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Preliminary Ecological Appraisal

**Land at Springfields, Chichester Road,
North Bersted, Bognor Regis PO21 5EE**

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Report Summary

1. The Ecology Co-op has been commissioned by Next Phase Planning and Development to undertake a Preliminary Ecological Appraisal at Springfields. A site walkover survey visit was carried out on the 19th June 2018, to evaluate the site for habitats potentially suitable to support EU and UK protected species. The purpose of this report is to record the findings of the survey and identify potential ecological constraints to a proposed development of a residential building.

This survey was undertaken by Sam Lunn BSc, MSc, ACIEEM and Kate Lewis BSc (hons) MSc.

2. The site is currently used as a garden and includes a large mown amenity grass lawn with a ruderal bank. A row of evergreen oaks runs inside the south boundary with an mix of garden plants growing underneath. A post and rail fence separates the site from a small mown field to the north-west and the A249 borders the south-west.

3. There is one designated site within 2 kilometers of the site: The Brooks Nature Reserve 1.4km south-east. There is limited potential for reptiles to use the site and the bordering evergreen oak tree line, has potential to provide foraging habitat for bats and nesting habitat for birds although these are not scheduled to be removed. No further surveys are recommended.

4. As the site may be used by foraging and commuting bats, it is important that the potential for disturbance from artificial lights is considered. The proposed development should include an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 2). As a precautionary mitigation measure, it is recommended that the lawn continues to be mown to ensure that the site remains unsuitable for reptiles. The evergreen trees and north-east ruderal bank have potential to support a variety of common nesting birds. It will be essential for any future development to consider the nesting bird season and any vegetation removal should be timed outside of the nesting bird season (typically 1st March to 31st August), unless features are first searched by a suitably qualified ecologist and no active nests are found.

This report has been prepared by The Ecology Co-operation Ltd, with all reasonable skill, care and diligence within the terms of the Contract with the client. This report only becomes the property of the client once payment for it has been received in full.

We disclaim responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake a Preliminary Ecological Appraisal of Springfields, Chichester Road, North Bersted, Bognor Regis PO21 5EE by Next Phase Planning and Development. This report presents the findings of a walkover survey undertaken by Kate Lewis BSc (hons) MSc and Sam Lunn, an associate member of Chartered Institute for Ecology and Environmental Management (CIEEM) on 19th June 2018. It provides details on the potential for any protected species and/or habitats to be present at the site and provides an assessment of the potential ecological constraints to the proposed development of a residential building. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment (EclA) of the proposal are provided. Where appropriate, measures to avoid, mitigate and/or compensate for impacts are outlined.

1.2 Background

The site is located on the A259, between Colworth and North Bersted, West Sussex. The central grid reference for the site is SU 91518 01823 (Figure 1).

This is a small site, used as a residential garden, largely comprised of a mown amenity lawn measuring approximately 0.05 hectares. The lawn is bordered to the south by a row of six evergreen oaks *Quercus ilex*, five of which are mature. Garden plants such as roses and ornamental holly have been planted in the understory of these trees. There is also a small garage on this southern border, which is not part of the proposed survey area. The north east boundary of the site is bordered by a ruderal bank, mostly consisting of nettles *Urtica dioica* and cleavers *Galium aparine*, and an arable field beyond. A storage container and caravan, that currently lie in front of this border will be removed upon commencement of building works. The western border consists of a small mown field, separated from the site by a post and rail fence, and the south west of site is bordered by the A259. Figure 2 shows the boundary of the site.

The proposed development is to build a residential house on the lawn area only. The bordering mature evergreen oak trees should not be affected (Figure 3).



Figure 1. An aerial image showing the location of the site. The approximate site boundary is outlined in red. Images produced courtesy of Google maps (Map data ©2018 Google)



Figure 2. Aerial image illustrating the site boundary line outlined in red.

