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August 2023

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Report to: Roadchef
Report Title: Roadchef Rownhams Preliminary Ecological Appraisal
Version: V1.0
Issue Date: August 2023
Report Ref: 21663
Originated By: [Redacted]

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Version	Author	Description	Date
0.1	Charlie Haberfield	First draft	20/07/2023
0.2	Claire Evans	Technical review	07/08/2023
0.3	Charlie Haberfield	Comments addressed	08/08/2023
0.4	Rebecca Little	Approver review	08/08/2023
1.0	Claire Evans	Issue	09/08/2023

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Contents

SUMMARY	6
1 INTRODUCTION.....	7
1.1 SCOPE.....	7
1.2 SITE DESCRIPTION.....	7
1.3 PROJECT SCOPE.....	7
1.4 QUALITY ASSURANCE.....	7
2. LEGISLATION	9
3. METHODOLOGY	10
3.1 DATA CONSULTATION.....	10
3.2 SITE SURVEY.....	10
3.3 PROTECTED SPECIES	11
3.4 LIMITATIONS.....	13
4. RESULTS AND DISCUSSION	14
4.1 STATUTORY DESIGNATED SITES.....	14
4.2 NON-STATUTORY DESIGNATED SITES.....	15
4.3 OTHER IMPORTANT HABITATS.....	15
4.4 HABITAT ASSESSMENT.....	16
4.5 PROTECTED SPECIES	17
5. ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS	24
5.1 POTENTIAL IMPACTS AND EFFECTS.....	24
5.2 CONSTRAINTS AND MITIGATION MEASURES.....	24
6. RESIDUAL EFFECTS AND CONCLUSIONS	28
7. REFERENCES.....	29
FIGURE 1: SITE LOCATION PLAN	30
FIGURE 2: HABITAT MAP	31
FIGURE 3: INTERNATIONAL STATUTORY DESIGNATED SITES WITHIN 10 KM	32
APPENDIX 1: SITE HABITAT PHOTOGRAPHS	33
.....	34
APPENDIX 2: WILDLIFE LEGISLATION	37
AMPHIBIANS INCLUDING GREAT CRESTED NEWT.....	37
.....	37
BATS	37
BIRDS.....	37
FRESHWATER AND MIGRATORY FISH.....	38
HAZEL DORMOUSE.....	38
OTTER	38
REPTILES.....	39
WATER VOLE.....	39
WHITE-CLAWED CRAYFISH.....	39
INVASIVE NON-NATIVE SPECIES.....	39
APPENDIX 3: NON-STATUTORY DESIGNATED SITES WITHIN 2 KM OF THE SITE	40
APPENDIX 4: BIRD SPECIES RECORDS WITHIN 2 KM OF THE SITE	43

Summary

Ecus Limited (Ecus) was commissioned by Roadchef to undertake a Preliminary Ecological Appraisal (PEA) on Roadchef Rownhams, M27 Northbound, Hampshire, Rownhams, SO16 8AP (National Grid Reference (NGR): SU 38836 17823).

The PEA focussed on the service station building and surrounding habitats hereafter referred to as “the Site” (see **Figures 1** and **2**). The proposed works are to extend the building and construct a new drive-thru. The route of the drive thru is yet to be finalised.

The PEA identified a number of ecological constraints to the proposed works requiring the following recommendations:

Due to the presence of woodland adjacent to and within the Site, pollution prevention measures should be followed throughout the works;

Due to the destruction of habitat suitable for nesting birds, a nesting bird check should take place within 48 hours of the works commencing if the trees are felled during March- August;

Possible disturbance to foraging and commuting bats which would require a Sensitive Lighting Plan if the works are conducted at night or new lighting is to be installed;

Low to moderate bat roost potential was recorded in a number of the trees which will require soft-felling or further survey if impacted by the works;

Scrub suitable for reptiles which should be left in situ if possible or removed under Ecological Clerk of Works (ECOW);

Habitats suitable for hazel dormouse (woodland and scrub) should be removed under ECoW; and

The service station building (B1) supported potential roost features for bats (PRFs) and was identified as having moderate bat roost potential. The building will require two dusk emergence surveys to determine if bats are roosting within the building.

1 Introduction

1.1 Scope

- 1.1.1 Ecus Limited (Ecus) was commissioned by Roadchef to undertake a Preliminary Ecological Appraisal (PEA) on Roadchef Rownhams, M27 Northbound, Hampshire, Rownhams, SO16 8AP (NGR: SU 38836 17823).
- 1.1.2 This report details the findings of a data consultation, habitat survey and protected species assessment carried out on 19th July 2023. The methodologies employed and all survey findings are described along with an evaluation and assessment of the ecological importance of the Site. Any requirement for further survey work and/or mitigation/enhancement is also detailed as required.
- 1.1.3 The PEA focussed on the structures and the habitats that will be directly impacted by the works, referred to as 'the Site'. The works will focus on the existing structure within the red line boundary as provided by Roadchef (drawing ref.: 1002 rev. D, dated 14/06/2023), which is defined as the 'Site Boundary' displayed in **Figure 1** and **Figure 2**. The PEA also surveyed the habitats within 10 m surrounding the Site boundary where they were visible, hereafter referred to as 'the Survey Area'. The Survey Area is defined by the blue line 'Survey Area boundary' in **Figure 1** and **Figure 2**.

1.2 Site Description

- 1.2.1 The Site was a service station located on the M27 Northbound. The Site extent can be viewed in **Figure 1**. The habitat map is illustrated in **Figure 2** and the Site habitat photographs can be viewed in **Appendix 1**.
- 1.2.2 The Site is within a semi-urban area located at the Rownhams Roadchef services with the M27 on the south side, woodland to the north, and residential gardens to the west. The surrounding area is a mix of hardstanding including roads, residential and commercial buildings and green space including coppices, woodland, and grassland. Lords Wood is located 1.34 km south-east, but there is low habitat connectivity to the Site as the M27 acts as a barrier to the Site.
- 1.2.3 The Site was a flat roofed, one-storey brick building. The Survey Area is indicated by the blue line boundary in **Figure 1** and **Figure 2**.

1.3 Project Scope

- 1.3.1 The project includes the possible felling of several trees in woodland to the west of the service station building and extensions to the structure to facilitate a new drive thru. This PEA will inform mitigation and any further surveys required depending on the final plan for works to be undertaken. There is currently no set date for the works.

1.4 Quality Assurance

- 1.4.1 The habitat survey and protected species assessment was completed by Assistant Ecologist Isabel Soane BSc (Hons) MSc and the associated PEA report was completed by Graduate Ecologist Charlie Haberfield.
- 1.4.2 Senior Ecologist Claire Evans BSc (Hons) MSc ACIEEM has reviewed this report in accordance

with Ecus' Quality Assurance policy.

1.4.3 The report was approved by Ecus Principal Ecologist Rebecca Little BSc (Hons) MCIEEM MRSB.

2. Legislation

2.1.1 The primary purpose of the PEA was to identify any ecological constraints to the proposed works, including designated sites, habitats and species protected by legislation, namely, but not limited to:

- The Wildlife & Countryside Act 1981 (as amended) (“the WCA 1981”);
- The Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitats Regulations”);



- The Natural Environment and Rural Communities Act 2006 (“the NERC Act”); and
- The Environment Act 2021.

2.1.2 Further details for species protected by the above legislation are provided in Appendix 2.

3. Methodology

3.1 Data Consultation

- 3.1.1 Obtaining existing biological records is an important part of the PEA process, as it provides additional information that may not be apparent during a Site visit and provides a helpful baseline from which to inform recommendations and mitigation.
- 3.1.2 Hampshire Biodiversity Information Centre (HBIC) was approached for data consultation in July 2023, to provide recent (within the past 10 years) biological records within 2 km of the Site. This Search Area was considered appropriate due to the small spatial nature of any effects arising from the proposed works.
- 3.1.3 The data obtained from HBIC includes records of protected and notable species, invasive non-native species (INNS) and non-statutory designated sites for nature conservation.
- 3.1.4 In addition, Ecus used the Multi-Agency Geographical Information for the Countryside (MAGIC) website (MAGIC, 2022) to identify statutory designated sites of international and European nature conservation importance within 10 km of the Site, other statutory designated sites within 2 km of the Site and any records of European Protected Species (EPS) mitigation licences granted within 2 km of the Site.
- 3.1.5 Information obtained from MAGIC and HBIC is included within the report where appropriate.

3.2 Site Survey

- 3.2.1 A habitat survey and protected species assessment was completed in accordance with industry guidelines (CIEEM, 2017) on 19th July 2022 by Ecus ecologist Isabel Soane.
- 3.2.2 Weather conditions and visibility were suitable for the purpose of the survey (temperature = 21 °C, wind = Beaufort 1, cloud = 20% cover, precipitation = None).
- 3.2.3 The Survey Area was assessed as shown by the blue line on **Figure 1**. Botanical species were recorded by level of abundance using the DAFOR scale and a species list was noted. This method is intended to provide an indication of the relative abundance of plant species within each habitat. The standardised terms are as follows:
 - D – Dominant
 - A – Abundant
 - F – Frequent
 - O – Occasional
 - R – Rare
- 3.2.4 Habitat type was categorised using UKHabs method (Butcher *et al.*, 2021).
- 3.2.5 This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all plants occurring across the Survey Area.
- 3.2.6 Evidence of protected species, species of nature conservation importance, and notable, rare, or

scarce species was recorded if field signs were present at the time of survey. Any evidence recorded is included within the report as appropriate and represented as Targets Notes (TN) in Figure 2. Photographs were taken of each habitat type and any features with potential to support protected or notable species.

