licences. Where a lawful operation is required to be carried out, but which is likely to result in one of the above offences, a licence may be obtained from Natural England (the statutory body in England with responsibility for nature conservation) to allow the operation to proceed. However, in accordance with the requirements of The Conservation of Habitats and Species Regulations 2017, a licence can only be issued where the following requirements are satisfied:

- The proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment';
- 'There is no satisfactory alternative';

- The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.

5.1.2 Nesting Birds

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. The nesting season for most species is between March and August inclusive.

5.1.3 The Natural Environment and Rural Communities Act 2006

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity. It also requires the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organisms and habitats. This is important in the context of planning decisions as the National Planning Policy Framework (paragraph 117) affords planning policy protection to the habitats of species listed by virtue of Section 41. The current list of species and habitats is the same as those listed with the UK Post-2010 Biodiversity Framework.

There are no habitats listed within Section 41 of the NERC Act 2006 that are considered relevant to the site.

Species listed within Section 41 of the NERC Act 2006 that are considered relevant to the site are:

- Hedgehog (potential for shelter beneath dense scrub)

5.1.4 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) was revised in July 2018 and this new document forms a key part of the Government's reforms to make the planning system less complex and more accessible, to protect the environment and to promote sustainable growth. The NPPF states that the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Local planning authorities should set criteria-based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. To minimise impacts on biodiversity and geodiversity, planning policies should:

- plan for biodiversity at a landscape-scale across local authority boundaries;
- identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;
- aim to prevent harm to geological conservation interests; and
- where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm 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;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have 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;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites:
 - ❖ potential Special Protection Areas and possible Special Areas of Conservation;
 - ❖ listed or proposed Ramsar sites; and
 - ❖ sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

5.2 Potential Impacts

5.2.1 Sites of Nature Conservation Importance

There are no foreseeable impacts on Local Wildlife Sites. This is due to the distance of such sites from the proposed area of the development, as well as the scale of the proposals, which will have no foreseeable effects beyond the site boundary.

5.2.2 Habitats

The proposed development will result in the loss of existing buildings (except for the barn), as well as areas of amenity grassland, scrub and hard-standing. These habitats are considered to be of negligible or low ecological value and their loss will have no foreseeable impacts on the ecology of site or the wider area.

The proposed scheme will also result in the loss of some trees, which will result in habitat loss within the site, but will not result in any foreseeable impacts within the wider context. Compensatory planting is recommended to ensure that there will be no net loss of biodiversity.

5.2.3 Bats

There is no evidence to suggest that the public house or other buildings at The Gardener's Arms are being used as places of shelter/protection by roosting bats. As a result of this conclusion, the proposed works to the buildings are unlikely to result in any significant impacts on bats or the places

that they use for breeding, shelter and/or protection (roosts) and no specific compensation measures are considered necessary (Mitchell-Jones 2004).

With the adoption of careful works practices and the removal of the tree identified as having 'low' bat roost potential by an experienced arboriculturalist it is considered that impacts on bats can be avoided.

Since no significant impacts on bats are predicted under The Conservation of Habitats and Species Regulations 2017, a European Protected Species (bat) licence will not be required for the proposed works to proceed.

Since there are no predicted impacts on bats or their habitats, it is not necessary to consider the 'three tests' of The Conservation of Habitats and Species Regulations 2017 in this instance.

5.2.4 Birds

Removal of woody vegetation during the bird breeding season may result in the damage or destruction of active birds' nests.

5.2.5 Hedgehogs

Without careful works clearance of the dense bramble scrub could result in the killing/injury of sheltering hedgehogs.

6 Recommendations

6.1 Habitats

In order to compensate for the loss of trees, new areas of landscape planting should be designed, planted and managed to maximise their value to wildlife. One key element of this would be the species used within the planting, which should comprise native species (preferably of local provenance) where possible, as well as ornamental plants of known value to wildlife. The key will be to provide a variety of flowers and fruits throughout the year in order to provide food for insects and birds, as well as providing potential nest sites through the planting of trees and shrubs.

