



Land adjacent to No.54 Long Copse Lane

Ecological Appraisal



The Horne and Barry Families

November 2021

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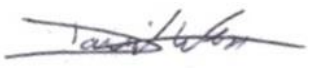
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Figure 1 – Phase 1 Habitat Plan

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Executive Summary

Contents	Summary
Site Location	The site is approximately 0.44ha, and is located to the south side of Long Copse Lane in Emsworth, Hampshire centred on OS grid reference SU 7518 0785 within Havant District. The Site consists of neutral semi-improved grassland with unmanaged species-rich hedgerows with mature trees along its southern and eastern boundaries and species-poor managed hedgerows along the northern and western boundaries. The site is situated on the settlement edge, immediately adjacent to dense residential development to the south and east.
Proposals	The proposed development is for nine residential dwellings and access off Long Copse Lane.
Existing Site Information	Site is designated at a non-statutory level as a SINC as it supports semi-improved grassland with elements of unimproved grassland.
Scope of this Survey(s)	Ecological Appraisal to assess habitats and identify evidence of or potential for protected and notable species. Additionally an NVC botanical survey to assess the quality and value of the grassland habitat on site.
Results	The site comprises neutral semi-improved grassland with unmanaged species-rich hedgerows with mature trees along its southern and eastern boundaries and species-poor managed hedgerows along the northern and western boundaries. The semi-improved grassland represents a poor example of lowland meadow Habitat of Principal Importance (HPI) and is not considered to be of SINC value, chiefly due to the lack of unimproved grassland indicators. The site has high suitability for reptiles, moderate suitability for foraging badgers (and sett creation) and breeding birds within the boundary hedgerows and low suitability for commuting and foraging bats, dormice and notable invertebrates.
Recommendations	Designated Sites Financial contribution to SDMP in order to mitigate for adverse effects upon Chichester and Langstone Harbour SPA. Mitigation to achieve nutrient-neutrality. Enhancement and management of adjacent meadow to compensate for the loss of SINC habitat. Habitats Retention and protection of species-rich hedgerows with semi-improved grassland buffer. Infill of field gate with native woody species to compensate for loss of species-poor hedgerow. Protected & Notable Species Reptile presence/likely absence survey (slow worm and common lizard present). Lighting design to avoid illumination of retained habitat buffers.



Glossary

AONB	Area(s) of Outstanding Natural Beauty
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 2010 (as amended)
HAP	Habitat Action Plan
HBIC	Hampshire Biodiversity Information Centre
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
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
SINC	Site of Importance for Nature Conservation
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 in May 2017 to undertake an Ecological Appraisal and botanical survey of the site at Long Copse Lane, Emsworth.

This report has been prepared by Phil Lomax CBiol MRSB MCIEEM and David West CEnv MCIEEM.

1.2 Site Location

The site is approximately 0.44ha, and is located to the south side of Long Copse Lane in Emsworth, Hampshire centred on OS grid reference SU 7518 0785 within Havant District. The survey area, hereafter referred to as the 'Site', is shown on Figure 1 and consists of neutral semi-improved grassland with unmanaged species-rich hedgerows with mature trees along its southern and eastern boundaries and species-poor managed hedgerows along the northern and western boundaries. The site is situated on the settlement edge, immediately adjacent to dense residential development to the south and east.

1.3 Development Proposals

The proposed development is for nine residential dwellings and access off Long Copse Lane, with open space to mitigate for the loss of grassland and to protect boundary features.

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;
- A botanical survey undertaken in accordance with NVC methodology to assess the floristic diversity and the vegetation communities within the site;
- A comparison between the current plant species composition and plant communities and those recorded in previous botanical surveys;
- An assessment of the current status of the site in relation to the criteria for SINC site selection in Hampshire; 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 Previous Reports

A Phase 2 botanical survey of the site was completed on 23rd August 2011 by HBIC. This identified the grassland as lowland meadow priority habitat comprising MG5 grassland with four indicator species of unimproved grassland; corky-fruited water-dropwort, hoary ragwort, pepper-saxifrage and stone parsley.

2.1.2 Local Ecological Records Centre

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

The data search covers:

- Non-statutory designated sites for nature conservation, namely SINC's;
- 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.

2.1.3 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 3rd May 2017 by WYG Principal Ecologist David West CEnv MCIEEM. The weather conditions were dry, 11°C with light cloud and low wind.

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).

The site was visited by WYG Principal Ecologist (and botanical specialist) Dr Timothy Rich on 6 July 2018 in good weather for 75 minutes to carry out a walkover botanical survey of the grassland (excluding the hedges).

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 – Trees

Any suitable 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	Description of Roosting Habitats
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 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

Suitability	Description of Roosting Habitats
	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	Description of Roosting Habitats
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).



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 May which is in 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. Furthermore the Phase 2 survey was also completed in the optimum season and there are considered to be no limitations to the identification of botanical species and assessment of relative abundance.

