

**PURBROOK PARK SCHOOL, STAKES ROAD,
WATERLOOVILLE, HAMPSHIRE**

PRELIMINARY ECOLOGICAL APPRAISAL

Final Document

October 2015

Preliminary Ecological Appraisals • Phase 1 and 2 Surveys • NVC • EcIA • Management Plans • Protected Species Licensing
Habitats • Badger • Bats • Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

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ECOSA Quality Assurance Record

This report has been produced in accordance with Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing 2015¹. The Preliminary Ecological Appraisal was undertaken in accordance with the following guidelines:

- Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Peterborough, UK²
- Hundt L. (2012) Bat Surveys: Good Practice Guidelines, (2nd Ed.), Bat Conservation Trust
- Bright et al. (2006) The Dormouse Conservation Handbook (2nd Ed.). English Nature, Peterborough, UK
- Froglife (1999) Reptile Survey: A Guide to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation, Froglife Advice Sheet 10
- English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature, Peterborough

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¹ Chartered Institute of Ecology and Environmental Management (2015). *Guidelines for Ecological Report Writing*. Technical Guidance Series. <http://www.cieem.net/publications/23/ecological-report-writing>

² The standard JNCC Phase 1 habitat survey methodology involves the production of a Phase 1 map showing the location and extent of habitat types, however, given the limited size and complexity of the site surveyed a Phase 1 habitat map has not been produced in this instance.

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Map 1 Site Location

Appendix 1 Sites Designated for Nature Conservation

Appendix 2 Protected Species Legislation

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EXECUTIVE SUMMARY

- An extended Phase 1 ecological survey was undertaken on 26th August 2015 at Purbrook Park School, Stakes Road, Waterlooville, Hampshire PO7 5LZ. The exact details of the proposed works were unknown at the time of writing, however, are understood to comprise redevelopment of the site to provide new residential housing with associated landscaping and access.
- The Preliminary Ecological Appraisal, comprising the Phase 1 survey and desktop study, was undertaken to ascertain the potential for protected habitats and species to be present within the site.
- The site is situated within the town of Purbrook, approximately 2 kilometres (km) south of Waterlooville, 2km west of Leigh Park and 1km west of the A3 motorway, in an area predominately comprising residential development. The site itself consists of a single former playing field measuring approximately 0.72 hectares (ha) enclosed by wire mesh fencing. The site is bounded to the north, east and west by existing residential development and to the south by Stakes Road.
- The site supports habitats of low ecological value that have potential to support a number of protected species including foraging bats, nesting birds and common species of reptile.
- Phase 2 bat transect and reptile surveys are recommended in order to establish the usage of the site by these species groups.
- Vegetation clearance will be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist will be present immediately prior to clearance to check vegetation. Active nests and an undisturbed 5-10m buffer will be left until nesting ends naturally.
- If works have not commenced by August 2017, or the proposal for the site change significantly, it is recommended that the ecological assessment is updated. This is because many of the species considered during the current survey are highly mobile and the ecology of the site is likely to change over this period.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been contracted by Persimmon Homes South Coast to undertake a Preliminary Ecological Appraisal at Purbrook Park School, Stakes Road, Waterlooville, Hampshire, PO7 5LZ. The site is centred on National Grid Reference (NGR) SU6828307798 (**Map 1**).

This report presents the findings of the Preliminary Ecological Appraisal carried out by ECOSA during August 2015.

1.2 Aims and Scope of Report

This report is based on a Phase 1 field survey and desktop study which is aimed at assessing the suitability of the site and its immediate surrounds to support notable habitats and protected species. This information allows an initial assessment of the biodiversity value of the site to be made, potential constraints to be identified, and mitigation and compensation measures to be developed.

1.3 Site Setting and Description

The Purbrook Park School site is situated in the South Coast Plain & Hampshire Lowlands Natural Area, described by Natural England as follows³:

"The landscape of the South Coast Plain and Hampshire Lowlands is split between the generally open, often featureless landscape of the coastal plain and the more varied landscape in the west. The Natural Area contains a number of nature conservation features. Although relatively small in extent, the south-facing slopes of Portsdown Hill support some high quality chalk grassland, and the chalk rivers of the Itchen and Test flow through the Natural Area, supporting fine examples of threatened habitat and several key species. The floodplains of the Rivers Test and Itchen contain some botanically rich neutral grassland and elsewhere in the Natural Area fen and fen-meadows occur, especially where chalk springs arise at the foot of the downs."

The site is situated within the town of Purbrook, approximately 2 kilometres (km) south of Waterlooville, 2km west of Leigh Park and 1km west of the A3 motorway, in an area predominately comprising residential development.

The wider area comprises the towns of Purbrook and Waterlooville with open countryside comprising areas of agricultural fields and occasional blocks of woodland to the west. Langstone Harbour also lies approximately 2km to the south of the site.

³ Natural Areas are defined by Her Majesty's Stationery Office as 'biogeographic zones which reflect the geological foundation, the natural systems and processes and the wildlife in different parts of England, and provide a framework for setting objectives for nature conservation' (Biodiversity: The UK Steering Group Report, HMSO, 1995).

The site itself consists of a single former playing field measuring approximately 0.72 hectares (ha) enclosed by wire mesh fencing. The site is bounded to the north, east and west by existing residential development and to the south by Stakes Road.

1.4 Site Proposals

The exact details of the proposed works were unknown at the time of writing, however, are understood to comprise redevelopment of the site to provide new residential housing with associated landscaping and access. The exact timescales associated with the construction of the development are currently unknown.