Native tree and shrub species which are considered suitable for the site include:

- Beech *Fagus sylvatica*
- Blackthorn *Prunus spinosa*
- Crab apple *Malus sylvestris*
- Dog rose *Rosa canina*
- Dogwood *Cornus sanguinea*
- English oak *Quercus robur*
- Field maple *Acer campestre*
- Guelder rose *Viburnum opulus*
- Hawthorn *Crataegus monogyna*
- Hazel *Corylus avellana*
- Holly *Ilex aquifolium*
- Hornbeam *Carpinus betulus*
- Spindle *Euonymus europaeus*
- Wayfaring tree *Viburnum lantana*
- Wild cherry *Prunus avium*

6.2 Bats

6.2.1 Timing of Works

No timing restrictions are considered necessary with regard to bats.

6.2.2 Careful Work Practices

Works should proceed in a careful and controlled manner. Contractors should be briefed with regard to the fact that individual bats can often exploit very small crevices as roost sites and that bats can move between roost sites on a regular basis.

The tree assessed as having 'low' bat roost potential (a semi-mature cherry) should be removed by an experienced arboriculturalist who should attempt to remove sections of ivy stems in order to expose the trunk before its removal.

In the very unlikely event that bats or significant evidence of bats (for example large accumulations of fresh bat droppings) are encountered, works should stop immediately and advice sought from a qualified ecologist.

6.2.3 Enhanced Roosting Opportunities

Roosting opportunities for bats could be incorporated in a number of ways. This could be achieved through integrated features or externally mounted bat boxes on new buildings.

Options include:

- Ibstock Bat Brick
- Schwegler 1FR Bat Tubes, integrated into buildings
- Schwegler 1FF or 1FQ Bat Boxes for external mounting on buildings
- Traditional wooden (oak) bat boxes for buildings and/or trees
- Beaumaris Woodstone Bat Box

Bat roosting opportunities such as these would be seen as an enhancement measure and one or two features would be seen as an appropriate level of enhancement in this instance. Where possible, bat roost features should be erected on south or east facing facades, and/or facing garden and boundary habitats. Exterior lighting should be avoided around bat roost features.

6.2.4 Lighting

External lighting should be minimised within any development proposals, unless it is necessary for reasons of security and safety. In particular, lighting and light spillage should be avoided along the site boundaries. Avoidance of external lighting will ensure that bat activity is not adversely affected.

If lighting is required, it should be kept at low level and at low intensity, with hoods and baffles used to direct the light to where it is required (Bat Conservation Trust 2008, Emery 2008). To minimise the impact on bats, the use of low pressured sodium lamps is recommended in preference to mercury or metal halide lamps which have a UV element that can affect the distribution of insects and attract bats to the area, affecting their natural behaviour (Bat Conservation Trust 2008).

The key principals for choosing a suitable type of lamp are:

- Avoid blue-white short wavelength lights: these have a significant negative impact on the insect prey of bats. Use alternatives such as warm-white (long wavelength) lights as this will reduce the impact on insects and therefore bats.
- Avoid lights with high UV content: (e.g. metal halide or mercury light sources), or reduce/completely remove the UV content of the light. Use UV filters or glass housings on lamps which filter out a lot of the UV content.

Selecting an appropriate lamp unit that is designed to be environmentally friendly will minimise light spill, but further controls can be imposed by installing directional accessories such as baffles, hoods and louvres on lamps to direct light away from ecologically sensitive areas.

LED (Light Emitting Diode) units are an effective way to direct the light into small target areas and are recommended for lighting the proposed parking and turning area. Composite LEDs can be switched off to reduce/direct the light beam to specific areas.

6.3 Birds

6.3.1 Timing

Removal of trees and dense scrub should be undertaken outside the breeding bird period, avoiding March to August inclusive.

6.3.2 Enhanced Nesting Opportunities

As an enhancement, it is recommended that nest boxes for common or garden bird species are erected on new buildings. Over 60 species are known to adopt nest boxes including blue tits, great tits, starlings, robins and sparrows.

The location and nature of the nest box depends on the species it is designed for; boxes for tits, sparrows or starlings should be fixed two to four metres up a tree or a wall; open-fronted boxes for robins and wrens need to be low down, below 2m, and well-hidden in vegetation. Unless there are trees or buildings which shade the box during the day, boxes should be faced between north and east, thus avoiding strong sunlight and the wettest winds. Consideration should also be given to the incorporation of house sparrow terraces and swift boxes within the new building.

