



Update Preliminary Ecological Appraisal

Land at Chalcroft Business Park, West End, Hampshire

Contents

1.0 INTRODUCTION.....	4
BACKGROUND.....	4
SITE CONTEXT	4
DESCRIPTION OF PROPOSED DEVELOPMENT	6
PLANNING POLICIES.....	6
2.0 METHODOLOGY.....	7
DESKTOP STUDY	7
HABITAT SURVEY	7
PRELIMINARY ROOST ASSESSMENT.....	7
OTHER PROTECTED SPECIES ASSESSMENTS.....	8
LIMITATIONS.....	8
3.0 PREVIOUS SURVEYS	8
4.0 RESULTS	9
DESKTOP STUDY	9
HABITAT SURVEY	14
PROTECTED SPECIES.....	15
<i>BATS</i>	15
<i>BUILDINGS ASSESSMENT</i>	15
<i>TREE AND HABITAT ASSESSMENT</i>	17
<i>REPTILES</i>	17
<i>GREAT CRESTED NEWTS (GCN)</i>	18
<i>NESTING BIRDS</i>	18
5.0 DISCUSSION	19
EFFECTS ON DESIGNATED SITES.....	19
EFFECTS ON PRIORITY HABITATS	19
EFFECT ON ON-SITE HABITATS	20
EFFECTS ON PROTECTED SPECIES.....	20
ECOLOGICAL ENHANCEMENTS	24
6.0 IMPACT ASSESSMENT	26
7.0 CONCLUSIONS	28
8.0 REFERENCES	30
APPENDIX 1: HABITAT MAP	32
APPENDIX 2: SITE PHOTOGRAPHS.....	33
APPENDIX 3: SPECIES LIST	39

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 an updated Preliminary Ecological Appraisal (PEA) for the land at Chalcroft Business Park, West End, Hampshire, SO30 2PA, 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);
- Previous surveys (Section 3);
- Results (Section 4);
- Implications for development (Section 5);
- An impact assessment (Section 6); and
- Conclusions (Section 7).

Site Context

1.4 The site (SU 48515 16321) is located within Chalcroft Business Park and consists primarily of areas of hardstanding, large industrial buildings with some additional smaller units and offices. The wider area consists of woodland to the north, south 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 It is understood that the proposed development includes the demolition of the existing structures within the site boundary and the construction of two new industrial units.

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 15th of February 2023 by principal ecologist Matt Pendry BSc (Hons) and assistant ecologist Benjamin Prego BSc (Hons) QCIEEM. 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

Preliminary Roost Assessment

- 2.4 The buildings on site were externally assessed for their suitability for roosting bats. The surveyors checked for evidence of roosting bat species and Potential Roosting Features (PRFs).
- 2.5 The surveyors assessed the buildings visually and searched for evidence such as:
- Staining beneath or around a hole caused by natural oils in bat fur.
 - Bat droppings beneath a hole, roost or resting area.
 - Bat droppings and/or insect remains beneath a feeding area.

- Audible squeaking from within a hole.
- Insects (especially flies) around a hole.
- Dead bats.

Other Protected Species Assessments

- 2.6 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

- 2.7 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.
- 2.8 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 Previous Surveys

- 3.1 An update PEA was undertaken in June 2018 by The Ecology Partnership Ltd following previous survey work carried out by EcoSupport Ltd in 2015. In 2018, the site boundary was different and consisted of a larger area of neutral semi-improved

grassland in addition to an area of broadleaved woodland. The habitats on site consisted predominantly of areas of hard standing, industrial buildings, scattered mature trees and the large area of semi-improved grassland with an adjacent area of broadleaved woodland.

- 3.2 The site was found to lie adjacent to Round Copse SINC with part of the SINC located within the original red line boundary. As such, a landscape buffer was recommended to be put in place and a mitigation strategy was proposed in order to minimise the risk any development would have on the SINC.
- 3.3 Two of the buildings on site were considered to have 'low' potential to support roosting bats. As such, a total of three emergence surveys were carried out on each building in 2018. The survey results confirmed that these buildings were being used as a likely summer day roost by low numbers of common pipistrelles.
- 3.4 No further surveys for any other protected species including badgers, reptiles and great crested newts were recommended in 2018.

4.0 RESULTS

Desktop Study

- 4.1 The site does not fall within or adjacent to any designated areas. There are four 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. 1.56km north-west of the site;
 - Solent Maritime SAC located c. 4.76km south-east of the site;
 - Solent and Southampton Water Ramsar and Special Protection Area (SPA) located c. 5km south-east and south-west of the site; and
 - Emer Bog SAC located c. 9.76km north-east of the site.

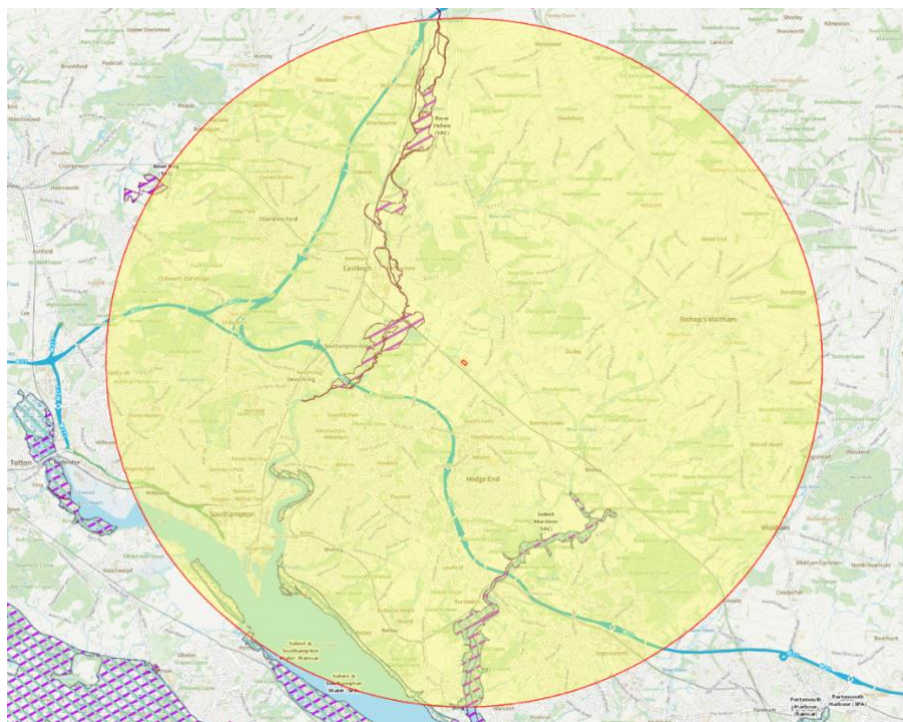


Figure 3: Internationally designated sites within 10km of the site boundary.

