



Preliminary Ecological Appraisal

Land South-East of Chalcroft Business Park West End, Hampshire

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing. Whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date. This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated, only dominant species may be recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 INTRODUCTION

Background

1.1 The Ecology Partnership was commissioned by Strutt and Parker to undertake a Preliminary Ecological Appraisal (PEA) for the land south-east of Chalcroft Business Park, West End, Hampshire, SO30 2HH, hereafter referred to as the 'site'.

1.2 The key objectives of a PEA (CIEEM 2017) are to:

- Identify the likely ecological constraints associated with a project;
 - Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy' (CIEEM 2016; BSI 2013, Clause 5.2);
 - Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
- Identify the opportunities offered by a project to deliver ecological enhancement.

1.3 This report comprises the:

- Legislative and planning context (Section 1);
- Assessment methodologies (Section 2);
- Results (Section 3);
- Implications for development (Section 4);
- An impact assessment (Section 5); and
- Conclusions (Section 6).

Site Context

1.4 The site (SU 48750 15962) is located south-east of Chalcroft Business Park and consists primarily of areas of grassland with some scattered trees. The wider area consists of woodland to the north and west, grassland fields to all aspects, railway tracks to the south and the town of Hedge End to the south-east. The red line boundary of the site is shown below and in relation to the wider landscape (Figure 1 and Figure 2).



Figure 1: Approximate red line boundary of the site.



Figure 2: Approximate red line boundary of the site in relation to the wider landscape.

Description of Proposed Development

- 1.5 Outline application for up to 4,130sqm of commercial floorspace (Use Classes E(g)(ii), (iii) and B8) to include farm shop (Use Class E(a)) of up to 327sqm, parking and yard areas (including accessible spaces), landscape buffers and acoustic mitigation. Formation of vehicular and pedestrian access to Estate road (access not a reserved matter).

Planning Policies

- 1.6 The site was surveyed to assess its ecological value and ensure the proposals complied with relevant planning policy and legislation. Policy guidance is provided by the National Planning Policy Framework (NPPF 2021) as well as policies from the Eastleigh Borough Local Plan 2016-2036 (adopted in 2022). These policies included the following which are considered relevant to Ecology, Biodiversity and Nature Conservation:
- S9: Green Infrastructure
 - DM11: Nature Conservation
- 1.7 The Environment Bill received Royal Assent on 9th November 2021 and is now enacted as the Environment Act 2021. Part 6 (Nature and Biodiversity) and Schedule 14 of the Environment Act 2021 insert a new section 90A and Schedule 7A into the Town and Country Planning Act 1990 (TCPA), which contain the provisions requiring mandatory biodiversity net gain for development granted planning permission pursuant to the TCPA. These provisions are not yet in force, but, once they are brought into effect through implementing legislation, will require developments to provide a biodiversity value post-development that exceeds the predevelopment biodiversity value of the onsite habitats by at least 10%. These provisions are not expected to come into force until November 2023 for new planning applications.
- 1.8 The site has therefore been surveyed to assess its ecological value and to ensure compliance with national and local plan policies and other relevant nature conservation legislation including; Wildlife and Countryside Act 1981, Natural Environment and Rural Communities Act 2006, and the Conservation of Habitats and Species (EU Exit) Regulations 2019.

- 1.9 The report has been produced with reference to current guidelines for PEA (CIEEM 2017) and in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.

2.0 METHODOLOGY

Desktop Study

- 2.1 A desktop study was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and an internet-based aerial mapping service (maps.google.co.uk) was used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands etc.) within the wider landscape.

Habitat Survey

- 2.2 The site was surveyed on the 16th of March 2023 by principal ecologist Matt Pendry BSc (Hons) and assistant ecologist Benjamin Prego BSc (Hons) QCIEEM, with an additional survey in 16th August to account for any seasonal changes to the site. The surveyors identified the habitats present, following the standard 'UK Hab' auditing method. The site was surveyed on foot and the existing habitats and land uses were recorded on an appropriately scaled map (JNCC 2010).
- 2.3 Plant species abundance was recorded using the DAFOR scale and species abundance was assigned to one of the following categories in Table 1.

Table 1: DAFOR Scale Lettering

DAFOR Category	Letter
Dominant	D
Abundant	A
Frequent	F
Occasional	O
Rare	R

Protected Species Assessments

- 2.4 Any evidence of additional protected species was recorded. Standard methods of search and measures of presence, or likely presence based on habitat suitability were used for bats in trees (Collins 2016), breeding birds (BTO 2020), hazel dormice

Muscardinus avellanarius (Bright *et al.* 2006), great crested newts *Triturus cristatus* (ARG 2010), reptiles (Froglife 2015), badgers *Meles meles* (Creswell *et al.* 1990) water voles *Arvicola amphibius* (Strachan *et al.* 2011) and invertebrates (Buglife 2009 and 2016, English Nature 2005 and 1998).

Limitations

- 2.5 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. The site was visited over the period of one site visit, as such seasonal variations cannot be observed and potentially only a selection of all species that potentially occur within the site have been recorded. Therefore, the survey provides a general assessment of potential nature conservation value of the site and does not include a definitive plant species list.
- 2.6 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on-site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment it is considered reasonably likely that protected species may be present.

3.0 RESULTS

Desktop Study

- 3.1 The site does not fall within or adjacent to any designated areas. There are three internationally designated sites within 10km of the site boundary (Figure 3). These are listed below:
- River Itchen Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) located c. 2km north-west of the site;
 - Solent Maritime SAC located c. 4.37km south-east of the site; and
 - Solent and Southampton Water Ramsar and Special Protection Area (SPA) located c. 5km south-east and south-west of the site.

3.2 There are two statutory designated sites within 2km of the site (Figure 4). These are listed below:

- Moorgreen Meadows SSSI located c. 1.04km south of the site; and
- River Itchen SSSI located c. 1.99km north-west of the site.