On buildings, the integration of bird boxes is particularly recommended as species such as house sparrow, house martin and swift will readily adopt such features as nest sites. The following bird nesting features are recommended:

- Ibstock Swift Box
- Schwegler Swift and Bat Box 1MF
- Schwegler Swift Box Type 25
- Schwegler House Sparrow Brick Box Type 24
- Schwegler Sparrow Terrace 1SP

6.4 Hedgehogs

6.4.1 Careful Work Practices

Clearance of the dense bramble scrub should be undertaken carefully, contractors should be briefed as to the potential for sheltering hedgehogs to be present. In the event a sheltering hedgehog is encountered, the animal should be moved to a hedgehog house installed within the site.

6.4.2 Hedgehog Houses

At least two Igloo Hedgehog Houses will be installed within the new gardens.

6.4.3 Provision for Movement by Hedgehogs

A 13cm x 13cm will be cut at the base of every row of fence panels within the site to allow hedgehogs to move between gardens.

7 References

Altringham, J., 2003. *British Bats*. Harper Collins.

Bat Conservation Trust, 2009. *The State of the UK's Bats 2009*. National Bat Monitoring Programme.

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Joint Nature Conservation Committee, 2012. *Bat Worker's Manual*. Joint Nature Conservation Committee, Peterborough, UK.

Mitchell-Jones, A., 2004. *Bat Mitigation Guidelines*. English Nature.

Neuweiler, G., 2000. *The Biology of Bats*. Oxford University Press, Oxford, UK.

Ransome, R., 1990. *The Natural History of Hibernating Bats*. Christopher Helm, London, UK.

8 Appendix 1. Photographs



Photograph 1. The Gardener's Arms public house (Building A) viewed from the south.



Photograph 2. The rear (north-eastern) elevation of the public house (Building A).



Photograph 3. Missing tiles from the south-eastern aspect of the public house's (Building A) roof.



Photograph 4. Broken/missing tiles from a bay window at the south-eastern elevation of the public house (Building A).



Photograph 5. The underside of the roof within the loft space of the public house (Building A).



Photograph 6. A driveway of hardstanding to the north of the public house, providing access to several caravans (Buildings B & C) and the bungalow (Building D).



Photograph 7. The bungalow (Building C) located to the (rear) north of the building.



Photograph 8. The skittle alley (Building E) located to the rear (north) of the public house.

