



**THE HEIGHTS, 82 GOSBROOK ROAD,
CAVERSHAM, READING
ECOLOGICAL APPRAISAL**

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EXECUTIVE SUMMARY

RPS Planning and Development Limited (RPS) was commissioned by Reading Borough Council to update the Ecological Appraisal of an area of land at The Heights Primary School to inform proposals for an update planning application. The site location is shown on Figure 1.

The Ecological Appraisal comprised an update desk study and Phase 1 Habitat Survey of the site as per guidance provided by CIEEM (2016). A copy of the original desk study and extended Phase 1 Habitat Survey which was completed on the 19th May 2014 is provided in Appendix 1.

The desk study identified eight statutory site designations and ten non-statutory site designations within 5km and 2km of the site. It is unlikely that the development proposals would have an impact on these designated sites due to the distance to the sites and the type of development proposed.

The update desk study also identified a number of additional records of protected and notable species. In total, the 2014 and 2018 desk studies provided records for 11 bat species, three other mammal species, 23 bird species, five herpetofauna, two invertebrates and four plant species within 2km of the site.

Since the previous Phase 1 Habitat Survey in 2014 the derelict and other smaller buildings on site have been demolished and replaced with a two storey modular school building. The building surroundings have been modernised with new hardstanding and associated school landscaping. A number of the existing mature trees and hedgerows have been retained. The old willow trees along the site boundary have been felled.

The update Phase 1 Habitat Survey identified that the survey area predominately consisted of a building, hardstanding, amenity grassland, hedgerows, trees, scattered scrub and tall ruderal.

The habitats on site were considered to provide suitable habitats for nesting birds, foraging and commuting bats and roosting bats and limited value to invertebrates.

A description of the potential effects of the proposals on the habitats and species identified as being present are described in Chapter 4. Mitigation measures are also recommended during site works for nesting birds and bats. Measures to enhance the ecology value of the site are also recommended.

1 INTRODUCTION

- 1.1 RPS Planning and Development Limited (RPS) was commissioned by Reading Borough Council to update the Ecological Appraisal of an area of land at The Heights Primary School, 82 Gosbrook Road, Caversham to inform proposals for an update planning application to extend the current approval for another two years and also include an area for a new additional school building to be built in the neighbouring grounds.
- 1.2 The site location is shown on Figure 1.
- 1.3 The PEA comprises a desk study and Phase 1 Habitat Survey of the site as per guidance provided by CIEEM (2016). A review of previous ecology work for the site was also undertaken.
- 1.4 The objectives of the desk study and Phase 1 habitat survey were to:
- Locate statutory designated wildlife sites within 5km of the site;
 - Locate non-statutory designated wildlife sites within 2km of the site;
 - Locate records of protected or otherwise notable species within 2km of it;
 - Identify and map the habitats present within the site boundary;
 - Assess the potential for legally protected fauna and flora to be present; and
 - Assess any potential affects the proposals may have and make recommendations for further ecological surveys, avoidance, mitigation and compensation measures where necessary.
- 1.5 This report outlines the methods used (Chapter 2), presents the results obtained (Chapter 3), and sets out the conclusions reached (Chapter 4).

2 METHODOLOGY

Desk Study

Search Area

- 2.1 A search area with a 2km radius from the site boundary was used to gather records of protected and notable species and details of non-statutory wildlife sites.
- 2.2 A wider search area with a 5km radius from the site was used to gather details of statutory wildlife sites as these were considered more sensitive receptors which could potentially be affected by activity at a greater distance away.

Data Request

- 2.3 A data request was sent to the Thames Valley Environmental Records Centre, in March 2018 to request any data they held on designated wildlife sites and protected and notable species since the previous data request in May 2014.
- 2.4 In addition to these requests, the 'MAGIC' website was consulted for information on any Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs). The JNCC website was also consulted for additional details of any SACs, SPAs, and Ramsar Sites.
- 2.5 The legal and conservation status of the species for which records were received was determined using the *Spreadsheet of Conservation Designations for UK Taxa* (JNCC, 2010).
- 2.6 The following pre-existing survey reports produced by RPS in respect to the site from 2014 were also reviewed as part of the desk study:
 - The Heights 82 Gosbrook Road, Caversham Reading Ecology Appraisal Including Extended Phase 1 Habitat Survey and Ecology Desk Study
 - The Heights 82 Gosbrook Road, Caversham Reading Bat Roost Assessment of Buildings and Trees

Phase 1 Habitat Survey

- 2.7 The Phase 1 Habitat Survey was carried out by Elizabeth White MCIEEM, a Senior Ecologist employed by RPS, and experienced in carrying out Phase 1 Habitat Surveys. The survey was undertaken on the 13th March 2018 to map all habitats present within the site boundary and to identify any potential for protected species to be present.

- 2.8 The survey took account of the standard Phase 1 Habitat Survey methodology as set out by the Joint Nature Conservation Committee (JNCC) in the Handbook for Phase 1 Habitat Survey; a technique for environmental audit (JNCC, 2010).
- 2.9 The area was surveyed and habitats were mapped onto Ordnance Survey base maps using the JNCC Phase 1 Habitat Survey categories. Typical plant species were recorded for each category of habitat and species names used follow Stace (2010).
- 2.10 Habitats potentially suitable for legally protected animal species were noted, and any signs of such species (e.g. sightings, tracks, droppings, burrows, etc.) were recorded.
- 2.11 Target notes were created for any features of interest and are listed at Appendix 1.
- 2.12 The site visit was undertaken slightly outside of the optimum season for Phase 1 habitat survey (between late March to mid-October is considered optimal in the south of England) therefore it was slightly too early in the season for full plant species identification. However due to the nature of the habitats present on site and its existing use, a diverse flora was unlikely and therefore the timing of the survey was not considered a limitation and confidence in the findings of the survey are high.

3 RESULTS

The Heights, 82 Gosbrook Road, Caversham Reading Ecology Appraisal Including Extended Phase 1 Habitat Survey and Ecology Desk Study (RPS 2014)

- 3.1 RPS undertook ecological survey work including a desk study and an extended Phase 1 Habitat Survey which was completed on the 19th May 2014. A copy of this report is provided in Appendix 1. This survey identified the need for a further survey for roosting bats of the building and trees on site which was completed on the 5th June 2014.
- 3.2 The 2014 RPS report identified eight statutory designated sites, all Local Nature Reserves within 5km of the site. The closest site, Clayfield Copse was approximately 2.25km north of the site and designated as ancient woodland. No non-statutory designated sites were located within the site. Nine non-statutory designated sites, all Local Wildlife Sites were located within the 2km search area. All non-statutory designated sites were located between 1km and 2km of the site boundary. Details of the sites are provided in Appendix 1 and the locations of these are shown on Figure 1 .
- 3.3 The 2014 Phase 1 Habitat Survey identified that the site predominately comprised buildings and hard-standing with an area of semi-natural broadleaved woodland, areas of poor semi-improved grassland, hedgerows and trees.
- 3.4 The main, old school building and two trees on site were considered to have some bat roost potential. A large sycamore *Acer pseudoplatanus* tree was considered as having low potential to support roosting bats and a dead ivy *Hedera helix* clad willow *Salix sp.* tree was considered as having good potential to support roosting bats. Further survey work was undertaken on these features, the results of which are provided in the section below. No other buildings or trees on site had potential to support roosting bats.
- 3.5 The woodland, trees, hedgerow and scrub on site were of potential value as foraging and commuting habitat for a variety of bat species which have been recorded in the area. These habitats also had the potential to support breeding bird nests.
- 3.6 The small areas of scrub and semi-improved grassland on site were considered of limited potential value to reptiles and the areas of hard-standing offered limited value as basking sites. Habitat connectivity on site and within the surrounding area was poor. Therefore, it was considered unlikely that any significant reptile population would be utilising the site and, if present, reptile numbers were likely to be very low.
- 3.7 The trees, scrub and grassland on site provided nectar, pollen, seeds and berries which could be utilised by and support a variety of common invertebrates. Several of the trees were dead or had dead/decaying limbs which could provide an important habitat for invertebrates including stag beetle on the site.
- 3.8 No badger setts were located on site or within the immediately surrounding area and no signs that could indicate the presence of badgers were recorded.

- 3.9 No waterbodies of potential value to breeding amphibians were located on site. Surrounding areas were dominated by unfavourable, heavily built-up land, areas of amenity grassland and main roads. No waterbodies were recorded on OS base maps within 250 m of the site.

The Heights 82 Gosbrook Road, Caversham Reading Bat Roost Assessment of Buildings and Trees (RPS 2014)

- 3.10 A daytime bat roost assessment of the building and two trees on site was carried out by two appropriately experienced ecologists on the 5 June 2014, following guidelines published by the Bat Conservation Trust (BCT) (2012).
- 3.11 No evidence of bats was recorded either in the building on site or the two surveyed trees. The building had recently been damaged by fire and offered very limited potential for roosting bats. Although potential access points were identified no signs of bat presence were recorded. The features in the trees that were identified as being of potential value to roosting bats were thoroughly investigated and were found to offer no potential as roost sites. Taking into account BCT guidelines, the building and two trees were downgraded and were considered to offer no potential for roosting bats. Therefore no further bat roost surveys were required.

Desk Study Update 2018

- 3.12 The updated data received from Thames Valley Environmental Records Centre (TVERC) concerning wildlife sites and protected and notable species records is summarised below.

Statutory designated sites

- 3.13 A total of eight statutory designated sites were identified within 5km of the site. These are listed in the initial report undertaken by RPS included in Appendix 1 and shown on Figure 1 of this report. No new sites have been given a statutory designation within 5km of the site.

Non-statutory designated sites

- 3.14 A total of ten non-statutory designated sites were identified within 2km of the site. These are listed in the initial report undertaken by RPS included in Appendix 1 and shown on Figure 1 of this report. Hemdean Bottom Local Wildlife Site was omitted from the previous report but was selected in 2012. This is listed in Table 1 below.

Table 1 – Summary of protected and notable birds recorded within 2km of the site.