2.0 METHODS

2.1 Introduction

This section details the methods used during the Preliminary Ecological Appraisal undertaken at Purbrook Park School, Stakes Road, Waterlooville, Hampshire.

2.2 Desk-Based Assessment Methods

2.2.1 Biological Records Centre

Hampshire Biodiversity Information Centre (HBIC) was consulted on 9th September 2015 for information on non-statutory designated sites and protected and notable species within a 1km radius of the site. Bat records were provided within a 2km radius of the site. Relevant protected species records from within the last 10 years are detailed in this report.

2.2.2 Multi-Agency Geographic Information for the Countryside (MAGIC)

The Multi-Agency Geographic Information for the Countryside (MAGIC)⁴ database was accessed on 9th September 2015 in order to establish the presence of statutory designated sites located within the vicinity of the site. This included a search for all internationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites within 2km of the site and a search for nationally designated sites including Sites of Special Scientific Interest (SSSIs), Local Nature Reserves (LNRs) and National Nature Reserves (NNRs) within 1km of the site. Where necessary the search areas were extended to consider potential impacts beyond these search distances.

2.3 Phase 1 Field Assessment

The Phase 1 ecological field survey was carried out on 26th August 2015. The survey involved a walkover of the site to identify the habitat types present and to record evidence of protected species, with particular reference to badger *Meles meles*, bats, dormouse *Muscardinus avellanarius*, breeding birds, reptiles, great crested newt *Triturus cristatus* and terrestrial invertebrates. Details of the species-specific survey methods are given below.

2.3.1 Vegetation Survey Methods

An assessment was made of all areas of vegetation within the site using the standardised Phase 1 survey methodology⁵. This involved a walkover survey to identify broad vegetation types, which were then classified against Phase 1 habitat types. A list of characteristic plant species for each vegetation type was also compiled and any invasive species encountered during the survey are noted.

⁴ <http://defra.magic.gov.uk>

⁵ JNCC (2010) Handbook for Phase 1 habitat survey: A technique for environmental audit – Field manual

2.3.2 Bat Survey Methods

An assessment was made of the suitability of trees on the site and immediately on the site boundary to support roosting bats based on the presence of features such as holes, cracks, splits, loose bark and ivy cladding. An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The survey conformed to current Bat Conservation Trust guidelines⁶.

2.3.3 Badger Survey Methods

The survey involved a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity. Particular emphasis was placed on locating badger setts, paths, and signs of territorial activity such as latrine sites both on-site and within immediately adjacent areas where access was possible.

2.3.4 Dormouse Survey Methods

The assessment for the potential of the site to support dormouse was based on an assessment of habitat features that may indicate that dormice are present on the study area. This includes the presence of food sources such as common hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum*. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features for determining the potential presence of dormice.

2.3.5 Bird Survey Methods

The assessment of breeding birds and wintering birds on the site was based on the suitability of habitat present, evidence of nesting such as old or currently active nests and the presence of bird species that may potentially nest within the available habitat.

2.3.6 Reptile Survey Methods

The reptile survey was based on an assessment of the suitability of habitat present within the site to support a population of common reptiles. Reptiles particularly favour scrub and grassland interfaces and the presence of these is a good indication that reptiles may be present on-site. In addition, reptiles may utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

2.3.7 Great Crested Newt Survey Methods

The assessment of the site to support great crested newts included establishing the presence of suitable aquatic habitats such as ponds within or adjacent to the site and the presence of suitable terrestrial habitat. Ponds that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species.

⁶ Hundt L (2012) *Bat Surveys: Good Practice Guidelines*, 2nd edition. Bat Conservation Trust (BCT), London

In addition, online mapping resources at a minimum scale of 1:25,000 were used to identify the presence of ponds or other waterbodies within a 500 metre (m) radius of the site. The 500m is a standardised search radius to assist in the assessment of the potential of a site and its surrounding habitat to support this species, based on current Natural England guidance⁷.

2.3.8 Invertebrate Survey Methods

An assessment was made of the site for its potential value to support diverse communities of invertebrates or any Biodiversity Action Plan (BAP) or scarce species. The assessment was made based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, the presence of varied woodland structure and sunny woodland edges with a diverse flora, presence of ponds and water courses and the presence of free draining soil exposures. During the Phase 1 survey there was no attempt made to identify species present and where a site supports features that may be of importance to invertebrates then further Phase 2 surveys may be required to assess the importance of the site.

2.4 Phase 1 Survey Details

The extended Phase 1 field survey was carried out by Edward Venables of ECOSA on 26th August 2015. The weather conditions were rain, overcast with approximately 100% cloud cover, an ambient temperature of 17°C and light easterly breeze.

During the Phase 1 survey the surveyor was equipped with a ladder, 10x40 binoculars, a high powered torch and a digital camera.

2.5 Phase 1 Survey Limitations

It is not always possible to provide definitive assessments of a species' presence/likely absence at a site and so in the absence of direct evidence, assessments and recommendations are based on the presence of suitable habitat within/adjacent to a site and the results of species records within the desk study data.

It should be noted that at the time of the preparation of this report the full extent of the development works were not known and therefore the impacts and mitigation/compensation measures presented are entirely provisional at this stage. There will be a requirement to consider these elements in more detail as the project progresses.