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

- Moorgreen Meadows SSSI located c. 1.36km south of the site; and
- River Itchen SSSI located c. 1.56km north-west of the site.

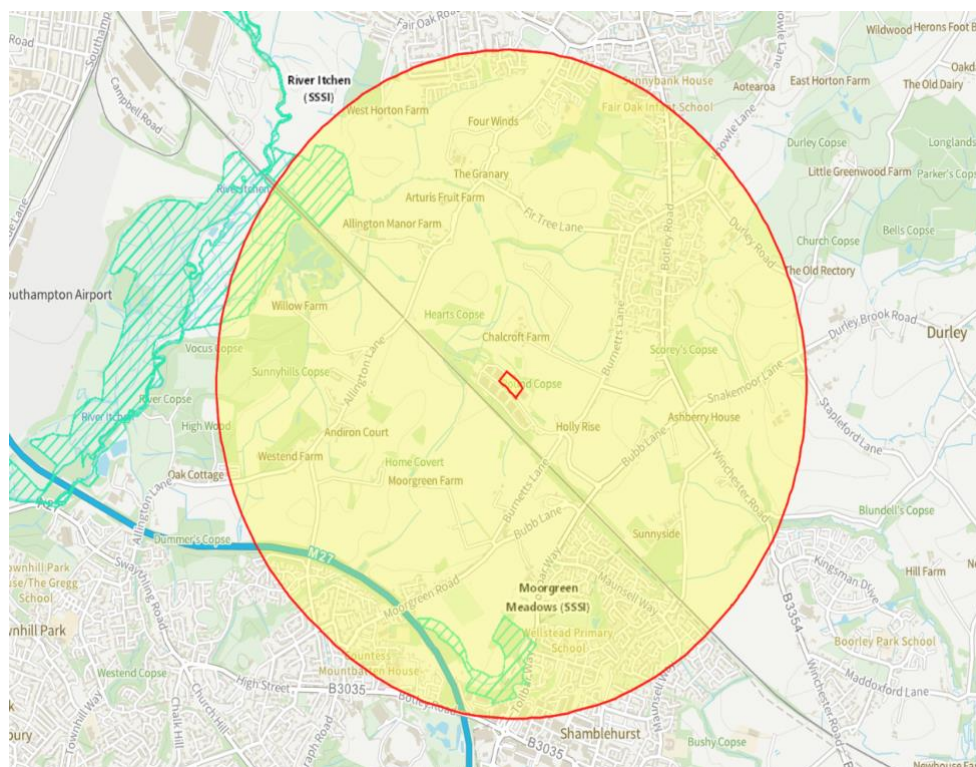


Figure 4: Statutory designated sites within 2km of the site boundary.

4.3 There are several units of priority habitat within 2km of the site (Figure 5). The closest of each type is:

- Deciduous woodland c. 20m north-east of the site;
- Coastal and floodplain grazing marsh c. 134m north-west of the site;
- Ancient semi-natural woodland c. 196m north-west of the site;
- Traditional orchards c. 904m north-east of the site;
- Purple moor grass and rush pasture c. 1.1km north-east of the site;
- Good quality semi-improved grassland c. 1.43km east of the site;
- Lowland meadows c. 1.74km north-west of the site; and
- Ancient replanted woodland c. 1.89km west of the site.

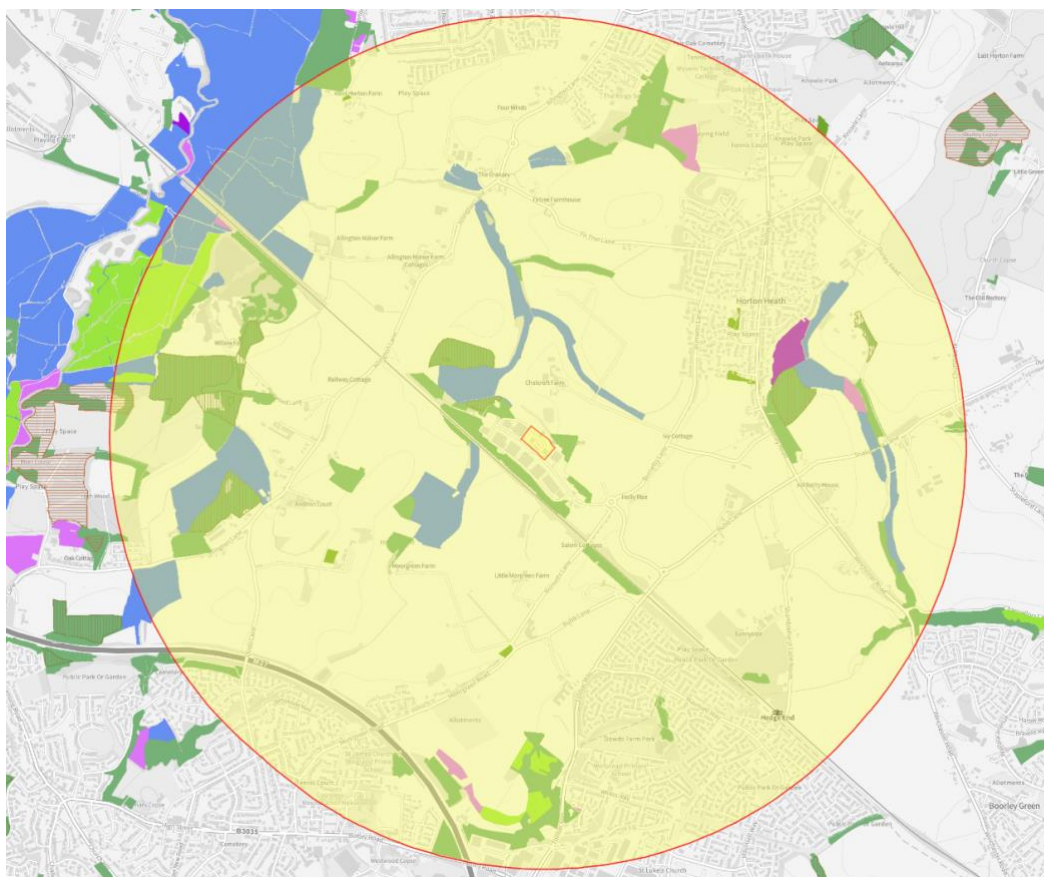


Figure 5: Priority habitats found within a 2km radius of the site, including: good quality semi-improved grassland (pink), deciduous woodland (pale green), ancient replanted woodland (brown horizontal hatching), traditional orchards (green), lowland dry acid grassland (light pink), lowland meadows (lime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

4.4 No ponds were identified on site. OS maps indicate that there are two ponds within 500m of the site (Figure 6) and aerial photography indicates there is an additional pond in the grassland to the north-east of the site.