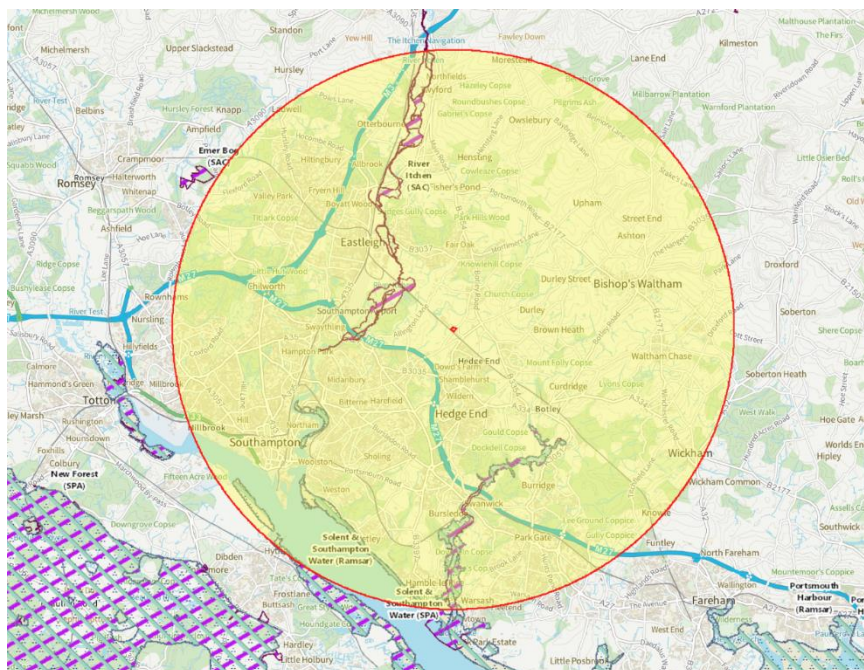


Figure 3: Internationally designated sites within 10km of the site boundary.

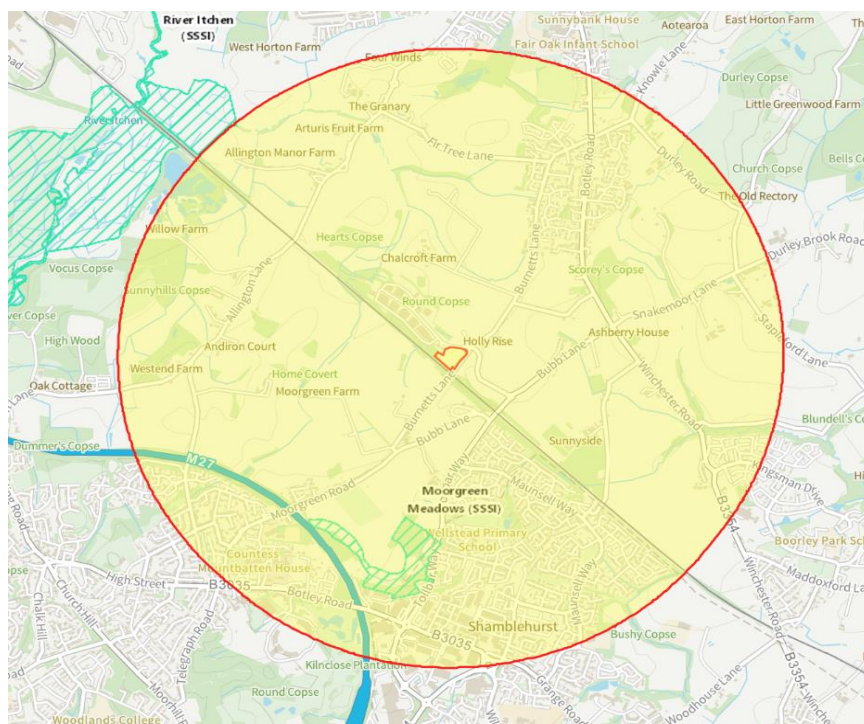


Figure 4: Statutory designated sites within 2km of the site boundary.

3.3 Records obtained from Hampshire Biodiversity Information Centre (HBIC) indicate there are 29 non-statutory designated sites within 2km of the site. These are all Sites of Importance for Nature Conservation (SINCs) and are listed below:

- Chalcroft Distribution Park SINC located adjacent to the site to the west;
- Round Copse, West End SINC located c. 40m north of the site;
- Home Covert, West End SINC located c. 750m west of the site;
- Hearts Copse SINC located c. 800m north-west of the site;
- Meadow adjacent to Home Covert SINC located c. 860m west of the site;
- Field North of Hearts Row, West End SINC located c. 943m north-west of the site;
- Scorey's Copse SINC located c. 950m north-east of the site;
- Scorey's Copse Meadow SINC located c. 995m north-east of the site;
- Treeline Break, West End SINC located c. 996m north-west of the site;
- Copse by Oaklands House SINC located c. 1km west of the site;
- Winslowe House Meadow SINC located c. 1.04km west of the site;
- Scorey's Copse Rush Pasture SINC located c. 1.12km north-east of the site;
- Moorgreen Woodlands SINC located c. 1.25km south of the site;
- Allington Lane Pond SINC located c. 1.27km north-west of the site;
- Alder Strip SINC located c. 1.32km east of the site;
- Botley Golf Course Wood SINC located c. 1.54km south-east of the site;
- Snakemoor Farm Meadow SINC located c. 1.38km north-east of the site;
- Bushy Copse SINC located c. 1.48km west of the site;
- Hogwood Lane Drove SINC located c. 1.53km north-west of the site;
- Hog Wood and Gravel Pits SINC located c. 1.56km north-west of the site;
- Withybed Covert/Ridgeway Copse SINC located c. 1.63km west of the site;
- Hogwood Lane Meadow SINC located c. 1.64km north-west of the site;
- Quobleigh Pond and Woods SINC located c. 1.67km north of the site;
- Itchen Valley Country Park SINC located c. 1.68km north-west of the site;
- Wyvern Technology College Meadow SINC located c. 1.7km north-east of the site;
- Ford Lake Woodland SINC located c. 1.72km south-east of the site;
- Ponds and Meadow adjacent to Wyvern Technology College SINC located c. 1.84km north of the site;
- Bottom Copse/Bushy Copse SINC located c. 1.88km south-east of the site; and

- Ford Lake Meadow SINC located c. 1.98km west of the site.