⁷ English Nature (2001) Great Crested Newt Mitigation Guidelines. Peterborough

2.6 Initial Protected Species Assessment

Details of the assessment criteria used to determine the ecological value of on-site attributes during the Phase 1 survey is outlined below. During a Phase 1 survey the assessment criteria is based on the potential for the site to support the species considered, this is usually based on the on-site habitat features and their suitability for the species considered. However, in many cases Phase 2 surveys will be required to assess the status of species and hence the importance of a population at the site, therefore the assessment of value should be considered a provisional assessment.

2.7 Criteria used to Assess Ecological Value

The ecological values provided within this report are based around both professional judgement and current published relevant guidance, including information sources such as *A Nature Conservation Review*⁸ and *Guidelines for Ecological Impact Assessment in the United Kingdom*⁹. Values provided are within the context of the site itself.

2.8 Criteria used to Assess Ecological Potential

Table 1 defines the criteria used to assess the potential of the site and its trees to support protected species, based on the habitat characteristics of the site..

⁸ Ratcliffe, D. (1977) *A Nature Conservation Review*. Cambridge University Press

⁹ IEEM (2006) *Guidelines for Ecological Impact Assessment in the UK*

Table 1: Criteria used to assess ecological potential

	Bats ¹⁰	Other Protected Species ¹¹
	Tree Assessment	
Species Present	In some instances, bat presence can be confirmed from trees e.g. where staining or droppings are visible; where roosting bats have been observed entering/emerging from a tree; or where roosting bats can be heard.	The presence of a protected species can sometimes be confirmed by evidence recorded, for example guard hairs or latrines for badger or hazel nuts gnawed in the characteristic style for dormice.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the status of the species present.	
High Potential	Trees with features such as loose bark, splits and deep or extensive holes suitable for roosting bats. High potential trees are generally large and/or mature specimens.	On-site habitat is of high quality for a species or species group. The site is within or near a geographic stronghold. Good quality surrounding habitat and good connectivity.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.	
Medium Potential	This category includes trees with some interest for tree-roosting bats such as broken snags, some flaking bark, a covering of ivy or shallow holes.	On-site habitat is of moderate quality, providing most of the species/species group requirements. Limiting factors may include small habitat area or disturbance.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.	
Low Potential	Low potential trees have some, although generally limited potential to support tree-roosting bats, or ivy may obscure roost features.	On-site habitat is of poor to moderate quality for the species or group. Presence cannot be discounted on the basis of distribution, isolation, surrounding habitats, etc.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.	
Negligible Potential	Trees that provide few or no features with bat roosting potential.	Site includes very limited or poor quality habitat for the species /group; surrounding habitat is unlikely to support wider populations.
	Further Phase 2 surveys are unlikely to be required as species is unlikely to be present.	

¹⁰ The criteria are an attempt to qualify the potential for a given building or tree to support roosting bats and are to a degree subjective. Bats may make use of a single feature on an otherwise unsuitable building or tree and therefore an assessment of bat potential cannot solely be based on the quantity of potential roost features present.

¹¹ Badger, dormouse, birds, reptiles, great crested newt, invertebrates, other notable species, vegetation

3.0 RESULTS

3.1 Introduction

This section details the results of the Preliminary Ecological Appraisal undertaken at Purbrook Park School, Stakes Road, Waterlooville, Hampshire.

3.2 Desktop Study

3.2.1 Protected Species

Results from HBIC showed that a number of protected species have been recorded within a 1km radius of the site and a number of bat species within a 2km radius of the site. These are discussed further within the relevant results section, below¹².

3.2.2 Statutory and Non-statutory Designated Sites

Consultation with the MAGIC website and HBIC revealed that there are no statutory sites within 2km of the site boundary and fourteen non-statutory designated sites of nature conservation situated within a 1km radius of the site. Further information on sites designated for nature conservation is provided in **Appendix 1**.

Table 2: Non-statutory designated sites located within a 1km radius of the site.

Designation	Name	Approximate Relative Location	Reason for Designation
SINC	Newlease Copse, Havant	320m north	The site is designated for the presence of ancient semi-natural woodland.
SINC	Stakes Coppice Remnant 1	330m north	The site is designated for the presence of other woodland where there is a significant element of ancient semi-natural woodland surviving and for its presence in an area otherwise deficient in such interest.
SINC	Sandy Dell	375m south west	The site is designated for the presence of ancient semi-natural woodland.
SINC	Gundymoor Wood (West)	520m east	The site is designated for the presence of ancient semi-natural woodland.
SINC	Johnston's Coppice	570m east	The site is designated for supporting ancient semi-natural woodland and a population of dormouse.
SINC	Gundymoor Wood (Main)	650m east	The site is designated for the presence of ancient semi-natural woodlands.
SINC	Meadow Adjacent to Johnston's Copse	745m east	Ancient semi-natural woodlands, semi-improved grasslands which retain a significant element of unimproved grassland, wetlands of unimproved and waterlogged (seasonal or permanent) conditions and for supporting a population of dormouse.
SINC	Stakes Coppice Remnant 2	800m north east	The site is designated for woodland where there is a significant element of ancient semi-natural woodland surviving

¹² The full data set is available on request from ECOSA.