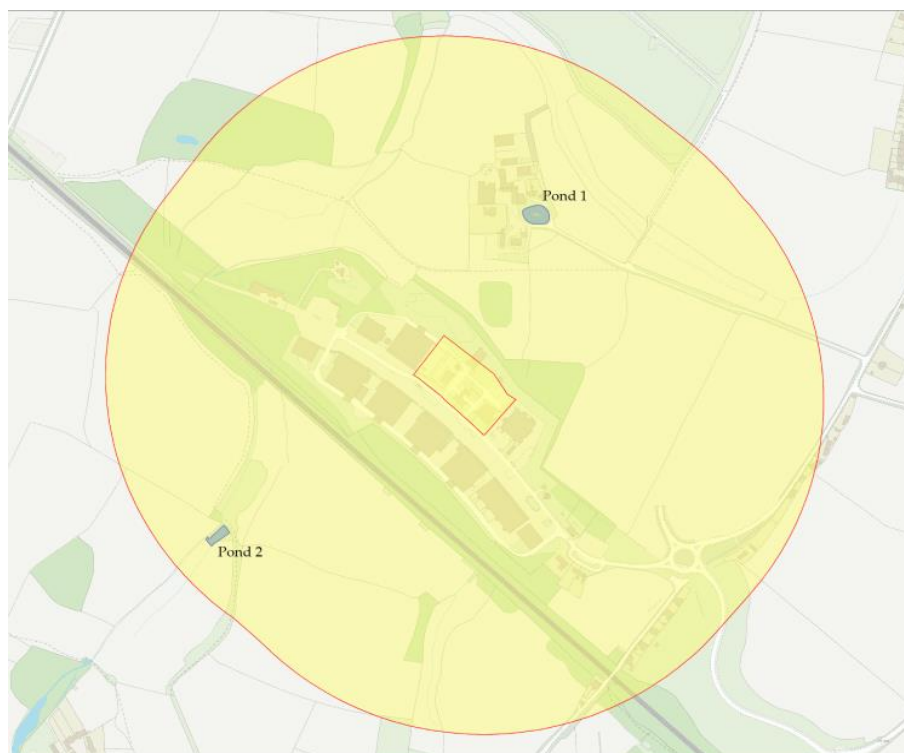


Figure 6: Ponds within 500m of the site boundary.

- 4.5 There are fourteen 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 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. 230m north	Present
Confirmed Presence of GCN through Class Survey Licence Returns		
Dates	Distance from site	
19/04/2014	c. 230m north	
April – May 2015	c. 1.3km north-west	
16/06/2015	c. 1.44km west	
May – June 2015	c. 1.51km north	
May – June 2016	c. 1.51km north	
April – May 2015	c. 1.53km north-west	
April – June 2015	c. 1.56km north-west	
June 2016	c. 1.56km north-west	
March – June 2016	c. 1.62km north-east	
March – May 2016	c. 1.65km north-west	
May 2016	c. 1.66km north-west	
May – June 2015	c. 1.72km north-east	

Granted European Protected Species Licenses			
Species	Date Range	Date	Reason for License
Common Pipistrelle Soprano Pipistrelle Brown Long-eared	2016-2020	c. 900m south-west	Destruction of a resting place
Common Pipistrelle Natterer's bat Brown Long-eared	2019-2024	c. 936m north-east	Destruction of a resting and breeding place
Common Pipistrelle	2015-2020	c. 1.17km north-west	Destruction of a resting place
Great Crested Newt	2015-2016	c. 1.17km north-west	Damage of a resting place
Great Crested Newt	2016-2019	c. 1.17km north-west	Damage and destruction of a resting place
Great Crested Newt	2020-2028	c. 1.3km north	Damage and destruction of a resting place
Great Crested Newt	2020-2022	c. 1.3km north	Damage and destruction of a resting place
Common Pipistrelle Soprano Pipistrelle	2019-2024	c. 1.52km north	Destruction of a resting place
Great Crested Newt	2019-2026	c. 1.52km north	Damage and destruction of a resting place
Great Crested Newt	2009	c. 1.63km north-east	Destruction of a resting place
Soprano Pipistrelle	2020-2026	c. 1.75km north	Destruction of a resting place
Great Crested Newt	2018-2025	c. 1.76km north	Damage and destruction of a resting place
Common Pipistrelle Serotine	2019-2029	c. 1.81km south-west	Destruction of a resting place
Common Pipistrelle	2018-2019	c. 1.85km west	Destruction of a resting place

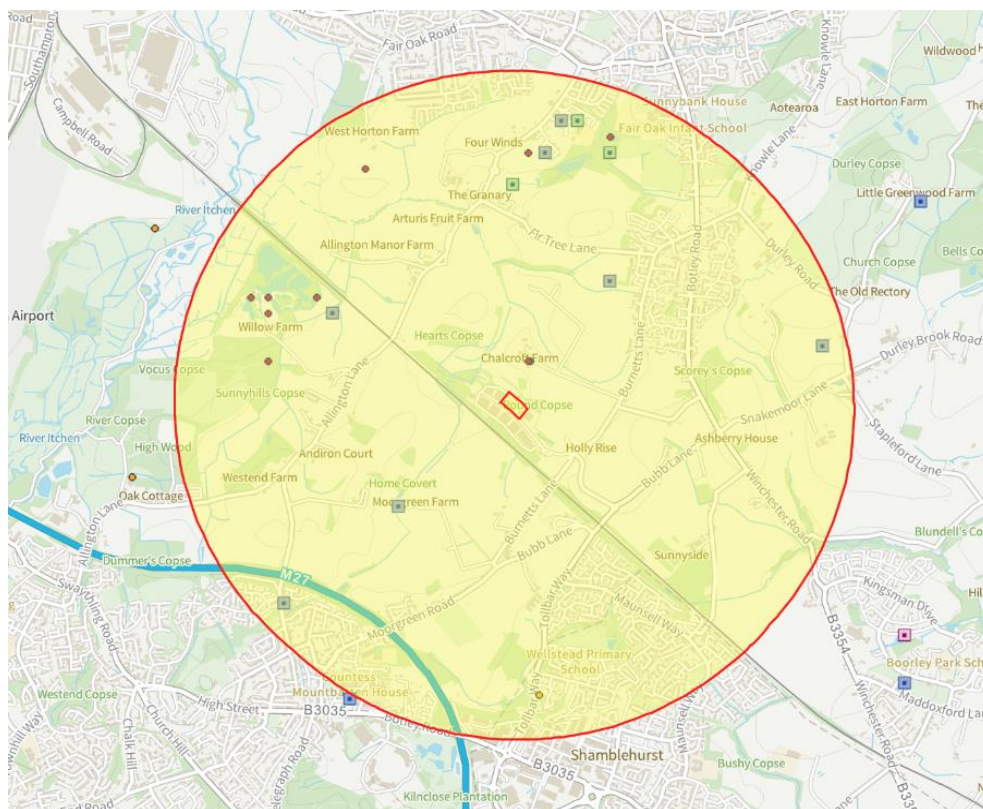


Figure 7: Location of EPS licences, GCN pond surveys and class survey licence returns within 2km of the site.