Site Name	Designation	Distance to site (m)	Description
Hemdean Bottom	LWS	1.7km	A chalk valley on the edge of Caversham. Site consists of grassland with small areas of woodland and planted scrub.

Records of Protected and Other Notable Species

- 3.15 Protected or notable species refers to any species listed under the following legislation or which is identified as being of nature conservation concern in the lists referred to below.

Protected Species

- The Conservation of Habitats and Species Regulations 2010 (Annex 4) (European Protected Species) (EPS)
- Council Directive 79/409/EEC on the Conservation of Wild Birds ("Birds Directive") (BDIR);
- Wildlife and Countryside Act 1981 (as amended) (Schedules 1, 5 and 8) (WCA1/WCA5/WCA8);
- The Protection of Badgers Act 1992 (PBA)

Other Notable Species

- UK Biodiversity Action Plan Species (UKBAP)
- The Natural Environment and Rural Communities (NERC) Act 2006. Section 41; Habitats and Species of Principal Importance in England (NERC S.41)
- RSPB UK Red or Amber listed birds (Red or Amber)
- Red listing based on IUCN guidelines –Near threatened (NT)
- Rare and scarce species not based on IUCN criteria –Nationally Scarce (NS)

- 3.16 Records of additional protected and otherwise notable species recorded in the 2km and 5km search areas since the original desk study data request provided by the consultees are summarised in the tables below. Information on the species recorded in the 2014 desk study is provided in Appendix 1. All species records provided by TVERC since 2014 are shown on Figure 2.

Birds

Table 2 – Summary of protected and notable birds recorded within 2km of the site.

Taxon Name	Common Name	Protected Status
<i>Apus apus</i>	Swift	Amber
<i>Chroicocephalus ridibundus</i>	Black-headed gull	Amber
<i>Falco peregrinus</i>	Peregrine	WCA1, BDIR1
<i>Motacilla cinerea</i>	Grey wagtail	Red
<i>Turdus viscivorus</i>	Mistle thrush	Red

- 3.17 A total of five additional protected or notable species of bird have been recorded within the search area since the original desk study of May 2014; these are listed in Table 2 above.

- 3.18 The bird records include peregrine which is specially protected under the Wildlife and Countryside Act (WCA) 1981 (as amended) and protected under the Birds Directive. Two red listed species; grey wagtail and mistle thrush and two amber listed species; swift and black-headed gulls have also been recorded within the search area, since 2014.

Mammals

Table 3 – Summary of bat records within 5km of the survey site.

Taxon Name	Common Name	Protected Status
<i>Barbastella barbastellus</i>	Western barbastelle	EPS, WCA5, UKBAP, NERC S.41
<i>Nyctalus leisleri</i>	Lesser noctule	EPS, WCA5
<i>Pipistrellus nathusii</i>	Nathusius's pipistrelle	EPS, WCA5

- 3.19 Three additional species of bat were recorded within 5km of the site boundary since the original desk study of May 2014. The bat species recorded are listed in Table 3 above.
- 3.20 All bats are European Protected Species and listed on Schedule 5 of the WCA 1981 (as amended). Western barbastelle is also listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006) and is listed as a UK Biodiversity Action Plan (UKBAP) priority species.
- 3.21 No other protected and notable mammal species have been recorded within 2km of the site since 2013.

Herpetofauna

Table 4 – Summary of protected herpetofauna recorded within 2km of the site.

Taxon Name	Common Name	Protected Status
<i>Triturus cristatus</i>	Great crested newt	EPS, WCA5, UKBAP, NERC S.41

- 3.22 One additional protected species of herpetofauna has been recorded within the 2km search area since the original desk study of May 2014; this is listed in Table 4 above.
- 3.23 A great crested newt record has been provided approximately 600m to the south of the site at King's Meadow.
- 3.24 Great crested newt is a European Protected Species, protected under the WCA 1981 (as amended), listed under Section 41 of the NERC Act (2006) and is a UK BAP Priority Species.

Invertebrate

Table 5 – Summary of notable invertebrate species recorded within 2km of the site.

Taxon Name	Common Name	Protected Status
<i>Tyria jacobaeae</i>	Cinnabar	UKBAP, NERC S.41

- 3.25 One additional notable species of invertebrate has been recorded within the 2km search area since the original desk study of May 2014; this is listed in Table 5 above.
- 3.26 Cinnabar has been recorded at The Coal, Kennetmouth and Kings Meadow East Local Wildlife Site which is approximately 1km south of the site.

Flora

Table 6 – Summary of notable plant species recorded within 2km of the site.

Taxon Name	Common Name	Protected Status
<i>Fragaria vesca</i>	Wild Strawberry	NT
<i>Fritillaria meleagris</i>	Fritillary	NS

- 3.27 Two additional notable species of plant have been recorded within the 2km search area since the original desk study of May 2014; these are listed in Table 6 above.
- 3.28 Wild strawberry and fritillary has been recorded at Highdown Wood Local Wildlife Site which is approximately 1.5km north of the site.

Phase 1 Habitat Survey

Overview

- 3.29 The Phase 1 Habitat Survey was carried out by Elizabeth White MCIEEM, a Senior Ecologist employed by RPS, and experienced in carrying out Phase 1 Habitat Surveys.
- 3.30 The site is located north of Gosbrock Rd, Caversham, Reading, surrounded by a footpath and parkland to the west, residential areas to the east and further amenity grassland, including St Anne's Catholic Primary School to the north. Christchurch Meadows recreation ground is located further south of Gosbrock Rd, south of the site.

Phase 1 habitat survey results

- 3.31 A description of the habitats identified during the survey is given below. Their locations within the survey area are shown on the Phase 1 habitat plan at Figure 3. A list of target notes is provided at Appendix 2 and a species list is provided at Appendix 3.

- 3.32 Since the previous Phase 1 Habitat Survey in 2014 the derelict and other smaller buildings on site have been demolished and replaced with a two storey modular school building. The building surroundings have been modernised with new hardstanding and associated school landscaping. A number of the existing mature trees and hedgerows have been retained. The old willow trees along the site boundary have been felled.

Individual Broadleaved Trees

- 3.33 There are several semi-mature and mature broadleaved trees on site, predominately located along the site boundaries. Species include ash *Fraxinus excelsior*, elder *Sambucus nigra*, hawthorn *Crataegus monogyna*, hornbeam *Carpinus betulus* and sycamore.

Scattered Scrub

- 3.34 Scattered scrub lines the northern and southern boundaries of the field of the proposed location of the new modular building (TN1). The scrub mainly consists of young tree saplings and bramble *Rubus* sp. Species present include ash, aspen *Populus tremula*, beech *Fagus sylvatica*, elder, hawthorn, horse chestnut *Aesculus hippocastanum*, hazel *Corylus avellana*, holly *Ilex aquifolium* and sycamore.
- 3.35 The ground flora is dominated by longer grass swards, ivy, lords and ladies *Arum maculatum* and wild radish *Raphanus raphanistrum*.

Tall ruderal

- 3.36 Tall ruderal is also present along the northern and southern boundaries of the field. Species present include cleavers *Galium aparine* and stinging nettle *Urtica dioica*.

Amenity grassland

- 3.37 The field to the north of the survey area (TN2), primarily the location for the modular building, is used as a recreation ground and consists of managed, muddy, short, frequently mown, perennial ryegrass *Lolium perenne* grassland. Little species diversity was present other than daisy *Bellis perennis* and ribwort plantain *Plantago lanceolata*.

Species-poor intact hedge

- 3.38 The western boundary hedge (TN3) consists of leylandi cypress *Cupressus x leylandii*.

Fence

- 3.39 Wire mesh fences line the site boundaries.

Wall

- 3.40 A brick wall lines the northern section of the western site boundary.

Buildings

- 3.41 The majority of the site consists of the two storey school building (TN4), which was built in September 2014. The building is flat roofed and modern.

Hardstanding

- 3.42 The majority of the building surrounds consist of hardstanding.

Potential for Protected or Otherwise Notable Fauna

Plants and Habitats

- 3.43 The site predominately consists of buildings, hardstanding, amenity grassland, species poor hedgerows and trees. None of the habitats present would qualify as a NERC Section 41 Habitat/UKBAP Priority Habitats.
- 3.44 A number of notable plants were recorded within 2km of the site. The site did not have a diverse flora and was unlikely to support any protected or notable flora.

Nesting birds

- 3.45 The hedgerows, trees and scattered scrub on site were considered to have some potential to support nesting birds. A number of bird boxes were installed on large mature trees.

Mammals

Bats

Bat roosts

- 3.46 One of the mature ash trees (TN5) on site was identified as having potential roost features that bats could utilise. These features include a small woodpecker hole and a small rot hole. Following Bat Conservation Trust guidelines (BCT, 2016) the tree was considered to provide medium bat roost potential, as the tree has one or more potential roost sites that could be used by bats due to size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
- 3.47 The sycamore tree, previously surveyed for bat roost potential in 2014 was still present on site and the features present had not changed since it was downgraded to having no bat roost potential, therefore it is still considered as having no bat roost potential. The dead ivy clad willow tree was no longer present. None of the other trees on site were identified as having features that bats could utilise as roosts.

Bat activity

- 3.48 The hedgerows, trees and scattered scrub on site were considered to be suitable habitats for foraging and commuting bats. The area of grassland was considered to be of lower value to bats.

Herpetofauna

- 3.49 No waterbodies of potential value to breeding amphibians were located on site. Surrounding areas were dominated by unfavourable, heavily built-up land, areas of amenity grassland and main roads. No waterbodies were identified on OS base maps within 250 m of the site.
- 3.50 The small areas of scattered scrub on site were of limited potential value to reptiles and the areas of hard-standing and amenity grassland offered very limited value as basking sites. Habitat connectivity on site and with the surrounding area was poor. Therefore, it was considered unlikely that reptiles would be utilising the site.