Designation	Name	Approximate Relative Location	Reason for Designation
SINC	Portsmouth Golf Course West	865 metres south	The site is designated for semi-improved grasslands which retain a significant element of unimproved grassland and, grasslands which have become impoverished through inappropriate management but which retain elements of relic unimproved grassland to enable recovery.
SINC	Littlepark Wood (West)	865m east	The site is designated for supporting ancient semi-natural woodland, other semi-natural woodland that comprise of important community types of restricted distribution in the County and for supporting a population of dormouse.
SINC	Purbrook Park Wood	965m south	The site is designated for the presence of ancient semi-natural woodland.
SINC	Frank's Coppice	990m north	The site is designated for woodland where there is a significant element of ancient semi-natural woodland surviving
SINC	Stakes Coppice Remnant 6	1000m north	The site is designated for the presence of ancient semi-natural woodland.
SINC	Hulbert Road Meadow	1000m east	The site is designated for supporting grasslands which have become impoverished through inappropriate management but which retain elements of relic unimproved grassland to enable recovery and for supporting a population of dormouse.

In addition, Chichester and Langstone Harbour SPA / Ramsar site and Solent Maritime SAC is situated approximately 2.6km to the south-east of the site. These sites are designated for their internationally important assemblages of wetland birds and wetland habitats.

3.3 Vegetation Survey Results

The vegetation within the site is described here in general terms using Phase 1 habitat survey terminology and referring to dominant, characteristic and other noteworthy species in each vegetation type within the survey area. The habitat types on site consist of:

- Scattered scrub;
- Poor semi-improved grassland;
- Species-poor intact hedgerow;
- Tree lines.

3.3.1 Scattered Scrub

Scrub is present at field boundaries along the northern and western edges below treelines (**Figure 1**). Species recorded within this habitat are dominated by bramble *Rubus fruticosus* aggregate with other species recorded including hedge bindweed

Calystegia sepium, snowberry *Symphoricarpos albus*, common nettle *Urtica dioica*, hogweed *Heracleum sphondylium* and gorse *Ulex europaeus*.



Figure 1: Bramble scrub located to the east of the site

3.3.2 Poor Semi-improved Grassland

The former school playing field covers the majority of the site and is dominated by ruderal species with some garden and agricultural escapees (**Figure 2** and **Figure 3**). Species recorded within the habitat include sunflower *Helianthus* genus, greater plantain *Plantago major*, creeping cinquefoil *Potentilla reptans*, gorse *Ulmus* species, yarrow *Achillea millefolium*, common vetch *Vicia sativa*, broad-leaved dock *Rumex obtusifolius*, ragwort *Senecio jacobaea*, white clover *Trifolium repens*, creeping buttercup *Ranunculus repens*, common knapweed *Centaurea nigra*, rapeseed *Brassica napus*, ribwort plantain *Plantago lanceolata*, spear thistle *Cirsium vulgare*, smooth sow-thistle *Sonchus oleraceus*, Yorkshire fog *Holcus lanatus*, perennial rye grass *Sonchus arvensis*, fat hen *Chenopodium album*, red clover *Trifolium pratense*, cock's foot *Dactylis glomerata*, doves-foot cranesbill *Geranium molle*, mayweed *Anthemis* genus and dandelion *Taraxacum officinale* aggregate.



Figure 2: North-western view of field showing areas of bare ground



Figure 3: North-eastern view of field

3.3.3 *Species-poor Intact Hedgerow*

The hedgerow is located along the southern boundary of the site and is dominated by hawthorn (**Figure 4**). The southern side of the hedgerow is managed along a footpath. The species here include sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna* and ash *Fraxinus excelsior*.



Figure 4: Southern boundary hedgerow

3.3.4 *Tree Lines*

The treeline along the northern and eastern boundary of the site is comprised of semi-mature and mature trees (**Figure 5**). Species recorded include sycamore, holly *Ilex aquifolium*, cherry laurel *Prunus laurocerasus*, pine *Pinus* species, gorse and hawthorn.



Figure 5: Treeline in north of site

3.3.5 *Summary*

The site consists predominately of the former playing field which supports common and widespread species including a number of escapes and early recolonising species. The features of relatively greater ecological interest at the site level are the semi-mature and mature tree forming the boundaries of the site. Overall the habitats within the site are considered to have **low ecological value**.

3.4 Bat Survey Results

3.4.1 Bats - Tree Assessment

The mature trees on site and immediately adjacent to the site boundary were not recorded as supporting any obvious roosting features and therefore are unlikely to support roosting bats. More suitable bat roosting habitat is present in the wider area in the form of woodlands which are present. The site is considered to have **negligible potential** for supporting roosting bats.

3.4.2 Bats - Foraging and Commuting Habitat

The semi-mature and mature treelines at the boundaries of the site provide some suitable opportunities and resources for foraging and commuting bats. The site contains only limited connectivity to similar suitable habitats in the surrounds and is in a generally urbanised location. Higher quality foraging and commuting habitat is situated in the wider area in the extensive areas of ancient woodland and mature hedgerow network which is present. A number of records of bat species were returned by HBIC as part of the desktop study the nearest of which was for common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* recorded approximately 440m south-east of the site in 2011. The site is assessed as having **medium potential** for supporting foraging and commuting bats.

3.5 Badger Survey Results

No evidence of badgers was recorded during the survey. The site provides some suitable foraging habitat for the species in the areas of grassland and hedgerows which are present. The boundary features provides some limited opportunities for sett building given the cover they provide. Habitats in the wider area in the form of agricultural fields and woodland are likely to provide suitable habitat for badger. No records of badger were returned by HBIC as part of the desktop study undertaken. Overall this site is assessed as having **low potential** for supporting badgers.

