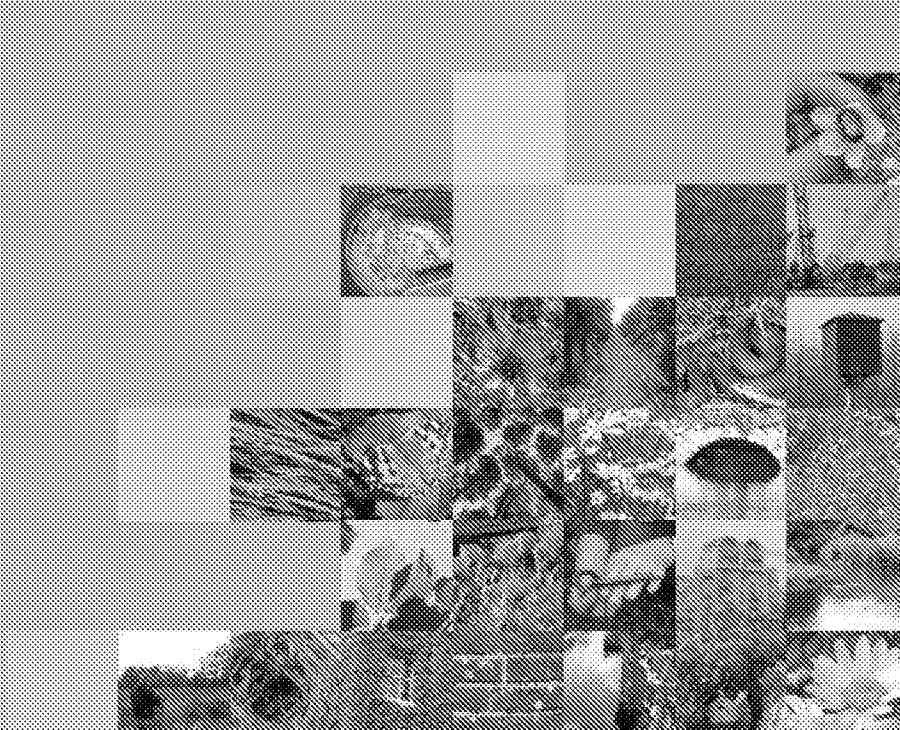
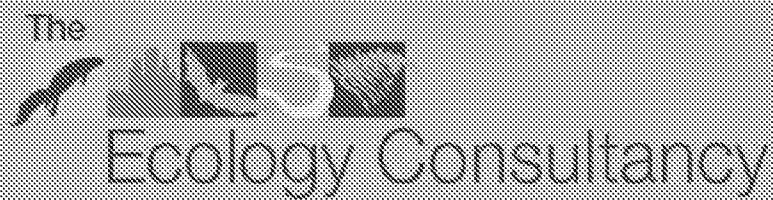




Pound Place, Angmering, West Sussex

Preliminary Ecological Appraisal

Report for Mishon Mackay /

Mr. & Mrs. Atkins

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Summary of Key Issues

The Ecology Consultancy was commissioned to undertake a Preliminary Ecological Appraisal (PEA), comprising a Phase 1 habitat survey and protected and notable species assessment, for Pound Place, Angmering, West Sussex.

The main findings of the PEA are as follows:

- ✧ The site comprised a residential property and garden with outbuildings. The habitats present included amenity grassland, species-poor non-native hedgerows, introduced shrub and scattered trees.
- ✧ The site is not subject to any statutory or non-statutory designations. There are no statutory designated sites within a 2km radius. The nearest non-statutory designated site is Highdown Hill and the Miller's Tomb Site of Nature Conservation Importance located 1.3km east.
- ✧ Habitats present are considered of value within the immediate vicinity of the site only (but may assume higher value where they support protected and/or notable species).
- ✧ **Bats** – at least two trees were identified within the site boundary with moderate potential to support a bat roost. It was recommended that in order to comply with legislation, further survey was required to ascertain if any bats are using these trees for roosting. These trees have since been removed from the site, therefore, no further bat surveys were possible.
- ✧ **Breeding birds** – breeding birds were confirmed as being present on site. Bird boxes, buildings, shrubs, trees and hedgerows on site all have potential to support breeding birds and most will be impacted by the development. It was recommended that in order to comply with legislation, these habitats should be removed September to February inclusive which is outside of the main bird breeding season. A number of these trees have since been removed from the site, and it is recommended that any further removal of vegetation is undertaken outside of the bird breeding season.
- ✧ **Reptiles** – habitats on site were identified as having low potential to support reptiles. In order to comply with legislation, it is recommended that a precautionary approach is taken and that habitats are managed/removed in such a way as to avoid any potential impacts on reptiles and dissuade them from using the site.
- ✧ Recommendations to enhance the biodiversity value of the site in line with national and local planning policies comprise the inclusion within the scheme of Sustainable Urban Drainage Systems (SuDS) including green roofs; wildlife planting; the provision of bird nesting opportunities; and wildlife-friendly fencing.

1 Introduction

BACKGROUND TO COMMISSION

- 1.1 The Ecology Consultancy was commissioned by Mishon Mackay on behalf of Mr and Mrs Atkins on 12 May 2014, to carry out a Preliminary Ecological Appraisal (PEA) of land at Pound Place, Angmering, West Sussex. The appraisal was carried out in order to provide ecological information to inform an outline planning application for a proposed residential development. This appraisal considers land within the planning application site boundary (hereon referred to as 'the site') as indicated on the plan provided by Crossley Design Associates (2014).

SCOPE OF THE REPORT

- 1.2 This aim of this appraisal is to provide baseline ecological information about the site. This will be used to identify any potential ecological impacts associated with the proposed development and/or to identify the need for additional survey work to further evaluate any impact that may be significant. Where necessary, avoidance, mitigation/compensation and/or enhancement measures have been recommended to ensure compliance with nature conservation legislation and planning policy.
- 1.3 This appraisal is based on the following information sources:
- ✧ a desk top study of the site and a 2km surrounding radius;
 - ✧ a Phase 1 habitat survey (JNCC, 2010) of the site and immediate surrounds to identify and map the habitats present; and
 - ✧ a protected species assessment to identify features with potential to support legally protected and/or notable species.
- 1.4 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2013) and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).
- 1.5 The survey, assessment and report were conducted and written by Rosanna Marston BSc, MSc, GradCIEEM, an Ecologist with over two years' experience who is competent in carrying out Phase 1 habitat surveys and protected species assessments.

