



Land Off Westwood Close

Ecological Appraisal



For Hampshire Homes Ltd.

June 2018

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Executive Summary

Contents	Summary
Site Location	The site is located to the east of Westwood Close and south of Westbourne Road in Emsworth, Hampshire and is centred at Ordnance Survey National Grid Reference SU 75295 06967.
Proposals	Construction of 46 residential units, including a provision for affordable housing. A proposed access road into the site will adjoin Westwood Close, whilst it is proposed that the existing footpath running through the site is realigned around the development.
Existing Site Information	The site comprises a large field of common land currently used for cattle grazing. The site is bordered on the west by a mature tree line and on the east by a hawthorn dominated degraded hedgerow. A tributary of the River Ems runs along this boundary. A subway passing beneath the A27 sits at the southernmost point of the site. The wider area is made up by residential properties and arable fields.
Scope of this Survey(s)	An Ecological Appraisal including a desk-based study and an extended Phase 1 habitat survey. The desk-based study used online resources and information sourced from the Local Ecological Records Centre and the extended Phase 1 habitat survey completed a field survey in line with JNCC 2010 methodology in order to identify the onsite habitats, and their potential to support protected and notable species.
Results	- The site is considered to have high potential to support reptiles due to the semi-improved grassland and scrub/tall ruderal habitat along its boundaries. - The site is considered to have <i>low suitability</i> (Collins, 2016) for foraging and commuting bats. - Five trees were identified with the potential to support roosting bats. These trees sit outside of the proposed development area and are not considered likely to be impacted. - The site is considered to have moderate potential to support hazel dormouse, particularly along the eastern and western boundaries which are dominated by known dormouse foraging plants (notably hawthorn). - No signs of badger were identified during the survey, however the grassland and scrub habitats are suitable for foraging and commuting by badgers. The central tree line offers suitable habitat for sett creation. - Several birds were seen entering and exiting the central treeline during the survey and are considered highly likely to be nesting. - No signs of otter or water vole were identified during the survey, however as records of water vole within the River Ems were returned, absence of water voles cannot be assumed. - No invasive plant species were identified during the survey.
Recommendations for Further Survey	Reptile presence/likely absence survey.



	• Seasonal bat activity surveys in line with BCT (Collins, 2016) recommendations. • Hazel dormouse presence/likely absence surveys using artificial nesting tubes. • Continued checks for evidence of badgers during recommended protected species surveys. • Pre-commencement nesting bird checks of any scrub and trees requiring removal during the nesting bird season (March-September inclusive).
Recommendations for Enhancement	• Incorporation of a species-rich, locally native planting scheme to increase foraging provision for a range of wildlife. • Bat boxes should be installed on retained trees, the specification and number of which should be confirmed following the recommended bat activity surveys. • Infill planting using native species of the hedgerow forming the eastern site boundary. • Three open fronted and three hole fronted bird boxes should be installed on retained trees along the western boundary to increase nesting provision for birds on and around the site.



Glossary

AONB	Area(s) of Outstanding Natural Beauty
HBIC	Hampshire Biodiversity Information Centre
Badger Act	Protection of Badgers Act 1994
BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BTO	British Trust for Ornithology
CEco	Chartered Ecologist
CEnv	Chartered Environmentalist
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
EcIA	Ecological Impact Assessment
ECow	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EMP	Ecological Management Plan
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great crested newt
Habitat Regulations	Conservation of Habitats and Species Regulations 2017 (as amended)
HAP	Habitat Action Plan
Hedgerow Regulations	Hedgerow Regulations 1997
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
JNCC	Join Nature Conservancy Council
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LPA	Local Planning Authority
LWS	Local Wildlife Site
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SNCO	Statutory Nature Conservation Organisations
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981

1.0 Introduction

1.1 Background

WYG was commissioned by Hampshire Homes Ltd. in May 2017 to undertake an Ecological Appraisal of the site known as Land off Westwood Close.

This report has been prepared by Consultant Ecologist Max Ward GradCIEEM.

1.2 Site Location

The site is located to the east of Westwood Close and south of Westbourne Road in Emsworth, Hampshire and is centred at Ordnance Survey National Grid Reference SU 75295 06967. The survey area, hereafter referred to as the 'site', is shown on Figure 1 and comprises a large area of common land with grazing cattle present. A tributary of the River Ems runs along the eastern site boundary, whilst residential properties back on to the site from the west. A subway passing beneath the A27 sits at the southernmost point of the site. The wider area is made up by residential properties and arable fields.

1.3 Development Proposals

Proposals are for the construction of 46 residential units, including a provision for affordable housing. A proposed access road into the site will adjoin Westwood Close, whilst it is proposed that the existing footpath running through the site is realigned around the development. In addition to the above, hard and soft landscaping is also proposed.

1.4 Purpose of the Report

The objectives of this assessment are to carry-out:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/notable species within the site and its zone of influence;
- A preliminary ecological appraisal involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species; and
- An assessment of the potential ecological receptors present on site, any constraints they pose to future development and any recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate).

Note that, where possible, common names for flora and fauna have been used throughout this report for ease of reading.



2.0 Methodology

2.1 Desk Study

2.1.1 Local Ecological Records Centre

Information was requested from HBIC for information on any nature conservation designations and protected or notable species records within 2 km of the site.

The data search covers:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts, bats and badger;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance; and,
- Priority habitats or species within the Hampshire LBAP.

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

2.1.2 Local Species Recorders

The following local species recorder groups were also contacted for any relevant records that they held:

- Local Bat Group
- Local Badger Group
- Local Reptile Group
- Local Bird Group

2.1.3 Online Resources

A search for relevant information was also made on the following websites:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations and information on any EPSL applications that have been granted in the local area since 2015.

2.2 Field Surveys

The following methodologies have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.

2.2.1 Habitats

An extended Phase 1 habitat survey was undertaken on the site on the 24th June 2017 by WYG Project Ecologist Max Ward GradCIEEM. The weather conditions were bright and clear with no limitations to visibility.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (Joint Nature Conservation Committee, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2010). The site was also appraised for its suitability to support notable flora, with regard to the CIEEM Guidelines for Preliminary Ecological Appraisal (2013).

2.2.2 Protected & Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRoW Act, those given extra protection under the NERC Act, and species included in the Hampshire LBAP.

Great Crested Newt

The site was appraised for its suitability to support GCN. The assessment was based on Guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

Bats

Roosting bats – Buildings/structures/trees

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd ed., 2016) – hereafter referred to as the 'BCT Guidelines'. The following system has therefore been used to categorise the bat roost suitability of any features found:

Table 1 Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Typical Roosting Features
Negligible	Negligible habitat feature 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). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or 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 (with respect to roost type only – the

Suitability	Typical Roosting Features
	assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions & surrounding habitat.

Foraging/commuting bats

The BCT Guidelines use the following criteria to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site:

Table 2 Categories of Habitat Suitability (BCT Guidelines)

Suitability	Typical Foraging & Commuting Features
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Gent & Gibson, 2003).

Badgers

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).



Hazel Dormice

The site was surveyed for its suitability to support hazel dormice. The assessment was based on guidance outlined in Bright *et al.* (2006).

Water Vole?

Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to CIEEM's *Guidelines for Preliminary Ecological Appraisal* (2013) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development*. Evidence of any current or historical presence of such species was recorded.

2.2.3 Invasive Species

The site was searched for evidence of invasive plant species, such as Japanese knotweed, Himalayan balsam, giant hogweed, wall cotoneaster and rhododendron – however see Appendix A for a full list.

2.3 Limitations

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in June which is inside the optimal survey window. As such this is not considered to be a limitation to the accurate assessment of the habitats and the dominant species of the respective vegetation types were visible and identifiable.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

The details of this report will remain valid for a period of **two years** from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

3.0 Baseline Conditions

3.1 Designated Sites

The following designated site of nature conservation importance have been identified within 2km of the site.