- 3.2.7 Habitat type has been digitised using QGIS V3.28 (see Figure 2).
- 3.2.8 Any habitats present which are listed under Section 41 of the NERC Act were noted.
- 3.2.9 The importance of ecological features present within the Survey Area was determined based on the guidance given in CIEEM Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and Guidelines for Ecological Impact Assessment (CIEEM, 2018).
- 3.2.10 Ecological features (habitats and species that could be affected by the proposed works) were assigned levels of importance for nature conservation. The hierarchy of importance used in this report scales from international, national, regional, county, local and lastly Site level (CIEEM, 2018).

3.3 Protected Species

- 3.3.1 Any evidence of, or potential for protected or otherwise notable species encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species.

Amphibians including great crested newt

- 3.3.2 A desk-based assessment was undertaken using a 1:25,000 scale (Ordnance Survey) OS map to identify all waterbodies within 250 m of the Site that are not separated by a significant barrier to amphibian dispersal (such as a major road or watercourse).
- 3.3.3 As garden ponds within residential properties are often absent from OS map sources, aerial photography was also used to search for additional ponds.
- 3.3.4 Habitats present within the Site were assessed for their suitability to support amphibians including great crested newt (GCN) *Triturus cristatus*. The connectivity of any suitable habitat within the Site to other habitat within the surrounding area was assessed during the Site visit and through visual analysis of aerial imagery.

Bats

- 3.3.6 In accordance with the Bat Conservation Trust's best practice guidelines (Collins, 2016), the suitability of habitat features within the Survey Area to support roosting bats was categorised as negligible, low, moderate, or high. This was based on the number and type of roosting features and surrounding landscape character.
- 3.3.7 Any structures and trees present within the Survey Area were subject to an external visual assessment, undertaken from ground-level using binoculars. This approach permitted a search for

the presence of Potential Roosting Features (PRFs) which could be used by roosting bats.

- 3.3.8 An individual tree or structure may have several PRFs associated with it. It is not always possible to confirm if a feature is used by bats, as bats may not use the feature frequently.
- 3.3.9 Habitats within the Survey Area were also assessed for their suitability to support foraging and commuting bats.

Birds

- 3.3.10 Species of birds noted incidentally during the survey were recorded where possible and details of suitable habitats for nesting birds were noted, including those species with enhanced statutory protection.

Fish

- 3.3.11 Any watercourses present within the Survey Area were assessed for their suitability to support protected and notable fish species such as Atlantic salmon *Salmo salar*, brown trout *S. trutta* and European eel *Anguilla anguilla*.

Hazel dormouse

- 3.3.12 Habitats within the Survey Area were assessed for their potential to support hazel dormouse *Muscardinus avellanarius*, including recording of plant species that could provide foraging and nesting habitat. The connectivity of any suitable habitat within the Survey Area to other habitat within the surrounding area was assessed during the survey and through studying aerial imagery.

Invertebrates including white-clawed crayfish

- 3.3.13 Habitats were assessed for their potential to support notable or protected terrestrial and aquatic invertebrates.
- 3.3.14 Any watercourses within the Survey Area were assessed for their suitability to support white-clawed crayfish *Austropotamobius pallipes*.

Otter

- 3.3.15 Watercourses and waterbodies within the Survey Area were assessed for their suitability to support otter *Lutra lutra*. This involved recording incidental sightings of field signs such as: droppings (spraints), footprints, feeding remains, lying-up areas, holts, areas of habitat considered suitable for otters and actual observations (Chanin, 2003).
- 3.3.16 Terrestrial habitats present within the Survey Area were also assessed for their suitability to support otter and for their connectivity to watercourses and other suitable habitat within the surrounding area.

Reptiles

- 3.3.17 The habitats present within the Survey Area were assessed for their suitability to support basking, foraging and hibernating reptiles. The connectivity of any suitable habitat within the Survey Area to other habitat within the surrounding area was assessed during the survey and through studying aerial imagery. Any incidental reptile encounters made during the survey were recorded.

Water vole

3.3.18 Watercourses and waterbodies within the Survey Area were assessed for their suitability to support water vole *Arvicola amphibius*. Any incidental evidence of water vole was recorded, such as: burrows, latrines, footprints, runs in the vegetation, grazed 'lawns', feeding remains and actual sightings (Dean *et al.*, 2016).

3.3.19 Terrestrial habitats present within the Survey Area were also assessed for their suitability to support water voles and for their connectivity to watercourses and other suitable habitat within the surrounding area.

Other protected and notable species

3.3.20 Habitats were additionally assessed for their potential to support other protected species, nationally or locally scarce species, or notable species.

Invasive non-native species (INNS)

3.3.21 Any evidence of invasive non-native plant species listed under Schedule 9 of the WCA 1981 was recorded during the survey including, but not limited to: Japanese knotweed *Reynoutria japonica*, hybrid knotweed *R. x bohemica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

3.3.22 Evidence of invasive non-native animal species was noted incidentally and any relevant recommendations have been made in Section 5.

3.4 Limitations

3.4.1 Every effort has been made to provide a comprehensive description of the Site and Survey Area, but the following specific limitations apply to this appraisal.

3.4.2 The survey undertaken was intended to provide a rapid assessment of the habitats present within the Survey Area and was not intended to replace detailed vegetation or protected species surveys. Where a greater level of information is necessary to inform an assessment, recommendations have been made to undertake further detailed survey.

3.4.3 Surveys of this type provide a snapshot of the Survey Area at the time of the survey.

3.4.4 The survey was completed in July, which is inside the optimal survey period (May to September inclusive). Many flowering plant species would be present at this time of year and therefore it is considered that an adequate assessment of the habitats and protected/notable species potential of the Survey Area has been made.

3.4.5 An internal assessment of the roof space was not carried out, additionally it was not possible to view the interior of some sections of the building. Therefore, assessment of bat roost potential has been made on a precautionary basis.

4. Results and Discussion

4.1 Statutory Designated Sites

4.1.1 There were five sites designated at the international and/or European level located within 10 km of the Site, as detailed within **Table 1** below and displayed in **Figure 3**.

Table 1: Statutory designated sites of international or European importance within 10 km of the Site

Site name	Designation	Distance from the Site at closest point	Reasons for designation
Solent and Southampton Water	Ramsar site and Special Protection Area (SPA)	3.56 km south-west	A series of estuaries and harbours with extensive mudflats and saltmarshes with adjacent coastal habitats. In summer, the site is of importance for breeding seabirds, including gulls and four species of terns.
Solent Maritime	Special Area of Conservation (SAC)	3.64 km south-west	A series of estuaries, mudflats, sandbanks and coastal lagoons with a number of pioneer plant species.
Emer Bog	Special Area of Conservation (SAC)	3.76 km north	An area of mire surrounded by woodland. The bogland supports a wide range of bird species like water rail <i>Rallus aquaticus</i> which is thought to breed on the site. Other species include kingfisher <i>Alcedo atthis</i> and reed warbler <i>Acrocephalus scirpaceus</i> .
River Itchen	Special Area of Conservation (SAC)	6.53 km east	The Itchen is a chalk river dominated by aquatic <i>Ranunculus spp.</i> that supports strong populations of Southern damselfly <i>Coenagrion mercuriale</i> , Bullhead <i>Cottus gobio</i> , White-clawed crayfish <i>Austropotamobius pallipes</i> , Brook lamprey <i>Lampetra planeri</i> , Atlantic salmon <i>Salmo</i>

Site name	Designation	Distance from the Site at closest point	Reasons for designation
			<i>salar</i> and Otters <i>Lutra lutra</i> .
New Forest	Ramsar site, Special Area of Conservation (SAC) and Special Protection Area (SPA)	9.72 km east	A mix of landscapes including ancient woodlands, wetlands and bogs, and open heathlands means it is home to many rare species of plants and wildlife long since lost from the UK and Europe.

- 4.1.2 Due to the localised and small-scale nature of the works and the distance from the designated sites, the statutory designated sites of international or European importance within 10 km of the Site are considered not to be a constraint to works.
- 4.1.3 There were no statutory designated sites relating to nature conservation of national or less than national importance located within 2 km of the Site.

4.2 Non-statutory Designated Sites

- 4.2.1 There were 39 non-statutory designated sites for nature conservation within 2 km of the Site, listed in **Appendix 3**. The closest site is Greenhill Copse, located 80 m north. Connective habitat is present between this site and the Site in the form of woodland, however the works are not expected to impact woodland to the north of the Site.
- 4.2.2 Due to the localised and small-scale nature of the works, the non-statutory designated sites within 2 km of the Site are considered not to be a constraint to works.

4.3 Other Important Habitats

Ancient woodland

- 4.3.1 The MAGIC search results returned 40 sites within 2 km of the Site listed within the Ancient Woodland Inventory (AWI). The closest site is Greenhill Copse, a mix of ancient and semi-natural woodland 80 m north.

Habitats of Principal Importance

- 4.3.2 Several Habitats of Principal Importance (HPIs) were included within the Natural England Priority Habitats Inventory database within 2 km of the Site. These comprised:

31 small pockets of deciduous woodland, the closest of which was 3 m north-east of the Site.