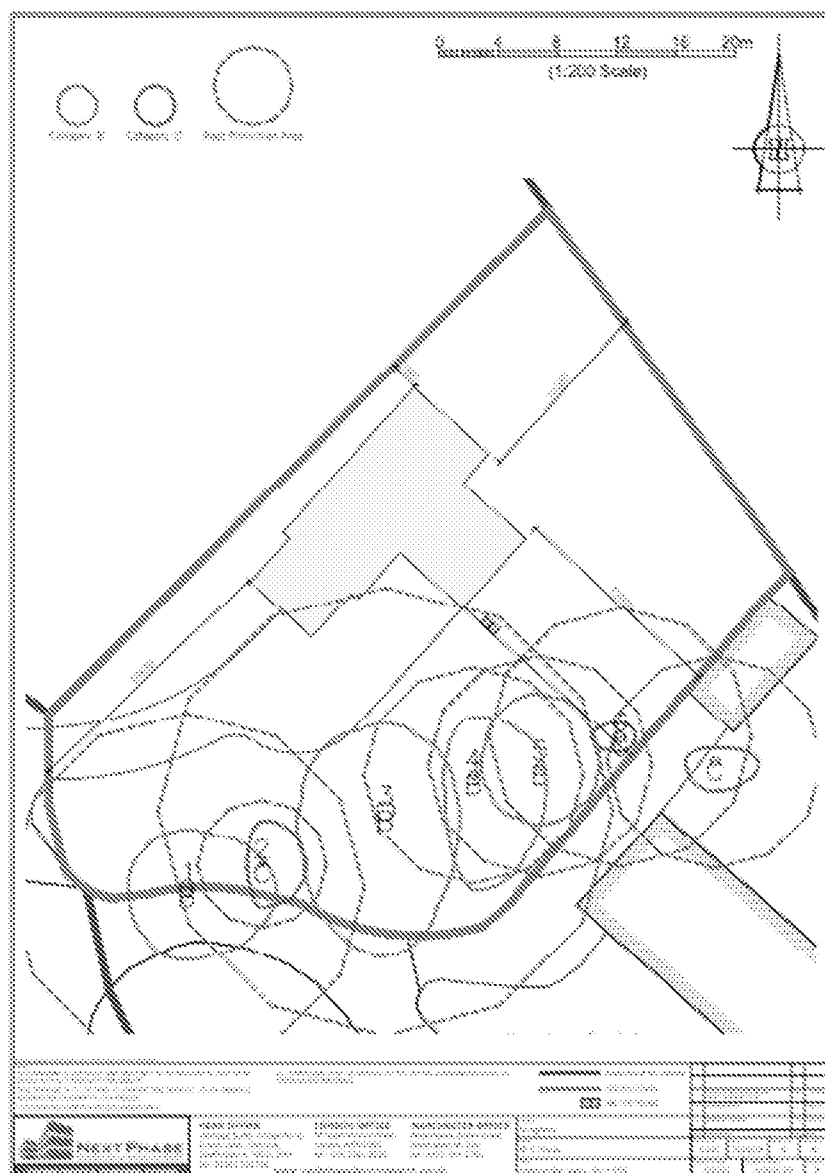


Figure 3. Proposed plan provided by Next Phase Planning and Development.

1.3 Policy and Legislation

Legal protection applying to relevant bird, mammal, herpetofauna and invertebrate species and current nature conservation planning policy is outlined in Appendix 1 of this report.

2 METHODOLOGY

The methodology used for this survey are in accordance with the Guidelines for Preliminary Ecological Assessment (CIEEM 2017)¹.

¹ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.



2.1 Desk Study

A search for existing records of protected species, species of conservation concern and invasive non-native species was requested from the Sussex biological records centre within a radius of 1km of the site.

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest including ponds within 500m (relevant to great crested newts), watercourses (relevant to riparian mammals and crayfish) and connectivity to woodland, scrub, and hedgerow networks (relevant to bats, dormice) in the wider landscape around the site. The connectivity of the site to these features, buildings, and other semi-natural habitats such as grassland and heathland are also relevant to bats, great crested newts and reptiles.