Table 3 Designated Sites within 2km

Designation	Site Name	Distance & Direction	Summary of features
LNR	Brook Meadow	0.24km South	Supports grassland habitat flanked by woodland and streams. Important site for birds, invertebrates and wildflowers.
Ramsar SPA SAC	Chichester and Langstone Harbours	0.96km South	Designated for supporting 19 species of wintering wildfowl and waders including wintering populations of dark-bellied brent geese, little egret, black-tailed godwit, dunlin, grey plover, redshank and ringed plover.
SSSI	Chichester Harbour	0.96km South	A large estuarine basin in which low water extensive mud and sandflats are exposed. The site is particularly significant for wintering wildfowl and waders and also breeding birds both within the harbour and the surrounding permanent pasture fields and woodlands.
SAC	Solent Maritime	0.96km South	Supports the following designated features: Sandbanks which are slightly covered by sea water all the time; estuaries; mudflats and sandflats not covered by seawater at low tide; coastal lagoons; annual vegetation of drift lines; perennial vegetation of stony banks; <i>salicornia</i> and other annuals colonising mud and sand; <i>Spartina</i> swards; Atlantic salt meadows; shifting dunes along the shoreline with <i>Ammophila arenaria</i> . Supports the following designated species: Desmoulin's whorl snail.
LNR	Eames Farm	1.46km South	Supports coastal grazing marsh of national and international importance due to supporting rare plants and birds.
SINC	Lumley Meadow	0.22km South	Supports agriculturally unimproved grassland and the following notable species: Meadow brome Distant sedge Divided sedge
SINC	Stream West of Emsworth Recreation Ground	0.51km West	Supports the following notable species: Narrow-leaved water plantain

Designation	Site Name	Distance & Direction	Summary of features
SINC	Westbrook Stream, Bridge Road	0.53km SW	Supports the following notable species: Narrow-leaved water plantain
SINC	Land West of Emsworth Recreation Ground	0.60km West	Supports semi-improved grasslands which retain a significant element of unimproved grasslands.
SINC	Land East of 54 Long Copse Lane	0.62km NW	Supports semi-improved grasslands which retain a significant element of unimproved grasslands.
SINC	Emsworth Millpond	0.71km South	Supports semi-natural coastal and estuarine habitats.
SINC	Southleigh Forest	1.12km NW	Supports pasture woodland and wooded commons of considerable biological and historical interest. Supports the following notable species: Purple emperor Coral necklace
SINC	Brook Farm B	1.49km SW	Supports a significant population of dark-bellied brent geese. Supports the following notable species: Weasle's snout Corn spurrey
SINC	Nore Grassland & Saltmarsh	1.67km SW	Supports semi-natural coastal and estuarine habitats. Supports the following notable species: Slender hare's-ear Sea wormwood
SINC	Warblington Castle Farm East D	1.80km SW	Supports a significant population of dark-bellied brent geese.
SINC	Conigar Point Meadows	1.82km SW	Supports semi-improved grasslands which retain a significant element of unimproved grasslands and semi-natural coastal and estuarine habitats. Supports the following notable species: Celery Field brome Slender hare's-ear Divided sedge Long-bracted sedge Golden samphire

Designation	Site Name	Distance & Direction	Summary of features
			Lax-folowered sea-lavender Common glasswort

3.2 Habitats

The following habitats have been identified through our assessment:

3.2.1 Scattered Scrub

Several areas of scattered scrub dominated by bramble were present along the site boundaries in small, isolated patches (Figure 2).

3.2.2 Broad-leaved Scattered Trees

Several trees were present around the site including pedunculate oak, turkey oak, ash, cherry laurel, hawthorn and sycamore (Figure 2). A fallen tree was also present in the centre of the grassland (TN1, Photograph 1). Trees with suitability to support roosting bats and/or nesting birds are discussed in full detail in Section 3.3.3 Bats and Section 3.3.7 Birds.

Photograph 1 Fallen tree in the centre of the site



3.2.3 Species-poor Hedgerows

Several species-poor, unmanaged hedgerows dominated by hawthorn with small amounts of blackthorn, dog rose and hazel ran along the site boundaries. These boundary features were dominated by common nettle on the ground (Figure 2, Photograph 2).

Photograph 2 Hawthorn hedgerow forming the eastern site boundary



3.2.4 Semi-improved Grassland

The majority of the site was dominated by semi-improved, grazed grassland. The grassland was dominated by red fescue and perennial rye-grass with creeping buttercup, red clover and thistle. Small amounts of annual meadow grass, cocks foot, white clover and dandelion were also present throughout (Photograph 3, Figure 2). The site is utilised as low-density cattle pasture.

Photograph 3 Semi-improved grassland making up the majority of the site



3.2.5 Running Water

A tributary of the River Ems runs along a small stretch the northern section of the eastern boundary of the site. The watercourse was accessible only at a small number of points (Figure 2). At these points, the water was fast flowing and approximately 40cm deep. The water was very clear, with a

stone substrate. Very little plant cover was present either on the water surface or on the banks (Photograph 4).

Photograph 4 Tributary running along the eastern boundary with sparse vegetated banks



3.2.6 Tall Ruderal

Large areas of the site were dominated by nettle and thistle, particularly along the boundaries but also encroaching into the central grassland (Photograph 5, Figure 2).

Photograph 5 Dense nettle along western boundary





3.2.7 Bare Ground

The bank of the stream running along the eastern boundary was banked by a small area of bare ground (gravel) towards the northernmost tip of the site (Photograph 4, Figure 2).

3.2.8 Buildings

A concrete bunker was situated along the western boundary of the site. The building was constructed entirely of concrete with open 'windows' (un-paned) cut into the eastern elevation along with a cut entrance on the northern elevation (Figure 2).

3.3 Protected & Notable Species

3.3.1 Great Crested Newts

Desk Study

Neither HBIC nor SxBRC returned any records of GCN within 2km of the site.

Field Survey

No suitable waterbodies were identified either onsite or connected to the site within 500m, and the site is considered to have negligible potential for GCN.

3.3.2 Reptiles

Desk Study

The data provided by HBIC and SxBRC included a combined 71 records of reptiles within 2km of the site, including slow worm, common lizard, grass snake and adder. The majority of records were of slow worm, returned from Manor Way, Emsworth, approximately 1.5km south-east of the site.

Field Survey

Habitats on site that are suitable for reptiles include semi-improved grassland, areas of scrub and ruderal vegetation. These habitats provide a wide range of opportunity for foraging, basking and hibernation by reptiles. The site is considered to have high potential for reptiles.

3.3.3 Bats

Desk Study

HBIC and SxBRC returned 338 records of bats within 2km of the site, comprising an unidentified bat, serotine, Bechstein's bat, Brandt's bat, Daubenton's bat, whiskered bat, Natterer's bat, noctule, pipistrelle species bat, common pipistrelle, soprano pipistrelle, long-eared bat species and brown long-eared bat. Large numbers of Bechstein's bat (51 and 26 individuals) were recorded in Longcopse Hill located approximately 1.1km from the site to the north in 2009. Bechstein's bat is listed as '*rarest*' bats (Collins, 2016) and are typically associated with broadleaved woodland. The site is open with few mature trees and species-poor hedgerows. The River Ems to the north does provide a potential commuting corridor, however it is interrupted by several roads and areas of existing development. This reduces the likelihood of Bechstein's bat occurring on site.



Roosting bats

A total of five trees were identified with suitability to support roosting bats (based on a ground level assessment), however all are outside of the proposed development site or marked for retention and protection and are therefore unlikely to be affected by the works. The concrete bunker along the western boundary (Figure 2) is open to adverse weather, and unlikely to be stable in temperature. No roosting features were identified and the building is considered to have *negligible suitability* (Collins, 2016) for roosting bats. Additionally, the building sits outside of the proposed development area and will not be impacted by the proposals.

Foraging and Commuting Bats

Suitable habitat for bat foraging and commuting comprise hedgerows and trees along the north-western boundary adjacent to the properties on Westwood Close. Higher quality linear features are adjacent to the site, which are tree lines along the eastern boundary and the tributary of the River Ems. The tributary offers suitable commuting route as well as foraging resources (potentially for rarer bat species). However, given the distance between the application site and these features, adverse effects are considered unlikely. The site is considered to have *low suitability* (Collins, 2016) for both foraging and commuting bats.

3.3.4 Badger

Desk Study

Neither HBIC nor SxBRC returned records of badger within 2km. This cannot be used to suggest that badgers are not present, however, as records for this species are often sensitive.

Field Survey

No signs of badgers were identified on site. However due to the highly mobile nature of the species, badgers may move into the site in the future. A mix of habitats including small wooded areas, semi-improved grassland and scrub offer numerous opportunities for foraging and sett creation by badgers. As such the site is considered to have moderate potential to support badgers in the future.

3.3.5 Hazel Dormice

Desk Study

Neither HBIC nor SxBRC returned any records of dormice within 2km of the site.

Field Survey

The eastern boundary hedgerow is potentially suitable for foraging hazel dormouse, and is well connected to other suitable habitat to the east and north. The hedgerow is in a degraded condition, with several gaps, reducing its potential suitability for dormice using it as a primary foraging and sheltering habitat, but it is in a suitable condition to facilitate the movement of dormouse to more optimal foraging habitat. The boundaries of the field outside the application site are well vegetated with scrub, trees and small sections of scrubby hedgerow. Several small stands of fruiting species including hawthorn, bramble and hazel are present around the site, providing a foraging resource for dormouse. Due to the mix of habitats present and the connectivity to suitable habitat in the wider area, the site is considered to have moderate potential to support hazel dormouse.

3.3.6 Otter & Water Vole

Desk Study

SxBRC returned 12 records of water vole and HBIC returned eight records of water vole within 2km of the site. The majority of records were returned from the River Ems, which runs along the eastern boundary of the site. No records of otter were returned by either HBIC or SxBRC.

Field Survey

No signs of water vole or otter were identified during the survey. However due to records of water vole being returned within the watercourse running through the site, the site is considered to have high potential to support water vole.