Three areas of good quality semi-improved grassland, the closest of which was 722 m north-east of the Site.

- 4.3.3 The above HPI are considered to be a constraint to works. Due to the proximity of the deciduous woodland, best practice pollution prevention measures should be implemented throughout the works.

Aquatic habitats

- 4.3.4 No waterbodies were identified within 250 m of the Site.
- 4.3.5 No watercourses were identified within 30 m of the Site.
- 4.3.6 There appears to be very low hydrological connectivity to the Site and therefore aquatic habitats are considered not to be a constraint to works.

4.4 Habitat Assessment

- 4.4.1 The habitats within the Survey Area are detailed below in order of size (largest area to smallest area). The descriptions should be read with reference to the Habitat map (**Figure 2**) and the habitat photographs in **Appendix 1**.

Buildings

- 4.4.2 This feature was a service station building (B1) which was bound by deciduous woodland and hardstanding car parks. It was a single storey building which was due to be extended during the planned works.
- 4.4.3 This feature may provide shelter for bats as discussed in Section 4.5.
- 4.4.4 This habitat does not qualify as HPI under the UK Biodiversity Action Plan (BAP) and therefore is considered not to be important beyond site level.

Modified grassland with scattered trees

- 4.4.5 There was modified grassland in the form of a managed picnic area to the east of the structure. This habitat contained Yorkshire fog *Holcus lanatus*, rough meadow grass *Poa trivialis*, creeping buttercup *Ranunculus repens* and self-heal *Prunella vulgaris* with high nutrient indicators such as white clover *Trifolium repens*. This vegetated area is significant on a local level only; however it is important to the ecological network as it can be used by birds and insects opportunistically and is home to moles as mole hills were recorded bordering the scrub areas.
- 4.4.6 This habitat does not qualify as HPI under the UK BAP and therefore is not considered to be important beyond local level.

Broadleaved and mixed woodland

- 4.4.7 There was dry oak-dominated woodland to the west which contained cypress *Cupressaceae sp.*, oak *Quercus sp.*, hazel *Corylus avellana*, ash *Fraxinus excelsior* and horse chestnut *Aesculus hippocastanum* trees with avens *Geum sp.*, ground ivy *Glechoma hederacea*, ivy *Hedera helix*, bramble *Rubus fruticosus*, daisy *Bellis perennis* and cow parsley *Anthriscus sylvestris* for ground flora. There was other broadleaved woodland to the north in the form of a hazel coppice which had no visible ground flora. There was lowland mixed deciduous woodland to the south which contained ash, oak, silver birch *Betula pendula* and hazel trees with bramble, clustered dock *Rumex conglomeratus* and avens for ground flora. This southern woodland was suitable [REDACTED]. These patches of woodland are significant on a local level only, however it is important to the ecological network as it can be used by birds and insects opportunistically.
- 4.4.8 There were several trees around the structure which may be removed for the works. These were surveyed for bat potential as discussed in Section 4.5.

4.4.9 Lowland mixed deciduous woodland and dry oak-dominated woodland are HPis under the UK BAP and are therefore considered important at a national level. Other broadleaved woodland is not listed as a HPI but is still considered to be important at a local level due to providing habitat for a number of species.

Scrub

4.4.10 There was a patch of bramble scrub to the north between the Site and the northern hazel coppice and there was another patch of mixed scrub which wrapped the boundaries of the modified grassland which made up the picnic area. Both habitats contained bramble and the eastern one also contained gorse *Ulex* sp. This scrub is significant on a local level only, however it is important to the ecological network as it can be used by birds and insects opportunistically and by reptiles for shelter.

4.4.11 This habitat does not qualify as HPI under the UK BAP and therefore is not considered to be important beyond local level.

4.5 Protected Species

Amphibians, including great crested newt

4.5.1 HBIC returned three recent records for common amphibians and no recent records for GCN within 2 km of the Site. The closest pertained to a common toad *Bufo bufo* located 1.5 km east. There were eight further historical records of common amphibians and one for GCN which was located approximately 1.6 km to the west of the Site in 2012.

4.5.2 According to MAGIC, there were no granted EPS licences relating to GCN located within 2 km of the Site. MAGIC also identified no GCN class survey licence returns.

4.5.3 There were no waterbodies identified within 250 m of the Site.

4.5.4 There were no waterbodies identified during the survey.

4.5.5 The habitat within the Site offered some suitability for foraging and resting amphibians in the form of the picnic area which had a short sward. The scrub could also provide a small amount of shelter.

4.5.6 The roads surrounding these habitats, especially the M27, were busy and therefore acted as a barrier to dispersal.

4.5.7 Due to a lack of nearby waterbodies, even though there was some suitable habitat for amphibians in the modified grassland and scrub, common amphibians are not considered a potential constraint to the proposed works.

Bats

- 4.5.13 HBIC returned records of at least ten bat species within 2 km of the Site. The records related to common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Nathusius’ pipistrelle *P. nathusii*, unknown pipistrelle species *Pipistrellus sp.*, brown long-eared bat *Plecotus auritus*, unknown plecotus species *Plecotus sp.*, serotine *Eptesicus serotinus*, western barbastelle *Barbastella barbastellus*, Daubenton’s bat *Myotis daubentonii*, Natterer’s bat *Myotis nattereri*, unidentified *Myotis* species *Myotis sp.*, noctule bat *Nyctalus noctula* and a lesser horseshoe bat *Rhinolophus hipposideros*.
- 4.5.14 The closest records related to a serotine, a noctule, an unknown pipistrelle species, a common pipistrelle and a soprano pipistrelle 283 m north east of the Site.
- 4.5.15 According to MAGIC, there were four granted EPS licences relating to bats located within 2 km of the Site as detailed in **Table 2**.

Table 2: EPSM Licences relating to bats located within 2 km of the Site

Licence number	Species	Approximate distance and direction from the Site	Licence impacts	Dates
2015-18011-EPS-MIT	Common pipistrelle	0.63 km South	Destruction of a resting place	18/01/2016 to 31/01/2021
2015-18011-EPS-MIT-1	Common Pipistrelle	0.63 km South	Destruction of a resting place	22/11/2016 to 22/11/2016
2015-17519-EPS-MIT	Common pipistrelle	1.44 km South-West	Destruction of a resting place	08/01/2016 to 31/01/2021
2020-46574-EPS-MIT	Common pipistrelle and Brown Long Eared	1.68 km East	Destruction of a resting place	11/05/2020 to 30/04/2025

- 4.5.16 The scattered trees within the Site provided suitable habitat for foraging and commuting bats.
- 4.5.17 Commuting and foraging bats could be impacted by the proposed works and therefore are a potential constraint.

Roosting Bats

4.5.18 HBIC does not differentiate which bat records pertain to roosts.

4.5.19 There were 14 trees and an existing structure which were assessed for PRFs, the results are provided in **Table 3** below and images can be found in **Appendix 1**.

Table 3: Results of Preliminary Bat Roost Assessment

Target Note (TN)	Feature	PRFs	Bat Roost Potential
B1	Northern Aspect	Gap under metal corrugated roof.	Low
B1	Eastern Aspect	Some gaps under tiles.	Low
B1	Southern Aspect	More prominent gaps under tiles.	Low
B1	Western Aspect	Wooden slats, but mostly backed with wire, apart from one area where a bat could get inside. The interior of the PRF was not visible.	Moderate
1	Cypress Tree	No PRF's recorded at time of survey.	Negligible
2	Cypress Tree	Branch has snapped off, cavity may be present behind.	Low
3-5	Ash Tree	Cluster of three ash trees, some ivy but not well established.	Negligible
6	Horse Chestnut	Thick Ivy	Low
7	Ash Tree	Ash coppice with thick Ivy.	Low
8	Ash Tree	Coppice with large holes at the bottom of the trunk by the roots.	Moderate
9	Ash Tree	Coppice with large holes at the bottom of the trunk by the roots.	Moderate
10	Ash Tree	Coppice with large holes at the bottom of the trunk by the roots.	Moderate
11	Ash Tree	Ash coppice with thick Ivy.	Low
12	Ash Tree	Coppice with large holes at the bottom of the trunk by the roots.	Moderate
13	Ash Tree	Ash coppice with thick Ivy.	Low
14	Ash Tree	Ash coppice with thick Ivy.	Low

4.5.20 The existing structure was assessed as having moderate bat roost potential, due to the potential for bats to get inside which are detailed in **Table 3**. However, the interior of the PRFs were not surveyed and therefore this assumption has been made on a precautionary basis and to avoid any disturbance impacts. .

4.5.21 Six of the trees (TN2, 6, 7, 11, 13 and 14) were assessed as having low potential for roosting bats. Four of the trees (TN8, 9, 10 and 12) have moderate potential for roosting bats.

4.5.22 Roosting bats could be impacted by the proposed works and therefore are considered a potential constraint.

Birds

4.5.23 HBIC returned recent records for 73 bird species within 2 km of the Site. These included 31 species that are protected under Schedule 1 of the WCA 1981, 22 species listed as Species of Principal Importance (SPI) under Section 41 of the NERC Act and 41 species listed as Red or Amber in the Birds of Conservation Concern (BoCC) (Stanbury *et al.*, 2021), as detailed in **Appendix 4**.

4.5.24 The scrub and woodland within the Site provided suitable habitat for a common assemblage of bird species. It is unlikely the Schedule 1 or SPI species recorded within 2 km would nest on the Site.