Habitat Survey

- 4.6 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

- 4.7 An area of other neutral grassland was identified at the northern end of the site separating the site from the adjacent woodland. This grassland was unmanaged and contained sections of longer sward vegetation. The abundant species in this habitat was common bent, with species such as perennial rye-grass, red fescue, Yorkshire fog, self-heal, and creeping cinquefoil appearing frequently. Other herbaceous species that were seen occasionally included ragwort, perforate st John's-wort, bristly ox-tongue, white clover, creeping thistle, creeping buttercup, cock's-foot grass, mouse-ear, and lesser hop trefoil.

Modified Grassland

- 4.8 Several areas of well-managed modified grassland were identified to the south of the industrial buildings. These habitats were maintained at short sward with species such

as perennial rye-grass and red fescue in abundance. Other species present included common bent frequently and creeping buttercup occasionally.

Artificial Unsealed Surface

- 4.9 Areas of artificial unsealed surface were present on site. These areas consisted of gravel and were being used for parking.

Hardstanding

- 4.10 Several sections of hardstanding were present on site between the buildings and sections of artificial unsealed surface.

Buildings

- 4.11 A total of eight buildings were identified on site. These buildings were being used for industrial purposes or as offices.

Protected Species

Bats

Buildings Assessment

- 4.12 There were a total of eight buildings on site that were assessed for their potential to support roosting bats. These buildings were previously assessed in 2018, followed by emergence surveys on two of the buildings. The building assessment for the most recent site visit is summarised in Table 3 below:

Table 3: Building assessment for roosting bat species

Building	Description	Evidence of Roosting Bat Species	Potential to Support Roosting Bats
1	Building 1 was a single-storey brick-built office block with a flat roof and no internal voids. Externally the building was in good condition and did not exhibit any features that could be utilized by roosting bat species.	None	Negligible
2	Building 2 was a small brick built single storey structure with a flat felt roof. Wooden fascia boarding was present all around the building with gaps between the boards and the brickwork creating some dark crevice habitat. No bat droppings were found at the time of the survey. Three emergence surveys were	Confirmed roost in 2018	High

	conducted on the building in 2018 which confirmed bats were using the building as a potential summer roost.		
3	Building 3 was a two-storey brick-built office block with a flat roof sealed with lead flashing. No internal voids were present within the building. A slight gap was identified in the external wall on the eastern side of the building that could provide access for bats to the internal structure of the building. The building is very well illuminated by security lighting overnight.	None	Low
4	Building 4 was a single-storey brick-built structure with a sloping corrugated roof. No internal voids were present. No external features were identified except for some narrow strips of wooden fascia boarding that offered very minimal crevice opportunities to support roosting bats. The building is very well illuminated by security lighting overnight.	None	Negligible
5	Building 5 was a single-storey flat roofed building. No internal voids were present. External fascia boarding with slight gaps between the boards and the walls was present creating some potential crevice habitat. The building is also very well illuminated by security lighting overnight. Three emergence surveys were conducted on the building in 2018 which confirmed bats were using the building as a potential summer roost.	Confirmed roost in 2018	High
6	Building 6 was a large two-storey brick-built industrial building with a flat roof and no internal voids. No external features were found to be present.	None	Negligible
7	Building 7 was a single-storey brick-built structure with a flat roof used as a factory in constant use with high levels of machinery noise. A small gap was identified in the wooden panelling on the southern corner of the building that could provide access for bats to the internal structure of the building.	None	Low
8	Building 8 was a small single-storey brick-built structure with a flat roof sealed with metal soffits. No external features were identified that could support roosting bats.	None	Negligible

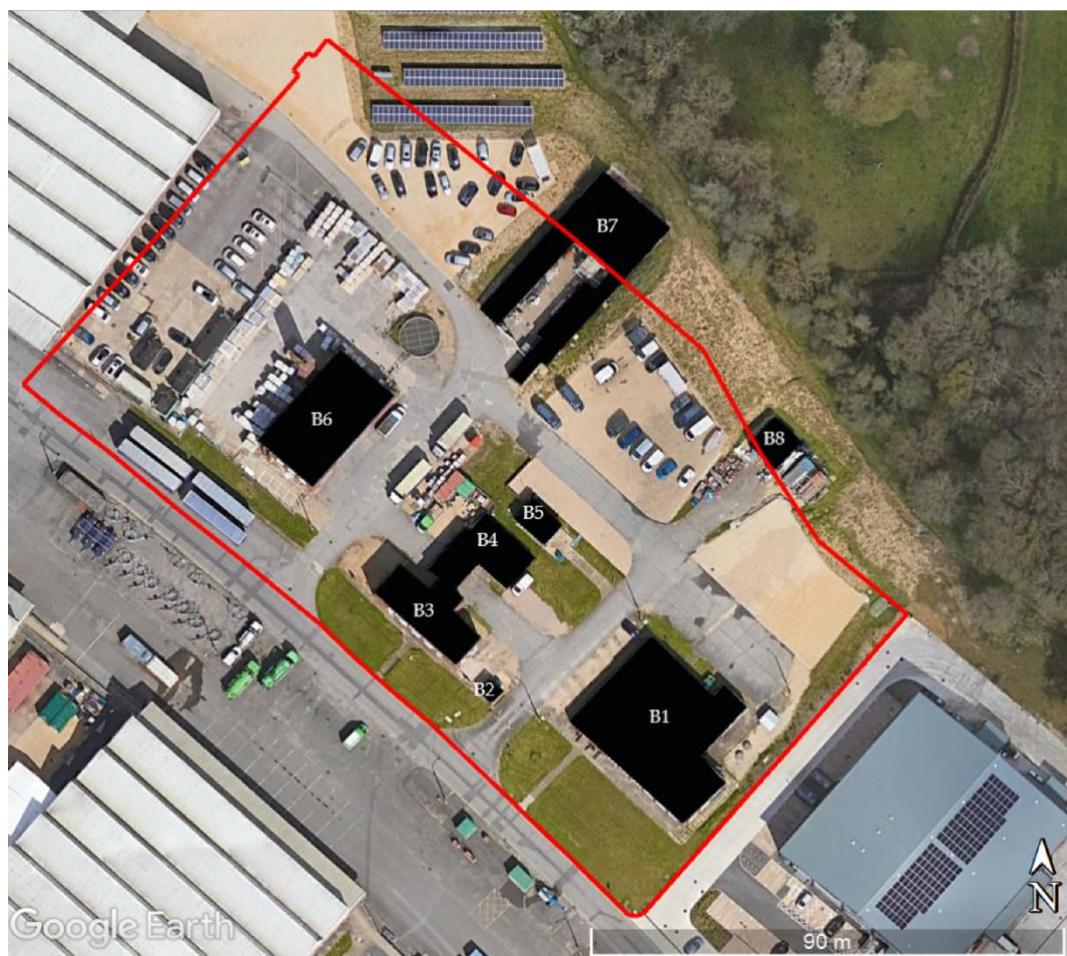


Figure 8: Location of all the buildings on site assessed at the time of the survey.