Invertebrates

- 3.51 The hedgerows, trees and scrub comprised a low diversity of common and widespread flora. The plants were likely to provide a food source for some local invertebrate populations and the flowers were likely to provide a source of pollen and nectar. However, it is unlikely that they would support invertebrates of formal conservation interest. The majority on trees on site were in a relatively good condition, however some trees had small areas of dead or had dead/decaying features which could provide an important habitat for invertebrates including stag beetle on the site.

4 CONCLUSION

Desk Study

- 4.1 A total of eight statutory site designations were identified within 5km of the site and ten non-statutory site designations were identified within 2km of the site. They consisted of eight Local Nature Reserves and ten Local Wildlife Sites. It is unlikely that the development proposals will have an impact on these designated sites due to their distance from the site.
- 4.2 The desk study also identified a number of records of protected and notable species. Records were provided for 11 bat species within 2 km of the site and a number of additional bat records that were not identified to species level. Other mammals including European otter, west European hedgehog and Eurasian badger were also recorded within 2 km of the site.
- 4.3 A total of 23 bird species, five herpetofauna, two invertebrates and four plant species were recorded within 2km of the site. A precise grid reference was not provided for the location of a number of records so it was not possible to determine how near to the site these species had been recorded.
- 4.4 The site has the potential to support the protected and notable birds, bats, mammals, herpetofauna, invertebrates and plant species, which were identified during the desk study if suitable habitats are present.
- 4.5 The potential impact of the proposals on any protected species which may be present on site is discussed below.

Phase 1 Habitat Survey

- 4.6 The Phase 1 Habitat Survey identified that the survey area predominately consisted of a building, hardstanding, amenity grassland, hedgerows, trees, scattered scrub and tall ruderal.
- 4.7 The habitats on site were considered to provide suitable habitats for nesting birds, foraging and commuting bats and roosting bats and limited value to invertebrates.
- 4.8 A description of the potential effects of any clearance works on the habitats and species identified as being present or potentially present are described below followed by recommendations for further survey work and mitigation measures to ensure such effects are avoided. Measures to enhance the ecology value of the site are also recommended.

Nesting birds

- 4.9 All wild birds are protected at a European level under the EC Directive on the Conservation of Wild Birds 1979 (79/409/EEC) (the Birds Directive). All species of wild bird in the UK (other than a few pest species) are given general protection under Part 1 Section 1(1) of the Wildlife and Countryside Act 1981 and birds listed under Schedule 1 of the Act are further protected.
- 4.10 Vegetation on site which is suitable for bird nesting such as hedgerows, trees and scrub should be cleared outside of the bird nesting season, as far as practicable. The clearance works should be undertaken between October and mid-February to ensure nesting birds are not disturbed.

- 4.11 If any clearance was required outside this period, the relevant areas should be inspected by a suitably experienced ecologist to check for the presence of nesting birds prior to any site clearance. If an active nest is present, the nest and vegetation within 5m of it will be retained until the young birds have fledged. If the nest proves to be of a species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), advice from the inspecting ecologist regarding suitable distances to avoid disturbance of the nest and any birds using it will be sought and agreed with clearance contractors. Such buffers will remain in place until the young birds have fledged and left the nest.

Mammals

Bats

- 4.12 Bats and bat roosts are protected under the Wildlife and Countryside Act 1981 (as amended) and under The Conservation of Habitats and Species Regulations 2017 which makes all species of bat in Great Britain European Protected Species. Some species are also listed as UK BAP Priority Species and Species of Principal Importance in England. Any works that could potentially affect a bat or its roost can only be conducted under a licence required in advance from Natural England.
- 4.13 Under the legislation, it is an offence to intentionally or deliberately kill, injure or capture bats, deliberately disturb bats, recklessly or intentionally disturb roosting bats, obstruct access to their roosts and damage or destroy a bat roost. Any works that could potentially affect a bat or a bat roost can only be conducted under a licence obtained in advance from Natural England once appropriate mitigation measures are agreed.
- 4.14 One of the ash trees on site was considered to provide medium bat roost potential. If any pruning works are required on this tree, it is recommended that these works are undertaken in September/October, to avoid the maternity and hibernation seasons when bats are most vulnerable to disturbance.
- 4.15 If the tree is to be felled then further investigation will be considered necessary in order to confirm the presence or likely absence of roosting bats and to inform mitigation measures and the potential need to obtain a Natural England development licence for bats prior to felling.
- 4.16 It is recommended that off ground, aerial inspections to further explore the tree's suitability as a roost and to search for signs of use as a bat roost is undertaken and/or evening emergence/dawn re-entry survey to identify bats emerging or returning to a roost.
- 4.17 Due to the known presence of bats in the surrounding area, native and wildlife planting of potential value to foraging and commuting bats should be incorporated into landscape proposals for the new modular building where practicable.
- 4.18 There is currently no lighting scheme for the site. Any lighting on the site should include measures to control the amount of artificial lighting used on the site and consider the specifications set out in the Bat Conservation Trust (2014) guidelines as artificial lighting can affect the feeding behaviour of bats.
- 4.19 Measures to maintain the habitat suitability of habitats on site identified as important for foraging and commuting bats, particularly hedgerows and trees should be considered including locating and

directing lighting away from them to prevent unwanted light spill. Lighting should be designed to prevent lighting levels from exceeding current levels along the boundary vegetation.

- 4.20 The installation of appropriate bat roost boxes could be considered as part of development proposals in order to enhance the potential biodiversity value of the site.

Tree protection

- 4.21 Any trees to be retained on site should be protected from any damage during the fencing and any clearance works by following best practice guidelines provided in NHBC Standards (2008) *Building near trees*. Barriers must prohibit construction works in the area between the barrier and the tree trunk. The minimum distance between the tree trunk and barrier must be either the distance of branch spread or half the tree height, whichever is the greater. In all cases trees must be protected from direct impact and from severance or asphyxiation of the roots.

Site enhancement

- 4.22 It is recommended that the planting of trees and shrubs should be included as part of the landscape proposals for the site to create additional habitat and a food source for nesting birds and small mammals.
- 4.23 The planting proposed for the site should be a diverse range of native species naturally occurring in the area and/or wildlife friendly species,. The planting of trees and shrubs should be designed to create small areas of habitat and to improve connectivity through the site to the surrounding landscape.

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APPENDICES

APPENDIX 1

The Heights 82 Gosbrook Road, Caversham Reading Ecology Appraisal Including
Extended Phase 1 Habitat Survey and Ecology Desk Study (RPS 2014)



**THE HEIGHTS, 82 GOSBROOK ROAD,
CAVERSHAM, READING**

**ECOLOGY APPRAISAL
INCLUDING EXTENDED PHASE 1
HABITAT SURVEY AND ECOLOGY
DESK STUDY**

Date: 27 May 2014

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S EXECUTIVE SUMMARY

- S.1 RPS was commissioned to carry out an ecology desktop study and a Phase 1 habitat survey of 82 Gosbrook Road, Caversham in Reading.
- S.2 The objectives of the desk study were to locate:
- statutory designated wildlife sites within 5km of the site;
 - non-statutory designated wildlife sites within 2km of the site; and
 - records of protected or otherwise notable species, reported since 2000, within 2km of the site, or 5km for bats.
- S.3 The objectives of the Phase 1 habitat survey were to:
- map all habitats present within the site boundary according to the Phase 1 habitat survey guidelines published by the Joint Nature Conservation Committee (2010); and
 - assess the habitats present for their potential to support protected or otherwise notable species and identify field signs of such species.
- S.4 The desk study identified 8 statutory designated wildlife sites and 9 non-statutory designated wildlife sites within 5km and 2km of the site respectively.
- S.5 The desk study also identified a number of records of protected or otherwise notable species. Records included 8 bat species and a number of additional bat records that were not identified to species level. Otters, West European hedgehog and Eurasian badger were also recorded within 2km of the site. Records of seventeen bird species, 4 species of herpetofauna, 2 plant species and 1 invertebrate species were also reported within 2km of the site.
- S.6 The survey area predominately consists of buildings and hard-standing with an area of semi-natural broadleaved woodland, areas of poor semi-improved grassland and trees.
- S.7 The site is of potential value to a number of protected or otherwise notable species: bats could utilise the site for foraging and as a commuting route and the main building and two trees on site have the potential to contain bat roosts; hedgerows, trees, scrub and buildings are of potential value to nesting birds; areas of scrub, hedgerows and rough grassland are of some limited value to small mammals and reptiles; and hedgerows and trees provide nectar, pollen, seeds and berries which can be utilised by and support a variety of common invertebrates.
- S.8 Recommendations for further work include bat activity and roost surveys, measures to ensure the protection of breeding bird nests and reptiles, and the retention of invertebrate dead wood habitat.

1 INTRODUCTION

- 1.1 RPS was commissioned to carry out an ecology desktop study and a Phase 1 habitat survey of 82 Gosbrook Road, Caversham in Reading.
- 1.2 The objectives of the desk study were to locate:
- statutory designated wildlife sites within 5km of the site;
 - non-statutory designated wildlife sites within 2km of the site; and
 - records of protected or otherwise notable species, reported since 2000, within 2km of the site, or 5km for bats.
- 1.3 The objectives of the Phase 1 habitat survey were to:
- map all habitats present within the site boundary according to the Phase 1 habitat survey guidelines published by the Joint Nature Conservation Committee (2010); and
 - assess the habitats present for their potential to support protected or otherwise notable species and identify potential field signs of such species.
- 1.4 This report outlines the survey methods used (Chapter 2), presents the results obtained (Chapter 3) and sets out the conclusions reached and any recommendations for further surveys (Chapter 4).

2 METHODOLOGY

Desk Study

Search Area

- 2.1 A search area of 2km from the site was used to gather details of non-statutory designated wildlife sites and records of protected and otherwise notable species.
- 2.2 A wider search of 5km from the site was used to gather details of statutory designated wildlife sites and records of bats, which could be affected by activity over a greater distance due to their mobile nature and typical size of their home ranges.