3.3.7 Birds

HBIC and SxBRC returned records of the following notable bird species. These are summarised below in Table 4.

Table 4 Notable bird species records within 2km of the site

Species	Total Records	Species	Total Records
Mute swan	46	Woodcock	2
Common shelduck	43	Redshank	79
Wigeon	20	Mediterranean gull	2
Gadwall	8	Yellow-legged gull	2 (historical)
Teal	26	Great black-backed gull	3
Mallard	54	Black-headed gull	2
Pintail	7	Sandwich tern	1
Garganey	3 (historical)	Stock dove	37
Shoveler	8	Turtle dove	42
Pochard	4 (historical)	Cuckoo	37
Tufted duck	56	Barn owl	69
Little egret	114	Tawny owl	5
Bittern	17 (historical)	Short-eared owl	1
Grey partridge	3	Swift	8
Little grebe	47	Kingfisher	70
Red kite	10	Hoopoe	1
Hen harrier	1 (historical)	Green woodpecker	14
Osprey	3	Lesser-spotted woodpecker	1 (historical)
Kestrel	33	Cetti's warbler	182
Hobby	85	Grasshopper warbler	2 (historical)

Species	Total Records	Species	Total Records
Oystercatcher	35	Willow warbler	5
Little ringed plover	13	Skylark	43
Lapwing	49	Sand martin	1
Avocet	2	Swallow	21
Common sandpiper	26	House martin	8
Snipe	81	Curlew	42
Meadow pipit	10	Firecrest	2
Yellow wagtail	10	Willow tit	3 (historical)
Grey wagtail	14	Marsh tit	5
Duncock	28	Starling	24
Nightingale	1 (historical)	House sparrow	24
Redstart	5	Tree sparrow	1 (historical)
Whinchat	7	Linnet	11
Wheatear	6	Serin	1
Song thrush	20	Bullfinch	2
Mistle thrush	4	Yellowhammer	3
Whitethroat	19	Reed bunting	13
Dartford warbler	2	Corn bunting	17
Bearded tit	226		

Field Survey

Several birds were observed entering and exiting the central tree line during the survey. As such, this area of the site is considered highly likely to support nesting birds. Several other trees and hedgerows around the site have the potential to support nesting birds although at the time of the survey no nests were recorded. The site is therefore considered to have high potential to support nesting birds.

3.3.8 Invertebrates

Desk Study

Neither HBIC nor SxBRC returned records of notable invertebrates associated with the River Ems within 2km.

Field Survey

The habitats recorded onsite were diverse and are therefore likely to support a range of common invertebrates. Despite this, no habitats suitable for specialist invertebrate species were recorded and as such it is considered unlikely that notable or protected invertebrates will be present on the site. As no records of notable invertebrates potentially associated with the River Ems were returned from the data search, the site is considered to have low suitability for notable and protected invertebrates.

3.3.9 Notable Plants

The habitats present on site were diverse but floristically simple. As such it is considered unlikely that notable plant species will be present on the site.

3.3.10 Invasive Species

No evidence of invasive plant species were found during the survey.

3.4 Importance of Ecological Features

In line with the CIEEM PEA Guidelines, and based on the above baseline information, each ecological feature recorded within the study area is considered to have the following importance, as defined within the CIEEM EcIA Guidelines (2016):

Table 5 Importance of Ecological Features

Feature	Importance	Rationale
River Ems	Regional level	Forms part of the Brook Meadow LNR.
Scattered trees	Site level	Several trees suitable for nesting birds and roosting bats in the area immediately surrounding the site.
Hedgerows	Site level	Well-connected hedgerows dominated by hawthorn suitable to support a range of fauna including hazel dormouse.
Semi-improved neutral grassland	Site level	Floristically simple grazing pasture habitat that is widespread within the local area.
Scrub	Site level	Bramble scrub offering potential habitat for a range of fauna.
Ruderal	Site level	Nettle dominated common habitat, created likely as a result of grazing on the semi-improved grassland.
Nesting birds	Site level	Likely common species, known to be nesting on site.
Reptiles	Unknown	Further presence/likely absence surveys required
Hazel dormouse	Unknown	Further presence/likely absence surveys required
Bats	Unknown	Further night-time surveys required
Badger	Unknown	Not currently present but have the potential to move on site in the future.
Either: International (incl. European) / National / Regional / County / Local / Site level Or: Unknown (i.e. further surveys/information needed)		

The potential for the proposals to have adverse or beneficial impacts on these features, along with the need for any mitigation or enhancement measures are discussed in detail below.

4.0 Relevant Planning Policy & Legislation

4.1 National Planning Policy Framework

The NPPF was adopted in March 2012. Section 11 of the NPPF, *Conserving and Enhancing the Natural Environment* replaces *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. However, government Circular 06/2005, *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System*, which relates to PPS9 remains valid and is referenced within Paragraph 113 of the NPPF.

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. The NPPF also states that '*planning policies should promote the protection of priority species populations linked to national and local targets*'.

Furthermore, central and local government policy now points towards ecological enhancement on development sites. The NPPF considers enhancement in the statement '*The planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes....and minimising impacts on biodiversity and providing net gains in biodiversity*'.

4.2 Biodiversity 2020: A strategy for England's wildlife & ecosystem services

Biodiversity 2020 replaces the previous UK Biodiversity Action Plan and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The priority species and habitats considered under Biodiversity 2020 are the SPI & HPI detailed under NERC Act (see Appendix A for further details).

4.3 Local Biodiversity Action Plan

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Havant Biodiversity Action Plan is the relevant document for this site and it contains the following Habitat Action Plans:

Table 6 Havant BAP HAPs

Species Action Plans	
Coastal and floodplain grazing marsh	Coastal saltmarsh
Acidic dune grassland	Coastal vegetated shingle
Intertidal mudflats	Lowland calcareous grassland
Lowland dry acid grassland	Lowland heathland

Species Action Plans	
Lowland meadows	Lowland mixed deciduous woodland
Purple moor grass and rush pastures	Reedbeds
Saline lagoons	Seagrass beds
Sheltered muddy gravels	Wet woodland
Wood pasture and parkland	

It should be noted that the existence of a HAP does not always infer an elevated level importance for those features. These plans may be designed to encourage an increase in these habitats, rather than to protect a county-scarce feature (for example).

4.4 Adopted Havant Borough Council Local Plan

The site is within Havant Borough and is governed by the Core Strategy for Havant Borough Council. Development Management Policy DM8 *Conservation, Protection and Enhancement of Existing Natural Features* states:

Development will only be permitted where it protects and enhances local habitats and landscape distinctiveness and which addresses all of the relevant criteria as set out below:

- *Protects natural features of nature conservation and/or amenity importance on the site, for example trees, woodlands, hedgerows, soils, streams, stream corridors, springs, ditches or ponds from damage, destruction and a deterioration in quality.*
- *Sympathetically incorporates existing features into the overall design of the scheme including measures taken to ensure their continued survival.*
- *Provides new landscape works that integrate successfully with the local environment and existing natural features, using local materials and plant species and making provision for future maintenance of new landscape works associated with new developments.*
- *Ensures sequences of greenspaces are maintained and protects the attractiveness and visual amenity of all green open spaces that contribute to the identity of the borough.*

4.5 Legislation

Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix A. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:

- Harm to a Natura 2000 site
- Disturbance or killing of an EPS
- Disturbance of nesting wild birds
- Disturbance of nesting Schedule 1 bird species or their dependant young



5.0 Discussion

5.1 Designated Sites

Natura 2000 Sites

The closest Nature 2000 sites are the Chichester and Langstone Harbours Ramsar, SPA, SAC and the Solent Maritime SAC. Both located 0.96km from the site. Due to the proximity of the site to these Natura 2000 sites, steps must be taken to mitigate for indirect impacts on the protected sites as a result of increased visitor pressure. It is likely that this can be achieved through financial contribution to support offsite mitigation and management. The tributary of the River Ems running along the eastern boundary of the site flows into these sites and as such, the potential for pollution through run-off must be avoided. Impacts should be stopped and/or reduced through avoidance and mitigation measures including the use of Sustainable Urban Drainage Systems using suitable forms of filtration in order to prevent run-off entering the tributary.

Sites of Special Scientific Interest

The nearest SSSI to the site is Chichester Harbour, located approximately 0.96km south. Due to the distance from the site there will not be any direct impacts as a result of the proposed development. Indirect impacts as a result of increased recreational pressure can be addressed alongside the proposed mitigation for the Natura 2000 sites within proximity of the development.

Local Nature Reserves

The Brook Meadow LNR sits approximately 0.24km west of the proposed development site. Impacts from development have the potential to degrade this habitat, particularly the River Ems through run off causing increased siltation. Impacts should be stopped and/or reduced through avoidance and mitigation measures including the use of Sustainable Urban Drainage Systems using suitable forms of filtration in order to prevent run-off entering the tributary of the River Ems that makes up the eastern site boundary.