3.6 Dormouse Survey Results

The habitat within the site is largely unsuitable for supporting dormouse with the boundary features lacking the diversity of food resources which the species generally requires with no connectivity to any other suitable offsite habitats in the vicinity. More suitable habitat is present in the wider area with a number of SINC's in the vicinity known to support dormouse populations. A number of records of dormouse were returned by HBIC as part of the desktop study undertaken all of which were recorded within the 1km OS grid square to the south-east of the site. The site is assessed as having **negligible potential** for supporting dormouse overall.

3.7 Bird Survey Results

The boundary trees and hedgerows on site provide excellent nesting opportunities for breeding birds; the vegetation also provides suitable resources for foraging. A number of records of birds were returned by HBIC as part of the desktop study including records of brent goose *Branta bernicla* within 1km of the site, the latest record being from 2012. However, the site is enclosed and surrounded by development, thus lacking the more open vistas allowing predator vigilance which brent geese generally require. The site is also not listed within the Solent Waders and Brent Goose Strategy 2010^{13,14}. The site is considered to have **high potential** for breeding birds and **negligible potential** for wintering birds.

3.8 Reptile Survey Results

The site contains areas of unmanaged vegetation and scrub with provides suitable foraging and refuge opportunities for common species of reptile. However, the site is surrounded by built form and generally lacks connectivity to other suitable habitat in the surrounds. No records of reptiles were returned by HBIC as part of the desktop study undertaken. The site is considered to have **medium potential** for supporting reptiles.

3.9 Great Crested Newt Survey Results

No waterbodies are present within the site itself. A review of online 1:25,000 OS mapping and aerial imagery revealed two off-site waterbodies within 500m of the boundary, details of which are provided in **Table 3**.

Table 3: Waterbodies located within a 500m radius of the site

Approximate Distance and Direction from Site Boundary	Waterbody Description	Suitability for Supporting Great Crested Newt
40m north	A review of aerial photography indicates a small garden pond.	The suitability of the pond for supporting great crested newt is currently unknown as a detailed assessment was not possible as part of the site survey. However, the pond appears to be a typical garden pond and isolated from other ponds in the vicinity. Therefore, it is considered unlikely to be suitable for supporting great crested newt.

¹³ King (2010) Solent Waders and Brent Goose Strategy 2010. Hampshire and Isle of Wight Wildlife Trust

¹⁴ The Solent Waders and Brent Goose Strategy is a non-statutory document which provides advice in relation to strategic planning and development proposals in relation to internationally important population of brent goose and waders within and around the Special Protection Areas and Ramsar sites of the Solent coast. The strategy identifies those sites supporting these species and those which may have potential for supporting these species.

Approximate Distance and Direction from Site Boundary	Waterbody Description	Suitability for Supporting Great Crested Newt
360m north-east	A large circular pond, fed by three drainage channels understood to be a SuDs feature of the adjacent development.	The waterbody is considered to be largely unsuitable for great crested newt as a result of the limited connectivity to suitable terrestrial habitat and lack of other ponds in the locality. The waterbody generally lack suitable egg laying vegetation for great crested newt.

The large pond is separated from the site by residential development and roads and therefore is unlikely to be connected to the onsite terrestrial habitat and is well removed from the site. Given the isolated nature of the single garden pond identified it is considered that this is highly unlikely to support breeding great crested newt. The terrestrial habitat is of moderate quality for great crested newts. No records of great crested newt were returned by HBIC as part of the desktop study undertaken. Overall the site is considered to have **negligible potential** for supporting great crested newt.

3.10 Invertebrate Survey Results

The site is considered likely to support a diversity of common and widespread terrestrial invertebrate species given the common and widespread nature of the habitats present. Records of stag beetle *Lucanus cervus* within 1km of the site were returned from the HBIC desk study as well as a number of other terrestrial invertebrate species. The site is considered to have **low potential** for supporting rare or notable invertebrate species or assemblages.

4.0 PLANNING POLICY CONTEXT

4.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Havant Borough Council administrative area.

4.2 Planning Policy

4.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 14 of the NPPF *"At heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking"* however at paragraph 119 it goes on to state that *"The presumption on favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined"*.

The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 109 states that the planning system should contribute to and enhance the natural environment by *"...minimising impacts on biodiversity and providing net gains in biodiversity where possible..."*

Paragraph 118 states that *"when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity"*. A number of principles are set out in Paragraph 118 including the principle that where harm cannot be adequately avoided then it should be mitigated for or as a last resort compensated for; where impacts occur on nationally designated sites the benefits must clearly outweigh any adverse impact; incorporating biodiversity in and around developments should be encouraged; protection of irreplaceable habitats such as ancient woodlands and that those sites proposed as potential SPAs, SACs and Ramsars or acting as compensation for SPAs, SACs and Ramsar should receive the same protection as European sites.

In addition to the NPPF Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states *"the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be*

likely to result in harm to the species or its habitat” whilst paragraph 99 states “it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted”.

4.2.2 Local Policy

Local planning policy within Havant Borough is provided by the Havant Borough Core Strategy March 2011 with a single policy referring in part ecology and biodiversity:

- **Policy CS11:** Protecting and Enhancing the Special Environment and Heritage of Havant Borough. This policy refers in part to biodiversity stating that planning permission will be granted for development that:
 - Protects and where possible enhances the borough’s statutory and non-statutory designated habitats and features of biological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures;
 - Has particular regard for nature conservation designations with international designations given the highest regard;
 - Supports an ongoing programme of survey of habitats, species and designations of SINCS;
 - Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly associated with the coasts, in order to minimise harm;
 - 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;
 - Protects wildlife habitats and corridors to prevent fragmentation and to allow species to adapt to climate change; and
 - Responds to the emerging evidence from the Solent Disturbance and Mitigation Project and published recommendations and further research.