Data Request

- 2.3 Data relating to designated wildlife sites and protected or otherwise notable species was requested from the Thames Valley Environmental Records Centre (TVERC).
- 2.4 The TVERC provided records of notable invertebrates, amphibians, reptiles, hedgehogs, water voles, bats, birds and plants. The TVERC does not hold local records of badger activity; however a detailed survey of the site and immediately adjacent area for signs of badger activity and badger setts was undertaken as part of the Phase 1 habitat survey.
- 2.5 In addition to the TVERC data request, the 'MAGIC' website was consulted for information on any Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs). The Joint Nature Conservation Committee (JNCC) website was also consulted for additional details of any SACs, SPAs, and Ramsar Sites.

Phase 1 Habitat Survey

- 2.6 The Phase 1 habitat survey of the site was completed on 19th May 2014 by an appropriately experienced ecologist.
- 2.7 The survey was undertaken in accordance with the standard Phase 1 habitat survey methodology as set out in the *Handbook for Phase 1 Habitat Survey: A technique for environmental audit* (Joint Nature Conservation Committee, 2010).
- 2.8 Habitats were mapped onto Ordnance Survey base maps using the JNCC Phase 1 habitat survey categories. Target notes were made for features of ecological interest. Habitats potentially suitable for legally protected species were noted and any signs of such species (e.g. sightings, tracks, dropping, burrows etc.) were recorded.

Constraints

- 2.9 The main building on site had been damaged by fire and was no longer in use. It was considered unsafe for a detailed survey of the interior to be undertaken; however, a survey of external features was completed.
- 2.10 Weather conditions were suitable for this type of survey and presented no constraint.

3 RESULTS

Desk Study

- 3.1 Data received from the TVERC relating to wildlife sites and protected or otherwise notable species is summarised below and attached at Appendix 1.
- 3.2 The legal and conservation status of the species for which records were received was determined using the *Spreadsheet of Conservation Designations for UK Taxa* (Joint Nature Conservation Committee, 2010).

Designated wildlife sites

- 3.3 No statutory designated wildlife sites are located within the survey site; however, 8 sites are located within 5km of the survey site. These are listed in Table 1 below and shown on the Statutory Designated Wildlife Sites Map (Figure 1i).

Table 1 – Statutory designated wildlife sites within 5km of the survey site

Site Name	Designation	Distance to site	Description
Clayfield Copse	Local Nature Reserve (LNR)	2.25km	Ancient woodland with service trees, bluebells, common orchids and wood anemone.
Ali's Pond	LNR	4km	Established in 1997 as a public access conservation area. Consists of ponds, hedgerows and trees. Breeding Great Crested Newts present.
Mcllory Park	LNR	4km	Natural park along the River Thames with areas of semi ancient woodland.
Round Copse	LNR	3.9km	Dense woodland with a variety of birdlife.
Lousehill Copse	LNR	3.9km	Semi ancient woodland surrounded by housing.
High Wood	LNR	3.7km	Consists of exotic tree species which were part of an arboretum.
Blundells Copse	LNR	4.4km	Ancient woodland with a stream.
Maiden Eriagh Park	LNR	4.7km	Lowland mixed deciduous woodland, ancient semi natural woodland and eutrophic open waterbody.

- 3.4 No non-statutory designated wildlife sites are located within the boundaries of the survey site; however, 9 sites are located within 2km of the survey site. These are listed in Table 2 and shown on the Non-Statutory Designated Wildlife Sites Map (Figure 1ii).

Table 2 – Non-Statutory designated wildlife sites within 2km of the site

Site Name	Designation	Distance to site	Description
Cow Lane Depot	Local Wildlife Site (LWS)	2km	Small isolated site bounded by a railway track. Site forms a mosaic of habitats ranging from willow scrub to open standing water.
Furze Plat	LWS	2km	A small area of mixed semi-natural woodland.
Henley Road Gravel Pit	LWS	1.5km	A large pit next to the Thames where gravel has been extracted in the past. Supports a wide range of overwintering wildfowl.
Highdown Wood	LWS	1.5km	A small broadleaved woodland dominated by mature beech.
Holy brook	LWS	2km	River located along the southern edge of Reading.
Old Cemetery, Victoria Road	LWS	1km	Small Victorian cemetery with native bluebells and primroses.
Rotherfield Way Copse	LWS	1.5km	Small broadleaved woodland situated in a sheltered dry valley.
The Coal, Kennetmouth and Kings Meadow East	LWS	1km	An old colliery spoil site comprising of a riverside woodland area, a recreational area and a section of the River Thames and River Kennet.
The Warren Woodland Complex	LWS	1km	Consists of six sites consisting of a chalk pit and woodlands.

Records of Protected and Otherwise Notable Species

- 3.5 Protected or otherwise notable species are any species specially protected or listed under the following legislation:

Protected Species

- Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive) (Annex V) (HabsDir-A5)
- The Conservation of Habitats and Species (Amendment) Regulations 2012 (European Protected Species (EPS) - Schedules 2 (animals) and 5 (plants)) (Habitats Regulations)
- Council Directive 79/409/EEC on the Conservation of Wild Birds ("Birds Directive") (BDIR);
- Wildlife and Countryside Act 1981 (as amended) (Schedules 1, 5 and 8) (WCA1/WCA5/WCA8);
- The Protection of Badgers Act 1992 (PBA)

Otherwise Notable Species

- The Natural Environment and Rural Communities (NERC) Act 2006. Section 41; Habitats and Species of Principal Importance in England (S41)
- UK Birds of Conservation Concern (BoCC) - Red or Amber List species (Red or Amber)
- National Red Data Book Species (NT – Near Threatened, VU – Vulnerable)

- 3.6 Records of protected and otherwise notable species recorded since 2000 provided by the TVERC are summarised in the tables below and the locations where species were recorded are shown on Figure 2.

Birds

- 3.7 A total of 17 records of protected or otherwise notable species of bird were reported within the search area, as listed in Table 3 below. These include species specially protected under the WCA, the Birds Directive and under Section 41 of the NERC Act (2006). All but one of the bird species (namely Caspian tern) are included in the UK BoCC Red or Amber lists.

Table 3 – Summary of protected or otherwise notable bird species recorded within 2km of the survey site

Taxon Name	Common Name	Protected Status
<i>Phoenicurus ochruros</i>	Black Redstart	WCA1 Amber
<i>Hydroprogne caspia</i>	Caspian Tern	BDIR
<i>Sterna hirundo</i>	Common Tern	BDIR Amber
<i>Picus viridis</i>	Green Woodpecker	Amber

Taxon Name	Common Name	Protected Status
<i>Anser anser</i>	Greylag Goose	WCA1 BDIR
<i>Prunella modularis</i>	Dunnock	Amber
<i>Pernis apivorus</i>	Honey Buzzard	BDIR Amber
<i>Alcedo atthis</i>	Kingfisher	WCA1 BDIR Amber
<i>Vanellus vanellus</i>	Lapwing	BDIR NERC S.41 Red
<i>Anas platyrhynchos</i>	Mallard	Amber
<i>Aythya ferina</i>	Pochard	Amber
<i>Milvus milvus</i>	Red Kite	WCA1 BDIR Amber
<i>Emberiza schoeniclus</i>	Reed Bunting	NERC S.41 Amber
<i>Turdus philomelos</i>	Song Thrush	Red
<i>Sturnus vulgaris</i>	Starling	Red
<i>Columba oenas</i>	Stock Dove	Amber
<i>Aythya fuligula</i>	Tufted Duck	Amber

Mammals

3.8 Records of mammals provided by the TVERC are listed in Table 4 below.

- 3.9 Eight species of bats were recorded within 5km of the site and a number of records were provided for bats not identified to species level. European Otter was also recorded within 5km of the site; at a bridge along the River Thames to the south of the survey site, and at gravel pits located to the south east and east of the survey site.
- 3.10 All bats and otters are specially protected under the WCA, Section 41 of the NERC Act (2006) and are European Protected Species.

Table 4 – Summary of bat and otter records within 2km of the survey site

Taxon Name	Common Name	Protected Status
<i>Plecotus auritus</i>	Brown Long-eared Bat	WCA5 EPS NERC S.41
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	WCA5 EPS
<i>Myotis daubentonii</i>	Daubenton's Bat	WCA5 EPS
<i>Plecotus</i>	Long-eared Bat species	WCA5 EPS
<i>Myotis nattereri</i>	Natterer's Bat	WCA5 EPS
<i>Nyctalus noctula</i>	Noctule Bat	WCA5 EPS NERC S.41
<i>Eptesicus serotinus</i>	Serotine	WCA5 EPS
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	WCA5 EPS
<i>Chiroptera</i>	Unidentified Bat	WCA5 EPS
<i>Myotis sp.</i>	Unidentified <i>Myotis</i> species	WCA5 EPS

Taxon Name	Common Name	Protected Status
<i>Pipistrellus</i>	Unidentified Pipistrelle species	WCA5 EPS
<i>Myotis mystacinus</i>	Whiskered Bat	WCA5 EPS
<i>Lutra Lutra</i>	European Otter	WCA5 EPS NERC S.41

- 3.11 Two other notable and protected mammal species have been recorded within 2km of the site, as listed in Table 5 below.

Table 5 - Summary of other notable mammal records within 2km of the survey site

Taxon Name	Common Name	Protected Status
<i>Erinaceus europaeus</i>	West European Hedgehog	NERC, S41
<i>Meles meles</i>	Eurasian Badger	PBA

Herpetofauna

- 3.12 A total of 4 protected species of herpetofauna have been recorded within the search area; these are listed in Table 6 below. All the species recorded are protected under the WCA.

Table 6 - Summary of protected and otherwise notable herpetofauna recorded within 2km of the survey site

Taxon Name	Common Name	Protected Status
<i>Lissotriton vulgaris</i>	Smooth Newt	WCA5
<i>Bufo bufo</i>	Common Toad	WCA5 NERC S.41
<i>Anguis fragilis</i>	Slow Worm	WCA5 NERC S.41
<i>Natrix natrix</i>	Grass Snake	WCA5 NERC S.41

Flora

- 3.13 Two protected plant species was recorded within 2km of the site, as listed in Table 7 below.