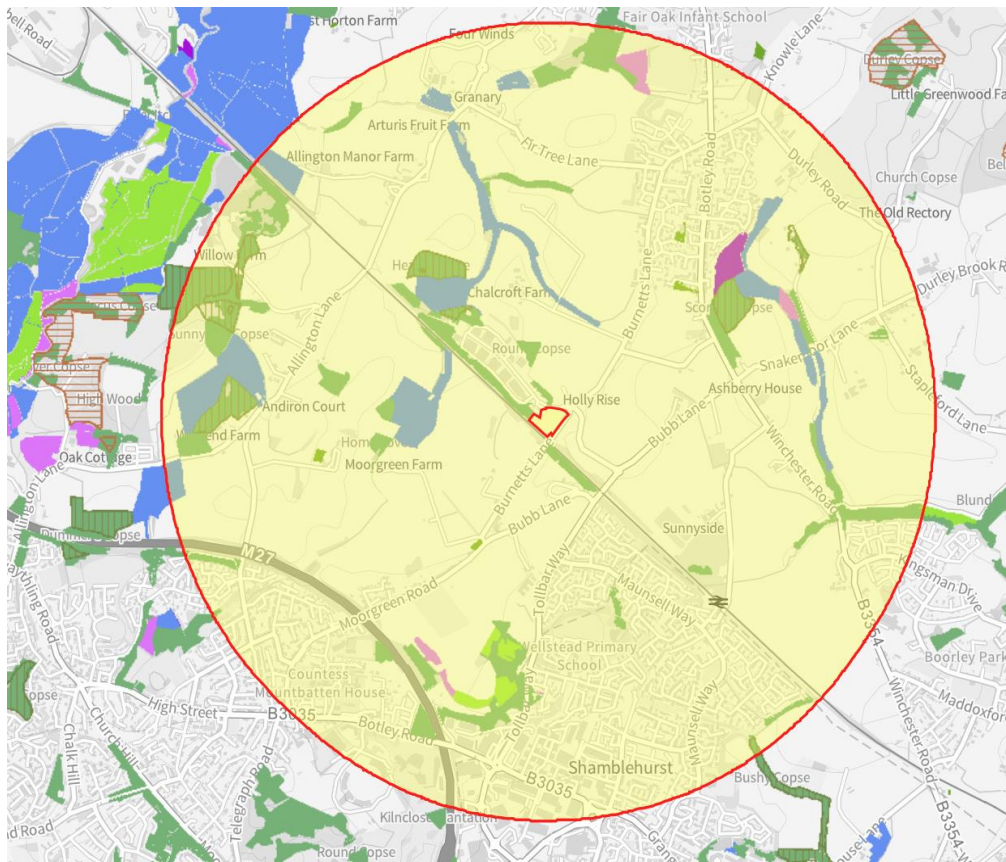


Figure 5: Priority habitats found within a 2km radius of the site, including: good quality semi-improved grassland (pink), deciduous woodland (pale green), traditional orchards (green), lowland dry acid grassland (light pink), lowland meadows (lime green), purple moor grass and rush pasture (purple), and ancient semi-natural woodland (vertical green hatching).

- 3.4 OS maps do not indicate any ponds on site or within 250m of the site, however, aerial photography indicates there is a pond in the grassland to the north of the site.
- 3.5 There are 13 past European Protected Species (EPS) licences, one positive GCN pond survey result (2017-2019) and a number of GCN class survey licence returns within 2km of the site (Figure 7). These are listed in Table 2 below:

Table 2: GCN pond survey results, GCN class survey licence returns, and granted EPS licenses within 2km of site.

GCN Pond Survey Results (2017-2019)		
Survey Date	Distance from site	Survey Results
2019	c. 600m north-west	Present

Confirmed Presence of GCN through Class Survey Licence Returns			
Dates		Distance from site	
19/04/2014		c. 600m north-west	
April – May 2015		c. 1.71km north-west	
16/06/2015		c. 1.76km north-west	
May – June 2015		c. 1.88km north	
May – June 2016		c. 1.88km north	
April – May 2015		c. 1.9km north-west	
April – June 2015		c. 1.95km north-west	
June 2016		c. 1.95km north-west	
Granted European Protected Species Licenses			
Species	Date Range	Date	Reason for License
Common Pipistrelle Soprano Pipistrelle Brown Long-eared	2016-2020	c. 890m south-west	Destruction of a resting place
Common Pipistrelle Natterer’s bat Brown Long-eared	2019-2024	c. 1.1km north	Destruction of a resting and breeding place
Common Pipistrelle	2015-2020	c. 1.55km north-west	Destruction of a resting place
Great Crested Newt	2015-2016	c. 1.55km north-west	Damage of a resting place
Great Crested Newt	2016-2019	c. 1.55km north-west	Damage and destruction of a resting place
Great Crested Newt	2020-2028	c. 1.71km north	Damage and destruction of a resting place
Great Crested Newt	2020-2022	c. 1.71km north	Damage and destruction of a resting place
Common Pipistrelle	2018-2019	c. 1.72km north-east	Destruction of a resting place
Common Pipistrelle Serotine	2019-2029	c. 1.77km south-west	Destruction of a resting place
Common Pipistrelle Brown Long-eared	2016-2026	c. 1.85km south-west	Damage and destruction of a resting place
Common Pipistrelle Soprano Pipistrelle	2019-2024	c. 1.88km north	Destruction of a resting place
Great Crested Newt	2019-2026	c. 1.88km north	Damage and destruction of a resting place
Great Crested Newt	2009	c. 1.91km north-east	Destruction of a resting place