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.

An update site visit in May 2020 confirmed there have been no significant changes to site conditions which would alter the recommendations or assessment within this report.

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 (Emsworth)	1.55km South	The site consists of 5 acres of grassland, surrounded by woodlands and flanked by two streams. Brook Meadow is full of birds, insects and wild flowers and has Water Voles in the river.
SINC	Land East of 54 Long Copse Lane	On site	Semi-improved grasslands which retain a significant element of unimproved grassland.
SINC	Southleigh Forest (South)	0.55km West	Pasture woodland and wooded commons of considerable biological and historical interest.
SINC	Southleigh Forest (North of Emsworth Common Road)	0.94km North west	Pasture woodland and wooded commons of considerable biological and historical interest.
SINC	Southleigh Forest	1.03km North west	Pasture woodland and wooded commons of considerable biological and historical interest; purple emperor (<i>Apatura iris</i>); coral necklace (<i>Illecebrum verticillatum</i>).
SINC	Land West of Emsworth Recreation Ground	1.16km South west	Semi-improved grasslands which retain a significant element of unimproved grassland.
SINC	Stream West of Emsworth Recreation Ground	1.39km South	Narrow-leaved water plantain (<i>Alisma lanceolatum</i>).
SINC	Barton's Copse & The Slip	1.50km West	Ancient and semi-natural woodland; Pasture woodland and wooded commons of considerable biological and historical interest.
SINC	Lumley Meadow	1.56km South	Agriculturally unimproved grassland; meadow brome (<i>Bromus commutatus</i>); distant sedge (<i>Carex distans</i>); Carex divisa (<i>Divided sedge</i>).
SINC	Westbrook Stream, Bridge Road	1.76km South	Narrow-leaved water plantain (<i>Alisma lanceolatum</i>).

Designation	Site Name	Distance & Direction	Summary of features
RVEI	U609 Bridge Road, Emsworth	1.76km South	Narrow-leaved water plantain (<i>Alisma lanceolatum</i>).

In addition to the above designations, the site is located within the potential zone of impact for the following Natura 2000 sites.

Table 4 Natura 2000 Sites

Designation	Site Name	Distance & Direction	Summary of features
SPA, SAC, SSSI, Ramsar	Chichester and Langstone Harbour	2.3km South	Designated principally for its important breeding and over-wintering bird populations including wintering dark-bellied Brent goose (<i>Branta bernicla bernicla</i>), teal (<i>Anas cracca</i>), black-tailed godwit (<i>Limosa limosa islandica</i>) and ringed plover (<i>Charadrius hiaticula</i>) and breeding common tern (<i>Sterna hirundo</i>), little tern (<i>Sterna albifrons</i>), roseate tern (<i>Sterna dougalli</i>) and Sandwich tern (<i>Sterna sandvicensis</i>). It is also designated for its important wintering assemblage of wildfowl.

3.2 Habitats

The following habitats have been identified through our assessment:

3.2.1 Neutral semi-improved grassland

The Site comprises a single field of neutral semi-improved grassland dominated by Yorkshire fog, common bent, sweet vernal grass, black knapweed and meadow buttercup with a diverse assemblage of herb and wildflower species.

The botanical survey found that the meadow was tall (0.7 - 1.2m), uncut, species-rich grassland with abundant knapweed and other herbaceous plants mixed c. 50:50 with grasses and rushes. The north-east side was taller with more coarse grasses, and the south-west side shorter with a greater diversity of plants, presumably reflecting past management and grazing (it had been unused for the last 2-3 years after a period of heavy horse-grazing). The field was surrounded by hedges with varied numbers of trees on all sides, and some blackthorn encroachment was occurring on the south side. The soils were clayey silts and are probably quite damp in normal years, especially at the lower southern end of the field. There were a few anthills present.

The following 52 plants were recorded with a visual estimate of frequency:



Yarrow (<i>Achillea millefolium</i>)	Rare
Common bent (<i>Agrostis capillaris</i>)	Occasional
Giant bent (<i>Agrostis gigantea</i>)	Occasional
Creeping bent (<i>Agrostis stolonifera</i>)	Rare
Crow garlic (<i>Allium vineale</i>)	Rare
Meadow Foxtail (<i>Alopecurus pratensis</i>)	Frequent
Sweet vernal-grass (<i>Anthoxanthum odoratum</i>)	Abundant
Cow parsley (<i>Anthriscus sylvestris</i>)	Rare
False oat-grass (<i>Arrhenatherum elatius</i>)	Occasional
Meadow brome (<i>Bromus commutatus</i>)	Occasional
Cuckooflower (<i>Cardamine pratensis</i>)	Rare
Grey sedge (<i>Carex divulsa</i> subsp. <i>divulsa</i>)	Rare
Hairy sedge (<i>Carex hirta</i>)	Rare
Common knapweed (<i>Centaurea nigra</i>)	Abundant
Creeping thistle (<i>Cirsium arvense</i>)	Rare
Spear thistle (<i>Cirsium vulgare</i>)	Rare
Cock's-foot (<i>Dactylis glomerata</i>)	Frequent
Common couch (<i>Elytrigia repens</i>)	Occasional
Great Willowherb (<i>Epilobium hirsutum</i>)	Rare
Hoary willowherb (<i>Epilobium parviflorum</i>)	Rare
Square-stalked willowherb (<i>Epilobium tetragonum</i>)	Rare
Cleavers (<i>Galium aparine</i>)	Rare
Cut-leaved crane's-bill (<i>Geranium dissectum</i>)	Occasional
Bristly Oxtongue (<i>Helminthotheca echioides</i>)	Rare
Yorkshire-fog (<i>Holcus lanatus</i>)	Abundant
Perforate St John's-wort (<i>Hypericum perforatum</i>)	Rare
Square-stalked St John's-wort (<i>Hypericum tetrapterum</i>)	Rare
Compact rush (<i>Juncus conglomeratus</i>)	Locally frequent
Soft rush (<i>Juncus effusus</i>)	Rare
Meadow vetchling (<i>Lathyrus pratensis</i>)	Occasional
Perennial rye-grass (<i>Lolium perenne</i>)	Rare
Marsh bird's-foot trefoil (<i>Lotus pedunculatus</i>)	Frequent
Corky-fruited water-dropwort (<i>Oenanthe pimpinelloides</i>)	Locally frequent
Timothy (<i>Phleum pratense</i>)	Occasional
Rough meadow-grass (<i>Poa trivialis</i>)	Occasional
Creeping cinquefoil (<i>Potentilla reptans</i>)	Occasional
Blackthorn (<i>Prunus spinosa</i>)	Rare - suckers
Fleabane (<i>Pulicaria dysenterica</i>)	Locally frequent
Meadow buttercup (<i>Ranunculus acris</i>)	Frequent
Creeping buttercup (<i>Ranunculus repens</i>)	Occasional
Bramble (<i>Rubus fruticosus</i> agg.)	Rare
Clustered dock (<i>Rumex conglomeratus</i>)	Frequent
Broad-leaved Dock (<i>Rumex obtusifolius</i>)	Rare
Wood dock (<i>Rumex sanguineus</i>)	Occasional
Goat willow (<i>Salix caprea</i>)	Rare - sapling
Tall fescue (<i>Schedonorus arundinaceus</i>)	Locally frequent
Hoary ragwort (<i>Senecio erucifolius</i>)	Occasional
Ragwort (<i>Senecio jacobaea</i>)	Rare
Hedge woundwort (<i>Stachys sylvatica</i>)	Rare
Lesser stitchwort (<i>Stellaria graminea</i>)	Occasional
Nettle (<i>Urtica dioica</i>)	Rare
Common vetch (<i>Vicia sativa</i>)	Occasional

No rare or protected plant species were present. The most interesting species present was the corky-fruited water-dropwort with a high abundance of plants in a small area (predominately distributed in the southern portion of the site adjacent to the ditch).



Plate 1 Taller grassland on north side



Plate 2 Shorter grassland on south side



Plate 3 Corky-fruited water-dropwort, an uncommon plant

3.2.2 Species-rich hedgerow

The southern and eastern boundaries of the Site comprise intact unmanaged species-rich hedgerows dominated by hawthorn *Crataegus monogyna* with blackthorn *Prunus spinosa*, Pendunculate oak *Quercus robur*, goat willow *Salix caprea*, field maple *Acer campestre*, hazel *Corylus avellana* and bramble *Rubus fruticosus*. The ground flora is characterised by the adjacent semi-improved grassland with abundant ruderal species such as nettle *Urtica dioica*. A dry ditch is present through the hedgerows which is free of vegetation resulting in much of the ground beneath the hedgerow being bare. The eastern hedgerow contains two mature oaks.

3.2.3 Species-poor hedgerow

The northern and western boundaries of the Site comprise intact managed species-poor hedgerows dominated by hawthorn with blackthorn, oak, and bramble. The ground flora is characterised by the adjacent semi-improved grassland with abundant ruderal species such as nettle and cleavers *Galium aparine*. A dry ditch is present through the hedgerows which is free of vegetation resulting in much of the ground beneath the hedgerow being bare. The northern hedgerow contains two semi-mature oaks and is fragmented by a field gate at its eastern extent.

3.3 Protected & Notable Species

3.3.1 Great Crested Newts

HBIC returned no records of great crested newts within 2km of the Site.

No ponds were identified within 500m of the site and as such great crested newts are concluded to be absent from the Site and are not considered further in this assessment.