SITE CONTEXT AND STATUS

- 1.6 The proposed development site is 0.69 hectares (ha) in size and is centred on National Grid Reference TQ 075 039. The site lies on the outskirts of Angmering within the Arun District and it is not subject to any nature conservation designations. It is bound by Roundstone Lane to the west and surrounded by grassland, old plant nurseries and hedgerows to the north, east and south. On the opposite side of Roundstone Lane to the west are residential properties (part of Angmering village) and in the wider landscape to the east are large areas of agricultural land.

DEVELOPMENT PROPOSALS

- 1.7 The development proposals for the site, based on current plans provided by Crossley Design Associates (2014), are to demolish five buildings/structures (Buildings 3-7) including a cabin with swimming pool, sheds and a greenhouse. The majority of vegetation on the site will also be lost including a number of scattered trees and hedgerows. Pound Place (Building 2) and the garage (Building 1) will be retained. A total of 18 new residential buildings will be built, including areas of car parking, four garages and six covered parking barns together with new tree planting.

RELEVANT LEGISLATION AND PLANNING POLICY

- 1.8 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 5:
- ✧ The Conservation of Habitats and Species Regulations, 2010 (as amended) (commonly referred to as the Habitats Regulations);
 - ✧ The Wildlife and Countryside Act 1981 (as amended);
 - ✧ The Natural Environment and Rural Communities Act 2006;
 - ✧ The Protection of Badgers Act 1992; and
 - ✧ Wild Mammals (Protection) Act 1996.
- 1.9 The National Planning Policy Framework (Department of Communities and Local Government, 2012) requires local authorities to avoid and minimise impacts on biodiversity and, where possible, to provide net gains in biodiversity when taking planning decisions. Other planning policies at the local level which are of relevance to this development include the Arun District Council Local Plan (2014).

2 Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites¹, non-statutory designated sites², legally protected species³ Species and Habitats of Principal Importance⁴ and other notable species⁵ and notable habitats⁶ that have been recorded within a 2km radius of the site:

- The Ecology Consultancy are a partner organisation with the Sussex Biodiversity Records Centre (SxBRC) and hold biological data sets compiled by the SxBRC from records provided by local recorders. Species data is provided to the SxBRC by a range of individual biological recorders, recording groups, private, public and charitable sector organisations. Data remains the property of the original recorder and is reproduced with permission;
- MAGIC (<http://www.magic.gov.uk/>) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publically available aerial photography.

HABITAT SURVEY

2.2 A habitat survey of the site was carried out on the 20 May 2014 in warm, clear, dry conditions. It covered the entire site including boundary features. Habitats were described and mapped following standard Phase 1 habitat survey methodology (JNCC,

¹ Statutory designations include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

² Non-statutory sites are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

³ **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended); or in the Protection of Badgers Act 1992 (as amended).

⁴ **Species of Principal Importance** are those listed on Section 41 of the Natural Environment and Rural Communities Act, 2006.

⁵ **Notable species** include Species of Principal Importance under the Natural Environment and Rural Communities Act 2006; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Eaton *et al.*, 2009); and/or Red Data Book/nationally notable species (JNCC, undated).

⁶ **Notable habitats** include Habitats of Principal Importance under the Natural Environment and Rural Communities Act, 2006; those listed on a LBAP; Ancient Woodland Inventory sites; and Important Hedgerows as defined by the Hedgerow Regulations 1997.

2010). Habitats were also assessed against Habitat of Principal Importance⁷ descriptions as set-out by the JNCC (BRIG, 2008). A list of plant species was compiled (Appendix 3), together with an estimate of their abundance made using the DAFOR⁸ scale. Scientific names are given after the first mention of a vascular plant species, thereafter, common names only are used. Nomenclature follows Stace (2010). Incidental records of birds and other fauna noted during the course of the habitat survey were also compiled.

- 2.3 Habitats were marked on a paper base map and subsequently digitised using a GIS. The smallest area to be mapped was approximately 3m², which was selected as a suitable scale to sample the range of different vegetation types present.
- 2.4 Target notes were used to provide information on specific features of ecological interest (e.g. a badger sett) or small habitat features that were too small to be mapped.
- 2.5 The site was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, detailed mapping of such species is beyond the scope of this commission.

PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 2.6 The potential of the site to support legally protected species, Species of Principal Importance or otherwise notable species was assessed using the results of the desk top study combined with field observations, from the habitat survey. The potential for protected species occurrence was ranked on a scale from negligible to present as described in Table 3.3.
- 2.7 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance on identifying species' field signs which includes: badger (e.g. Roper, 2010); bats (Hundt, 2012); hazel

⁷ Habitats of Principal Importance for the Conservation of Biodiversity = those listed on Section 41 of the Natural Environment and Rural Communities Act, 2006.

⁸ The DAFOR scale has been used to try and measure the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover. Locally Frequent (LF) is also used where the frequency and distribution is patchy.

dormouse (English Nature, 2006); great crested newt (Langton *et al.* 2001); otter (Chanin, 2003); reptiles (Gent and Gibson, 2003); and water vole (Strachan *et al.* 2011).

Table 2.1: Protected species assessment categories.

Category	Description
Present	Presence confirmed from the current survey or by recent, confirmed records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records provided by desk top study. The site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides all of the known key requirements for a given species/species group. Several desk top study records and/or site within national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement, and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk top study records. However, presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. There were no desk top study records. Surrounding habitat unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species.

SITE EVALUATION

- 2.8 The site was evaluated broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2006) which ranks the nature conservation value of a site according to a geographic scale of reference: international, national, regional, county/metropolitan, district/borough, local/parish or of value at the site scale. In evaluating the nature conservation value of the site the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility; connectivity to other habitats; and relevant nature conservation aims and objectives for a given area as contained in national and local biodiversity action plans and planning policies. Specific guidance on designation of local nature conservation sites (Defra, 2006) was also used to inform the site evaluation.

LIMITATIONS AND DATA VALIDITY

- 2.9 Ecological survey data is typically valid for two years unless otherwise specified.
- 2.10 Every effort has been made to provide a comprehensive description of the site. However, the following specific limitations apply to this assessment.

- » It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.
- » Where only four figure grid references are provided for protected species by third parties, the precise location of species records can be difficult to determine and they could potentially be present anywhere within the given 1km x 1km square. Equally six figure grid references may be accurate to the nearest 100m only.
- » The Phase 1 habitat survey does not constitute a full botanical survey.
- » A number of ornamental plant species were present in the site boundary. These have been identified to species level where possible; however, owing to the large number of horticultural varieties some plants could not be identified. Ornamental plants may be of value to wildlife, although none are characterised as rare or notable from a native biodiversity conservation perspective. Thus, this limitation does not affect the overall conclusions of this appraisal.
- » The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended if on the basis of the preliminary assessment or during subsequent surveys it is considered reasonably likely that protected species may be present.
- » The ecological evaluation is subject to the findings of further ecological surveys (should these be required).