Non-Statutory Designated Sites

Six SINCs sit within 1km of the proposed development site. Avoidance and mitigation measures must be taken to avoid direct impacts on these sites. It is not known whether these sites are accessible by the public and as such it is possible that measures will be required to mitigate for increased pressure from visitation to these sites.

5.2 Habitats

The habitats identified on the site were common and of limited floristic value. Botanical surveys of the site are not considered necessary. The hedgerows forming the site boundaries are Priority Habitat under S41 of the NERC Act, 2006 and offer foraging opportunity and shelter for wildlife. It is recommended that, all hedgerows are retained around the external boundaries of the site as a key element of the landscape scheme.

The tributary of the River Ems, running alongside the eastern boundary of the site is a particularly sensitive receptor, and there is the potential for this habitat feature to be impacted directly during the construction phase through the run-off of materials, which could, in turn lead to impacts on the river.



system through increased siltation. Steps should be taken to avoid impacting the watercourse through the establishment of SUDS with suitable forms of filtration.

Several trees along the western boundary of the site are potentially suitable for nesting birds and as such, retention of these features is considered the most preferable option.

The proposed development has limited opportunities for ecological enhancement. It is recommended that retained hedgerows are managed so as to optimise their biodiversity value including planting of any gaps with native species. In addition to this, species rich planting is recommended as a part of the landscaping scheme in order to increase the suitable post-construction habitat for wildlife. A list of recommended species can be provided on request; locally native species would be preferred.

5.3 Protected & Notable Species

5.3.1 Great Crested Newts

As no records of GCN or ponds suitable to support GCN and connected to the site were identified within 500m, no further survey for the species is considered necessary.

5.3.2 Reptiles

The site is considered to have high potential to support reptiles due to the mix of ruderal and scrub habitat surrounding the suitable semi-improved grassland habitat. The site is well connected to suitable habitat offsite to the east and south. It is recommended that a reptile presence/likely absence survey is carried out on the site in order to establish the species present, and to inform potential avoidance, mitigation and enhancement measures which may include either a displacement exercise into suitable retained habitat onsite or alternatively a translocation into a suitable receptor site that will require surveys to establish the population size of reptiles already present.

5.3.3 Bats

Roosting Bats

A total of five trees were identified with suitability to support roosting bats (based on a ground level assessment), however all are outside of the proposed development site and are unlikely to be affected by the works. These trees should be protected from impacts through the establishment of a suitable buffer zone. If proposals change and as a result any of these trees are to be impacted, further surveys may be required.

The building present falls outside the development boundary and has been classified as offering *negligible suitability* (Collins, 2016) to support roosting bats and therefore will not require any further surveys.

All trees sitting within the development boundary should wherever possible be retained. Where this is not possible it is recommended that trees are removed using soft-felling techniques as a precautionary measure.

Commuting and Foraging Bats

The site is considered to have *low suitability* (Collins, 2016) to support both commuting and foraging bats due to the suitable habitats present and sub-optimal linear features along the eastern and



western boundaries. Additionally, the River Ems is potentially suitable to provide a foraging and commuting feature. In line with BCT (Collins, 2016) guidelines, dusk bat activity surveys should be completed on a seasonal basis (Spring, Summer and Autumn) along a single transect, with one static detector placed along the transect for a minimum of five nights for each season.

5.3.4 Badger

Whilst no signs of badger were identified on site during the survey, potentially suitable habitat is present on site which could support foraging badgers, badgers commuting through the site and sett creation. It is recommended that further checks for signs of badger are undertaken during the recommended protected species surveys and that a pre-commencement check for badgers is undertaken prior to works beginning on site to make sure that badgers have not moved on to the site without prior knowledge. If badgers are found to be on site further mitigation and avoidance measures are likely to be required.

5.3.5 Hazel Dormouse

The site is considered to have moderate potential to support hazel dormouse due to the well-connected yet degraded hedgerow habitat forming the eastern site boundary. This hedgerow is dominated by hawthorn, a known food-species for hazel dormouse, and may provide suitability for dormouse commuting through the site and during hibernation. Hazel dormouse presence/likely absence surveys are recommended using artificial nesting tubes. If hazel dormouse are found to be present, further avoidance and mitigation measures may be required. It is recommended that all hedgerow habitat onsite is retained and enhanced to increase its suitability for the species.

5.3.6 Otter and Water Vole

Whilst no signs of either otter or water vole were identified during the survey, there are several records of water vole presence within the River Ems, a tributary of which runs along the eastern boundary of the site. As such, an additional check for evidence of water vole was made on the 17th June 2017. No evidence of water vole was identified and the watercourse will not be directly impacted by the proposed development. Steps should be taken as outlined above to avoid impacts on the watercourse which in turn will prevent impacting water voles that may be present.

5.3.7 Nesting Birds

It is recommended that trees and hedgerows are retained and protected from impacts wherever possible. In areas where this is not possible, removal should take place outside of the nesting birds season which runs from March to September inclusive. If removal must be completed outside of this window, a pre-commencement nesting bird check should be completed no sooner than 24 hours before scheduled removal.

5.3.8 Invertebrates

The proposed scheme has the opportunity to improve the suitability of the site for a range of common invertebrate species through the incorporation of a species-rich, locally native planting scheme.



5.3.9 Invasive Species

As no signs of invasive species were identified during the survey, it is considered unlikely they are present. It is recommended that further checks for potentially invasive species are made during the recommended protected species surveys. If any signs are found, further survey may be required.

6.0 Summary & Recommendations

6.1 Designated Sites

- The proposed development has the potential to directly impact statutory and non-statutory designated sites, particularly Brook Meadows LNR which sits directly to the east and incorporates the tributary of the River Ems. Additionally the development has the potential to indirectly impact Chichester & Langstone Harbour Ramsar, SPA, SAC and Solent Maritime SAC through increased recreational pressure. Financial contribution to the Solent Recreation Mitigation Strategy is likely to be required;
- Steps should be taken to avoid impacts from run-off into the River Ems, through the incorporation of SUDS with appropriate natural filtration.

6.2 Habitats

- No protected or ecologically notable habitats are present on the site. No further recommendations are made with regard to habitats;
- Retention of trees and hedgerows on and around the site should be prioritised in the first instance. If this is not possible then further survey and mitigation may be required;
- Consideration should be given to incorporating locally native trees and shrubs in any soft landscaping, fulfilling Policy DM8 of the Local Plan.

6.3 Protected & Notable Species

As a result of the findings of the Ecological Appraisal it is recommended that:

- Reptile presence/likely absence surveys are completed on the site, particularly focused on the areas between semi-improved grassland and scrub/tall ruderal habitat;
- Manual dusk bat activity surveys are completed on a seasonal basis (a total of three surveys), with one automated detector deployed for a minimum of five nights for each survey;
- All trees identified as sitting within the development footprint that require removal should be removed using soft felling techniques as a precautionary measure;
- Hazel dormouse presence/likely absence surveys are undertaken of the site boundaries using artificial nesting tubes;
- Further checks for badger activity are made during the aforementioned surveys, and a pre-commencement badger check is completed prior to the commencement of works;
- A pre commencement check for nesting birds is undertaken prior to construction (if within the breeding season), and any nests identified are protected in-situ until all young have fledged and do not return

6.4 Recommendations for Enhancement

In order to demonstrate consideration for Policy DM8 of the Adopted Havant Borough Council Local Plan, the following recommendations for enhancement of the site are made:



- The site should be enhanced for wildlife through the incorporation of a species-rich, locally native planting scheme, which will increase invertebrate abundance and therefore foraging opportunity for a range of species discussed above;
- Bat boxes should be installed on retained trees along the western boundary of the site, the specification and number of which will be informed by the findings of the recommended bat activity surveys;
- Three Schwegler 2H open fronted bird boxes and three Schwegler 1B bird boxes should be installed on retained trees along the western site boundary to improve the nesting provision for birds on and around the site; and
- The hedgerow running along the eastern boundary should be retained and enhanced using infill planting of native species.