3.3.2 Reptiles

HBIC returned five records of slow worm *Anguis fragilis* within 2km of the Site. The closest record is located 1.65km south of the site. A medium population of slow worm and low population of grass snake *Natrix natrix* was recorded within the Hampshire Farm site to the south in 2010 (WYG, 2010). These reptiles were translocated to the large area of mixed grassland and scrub to the east of the site.

The semi-improved grassland is suitable for foraging reptiles and there are more open areas for basking and denser areas suitable for refuge. The hedgerows offer suitability for hibernation and there is further suitable habitat adjacent immediately east of the site (as described above). Therefore the Site is considered to have high suitability for reptiles.

3.3.3 Bats

HBIC returned records of nine bat species within 2km of the site; serotine *Eptesicus serotinus*, Bechstein's bat *Myotis bechsteinii*, Daubenton's bat *Myotis daubentonii*, whiskered bat *Myotis mystacinus*, Natterer's bat *Myotis nattereri*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared bat *Plecotus auritus*. Additionally there were records of unidentified *Myotis*, pipistrelle, long-eared and bat species. The closest records are for serotine, noctule, soprano pipistrelle and unidentified *Plecotus* and *Myotis* species recorded 0.09km south west of the site. The closest record of Bechstein's bat is of a peak count of 26 individuals 0.28km north west of the site.

There are two mature oak trees located in the eastern boundary hedgerow which contained potential roost features. Each had a small number of features (small hazard beam and knot hole) and are considered to have low suitability for roosting bats. A dead tree is also located in the hedgerow. This is also considered to have low suitability due to small patches of lifted bark.

The semi-improved grassland field has some suitability for foraging bats, in particular species such as serotine, noctule and common pipistrelle which forage over open fields and parkland. The species-rich hedgerows also have suitability for foraging and also provide linear routes for commuting. Connectivity to habitats in the wider landscape is poor however with residential development to the west and south of the site. Suitability for Bechstein's bat is low with this species heavily associated with broadleaved woodland. The only woodland in the wider area is Southleigh Forest to the north west of the site. There is not habitat connectivity between the Site and forest to accommodate commuting Bechstein's bats and there is no suitable foraging habitat on site. Based on the small size of the site and limited connected habitat to the south and east the Site is considered to have moderate suitability for foraging and commuting bats.

3.3.4 Badger

HBIC returned no records of badger *Meles meles* within 2km of the site. No evidence of badger activity was noted such as setts, latrines or snuffle holes. The hedgerows do provide suitable areas for sett creation and the semi-improved grassland is suitable foraging habitat. The Site is therefore considered to have moderate suitability for badgers.

3.3.5 Hazel Dormice

HBIC returned no records of hazel dormice *Muscardinus avellanarius* within 2km of the site. The species-rich hedgerows do provide suitable habitat for hazel dormice, however the managed species-

poor hedgerows are considered to have poor suitability. Habitat connectivity is poor to the south where the species-rich hedgerow quickly becomes defunct. The species-poor hedgerow does extend east along Long Copse Lane however becomes patchy and defunct after approximately 50m. Given the limited connectivity and defunct hedgerow network south of Long Copse Lane the Site is considered to have low suitability for hazel dormice.

3.3.6 Otter & Water Vole

HBIC returned eight records of water vole *Arvicola amphibius* within 2km of the site and no records of otter *Lutra lutra*. The closest record is 1.55km south of the site from the River Ems. There are no watercourses on site and the dry ditches have negligible suitability, nor do they connect to the River Ems. As such otter and water vole are concluded to be absent and are not considered further in this assessment.

3.3.7 Birds

HBIC returned records of 78 bird species within 2km of the site, however the majority of these are associated with wetland habitats around Emsworth Harbour 2km south of the site. A summary of notable non-coastal records is given below.

Table 5 Summary of Notable Bird Records

Scientific Name	Common Name	Conservation Status	Number of Records
<i>Acrocephalus scirpaceus</i>	Reed Warbler	Hampshire BAP	1
<i>Alauda arvensis</i>	Skylark	NERC Section 41; BoCC Red List; Hampshire BAP	1
<i>Alcedo atthis</i>	Kingfisher	W&CA Schedule 1	4
<i>Branta bernicla</i>	Brent Goose	NERC Section 41; BoCC Red List; Hampshire BAP	2
<i>Cettia cetti</i>	Cetti's Warbler	W&CA Schedule 1, Hampshire BAP	7
<i>Circus aeruginosus</i>	Marsh Harrier	W&CA Schedule 1	1
<i>Circus cyaneus</i>	Hen Harrier	W&CA Schedule 1; NERC Section 41; BoCC Red List; Hampshire BAP	1
<i>Circus pygargus</i>	Montagu's Harrier	W&CA Schedule 1, Hampshire BAP	1
<i>Coccothraustes coccothraustes</i>	Hawfinch	NERC Section 41; BoCC Red List; Hampshire BAP	1
<i>Egretta garzetta</i>	Little Egret	Hampshire BAP	6
<i>Emberiza citrinella</i>	Yellowhammer	NERC Section 41; BoCC Red List	1
<i>Emberiza schoeniclus</i>	Reed Bunting	NERC Section 41; Hampshire BAP	1
<i>Falco peregrinus</i>	Peregrine	W&CA Schedule 1	4
<i>Falco subbuteo</i>	Hobby	W&CA Schedule 1; Hampshire BAP	2
<i>Fringilla montifringilla</i>	Brambling	W&CA Schedule 1	2
<i>Gallinago gallinago</i>	Snipe	Hampshire BAP	1
<i>Hydrocoloeus minutus</i>	Little Gull	W&CA Schedule 1	1