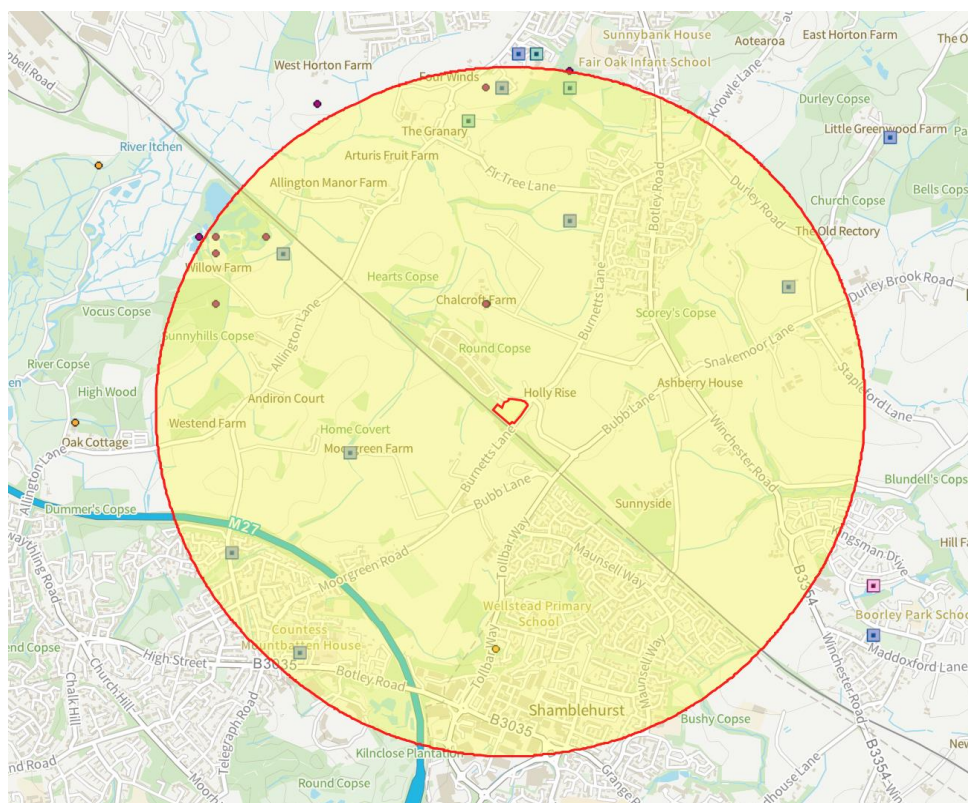


Figure 7: Location of EPS licences, GCN pond surveys and class survey licence returns within 2km of the site.

3.6 A 2km records search for local protected and notable species was requested from Hampshire Biodiversity Information Centre (HBIC). The records closest to site, recorded within the last 10 years and relevant to the habitats on site have been included in Table 3.

Table 3: Species records within 1km of the site boundary in the past 10 years.

Species	Status	Distance from site	Date of record
White Letter Hairstreak <i>Satyrrium w-album</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	1.7km south	2019
Great Crested Newt <i>Triturus cristatus</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5; Habitats Directive Annex 2 & 4; NERC Act (2006) Section 41	600m north	2014
Grass Snake <i>Natrix natrix</i>	Wildlife and Countryside Act 1981 (as amended); NERC Act (2006) Section 41	1.16km south	2017
Eurasian Badger <i>Meles meles</i>	Protection of Badgers Act (1992)	1.4km south-west	2019
Western European Hedgehog <i>Erinaceus europaeus</i>	NERC Act (2006)	770m south	2020
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and	314m north-west	2018

	Countryside Act (1981 as amended) Schedule 5		
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	408m north-west	2018
Nathusius's Pipistrelle <i>Pipistrellus nathusii</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	750m north-east	2018
Brown Long-eared Bat <i>Plecotus auritus</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	408m north-west	2019
Serotine <i>Eptesicus serotinus</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	408m north-west	2018
Daubenton's Bat <i>Myotis daubentonii</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	408m north-west	2018
Whiskered Bat <i>Myotis mystacinus</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	537m north-west	2020
Natterer's Bat <i>Myotis nattereri</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	408m north-west	2019
Noctule Bat <i>Nyctalus noctula</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	314m north-west	2018
Red Kite <i>Milvus milvus</i>	Birds Directive Annex 1; Wildlife and Countryside Act (1981 as amended) Schedule 1; Convention on Migratory Species Appendix 2	149m south-east	2018
Marsh Harrier <i>Circus aeruginosus</i>	Birds Directive Annex 1; Wildlife and Countryside Act (1981 as amended)	1.6km west	2017

	Schedule 1; Convention on Migratory Species Appendix 2		
Peregrine <i>Falco peregrinus</i>	Wildlife and Countryside Act (1981 as amended); Birds Directive Annex 1	Within 2km	2020
Hobby <i>Falco subbuteo</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1	644m	2020
Merlin <i>Falco columbarius</i>	Wildlife and Countryside Act (1981 as amended); Birds Directive Annex 1; Red List BoCC	1.6km west	2017
Osprey <i>Pandion haliaetus</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1; Birds Directive Annex 1	1.2km north-east	2014
Barn Owl <i>Tyto alba</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1	149m south-east	2016
Cuckoo <i>Cuculus canorus</i>	NERC Act (2006); BoCC Red List	910m north-west	2014
Skylark <i>Alauda arvensis</i>	NERC Act (2006) Section 41; Birds Directive Annex 2.2	910m north-west	2014
Fieldfare <i>Turdus pilaris</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1; Birds Directive Annex 2.2; Red List BoCC	910m north-west	2014
Redwing <i>Turdus iliacus</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1; Birds Directive Annex 2.2; Red List BoCC	910m north-west	2014
Brambling <i>Fringilla montifringilla</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1	1.6km west	2016
Common Crossbill <i>Loxia curvirostra</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1; Bern Convention Appendix 2	1.9km north-west	2020
Woodlark <i>Lullula arborea</i>	Birds Directive Annex 1; Wildlife and Countryside Act (1981 as amended) Schedule 1; NERC Act (2006) Section 41	1.1km south-west	2020
Snipe <i>Gallinago gallinago</i>	Birds Directive Annex 2.1; Convention on Migratory Species Appendix 2	910m west	2014
Firecrest <i>Regulus ignicapillus</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1	910m west	2014
Black Redstart <i>Phoenicurus ochruros</i>	Wildlife and Countryside Act (1981 as amended) Schedule 1; Red List BoCC	910m west	2014
Nightingale <i>Luscinia megarhynchos</i>	Red List BoCC	1.9km north-west	2014
Linnet <i>Linaria cannabina</i>	NERC Act (2006) Section 41; Red List BoCC	910m west	2013
Lesser Redpoll <i>Acanthis cabaret</i>	NERC Act (2006) Section 41; Red List BoCC	910m west	2014
Yellowhammer <i>Emberiza citronella</i>	NERC Act (2006) Section 41; Red List BoCC	1.1km east	2016
Reed Bunting <i>Emberiza schoeniclus</i>	Wildlife and Countryside Act (1981 as amended); Amber List BoCC; UK BAP	645m west	2013

Habitat Survey

- 3.7 The habitat map is presented in **Appendix 1**, site photos are in **Appendix 2** and a full species list is provided in **Appendix 3**.

Other Neutral Grassland

- 3.8 The majority of the site consisted of a large area of neutral grassland. This grassland was unmanaged and consisted of longer sward, tussocky vegetation. The abundant species in this habitat was Yorkshire fog and Timothy grass, with species such as perennial rye-grass and common bent appearing frequently. Other herbaceous species that were present included occasional bramble, broad-leaved dock, cock's-foot, cow parsley, creeping buttercup, creeping cinquefoil, soft rush, spear thistle, and wood dock.

Modified Grassland

- 3.9 A section of modified grassland was identified along the northern edge of the site boundary. This habitat was well-managed with vegetation kept at a short sward. Within this habitat perennial rye-grass was observed in abundance, with other species present occasionally including common bent, common mouse-ear, creeping buttercup, dove's-foot crane's-bill, lesser hop trefoil, meadow foxtail, ribwort plantain, spotted medick, wavy bitter-cress, and white clover.