7.0 References

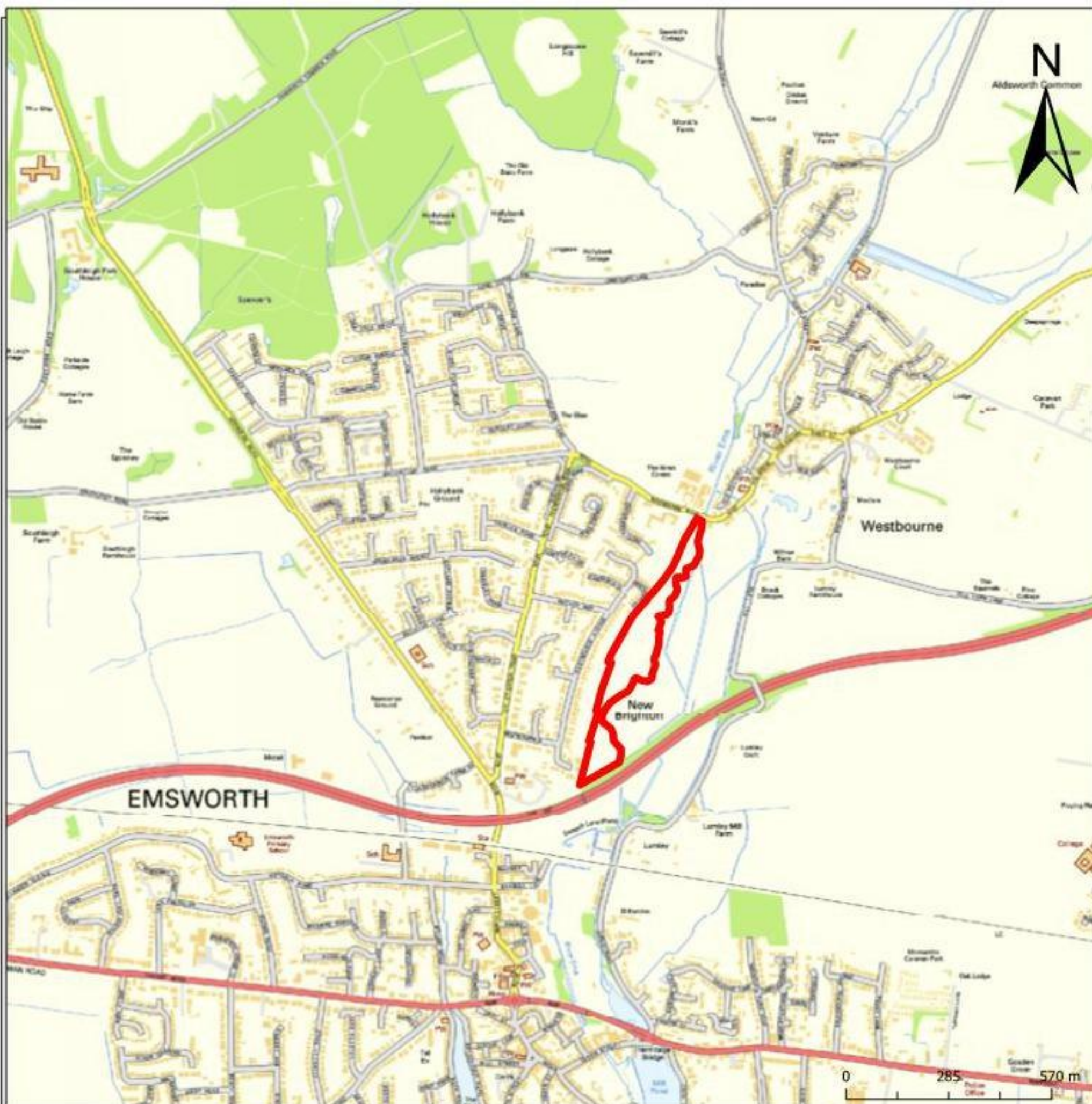
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FIGURES

Figure 1 – Site Location Plan

Figure 2 – Phase 1 Habitat Plan



Legend

— Site Boundary

The Pavillion, 1st Floor
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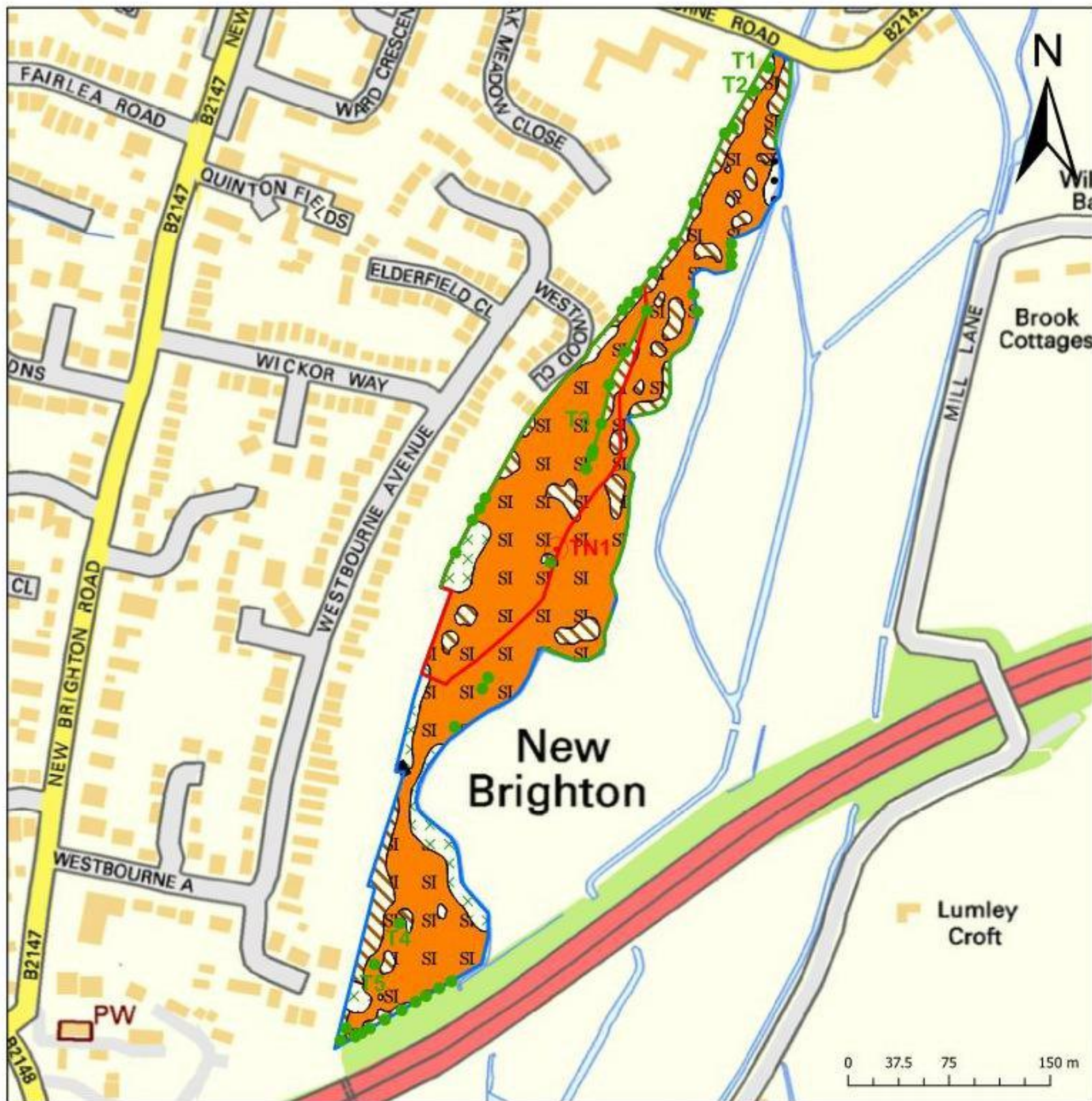
WYG

Land off of Westwood Close

Site Location Plan

Scale at A3:	Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
1:4000	MW	03/08/17	KW	31/01/18	DW	01/02/18
Project No:	Office	Type	Drawing No.	Revision		
A104417	45	94	Figure 1			

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Legend

- | | | | |
|--|------------------------------|--|-------------------------|
| | Target Note | | Scattered Scrub |
| | Scattered Trees | | Semi Improved Grassland |
| | Intact Species Poor Hedgerow | | Tall Ruderal |
| | Site Boundary | | Building |
| | Survey Boundary | | Bare Ground |

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WYG

Land off of Westwood Close

Extended Phase 1 Habitat Plan

Scale at A3: 1:4000	Drawn by: MW	Date: 03/08/17	Checked By: KW	Date: 31/01/18	Approved By: DW	Date: 31/01/18
Project No: A104417	Office 45	Type 94	Drawing No. Figure 2	Revision B		

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Appendix A – Wildlife Legislation

Bern Convention

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (79/409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. Amendments made in 2012 stipulated that public bodies help preserve, maintain and re-establish habitats for wild birds.