2.11 Despite these limitations, it is considered that this report accurately reflects the habitats present, their biodiversity values and the potential of the site to support protected and notable species.

3 Results

DESK TOP STUDY

Statutory Designated Nature Conservation Sites

- 3.1 The proposed development site is not subject to any statutory nature conservation designations. There are no European or national statutory designations within a 2km radius of the site.

Non-Statutory Designated Nature Conservation Sites

- 3.2 The proposed development site is not subject to any non-statutory nature conservation designations. There are two non-statutory sites designated as SNCIs located within 2km of the site (see Table 3.1).

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
Highdown Hill and the Miller's Tomb	1.30km east	The site features species-rich chalk grassland, chalk scrub and chalk pits which support notable plants including round-headed rampion <i>Phyteuma orbiculare</i> , invertebrates including butterflies and the red data book species Carthusian snail <i>Monacha cartusiana</i> , reptiles and a range of birds including nightingale <i>Luscinia megarhynchos</i> .
Ferring Rife and Meadows	1.61km south-east	The site features a stream, ponds and neutral grassland which support notable invertebrates including butterflies, dragonflies and the Carthusian snail, plants including the locally uncommon parsley water-dropwort <i>Oenanthe lachenalii</i> and birds including skylark <i>Alauda arvensis</i> .

Landscape and Habitat Classifications

Ancient woodland

- 3.3 There are four blocks of woodland within a 2km radius of the site that appear on the ancient woodland inventory. The closest of these is the Ancient Semi-Natural Woodland (ASNW) site Groom's Copse, located approximately 1.06km north of the site.

PHASE 1 HABITAT SURVEY

Overview

- 3.4 The following account summarises the findings of the Phase 1 habitat survey. Also included are details of habitat information provided in the desk top study (e.g. Natural England Habitat of Principal Importance inventories).

- 3.5 The site consists of seven buildings/structures, including the main residential building Pound Place surrounded by a garden. The garden included areas of hard standing, amenity grassland, ornamental shrubberies, scattered trees, hedgerows and areas of horticultural planting and tall ruderal. Natural England classifies the on-site grassland as ‘Good Quality Semi-Improved Grassland’ (Natural England, 2013); however, this habitat was not thought to be of sufficient quality to qualify as a Habitat of Principal Importance. No habitats qualifying as local BAP priorities were recorded.
- 3.6 Phase 1 habitats types are mapped in Figure 1, approximate areas are given in Table 3.2. A description of dominant and notable species and the composition of each habitat is provided below.

Table 3.2: Phase 1 Habitat Areas

Phase 1 Habitat	Area (ha)	%
Amenity grassland	0.50	72.07
Buildings and hardstanding	0.14	19.95
Introduced shrub	0.04	6.05
Horticultural planting	0.01	1.09
Tall ruderal	0.01	0.85
Species-poor non-native hedgerow	380m	N/A
Scattered trees	80No.	N/A

Buildings and hardstanding

- 3.7 Building 1 was a brick built garage, approximately 8m high with a tiled roof and wooden-framed glass windows. Some gaps were visible under the tiles, but the window frames appeared well-sealed and in a good state of repair (see Photograph 1 – Appendix 2).
- 3.8 Building 2 (Pound Place) was a brick built residential building, approximately 10m high (three storeys) with wooden weather boarding and a pitched roof with tiles (see Photograph 2). There was a glass conservatory extension on the north-east side of the building. Gaps were observed under the tiles on the roof and a small number were missing on the west-facing side of the building. The UPVC-lined windows appeared well-sealed and the brickwork in a good state of repair.

- 3.9 Building 3 was a wooden cabin covering a swimming pool, approximately 4.5m high with a felt-lined roof. Overall the building was in a good state of repair and appearing well-sealed, with only a small gap under the felt visible on the north-east side of the building.
- 3.10 Buildings 4 and 7 were wooden sheds, approximately 2m high and 3m high respectively, with felt-lined roofs and both appearing well-sealed and in a good state of repair.
- 3.11 Building 5 was a plastic storage container/tank approximately 3m high.
- 3.12 Building 6 was a greenhouse approximately 3m high in a state of disrepair with a collapsed roof and broken glass panes.

Amenity grassland

- 3.13 The amenity grassland forming the majority of the garden area comprised (amongst other species) abundant daisy, locally abundant slender trefoil, frequent meadow-grass and locally frequent Yorkshire fog and common mouse-ear. The sward was mown very short and appeared to be regularly managed in this way (see Photograph 3).

Introduced shrub

- 3.14 Various planted and potted ornamental shrubs were present throughout the garden on site (see Photograph 3). Species included hedge veronica, sections of box and garden privet hedgerow, barberry, spotted laurel and buddleia. All of the shrubs appeared regularly cut and managed.

Horticultural planting

- 3.15 In the south-east corner of the site were a number of beds used for horticultural planting. Some of these contained only bare earth at the time of survey or very little vegetation, others were planted with garden strawberry, rhubarb, currant and raspberry.

Tall ruderal

- 3.16 Around the margins of the horticultural beds were some areas of tall ruderal vegetation up to 1.5m high. Species present were those typically associated with enrichment, disturbance and/or waste ground including common nettle, sow-thistles, cleavers, white dead-nettle and broad-leaved dock.

Species-poor non-native hedgerow

- 3.17 A cypress hedgerow approximately 10m high formed almost the entire boundary of the site with the exception of a few gaps in the south-east and south-west corners. A few other species were present within the hedgerow and at the base of it including silver birch, pedunculate oak, cow parsley and common chickweed.

Scattered trees

- 3.18 Trees were scattered throughout the site and included a high proportion of coniferous and non-native species planted as ornamentals. This included pines, cherries, sycamore, silver birch and rowan amongst others. Most of the trees were fairly young specimens, with the exception of two mature pines to the western end of the garden. There was also the occasional ivy-clad tree.

PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 3.19 The potential for the site to support protected species⁹, Species of Principal Importance¹⁰ and notable species¹¹ has been assessed. The following species/species groups are considered likely to be supported in the habitats present within the site:

- ✧ badger *Meles meles*;
- ✧ bats;
- ✧ breeding birds;
- ✧ dormouse *Muscardinus avellanarius*;
- ✧ great crested newt *Triturus cristatus*;
- ✧ hedgehog *Erinaceus europaeus*;
- ✧ invertebrates; and

⁹ **Legally protected species** include those listed on Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981 (as amended); species listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended); and the Protection of Badgers Act, 1992.