Tree and Habitat Assessment

- 4.13 No mature trees are present within the site boundary.
- 4.14 The section of other neutral grassland on site contained areas of longer sward vegetation which could provide some opportunities for foraging bats. Additionally, the presence of deciduous woodland to the north of the site indicates that it is likely that bats are present within the local area and may use the site for commuting purposes. However, the majority of the site comprised managed modified grassland, artificial unsealed surface, hardstanding and buildings, which are considered to be of limited interest for foraging and commuting bats. As such, the site was considered to have 'low' potential for foraging and commuting bats.

Reptiles

- 4.15 The other neutral grassland habitat identified to the north of the site was considered to have some potential to support reptile species due to the areas of longer sward

vegetation. The remainder of the site contained habitats that were considered unsuitable to support reptiles including hardstanding, managed modified grassland, and buildings. As such, it was considered the site had 'low' potential to support reptiles.

Great Crested Newts (GCN)

- 4.16 The majority of the habitats on site are not suitable for great crested newts. The other neutral grassland to the north of the site was considered to have some potential to support GCN in their terrestrial phase due to the areas of longer sward vegetation.
- 4.17 Three ponds were identified within 500m of the site. The pond to the south-west of the site is separated from the site by railway tracks and, as such, access to the site for GCN from this pond is unlikely. The pond to the north of the site was confirmed to have GCN present in 2019 following a survey. The final pond identified using aerial photography to the north-east of the site was not accessible at the time of the survey.
- 4.18 Due to the presence of suitable habitat on site for GCN in their terrestrial phase and the proximity of a confirmed GCN breeding pond, the site was considered to have 'low' suitability to support great crested newts.

Badgers

- 4.19 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 edges and woodland areas to the north for commuting and foraging.

Nesting Birds

- 4.20 No evidence of nesting birds was recorded on the site or on the buildings within the site.

Other Species

- 4.21 The site is considered suitable for hedgehogs, although no direct evidence was recorded and it is considered that hedgehogs would not be reliant on the habitat within the site, given the surrounding habitat.
- 4.22 Due to a lack of suitable habitat, the site was not considered suitable for other protected species, such as hazel dormice, water voles, or otters.

5.0 DISCUSSION

- 5.1 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

- 5.2 There are four internationally designated sites within 10km of the site, the closest being River Itchen SAC and SSSI located *c.* 1.56km to the north-west. Due to the distances involved, and due to the lack of any related habitats being lost, it is not considered that the development would have a negative impact on any internationally designated sites.
- 5.3 The site does not lie within or adjacent to any statutory sites. The closest statutory site is Moorgreen Meadows SSSI located *c.* 1.36km south of the site. The site does fall within an Impact Risk Zone of this SSSI, however, at this distance the proposed developments do not fall into any of the categories that would require consultation with Natural England. Furthermore, there are no related habitats on site. As such, it is considered unlikely that the proposed development will result in any direct or indirect impacts on statutory designated sites.
- 5.4 The site is situated adjacent to Round Copse SINC which is designated for its ancient and semi-natural woodland characteristics and the presence of the priority habitats (lowland mixed deciduous woodland and wet woodland). It is considered that all of the woodland habitats associated with this SINC must be appropriately buffered to avoid any direct negative impacts. Further details regarding the mitigation of any impacts to this SINC during developments can be found in the Biodiversity Mitigation and Enhancement Plan (BMEP) for the site.

Effects on Priority Habitats

- 5.5 There are a number of 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. These habitats are not present on the site, with the closest being

a parcel of deciduous woodland within Round Copse SINC located adjacent to the north of the site. This habitat will be appropriately buffered to avoid any direct negative impacts during development.

- 5.6 A section of other neutral grassland is present to the north of the site. This habitat will be retained and enhanced to act as a wildlife buffer between the site and the SINC situated to the north.

Effect on On-site Habitats

- 5.7 The other habitats on site, including modified grassland, hardstanding and artificial unsealed surface, 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

- 5.8 There were eight buildings present on site at the time of the survey which were all assessed for their potential to support roosting bat species. These buildings were previously surveyed in 2018 which revealed the presence of potential summer bat roosts in buildings 2 and 5.
- 5.9 As such, these buildings have been classified as being 'confirmed roosts' as such, a Natural England bat licence would be required for the demolition of these buildings. Update bat surveys will be required to support the licence.
- 5.10 The update bat surveys would involve conducting three dusk emergence/dawn re-entry surveys in accordance with the Bat Conservation Trust guidelines (2016). Two of the surveys should occur within the optimum time period between May and August and the final survey can be carried out between May and September. The previous surveys identified low numbers of common pipistrelles and therefore the works would fall under a Bat Low Impact Class Licence (BLICL).
- 5.11 No works must be undertaken to the rooves of these buildings until one of these licences is granted.

-
- 5.12 Two additional external features were identified during the PEA on buildings 3 and 7 which could potentially support a bat roost. As such, these buildings were considered to have 'low' potential to support roosting bats and a single bat emergence and/or re-entry survey will need to be undertaken for these buildings. 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, which is between May and August.
- 5.13 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.
- 5.14 No mature trees were identified on site.
- 5.15 The site was generally considered to be of 'low' habitat suitability for foraging and commuting bats and no activity transect surveys are required on site. The northern edge of the site consisting of longer sward other neutral grassland is considered to be the most valuable. This habitat will be retained and enhanced as a wildlife buffer between the site and the adjacent SINC.
- 5.16 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

- 5.17 The majority of the habitats on site, including the managed modified grassland, hardstanding and areas of artificial unsealed surface, offer little ecological value to reptiles.
- 5.18 The longer sward other neutral grassland habitat to the north of the site offered some suitable habitat for reptile species. This habitat will be retained and enhanced to act as a wildlife buffer between the site and the adjacent SINC. As such, no further surveys for reptiles are recommended, however reasonable avoidance measures (RAMs) should be put in place on site during works as a precautionary approach to protect reptile species.