- **Policy DM9:** Development in the Coastal Zone. This policy refers to the protection of the coastal zone as defined on the Proposals Map. Permission will only be granted in the coastal zone where the following criteria are met:

-
- Has no harmful effects on nature conservation within the Chichester and Langstone Harbour SSSIs and SPA, Solent Maritime SAC and Ramsar site, or any SINC and Local Nature Reserves;
 - Maintains and enhances the appearance and distinctiveness of existing settlements and landmarks along the coast;
 - Contributes positively to the landscape and has regard to best practice on the design of new buildings in coastal locations;
 - Upgrades existing footpaths and ensures that public access is retained and provided to connect existing paths along the waterfront where appropriate;
 - Would result in improvements to or redistribution of moorings, marine berths or launch on demand facilities (dry berths) in the harbours;
 - Would not be detrimental to infrastructure for, and quality of, water-based recreation, or be detrimental to the safety of navigation; and
 - Provides recreational opportunities that do not adversely affect the character and appearance of the coast.

5.0 EVALUATION, IMPACTS AND RECOMMENDATIONS

5.1 Introduction

This section presents the conclusions of the Preliminary Ecological Appraisal. It provides an initial assessment of the likely ecological constraints to the proposed development and detailed recommendations for any further survey work or mitigation measures considered necessary. An outline of protected species legislation relevant to the findings of this report is provided in **Appendix 2**. Full details of the evaluations, impacts and recommendations relating to protected species at the site are contained in **Table 4**.

5.2 Site Evaluation

The site comprises poor semi-improved grassland field and ruderal vegetation comprises common and widespread species of generally low ecological value. The features of greater importance at the site level are the semi-mature and mature boundary trees. The site has been assessed as having potential to support for breeding birds and common species of reptiles. The site has medium potential for foraging and commuting bats and low potential for foraging badger. The site has been assessed as having negligible potential for supporting any other protected or notable species.

5.3 Potential Key Impacts of Development

At the time of this report, the full extent of the works are unknown, however it is understood that the proposals entail the construction of new residential dwellings with associated access and landscape. In the absence of mitigation, the potential ecological impacts of these works are:

- Potential loss of suitable bat foraging habitat and disturbance to foraging bats as a result of increased lighting at the site;
- Potential disturbance and/or harm to breeding birds during construction and extraction works if undertaken during the nesting season; and
- Loss of suitable habitat and potential disturbance and/or harm to common reptile species.

5.4 Outline of Key Mitigation and Enhancements

The following main mitigation and enhancement strategies have been designed to minimise the potential impacts and enhance the site for wildlife:

- New native species landscaping should be incorporated into the development proposals;

- Phase 2 bat transect surveys are recommended in order to establish the usage of the site by foraging and commuting bats;
- Any necessary vegetation clearance will be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist will be present immediately prior to clearance to check vegetation. Active nests and an undisturbed 5-10m buffer will be left until nesting ends naturally; and
- A Phase 2 reptile survey of the site is recommended to ascertain the presence / likely absence of this species group at the site.

5.5 Evaluation Against Relevant Planning Policy

Given the impacts identified and the subsequent recommendations made, including the need for further survey, it is considered that the proposals have the potential to accord with all relevant national and local planning policy (see **Section 4**).

Table 4: Evaluations, impacts and recommendations relating to protected species at the site

Ecological Feature	Summary	Potential Impacts of Development	Recommendations
Designated Sites	Langstone Harbour SPA / Ramsar site and Solent Maritime SAC is situated approximately 2.6km to the south-east of the site. A total of fourteen SINC's are present within 1km of the site boundary.	In line with the recently published Solent Interim Recreational Mitigation Strategy¹⁵ it is acknowledged that the proposed development has the potential to result in increased recreational pressure on the Langstone Harbour SPA / Ramsar site and Solent Maritime SAC either alone or in-combination with other plans or projects. There are no anticipated impacts on designated sites as the closest SINC is further than 300m away from the site and separated from the site by existing residential development.	In line with the Solent Interim Recreational Mitigation Strategy it is proposed that a financial contribution is made to the strategic mitigation measures to be implemented by the Solent Recreation Mitigation Partnership. At the time of writing this contribution is currently £172 per dwelling plus any administration charges necessary. These long-term strategic measures will ensure that the conservation objectives of the designated sites are maintained.
Vegetation	The site comprises of low ecological value poor semi-improved grassland, species-poor hedgerows, scrub vegetation and mature treelines.	The proposals will likely result in the loss of the existing semi-improved grassland within the site which is of limited ecological value.	It is recommended that the mature and semi-mature trees within the site and at the boundaries are retained wherever possible. Any proposed landscaping should incorporate native tree and shrub species rather than cultivars. It is recommended that any new areas of grassland are sown with a diverse seed mixture such as Emorsgate EL1 flowering lawn mixture.
Bats	No trees within potential to support roosting bats have been recorded as part of the appraisal undertaken. The site has been assessed as having potential to support foraging and commuting bats associated with the boundary vegetation.	The proposals have the potential to result in a loss of suitable bat foraging habitat and the potential to disturb bats foraging along the boundaries of the site through the introduction of new lighting at the site. In England, bats and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, all bat species are protected under the Conservation of Habitats and Species	It is recommended that Phase 2 bat transect surveys are undertaken in order to establish the usage of the site by foraging and commuting bats and allow a full impacts assessment of foraging bats to be undertaken.