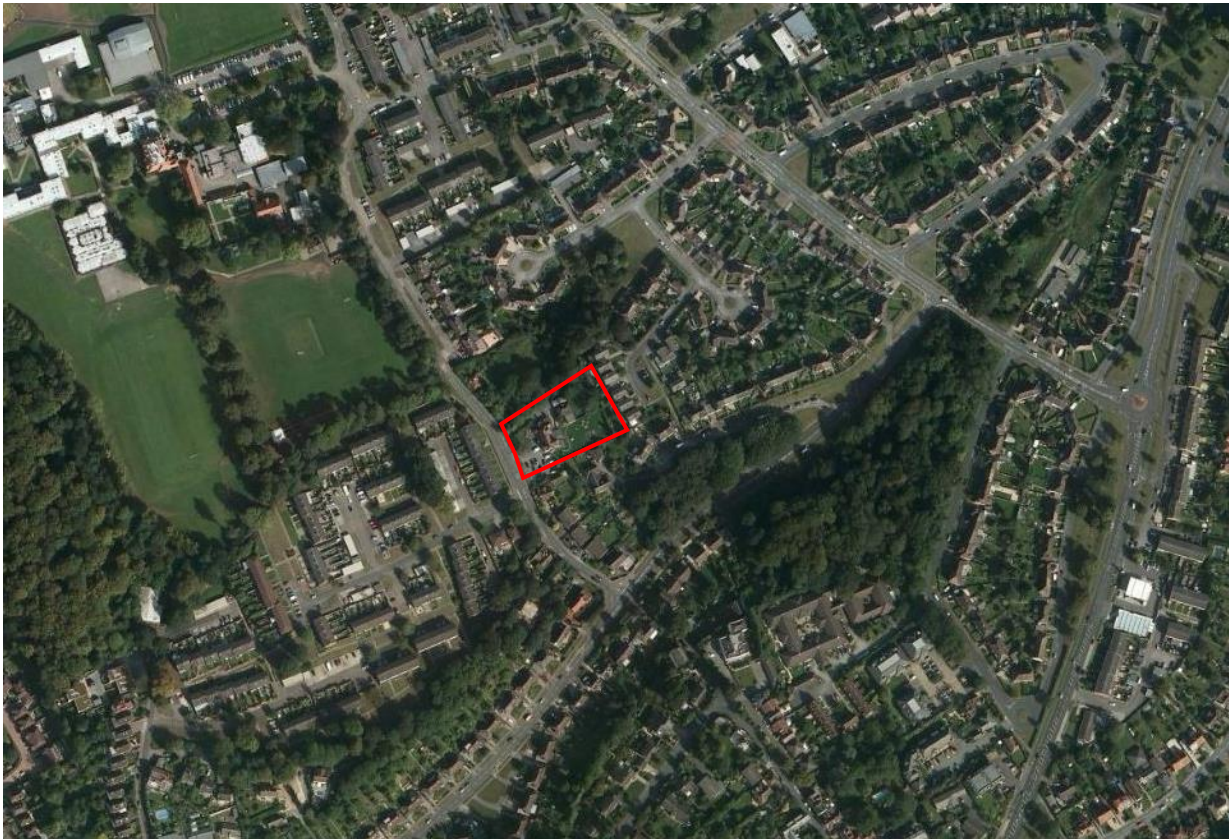


Photograph 9. The Barn (Building G) viewed from the west.



Photograph 10. The habitats to the rear of the public house.

9 Appendix 2. Site Location Plans



Aerial photograph showing the location of the study site at The Gardener's Arms, Emmer Green (outlined in red). Source: <http://www.bing.com/mapspreview>



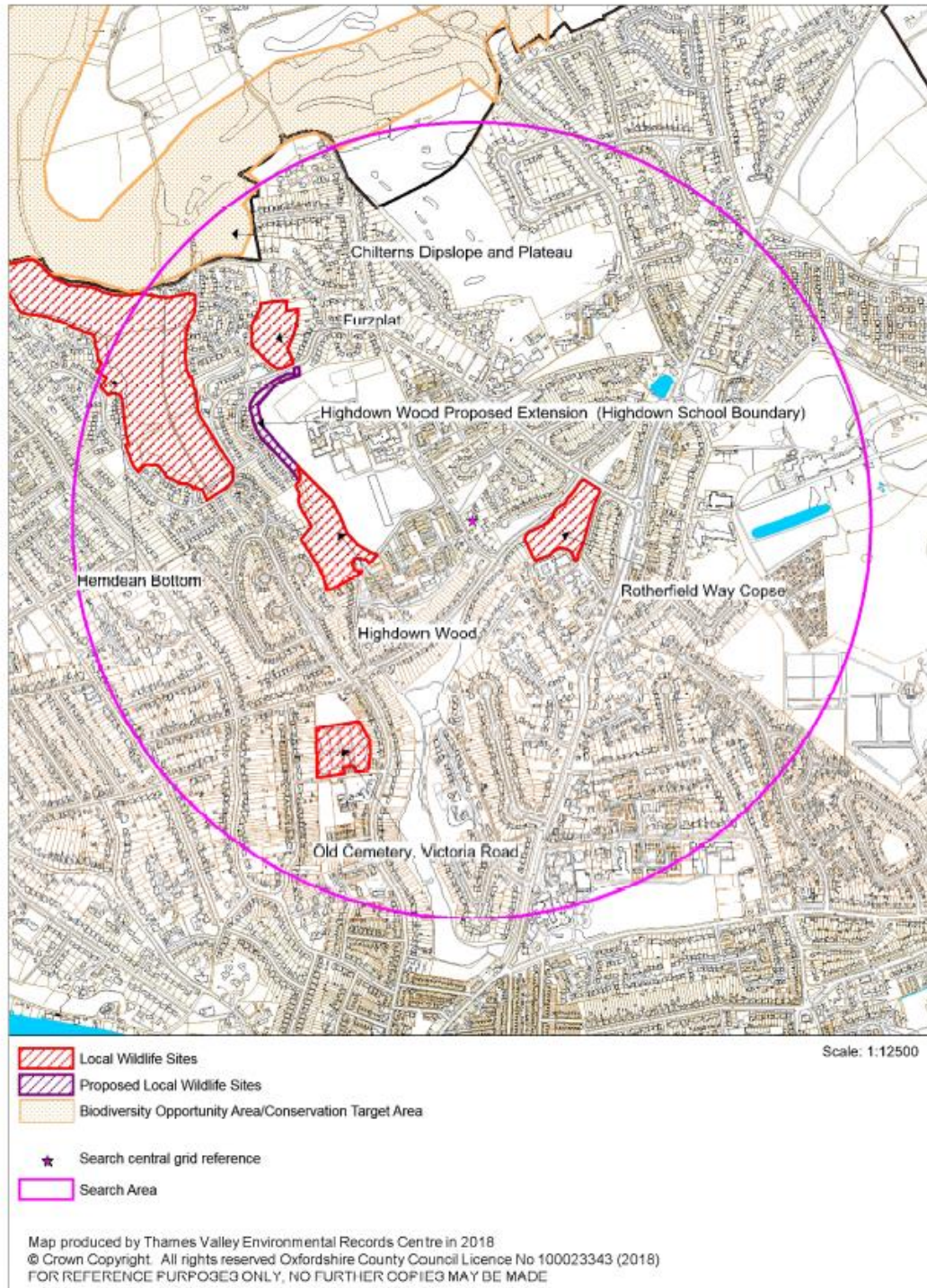
Ordnance Survey map showing the approximate location of The Gardener's Arms (indicated by the red dot) within the local area. Source: <http://www.bing.com/mapspreview>