The MAGIC website resource (www.magic.gov.uk) was used to identify the location of designated sites for nature conservation and EPS licences granted in relation to the survey site.

2.2 Field Survey

A site walkover survey was undertaken on 19th June 2018, during which the habitats contained within the site were described and evaluated. Since this site is relatively small scale and contains limited semi-natural habitat diversity, it was not considered necessary to undertake comprehensive Phase 1 Habitat Mapping of the site. All habitat types contained within the site, together with the dominant botanical species and indicators of important habitat types such as ancient woodland or unimproved grasslands, were simply listed and described.

Habitats and features at the site were evaluated for their potential to support legally protected species. In addition, observations of any important plant communities, bird assemblages or other potentially valuable ecological features were recorded.

Details of the preliminary survey methods for each legally protected species are given below.

2.3 Badgers

Habitats within the site and surrounding areas were broadly assessed for their potential to support badgers. Any signs of badger activity, for example setts, footprints, latrines, well-worn paths, foraging marks, were recorded.

2.4 Bats

Bats can use a wide range of features including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy, and loose bark.

Trees, buildings, and other structures were broadly assessed for their potential to support roosting bats and further surveys are recommended as appropriate.



The potential for roosting bats for each feature, or group of features was assessed as either negligible, low, moderate, or high, in accordance with the Bat Conservation Trust Survey Guidelines (Collins, J.(ed.) (2016)². Any evidence confirming the presence of bats that was found was clearly recorded including photos and samples (e.g. droppings) where appropriate. Further surveys are recommended where necessary.

2.5 Breeding Birds

The habitats contained within the site and adjacent areas were broadly assessed for their potential to support important bird species/assemblages, and breeding birds. Any birds identified during the site visit were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern (Eaton *et al.* 2015)³ and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981). Further surveys are recommended as appropriate.

2.6 Dormice

The site was broadly assessed for its potential to support hazel dormouse. This included use of on-line mapping resources to assess the surrounding area for connectivity to large blocks of woodland, scrub and extensive hedgerow networks. Further surveys are recommended as appropriate in accordance with best practice guidance (Bright *et al* 2006)⁴.

2.7 Great Crested Newt

A desk study was undertaken to identify ponds within 500m of the site. Where access permission was granted, or ponds could be viewed from public roads or footpaths, the ponds were assessed for their potential to support great crested newts using the Habitat Suitability Index (H.S.I.) (Oldham *et al* 2000)⁵.

Further surveys are recommended as appropriate, in accordance with best practice guidance (English Nature 2001)⁶.

2.8 Reptiles

Habitats on the site were broadly assessed for their potential to support reptiles. Particular attention was paid to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation

² Collins, J.(ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.

³ Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, Leigh., Musgrove, A., Noble, D., Stroud, D., Gregory, R. (2015) *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. British Birds 108, pp 708-746.

⁴ Bright, P., Morris, P. and Mitchell-Jones, T. (2006) *The dormouse conservation handbook 2nd Ed*. English Nature, Peterborough.

⁵ Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). *Herpetological Journal* 10, 143-155.

⁶ English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.



sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (rough grassland and scrub). The common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus*) are widespread species that can be found in any of these habitats, whereas smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis*, have much more restricted and isolated populations on lowland heathland and sand dunes.

2.9 Other notable species

The site habitats were broadly assessed for their potential to support species of principle importance for nature conservation (Section 41 NERC Act 2006) and other notable species. This includes mammals such as harvest mouse, hedgehog, brown hare, and many bird species. The site was broadly assessed for its potential to support important invertebrate assemblages with particular attention paid to features such as standing dead-wood, wet flushes, bare earth banks and botanically rich areas.

3 BASELINE CONDITIONS

3.1 Designated Sites

There is one designated site within 2 kilometers of the site: The Brooks Nature Reserve, 1.4km south-east which is a 19Ha site comprising 3 fields alongside the north-east bank of the Aldingbourne Rife. However, the A259 and a number of arable fields that lie between the site and this nature reserve offer limited connective habitat of good quality for use by wildlife (figure 4).