Table 7 - Summary of notable plant species recorded within 2km of the survey site

Taxon Name	Common Name	Protected Status
<i>Hyacinthoides non-scripta</i>	Bluebell	WCA8
<i>Ruscus aculeatus</i>	Butcher's Broom	HabDir-A5

Invertebrates

- 3.14 One protected invertebrate species was recorded within 2km of the site, as listed in table 8 below. Stag beetle is specially protected under the WCA and under Section 41 of the NERC Act (2006).

Table 8 - Summary of notable invertebrate species recorded within 2km of the survey site

Taxon Name	Common Name	Protected Status
<i>Lucanus cervus</i>	Stag Beetle	WCA5 NERC S.41

Phase 1 Habitat Survey

- 3.15 Findings of the Phase 1 habitat survey are described below and shown on Figure 3. Key features of ecology or nature conservation interest are highlighted by Target Notes (referenced TNx on Figure 3), which are described at Appendix 2. A list of the plant species recorded during the survey is provided at Appendix 3. Plant species names follow Stace (2010).

Habitats within the site boundary

A1.2 Semi-natural Broadleaved Woodland

- 3.16 There is a small area of woodland along the north-eastern boundary of the site. Species include willow *Salix sp.*, hazel *Corylus avellana*, ash *Fraxinus excelsior*, aspen *Populus tremula* and sycamore *Acer pseudoplatanus*. The ground flora is dominated by ivy *Hedera helix* and bramble *Rubus sp.*

A3.1 Individual Broadleaved Trees

- 3.17 There are several semi-mature and mature broadleaved trees on site, predominately located along the site boundaries. Species include ash, willow, field maple *Acer campstre*, holly *Ilex aquifolium*,

beech *Fagus sylvatica* and elder *Sambucus niger*. The ash and willow trees along the southern and south eastern site boundaries are covered with dense ivy.

A2.2 Scattered Scrub

- 3.18 The site has been left derelict and vegetation has been unmanaged for several years. This has allowed scrub to encroach site boundaries. The scrub mainly consists of young trees of species found within and surrounding the site including horse chestnut *Aesculus hippocastanum*, cherry *Prunus avium*, hawthorn *Crataegus monogyna*, rose *Rosa sp.* sycamore, holly, ash and willow.

B6 Poor Semi-improved Grassland

- 3.19 There are two main areas of semi-improved grassland on site consisting of similar species and relative abundance. The largest area is located in the northern section of the site (TN1) and at the time of the survey this area comprised tall grasses, which provided good ground. The second patch (TN2) is located along the eastern site boundary and, at the time of the survey this area comprised a short sward with scattered patches of bare ground.
- 3.20 Species include Yorkshire fog *Holcus lanatus*, meadow grass *Poa sp.*, brome *Bromus sp.*, dandelion *Taraxacum officinale*, wood avens *Geum urbanum*, wood spurge *Euphorbia amygdaloides*, hedge mustard *Sisymbrium officinale*, garlic mustard *Alliaria petiolata*, bulbous buttercup *Ranunculus bulbosus*, cleavers *Galium aparine*, cow parsley *Anthriscus sylvestris*, ribwort plantain *Plantago lanceolata*, dock *Rumex sp.*, field bindweed *Convolvulus arvensis*, common mouse-ear *Cerastium fontanum*, common vetch *Vicia sativa*, herb Robert *Geranium robertianum*, stinging nettle *Urtica dioica* and hogweed *Heracleum sphondylium*.

J1.4 Introduced Scrub

- 3.21 There is some ornamental planting along the edge of the main building (TN3).

J2.2 Species-poor Hedge

- 3.22 In the northern corner of the site there is a species-poor hedge, consisting of four multi-stemmed hazel trees which separate an area of hard-standing from an area of poor semi-improved grassland.

J3.2 Species-poor Intact Hedge with Trees

- 3.23 The western boundary hedge consists predominantly of conifers *Coniferae* spp with holly and cherry trees and small young maple, horse chestnut, ash and hawthorn. There is little understory vegetation; species include garlic mustard, wood avens, ivy and herb Robert.

J2.4 Fence

- 3.24 A wire mesh fence lines the northern, eastern and southern site boundaries. Scrub including small young trees is encroaching through the fence in many places most notably along the southern and eastern boundaries.

J3.6 Buildings and Hard-standing

- 3.25 The majority of the site consists of buildings and hard-standing. The large building (TN4) in the centre of the site is the remains of a nursery, which is derelict and fire damaged. The building consists of a stone wall and metal roof. Windows and doors are boarded up.
- 3.26 There is a small stone building (TN5) on the edge of the woodland. The interior of the building is well lit due to the number of windows.
- 3.27 There are two small buildings in the south east corner of the site. One of the buildings (TN6), an old bike shed, consists of stone walls and a metal roof. The interior is open and exposed to the elements. The other building (TN7) comprises stone walls and a metal shutter door and appears relatively intact and in good condition.

Habitats outside the site boundary

- 3.28 A footpath and area of amenity grassland is located adjacent to the northern and western site boundaries and a road, car parking areas, with patches of amenity grassland and some large trees are located adjacent to the southern and eastern site boundaries. Residential properties are situated beyond these to the south and east of the site.

Potential for protected and notable species

Bats

- 3.29 There is a large sycamore tree (TN8) on the edge of the woodland, near the stone building, which has some potential (Category 2 – Bat Conservation Trust, 2012) to support roosting bats due to the presence of a knot hole and woodpecker holes, which may provide suitable roost sites.
- 3.30 There is a dead ivy clad willow tree (TN9) along the southern site boundary, which has a relatively large hole where a limb has broken off. It is possible that the hole, which leads upwards into the trunk of the tree, provides access to a cavity of good potential (Category 1 – Bat Conservation Trust, 2012) to support a bat roost.
- 3.31 The main building on site has the potential to support a bat roost; the interior space is poorly lit, making it more favourable to bats and loose boarding on a window and a door provide potential access points for bats.
- 3.32 Windows in the small stone building on the edge of the woodland (TN5) create a relatively well-lit interior space and no obvious features of potential value to roosting bats were located. No bat evidence was identified inside or on the exterior of the building. The building is considered to be of no potential value to roosting bats.

- 3.33 The interior of the old bike shed in the south east corner of the site (TN6) is open and exposed to the elements, making it unsuitable for roosting bats and no features of potential value as roost sites were located.
- 3.34 The second building (TN7) in the south east corner of the site appears in relatively good condition and no features of potential value to roosting bats were located. No signs that could indicate the presence of bats were located in either building.
- 3.35 The woodland, trees, hedgerow and scrub on site are of potential value as foraging and commuting habitat for a variety of bat species which have been recorded in the area (Figure 2).
- 3.36 All species of bat in the UK are fully protected under the WCA and under Schedule 2 of Habitats Regulations. The Act and Regulations make it an offence to:
- intentionally or recklessly capture, injure or kill;
 - intentionally or recklessly disturb;
 - deliberately take or destroy the eggs;
 - damage or destroy, or obstruct access to a breeding site or resting place; and
 - possess, control, transport, and (offer to) sell or exchange any live or dead animal or part of an animal taken from the wild.
- 3.37 Soprano pipistrelles, noctules, Bechstein's bats, brown long-eared bats, and greater and lesser horseshoe bats are also priority species of the UK Biodiversity Action Plan (BAP).
- 3.38 Any works that could potentially affect a bat or its roost should only be conducted under a licence issued by Natural England under the Habitats Regulations.

Birds

- 3.39 The woodland, trees, hedgerow and scrub on site have the potential to support breeding bird nests.
- 3.40 All wild birds are protected at a European level under the Birds Directive. This provides general protection to wild birds from deliberate killing, taking from the wild, egg collecting, nest destruction and keeping in captivity, but allowances are made for game birds. Specially protected birds are listed in Annex I of the Directive.
- 3.41 All species of wild bird in the UK (other than a few pest species) are given general protection under Part 1 Section 1(1) of the WCA against intentional killing, injuring or taking, as well as taking, damaging or destroying nests in use or being built, and taking or destroying eggs. In addition, birds listed under Schedule 1 of the Act are further protected against reckless as well as intentional disturbance.

Reptiles

- 3.42 The small areas of scrub and semi-improved grassland on site are of limited potential value to reptiles and the areas of hard-standing offers limited value as basking sites. Habitat connectivity on site and with the surrounding area is poor. Therefore, it is considered unlikely that any significant reptile population will be utilising the site and, if present, reptile numbers are likely to be very low.
- 3.43 All reptile species native to Britain are protected under Schedule 5 (9) of the WCA, which makes it an offence to intentionally or recklessly kill or injure these species, or sell, barter, exchange, or transport reptiles or any part of them.
- 3.44 All common species of reptiles in the UK (slow-worm, adder, grass snake and common lizard) are listed under Section 42 of the NERC Act 2006 and are priority species of the UK BAP.

Invertebrates

- 3.45 The trees, scrub and grassland on site provide nectar, pollen, seeds and berries which can be utilised by and support a variety of common invertebrate. Several of the trees have are dead or have dead/decaying limbs which could provide an important habitat for invertebrates including stag beetle on the site.

Badgers

- 3.46 No badger setts were located on site or within the immediately surrounding area and no signs that could indicate the presence of badgers were recorded.

Amphibians

- 3.47 No waterbodies of potential value to breeding amphibians were located on site. Surrounding areas are dominated by unfavourable heavily built-up land, areas of amenity grassland and main roads. No waterbodies are recorded on OS base maps within 250 m of the site.

4 CONCLUSIONS AND RECOMMENDATIONS

Desk Study

- 4.1 The desk study identified 8 statutory designated wildlife sites and 9 non-statutory designated wildlife sites within 5km and 2km of the site respectively.
- 4.2 The desk study also identified a number of records of protected or otherwise notable species. Records included: 17 species of birds; 8 bat species and a number of additional bat records not identified to species level; otters; West European hedgehog; Eurasian badger; 4 species of herpetofauna; 1 invertebrate species; and 2 plant species.
- 4.3 A precise grid reference was not provided for the location of a number of records so it was not possible to determine accurately how close to the site these species had been recorded; however, records provide a good indication of the species that could be present utilise the site and/or the immediately surrounding area and, therefore, could be affected by development proposals.