4.5.25 During the site visit several birds were identified in and around the trees and scrub which were nuthatch *Sitta europaea*, great spotted woodpecker *Dendrocopos major*, wren *Troglodytes troglodytes*, jackdaw *Corvus monedula* and blackbird *Turdus merula*.

4.5.26 Nesting birds are a potential constraint to the proposed works.

Fish

4.5.27 HBIC returned no records of fish species within 2 km of the Site.

4.5.28 There were no waterbodies within the Site or Survey Area and no waterbodies or water courses within 250 m of the Site. There is little potential to effect fish and they are not considered to be a constraint to the works and are not discussed further in this report.

Hazel dormouse

4.5.29 HBIC returned one record of hazel dormouse within 2 km of the Site located 788 m south.

4.5.30 According to MAGIC, there were three granted EPS licences relating to hazel dormouse located within 2 km of the Site.

Table 4: EPSM Licences relating to dormice located within 2 km of the Site

Licence number	Species	Approximate distance and direction from the Site	Licence impacts	Dates
2019-40242-EPS-MIT	Hazel or common dormouse	1.46 km East	Damage of a breeding site	09/05/2019 to 31/12/2025
2019-40242-EPS-MIT-1	Hazel or common dormouse	1.46 km East	Damage of a breeding site	03/04/2020 to 31/12/2025
2019-40242-EPS-MIT-2	Hazel or common dormouse	1.46 km East	Damage of a breeding site	27/10/2020 to 31/12/2025

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- 4.5.31 The trees on the northern boundary of the Site were of high suitability for hazel dormouse as there was hazel coppice woodland with semi-mature hazel between a range of coppice sizes. West area of lowland mixed deciduous woodland, located on Site, has some old ash coppice with holes in the trunk, a good potential habitat for dormice. There were several woodland areas surrounding the Site, including a small ring of woodland directly surrounding it, and larger patches in the wider area which could act as connective habitat.
- 4.5.32 Due to the high suitability of the Site for hazel dormouse and presence of records within 2 km of the Site, hazel dormice are considered to be a constraint to works.

Invertebrates including white-clawed crayfish

- 4.5.33 HIBC returned recent records of 69 invertebrate species within 2 km of the Site, that are listed as Species of Principal Importance (SPI) under Section 41 of the NERC Act. The closest record to the Site included various species located 308 m from the Site including the stag beetle *Lucanus cervus* in 2016 and small heath *Coenonympha pamphilus* in 2020.
- 4.5.34 No recent or historical white-clawed crayfish *Austropotamobius pallipes* records were returned.
- 4.5.35 The modified grassland habitat on-Site provided suitable habitat for a small, common range of invertebrates. This is because it is a sward managed primarily as a picnic area and had substantial connectivity to other suitable habitat in the wider area such as the mixed scrub and bramble scrub bordering the Site. The structure could also have a small range of species living within crevices. Brimstone *Gonepteryx rhamni*, meadow brown *Maniola jurtina* and small white *Pieris rapae* were observed on site.
- 4.5.36 Due to the lack of rare species records and minimal suitable habitat, invertebrates and white clawed crayfish are not considered to be a constraint to works and as such are not discussed further in this report.

Otter

- 4.5.37 HBIC returned no recent records of otter within 2 km of the Site.
- 4.5.38 According to MAGIC, there were no granted EPS licences relating to otter located within 2 km of the Site.
- 4.5.39 The Site and wider area lacks suitable watercourses and terrestrial habitat for otter.
- 4.5.40 Due to the lack of records and suitable habitat nearby, riparian mammals are not considered to be a constraint to works and as such are not discussed further in this report.

Reptiles

- 4.5.41 HBIC returned 17 records of reptiles within 2 km of the Site. These pertained to four slow worm *Anguis fragilis*, three grass snake *Natrix Helvetica*, three adder *Vipera berus* and seven common lizard *Zootoca vivipara*. The closest record pertained to an adder and a common lizard 676 m north of the Site in 2019.

- 4.5.42 According to MAGIC, there were no granted EPS licences relating to reptiles located within 2 km of the Site.
- 4.5.43 The modified grassland habitat which was a managed picnic area on-Site had low suitability for foraging reptiles.
- 4.5.44 The wider area was semi-urban, largely hardstanding with rural and woodland areas to the north and bounded by the M27 Motorway to the south. The scrub on site offered potential habitat and habitat connectivity was present in the form of woodland surrounding the Site.
- 4.5.45 While it is considered unlikely reptiles would be encountered during the works, they are considered a constraint if the scrub is to be affected by the works.

Water vole

- 4.5.46 HBIC returned no recent records of water vole within 2 km of the Site.
- 4.5.47 The Site and wider area lacked suitable watercourses and terrestrial habitat for water vole.
- 4.5.48 Due to the lack of records and suitable habitat nearby, riparian mammals are considered not to be a constraint to works and as such are not discussed further in this report.

Other protected and notable species

- 4.5.49 HBIC returned 18 records of hedgehog *Erinaceus europaeus* within 2 km of the Site, the most recent being in 2020 and nearest record being 394 m south-west.
- 4.5.50 The Site offered suitable habitat for foraging hedgehog in the form of modified grassland and woodland.
- 4.5.51 Due to the suitability of the Site habitats, hedgehog are considered a potential constraint to the works.
- 4.5.52 Mole hills were recorded on Site covering the main outdoor seating area. If this area needs excavation it should be done by hand to avoid asphyxiation of the animals due to collapsed tunnels.
- 4.5.53 Due to evidence for moles being recorded on Site, moles are considered a potential constraint to the works.

Invasive non-native species (INNS)

- 4.5.54 HBIC returned no recent records of invasive non-native species of plant (INNS) as listed on Schedule 9 of the Wildlife and Countryside Act, immediately adjacent to or on the Site.
- 4.5.55 No evidence of any INNS were recorded during the survey.
- 4.5.56 Due to no recent records and lack of INNS recorded during the Site visit, INNS are considered not to be a constraint to works and as such are not discussed further in this report.

5. Ecological Constraints, Opportunities and Recommendations

5.1 Potential Impacts and Effects

5.1.1 The proposed works as detailed in Section 1.3 have the potential to result in the following direct and indirect impacts:

- Potential felling trees (TBC).
- Expansion works to the structure.
- Increased temporary lighting (if works occur at night or if additional lighting is installed);
and
- Increased temporary noise and vibration from machinery and personnel.

5.1.2 These impacts may result in the following effects, which are described in more detail in **Table 5**:

- Damage to or pollution of deciduous woodland habitat.
- Loss of suitable habitats for dormice, hedgehog, nesting birds, bats and reptiles.
- Damage to suitable habitats for dormice, hedgehog, nesting birds, bats and reptiles.
- Killing and injury of dormice, nesting birds, bats and reptiles; and
- Disturbance to foraging and commuting bat species.

5.2 Constraints and Mitigation Measures

5.2.1 The ecological constraints and mitigation required to address the above are detailed in **Table 5** on the following pages.

5.2.2 The information contained within this report is valid for a period of 18 months from the date of the survey visit (CIEEM, 2019).

5.2.3 Therefore, if the works have not been completed by January 2025, the Site should be re-surveyed and re-assessed to determine if there have been any significant changes.

Table 5: Ecological Constraints and Opportunities

Feature/Constraint	Potential Impact and Effect	Action Required	Deliverable	Timing
Habitats of Principal Importance				
Deciduous Woodland	Damage or destruction of woodland habitat.	Works should be undertaken in accordance with industry good practice guidance by ensuring appropriate pollution prevention measures are put in place. For example, storage of all machinery, fuels, oil and chemicals and refuelling should occur within a designated area over 15 m from any waterbodies. Further guidance can be found within the government Guidance for Pollution Prevention https://www.gov.uk/guidance/pollution-prevention-for-businesses	Pollution Prevention Measures	Throughout works
Protected and notable species				
Bats (roosting)	Loss or damage to habitat for roosting bats	Soft-fell trees with low bat roost potential under supervision of an ecologist, leaving the off cuts on the ground overnight for any animals to escape of their own accord. Soft-felling involves removing the tree in sections and carefully lowering these to the ground, keeping any features suitable for bats in whole sections where possible. For ivy covered trees, the ivy should be removed before the tree is felled to check for bats roosting within the ivy and for the presence of roost features which may have been obscured.	Soft-fell trees	Throughout works
	Injury and or death to roosting bats	Further survey required of the building and moderate potential trees to comprise two dusk emergence surveys. Dusk emergence surveys should be carried out between May and September with at least one survey between May and August. Surveys must be carried out in suitable weather conditions with no rain or strong winds.	Dusk emergence surveys	Prior to works
Bats (foraging and commuting)	Temporary lighting used during the works.	Carry out all Site works in daylight hours or introduce a 'Sensitive Lighting Scheme' which involves pointing lights away from trees and buildings. Additional lighting should conform to a Sensitive Lighting Scheme and avoid illuminating habitats which may be used by foraging and commuting bats including woodland and scrub.	Sensitive Lighting Scheme (if works are to be done at night or additional	Throughout works/ following works