Great Crested Newts (GCN)

- 5.19 The majority of habitats on site are considered to be sub-optimal for GCN during their terrestrial phase. Only the other neutral grassland habitat to the north of the site was considered to offer some potential to terrestrial GCN. This habitat will be retained as part of the developments.
- 5.20 One suitable GCN breeding pond was identified within 250m of the site boundary. This pond is situated c. 220m north of the site. A survey carried out in 2019 confirmed the presence of GCN within this pond. 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)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	1 - 5 ha lost or damaged	0.04
Individual great crested newts	No effect	0
		Maximum:
		0.1
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 9: Natural England Rapid Risk Assessment Tool

- 5.21 Another pond was identified using aerial photography in a field to the north-east of the site. This pond was not accessible at the time of the survey; however, it is considered unlikely that any developments on site will negatively impact this waterbody. As such, no further surveys for great crested newts is recommended, however reasonable avoidance measures (RAMs) should be put in place on site during works as a precautionary approach.
- 5.22 The following RAMs measures should be employed throughout the development:
- Prior to the commencement of works on site, the location of the proposed development and potential compound should be kept in a state that is unattractive to GCN and reptiles including ensuring there are no potential refuge opportunities.
 - During development, construction and demolition materials, as well as skips and pallets, should be stored on existing hard standing where possible and furthermore, should be elevated off the ground. This is so that no features are created that GCN or reptiles could potentially use as refuge habitat.
- 5.23 Where trenches and holes are dug, these should not be left open overnight. GCN (and other amphibians, reptiles and small mammals) may get trapped in vertical-sided trenches. Therefore, where there is a risk of this occurring, the holes should be refilled or planks of wood should be placed so that any trapped animals may use these to escape.

Badgers

- 5.24 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. As such, best practice guidelines are recommended to be followed throughout any development, to ensure no individuals are harmed. These are listed below.
- 5.25 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.

Other Species

- 5.26 No potential for any other protected species, such as hazel dormice, water voles or otters was identified within the site.
- 5.27 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

- 5.28 Several enhancements can be made to the final development to provide increased ecological opportunities for a range of species. These are discussed in greater detail in the Biodiversity Mitigation and Enhancement Plan for the site.
- 5.29 New native shrub and wildflower planting will be established within the proposed 'wildlife buffer' to increase the biodiversity and enhance this area as a wildlife corridor. This buffer is located in the 20m stretch between the application area and the SINC and extends eastward until the fence line reaches a corner. Due to the increased

shading that will result from the building, a shade tolerant mix of native flowering species will be established throughout this area.

5.30 The use of bird boxes on the south-eastern aspects of the buildings will provide new nesting opportunities on site. A combination of four of the following (or similar) will be erected:

- 2 x 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.
- 2 x 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.

5.31 Specific enhancements for bat species will include the increase of roosting opportunities on site. This will be achieved by installing two crevice chambered rocket boxes in the SINC buffer zone. These boxes are affixed to a pole in the ground and feature two concentric circles of crevice roosting space around the pole. This will mimic the crevice habitat currently being utilised on site by common pipistrelle bats and allows bats within the box to adjust their position throughout the day based on their preferred microclimate. The recommended model is the Eco Rocket Bat Box by The Nestbox Company Limited, with a cavity roost chamber and a 5m pole (See Figure 10 below).

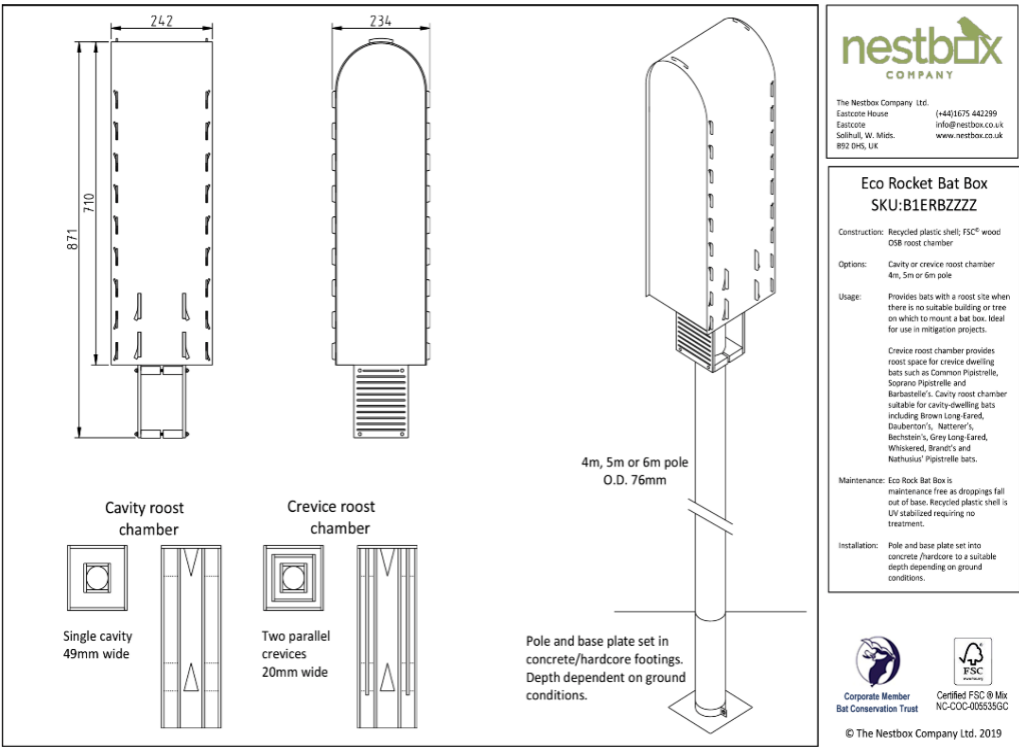


Figure 10: Eco Rocket Box diagram by Nextbox Company Ltd.

5.32 Both of the adjacent SINC woodland habitats of Round Copse SINC and Chalcroft Distribution Park SINC are within the site owners land ownership. It is therefore proposed that as a major enhancement to the local landscape these areas of woodland be subject to a woodland management plan. As part of the management plan both woodland blocks will be kept as private land with no public access. The full details are included as part of the Biodiversity Management and Enhancement Plan (BMEP).

6.0 IMPACT ASSESSMENT

6.1 This section of the report forms an Ecological Impact Assessment (EcIA) and is designed to quantify and evaluate the potential impacts of the development on habitats and species present on site, or within the local area.

Methodology

6.2 The approach to this assessment accords with guidance presented within the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2018). In essence, an EcIA assesses the activities associated with a proposed scheme that are likely to generate changes within identified zone of influences, on identified ecological

features and receptors. The proposals are subsequently reviewed, and mitigation and compensation measures are outlined which help to reduce negative impacts.

6.3 The zone of influence for the development is defined as:

- The project red-line, for effect on habitats and species;
- Adjacent habitat, considered by species, for mobile species with territories or foraging ranges that may overlap the site;
- Up to 1km for national statutory and non-statutory designations; and,
- Up to 15km for international statutory designations.