The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals	Schedule 5 – European Protected Species of Plants
Horseshoe bats <i>Rhinolophidae</i> - all species	Shore dock <i>Rumex rupestris</i>
Common bats <i>Vespertilionidae</i> - all species	Killarney fern <i>Trichomanes speciosum</i>
Wild cat <i>Felis silvestris</i>	Early gentian <i>Gentianella anglica</i>
Dolphins, porpoises and whales <i>Cetacea</i> – all sp.	Lady's-slipper <i>Cypripedium calceolus</i>
Dormouse <i>Muscardinus avellanarius</i>	Creeping marshwort <i>Apium repens</i>
Pool frog <i>Rana lessonae</i>	Slender naiad <i>Najas flexilis</i>
Sand lizard <i>Lacerta agilis</i>	Fen orchid <i>Liparis loeselii</i>
Fisher's estuarine moth <i>Gortyna borelii lunata</i>	Floating-leaved water plantain <i>Luronium natans</i>
Great crested newt <i>Triturus cristatus</i>	Yellow marsh saxifrage <i>Saxifraga hirculus</i>
Otter <i>Lutra lutra</i>	
Lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i>	
Smooth snake <i>Coronella austriaca</i>	
Sturgeon <i>Acipenser sturio</i>	
Natterjack toad <i>Epidalea calamita</i>	
Marine turtles <i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempii</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>	

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;

- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates – see below for the full list. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9. It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties

Avocet	<i>Recurvirostra avosetta</i>	Osprey	<i>Pandion haliaetus</i>
Bee-eater	<i>Merops apiaster</i>	Owl, Barn	<i>Tyto alba</i>
Bittern	<i>Botaurus stellaris</i>	Owl, Snowy	<i>Nyctea scandiaca</i>
Bittern, Little	<i>Ixobrychus minutus</i>	Peregrine	<i>Falco peregrinus</i>
Bluethroat	<i>Luscinia svecica</i>	Petrel, Leach's	<i>Oceanodroma leucorhoa</i>
Brambling	<i>Fringilla montifringilla</i>	Phalarope, Red-necked	<i>Phalaropus lobatus</i>
Bunting, Cirl	<i>Emberiza cirlus</i>	Plover, Kentish	<i>Charadrius alexandrinus</i>
Bunting, Lapland	<i>Calcarius lapponicus</i>	Plover, Little Ringed	<i>Charadrius dubius</i>
Bunting, Snow	<i>Plectrophenax nivalis</i>	Quail, Common	<i>Coturnix coturnix</i>
Buzzard, Honey	<i>Pernis apivorus</i>	Redstart, Black	<i>Phoenicurus ochruros</i>
Capercaillie	<i>Tetrao urogallus</i>	Redwing	<i>Turdus iliacus</i>
Chough	<i>Pyrrhocorax pyrrhocorax</i>	Rosefinch, Scarlet	<i>Carpodacus erythrinus</i>
Corncrake	<i>Crex crex</i>	Ruff	<i>Philomachus pugnax</i>
Crake, Spotted	<i>Porzana porzana</i>	Sandpiper, Green	<i>Tringa ochropus</i>
Crossbills (all species)	<i>Loxia</i>	Sandpiper, Purple	<i>Calidris maritima</i>
Curlew, Stone	<i>Burhinus oedipnemos</i>	Sandpiper, Wood	<i>Tringa glareola</i>
Divers (all species)	<i>Gavia</i>	Scaup	<i>Aythya marila</i>
Dotterel	<i>Charadrius morinellus</i>	Scoter, Common	<i>Melanitta nigra</i>
Duck, Long-tailed	<i>Clangula hyemalis</i>	Scoter, Velvet	<i>Melanitta fusca</i>
Eagle, Golden	<i>Aquila chrysaetos</i>	Serin	<i>Serinus serinus</i>
Eagle, White-tailed	<i>Haliaetus albicilla</i>	Shorelark	<i>Eremophila alpestris</i>
Falcon, Gyr	<i>Falco rusticolus</i>	Shrike, Red-backed	<i>Lanius collurio</i>
Fieldfare	<i>Turdus pilaris</i>	Spoonbill	<i>Platalea leucorodia</i>
Firecrest	<i>Regulus ignicapillus</i>	Stilt, Black-winged	<i>Himantopus himantopus</i>
Garganey	<i>Anas querquedula</i>	Stint, Temminck's	<i>Calidris temminckii</i>
Godwit, Black-tailed	<i>Limosa limosa</i>	Swan, Bewick's	<i>Cygnus bewickii</i>
Goshawk	<i>Accipiter gentilis</i>	Swan, Whooper	<i>Cygnus cygnus</i>
Grebe, Black-necked	<i>Podiceps nigricollis</i>	Tern, Black	<i>Chlidonias niger</i>

Grebe, Slavonian	<i>Podiceps auritus</i>	Tern, Little	<i>Sterna albifrons</i>
Greenshank	<i>Tringa nebularia</i>	Tern, Roseate	<i>Sterna dougallii</i>
Gull, Little	<i>Larus minutus</i>	Tit, Bearded	<i>Panurus biarmicus</i>
Gull, Mediterranean	<i>Larus melanocephalus</i>	Tit, Crested	<i>Parus cristatus</i>
Harriers (all species)	<i>Circus</i>	Treecreeper, Short-toed	<i>Certhia brachydactyla</i>
Heron, Purple	<i>Ardea purpurea</i>	Warbler, Cetti's	<i>Cettia cetti</i>
Hobby	<i>Falco subbuteo</i>	Warbler, Dartford	<i>Sylvia undata</i>
Hoopoe	<i>Upupa epops</i>	Warbler, Marsh	<i>Acrocephalus palustris</i>
Kingfisher	<i>Alcedo atthis</i>	Warbler, Savi's	<i>Locustella luscinioides</i>
Kite, Red	<i>Milvus milvus</i>	Whimbrel	<i>Numenius phaeopus</i>
Merlin	<i>Falco columbarius</i>	Woodlark	<i>Lullula arborea</i>
Oriole, Golden	<i>Oriolus oriolus</i>	Wryneck	<i>Jynx torquilla</i>
Schedule 5- Animals which are protected			
Adder (re: S.9(5) only) <i>Vipera berus</i>		Lagoon Worm, Tentacled (re: S.9(4)(a) only) <i>Alkmaria romijni</i>	
Allis Shad (re: S.9(1) & (4)(a) only) <i>Alosa alosa</i>		Leech, Medicinal <i>Hirudo medicinalis</i>	
Anemone, Ivell's Sea <i>Edwardsia ivelli</i>		Lizard, Sand (re: S.9(4)(b) & (c) & (5) only) <i>Lacerta agilis</i>	
Anemone, Startlet Sea <i>Nematosella vectensis</i>		Lizard, Viviparous (re: S.9(5) only) <i>Lacerta vivipara</i>	
Apus <i>Triops cancriformis</i>		Marten, Pine <i>Martes martes</i>	
Bats, Horseshoe (all sp. but re: S.9(4)(b) & (c) & (5) only) <i>Rhinolophidae</i>		Mat. Trembling Sea <i>Victorella pavidia</i>	
Bats, Typical (all sp. but re: S.9(4)(b) & (c) & (5) only) <i>Vespertilionidae</i>		Moth, Barberry Carpet <i>Pareulype berberata</i>	
Beetle <i>Graphoderus zonatus</i>		Moth, Black-veined <i>Siona lineata</i> / <i>Idaea lineata</i>	
Beetle <i>Hypebaeus flavipes</i>		Moth, Fiery Clearwing <i>Bembecia chrysidiformis</i>	
Beetle <i>Paracymus aeneus</i>		Moth, Fisher's Estuarine (re: S.9(4)(b) & (c) & (5) only) <i>Gortyna borelii</i>	
Beetle, Lesser Silver Water <i>Hydrochara caraboides</i>		Moth, New Forest Burnet <i>Zygaena viciae</i>	
Beetle, Mire Pill (re: S.9(4)(a) only) <i>Curimopsis nigrita</i>		Moth, Reddish Buff <i>Acosmetia caliginosa</i>	
Beetle, Rainbow Leaf <i>Chrysolina cerealis</i>		Moth, Slender Scotch Burnet (re: S.9(5) only) <i>Zygaena loti subspecies scotica</i>	
Beetle, Stag (re: S.9(5) only) <i>Lucanus cervus</i>		Moth, Sussex Emerald <i>Thalera fimbrialis</i>	
Beetle, Violet Click <i>Limoniscus violaceus</i>		Moth, Talisker Burnet (re: S.9(5) only) <i>Zygaena lonicerae subspecies jocelynae</i>	
Burbot <i>Lota lota</i>		Mussel, Fan (re: S.9(1), (2) & (5) only) <i>Atrina fragilis</i>	
Butterfly, Northern Brown Argus <i>Aricia artaxerxes</i>		Mussel, Freshwater Pearl <i>Margaritifera margaritifera</i>	
Butterfly, Adonis Blue <i>Lysandra bellargus</i>		Newt, Great Crested or Warty (re: S.9(4)(b) & (c) & (5) only) <i>Triturus cristatus</i>	
Butterfly, Chalkhill Blue <i>Lysandra coridon</i>		Newt, Palmate (re: S.9(5) only) <i>Triturus helveticus</i>	
Butterfly, Silver-studded Blue <i>Plebejus argus</i>		Newt, Smooth (re: S.9(5) only) <i>Triturus vulgaris</i>	
Butterfly, Small Blue <i>Cupido minimus</i>		Otter, Common (re: S.9(4)(b) & (c) & (5) only) <i>Lutra lutra</i>	
Butterfly, Large Copper <i>Lycaena dispar</i>		Porpoises (all species but re: S.9(5) only) <i>Cetacea</i>	
Butterfly, Purple Emperor <i>Apatura iris</i>		Sandworm, Lagoon <i>Armandia cirrhosa</i>	
Butterfly, Duke of Burgandy Fritillary <i>Hamearis lucina</i>		Sea Fan, Pink (re: S.9(1), 9(2) & 9(5) only) <i>Eunicella verrucosa</i>	
Butterfly, Glanville Fritillary <i>Melitaea cinxia</i>		Seahorse, Short Snouted (re: England & Wales only) <i>Hippocampus hippocampus</i>	
Butterfly, Heath Fritillary <i>Melicta athalia</i> / <i>Melitaea athalia</i>		Seahorse, Spiny (re: England & Wales only) <i>Hippocampus guttulatus</i>	
Butterfly, High Brown Fritillary <i>Argynnis adippe</i>		Sea Slug, Lagoon <i>Tenellia adpersa</i>	
Butterfly, Marsh Fritillary <i>Eurodryas aurinia</i>		Shad, Twaite (re: S.9(1) & (4)(a) only) <i>Alosa fallax</i>	