Feature/Constraint	Potential Impact and Effect	Action Required	Deliverable	Timing
			lighting is installed)	
Birds (nesting)	Impacts to nesting birds If undertaken during bird-nesting season (March-August)	Nesting bird check carried out by a suitably qualified ecologist. If any active nests are identified during the works, an exclusion zone must be implemented by an ecologist or suitably experienced person. The nest(s) will be left undisturbed until the young have been confirmed to have fully fledged or the nesting attempt be determined to have concluded.	Nesting bird check during March-August	48 hrs prior to the works
Hazel dormouse	Loss, damage or disturbance to habitats suitable for hazel dormouse	Vegetation removal of suitable habitat (woodland and scrub) should proceed under Ecological Clerk of Works (ECoW). The ECoW will inspect any suitable vegetation for the presence of dormouse nests or field signs. If dormice are encountered during the works then works must cease and a licence must be sought from Natural England.	Vegetation removal under ECoW.	Throughout works.
Hedgehog	Disturbance to habitat suitable for hedgehog	Best Practice Measures with regards to hedgehog should be followed. Clearance of scrub and woodland understory should be carried out in two stages. The first cut should take the vegetation down to approximately 30 cm with arisings removed. This will allow any hedgehog present to leave the Site of their own accord. The remaining vegetation can then be taken down to ground level. If hibernating hedgehog are found they should be left in place and an ecologist should be contacted for advice.	Best Practice Measures should be followed.	Throughout works.
Moles	Asphyxiation and death	If mole tunnels are to be affected excavation must be done by hand. If moles are encountered, they should be allowed to move away of their own accord. If they are in immediate danger they can be moved, wearing gloves, to a safe sheltered area away from the works.	Excavation by hand	Throughout works

Feature/Constraint	Potential Impact and Effect	Action Required	Deliverable	Timing
Reptiles	Loss or damage to habitat for reptiles	If possible, the scrub should be left in situ as good habitat for sheltering reptiles. If it must be impacted then it should be done under ECOW.	Leave the scrub in situ or ECOW	Throughout works

6. Residual Effects and Conclusions

- 6.1.1 Implementation of the measures detailed above will address the potential effects identified within this assessment, with no residual effects highlighted.
- 6.1.2 If any trees need to be removed from Site, 2-3 bird nesting boxes can be erected within the picnic area or woodland as replacement bird nesting habitat, this would assist in reducing any overall biodiversity impacts of the works. Consideration should also be given to the erection of bat boxes within the woodland.
- 6.1.3 Any felled trees or arisings from vegetation removal can be used to create refugia/hibernacula for reptiles and hedgehog. These should be placed in a sheltered location away from disturbance.

7. References

Baker, J., Beebee T., Buckley, J., Gent, A. & Orchard, D. (2011). Amphibian Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

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

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




UK Habitat Classification Working Group (2020). UK Habitat Classification – Habitat Definitions V1.1 Available at <https://ecountability.co.uk/ukhabworkinggroup-ukhab>.

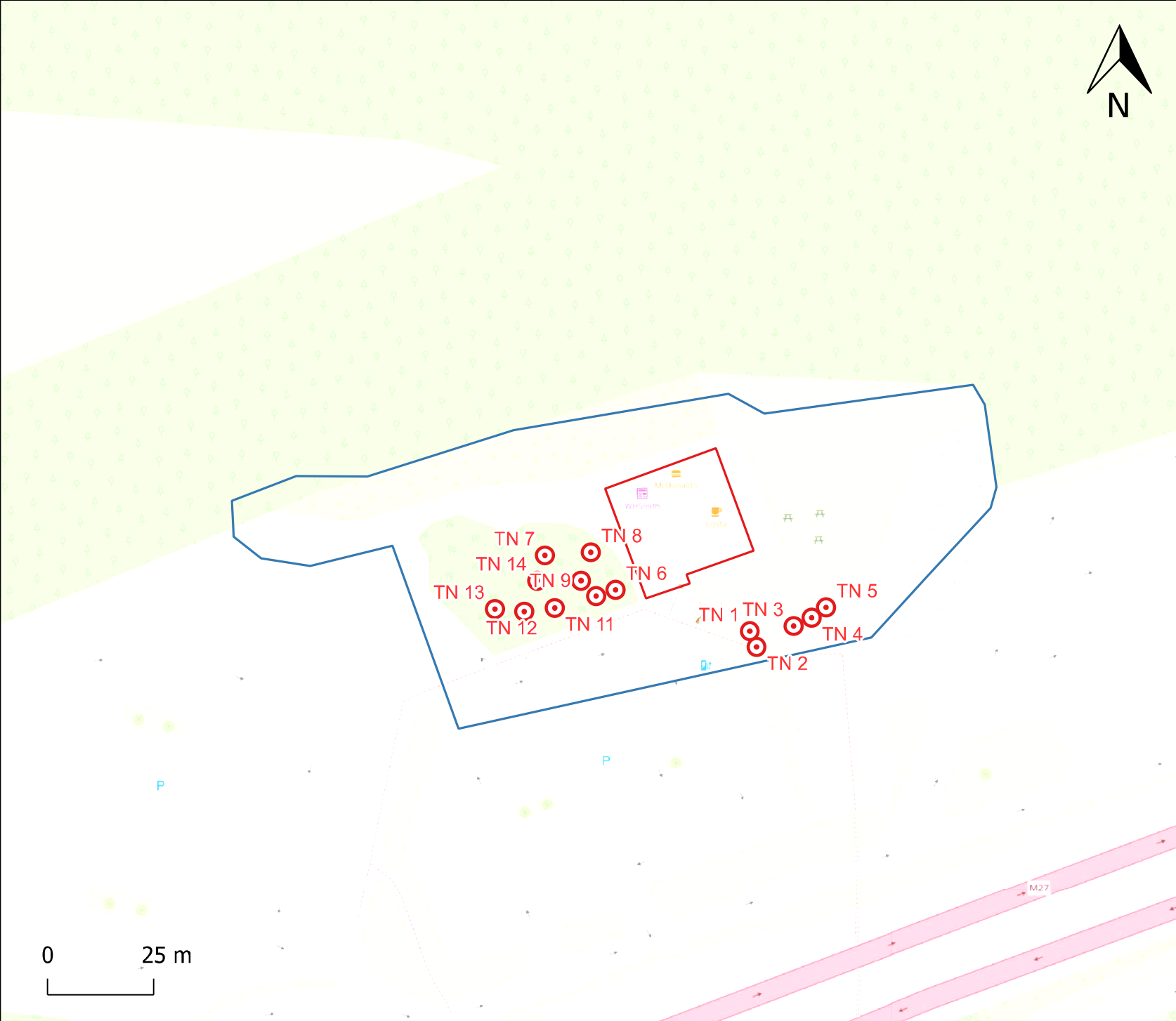
Natural England (2010). List of habitats and species of principal importance in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Figure 1: Site location plan



Legend

-  Site Boundary
-  Survey Area
-  Target Notes



Roadchef
 Roadchef, Rownhams
 Preliminary Ecological Appraisal












Figure 1
 Site Location Plan

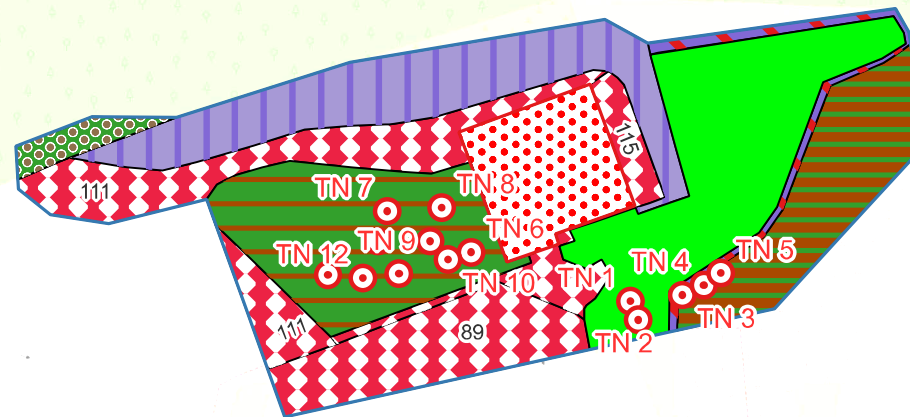
• Unit 4 • Prisma Park • Berrington Way •
 • Basingstoke • RG24 8GT •
 • tel: 01256 224588 • www.ecusltd.co.uk •

Figure 2: Habitat Map



Legend

-  Site Boundary
-  Survey Area
-  Target Notes
-  g4 - modified grassland
-  w1f - lowland mixed deciduous woodland
-  w1f5 - dry oak-dominated woodland (H9190)
-  w1g - other woodland; broadleaved
-  h3d - bramble scrub
-  h3h - mixed scrub
-  u1b5 - buildings
-  u1b6 - other developed land