¹⁰ **Species of Principal Importance** are those listed on Section 41 of the Natural Environment and Rural Communities Act, 2006.

¹¹ **Notable species** include Species of Principal Importance under the NERC Act, 2006, LBAP species; birds of conservation concern (Eaton *et al.*, 2009); and/or red data book/nationally notable species (JNCC, undated).

» reptiles.

3.20 These assessments, based on the results of the desk top study and observations made during the site survey of habitats within and immediately surrounding the site, are detailed further in Table 3.3, below. Desk top study records have only be considered if they are recent (from the last 20 years) and/or they refer to species that may be supported by habitats at the site. A number of abbreviations are used in this section to denote the status of different species these are footnoted below Table 3.3.

3.21 The table also summarises relevant legislation and policies relating to protected species and notable species. Key pieces of statute are summarised in Section 1 and set-out in greater detail in Appendix 5.

3.22 It is considered that the site does not contain habitats that would be suitable to support other legally protected species or notable species.

Table 3.3: Protected and Invasive Species Assessment

Habitat species	Status ^{12, 13}	Likelihood of occurrence / assessment
Badger	PBA	NEGLIGIBLE: The SxBRC do not provide desk top study records of badger. Habitats on site were easily accessible and no signs of badger were observed during the habitat survey. Badger may make use of woodland, scrub and hedgerow habitats to the north, east and south of the site and may occasionally use the site for foraging or when passing through. However, given the lack of field evidence for this species and the small size of the site it is highly unlikely that the site forms an important part of a badger territory. As there is a negligible chance they are present, badgers are not considered further in this appraisal.
Dormouse	HR WCA S5 SPI Sussex BAP	NEGLIGIBLE: There are no desk top study records for hazel dormouse. There is some connectivity to the site via hedgerows and scrub but overall there is very little woody habitat in the wider landscape and no significant blocks of woodland within 1km. The availability of woody habitat present on-site that could support foraging or nesting dormouse is limited to species-poor non-native hedgerows, scattered young ornamental trees and regularly managed introduced shrubberies. The entire site is subject to frequent disturbance. Overall, based on the small area of sub-optimal habitat present and limited availability of suitable off-site habitat in the wider landscape it is highly unlikely that this species is present. As there is a negligible chance they are present, dormice are not considered further in this appraisal.
Great crested newt	HR WCA S5 SPI Sussex BAP	NEGLIGIBLE: There are no desk top study records for great crested newt. There are no ponds on-site or identified within 500m of the site that could support breeding great crested newt. Habitats on-site were largely unsuitable for great crested newts in their terrestrial phase as they mainly comprised short-mown amenity grassland offering no cover. The piles of garden waste (see Target Note 5), tall ruderal vegetation and introduced shrubberies around the margins of the site could potentially be used as refugia, but overall it is considered highly unlikely that this species is present. As there is a negligible chance they are present, great crested newts are not considered further in this appraisal.

¹² The following abbreviations have been used to signify the legislation regarding different species: HR = Conservation of Habitats and Species Regulations 2010 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act, 1992.

¹³ The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Eaton *et al.*, 2009); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

Habitat species	Status ¹²⁻¹³	Likelihood of occurrence / assessment
Invertebrates	WCA S5 SPI Sussex BAP	LOW: There are desk top study records for 38 species of invertebrate, mainly species of moth and butterfly but also including snails, flies, beetles and bush-cricket. These have mainly been recorded at the local Highdown Hill and the Miller's Tomb SNCI and so are likely to be species associated with chalk grassland/scrub which would not be expected to occur on site. More generalistic species that could occur on site include small heath butterfly <i>Coenonympha pamphilus</i> and wall butterfly <i>Lasiommata megera</i> which are Species of Principal Importance and Sussex BAP species. Habitats on site suitable for supporting foraging invertebrates were limited to some nectar providing ornamental trees, shrubs and herbaceous plants. Several bumblebees were observed on the laburnum tree (see Target Note 1) during the habitat survey.
Reptiles	WCA S5 SPI Sussex BAP	LOW: There are desk top study records for four species of reptile within 2km of the site including slow worm <i>Anguis fragilis</i>, common lizard <i>Zootoca vivipara</i>, grass snake <i>Natrix natrix</i> and adder <i>Vipera berus</i>. These records are few in number, all at least 12 years old and located at least 0.48km north of the site. The site is well connected to suitable off-site habitat including large areas of grassland, scrub and hedgerows. Habitats on site suitable for supporting breeding, resting or foraging reptiles were limited to a few piles of garden waste (see Target Note 5 and Photograph 5), tall ruderal vegetation and introduced shrubberies around the margins of the site. Other habitats on site are largely unsuitable as they mainly comprised short-mown amenity grassland offering no cover.
Invasive species	WCA S9	MODERATE: There are several desk top study records for invasive species within 2km of the site, including some listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and others identified on the Sussex Invasive Alien Species Report (SIASR) only. Whilst a number of species occurring on Schedule 9 are commonly planted in garden habitats, none were recorded during the habitat survey. Invasive species recorded on site that are listed on the SIASR only include sycamore, cherry laurel and false acacia. As the invasive species present are not listed on the Wildlife and Countryside Act 1981 (as amended) and have no legal standing, they will not be considered further in this appraisal.
Bats	HR WCA S5 SPI Sussex BAP	HIGH to NEGLIGIBLE: There are desk top study records of four species of bats within 2km of the site including natterer's <i>Myotis nattereri</i>, common pipistrelle <i>Pipistrellus pipistrellus</i>, soprano pipistrelle <i>Pipistrellus pygmaeus</i> and brown long-eared <i>Plecotus auritus</i>. Soprano pipistrelle and brown long-eared bats are Species of Principal Importance and local BAP species. The desk top study records are few in number, mainly quite old and located at least 0.29km north-east of the site. The site is well connected to suitable off-site roosting and foraging habitat via hedgerows, scrub and grassland. A mature pine tree was identified in the western part of the site which featured broken limbs, splits and cracks on lateral branches which could be used by bats for roosting (see Target Note 3 in Appendix 4 and Photograph 4). Some of the trees in the eastern part of the site were covered with ivy, with could also conceal or create features suitable for bats to roost. It is understood these trees are due to be removed (Crossley Design Associates, 2014).