Native Hedgerow

- 3.10 A length of native hedgerow was identified along the northern, eastern and southern boundary of the other neutral grassland field on site. This habitat consisted of an abundance of blackthorn, with species such as hawthorn, bramble and common ivy appearing frequently, and species such as dog-rose, hazel and lords-and-ladies appearing occasionally.

Bramble Scrub

- 3.11 Several areas of bramble scrub were present on site. These habitats were dominated by bramble, with species such as bracken appearing in abundance, and common nettle appearing occasionally.

Woodland

- 3.12 An area of priority habitat deciduous woodland was present adjacent to the west of the site. This habitat was found to overlap into the site boundary and included species such as hazel and oak frequently, and bluebell, bramble and ground ivy occasionally.

Scattered Trees

- 3.13 Several scattered trees were present on site which consisted predominantly of oak in the centre of the other neutral grassland and along the south-eastern boundary of the site, and one Douglas fir on the grassland verge to the north of the site.

Protected Species***Bats******Roosting***

- 3.14 No buildings were identified on site.
- 3.15 A number of mature trees were present within the site boundary including an oak tree located in the centre of the neutral grassland. This tree had two holes on the main trunk that were considered to have potential to support bat roosts. As such, this tree was considered to have 'moderate' potential for roosting bats.

Foraging and Commuting

- 3.16 The area of neutral grassland on site contained sections of longer sward vegetation which could provide some opportunities for foraging bats. Additionally, the presence of hedgerows along the boundary of the site which provide connectivity to the deciduous woodland to the west indicate that it is likely that bats are present within the local area and may use the site for commuting purposes. As such, the site was considered to have 'moderate' potential for foraging and commuting bats.

Reptiles

- 3.17 The neutral grassland habitat on site was considered to have some potential to support reptile species due to areas of longer sward vegetation. Additionally, the boundary hedgerow habitats were considered to be suitable for reptile species due to the

presence of refuge opportunities. As such, it was considered the site had 'moderate' potential to support reptiles.

Great Crested Newts (GCN)

3.18 No ponds were identified on site at the time of the survey. Additionally, no ponds were identified within 250m of the site using OS mapping. A single pond was identified using aerial photography in the grassland to the north of the site, however, this pond was not accessible at the time of the survey. The closest confirmed GCN breeding pond is located c. 600m to the north-west of the site and was confirmed to have GCN present following a survey in 2019.

3.19 The neutral grassland, hedgerow and bramble scrub habitats on site were considered to offer some potential for GCN in their terrestrial phase. However, due to the distances involved between the site and the confirmed GCN breeding pond, and the dispersal barriers present in the surrounding area including roads and fences, the site was considered to have 'negligible' potential for great crested newts.

Badgers

3.20 No evidence of badgers such as setts, latrines or footprints were observed on site. However, it is considered likely that badgers are present within the local area and could use the site and woodland area to the west for commuting and foraging.

Dormice

3.21 The boundary hedgerow habitats and woodland area on site were considered suitable for dormice due to the presence of favourable woody species such as blackthorn, hawthorn and hazel. However, the connectivity of the site to suitable habitats in the surrounding area is limited by roads and a railway track to the south. As such, the site was considered to have 'low' potential to support dormice.

Nesting Birds

3.22 The hedgerow, bramble scrub and scattered trees on site were considered to have potential to support nesting birds.

Other Species

3.23 Due to a lack of suitable habitat, the site was not considered suitable for other protected species, such as water voles or otters.

- 3.24 The site is considered suitable for hedgehogs, although no direct evidence was recorded at the time of the survey.

4.0 DISCUSSION

- 4.1 The following paragraphs consider the effects of the development on designated sites, priority habitats and protected and priority species. Where the desk study and habitat survey provide sufficient evidence for an assessment of effects on any of these groups to be taken through planning, these are detailed below, the need for additional surveys and when and how these should be completed are summarised, if required.

Effects on Designated sites

- 4.2 There are three internationally designated sites within 10km of the site, the closest being River Itchen SAC and SSSI located c. 2km to the north-west.
- 4.3 Impacts on the River Itchen are associated with nutrient loading, largely from housing / overnight accommodation. Eastleigh Borough Council has agreed an interim plan to allow developers to address the environmental impacts of phosphates arising from new development within, and draining into Wastewater Treatment Works in, the River Itchen Special Area of Conservation (SAC) catchment area. As the proposals are for light industrial / business park development, the requirement for compensation measures may not be required. It is recommended that consultation with the LPA is conducted to ensure that nutrient neutrality is addressed if required.
- 4.4 The site does not lie within or adjacent to any statutory sites. There are two statutory sites within 2km of the site which are Moorgreen Meadows SSSI located c. 1.04km south of the site and River Itchen SSSI located c. 1.99km north-west of the site. At these distances, the proposed development on site is not considered likely to have any direct or indirect impacts on these statutory sites. The site does fall within the Impact Risk Zone of both the aforementioned SSSIs which states that planning applications consisting of *“large non-residential developments outside existing settlements/urban areas where the footprint exceeds 1ha”* should consult Natural England.
- 4.5 The site is situated adjacent to Chalcroft Distribution Park SINC to the west which is designated for the presence of priority habitats including lowland mixed deciduous woodland and due to having characteristics of ancient semi-natural woodland. It is

considered that this area of woodland must be appropriately buffered with a 20m wildlife buffer to avoid any direct negative impacts to the SINC.

Effects on Priority Habitats

- 4.6 The only priority habitat within the site boundary is the native hedgerow that borders the grassland field. This hedgerow was not classified as 'important' under the Hedgerow Regulations 1997 (as amended 2002). It is recommended that this hedgerow is retained and enhanced where possible to keep connectivity across the site post-development. If any sections of hedgerow are to be lost to create access to the site from the road to the north, compensation through the creation/enhancement of hedgerows will be required to support 'biodiversity net gain' assessments.
- 4.7 There are a number of additional priority habitats within the wider landscape, which are all habitats of principle importance for the conservation of biodiversity under Section 41 of the NERC Act 2006. The closest of these habitats was an area of lowland mixed deciduous woodland within Chalcroft Distribution Park SINC located adjacent to the west of the site. This habitat will be appropriately buffered to avoid any direct negative impacts during development.