Roadchef
Roadchef Rownhams
Preliminary Ecological Appraisal







Figure 2
Habitat Map

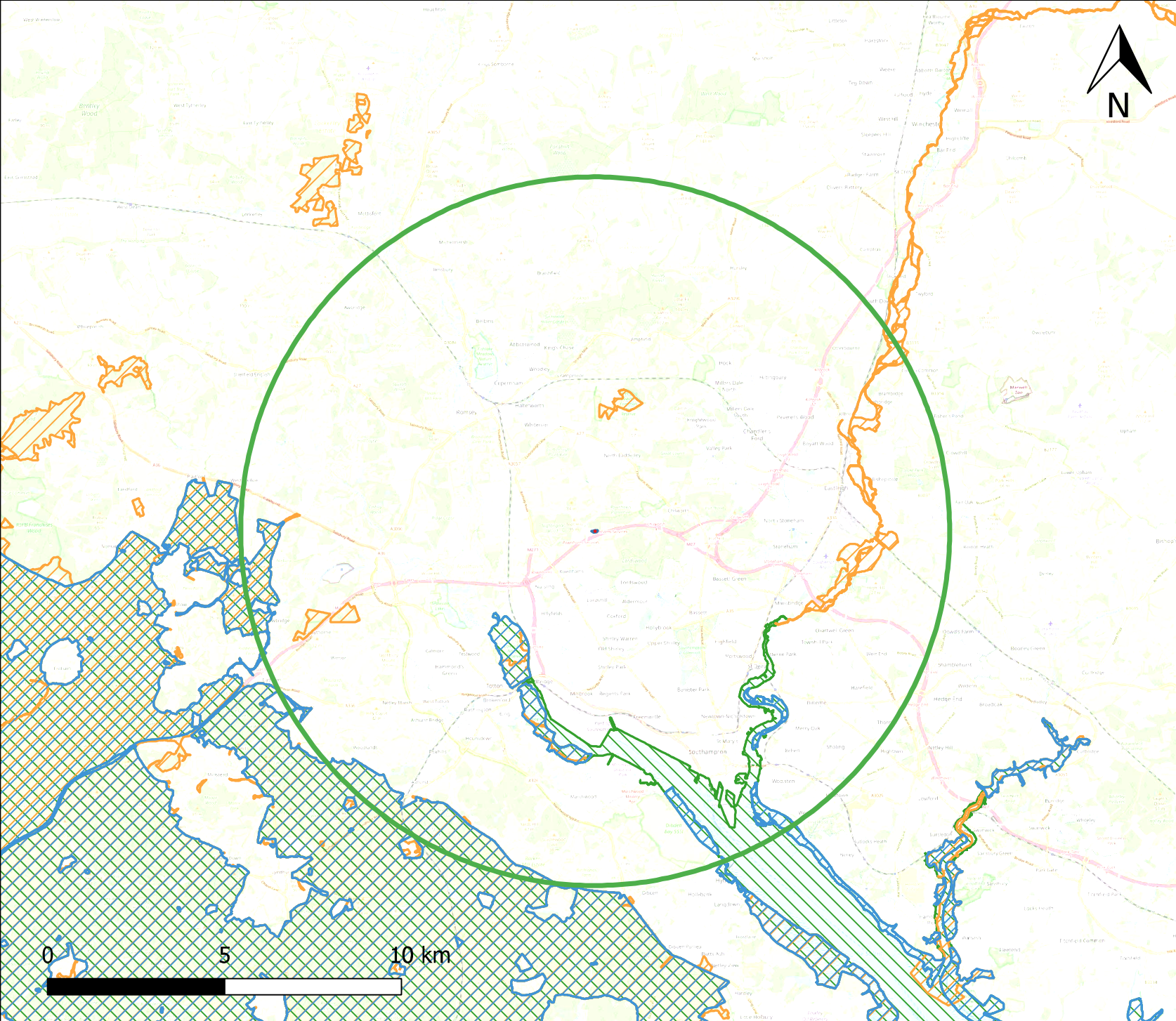
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• Basingstoke • RG24 8GT •
• tel: 01256 224588 • www.ecusltd.co.uk •

Figure 3: International Statutory Designated Sites Within 10 km



Legend

-  Site Boundary
-  Survey Area
-  10 km Buffer
-  Ramsar
-  Special Areas of Conservation
-  Special Protection Areas



Roadchef
Roadchef Rownhams
Preliminary Ecological Appraisal

Figure 3
 International designated sites within
 10 km

• Unit 4 • Prisma Park • Berrington Way • Basingstoke • BS35 1NP
 • tel: 01256 224588 • www.ecusltd.co.uk •

Appendix 1: Site Habitat Photographs



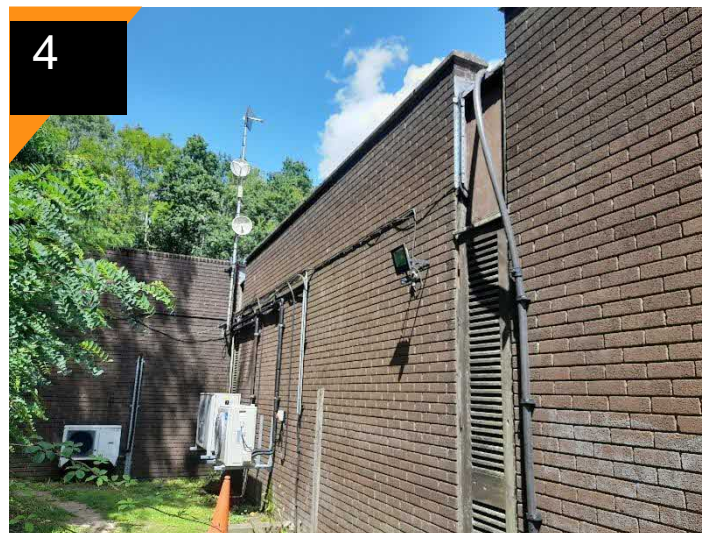
Plate 1 Building northern aspect corrugated roof.

Plate 2 Building eastern aspect lifted tiles.

Plate 3 South-eastern corner tile lifted.



Plate 4 Western Aspect



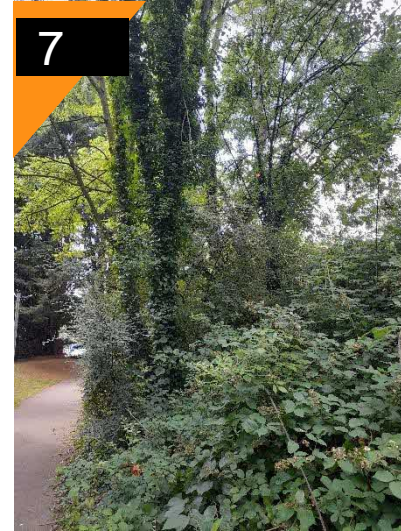
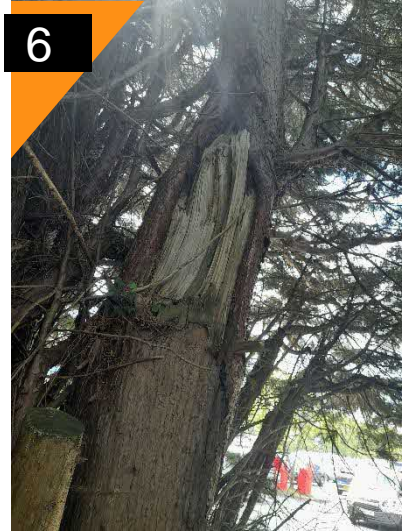


Plate 5 TN1 and TN2

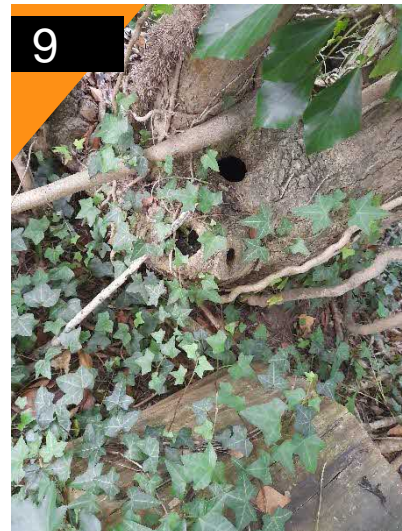
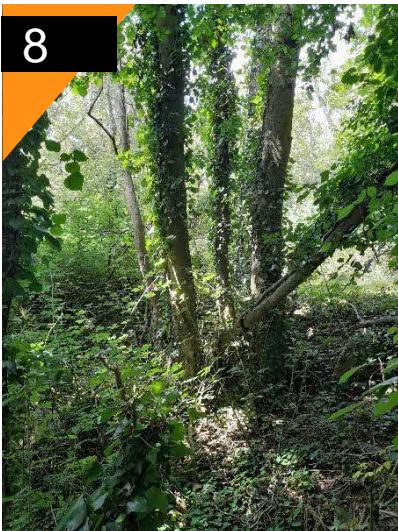
Plate 6 TN2 branch ripped out

Plate 7 TN3, TN4 and TN5

Plate 8 TN7

Plate 9 TN9 Hole

Plate 10 TN10 Ivy and Hole



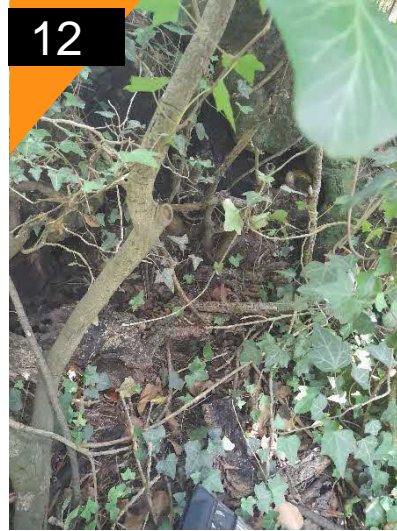
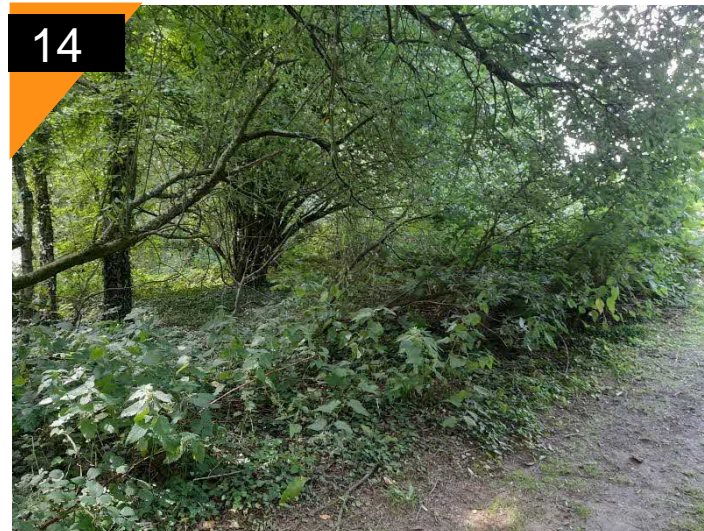