10 Appendix 3. Indicative Proposals' Plan



11 Appendix 4. Non-Statutory Sites Map & Citations

The Gardeners Arms, Emmer Green Designated Wildlife Sites



Berkshire Local Wildlife Site Citation**OLD CEMETERY, VICTORIA ROAD**

SITE CODE: SU77C04

GRID REF: SU712755

AREA (Ha): 1.5

LOCAL AUTHORITY: Reading Borough Council

LAST SURVEY DATE: 23/4/2004

DESIGNATION DATE: 2005

SITE DESCRIPTION

This small Victorian cemetery is laid out on a formal grid with tarmac paths surrounded by hedges. It is a sheltered man-made habitat in the midst of an urban environment in Caversham, Reading. Many large trees, generally not native and evergreens, form a backdrop to a carpet of native and garden bluebells, native primroses and celandine in a shaded moist environment.

The ground slopes gently to the east and the soil appears to be quite heavy clay. It is fairly isolated from other Wildlife Heritage sites.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE:

PROTECTED SPECIES

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE:

RED DATA BOOK (RDB) SPECIES RECORDED:

NATIONALLY SCARCE (NSC) SPECIES RECORDED:

BIRDS OF CONSERVATION CONCERN (BoCC) RECORDED:

Red List Species:

Amber List Species:

TYPICAL SPECIES OF THE HABITAT TYPE(S)

Six ancient woodland indicator species were noted and one unimproved grassland indicator.

Berkshire Local Wildlife Site Citation**HEMDEAN BOTTOM**

Site Code: 77D04

Grid Reference: SU706766

Area (ha): 31.21

Local Authority: Reading

Last Survey Date(s): July 2011

Date Selected or Reconfirmed: 2012

Site Description

A chalk valley on the edge of Caversham. Most of the site is grassland with small areas of woodland and planted scrub towards the edges. The valley sides are fairly gently sloping and the grassland is quite neutral in character but there is still a strong calcareous influence. On the steeper slopes where the sward is short there are more elements of lowland calcareous grassland. The chalk valley extends northwards into Oxfordshire where further areas of calcareous grassland are found.

Much of the grassland is dominated by red fescue with abundant common bent. False oat grass is abundant in places. Other grasses include ryegrass, cocks-foot, Yorkshire fog, yellow-oat grass, small cat's-tail and meadow barley. Sweet vernal-grass has been previously recorded as frequent. Species present include common-bird's-foot trefoil, with common knapweed, ox-eye daisy on the northern area and vervain, agrimony, meadow vetchling, wild carrot and wild basil in the central and southern areas. There is a patch of abundant common broomrape in the central area. Field scabious, pyramidal orchid, wild basil and agrimony are present at the edge of the northern area. Rough grassland dominated by false oat grass follows the northern hedge. The shorter sward on the steeper slopes has abundant rough hawkbit, with frequent fairy flax, common bird's-foot trefoil, occasional field scabious and agrimony. Common restharrow is also present. Glaucous sedge was recorded at the edge in 2004 and wild marjoram was recorded along the central bridleway in the same year. The grassland is probably best described as a remnant lowland meadow with a strong calcareous influence and elements of rough grassland and improved grassland.