Habitat species	Status ¹²⁻¹³	Likelihood of occurrence / assessment
		Buildings 1 and 2 featured tiled roofs with gaps under the tiles/missing tiles observed which could be used by bats for roosting. It is understood these buildings are due to be retained (Crossley Design Associates, 2014). The remaining trees and buildings on site were not seen to contain any obvious features which could be used by bats for roosting. Overall the site was considered of insufficient size to form a significant part of any bat foraging area. The trees with moderate bat roosting potential that are due to be removed will be considered further in this appraisal. Buildings 1 and 2 with high bat roosting potential that are due to be retained and the other buildings and trees on site with negligible bat roosting potential are discounted from further consideration.
Hedgehog	SPI Sussex BAP	HIGH: There are several desk top study records of hedgehog within 2km of the site, mainly located in the gardens of residential properties in Angmering. The site is well connected to suitable off-site habitat including large areas of grassland, scrub and hedgerows. Amenity grassland, introduced shrubberies and tall ruderal vegetation provided suitable habitat for foraging and sheltering hedgehog; however, there is no direct evidence that this species is present.
Birds	WCA S5 BoCC – amber list SPI	PRESENT: Numerous records of notable birds were provided from the data search. However, these species were mostly associated with wetland habitats and would not be expected to occur on site. The bird boxes, introduced shrub, species-poor non-native hedgerows and scattered trees provided suitable nesting habitat for common breeding bird species. Several common bird species were observed during the habitat survey including breeding blue tit <i>Cyanistes caeruleus</i> (see Target Note 7 and Photograph 6) and foraging dunnock <i>Prunella modularis</i>. Dunnock is a Species of Principal Importance and amber list species.

NATURE CONSERVATION EVALUATION

- 3.23 The proposed development site is not subject to any nature conservation designations nor does it support any local BAP habitats or habitats of principal importance. The site is considered of value within the immediate vicinity of the site only, due to it providing common and widespread habitats of limited extent and its location on the edge of an urban environment surrounded by residential housing and roads, with limited availability of semi-natural habitats. The habitats on site were seen to support small numbers of common foraging and breeding bird species and could possibly support small numbers of widespread reptile species, notable invertebrates and hedgehog. Populations of these species would likely be important within the immediate vicinity of the site only.
- 3.24 It was not possible to conclude on the value of potential bat populations without further surveys having been undertaken.

4 Potential Impacts and Recommendations

4.1 This section summarises the potential impacts on habitats and notable species that may be present at this site. The impact assessment is preliminary and further detailed assessment and surveys will be required to assess impacts and design suitable mitigation, where appropriate.

4.2 The following key ecological issues have been identified:

- ✧ habitats present are of value within the immediate vicinity of the site only (but may assume higher value where they support protected and/or notable species such as bats);
- ✧ habitat for breeding birds is present – measures must be taken to avoid killing birds or destroying their nests;
- ✧ habitat for widespread reptiles is present – measures must be taken to avoid killing or injuring reptiles;
- ✧ habitat for notable invertebrates and hedgehog is present – measures should be taken to continue accommodating these species on site post-development; and
- ✧ a range of measures could be undertaken to satisfy the requirement for ecological enhancement included in planning policy.

CONSTRAINTS AND MITIGATION/COMPENSATION

Designated Nature Conservation Sites

4.3 No impacts are envisaged on statutory or non-statutory designated sites owing to distance and therefore there are no constraints to the proposed development in this regard.

Habitats

4.4 A number of scattered trees, five outbuildings, sections of species-poor non-native hedgerow, approximately 0.5ha of amenity grassland and very small areas of introduced shrub, horticultural planting and tall ruderal vegetation will be removed for construction of the new dwellings. Each of these habitats is commonplace and widespread in West Sussex and of value within the immediate vicinity of the site only. No particular constraints were identified in relation to the intrinsic value of the habitats present; however, best environmental practice measures should be implemented to protect off-site habitats and retained trees.

4.5 Best environmental practice measures which should be implemented include:

- ✧ appropriate storage of fuels and chemicals to minimise the risk of accidental spillage and protection of retained trees. Sources of best construction practice include CIRIA guidance (Connolly and Charles, 2005) and Environment Agency Pollution Prevention Guidelines (2007); and
- ✧ retained trees should be protected in accordance with British Standards Institution (2012) guidelines.

Bats

- 4.6 All British species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Under this legislation it is an offence to deliberately capture, kill, disturb and damage or destroy a bat roost. Some species of bat are also Species of Principal Importance and Sussex LBAP species.
- 4.7 Buildings 1 and 2 were assessed as having high potential to support roosting bats; however, these are due to be retained during the development. As long as no works to these buildings are proposed (including any renovation work), then these will require no further survey work.
- 4.8 At least two trees were present which overall had moderate bat roosting potential due to the presence of broken limbs, ivy-covering and splits and cracks on lateral limbs. As these trees were due to be removed, further survey was recommended to determine the presence/likely absence of roosting bats and comply with legislation.
- 4.9 Confirmation was received from the client in August 2014 that the trees identified as having moderate potential to support a bat roost had since been removed from the site, therefore, no further survey was possible.

Breeding birds

- 4.10 All breeding birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). The site supports at least one common species of breeding bird and highly likely to support more.
- 4.11 Bird boxes, buildings, shrubs, trees and hedgerows on site all have potential to support breeding birds and most will be impacted by the development. It was recommended that in order to comply with legislation, these habitats should be removed September to February inclusive which is outside of the main bird breeding season. A number of these trees have since been removed from the site. It is recommended that any further removal of vegetation is carried out outside of the main bird breeding season to avoid any potential offences.
- 4.12 Where clearance work cannot be carried out outside of the main bird nesting season, a search for any nesting birds up to 48 hours prior to clearance must be undertaken by an experienced ecologist. If any nests are found, they are to be protected until such time as the ecologist confirms that the young have fledged. This would involve setting up an exclusion zone/cordon to an appropriate area for the species concerned. Works may then proceed up to, but not within, this exclusion zone. If any nesting birds are found at any time during clearance works when the ecologist is not present, work must stop immediately and an ecologist consulted immediately for advice on how to proceed.

Reptiles

- 4.13 All species of reptile are protected from killing or injuring under the Wildlife and Countryside Act 1981 (as amended) and are listed as Species of Principal Importance.
- 4.14 Habitats on site with potential to support reptiles were limited to a few piles of garden waste, tall ruderal vegetation and introduced shrubberies around the margins of the site. Suitable off-site habitats surrounding the site to the north, east and south slightly increases the chance of reptiles occurring. However, this is still considered to be low and any population present is likely to be small and comprised of widespread species such as slow-worm.
- 4.15 In order to comply with legislation, it is recommended that a precautionary approach is taken and that habitats are managed/removed in such a way to avoid any potential impacts on reptiles and dissuade them from using the site. This would involve maintaining the grassland on site as a regularly-mown sward right up until works commence and carefully removing/dismantling piles of garden waste and tall ruderal

vegetation/introduced shrubs by hand and/or using hand tools, during the reptile active period i.e. March to September. Please note that any vegetation of value to breeding birds must also be removed outside of the main breeding bird season.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

- 4.16 Planning policy and strategic biodiversity partnerships strongly encourage inclusion of ecological enhancements. Ecological enhancements will also deliver other green infrastructure benefits such as storm water attenuation and reducing the urban heat island effect. The following generic measures would be suitable for integration into the site's design, but would require a more detailed design to successfully implement.