6.4 The types of features considered in the assessment of effects, to meet legislative and policy requirements are:

- Designated sites (European, national and local);
- Protected species;
- Habitats and species of principal importance (Section 41 list);
- Hedgerows and woodland, were not of principal importance; and
- Habitats, where not of principal importance, that may function as wildlife corridors or stepping-stones.

Impact Assessment and Mitigation

6.5 Table 4 below summarises the impacts and required mitigation for each receptor as previously detailed in the discussion.

Table 4: Assessment of effects from the proposal after mitigation and compensation

Feature	Scale of Importance	Mitigation/Compensation Required	Residual Effect
International statutory designated sites	International	None required – considerable distance from the site, no related habitats will be lost through this scheme.	Not significant
National statutory designated sites	National	None required – considerable distance from the site, no related habitats will be lost through this scheme.	Not significant
Round Copse SINC	Local	Mitigation required in the form of 20m wildlife buffer between the site and the SINC. Further details and enhancements included in the BMEP for the site.	Not significant

Priority habitats	Local	Other neutral grassland on site and adjacent to the site to be retained and enhanced to act as a wildlife buffer to the SINC. Other priority habitats in the local area not likely to be impacted by the development, no related habitats will be lost through this scheme.	Not significant
On site habitats	Site	The majority of the existing habitat is of limited ecological value.	Not significant
Bats (roosting)	Local	Confirmed roost in two of the buildings on site in 2018. Three emergence surveys needed to inform licence. Two additional features identified on other buildings which will require a single survey to determine presence/likely absence of bat roosts.	Not significant Undetermined
Bats (foraging and commuting)	Site	The site provides limited foraging and commuting opportunities.	Not significant
Reptiles, GCN and badgers	Site	Mitigating potential harm to species by employing RAMs during developments.	Not significant
Nesting birds	Site	Enhancements in the form of the installation of bird boxes.	Not significant
Dormice, water voles and otters	Site	None required – no suitable habitat identified on site.	Not significant

7.0 CONCLUSIONS

7.1 The site does not lie within or adjacent to any designated sites. A number of statutory sites are located within the surrounding area; however, no direct or indirect negative impacts are anticipated due to the distances between the sites and the nature of the existing habitats to be lost on site.

7.2 The site lies adjacent to Round Copse SINC. A 20m buffer will be set up between the development and the SINC. Further details including the mitigation and enhancement strategy for the site can be found in the BMEP.

7.3 A section of other neutral grassland was identified to the north of the site which will be retained and enhance to act as a wildlife buffer for the adjacent SINC.

- 7.4 The site is comprised predominantly of sections of hardstanding, artificial unsealed surface and buildings, with areas of managed modified grassland. These habitats on site are common and widespread throughout the local area and the UK as a whole.
- 7.5 Two buildings on site were found to have confirmed bat roosts during previous surveying in 2018. These buildings will need three emergence surveys to inform a Natural England licence application. Two additional features were identified on two other buildings, as such, a single emergence survey is required for these buildings to confirm the presence/likely absence of a bat roost.
- 7.6 No mature trees were identified on site. The site was considered to have 'low' potential to support foraging and commuting bats.
- 7.7 The site was considered to have 'low' potential to support reptiles due to the presence of longer sward other neutral grassland on site. It was also considered to have 'low' potential to support great crested newts in their terrestrial phase due to the presence of a confirmed GCN breeding pond within 250m of the site. No further surveys for these species are recommended, however reasonable avoidance measures (RAMs) should be put in place on site during works as a precautionary approach to protect these species.
- 7.8 No evidence of badger activity, such as sett entrances, faeces or badger hairs, was recorded within the site.
- 7.9 No evidence of nesting birds was identified on any of the buildings on site.
- 7.10 The site does not support suitable habitat for dormice, water voles, or otters. Therefore, further surveys for these species' groups are not considered necessary.
- 7.11 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site for a range of wildlife. Advanced details for these enhancements can be found in the BMEP for the site.

8.0 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.

The Ecology Partnership. (2018)., *Preliminary Ecological Appraisal, Land at Chalcroft Business Park, West End, Hampshire*.

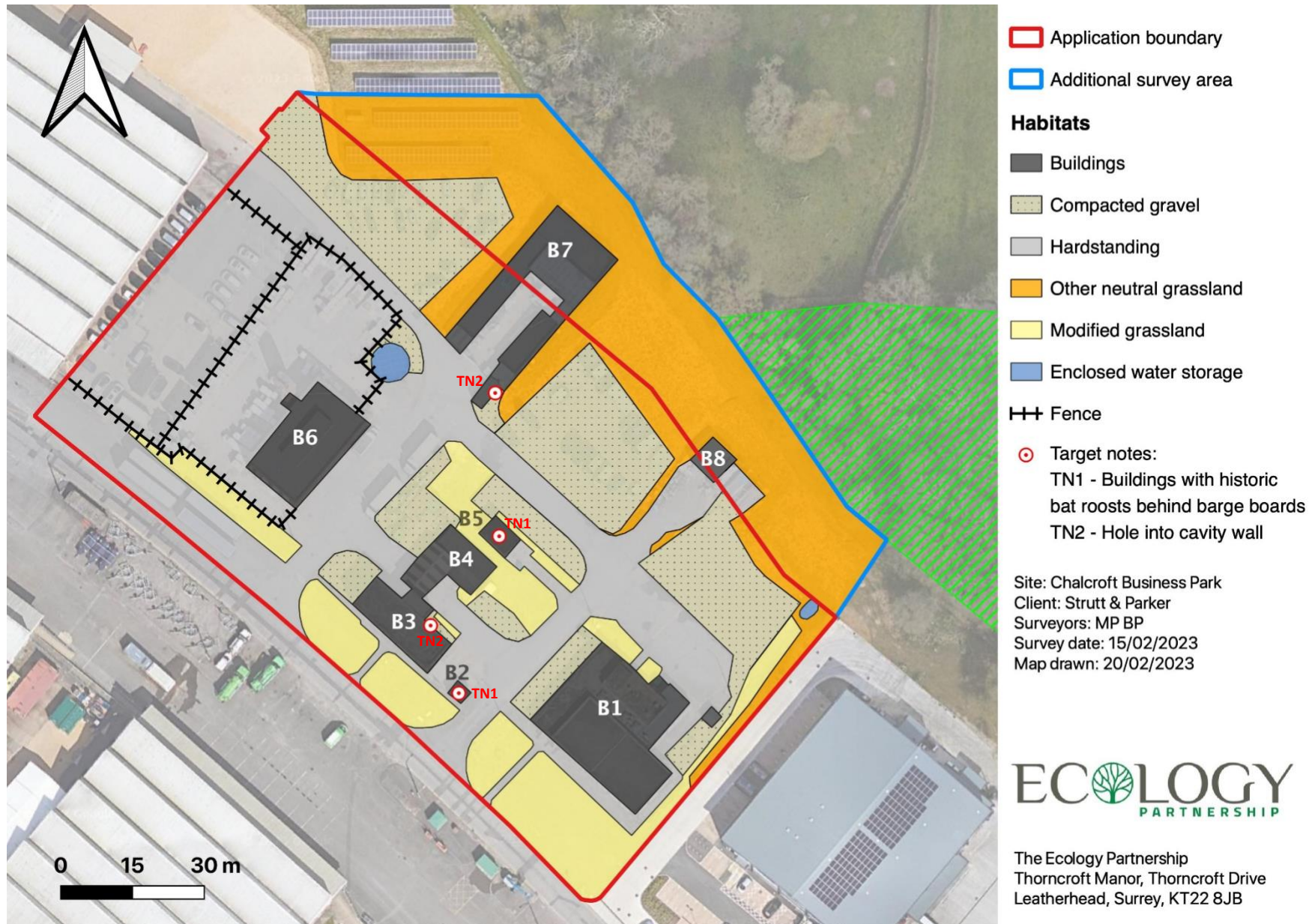
Internet resources:

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 other neutral grassland in the eastern corner of the site.



Photograph 2: Photo showing part of the woodland belonging to Round Copse SINC to the north.



Photograph 3: Photo showing a section of other neutral grassland to the north of the site and the western aspect of building 8.



Photograph 4: Photo showing a section of gravel and western aspect of building 7.	
Photograph 5: Photo showing a section of hardstanding in the north-western corner of the site.	
Photograph 6: Photo showing hardstanding to the east of building 6.	

Photograph 7: Photo of south-eastern aspect of building 6.	
Photograph 8: Photo of building 4.	
Photograph 9: Photo of area of modified grassland to the south of building 3.	

Photograph 10: Photo of the southern aspect of building 3.	
Photograph 11: Photo of building 2 to the left and building 1 in the centre, with the area of modified grassland to the south of building 1.	
Photograph 12: Photo of the potential bat roost feature on building 3.	

Photograph 13: Photo of the bat roost feature on building 5 where a bat roost was identified in 2018.	
Photograph 14: Photo of the south-eastern aspect of building 7.	
Photograph 15: Photo of potential bat roost feature in building 7.	

Photograph 16: Photo of building 8.	
Photograph 17: Photo of building 1.	
Photograph 18: Photo of the confirmed GCN breeding pond within 250m of the site.	

Appendix 3: Species List

Common name	Latin name	DAFOR score
Other Neutral Grassland		
Common Bent	<i>Agrostis capillaris</i>	A
Perennial Rye-grass	<i>Lolium perenne</i>	F
Red Fescue	<i>Festuca rubra</i>	F
Yorkshire-fog	<i>Holcus lanatus</i>	F
Selfheal	<i>Prunella vulgaris</i>	F
Creeping Cinquefoil	<i>Potentilla reptans</i>	F
Common Ragwort	<i>Senecio jacobaea</i>	O
Perforate St John's-wort	<i>Hypericum perforatum</i>	O
Bristly Oxtongue	<i>Picris echinoides</i>	O
White Clover	<i>Trifolium repens</i>	O
Creeping Thistle	<i>Cirsium arvense</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	O
Common Mouse-ear	<i>Cerastium fontanum</i>	O
Tufted Hair-grass	<i>Deschampsia cespitosa</i> <i>subsp. cespitosa</i>	O
Lesser Hop Trefoil	<i>Trifolium dubium</i>	O
Broad-leaved Dock	<i>Rumex obtusifolius</i>	R
Cleavers	<i>Galium aparine</i>	R
Dove's-foot Crane's-bill	<i>Geranium molle</i>	R
Yarrow	<i>Achillea millefolium</i>	R
Rosebay Willowherb	<i>Epilobium angustifolium</i>	R
Ribwort Plantain	<i>Plantago lanceolata</i>	R
Common Evening-primrose	<i>Oenothera biennis</i>	R
Buddleja	<i>Buddleja davidii</i>	R
Dandelion	<i>Taraxacum officinalis</i>	R
Gorse	<i>Ulex europaeus</i>	R
Canadian Fleabane	<i>Conyza canadensis</i>	R
Oxeye Daisy	<i>Leucanthemum vulgare</i>	R
Mugwort	<i>Artemisia vulgaris</i>	R
Daisy	<i>Bellis perennis</i>	R
Bramble	<i>Rubus sp.</i>	R
Wild Strawberry	<i>Fragaria vesca</i>	R
Spear Thistle	<i>Cirsium vulgare</i>	R
Wood dock	<i>Rumex sanguineus</i>	R
Compact Rush	<i>Juncus conglomeratus</i>	R

Bird's-foot-trefoil	<i>Lotus corniculatus</i>	R
Annual Meadow-grass	<i>Poa annua</i>	R
Common Fleabane	<i>Pulicaria dysenterica</i>	R
Groundsel	<i>Senecio vulgaris</i>	R
Bugle	<i>Ajuga reptans</i>	R
Foxglove	<i>Digitalis purpurea</i>	R
Wild Carrot	<i>Daucus carota</i> subsp. <i>carota</i>	R
Fennel	<i>Foeniculum vulgare</i>	R
Pendulous Sedge	<i>Carex pendula</i>	R
Purple Toadflax	<i>Linaria purpurea</i>	R
Willowherb Sp.	<i>Epilobium</i> sp.	R
Modified Grassland		
Perennial Ryegrass	<i>Lolium perenne</i>	A
Red Fescue	<i>Festuca rubra</i>	A
Common Bent	<i>Agrostis capillaris</i>	F
Creeping Buttercup	<i>Ranunculus repens</i>	O
Oxeye Daisy	<i>Leucanthemum vulgare</i>	R
Bird's-foot-trefoil	<i>Lotus corniculatus</i>	R
Autumn Hawkbit	<i>Leontodon hispidus</i>	R
Springy Turf-moss	<i>Rhytidiadelphus</i> <i>squarrosus</i>	R
Selfheal	<i>Prunella vulgaris</i>	R
Ribwort plantain	<i>Plantago lanceolata</i>	R
Field Speedwell	<i>Veronica agrestis</i>	R
Dove's-foot cranesbill	<i>Geranium molle</i>	R
Groundsel	<i>Senecio vulgaris</i>	R
Daisy	<i>Bellis perennis</i>	R
Creeping Cinquefoil	<i>Potentilla reptans</i>	R
Yarrow	<i>Achillea millefolium</i>	R
Daffodil	<i>Narcissus</i>	R

The Ecology Partnership Ltd

Thorncroft Manor

Thorncroft Drive

Leatherhead

KT22 8JB

Tel: 01372 364 133

www.ecologypartnership.com

Approved: Alexia Tamblyn MA (Oxon) MSc CEcol CEnv MCIEEM FRGS

Date: 21/02/2023