Plate 11 TN12

Plate 12 TN12 base

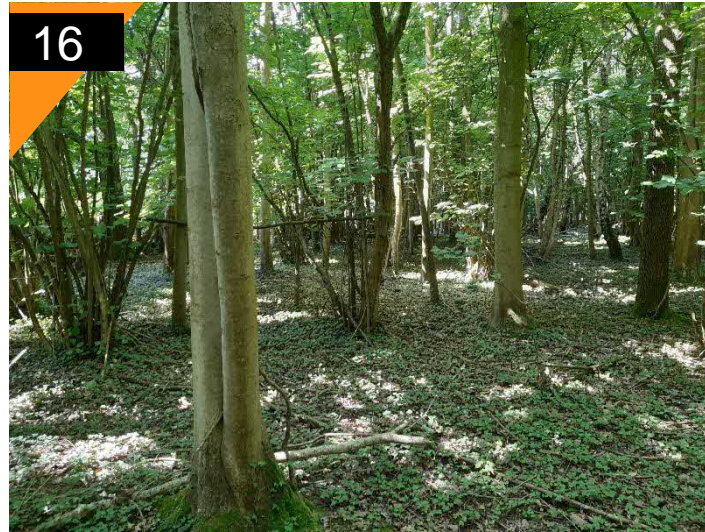
Plate 13 TN13

Plate 14 Lowland Mixed Deciduous
Woodland (w1f)





15



16

Plate 15 Further woodland w1f

Plate 16 Hazel coppice north of building

Plate 17 Mixed bramble/gorse scrub

Plate 18 Building northern aspect



17



18

Appendix 2: Wildlife Legislation

This Appendix is intended as a brief guide to some of the relevant offences associated with protected species which are common constraints associated with development projects.

For full details of legislation relating to all habitats and species discussed within this report visit <http://www.legislation.gov.uk>.

Amphibians including great crested newt

Great crested newt *Triturus cristatus* (GCN) is protected under the Wildlife & Countryside Act 1981 (as amended) (“the WCA 1981”) and the Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitats Regulations”) and is therefore a European Protected Species (EPS).

It is illegal to kill, injure, capture, handle or disturb GCN, and the places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed.

Natterjack toad *Epidalea calamita* is also an EPS and is afforded the same protection.

GCN, natterjack toad and common toad *Bufo bufo* are Priority Species under the Natural Environment and Rural Communities Act 2006 (“the NERC Act”).

The four widespread species of amphibian: the smooth and palmate newts, the common frog and common toad, are protected by Section 9 (5) of the WCA 1981 which prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.



Bats

All species of bat occurring within the UK are included in Schedule 2 of the Habitats Regulations. Under Regulation 43, bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from damage or destruction of a breeding site or resting place (roost).

All UK bats are also included on Schedule 5 of the WCA 1981. It is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

Bats are also listed as Priority Species under Section 41 of the NERC Act and certain species are Priority Species under the NERC Act.

Birds

All wild birds are protected under the WCA 1981 against destruction of the active nest.

It is illegal to kill, injure or ‘take’ any wild bird, take or damage the nest of any wild bird whilst in use or being built. The eggs of all wild birds are also protected.

The birds listed in Schedule 1 of the WCA 1981 are protected against disturbance whilst actively nesting.

Competent authorities must have regard for all bird species listed under Section 41 of the NERC which have potential to be impacted by proposed works.

In 2021, a re-assessment of Birds of Conservation Concern (BoCC) was published by Stanbury *et al.* (2021), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.

'Red' is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more.

'Amber' is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more.

These categories are followed by 'Green', indicating that the species is not experiencing population declines. A species can be green-listed but can also be listed under Schedule 1 of the WCA 1981 due to risk of persecution.

Freshwater and migratory fish

Various freshwater and migratory fish species and their habitats are afforded legal protection under the WCA 1981, Salmon and Freshwater Fisheries Act 1975 and Eels (England and Wales) Regulations 2009.

The following fish receive various levels of protection under the WCA 1981: allis shad *Alosa alosa*, twaite shad *Alosa fallax*, vendace *Coregonus albula*, whitefish *Coregonus lavaretus* and Atlantic sturgeon *Acipenser sturio*. Atlantic sturgeon are also EPS.

Special areas of conservation (SACs), sites of special scientific interest (SSSIs) or Ramsar sites have features of special interest for freshwater or migratory fish, such as: Atlantic salmon *Salmo salar*, bullhead *Cottus gobio*, lamprey (brook, river and sea) (*Petromyzontiformes*), spined loach *Cobitis taenia*, European eel *Anguilla anguilla*.

Atlantic salmon, brown/sea trout *Salmo trutta*, river lamprey and European eel are listed as priority species under Section 41 of the NERC Act.

Eels are also protected by the Eels (England and Wales) Regulations 2009.

Hazel dormouse

Hazel dormouse *Muscardinus avellanarius* is protected under Schedule 5 of the WCA 1981, and under Schedule 2 of the Habitats Regulations, giving this species the same protection as GCN and bats.

Hazel dormouse is also listed as a Priority Species under the Section 41 of the NERC Act.

Otter

Otter *Lutra lutra* is protected under Schedule 5 of the WCA 1981, and under Schedule 2 of the Habitats Regulations, giving this species the same protection as GCN and bats.

Otter are listed as Priority Species under the Section 41 of the NERC Act.

Reptiles

All UK reptile species are protected under Schedule 5 of the WCA 1981 against intentional killing or injuring.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* are further protected under Schedule 2 of the Habitats Regulations.

Slow worm *Anguis fragilis*, sand lizard, common lizard *Zootoca vivipara*, grass snake *Natrix helvetica* and adder *Vipera berus* are also listed as Priority Species under the Section 41 of the NERC Act.

Water vole

Water vole *Arvicola amphibius* is fully protected under Schedule 5 of the WCA 1981 making it an offence to intentionally kill, injure or take a water vole, intentionally or recklessly damage or destroy a place of shelter or protection, intentionally or recklessly disturb a water vole when it is occupying such a place, or intentionally or recklessly obstruct such a place.

Water vole are listed as Priority Species under the Section 41 of the NERC Act.

White-clawed crayfish

White-clawed crayfish *Austropotamobius pallipes* are partially protected under Schedule 5 of the WCA 1981, which makes it illegal to intentionally take them.

White-clawed crayfish are listed as Priority Species under the Section 41 of the NERC Act.

Invasive non-native species

Certain species of plants and animals that do not naturally occur in the UK have become established in the wild and represent a threat to the natural fauna and flora.

The WCA 1981 is the principal piece of legislation in the UK regarding invasive non-native species. It is an offence under Section 14 (2) to plant or otherwise cause to grow in the wild any species listed on Schedule 9, Part II of the Act. Schedule 9, Part II includes knotweed species *Fallopia spp.*, Himalayan balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, cotoneaster species *Cotoneaster spp.*, montbretia *Crocsmia x crocosmiiflora* and Rhododendron species *Rhododendron spp.* Section 14 also controls the spread of various animal species.

In accordance with Section 33 and 34 of the Environmental Protection Act 1990, if taken from their place of origin, any plant listed on Schedule 9, Part II of the WCA 1981 and their associated material (e.g. soil and ash) are classed as controlled waste.