Phase 1 Habitat Survey

- 4.4 The survey area predominately consists of buildings and hard-standing with an area of semi-natural broadleaved woodland, areas of poor semi-improved grassland and trees.
- 4.5 The site is of potential value to a number of protected species; trees, scrub and hedgerows on site provide potential nesting sites for breeding birds and habitat resources for foraging and commuting bats; the main building and two of the trees on site have the potential to contain bat roosts; areas of scrub, hedgerows and rough grassland provide some limited value to small mammals and reptiles; and hedgerows, scrub and trees provide nectar, pollen, seeds and berries of potential value to a variety of common invertebrates.

Recommendations

Bats

- 4.6 Two trees and the main building on site have the potential to support roosting bats. Further surveys are recommended in accordance with survey guidelines published by the Bat Conservation Trust (2012). The interior of the building should be accessed in order to locate any potential evidence of bat use and identify features of potential value to roosting bats. Features of the trees identified as being of potential value to roosting bats should be surveyed using an endoscope where practicable, in order to locate any signs that could indicate the presence of bats.
- 4.7 Findings of these surveys will inform the need for further dusk emergence and/or dawn swarming surveys, which should be undertaken in order to identify the species of roosting bats and determine the type and size of bat roost.

- 4.8 Findings of roost surveys will inform any potential application for a Natural England development licence for bats, which will be required for any works that would have an impact on known bat roosts and/or roosting bats.
- 4.9 It should be noted that Natural England licences typically only permit works that would impact upon a bat roost to be undertaken, in accordance with a detailed method statement, during October and/or April/early May, in order to minimise the potential impact on any bats that might be present.
- 4.10 In addition, a bat activity survey of the site is recommended in order to identify any species of bats utilising the site and assess the levels and types of bat activity. Due to the limited size of the site, three dusk and/or dawn activity surveys are recommended between May and October, following survey guidelines published by the Bat Conservation Trust (2012).
- 4.11 The information obtained from the bat surveys will assist with landscaping and lighting proposals for the site.
- 4.12 Due to the known presence of bats in the surrounding area (Figure 2), native and wildlife planting of potential value to foraging and commuting bats should be incorporated into landscape proposals where practicable.
- 4.13 A sympathetic lighting scheme, in accordance with guidelines produced by the Bat Conservation Trust and Institution of Lighting Engineers (2008), should be incorporated into proposals where practicable, as artificial lighting can adversely affect the behaviour and/or movement of some species of bat.
- 4.14 The installation of appropriate bat roost boxes could be considered as part of development proposals in order to enhance the potential biodiversity value of the site.

Birds

- 4.15 Any vegetation which provides suitable nesting habitat for birds, such as scrub, trees and hedgerows, should be cleared outside of the bird-breeding season (considered to be between mid-February and August inclusive). However, if this is not practicable, vegetation should be checked by an ecologist immediately prior to habitat clearance in order to ensure no active bird nests are damaged or disturbed. If an active nest is present, measures should be set in place so as to ensure the protection of the nest until young have fully fledged and left the nest, such as the creation of a surrounding 5m wide works-free buffer zone.
- 4.16 The installation of appropriate bird nest boxes could be considered as part of development proposals in order to enhance the potential biodiversity value of the site.

Reptiles

- 4.17 As the site offers very limited potential for reptiles no further reptile survey is recommended.

4.18 However, the following precautionary measures are recommended in order to help protect any reptile that might be present from potential injury or death due to construction:

- areas of tall/rough grassland should be mown (in two pass overs, the first being to a sward height of 10cm) prior to the commencement of construction; in order to deter any reptiles from entering working areas; and
- features of high potential value to resting or hibernating reptiles, such as accessible networks of mature tree roots, should be uplifted under the guidance of an ecologist and, if of potential value as a hibernation site, prior to the commencement of the hibernation period (e.g. October/November – February, depending on local weather conditions). Note: clearance of trees/scrub/hedges at this time of year will ensure the avoidance of the bird-breeding season.

Invertebrates

4.19 Several mature trees located along site boundaries contain dead or decaying wood of potential value to specialist invertebrates, as well as invertebrate feeders such as breeding birds and bats. Therefore, where practicable, felled dead wood could be stacked and retained on site. Timber piles can also provide potential resting places and hibernacula for reptiles.

4.20 Suitable locations for dead wood piles could include cool and damp sites in semi-shaded areas by hedges or within areas of woodland along site boundaries. Locations close to other habitat features, such as a hedge will enhance the value of the timber pile by providing species with adjacent cover and enhanced habitat connectivity.

4.21 Where practicable, logs could be of varying lengths and diameters and hard wood (such as ash, beech, oak and sycamore), should be favoured over soft wood.

5 REFERENCES

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Joint Nature Conservation Committee (2010). *Conservation Designations Spreadsheet*. Joint Nature Conservation Committee, Peterborough.

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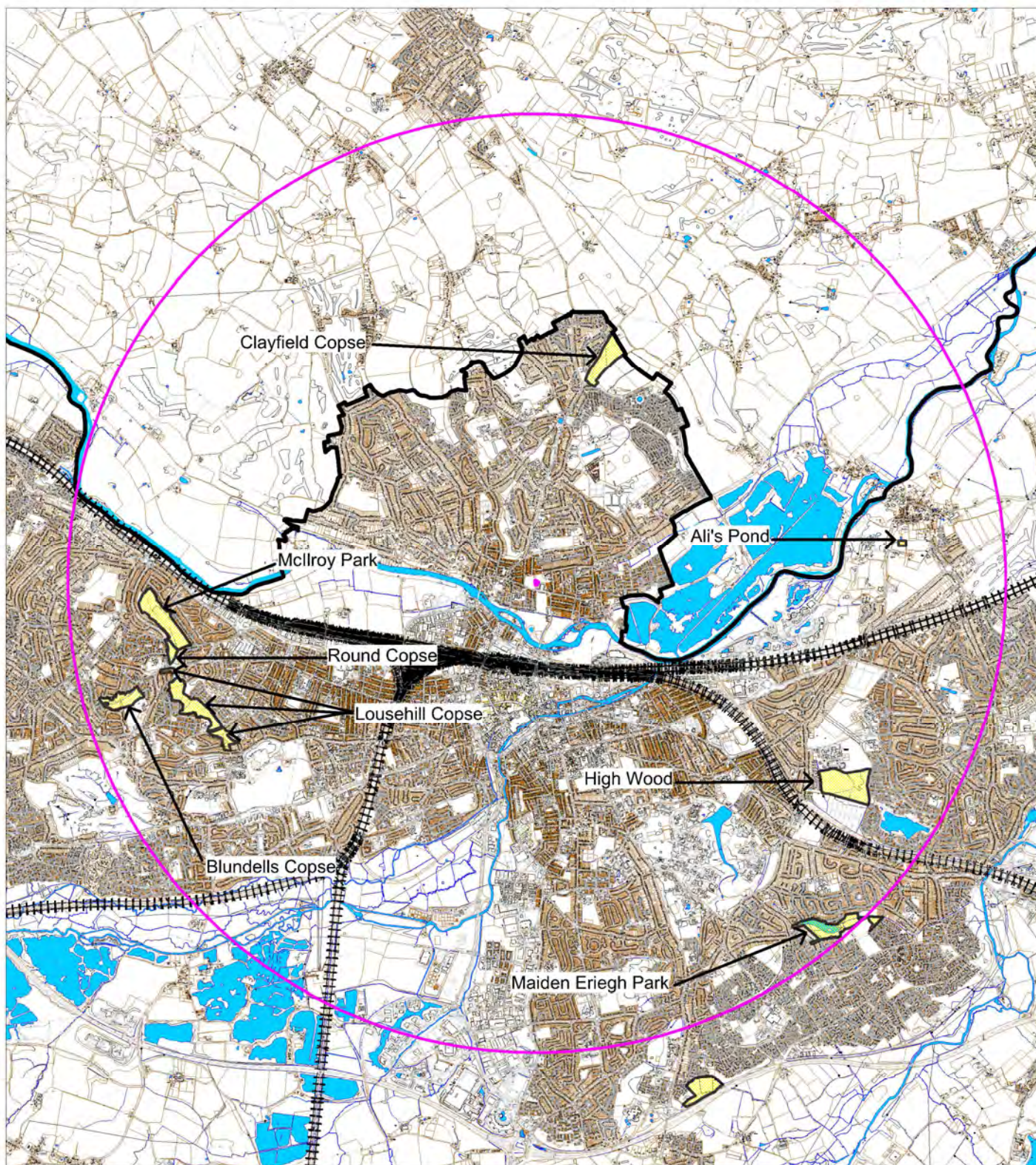
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Stace, C. (2010). *New Flora of the British Isles*. Cambridge University Press, Cambridge.