<i>Larus argentatus</i>	Herring Gull	BoCC Red List	1
<i>Larus fuscus</i>	Lesser Black-backed Gull	BoCC Red List	3
<i>Larus melanocephalus</i>	Mediterranean Gull	W&CA Schedule 1; Hampshire BAP	11
<i>Linaria cannabina</i>	Linnet	BoCC Red List; Hampshire BAP	1
<i>Merops apiaster</i>	Bee-eater	W&CA Schedule 1	1
<i>Milvus milvus</i>	Red Kite	W&CA Schedule 1; Hampshire BAP	10
<i>Motacilla cinerea</i>	Grey Wagtail	BoCC Red List	2
<i>Muscicapa striata</i>	Spotted Flycatcher	NERC Section 41; BoCC Red List; Hampshire BAP	2
<i>Numenius phaeopus</i>	Whimbrel	W&CA Schedule 1; NERC Section 41	3
<i>Pandion haliaetus</i>	Osprey	W&CA Schedule 1	3
<i>Panurus biarmicus</i>	Bearded Tit	W&CA Schedule 1; Hampshire BAP	1
<i>Passer domesticus</i>	House Sparrow	NERC Section 41; BoCC Red List	4
<i>Phoenicurus ochruros</i>	Black Redstart	W&CA Schedule 1; BoCC Red List	1
<i>Pluvialis squatarola</i>	Grey Plover	Hampshire BAP	2
<i>Poecile palustris</i>	Marsh Tit	BoCC Red List	5
<i>Pyrrhula pyrrhula</i>	Bullfinch	Hampshire BAP	3
<i>Regulus ignicapilla</i>	Firecrest	W&CA Schedule 1; Hampshire BAP	14
<i>Saxicola rubetra</i>	Whinchat	BoCC Red List; Hampshire BAP	2
<i>Streptopelia turtur</i>	Turtle Dove	NERC Section 41; BoCC Red List; Hampshire BAP	3
<i>Sturnus vulgaris</i>	Starling	BoCC Red List	4
<i>Sylvia undata</i>	Dartford Warbler	W&CA Schedule 1; Hampshire BAP	1
<i>Turdus philomelos</i>	Song Thrush	BoCC Red List; Hampshire BAP	3
<i>Turdus pilaris</i>	Fieldfare	W&CA Schedule 1; BoCC Red List	1
<i>Turdus viscivorus</i>	Mistle Thrush	BoCC Red List	1
<i>Tyto alba</i>	Barn Owl	W&CA Schedule 1	1

The species-rich hedgerows are likely to support a range of breeding passerines. No suitability or evidence of nesting raptors was observed within the mature trees on site. Given the small size of the Site it is considered to have negligible suitability for ground-nesting birds. Overall the Site is considered to have moderate suitability for breeding birds.

3.3.8 Invertebrates

HBIC returned records of 15 notable invertebrates within 2km of the site. Most are species associated with woodland or brownfield habitats which are not present on site. The semi-improved grassland does provide suitable habitat for invertebrates however it is considered unlikely to support significant numbers of notable species.



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 6 Importance of Ecological Features

Feature	Importance	Rationale
Chichester and Langstone Harbour	International	A designated Natura 2000 site for wintering birds.
Brook Meadow (Emsworth)	County	A statutory designated Local Nature Reserve.
SINCs	County	Nine local wildlife sites within the study area.
Semi-improved grassland	County	Diverse grassland designated as a SINC.
Species-rich hedgerows	Local	Mature hedgerows with limited connectivity.
Species-poor hedgerows	Site	Managed hedgerows of limited value.
Reptiles	Unknown	Site is of high suitability. Further surveys required.
Bats	Local	Site is of low suitability
Dormice	Local	Site is of low suitability
Breeding birds	Local	Site is of moderate suitability for widespread species
Invertebrates	Site	Site is of low suitability for notable species
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

A revised NPPF was issued on 19th February 2019 (Ministry of Housing Communities and Local Government, 2019) and currently supplements government Circular 06/2005, *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 170 of the NPPF also states that:

'Planning policies and decisions should contribute to and enhance the natural environment by:

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

The conservation and enhancement of wildlife is also specifically reference re: development within the National Parks or the Broads.