¹⁵ Solent Recreation Mitigation Partnership (2014) Solent Interim Recreational Mitigation Strategy

Ecological Feature	Summary	Potential Impacts of Development	Recommendations
		Regulations 2010. Refer to Appendix 2 for details.	
Badger	No evidence of badgers was recorded during the survey undertaken. However, the site does have some potential to supporting foraging badger.	The proposals will likely result in an overall loss of suitable badger foraging habitat.	In the unlikely event that a badger becomes trapped in excavations during construction works, a timber ramp should be inserted to allow the animal to escape of its own accord. New landscaping will likely provide new habitat for foraging badger.
Dormouse	The site has been assessed as having negligible potential for supporting dormouse.	Given the absence of any suitable habitat no impacts on dormouse are anticipated as a result of the proposals.	There are no recommendations to be made in respect of dormouse.
Birds	The site offers habitat suitable for supporting common nesting bird species within the areas of boundary hedgerow and mature treelines. The site is considered to be unsuitable for supporting brent goose.	Potential disturbance and/or harm to breeding birds during construction and extraction works if undertaken during the nesting season. All birds, their nests, eggs and young are legally protected, see Appendix 2 for details.	Vegetation clearance will be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist will be present immediately prior to clearance to check vegetation. Active nests and an undisturbed 5-10m buffer will be left until nesting ends naturally. In order to provide an enhancement it is recommended that new bird nest boxes be erected on retained trees around the boundary of the site. It is recommended that six bird boxes of varying designs would provide a good enhancement for nesting birds.
Reptiles	The site offers suitable habitat for sheltering and foraging reptile species within the semi-improved grassland field and areas of scrub.	The proposals will likely result in the loss of suitable reptile habitat which has the potential to result in direct harm on reptiles and long-term loss in habitat should species be present. Common reptile species are protected under the Wildlife and Countryside Act 1981 against harm, see Appendix 2 for details.	It is recommended that a Phase 2 reptile survey is carried out in order to determine the presence or likely absence of reptiles at the site. The Phase 2 reptile survey should involve the distribution of approximately 30 reptile refugia in suitable areas of reptile habitat within the site. The reptile refugia should then be inspected during suitable conditions on seven occasions between April and October in order to determine the status of reptiles at the site.

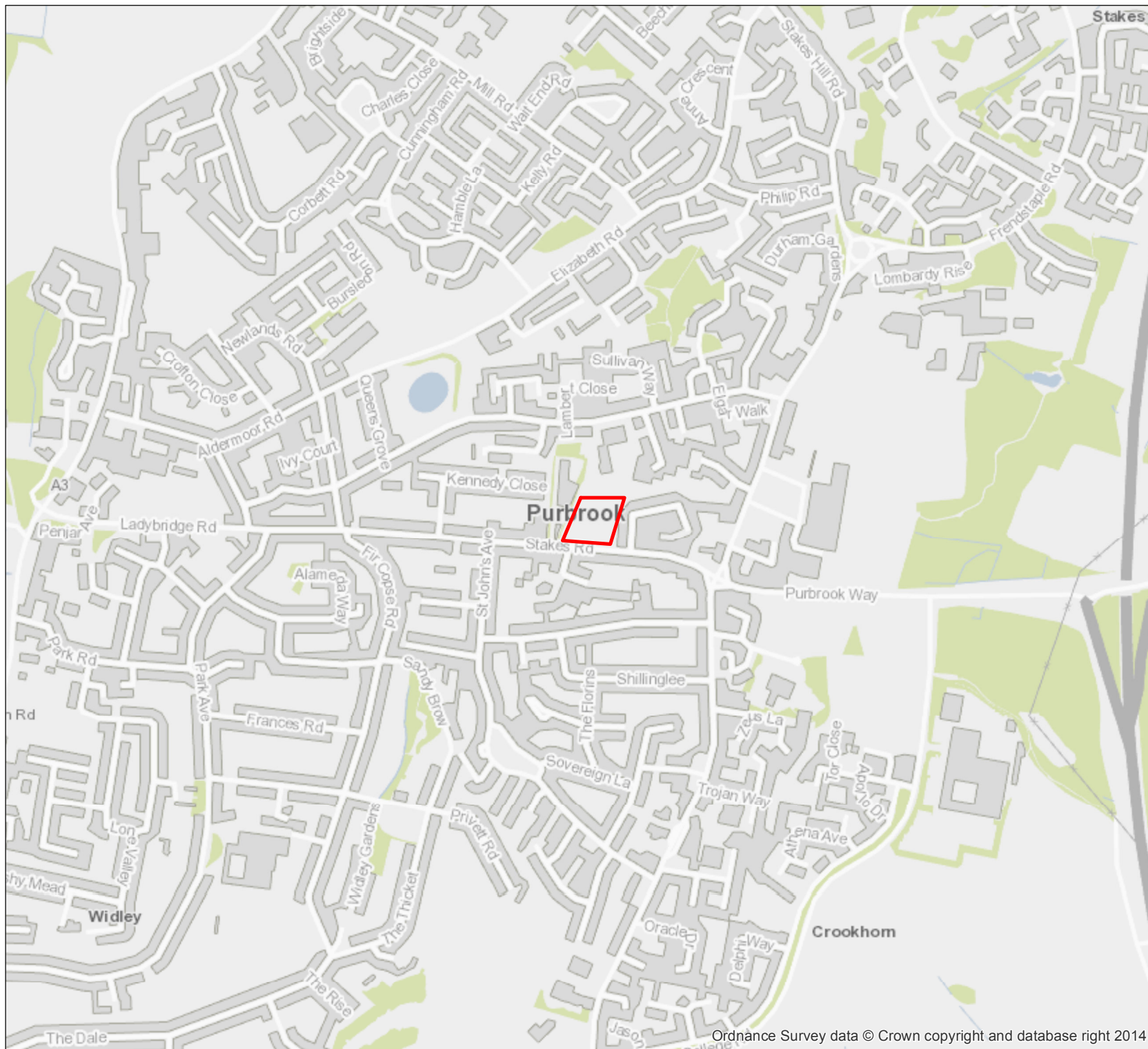
Ecological Feature	Summary	Potential Impacts of Development	Recommendations
			The survey will comply with the Herpetofauna Workers Manual ¹⁶ , the requirements of Natural England and will follow Institute of Chartered Ecology and Environmental Management (CIEEM) guidance.
Great Crested Newt	No waterbodies are present on site, although there is suitable terrestrial habitat. There are two off-site waterbodies within 500m of the boundary, both of which are considered unlikely to support great crested newt.	As great crested newts are likely absent from the site, there are no impacts anticipated.	There are no recommendations to be made in respect of great crested newt.
Invertebrates	The site supports low value habitats that are considered common or widespread. It has low potential for supporting rare or notable invertebrate species or assemblages with records of stag beetle returned from within the search area.	There are no anticipated impacts for this species associated with the site proposals.	It is proposed that any areas of standing deadwood within the boundary be retained wherever possible in order to provide habitat for stage beetle.