There are no granted EPS licenses for mitigation projects within 1km of the site boundaries. The closest EPS license to the site concerns C-PIP, 1.5km east, November 2014-2020.



Figure 4. Designated sites within a radius of 2km of the application site (red dot). Images produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).



3.2 Habitats

The site is predominately formed of a closely mown amenity lawn, consisting of grass species that could not be identified due to the length of the grass and interspersed with stunted native species such as broadleaf doc *Rumex obtusifolius*, medic *Medicago lupulina* and creeping buttercup *Ranunculus repens*. The north-east border contains a dense ruderal bank, consisting of nettle, cleavers, common hogweed *Heracleum sphondylium*, ivy *Hedera helix*, Yorkshire *holcus lanatus* and *Poa* spp, with a couple of small hazel *Corylus avellane* and ornamental holly trees. An arable field lies beyond this bank. Evergreen oaks line the south of the site, potentially providing habitat for bats and birds. Ornamental garden plants and shrubs have been planted beneath the oaks, forming two sections: the largest section consists largely of a number of roses, holly's, fuchsia and geraniums. The smaller section is dominated by foxgloves *Digitalis*, bluebells *Hyacinthoides* spp., a small elder *Sambucus nigra* and pale yellow eyed grass *Sisyrinchium striatum* (figure 6).



Figure 3. A view looking at the north-east boundary: a ruderal bank that backs on to an arable field. The caravan and storage container (top right) will be removed prior to commencement of works.



Figure 4. North-west border: a post and rail fence separates the site from a small, heavily mown field.



Figure 5. South border consisting of six evergreen oaks and ornamental garden plants.



Figure 6. Close up view of the south border, showing the garden area separated by a footpath.



Figure 7. The western border: A259. Road access is proposed through the existing gate,...

3.3 *Badgers*

No signs of any badger activity were seen during the survey assessment and there are no habitats of value for this species within the site and surrounding landscape.

Records of badgers are not provided by the records centre due to the sensitive nature of this information.



3.4 Bats

There are five mature evergreen oak trees on site which could potentially provide suitable bat habitat. However, upon inspection, only the furthest north-eastern tree was seen to have a single possible cavity in the trunk suitable for a solitary crevice-dwelling bat and had a thick enough lining of ivy for use by bats. However, as all the trees are to be retained, impact from the development would be restricted to lighting impacts. The trees could potentially provide foraging habitat for bats although connectivity to surrounding habitat is poor.

The Sussex biological record centre provided four western barbastelle bat records foraging within the 1km grid square SU9001, recorded in 2015, and one unspecified bat record, 2005, within a 1km area of the site.

3.5 Breeding Birds

The five mature evergreen oak trees also provide potential habitat for a variety of common nesting birds.

The Sussex biological record centre provided numerous bird records for the search area concerning a total of 115 species. Most of these species are relatively common and widespread, but the list includes 19 species of principle importance for conservation (S41 NERC Act 2007), and 18 species listed on Schedule 1 of the Wildlife and Countryside Act. In addition, 3 species are red listed on the Birds of Conservation Concern

A high proportion of these species are not garden birds and therefore not relevant to the application site. However, the dunnoek *Prunella modularis*, house sparrow *Passer domesticus*, starling *Sturnus vulgaris*, song thrush *Turdus philomelos* and bullfinch *Pyrrhula pyrrhula* could potentially breed on site.

Table 1. Data provided by the Sussex biological records centre: NERC and RedList species recorded within 1km of the Springfields site.