Paragraph 175 then goes on to confirm that:

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

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*



- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Regarding EcIA's and HRA's – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's and cSAC's themselves. In addition, when an application is being determined, Paragraph 177 clarifies that:

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

Paragraph 180 is also relevant as;

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:...

- c) *limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

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 Plan

The relevant local planning policy is Policy CS11 of the Havant Borough Council Core Strategy, March 2011. This policy states that Planning permission will be granted for development that:

1. *Ensures the key landscape and built form principles set out in the Havant Borough Townscape, Landscape and Seascape Character Assessment are protected and where possible enhanced by partnership working with developers, groups and the wider community.*
2. *Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.*



3. *Has particular regard to the following hierarchy of nature conservation designations within the borough (as identified on the Proposals Map):*
 - i. *Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar [International].*
 - ii. *Sites of Special Scientific Interest (SSSI) and National Nature Reserves [National].*
 - iii. *Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above [Local].*
4. *Protects and where appropriate enhances the borough's statutory and non- statutory heritage designations by appropriately managing development in or adjacent to conservation areas, listed buildings, scheduled ancient monuments, historic parks and gardens, archaeological sites, buildings of local historic or architectural interest.*
5. *Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation.*
6. *Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly on the coast, to reduce harm to nature conservation interests.*
7. *Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh.*
8. *Protects wildlife habitats and wildlife corridors to prevent the fragmentation of existing habitats and to allow species, for example Brent Geese, to respond to the impacts of climate change by making provision for habitat adaptation e.g. coastal managed realignment and species migration.*
9. *Maintains undeveloped gaps between the settlements of Emsworth/Havant; Havant/Waterlooville; Havant/Portsmouth; Emsworth/Westbourne and Leigh Park/Rowlands Castle as shown on the Proposals Map.*
10. *Protects the best and most versatile agricultural land that has the greatest potential for local food security.*
11. *Responds to the emerging evidence from the Solent Disturbance and Mitigation Project, the published recommendations, and future related research.*

The site lies adjacent to an area of open countryside on its western boundary which is allocated as Local Green Space in the Havant Borough Local Plan (Allocations) Adopted Version, July 2014. Policy AL8 of the Allocations Plan describes the policy for Local Green Spaces as follows: *Planning permission will be granted for development proposals that protect or enhance the Local Green Spaces, as shown on the Policies Map. Development proposals that would be harmful to these Local Green Spaces will not be permitted other than in very special circumstances.*

The site is also broadly within an area that is being considered for to meet the additional future housing requirements of Havant Borough. The Local Plan 2036 - Proposals for new housing development in the borough up to 2036 published in July 2016 proposes a New Urban Extension Site, at Emsworth including 166 dwellings north of Long Copse Lane; 5 dwellings to the rear of Redlands House, Long Copse Lane and 54 dwellings north of Hollybank Lane and Long Copse Lane.



4.4 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
- Killing of widespread reptiles



5.0 Discussion

5.1 Designated Sites

Natura 2000 Sites

Policy E5 of the adopted Local Plan (TVBC, 2016) requires that: Development that is likely to result in a significant effect, either alone or in combination, on an international or European nature conservation designation, or a site proposed for such designation, will need to satisfy the requirements of the Habitat Regulations. Therefore, it will be necessary for the details of the proposed development to take into consideration the potential effects on the following Natura 2000 Sites. Furthermore, Regulation 61 of the Habitats Regulations 2010 (as amended) requires that the local planning authority must undertake a Habitats Regulations Assessment (HRA) of the effects of any plan or project in consultation with Natural England and must not give consent for any development or operations that may result in an adverse effect on the integrity of a European protected site.

Chichester and Langstone Harbours SPA, Ramsar and SSSI

The Site Improvement Plan (SIP) for these Solent sites (Natural England, 2014) lists 16 separate threats and pressures to the designated sites. These include coastal squeeze, climate change, coastal fisheries, invasive species, mineral extraction, commercial fisheries, air pollution and loss of habitat to development. The proposed development at the site is unlikely to affect the designated sites directly in any of these ways. Furthermore, as noted the ditches on site do not connect to the River Ems and as such does not present a hydrological connection with the Natura 2000 Site. However, the proposed residential development does have the potential to have likely significant effects on the designated sites through one pathway:

1. Recreational disturbance – disturbance to the qualifying bird species populations resulting from recreational visits from the residents of the proposed development.

The Site is located 2.3km from the SPA and there are no footpath connections between them. As such a significant alone effect from recreation as a result of the development is considered unlikely. A key outcome of the SDMP is the identification of a zone extending for 5.6km around the Solent designations which the research identifies that 75% of visitors to the Solent designations originate from. Consequently, Natural England has identified that all developments that result in a net increase in residential development within this 5.6km zone should be considered to have a likely significant effect on the designations when considered in combination with other plans or projects that would deliver increased residential development. The site lies within this zone and therefore is likely to result in significant effects on the Solent designated sites through recreational visits. The SDMP Interim Framework, provides a mechanism for mitigating this effect through a financial contribution.