The woodland includes an area of oak and common lime with holly, yew and hawthorn and woodland species such as dog's mercury, wood melick, stinking iris (possibly a garden escape) crab apple and nettle leaved bellflower. Other areas are dominated by ash, with some hazel coppice, and probably planted areas with beech, oak, horse chestnut, turkey oak and ash. The northern hedgerow has a good variety of species including field maple, dogwood, blackthorn, hazel, hawthorn and elder. There is also an extensive fringe of planted scrub with dogwood, wayfaring tree, guelder rose, hazel and field maple.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Lowland meadow (with calcareous grassland influences)

Berkshire Local Wildlife Site Citation**FURZEPLAT**

Site Code: SU77D05

Grid Reference: SU71060 76590

Area (ha): 1.14

Local Authority: West Berkshire

Last Survey Date(s): 2010

Date Selected or Reconfirmed: 2011

Site Description

This is a small area of mixed semi-natural woodland that holds a diversity of tree and shrub species and typical habitats, including substantial standing and fallen deadwood. The site is unmanaged and as such tends to be structurally quite uniform, both in the canopy and shrub layers.

The woodland comprises a closed canopy of mature trees including specimens of ash, beech, oak, horse chestnut and white beam and this character is only broken along the northern fringe, where the canopy grades to a scrubby edge. Both wych and english elm have been recorded from this site and currently manifest their presence by small patches of natural regeneration. Sycamore is present throughout and some regeneration is evident. The trees in this site remain unmanaged and there is substantial standing and fallen deadwood throughout. The boundary of the woodland is generally abrupt and ends at the bottom of private gardens and the Tredegar Road itself.

The shrub layer is equally varied, including, field maple, holly, hazel, hawthorn, spindle, blackthorn, elder, and regenerating patches of ash and elm. Parts are heavily disturbed by recreational activities however and tend to be dominated by elder and nettles. In the hazel dominated sections a richer ground flora is present including, bluebell, dogs mercury and lords and ladies. The last survey was done very late in the year but historical records suggest that the site could be important for this element which needs investigating in the spring.

The shrub layer is also unmanaged and provides a dense thicket in some places, especially towards the north where the open shrub layer grades to a dense thicket of blackthorn. At the north end there is a steep bank on which the thicket occurs is heavily shaded and disturbed by rabbits. This bank provides the link between Furze Plat and the Gravel Hill Hedges. At present this area is not included in the site boundary.

This site forms an important wildlife corridor in the area linking the linear Gravel Hill Hedges and Hemdean Bottom Footpath in the north with the large Highdown Wood in the South.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Lowland Mixed Deciduous Woodland

PROTECTED SPECIES: Bluebell

Berkshire Local Wildlife Site Citation**ROTHERFIELD WAY COPSE**

Site Code: SU77D07

Grid Reference: SU717761

Area (ha): 1.26

Local Authority: Reading

Last Survey Date(s): 6.4.2004

Date Selected or Reconfirmed: 2004

Site Description

This small broad-leaved woodland is situated in a sheltered dry valley sloping moderately from NE to SW between roads and houses in Emmer Green, Reading. The geology appears to be Reading Beds. There are no other LWS in the vicinity and the wood is entirely surrounded by urban development apart from a wide mown grass verge to Rotherfield Way, of little wildlife value.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Lowland Mixed Deciduous Woodland

PROTECTED SPECIES: Bluebell, Butcher's-broom

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE: none recorded

RED DATA BOOK (RDB) SPECIES: none recorded

NATIONALLY SCARCE (NSC) SPECIES: none recorded

BIRDS OF CONSERVATION CONCERN (BoCC):

Red List Species: none recorded

Amber List Species: none recorded

TYPICAL SPECIES OF THE HABITAT TYPE(S): Eight ancient woodland indicator species were noted.