Taxon name	Common name	National Designation	Date of latest record
<i>Perdix perdix</i>	Grey Partridge	NERC S41	02/01/2014
<i>Circus cyaneus</i>	Hen Harrier	NERC S41	25/01/1989
<i>Vanellus vanellus</i>	Lapwing	NERC S41	02/02/2016
<i>Numenius arquata</i>	Curlew	NERC S41, RedList	25/07/2011
<i>Larus argentatus</i>	Herring Gull	NERC S41	19/12/2016
<i>Streptopelia turtur</i>	Turtle Dove	NERC S41	13/07/2011
<i>Cuculus canorus</i>	Cuckoo	NERC S41	05/01/2011
<i>Alauda arvensis</i>	Skylark	NERC S41	04/12/2016
<i>Motacilla flava</i>	Yellow Wagtail	NERC S41	07/01/2005
<i>Prunella modularis</i>	Dunnoek	NERC S41	12/06/2016
<i>Turdus philomelos</i>	Song Thrush	NERC S41	05/02/2015
<i>Muscicapa striata</i>	Spotted Flycatcher	NERC S41	24/08/2016
<i>Sturnus vulgaris</i>	Starling	NERC S41	04/10/2017
<i>Passer domesticus</i>	House Sparrow	NERC S41	12/06/2016
<i>Linaria cannabina</i>	Linnet	NERC S41	25/07/2011
<i>Pyrrhula pyrrhula</i>	Bullfinch	NERC S41	01/01/2011
<i>Emberiza citrinella</i>	Yellowhammer	NERC S41	12/09/2015



Emberiza schoeniclus	Reed Bunting	NERC S41	12/06/2016
Emberiza calandra	Corn Bunting	NERC S41	29/07/2016
Milvus milvus	Red Kite	RedList	14/02/2015
Limosa limosa	Black-tailed Godwit	RedList	15/01/2009

3.6 Dormice

The site contains no woodland, scrub or hedgerows suitable for dormice and therefore the species is highly unlikely to be present.

The Sussex biological record centre provided no dormouse records in the search area.

3.7 Great Crested Newts and other amphibians

There is one pond within 500m of the site. However, as this pond is more than 300m away, and the connecting amphibian habitat is poor, it was deemed unlikely that newts from this waterbody would be found on the site. In addition, there is no suitable habitat for great crested newts and other amphibians as site is comprised mostly of short amenity grass .

The Sussex biological record centre provided 10 amphibian records within 1km of the site. This included 3 records for smooth newt *Lissotriton vulgaris*, 5 records for palmate newt *Lissotriton Helvetica* and 2 records for common frog *Rana temporaria*. The closest of these was at 0.76km from the boundary of the site, dated 19/05/2016. No great crested newt records were identified.

3.8 Reptiles

The site comprises almost exclusively hard standing and close-mown amenity grassland, and therefore it is highly unlikely that reptiles would be found on site.

The Sussex biological record centre provided one reptile record in the 1km search area; one grass snake, 0.97km from the boundary of the site, dated May 2011.

3.9 Invasive non-native species

Other than the six evergreen oak trees, a rhododendron shrub planted in the garden area under the oaks was the only other non-native species evident during the walkover survey.

3.10 Other notable species

The habitats present within the site are unlikely to support other notable species such as brown hare, harvest mouse, hedgehog, notable invertebrates, or plants. No other notable species were identified during the survey.



3.11 Survey Limitations

An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey, but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.

4 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

4.1 Designated Sites

The site is outside the zone of influence from all designated sites and, based on this and the small scale of the development, there are no identified mechanisms of impact on designated sites as a result of the proposed development.

4.2 Habitats

The only habitat to be lost from the proposed construction site will be mown amenity grassland. The mature trees along the south boundary will remain intact and provide the only high value habitat within the site.

4.3 Badgers

No signs of badger activity were identified during the assessment and no badger setts are situated on or near of the proposed construction zone. No further mitigation for badgers is advised, however if any signs of digging by large animals is identified on or near to the site prior to construction, then an ecologist should be contacted for advice.

4.4 Bats

In accordance with the Bat Conservation Trust guidelines, the overall potential for the site to support bats is rated as 'negligible'. Five of the six mature evergreen oak trees were rated as negligible potential to support roosting bats and the sixth tree furthest south was rated as low with a single small cavity. and therefore no further surveys are required.