Effects on Other On-site Habitats

- 4.8 The majority of the site comprised a grassland field that was identified as other neutral grassland. The current proposals for the site indicate that this habitat will be lost during development. As such, it is considered that the loss of this habitat will require compensation in the form of habitat creation/enhancement to support any 'biodiversity net gain' assessments.
- 4.9 A number of scattered mature oak trees are present on site. The current proposals indicate that all but two of these are to be retained. It is recommended that where possible all mature trees are retained within the scheme, if trees are removed it is recommended that these are replaced or offset in line with current metric requirements.
- 4.10 The other habitats on site, including modified grassland and bramble scrub are common and widespread throughout the local area and the UK as a whole. As such, the loss of any of these habitats is likely to result in site-level impacts only.

Effects on Protected Species

Bats

Roosting

- 4.11 No buildings were identified on site.
- 4.12 A number of mature trees were identified on site including an oak tree in the centre of the other neutral grassland field that was considered to have 'moderate' potential for roosting bats. As such, two bat emergence and/or re-entry survey will need to be undertaken for this tree. Should a confirmed bat roost be identified, a licence will need to be obtained from Natural England prior to any works. This survey must be undertaken when bats are most active, with at least one survey between May and August, and the other between May and September.
- 4.13 Dusk emergence surveys commence at least 15 minutes before sunset until 2 hours after sunset, during which time, bats are identified and recorded using a bat detector, such as the EchoMeter Touch 2. Dawn emergence surveys follow a similar methodology, commencing at least 1.5 hours before sunrise and lasting until 15 minutes after sunrise. In addition to the above, bat surveys are required to be undertaken during suitable weather conditions, when conditions are relatively dry and mild with little/no wind.

Foraging and Commuting

- 4.14 The site was generally considered to be of 'moderate' habitat suitability for foraging and commuting bats. In addition, there are a number of records of bat species present within the local area. To establish the impact any developments within the site would have on foraging and commuting bats, it is recommended that monthly activity surveys are conducted along the boundary features and woodland between May – September/October (weather dependent). In addition, automated static bat detectors should be set up in two locations per transect, for five consecutive nights per month.
- 4.15 Any proposed lighting scheme as part of the development will have to consider bats in the surrounding area as well as on site. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Light at various levels can affect both their roosting and foraging behaviour. Recommendations for a sensitive lighting scheme include:

- Installing lighting only if there is a significant need;
- Using LED luminaries due to their lower intensity, sharp cut-off and good colour rendition – any lights with UV elements or metal halide lights should not be used;
- Lights with peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone 2012);
- Lights with an upward light ratio of 0% and good optical control;
- Careful consideration of column height to avoid light spill;
- Any external security lights should use motion-sensors and short (1-minute) timers;
- Avoid putting lighting near tree lines or hedgerows and angling light away from these linear features which are used by commuting and foraging bats;
- Planting a barrier or using man-made features required within the scheme to form a barrier.

Reptiles

- 4.16 The boundary hedgerow and bramble scrub habitats within the other neutral grassland on site were considered to have ‘moderate’ potential to support reptiles. Additionally, there are records of reptiles present within the local area.
- 4.17 As such, it is recommended that a reptile survey be undertaken to establish the presence/likely absence of reptiles on site. This survey must comprise placement of refugia around the perimeter of the site, which will be checked at least seven times between March/April and September/October on suitable dry days with temperatures between 8°C and 18°C. The results of a potential reptile survey should inform what, if any, further mitigation for reptiles is required.

Great Crested Newts (GCN)

- 4.18 The nearest confirmed great crested newt breeding pond is located c. 600m north-west of the site. Using the Natural England Rapid Risk Assessment tool, it is considered ‘highly unlikely’ that any development on site will have an impact on this GCN breeding pond.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	1 - 5 ha lost or damaged	0.04
Individual great crested newts	No effect	0
Maximum:		0.04
Rapid risk assessment result:		GREEN: OFFENCE HIGHLY UNLIKELY

Guidance on risk assessment result categories

"Green: offence highly unlikely" indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see **Non-licensed avoidance measures tool**) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.

Figure 8: Natural England Rapid Risk Assessment Tool

- 4.19 The boundary hedgerow and bramble scrub habitats within the other neutral grassland on site were considered suitable for great crested newts in their terrestrial phase. However, due to the lack of suitable breeding ponds within 250m and the presence of multiple dispersal barriers between the nearest confirmed GCN breeding pond and the site, it was considered unlikely that GCN are present on site. As such, no further survey work for the species is recommended.

Badgers

- 4.20 No evidence of badgers including setts, latrines, or holes were identified within the site on the day of the survey. However, it is considered likely that badgers use the site for foraging and commuting.
- 4.21 Due to the presence of woodland adjacent to the site to the west, it is recommended that prior to the commencement of any proposed developments, an update check should be carried out for the presence of any badger setts on site. Furthermore, as the site is likely used by badgers for foraging and commuting, best practice guidelines are recommended to be followed throughout any development, to ensure no individuals are harmed. These are listed below.
- 4.22 Best practice guidelines recommend that:
- Any excavations and trenches associated with construction are either covered at night or supplemented with a means of escape for any badgers that may fall into the excavation whilst foraging.

- Any open pipes or conduits laid should be blocked off each night to prevent badgers from entering them.
- If possible, construction work should only take place between dawn and dusk with no late evening work to reduce possible disturbance.

Dormice

- 4.23 The boundary hedgerow habitats and woodland area on site were considered suitable for dormice due to the presence of favourable woody species such as blackthorn, hawthorn, hazel and oak. Additionally, the site has good connectivity to areas of woodland in the wider area to the west and east.
- 4.24 The current proposals for the site indicate that a section of native hedgerow is likely to be cleared to provide access to the site from the road to the north. As such, further surveys for dormice are recommended. Dormice surveys should be performed over a number of months. Each month of the year between April and November is given a score of suitability. A survey effort adding up to a score of 20 will be required over the course of year in order to achieve suitable survey effort. Typically, this would comprise monthly surveys between May and September/October. In areas where hazel is present on site, a hazel nut search should be performed to identify whether dormice have opened nuts.

Nesting Birds

- 4.25 The hedgerow, bramble scrub, woodland, and scattered trees on site all have the potential to support nesting birds. If the removal of any of these features is to be carried out, this should be done outside of the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist. If active nests are identified, works in the vicinity of the nest must cease until the birds have fledged the nest.