Sustainable Urban Drainage System (SuDS)

- 4.17 SuDS comprise a linked system of soft landscaping, green roofs, rain-water harvesting technologies including ponds, below ground drainage and porous surfacing which can be designed into a development to intercept and attenuate surface water and prevent flooding. Design of a SuDS would be appropriate to this development and should be considered as part of the site master plan. A SuDS would also increase biodiversity, for example by providing a series of habitats for wildlife to use, if appropriately planted – see below.

Biodiverse green roof

- 4.18 The aspiration should be to install biodiverse green roofs on houses (subject to loading capacity) as they deliver multiple green infrastructure benefits, including being of high wildlife value. It is advised that any green roof should meet minimum standards published by the Green Roof Organisation (GRO, 2011) and professional advice is sought (e.g. The Green Roof Consultancy - <http://greenroofconsultancy.com/>) in order to align the technical specification with the environmental goals of the development.

Wildlife planting

- 4.19 Wildlife planting should be integral to the soft landscape plans and should include native species and/or species of recognised wildlife value¹⁴. The use of nectar-rich and berry

¹⁴ For example The Royal Horticultural Society:

http://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs_pollinators_plantlist
<http://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/perfectforpollinators-wildflowerlist>

producing plants will attract a wider range of insects, birds and mammals and continue to accommodate those already recorded at the site. Trees should also be provided and can be under-planted to improve structure and cover for wildlife. Consideration should also be given to creation of species-rich native hedgerows.

- 4.20 Good horticultural practice should be utilised, including the use of peat-free composts, mulches and soil conditioners, native plants with local provenance and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- 4.21 Landscaping should include the use of climbing plants growing on a support structure to provide vertical nesting habitat and foraging resources for birds and invertebrates. The support structure should ideally be placed 50-100mm off the façade. Plants should comprise native species or non-native species of recognised wildlife value and either deciduous or evergreen species depending on the specification.

Provision of bird nesting opportunities

- 4.22 The continued provision of bird boxes would be appropriate at this site and any that are lost should be replaced. Many different designs are available including boxes to support colonial species such as house sparrow. Woodcrete bird boxes (Schwegler, 2011) are recommended as they are long lasting compared to wooden boxes, insulate occupants from extremes of temperature and condensation and are available in a broad range of designs,.

Wildlife-friendly fencing

- 4.23 The proposed development will include the use of fencing to divide the residential properties and gardens, and will fragment an area of foraging and nesting habitat of value to generalist wildlife such as hedgehogs and other small mammals. It is therefore recommended that connectivity is maintained between the gardens by installing wildlife-friendly fencing, with gaps or tunnels in the bottom panels/gravel boards to allow easy passage for small mammals to continue foraging in this area. This can be achieved for example by cutting a hole (approximately 10cm²) in certain gravel boards, which is large enough for small mammals to pass through, but small enough to contain pets.

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Appendix 1: Habitat Map

HABITAT SURVEY MAP

Station:	NEA	Scale:	1:1000
Date of survey:	21/05/2014		
Surveyor:	Flora & Fauna		
Client:	Mishon Mackay/Mr & Mrs Atkins		
Address:	Pound Place, Angering GTA Job No: 145475		
Drawn by:	RM	Created:	ENC
Approved:	RM	Date:	21/05/2014

KEY

- [] Site boundary
- [■] Buildings
- [▨] Hardstanding
- [A] Amenity grassland
- [X] Introduced shrub
- [▤] Horticultural planting
- [□] Tall ruderal
- [---] Species-poor hedge
- [●] Scattered trees
- [⊙] Target note

0 12.5 25 50 Meters

The map is provided solely for the purpose of recording the location of the proposed works at the site as indicated on the accompanying plan.

Appendix 2: Photographs

Photograph 1

Building 1 (the garage) with gaps observed under the tiles on the roof potentially suitable for roosting bats. This building is due to be retained. View looking north.



Photograph 2

Building 2 (Pound Place) with missing tiles and gaps observed under the tiles on the roof potentially suitable for roosting bats. This building is due to be retained. View looking south-west.



Photograph 3

A view showing amenity grassland, introduced shrub and scattered trees in the gardens of Pound Place. View looking north.



Photograph 4

The mature pine tree in the western end of the site with broken limbs and various splits and cracks on lateral branches offering potential roosting opportunities for bats (see Target Note 3).



Photograph 5

Piles of garden waste offering potential breeding sites/refuges for reptiles. View looking north.



Photograph 6

Bird box erected on the wall of Building 2 with confirmed breeding blue tits (see Target Note 7). View looking west.



Appendix 3: Plant Species List

Plant Species List for Pound Place, Angmering compiled from the Preliminary Ecological Assessment habitat survey carried out on the 20th September 2014.

Scientific nomenclature and common names for vascular plants follow Stace (2010) and Blockeel & Long (1998) for bryophyte species. Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker,
t=tree, h=hedgerow, w=water

SCIENTIFIC NAME	COMMON NAME	ABUNDANCE	QUALIFIER
<i>Acer platanoides</i>	Norway maple	R	t, y, p
<i>Acer pseudoplatanus</i>	Sycamore	R	t, y, p
<i>Aesculus hippocastanum</i>	Horse chestnut	R	t, y, p
<i>Allium schoenoprasum</i>	Chives	R	p
<i>Allium</i> sp.	Allium species	R	p
<i>Alnus glutinosa</i>	Alder	R	t, y, p
<i>Anisantha sterilis</i>	Barren brome	R	e
<i>Anthriscus sylvestris</i>	Cow parsley	R	e
<i>Aucuba japonica</i>	Spotted-laurel	O	p
<i>Bellis perennis</i>	Daisy	A	
<i>Berberis thunbergii</i>	Thunberg's barberry	O	p
<i>Betula pendula</i>	Silver birch	LF	t, y
<i>Buddleja davidii</i>	Buddleia	R	p
<i>Buxus sempervirens</i>	Box	O	p
<i>Cardamine</i> sp.	Bitter-cress	O	e
<i>Carex pendula</i>	Pendulous sedge	R	p
<i>Cedrus deodara</i>	Deodar cedar	R	t, y, p
<i>Cerastium fontanum</i>	Common mouse-ear	LF	
<i>Cupressus</i> sp.	Cypress	LA	t, p
<i>Elaeagnus ebbingei</i>	Ebbinge's silverberry	R	p
<i>Epilobium ciliatum</i>	American willowherb	R	e
<i>Fallopia baldschuanica</i>	Russian-vine	R	
<i>Festuca rubra</i>	Red fescue	O	
<i>Fragaria ananassa</i>	Garden strawberry	LF	p
<i>Fraxinus excelsior</i>	Ash	R	t, y
<i>Galium aparine</i>	Cleavers	LF	e
<i>Geranium molle</i>	Dove's-foot crane's-bill	O	
<i>Geranium</i> sp.	Crane's-bill	R	p
<i>Glechoma hederacea</i>	Ground-ivy	LF	
<i>Hedera helix</i>	Ivy	R	
<i>Holcus lanatus</i>	Yorkshire-fog	LF	