Butterfly, Pearl-bordered Fritillary <i>Boloria euphrosyne</i>	Shark, Angel (re: S.9(1), (2) & (5) only) <i>Squatina squatina</i>
Butterfly, Black Hairstreak <i>Strymonidia pruni</i>	Shark, Basking <i>Cetorhinus maximus</i>
Butterfly, Brown Hairstreak <i>Thecla betulae</i>	Shrimp, Fairy <i>Chirocephalus diaphanus</i>
Butterfly, White Letter Hairstreak <i>Stymonida w-album</i>	Shrimp, Lagoon Sand (re: S.9(4)(a) only) <i>Gammarus insensibilis</i>
Butterfly, Large Heath <i>Coenonympha tullia</i>	Skate, White (re: S.9(1), (2) & (5) only) <i>Rostroraja alba</i>
Butterfly, Large Blue (re: S.9(4)(b) & (c) & (5) only) <i>Maculinea arion</i>	Slow-worm (re: S.9(5) only) <i>Anguis fragilis</i>
Butterfly, Mountain Ringlet <i>Erebia epiphron</i>	Snail, Glutinous <i>Myxas glutinosa</i>
Butterfly, Chequered Skipper <i>Carterocephalus palaemon</i>	Snail, Roman (in re: S.9(1), (2) & (5) only & in England & Wales only) <i>Helix pomatia</i>
Butterfly, Lulworth Skipper <i>Thymelicus acteon</i>	Snail, Sandbowl <i>Catinella arenaria</i>
Butterfly, Silver Spotted Skipper <i>Hesperia comma</i>	Snake, Grass (re: S.9(5) only) <i>Natrix helvetica</i> / <i>Natrix natrix</i>
Butterfly, Swallowtail <i>Papilio machaon</i>	Snake, Smooth (re: S.9(4)(b) & (c) & (5) only) <i>Coronella austriaca</i>
Butterfly, Large tortoiseshell <i>Nymphalis polychloros</i>	Spider, Fen Raft <i>Dolomedes plantarius</i>
Butterfly, Wood White <i>Leptidea sinapis</i>	Spider, Ladybird <i>Eresus niger</i>
Cat, Wild (re: S.9(4)(b) & (c) & (5) only) <i>Felis silvestris</i>	Squirrel, Red <i>Sciurus vulgaris</i>
Cicada, New Forest <i>Cicadetta montana</i>	Sturgeon (re: S.9(4)(b) & (c) & (5) only) <i>Acipenser sturio</i>
Crayfish, Atlantic Stream or White-clawed <i>Austropotamobius pallipes</i>	Toad, Common (re: S.9(5) only) <i>Bufo bufo</i>
Cricket, Field <i>Gryllus campestris</i>	Toad, Natterjack (re: S.9(4)(b) & (c) & (5) only) <i>Bufo calamita</i>
Cricket, Mole <i>Gryllotalpa gryllotalpa</i>	Turtle, Flatback <i>Natator depressus</i>
Damselfly, Southern <i>Coenagrion mercuriale</i>	Turtle, Green Sea (re: S.9(4)(b) & (c) & (5) only) <i>Chelonia mydas</i>
Dolphins (re: S.9(4A) & (5) only) <i>Cetacea</i>	Turtle, Hawksbill (re: S.9(4)(b) & (c) & (5) only) <i>Eretmochelys imbricata</i>
Dormouse (re: S.9(4)(b) & (c) & (5) only) <i>Muscardinus avellanarius</i>	Turtle, Kemp's Ridley Sea (re: S.9(4)(b) & (c) & (5) only) <i>Lepidochelys kempi</i>
Dragonfly, Norfolk Aeshna <i>Aeshna isosceles</i>	Turtle, Leatherback Sea (re: S.9(4)(b) & (c) & (5) only) <i>Dermochelys coriacea</i>
Frog, Common (re: S.9(5) only) <i>Rana temporaria</i>	Turtle, Loggerhead Sea (re: S.9(4)(b) & (c) & (5) only) <i>Caretta caretta</i>
Frog, Pool (Northern Clade) (re: S.9(4)(b) & (c)(1) & in England only) <i>Pelophylax lessonae</i>	Turtle, Olive Ridley <i>Lepidochelys olivacea</i>
Goby, Couch's <i>Gobius couchii</i>	Vendace <i>Coregonus albula</i>
Goby, Giant <i>Gobius cobitis</i>	Vole, Water <i>Arvicola terrestris</i> / <i>Arvicola terrestris</i>
Grasshopper, Wart-biter <i>Decticus verrucivorus</i>	Walrus <i>Odobenus rosmarus</i>
Hatchet Shell, Northern <i>Thyasira gouldi</i>	Whale (all sp. but re: S.9(4A) & (5) only) <i>Cetacea</i>
Hydroid, Marine <i>Clavopsella navis</i>	Whitefish <i>Coregonus lavaretus</i>
Lagoon Snail, De Folin's <i>Caecum armoricum</i>	Lagoon Worm, Tentacled (re: S.9(4)(a) only) <i>Alkmaria romijni</i>
Adder (re: S.9(5) only) <i>Vipera berus</i>	
Schedule 9 – List of Invasive plant species	
Australian swamp stonecrop or New Zealand pygmyweed <i>Crassula helmsii</i>	Japanese rose <i>Rosa rugosa</i>
Californian red seaweed <i>Pilea californica</i>	Japanese seaweed <i>Sargassum muticum</i>
Curly waterweed <i>Lagarosiphon major</i>	Laver seaweeds (except native species) <i>Porphyra</i> spp

Duck potato	<i>Sagittaria latifolia</i>	Parrot's-feather	<i>Myriophyllum aquaticum</i>
Entire-leaved cotoneaster	<i>Cotoneaster integrifolius</i>	Perfoliate alexanders	<i>Smyrniium perfoliatum</i>
False Virginia creeper	<i>Parthenocissus inserta</i>	Pontic rhododendron	<i>Rhododendron ponticum</i>
Fanwort or Carolina water-shield	<i>Cabomba caroliniana</i>	Purple dewplant	<i>Disphyma crassifolium</i>
Few-flowered garlic	<i>Allium paradoxum</i>	Red algae	<i>Grateloupia luxurians</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>	Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Floating water primrose	<i>Ludwigia peploides</i>	Small-leaved cotoneaster	<i>Cotoneaster microphyllus</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>	Three-cornered garlic	<i>Allium triquetrum</i>
Giant kelp	<i>Macrocystis</i> spp.	Variegated yellow archangel	<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>
Giant knotweed	<i>Fallopia sachalinensis</i>	Virginia creeper	<i>Parthenocissus quinquefolia</i>
Giant rhubarb	<i>Gunnera tinctoria</i>	Wakame	<i>Undaria pinnatifida</i>
Giant salvinia	<i>Salvinia molesta</i>	Wall cotoneaster	<i>Cotoneaster horizontalis</i>
Green seafingers	<i>Codium fragile</i>	Water fern	<i>Azolla filiculoides</i>
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	Water hyacinth	<i>Eichhornia crassipes</i>
Hollyberry cotoneaster	<i>Cotoneaster bullatus</i>	Water lettuce	<i>Pistia stratiotes</i>
Hooked asparagus seaweed	<i>Asparagopsis armata</i>	Water primrose	<i>Ludwigia grandiflora</i>
Hottentot fig	<i>Carpobrotus edulis</i>	Water primrose	<i>Ludwigia uruguayensis</i>
Hybrid knotweed	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>	Waterweeds	<i>Elodea</i> spp.
Indian (Himalayan) balsam	<i>Impatiens glandulifera</i>	Yellow azalea	<i>Rhododendron luteum</i>
Japanese knotweed	<i>Fallopia japonica</i>		

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

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

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.



Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.



Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.