FIGURES

**FIGURE 1(I AND II): STATUTORY AND NON-STATUTORY
WILDLIFE SITES**

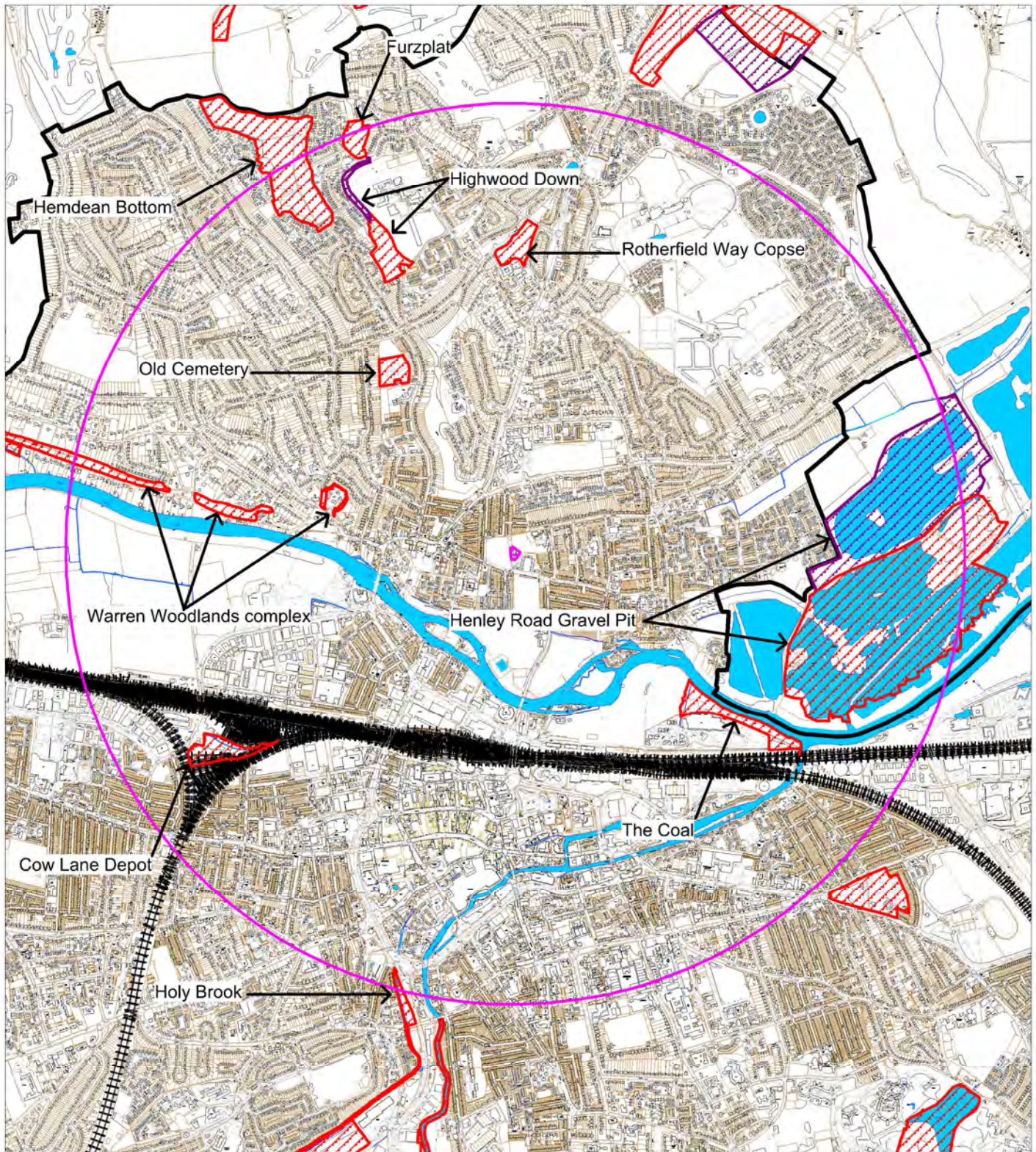
82 Gosbrook Road, Caversham, Reading
Statutory Designated Wildlife Sites Map



Scale: 1:60000

-  82 Gosbrook Road site boundary (SU717747)
-  5 km search area
-  Berkshire/Oxfordshire County boundary
-  Local Nature Reserve

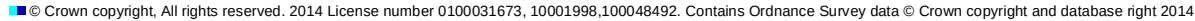
82 Gosbrook Road, Caversham Non-statutory Designated Wildlife Sites Map



-  82 Gosbrook Road site boundary (SU717747)
-  2 km search area
-  Berkshire/Oxfordshire County boundary
-  Local Wildlife Site
-  Proposed Local Wildlife Site/Extension

Scale: 1:25000

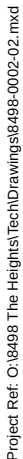
FIGURE 2: PROTECTED OR OTHERWISE NOTABLE SPECIES



 Bat records (5km)

Revision: ■

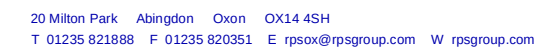
FIGURE 3: PHASE 1 HABITAT PLAN



- Site Boundary
- Building
- Hardstanding
- Semi-natural Broadleaved woodland
- Poor semi-improved grassland
- Introduced shrub
- Fence
- Species-poor intact hedgerow
- Species-poor intact hedgerow with trees
- Scattered scrub
- Broadleaved tree
- Target note

Rev:	Date:	Amendment:	Name:	Checked:

Status: FINAL



Title: Phase 1 Habitat Survey

1

Job Ref: OXF8498

Revision: ■

APPENDIX 2

Phase 1 Habitat Survey Target Notes

Target Note No.	Description
1	Scattered scrub lining the fence boundary of the proposed location of the modular building. Potential for nesting birds and foraging and commuting bats.
2	Managed short grassland used as a recreation ground. Little species diversity and very limited potential for protected and notable species.
3	Leylandii hedge. Potential for nesting birds and foraging and commuting bats.
4	Two storey modular modern primary school building. No potential for protected and notable species.
5	Mature ash tree with woodpecker hole and rot hole. Providing low potential bat roost features. Mitigation measures proposed if tree is to be felled or require pruning works.

APPENDIX 3

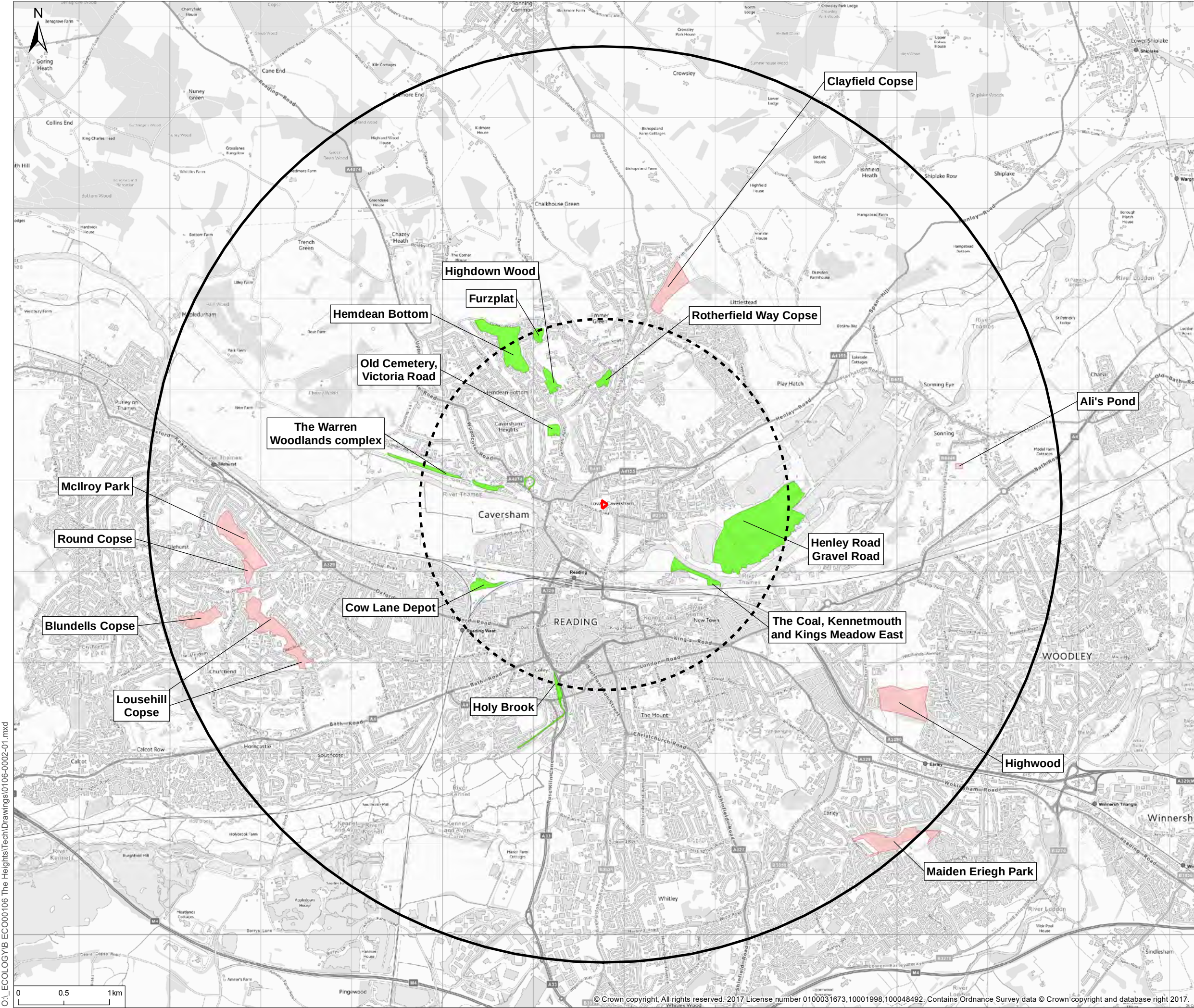
Phase 1 Habitat Survey Species List

ash *Fraxinus excelsior*
aspen *Populus tremula*
beech *Fagus sylvatica*, elder
bramble *Rubus sp.*
cleavers *Galium aparine*
daisy *Bellis perennis*
elder *Sambucus nigra*
hawthorn *Crataegus monogyna*
hazel *Corylus avellana*
holly *Ilex aquifolium*
hornbeam *Carpinus betulus*
horse chestnut *Aesculus hippocastanum*
ivy *Hedera helix*
leylandi cypress *Cupressus x leylandii*
lords and ladies *Arum maculatum*
perennial ryegrass *Lolium perenne*
ribwort plantain *Plantago lanceolata*
stinging nettle *Urtica dioica*
sycamore *Acer pseudoplatanus*.
wild radish *Raphanus raphanistrum*.