As the site may be used by foraging and commuting bats, it is important that the potential for disturbance from artificial lights is considered. The proposed development should include an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 2). This should include no light spays into the line of evergreen oaks.

4.5 Breeding Birds

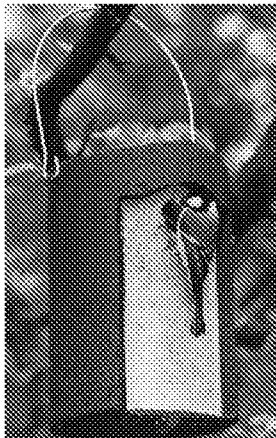
The evergreen trees and north-east ruderal bank have potential to support a variety of common nesting



birds. It will be essential for any future development to consider the nesting bird season and any vegetation removal and/or building demolition should be timed outside of the nesting bird season (typically 1st March to 31st August), unless features are first searched by a suitably qualified ecologist and no active nests are found.”

It is recommended that a native species-rich hedgerow be planted to replace or in addition to the post and rail fence currently in place on the north-west border and therefore provide an increase in nesting bird habitat.

Two 1b Schwegler bird nest boxes could also be erected onto two of the mature evergreen oaks.



Example of a 1b Schwegler nest box

4.6 Dormice

The surrounding habitat is unsuitable for dormice and therefore the development impact to dormice is negligible.

4.7 Great Crested Newts

No further surveys are recommended with respect to great crested newts, as there is no suitable terrestrial habitat within the site and no waterbodies within 250m of the site. It is considered extremely unlikely that this species would be found on the site at any time.

4.8 Reptiles

The proposed development site does not contain any suitable reptile habitat except for the ruderal bank on the northeast boundary which will not be. It is recommended that the lawn continues to be mown regularly until construction commences to ensure that the site remains unsuitable for reptiles.

4.9 Enhancement opportunities

The proposed development represents an opportunity for habitat enhancement to benefit insects, birds, hedgehogs and bats. It is recommended that a native species-rich hedgerow be planted to replace the



post and rail fence currently bordering the north-west of site. Thinning the canopies of the evergreen oaks would allow more light to reach the flower beds below, which would be particularly beneficial for the bluebells already planted. Any additional planting scheme could include native shrub species and flowering species known to encourage insect diversity. Such enhancement measures are in line with the recommendations of the NPPF and as such would be considered favourably when determining the planning application.

The developer is also encouraged to consider including integral bat roosting opportunities into the building fabric such as bat tiles or bat tubes. For example, 3 purpose designed bat tiles onto the south/east facing pitched roof. Alternatively, 2FE Schwegler Wall-Mounted bat shelters could be installed upon the external faces of the building close to the eaves of the building on the south or eastern face or on the mature evergreen oaks. As best practice, the lighting scheme should be designed to minimize light spill (see Bat Conservation Trust website), around these roosting features and potential commuting routes, particularly the line of evergreen oaks.

4.10 Conclusions.

This site contains a ruderal bank, a tree line of six evergreen oaks and a closely mown lawn, and has potential to support foraging bats and nesting birds. The ruderal bank and evergreen oak trees are not planned to be impacted by the development. Therefore, no significant potential impact from this development has been identified, although care must be taken to reduce impact from artificial light and to minimize disturbance to birds that may potentially nest in the evergreen oak trees bordering the south of site.

If any protected species are found during the proposed work, work should be stopped immediately and an ecologist must be contacted immediately for advice.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op, [REDACTED]



APPENDIX 1 –Wildlife Legislation and National Planning Policy

Introduction

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The 'Birds Directive', 'Habitats Directive' and 'Natura 2000 Sites'.

The Council Directive 79/409/EEC on the Conservation of Wild Birds ("the Birds Directive") sets a framework for the protection of wild birds. Under the directive, several provisions are made including the designation and protection of 'Special Protection Areas' (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the "Habitats Directive") directs member states of the EU to take measures to maintain favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the directive (for example Bechstein's bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*). Together with 'Special Areas of Conservation' (SPAs), designated under the Birds Directive, SACs form a network across Europe of protected areas known as the 'Natura 2000 sites'.