Berkshire Local Wildlife Site Citation**HIGHDOWN WOOD**

Site Code: SU77D08

Grid Ref: SU712760

Area (Ha): 2.6

Local Authority: Reading Borough Council

Last Survey Date: 26/4/2010

Date Selected or Reconfirmed: 2011

Site Description

This is a small broadleaved woodland, dominated by mature beech indicating plantation origin. It is situated within Caversham on the eastern flank of the Hemdean Valley and is bounded by housing estates and a school playing field. There is a line of old oaks along the escarpment which continues into the woodland. The wood is south-west facing on a moderate slope and has thin, free draining calcareous soils of the Upper Chalk though there are springs and seepage from the overlying Reading beds. This is a pleasant mature woodland overall with problems of litter and rubbish virtually confined to the edges. It appeared to be a good mature habitat for birds. The age range of the trees is limited, it is mostly mature with young saplings filling few gaps in the canopy.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Lowland Beech And Yew Woodland

PROTECTED SPECIES: Red Kite (2010), Bluebell (1985, 1994, 2003, 2010)

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE: Lesser Spotted Woodpecker (1994) and Bullfinch (1994)

RED DATA BOOK (RDB) SPECIES: None recorded

NATIONALLY SCARCE (NSC) SPECIES: None recorded

BIRDS OF CONSERVATION CONCERN (BoCC):

Red List: Lesser Spotted Woodpecker (1994) and Common Starling (1994)

Amber List: Green Woodpecker (1985, 1994) and Common Bullfinch (1994)

TYPICAL SPECIES OF THE HABITAT TYPE(S) Thirteen ancient woodland indicator species were noted.

Chilterns Dipslope and Plateau CTA (Conservation Target Area)

This complex area consists of the steeper side of the chalk valleys that cut through the plateau and key areas of the plateau where the main areas of woodland and heathland remnants are found. These valleys run into Buckinghamshire to the north. Valleys with chalk grassland or significant woodland at the edge of the area are excluded along with the flat chalk areas at the heads of the valleys.

Joint Character Area: Chilterns

Landscape Types: Wooded Estate Slopes and Valley Sides along the valleys. Wooded Farmland on the plateau.

Geology: The valleys are chalk. On the plateau there are deposits of sand, gravel and clay with flints. Areas with clay with flints are largely excluded except where there are extensive woodland areas.

Topography: Narrow steep sided chalk valleys running from the north east to the south east cut through the flatter Chilterns plateau. **Area of CTA:** 5534 hectares

Biodiversity:

- Chalk Grassland: The steeper slopes support a number of relatively small chalk grassland sites.
- Woodland: There are with numerous areas of ancient woodland with beech woodland and some lowland mixed deciduous woodland including SSSI's at Bix, Pishill, Harpsden and Bear, Oveys and Greatbottom Wood. The plateau areas included extensive areas of woodland in the area running from Crays Pond to Sonning Common and south of Nettlebed. Woodland Trust Reserves include Ipsden Heath and Clayhill Wood.
- Heathland: This area includes remnants of heathland on the Chiltern Commons, in association with some of the woodland.
- Further areas of plateau land are found at Crowsley, where there is important parkland, acid grassland and lowland meadow habitat, Gillots Field and the adjacent geological SSSI at Henley are also included.
- Species: the arable land is important for arable wildflowers and farmland birds.

Access: Warburg Reserve at Bix, a number of areas of common land, a number of Woodland Trust Reserves, Gillots Field at Henley and many bridleways and footpaths.

Archaeology:

Oxfordshire Biodiversity Action Plan Targets associated with this CTA:

1. Chalk (lowland calcareous) grassland – management¹, restoration and creation (along the valleys).
2. Lowland heathland and lowland dry acid grassland – management and restoration (on the plateau).
3. Woodland – management and restoration.
4. Wood-pasture and parkland (and veteran trees) – management.
5. Hedgerows – management, restoration and creation.
6. Arable field margins (and arable in-field options) – management and creation (with particular emphasis on farmland birds and arable wildflowers).
7. Traditional Orchards – management, restoration and creation.

¹ "Management" implies both maintaining the quantity, and maintaining and improving the quality of existing BAP habitat and incorporates the following target definitions: "Maintaining extent" and "Achieving Condition".

12 Appendix 5. Protected/Notable Species Records

Please refer to separate document prepared by TVERC.