<i>Hypericum calycinium</i>	Rose-of-Sharon	O	p
<i>Hypochaeris radicata</i>	Cat's-ear	O	
<i>Kniphofia</i> sp.	Red hot poker	R	p
<i>Laburnum anagyroides</i>	Laburnum	R	t, y, p
<i>Lamium album</i>	White dead-nettle	R	e
<i>Ligustrum ovalifolium</i>	Garden privet	R	p
<i>Lolium perenne</i>	Perennial rye-grass	O	
<i>Lotus corniculatus</i>	Common bird's-foot-trefoil	O	
<i>Mahonia aquifolium</i>	Oregon-grape	R	p
<i>Myosotis</i> sp.	Forget-me-not	R	
<i>Pinus</i> sp.	Pine	F	t, y, p
<i>Poa annua</i>	Annual meadow-grass	O	e
<i>Poa</i> sp.	Meadow-grass	F	
<i>Poa trivialis</i>	Rough meadow-grass	R	e
<i>Prunus cerasifera</i> var <i>pissardii</i>	Purple cherry plum	O	t, y, p
<i>Prunus laurocerasus</i>	Cherry laurel	R	p
<i>Prunus</i> sp.	Cherry	O	t, y, p
<i>Quercus cerris</i>	Turkey oak	R	t, y
<i>Quercus robur</i>	Pedunculate oak	R	s, e
<i>Ranunculus repens</i>	Creeping buttercup	O	
<i>Rheum x rhabarbarum</i>	Rhubarb	R	p
<i>Ribes</i> sp.	Currant	LF	p
<i>Robinia pseudoacacia</i>	False-acacia	R	t, y, p
<i>Rosa</i> sp.	Rose	R	p
<i>Rosemarinus officinalis</i>	Rosemary	R	p
<i>Rubus idaeus</i>	Raspberry	LF	p
<i>Rumex obtusifolius</i>	Broad-leaved dock	R	e
<i>Sambucus nigra</i>	Elder	O	t, y, s
<i>Senecio jacobaea</i>	Common ragwort	R	
<i>Sonchus</i> sp.	Sow-thistles	LF	e
<i>Sorbus aucuparia</i>	Rowan	O	t, y, p
<i>Sorbus</i> sp.	Whitebeam	R	t, y, p
<i>Stellaria media</i>	Common chickweed	O	e
<i>Taraxacum</i> sp.	Dandelion	O	
<i>Trifolium micranthum</i>	Slender trefoil	LA	
<i>Trifolium repens</i>	White clover	O	
<i>Urtica dioica</i>	Common nettle	LF	e
<i>Veronica arvensis</i>	Wall speedwell	O	
<i>Veronica filiformis</i>	Slender speedwell	O	
<i>Veronica</i> sp.	Hedge veronica	LF	p
<i>Viola</i> sp.	Violet	LF	
<i>Vitis vinifera</i>	Grape-vine	R	e
<i>Weigela</i> sp.	Weigelia	R	p
<i>Yucca</i> sp.	Yucca	R	p

Appendix 4: Target Notes

Target Notes List for Pound Place, Angmering from the Phase 1 habitat survey and protected and notable species assessment carried out on the 20th May 2014

Target note (TN)	Description
1	Laburnum tree attracting a large number of foraging bumblebees.
2	Large owl box erected on mature pine tree. Apparently used by roosting pigeons according to homeowner.
3	Mature pine tree with various broken limbs, splits and cracks on lateral branches offering potential roosting opportunities for bats.
4	Old bird's nest located at the top of a young pine tree.
5	Piles of grass cuttings and garden waste offering potential breeding sites/refuges for reptiles.
6	Small bird box erected on garden wall and appearing unoccupied.
7	Small bird box erected on the wall of Building 2 (approximately 1.5m high) and occupied by breeding blue tit.

Appendix 5: Legislation and Planning Policy

Important notice: This section contains details of legislation and planning policy applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive¹⁵ is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- » Deer Act 1991;
- » Countryside and Rights of Way (CRoW) Act 2000;
- » Natural Environment & Rural Communities (NERC) Act 2006;
- » Protection of Badgers Act 1992;
- » Wild Mammals (Protection) Act 1996.

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds,

¹⁵ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2010 (as amended) (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, dormouse and some plant species) are given below. **These should be read in conjunction with the relevant species sections that follow.**

- » In the Directive, the term ‘deliberate’ is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- » The Conservation of Habitats and Species Regulations 2010 (as amended) does not define the act of ‘migration’ and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.
- » In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three ‘tests’: i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- » Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- » Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate³
 - b) to affect significantly the local distribution or abundance of the species
- » Damage or destruction of a breeding site or resting place
- » Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- ❖ Intentional or reckless disturbance (at any level)
- ❖ Intentional or reckless obstruction of access to any place of shelter or protection
- ❖ Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost¹⁶.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- ❖ Intentionally kill, injure or take any wild bird;
- ❖ Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- ❖ Intentionally take or destroy an egg of any wild bird;
- ❖ Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

¹⁶ Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. **150**. The Mammal Society, Southampton.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- ✧ Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- ✧ Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird breeding season which typically runs from March to August¹⁷. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the breeding season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Herpetofauna (Amphibians and Reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita* and great crested newt *Triturus cristatus* receive full protection under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. The pool frog *Pelophylax lessonae* is also afforded full protection under the same legislation. Regulation 41 prohibits:

- ✧ Deliberate killing, injuring or capturing of species listed on Schedule 2
- ✧ Deliberate disturbance of any Schedule 2 species as:
 - a) to impair their ability:

¹⁷ It should be noted that this is the main breeding period. Breeding activity may occur outwith this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