FIGURES

FIGURE 1

Site Location and Statutory and Non-statutory Designated Sites



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- Legend**
- Site boundary
 - 5km search area
 - 2km search area
 - Local Nature Reserve
 - Local Wildlife Site

Rev	Description	Date	Initial	Checked

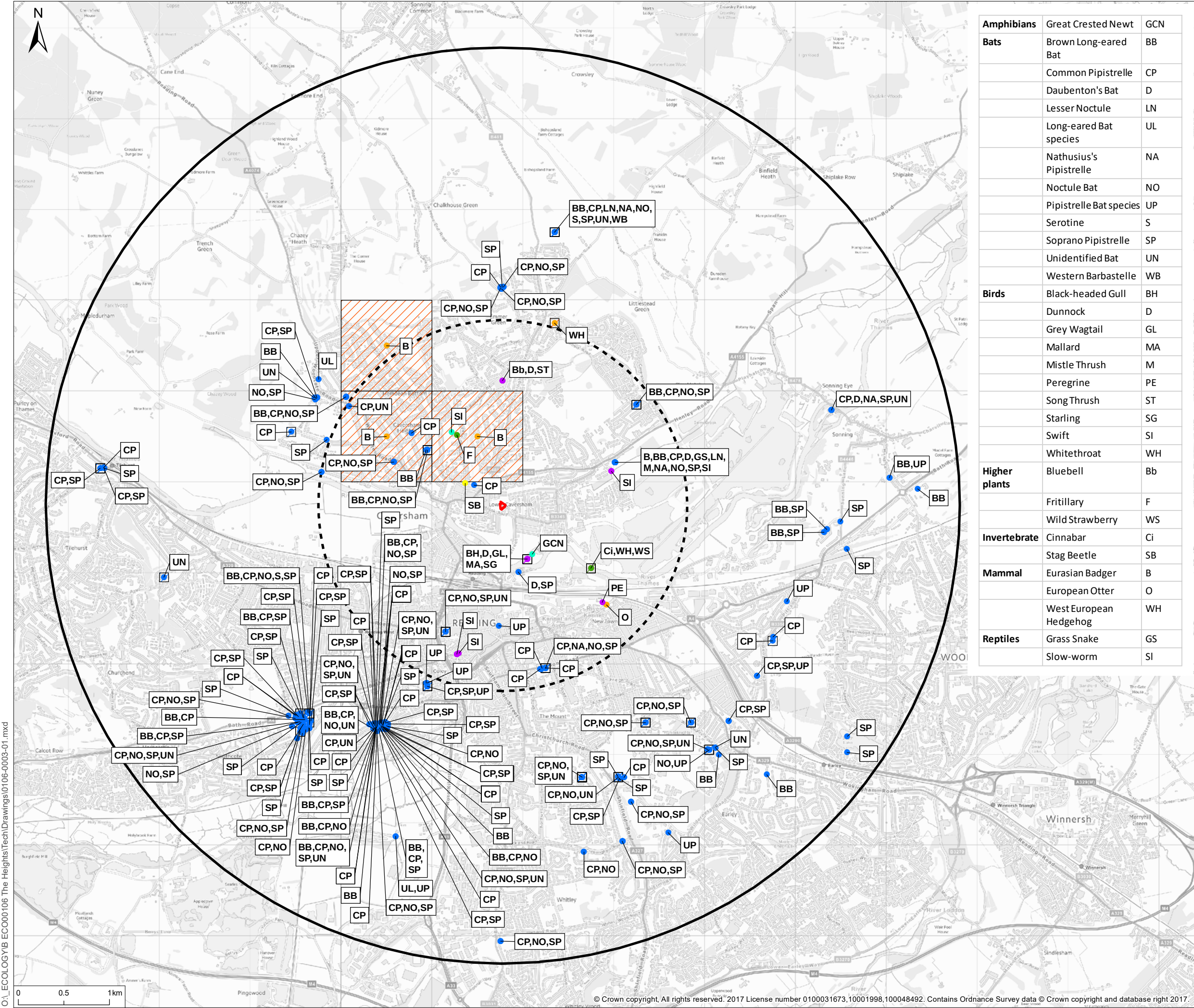


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Project	The Heights		
Title	Stat sites and non-stat sites within 5km and 2km		
Status	Drawn By:	PM/Checked By	
DRAFT	CR	EW	
Job Ref	Scale @ A3	Date Created	
ECO00106	1:40,000	MAR 2018	
Figure Number	Rev		
1	-		

FIGURE 2

Protected and Notable Species Records within 2km since 2014



Amphibians	Great Crested Newt	GCN
	Bats	
Bats	Brown Long-eared Bat	BB
	Common Pipistrelle	CP
	Daubenton's Bat	D
	Lesser Noctule	LN
	Long-eared Bat species	UL
	Nathusius's Pipistrelle	NA
	Noctule Bat	NO
	Pipistrelle Bat species	UP
	Serotine	S
	Soprano Pipistrelle	SP
Birds	Unidentified Bat	UN
	Western Barbastelle	WB
	Black-headed Gull	BH
	Dunnock	D
	Grey Wagtail	GL
	Mallard	MA
	Mistle Thrush	M
	Peregrine	PE
	Song Thrush	ST
	Starling	SG
Higher plants	Swift	SI
	Whitethroat	WH
	Bluebell	Bb
	Fritillary	F
	Wild Strawberry	WS
Invertebrate	Cinnabar	Ci
	Stag Beetle	SB
Mammal	Eurasian Badger	B
	European Otter	O
	West European Hedgehog	WH
Reptiles	Grass Snake	GS
	Slow-worm	SI

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- Legend**
- Site boundary
 - 5km search area
 - 2km search area
 - Amphibian and reptile record
 - Bat record
 - Bird record
 - Higher plant record
 - Invertebrate record
 - Mammal record

Rev	Description	Date	Initial	Checked



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Project The Heights

Title Protected and Notable species records within 2km since 2014

Status DRAFT

Drawn By: CR

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Job Ref ECO00106

Scale @ A3 1:40,000

Date Created MAR 2018

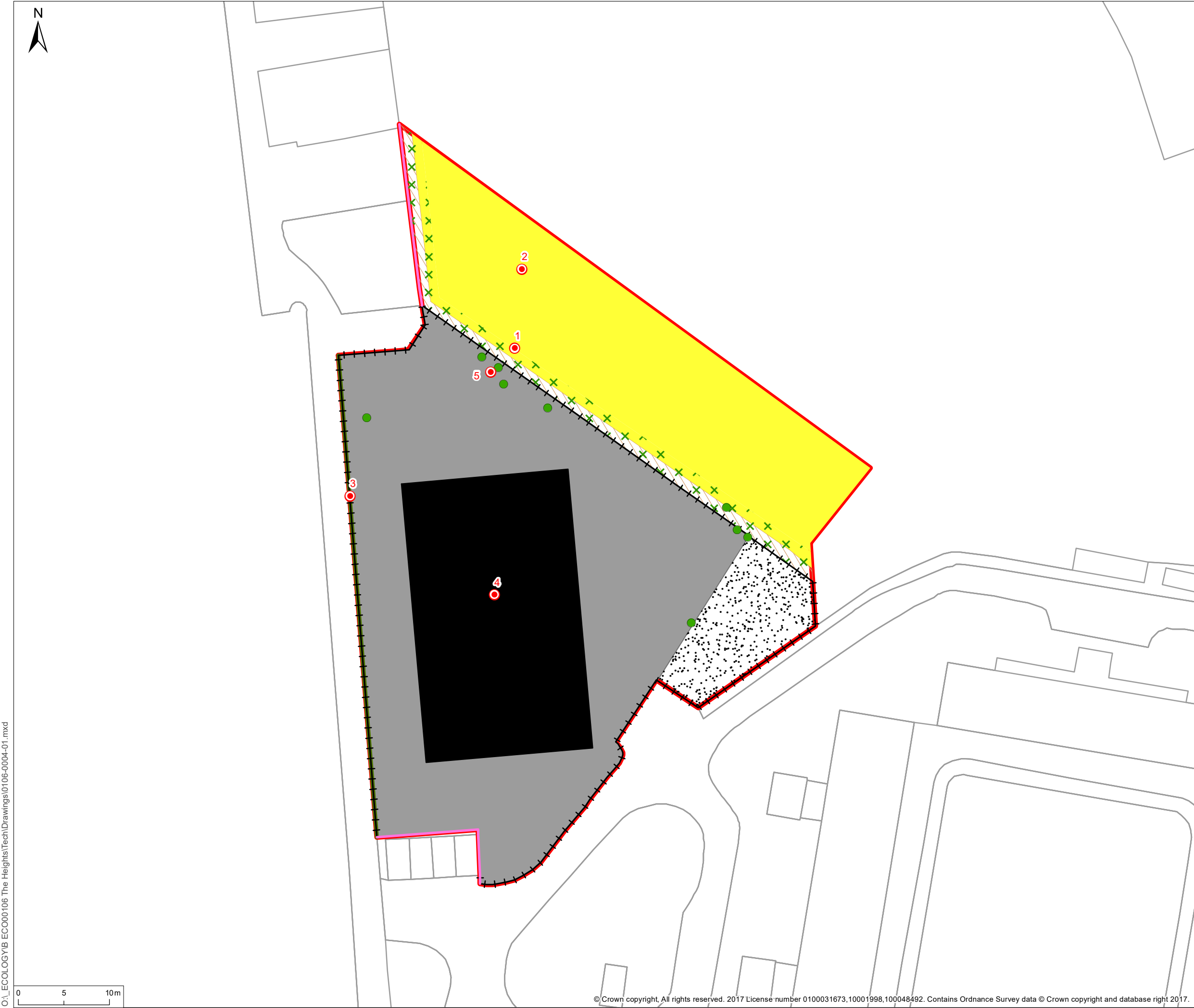
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FIGURE 3

Phase 1 Habitat Plan



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- Legend**
- Site boundary
 - Target note
 - Broadleaved tree
 - Fence
 - Species-poor intact hedge
 - Wall
 - Amenity grassland
 - Scattered scrub
 - Tall ruderal
 - Bare ground
 - Building
 - Hardstanding

Rev	Description	Date	Initial	Checked



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