¹⁶ JNCC (1998) Herpetofauna Workers Manual

5.6 Updating Survey

If works have not commenced by August 2017, or the proposal for the site change significantly, it is recommended that the ecological assessment is updated. This is because many of the species considered during the current survey are highly mobile and the ecology of the site is likely to change over this period.

Map 1 Site Location



**PURBROOK PARK SCHOOL,
STAKES ROAD, WATERLOOVILLE,
HAMPSHIRE**
PRELIMINARY ECOLOGICAL
APPRAISAL

Map 1 - Site Location

Client:	Persimmon Homes South Coast
Date:	October 2015
Status:	Final

KEY
 Site Boundary

Scale at A4: 1:10,000
0 40 80 160 240 320 Metres

ECOSA
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Appendix 1 Sites Designated for Nature Conservation

Statutory Sites

Internationally Designated Sites - Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

Special Protection Areas (SPA) and Special Areas of Conservation (SAC) form a network of protected sites across the European Union called Natura 2000. In the United Kingdom the primary legislative protection is afforded to these sites under the Conservation of Habitats and Species Regulations 2010 (as amended).

Ramsar sites are designated as wetlands of international importance which are afforded similar legislative protection to the Natura 2000 sites.

SACs specifically are sites which support internationally important habitats or internationally important assemblages or populations of species. SPAs are designated for supporting internationally important populations of birds listed in the annexes of the birds directive. SACs, SPAs and Ramsar sites are generally also designated as Sites of Special Scientific Interest at the national level.

Under Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (as amended) there is a legal requirement that competent authorities, such as local planning authorities, need to consider whether plans or projects are likely to have a significant adverse effect on the Natura 2000 or Ramsar sites either alone or in combination with other plans or projects. In the event that a likely significant effect cannot be ruled out on the basis of objective information then the competent authority must undertake an “Appropriate Assessment” to fully assess the plan or project against the sites conservation objectives. Unless certain defined derogation tests can be met the competent authority may not authorise nor undertake any plan or project which adversely affects the integrity of a Natura 2000 or Ramsar site.

Nationally Designated Sites – Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR)

Sites of Special Scientific Interest (SSSI) receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Such sites are designated to protect specific areas of biological or geological interest of national importance. Such sites also generally receive strict protection through the planning system.

National Nature Reserves (NNR) are also usually designated as SSSIs and area specifically managed for their wildlife value. They received legal protection through the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). As with SSSIs these sites generally receive strict protection through the planning system.

Locally Designated Sites – Local Nature Reserves (LNR)

Local Nature Reserves (LNR) are designated by local authorities under the National Park and Access to the Countryside Act 1949. These are generally designated not only for their local wildlife value but also for education, scientific and recreational purposes. These sites generally receive protection from development through the planning system.

Non-Statutory Sites

Locally Designated Sites

In addition to statutory designations local authorities often designate sites of nature conservation importance at the local level. Such designations are named differently by each local authority and may be referred to as Local Wildlife Sites (LWS), Sites of Importance for Nature Conservation (SINC) or Sites of Nature Conservation Importance (SNCI) amongst others. The exact level of protection afforded to these sites varies and is normally defined through local planning policy.

Appendix 2 Protected Species Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
 - To impair its ability to survive, breed, or rear or nurture their young;
 - To impair its ability to hibernate or migrate;
 - To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Bechstein's bat *Myotis bechsteinii*;
- Barbastelle *Barbastella barbastellus*; and
- Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Reptiles

The four widespread species of reptile that are native to Britain, namely common or viviparous lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded limited protection under Section 9 of this Act. This makes it an offence to:

- Intentionally kill or injure any of these species.

The remaining native species of British reptile (sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) receive a higher level of protection via inclusion under Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations (in England and Wales only) and the Wildlife and Countryside Act 1981 (as amended). However, the distribution of these species are restricted to only a very few sites.