Other Species

- 4.26 No potential for any other protected species, such as water voles or otters was identified within the site.
- 4.27 The site has potential to support hedgehogs. Whilst receiving no specific legal protection, they are protected from certain forms of harm under the wild mammals

(Protection) Act 1996. As, such, it is recommended that best practice guidelines be followed throughout any development to ensure no individuals are harmed.

Ecological Enhancements

- 4.28 Several enhancements can be made to the final development to provide increased ecological opportunities for a range of species and assist 'biodiversity net gain' assessments for the site post-development.
- 4.29 A 20m 'wildlife buffer' will be established between the application area within the site boundary and Chalcroft Distribution Park SINC located to the west of the site. This 'wildlife buffer' will be enhanced with new native shrub and wildflower planting to increase biodiversity and enhance this area as a wildlife corridor.
- 4.30 Further landscaping will be dependant on 'biodiversity net gain' assessments, however, it is recommended that habitats on site should be retained and enhanced where possible to increase the ecological value of the site post-development. Enhancement plans should incorporate habitats of high distinctiveness to achieve 'net gain' and should include the planting of native species.
- 4.31 Artificial bird boxes can be built into the development to provide new nesting opportunities on site and to achieve ecological enhancements in line with policies set out by the Local Planning Authority. A combination of the following (or similar) are recommended:
- Vivara Pro Barcelona WoodStone Open Nest Box– This box will provide suitable nesting opportunities for wrens, robins, spotted flycatchers, pied and grey wagtails, song thrushes and blackbirds and is made from woodstone to ensure that it is long lasting with good thermal regulatory properties.
 - Vivara Pro Seville WoodStone Nest Box with 32mm Oval Hole – This box is similar to the Barcelona nest box, but the oval hole is particularly favoured by house sparrows and redstarts, who will use the larger hole to perch to defend their nests from predators and rival.
- 4.32 Bat boxes can be installed on mature trees at least 3 metres from the ground. The location of the box should be unobstructed by branches and foliage with a clear flight line, be sheltered from strong winds and be exposed to the sun for part of the day,

ideally south-west or south-east facing. This will enhance the site by creating new roosting opportunities for bats in an area of trees with little existing roosting potential.

Recommended boxes include the below, or similar:

- CJ Wildlife Vivara Pro Woodstone Bat Box;
- CJ Wildlife Vivara Pro Low Profile WoodStone Bat Box;
- CJ Wildlife Large Multi Chamber WoodStone Bat Box; and
- CJ Wildlife Beaumaris Woodstone Bat Box.

4.33 A woodland management plan has already been conditioned for the adjacent SINC woodland habitat of Chalcroft Distribution Park SINC.

5.0 IMPACT ASSESSMENT

5.1 A full Ecological Impact Assessment (EcIA) report will be produced for the site as a standalone document, following completion of all further survey work and design freeze.

6.0 CONCLUSIONS

6.1 The site does not lie within or adjacent to any designated sites. A number of statutory sites are located within the surrounding area. The River Itchen SAC is located 2km from the site. Whilst the site will not support residential or overnight accommodation, it is recommended that the LPA is consulted to ensure that nutrient neutrality is considered within the scheme, if this is a requirement.

6.2 The site does lie within the Impact Risk Zone (IRZ) of River Itchen SSSI which states that planning applications consisting of *“large non-residential developments outside existing settlements/urban areas where the footprint exceeds 1ha”* should consult Natural England.

6.3 The site lies adjacent to Chalcroft Distribution Park SINC. A 20m buffer will be set up between the development and the SINC to enhance this area as a wildlife corridor.

6.4 A section of native hedgerow was identified along the border of the grassland field on site. This hedgerow will be retained and enhanced where possible. Any loss of this habitat will require compensation in the form of habitat creation/enhancement to support ‘biodiversity net gain’ assessments.

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- 6.5 The site is comprised predominantly of a large area of other neutral grassland. This habitat will be lost during development and, as such, will require compensation in the form of habitat creation/enhancement to support 'biodiversity net gain' assessments. The other habitats on site are common and widespread throughout the local area and the UK as a whole.
- 6.6 Several mature trees were identified on site including an oak tree that was found to have potential bat roost features. As such, two emergence surveys are required for this tree to confirm the presence/likely absence of a bat roost.
- 6.7 The site was considered to have 'moderate' potential to support foraging and commuting bats. As such, it is recommended that monthly bat transect surveys are carried out, in addition to static recording surveys, to assess the importance of the site for foraging and commuting bats.
- 6.8 No suitable breeding ponds were identified within 250m of the site boundary. As such, it is considered unlikely that great crested newts are present on site.
- 6.9 The longer sward grassland and boundary habitats on site were considered suitable to support reptiles. Additionally, the hedgerow and woodland on site were considered suitable to support dormice. As such, it is recommended that surveys should be undertaken for reptiles and dormice to determine the presence or likely absence of both species.
- 6.10 No evidence of badger activity, such as sett entrances, faeces or badger hairs, was recorded within the site. Prior to the start of any developments, an update badger check should be carried out and safety measures should be put in place to ensure that any badgers that use the site for foraging or commuting are not harmed.
- 6.11 The hedgerow, woodland and scattered trees on site have the potential to be used by birds as nesting habitat during the breeding season. The UK breeding season for most bird species takes place between March and September. Ideally, work affecting these areas should be avoided during this period. If unavoidable, it is recommended that any works affecting trees and scrub on site should be carried out under ecological watching brief.

- 6.12 The site does not support suitable habitat for water voles, or otters. Therefore, further surveys for these species' groups are not considered necessary.
- 6.13 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site for a range of wildlife.

7.0 REFERENCES

ARG., (2010) *UK Advice Note 5: Great crested newt habitat suitability index*. Amphibian and Reptile Groups of the United Kingdom.

Bright, P., Morris, P. & Mitchell-Jones, T., (2006)., *The Dormouse Conservation Handbook*. 2nd edition. English Nature.

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

CIEEM., (2018)., *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

Chapman, C., & Tyldesley, D. (2016). *Small-scale effects: How the scale of effects has been considered in respect of plans and projects affecting European sites-a review of authoritative decisions*. Natural England Commissioned Reports, (205).

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

Creswell, P., Harris, S. & Jeffries, D.J. (1990)., *The history, distribution status and habitat requirements of the badger in Britain*. Nature Conservancy Council, Peterborough.

English Nature., (2004)., *Reptiles: guidelines for developers*. English Nature, Peterborough.

Froglife., (2015)., *Surveying for Reptiles*. Froglife, Peterborough.