An additional pathway to a likely significant effect is increased nitrogen discharge via surface water and waste water (via Budds Farm WwTW). In accordance with Natural England guidance and local policy, the development will be required demonstrate nutrient-neutrality to avoid an adverse effect on the integrity of Chichester and Langstone Harbours.



Local Nature Reserve

Brook Meadow (Emsworth) LNR is located 1.55km south of the site. There are no hydrological connections between the sites, or other pathways which could result in direct adverse effects such as water or airborne pollution. Brook Meadow is managed for public access and there is potential for increased recreation as a result of the development. However given the distance between the sites, lack of direct footpath connections and small number of dwellings proposed adverse alone effects as a result of recreation are considered unlikely. The management of the site for visitor access is considered likely to mitigate for any in-combination effects.

Sites of Importance for Nature Conservation

Land East of 54 Long Copse Lane

The site was originally designated as a SINC by Hampshire Biodiversity Information Centre (HBIC) as 'Land East of 54 Long Copse Lane' based on a survey in 2011. The site was originally surveyed on 23 August 2011 after the meadow had been mown. In terms of *British Plant Communities, Volume 3 grasslands and montane communities* (Rodwell et al., 2011), it was described as a semi-improved Lowland Meadow MG5a *Cynosurus cristatus* – *Centaurea nigra* (crested dog's-tail – common knapweed) grassland, *Lathyrus pratensis* (Meadow vetchling) subcommunity. It was concluded to qualify as a habitat of principal importance (HPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. A total of 45 plants were recorded including four plants that were regarded as acid/neutral grassland indicator species.

The grassland was a good, relatively species-rich example of Lowland Meadow MG5a *Cynosurus cristatus* – *Centaurea nigra* grassland, *Lathyrus pratensis* subcommunity as originally recorded. The meadow should now be regarded as unimproved neutral grassland rather than semi-improved with many species of unimproved grasslands such as corky-fruited water-dropwort, fleabane, grey sedge, hoary ragwort, knapweed, marsh bird's-foot trefoil, meadow brome, meadow vetchling, perforate St John's-wort and square-stalked St John's-wort.

A notable feature is the abundance of corky-fruited water-dropwort. Fifteen of the 45 plants previously recorded were not re-found, of which the most notable absentees were creeping Jenny *Lysimachia nummularia*, pepper saxifrage *Silene silaus* and stone parsley *Sison amomum* (all damp grassland species which might still be present in low quantity – the site was noticeably wetter on the previous visit). A few previously-recorded species which are indicative of open ground or disturbance are more likely to have gone (such as Canadian fleabane *Conyza canadensis*). However, another 21 typical neutral grassland plants were recorded. The differences between the surveys are most likely to be due to a combination of the differences in management, the dry 2018 season and earlier time of survey rather than changes in the vegetation.

The site meets the brief published criteria for selection of SINC in Hampshire (Criterion 2A Neutral/acid/calcareous grassland Agriculturally unimproved grasslands; <http://documents.hants.gov.uk/biodiversity/SINCCriteria.pdf>). The site is below the size threshold to merit consideration as a Site of Special Scientific Interest (SSSI) even though of a grassland type of high botanical value ([http://jncc.defra.gov.uk/pdf/SSSI_Chptr03_revision_2017\(v2.0\).pdf](http://jncc.defra.gov.uk/pdf/SSSI_Chptr03_revision_2017(v2.0).pdf)). It is worth noting that the larger area of grassland to the east of the site appears of comparable quality and composition, although it has not been designated as a SINC. This area is likely to be more sustainable due to its larger size.



Policy CS11 of the Havant Borough Council Core Strategy, March 2011 states that development will be permitted if it can demonstrate that it: *"Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland"*.

The proposed development will result in the loss of locally valuable grassland habitat. However, it is proposed that the larger area east of the site (under the ownership of Havant Borough Council) is enhanced and managed to provide a larger, more sustainable area of this habitat. This will include translocating turfs from the site. Full details are provided in the Long Copse Lane Council Meadow Management Plan (WYG, 2021). With the application of mitigation it is considered that the development will be in accordance with Policy CS11.

Other SINCS

Other SINCS are located over 0.5km from the Site with no hydrological connections and are unlikely to be affected by noise, dust, air pollution or other construction-phase effects. Increased recreation is possible, in particular to Southleigh Forest which is 0.55km to the north west and contains a public right of way. Although increased recreation could have an adverse effect on the habitats for which the woodland is designated a SINC, it is considered that this will not be significant due to the small size of the proposed development.

5.2 Habitats

Neutral Semi-Improved Grassland

See discussion above under Land East of 54 Long Copse Lane.