Annex IV lists species in need of more strict protection, these are known as "European Protected Species (EPS)". All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The 'Habitats Regulations'

The Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 ("the 1994 regulations") in England and Wales.

'Natura 2000' sites receive the highest level of protection under this regulation which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where 'likely significant effects on the integrity of the site are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to;

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb wild animals of such species;
- Deliberately take or destroy their eggs (where relevant);
- Damage or destroy a *breeding or resting place* of such an animal;
- Possess, control, sell or exchange any live or dead animal or plant, of such species;
- Deliberately pick, collect, cut, uproot or destroy a wild plant of such species.

The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for



specific reasons provided certain conditions are met. An EPS licensing regime allows operations that would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a license, ensures that three statutory conditions (sometimes referred to as the 'three derogation tests') are met:

- A licence can be granted for the purposes of “preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53 (2) (e)).
- A licence can be granted if “there are no satisfactory alternatives” to the proposed action.
- A licence shall not be granted unless the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act (1981) as amended.

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with *full protection* include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).

Natural Environment and Rural Communities (NERC) Act (2006)



The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of *habitats and species of principal importance for the conservation of biodiversity* in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Protection of Badgers Act (1992)

The Badger *Meles meles* is afforded specific legal protection in Britain under the Protection of Badgers Act (1992), and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (see above).

Under this legislation, it is a criminal offence to:

- intentionally kill, injure, take, possess, or cruelly ill-treat, a Badger, or to attempt to do so;
- interfere with a sett, by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

A licence may be obtained from Natural England to permit certain prohibited actions for a number of defined reasons including interference of a sett for the purpose of development, provided that a certain number of conditions are met. Note that licenses are not normally granted for works affecting badgers between the end of November and the start of July.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2012) sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

The NPPF states that the wider benefits of an ecosystem should be recognised, and the presence of a protected species is a material consideration for a development proposal (Circular 06/2005, 2005).

In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- Minimising impacts on existing biodiversity and habitats,
- Providing net gains in biodiversity and habitats, wherever possible,
- establishing coherent ecological networks that are more resilient to current and future pressures.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK's response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government's response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for



protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade. Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK's leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the 'Red', 'Amber' and 'Green' lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every 5 years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2015 (Eaton et al, 2015), which provides an up to date assessment of the conservation status of birds in the UK.

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APPENDIX 2 Reducing impacts of artificial light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts on other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness. Guidelines issued by the Bat Conservation Trust⁷ should be considered while designing the lighting scheme. This includes the following measures:

Do not:

- provide excessive lighting. Use only the minimum amount of light needed for the task.
- directly illuminate bat roosts or important areas for nesting birds

Avoid:

- installing lighting in ecologically sensitive areas such as: near ponds, lakes, rivers, areas of high conservation value; sites supporting particularly light-sensitive species of conservation significance (e.g. glow worms, rare moths, slow-flying bats) and habitat used by protected species.
- using reflective surfaces under lights.

Do:

- consider employing a competent lighting designer who will apply the principals of providing the right light, in the right place, at the right time and controlled by the right system.
- minimise the spread of light to at, or near horizontal and ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required.
- consider the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures.
- consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times.
- use temporary close-boarded fencing until vegetation matures, to shield sensitive areas from lighting.
- limit the times that lights are on to provide some dark periods. The task being lit often varies, for example roads are less used after 23.00hrs and car parks are empty. A lighting designer can vary the lighting levels as the use of the area changes reducing lighting levels or perhaps even switching installations off after certain times. This use of adaptive lighting can tailor the installation to suit human health and safety as well as wildlife needs.

⁷ Bat Conservation Trust (2014) Artificial Lighting and Wildlife - Interim Guidance: Recommendations to help minimise the impact artificial lighting. Available at: http://www.bats.org.uk/pages/bats_and_lighting.html



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End.