Franklin, J. F. (1993)., 'Preserving Biodiversity: Species, Ecosystems, or Landscapes?', *Ecological Applications*, 3: 202-205.

Joint Nature Conservation Committee., (2010)., *Handbook for Phase 1 habitat survey – a techniques for environmental audit*. JNCC, Peterborough.

Institution of Lighting Professionals., (ILP – 2018)., *Guidance Note 08/18 – Bats and artificial lighting in the UK*. ILP, Rugby.

Langton, T.E.S., Beckett, C.L. & Foster, J.P. (2001)., *Great Crested Newt Handbook*. Froglife, Halesworth.

Mitchell-Jones, A.J. (2004)., *Bat Mitigation Guidelines*. English Nature, Peterborough.

Natural England., (2011)., *Badgers and Development: A guide to best practice and licensing*. Natural England, Bristol.

Neal, E. & Cheeseman, C. (1996)., *Badgers*. T & A D Poyser Ltd. London.

Stone, E.L., Jones, G., Harris, S. (2009)., Street lighting disturbs commuting bats. *Current Biology*, **19**: 1123-1127.

Wilson, G.J., Harris, S. & McLaren, G. (1997)., *Changes in British badger population, 1988-1997*. People's Trust for Endangered Species, London.

Internet resources:

Eastleigh Borough Council: www.eastleigh.gov.uk

Google Maps: www.google.co.uk/maps

Magic Interactive Map: www.magic.gov.uk

Appendix 1: Habitat Map



Appendix 2: Site Photographs

Photograph 1: Photo showing a section of the other neutral grassland field on site.	
Photograph 2: Photo showing a section of bramble scrub on site.	
Photograph 3: Photo showing a possible bat roost feature on the oak tree at the centre of the grassland field.	

Photograph 4: Photo showing a second possible bat roost feature on the oak tree at the centre of the grassland field.	
Photograph 5: Photo showing the extent of the site from the southern corner of the site.	
Photograph 6: Photo showing a section of native hedgerow along the northern boundary of the site.	

Photograph 7: Photo showing a section of the modified grassland found at the northern edge of the site.



Appendix 3: Species List

Common name	Latin name	DAFOR score
Other Neutral Grassland		
Timothy	<i>Phleum pratense</i>	A
Yorkshire fog	<i>Holcus lanatus</i>	A
Common Bent	<i>Agrostis capillaris</i>	F
Perennial Rye-grass	<i>Lolium perenne</i>	F
Bramble	<i>Rubus</i> sp.	O
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	O
Cow Parsley	<i>Anthriscus sylvestris</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	O
Creeping Cinquefoil	<i>Potentilla reptans</i>	O
False oat grass	<i>Arrhenatherum elatius</i>	O
Soft rush	<i>Juncus effusus</i>	O
Spear Thistle	<i>Cirsium vulgare</i>	O
Wood Dock	<i>Rumex sanguineus</i>	O
Bird's-foot-trefoil	<i>Lotus corniculatus</i>	R
Common Sorrel	<i>Rumex acetosa</i> subsp. <i>acetosa</i>	R
Lesser Stitchwort	<i>Stellaria graminea</i>	R
Marsh Thistle	<i>Cirsium palustre</i>	R
Meadow Buttercup	<i>Ranunculus acris</i>	R
Modified Grassland		
Perennial Rye-grass	<i>Lolium perenne</i>	A
Common Bent	<i>Agrostis capillaris</i>	O
Common Mouse-ear	<i>Cerastium fontanum</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	O
Dove's-foot Crane's-bill	<i>Geranium molle</i>	O
Lesser Hop-trefoil	<i>Trifolium dubium</i>	O
Meadow Foxtail	<i>Alopecurus pratensis</i>	O
Ribwort Plantain	<i>Plantago lanceolata</i>	O
Spotted Medick	<i>Medicago arabica</i>	O
Wavy Bitter-cress	<i>Cardamine flexuosa</i>	O
White Clover	<i>Trifolium repens</i>	O
Broad-leaved Dock	<i>Rumex obtusifolius</i>	R
Buck's-horn Plantain	<i>Plantago coronopus</i>	R
Cock's-foot	<i>Dactylis glomerata</i>	R
Common Field-speedwell	<i>Veronica persica</i>	R
Common Stork's-bill	<i>Erodium cicutarium</i>	R

Common Vetch	<i>Vicia sativa subsp. segetalis</i>	R
Creeping Cinquefoil	<i>Potentilla reptans</i>	R
Curled Dock	<i>Rumex crispus</i>	R
Daisy	<i>Bellis perennis</i>	R
Dandelion	<i>Taraxacum officinalis</i>	R
Groundsel	<i>Senecio vulgaris</i>	R
Red Dead-nettle	<i>Lamium purpureum</i>	R
Scentless Mayweed	<i>Tripleurospermum inodorum</i>	R
Selfheal	<i>Prunella vulgaris</i>	R
Smooth Sow-thistle	<i>Sonchus oleraceus</i>	R
Spear Thistle	<i>Cirsium vulgare</i>	R
Yarrow	<i>Achillea millefolium</i>	R
Hedgerow		
Blackthorn	<i>Prunus spinosa</i>	A
Bramble	<i>Rubus sp.</i>	F
Common Ivy	<i>Hedera helix</i>	F
Hawthorn	<i>Crataegus monogyna</i>	F
Dog-rose	<i>Rosa canina</i>	O
Hazel	<i>Corylus avellana</i>	O
Lords-and-Ladies	<i>Arum maculatum</i>	O
Great Mullein	<i>Verbascum thapsus</i>	R
Woodland		
Hazel	<i>Corylus avellana</i>	F
Pedunculate Oak	<i>Quercus robur</i>	F
Bluebell	<i>Hyacinthoides non-scripta</i>	O
Bramble	<i>Rubus sp.</i>	O
Ground-ivy	<i>Glechoma hederacea</i>	O
Ash	<i>Fraxinus excelsior</i>	R
Cleavers	<i>Galium aparine</i>	R
Common Nettle	<i>Urtica dioica</i>	R
Holly	<i>Ilex aquifolium</i>	R
Bramble Scrub		
Bramble	<i>Rubus sp.</i>	D
Bracken	<i>Pteridium aquilinum</i>	A
Common Nettle	<i>Urtica dioica</i>	O
Grey Willow	<i>Salix cinerea subsp. cinerea</i>	R
Scattered Trees		
Pedunculate Oak	<i>Quercus robur</i>	O
Douglas Fir	<i>Pseudotsuga menziesii</i>	R

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