Appendix 3: Non-statutory Designated Sites within 2 km of the Site

Site name	Designation	Distance from the Site at closest point
Greenhill Copse	Site of Importance for Nature Conservation	0.18 km north
Rownham's Plantation	Site of Importance for Nature Conservation	0.41 km north
Kingfisher Meadow	Site of Importance for Nature Conservation	0.72 km north
Aldermoor Copse, Nursling and Rownhams	Site of Importance for Nature Conservation	0.76 km south-west
Dymer's Wood	Site of Importance for Nature Conservation	0.80 km east
Clam's Copse	Site of Importance for Nature Conservation	0.81 km south-east
Packridge Copse	Site of Importance for Nature Conservation	0.85 km north-west
Long Copse, Chilworth	Site of Importance for Nature Conservation	0.88 km east
St. John's Church, Rownhams	Site of Importance for Nature Conservation	0.89 km south
Kiln Farm - Tanners Brook: Southern Grazed Meadow	Site of Importance for Nature Conservation	0.95 km north
Home Copse, Chilworth	Site of Importance for Nature Conservation	0.96 km north-east
Toot Hill Pasture	Site of Importance for Nature Conservation	1.02 km north-west
Rownhams Meadow	Site of Importance for Nature Conservation	1.12 km south

Site name	Designation	Distance from the Site at closest point
Kiln Farm - Tanners Brook: Northern Meadow	Site of Importance for Nature Conservation	1.14 km north
Rownhams Field	Site of Importance for Nature Conservation	1.15 km south
Matthew's Moor	Site of Importance for Nature Conservation	1.16 km east
Lord's Wood West	Site of Importance for Nature Conservation	1.28 km south
Middle Farm Meadow	Site of Importance for Nature Conservation	1.29 km west
Calveslease Copse	Site of Importance for Nature Conservation	1.31 km north
Kiln Farm - Tanners Brook: Ungrazed Meadow/Fen	Site of Importance for Nature Conservation	1.33 km north
Nightingale Wood & Outlier	Site of Importance for Nature Conservation	1.34 km west
Lymers Copse	Site of Importance for Nature Conservation	1.35 km south-west
Hazel Copse, Chilworth	Site of Importance for Nature Conservation	1.39 km east
Lord's Wood	Site of Importance for Nature Conservation	1.43 km south-east
Buxey Wood (West)	Site of Importance for Nature Conservation	1.52 km north-east
Lordswood Greenway	Site of Importance for Nature Conservation	1.52 km south
Chilworth Manor Meadows	Site of Importance for Nature Conservation	1.64 km east
Cromarty Pond	Site of Importance for Nature Conservation	1.68 km south

Site name	Designation	Distance from the Site at closest point
Hoe Copse	Site of Importance for Nature Conservation	1.70 km north-west
A3057 Romsey Road, Nursling	Road Verge of Ecological Importance	1.74 km west
Site 2, Roundabouts Copse	Site of Importance for Nature Conservation	1.86 km north
Buxey Wood (East)	Site of Importance for Nature Conservation	1.93 km north-east
Chilworth Common (FC site 625)	Site of Importance for Nature Conservation	1.97 km east
Fir Copse	Site of Importance for Nature Conservation	2.00 km south-west (approximate)
Home Covert, Nursling and Rownhams	Site of Importance for Nature Conservation	2.00 km south-west (approximate)
Nursling Plantation	Site of Importance for Nature Conservation	2.00 km south (approximate)
Lord's Hill Way	Site of Importance for Nature Conservation	2.00 km south (approximate)
Roundabouts Copse	Site of Importance for Nature Conservation	2.00 km north (approximate)
Ride Through Plantation on Chilworth Common	Site of Importance for Nature Conservation	2.00 km east (approximate)

Appendix 4: Bird species records within 2 km of the Site

Common name	Scientific name	Legal and/or Conservation Status
Barn Owl	<i>Tyto alba</i>	Schedule 1
Black Kite	<i>Milvus migrans</i>	Annex 1
Black Redstart	<i>Phoenicurus ochruros</i>	Red, Schedule 1
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	
Brambling	<i>Fringilla montifringilla</i>	Schedule 1
Bullfinch	<i>Pyrrhula pyrrhula</i>	NERC S41
Caspian Tern	<i>Hydroprogne caspia</i>	Annex 1
Cetti's Warbler	<i>Cettia cetti</i>	Schedule 1
Common Redpoll	<i>Acanthis flammea</i>	
Common Scoter	<i>Melanitta nigra</i>	Red, NERC S41, Schedule 1
Common Tern	<i>Sterna hirundo</i>	Annex 1
Crossbill	<i>Loxia curvirostra</i>	Schedule 1
Cuckoo	<i>Cuculus canorus</i>	Red, NERC S41
Curlew	<i>Numenius arquata</i>	Red, NERC S41
Dotterel	<i>Charadrius morinellus</i>	Annex 1, Red, Schedule 1
Fieldfare	<i>Turdus pilaris</i>	Red, Schedule 1
Firecrest	<i>Regulus ignicapilla</i>	Schedule 1
Golden Oriole	<i>Oriolus oriolus</i>	Schedule 1
Golden Plover	<i>Pluvialis apricaria</i>	Annex 1
Goshawk	<i>Accipiter gentilis</i>	Schedule 1
Grasshopper Warbler	<i>Locustella naevia</i>	Red, NERC S41
Great Black-backed Gull	<i>Larus marinus</i>	
Green Sandpiper	<i>Tringa ochropus</i>	Schedule 1
Greenshank	<i>Tringa nebularia</i>	Schedule 1
Grey Heron	<i>Ardea cinerea</i>	
Grey Partridge	<i>Perdix perdix</i>	Red, NERC S41

Common name	Scientific name	Legal and/or Conservation Status
Grey Wagtail	<i>Motacilla cinerea</i>	Red
Hawfinch	<i>Coccothraustes coccothraustes</i>	Red, NERC S41
Hen Harrier	<i>Circus cyaneus</i>	Annex 1, Red, NERC S41, Schedule 1
Herring Gull	<i>Larus argentatus</i>	Red
Hobby	<i>Falco subbuteo</i>	Schedule 1
Honey-buzzard	<i>Pernis apivorus</i>	Annex 1, Schedule 1
Hoopoe	<i>Upupa epops</i>	Schedule 1
House Sparrow	<i>Passer domesticus</i>	Red, NERC S41
Kingfisher	<i>Alcedo atthis</i>	Annex 1, Schedule 1
Lapwing	<i>Vanellus vanellus</i>	Red, NERC S41
Lesser Black-backed Gull	<i>Larus fuscus</i>	Red
Lesser Redpoll	<i>Acanthis cabaret</i>	Red, NERC S41
Lesser Spotted Woodpecker	<i>Dryobates minor</i>	Red
Linnet	<i>Linaria cannabina</i>	Red
Little Egret	<i>Egretta garzetta</i>	Annex 1
Little Ringed Plover	<i>Charadrius dubius</i>	Schedule 1
Marsh Harrier	<i>Circus aeruginosus</i>	Annex 1, Schedule 1
Marsh Tit	<i>Poecile palustris</i>	Red
Mediterranean Gull	<i>Ichthyaeetus melanocephalus</i>	Annex 1, Schedule 1
Merlin	<i>Falco columbarius</i>	Annex 1, Red, Schedule 1
Mistle Thrush	<i>Turdus viscivorus</i>	Red
Nightingale	<i>Luscinia megarhynchos</i>	Red
Nightjar	<i>Caprimulgus europaeus</i>	Annex 1, NERC S41
Ortolan Bunting	<i>Emberiza hortulana</i>	Annex 1
Osprey	<i>Pandion haliaetus</i>	Annex 1, Schedule 1
Oystercatcher	<i>Haematopus ostralegus</i>	
Peregrine	<i>Falco peregrinus</i>	Annex 1, Schedule 1

Common name	Scientific name	Legal and/or Conservation Status
Pied Flycatcher	<i>Ficedula hypoleuca</i>	Red
Purple Heron	<i>Ardea purpurea</i>	Annex 1, Schedule 1
Red Kite	<i>Milvus milvus</i>	Annex 1, Schedule 1
Red-necked Grebe	<i>Podiceps grisegena</i>	Red
Redstart	<i>Phoenicurus phoenicurus</i>	
Redwing	<i>Turdus iliacus</i>	Red, Schedule 1
Reed Bunting	<i>Emberiza schoeniclus</i>	NERC S41
Ring Ouzel	<i>Turdus torquatus</i>	Red, NERC S41
Ringed Plover	<i>Charadrius hiaticula</i>	Red
Sand Martin	<i>Riparia riparia</i>	
Sandwich Tern	<i>Thalasseus sandvicensis</i>	Annex 1
Shelduck	<i>Tadorna tadorna</i>	
Short-eared Owl	<i>Asio flammeus</i>	Annex 1
Siskin	<i>Spinus spinus</i>	
Skylark	<i>Alauda arvensis</i>	Red, NERC S41
Snipe	<i>Gallinago gallinago</i>	
Song Thrush	<i>Turdus philomelos</i>	Red
Spoonbill	<i>Platalea leucorodia</i>	Annex 1, Schedule 1
Spotted Flycatcher	<i>Muscicapa striata</i>	Red, NERC S41
Starling	<i>Sturnus vulgaris</i>	Red
Tree Pipit	<i>Anthus trivialis</i>	Red, NERC S41
Tree Sparrow	<i>Passer montanus</i>	Red, NERC S41
Turtle Dove	<i>Streptopelia turtur</i>	Red, NERC S41
Water Pipit	<i>Anthus spinoletta</i>	
Water Rail	<i>Rallus aquaticus</i>	
Wheatear	<i>Oenanthe oenanthe</i>	
Whimbrel	<i>Numenius phaeopus</i>	Red, Schedule 1

Common name	Scientific name	Legal and/or Conservation Status
Whinchat	<i>Saxicola rubetra</i>	Red
White Stork	<i>Ciconia ciconia</i>	Annex 1
White-fronted Goose	<i>Anser albifrons</i>	Red
Wood Sandpiper	<i>Tringa glareola</i>	Annex 1, Schedule 1
Wood Warbler	<i>Phylloscopus sibilatrix</i>	Red, NERC S41
Woodcock	<i>Scolopax rusticola</i>	Red
Woodlark	<i>Lullula arborea</i>	Annex 1, NERC S41, Schedule 1
Yellow Wagtail	<i>Motacilla flava</i>	Red
Yellowhammer	<i>Emberiza citrinella</i>	Red, NERC S41