- (i) to survive, breed, or reproduce, or to rear or nurture young;
- (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate
- b) to affect significantly the local distribution or abundance of the species

- ✧ Deliberate taking or destroying of the eggs of a Schedule 2 species
- ✧ Damage or destruction of a breeding site or resting place
- ✧ Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act, they are additionally protected from:

- ✧ Intentional or reckless disturbance (at any level)
- ✧ Intentional or reckless obstruction of access to any place of shelter or protection
- ✧ Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to Section 9(1) & (5). For these species, it is prohibited to:

- ✧ Intentionally (or recklessly in Scotland) kill or injure these species
- ✧ Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to Section 9(5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation Habitats and Species Regulations 2010 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

Invasive Plant Species

Certain species of plant, including Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera* are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Such species are generally non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to plant or otherwise cause these species to grow in the wild.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land per se, it is an offence to cause these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

Wild Mammals (Protection) Act 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to:

- Mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

B NATIONAL AND EUROPEAN LEGISLATION AFFORDED TO HABITATS

Statutory Designations: National

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory Sites of Special Scientific Interest (SSSIs) under the National Sites and Access to the

Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as *National Nature Reserves* which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (Natura 2000 network) and globally (such as Wetlands of International Importance). See subsequent sections for details of these designations. Improved provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).

The Wildlife & Countryside Act 1981 (as amended) also provides for the making of *Limestone Pavement Orders*, which prohibit the disturbance and removal of limestone from such designated areas, and the designation of *Marine Nature Reserves*, for which byelaws must be made to protect them.

Statutory Designations: International

Special Protection Areas (SPAs), together with *Special Areas of Conservation (SACs)* form the *Natura 2000* network. The Government is obliged to identify and classify SPAs under the EC Birds Directive (Council Directive 2009/147/EC (formerly 79/409/EEC)) on the Conservation of Wild Birds). SPAs are areas of the most important habitat for rare (listed on Annex I of the Directive) and migratory birds within the European Union. Protection afforded SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles (nm) is given by The Conservation of Habitats & Species Regulations 2010 (as amended). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SPAs in UK offshore waters (from 12-200 nm).

The Government is obliged to identify and designate SACs under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). These are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive within the European Union. SACs in terrestrial areas and territorial marine waters out to 12 nm are protected under The Conservation of Habitats & Species Regulations 2010 (as amended). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SACs in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

Statutory Designations: Local

Under the National Sites and Access to the Countryside Act 1949 Local Nature Reserves (LNRs) may be declared by local authorities after consultation with the relevant countryside agency. LNRs are declared for sites holding special wildlife or geological interest at a local level and are managed for nature conservation, and provide opportunities for research and education and enjoyment of nature.

Non-Statutory Designations

Areas considered to be of local conservation interest may be designated by local authorities as a Wildlife Site, under a variety of names such as County Wildlife Sites (CWS), Listed Wildlife Sites (LWS), Local Nature Conservation Sites (LNCS), Sites of Biological Importance (SBIs), Sites of Importance for Nature Conservation (SINCs), or Sites of Nature Conservation Importance (SNCIs). The criteria for designation may vary between counties.

Together with the statutory designations, these are defined in local and structure plans under the Town and Country Planning system and are a material consideration when planning applications are being determined. The level of protection afforded to these sites through local planning policies and development frameworks may vary between counties.

Regionally Important Geological and Geomorphological Sites (RIGS) are the most important places for geology and geomorphology outside land holding statutory designations such as SSSIs. Locally-developed criteria are used to select these sites, according to their value for education, scientific study, historical significance or aesthetic qualities. As with local

Wildlife Sites, RIGS are a material consideration when planning applications are being determined.

C NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) replaced Planning Policy Statement (PPS9) in April 2012 as the key national planning policy concerning nature conservation. The NPPF emphasises the need for suitable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species. An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species – that is those listed as UK Biodiversity Action Plan priority species – is also listed as a requirement of planning policy. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 40 of the Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' They are referred to in this report as Species of Principal Importance and Habitats of Principal Importance. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

D LOCAL PLANNING POLICY

The Arun District Council Local Plan (2014) deals with matters of strategic importance for Arun. Key chapters include Chapter 17 – Natural Environment, the main strategic objective being *"To plan for climate change and work in harmony with the environment to conserve natural resources and increase biodiversity."*

Policy ENV SP1: Natural environment

Arun District Council will encourage and promote the conservation and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects sites listed in Tables 17.1-17.6 that are recognised for the species and habitats contained within them.

Policy ENV DM4: Protection of trees

Development will be permitted where it can be demonstrated that trees protected by a Tree Preservation Order(s), (TPO) identified as Ancient Woodland, in a Conservation Area or contributing to local amenity, will not be damaged or destroyed now and as they reach maturity, unless to do so:

- a. Would result in the removal of one or more trees in the interests of good arboricultural practice. This shall be demonstrated by the developer following the advice of a suitably qualified person which shall be guided by BS 5837 (2012). Details of any advice received having regard to BS 5837 (2012) shall be submitted, in writing, as part of a planning application; or*
- b. Would enhance the survival and growth prospects of other protected trees;*
- c. The benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland.*

Where planning permission is granted in any of the above instances, conditions shall be used to ensure that, for any trees which are removed as part of a development, at least an equivalent number of a similar species and age (where practical) are planted on the proposed development site. Sufficient space for replacement trees to mature without causing future nuisance or damage shall be provided. The planting of new trees shall form an integral part of the design of any development scheme.

Proper provision must be made for the protection and management of trees or areas of woodland on-site when undertaking development. A management plan shall be provided as part of a planning application in accordance with BS 5837 (2012) in order to ensure that trees are adequately protected during development and appropriately maintained in the future. Conditions for the continued protection of trees on sites shall be included in any planning consent given.

Where there are existing trees on or adjacent to a development site, developers shall be required to provide:

d. Land and tree surveys

e. A tree constraints plan

f. An arboricultural impact assessment to include a tree protection plan and arboricultural method statement

These will ensure that development is planned to take a comprehensive view of tree issues at an early stage in the design process and that development works do not have a negative impact on existing trees. Developments shall also be consistent with all other Local Plan policies.

Policy ENV DM5: Development and biodiversity

Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.

Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person. All developments shall have regard to Natural England's standing advice for protected species. Developments

shall also be consistent with all other Local Plan policies.

F REGIONAL AND LOCAL BAPS

Many local authorities in the UK have also produced a local Biodiversity Action Plan (LBAP) at the County or District level. The Sussex Biodiversity Action Plan is based on the UK list of Species and Habitats of Principal Importance and contains 1,149 species and 65 habitats.



Experience and quality that make a difference

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