Appendix B – Desk Study Data

Map 2: Non-statutory site designations

Land off Westwood Close, Emsworth + 2km radius

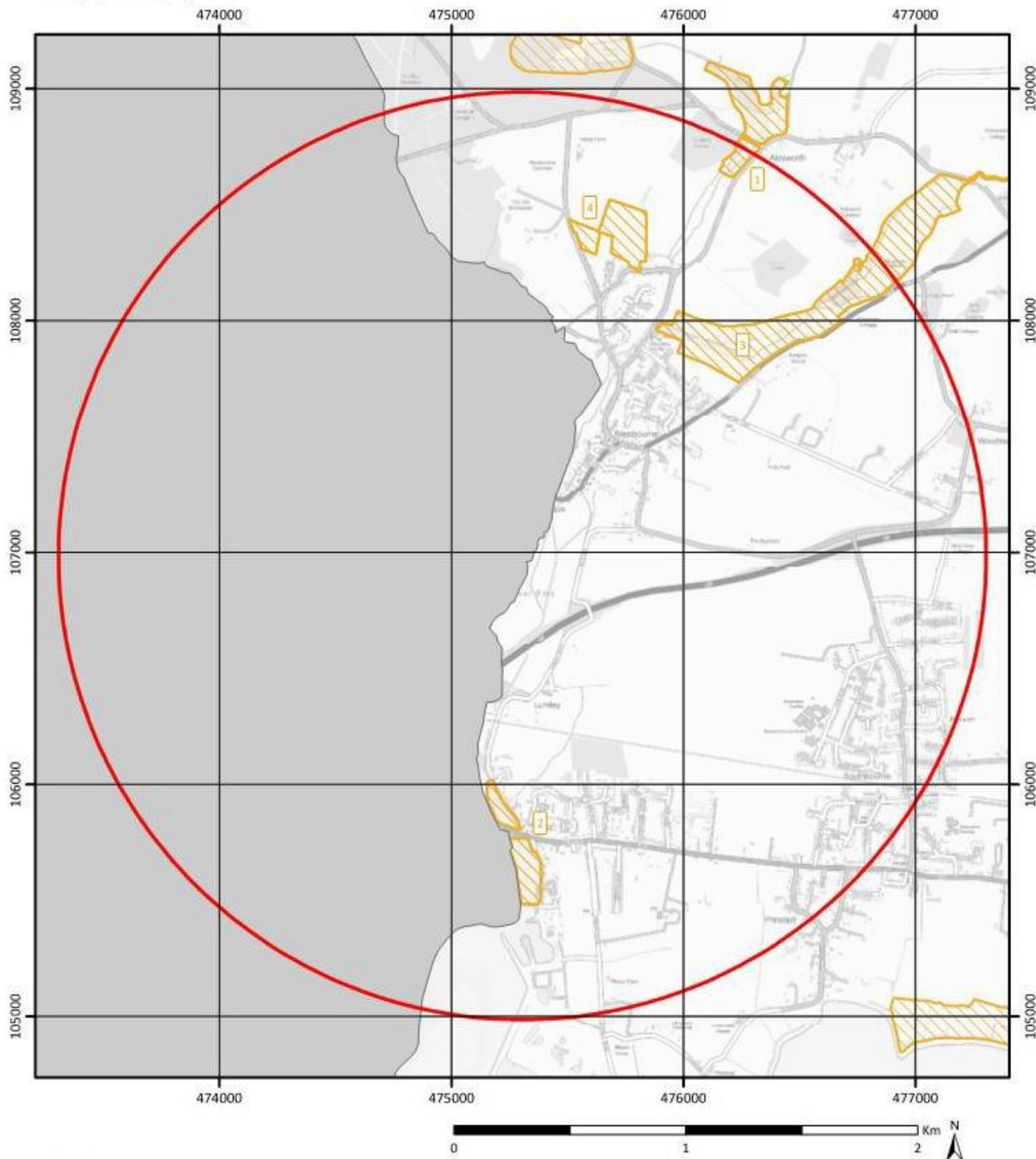
Prepared for Max Ward (WYG)

SxBRC/17/423 - 12/09/2017



**Sussex
Biodiversity
Record Centre**

Woods Mill, Henfield,
West Sussex BN5 9SD
www.sxbrc.org.uk
01273 497521

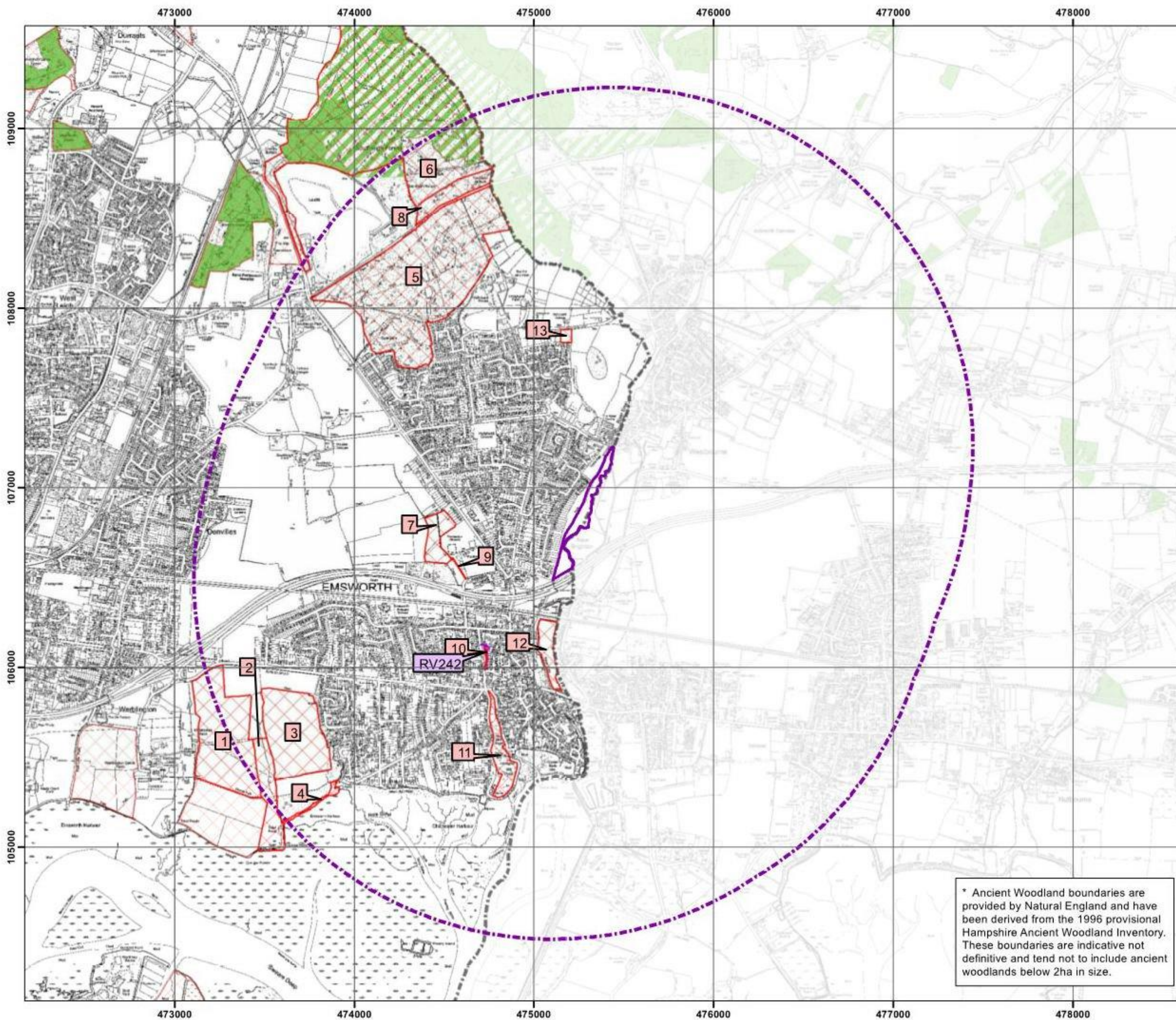


Key to Map:

-  Land beyond Sussex
-  Search Area
-  Local Wildlife Site

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Local Wildlife Site (LWS) data provided by East and West Sussex County Councils, and Brighton & Hove City Council. Notable Road Verge data supplied by East and West Sussex County Councils. Local Geological Site (LGS) data created by SxBRC in partnership with Sussex Geodiversity Group. © Crown Copyright. All rights reserved 2017.



Hampshire Biodiversity
Information Centre

HBIC Ref: 7112

**Non-statutory designated sites
(excluding Wader and Brent
Goose Strategy Sites) within
2km of Land off Westwood
Close (SU7529506959):**

Legend

- Hampshire County Boundary
- 2km Search Area
- Land off Westwood Close
- SINCs (Numbered pink)
- Surrounding SINCs
- RVEIs (Labelled purple)

Ancient Woodland Inventory

- Semi-Natural
- Replanted

Created: 29/08/2017

Scale at A3: 1:20,000

0 100 200 400 600 800 1,000
Meters



* Ancient Woodland boundaries are provided by Natural England and have been derived from the 1996 provisional Hampshire Ancient Woodland Inventory. These boundaries are indicative not definitive and tend not to include ancient woodlands below 2ha in size.

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