Species-Rich Hedgerow

No loss of species-rich hedgerow is proposed as part of the development. The hedgerows will be protected by a 3-5m buffer of retained semi-improved grassland. Construction-phase effects will be avoided through the use of protective fencing (heras or similar). The grassland buffer will avoid occupation-phase effects such as inappropriate management, fly tipping and damage to root systems.

Species-Poor Hedgerow

A small area of species poor hedgerow removal is proposed in order to allow access off Long Copse Lane at the centre of the site. This removal will be compensated through infill planting of the existing field gate at the north east corner of the site using native woody species.

5.3 Protected & Notable Species

Reptiles

The site has high suitability for reptiles. It is therefore recommended that a presence/likely absence survey is completed in order to confirm whether reptiles are on site and to estimate the population size. This should comprise the placement of artificial refuges on site at a minimum density of 10/ha



followed by seven survey visits to check refuges for the presence of reptiles. Survey visits should be between March and September and during dry conditions between 9-18°C.

If reptiles are recorded it is proposed that they are displaced to the semi-improved grassland buffer which is well-connected to other suitable habitat off-site. The suitability of this approach will be confirmed following completion of the presence/likely absence survey.

Subsequent reptile surveys recorded peak counts of three slow worms and five common lizards on site. Therefore it is proposed that displacement to the eastern site boundary (where a 4m habitat strip will be retained) will be suitable to avoid killing or injury of reptiles during construction.

Bats

Two mature trees and one dead tree have been identified with low bat roosting suitability. The site has also been assessed as having moderate suitability for foraging and commuting bats. The main habitats suitable for bats are to be retained as part of the development; the mature trees and species-rich hedgerows. The semi-improved grassland buffer will allow continued use of these corridors by bats. There will be a loss of potential foraging habitat in the form of semi-improved grassland, however the majority of bats identified in the desk study are known to utilise residential gardens for foraging, therefore this is not anticipated to be a significant adverse effect.

Based on the retention of these features, no further surveys for bats are proposed, provided that any lighting required is carefully designed to avoid illumination of the retained habitat buffers.

Hazel Dormice

The site has been assessed as having low suitability for dormice due to the lack of local records, and the poor availability and connectivity of suitable habitat in the surrounding area. The species-rich hedgerows are to be retained and protected as part of the proposed development, with a buffer to avoid disturbance. Permeable boundary fencing to plots will prevent inappropriate management of hedgerows or buffers. The only works with the potential to have an adverse effect on hazel dormice are the creation of a site access in the northern species-poor hedgerow which will result in the loss of circa 3m of hedgerow.

Although it is considered unlikely that hazel dormice are present on site, it is recommended that hedgerow removal for the site access is completed under a precautionary working method statement to avoid adverse effects to dormice, or an offence under the Habitats Regulations.

Breeding Birds

The site has been assessed as having moderate suitability for breeding birds. The species-rich hedgerows are to be retained and protected as part of the proposed development. The only works with the potential to have an adverse effect on breeding birds are the creation of a site access in the northern species-poor hedgerow.

It is recommended that hedgerow removal works are completed outside the nesting bird season (i.e. October – February). Any works outside this period should be preceded by a nesting bird check by a suitably qualified and experienced ecologist (no more than 24 hours in advance). Any active nests should be retained in situ and protected with a suitable buffer of vegetation (5m minimum) until all young have fledged.



6.0 Summary & Recommendations

6.1 Designated Sites

- Financial contribution to SDMP in order to mitigate for adverse effects upon Chichester and Langstone Harbour SPA.
- Mitigation to achieve nutrient-neutrality.
- Enhancement and management of adjacent meadow to compensate for the loss of SINC habitat.

6.2 Habitats

- Retention and protection of species-rich hedgerows with semi-improved grassland buffer.
- Infill of field gate with native woody species to compensate for loss of species-poor hedgerow.

6.3 Protected & Notable Species

- Reptile presence/likely absence survey (slow worm and common lizard present).
- Lighting design to avoid illumination of retained habitat buffers.
- Hedgerow removal to take place under precautionary working method statement for dormice.
- Removal of hedgerow outside bird nesting season, or following nesting bird check.



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FIGURES

Figure 1 – Phase 1 Habitat Plan



Legend

Boundaries

-  Species-Poor Hedgerow
-  Species-Rich Hedgerow with Trees

Habitats

-  Neutral Semi-Improved Grassland

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Long Copse Lane

Phase 1 Habitat Plan

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Project No: A102878	Office 45	Type 94	Drawing No. Figure 1
Revision			

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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 2010 (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. 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>
Curllew, Stone	<i>Burhinus oedecnemus</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>	Serim	<i>Serinus serinus</i>
Eagle, White-tailed	<i>Haliaeetus 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>
Invasive plant species listed in Schedule 9			
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>Smyrnium 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.