



ECOLOGICAL IMPACT ASSESSMENT REPORT

Site at Kings Meadow Road
Reading
RG1 3JH

A Report for
**Lochailort Reading Ltd &
Canmoor Developments Ltd**

Protected Species Ecology Ltd
info@pro-spp-eco.co.uk

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QUALITY ASSURANCE

Author	Penny Lewns CEcol CEnv MCIEEM	Signature: 
Approved By	David Lewns MCIEEM	Signature: 
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DECLARATION

This report has been produced in accordance with BS42020:2013 by Penny Lewns of Protected Species Ecology Ltd. The information, which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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Contents Table

SUMMARY	3
1.0 Introduction	4
1.1 BACKGROUND	4
1.2 SCOPE OF THIS REPORT & SURVEY OBJECTIVES	4
1.3 SITE CONTEXT AND STATUS	5
1.4 DESCRIPTION OF THE PROPOSED DEVELOPMENT	5
Figure 1.1 Site location OS 1:25,000 map	5
Figure 1.2 Aerial photograph showing location of site (image dated 25/3/17)	6
Figure 1.3 Proposed development	7
1.5 PLANNING POLICY AND LEGISLATION	8
Table 1.1 List of relevant legislation	9
2.0 Method	10
2.1 DESKTOP STUDY	10
2.2 FIELD SURVEYS	10
2.2.1 Phase 1 Habitat surveys	10
2.2.2 Protected species surveys	11
2.3 PRESENCE OR ABSENCE ASSESSMENT	12
2.4 LIMITATIONS	12
3.0 Results	13
3.1 DESK TOP STUDY	13
3.1.1 Designated sites	13
3.1.2 Protected species records	13
3.2 SURVEY RESULTS	13
3.2.1 Habitat Description	13
3.2.2 Mammals	14
3.2.3 Birds	15
3.2.4 Amphibians & Reptiles	16
Photographs 1 to 8	16
Figure 3.1 Phase 1 Habitat plan	18
4.0 Assessment	19
4.1 CONSTRAINTS ON STUDY INFORMATION	19
4.2 POTENTIAL IMPACTS	19
4.2.1 Habitat	19
4.2.2 Protected/priority species	19
5.0 Recommendations	21
5.1 FURTHER SURVEY	21
5.2 MITIGATION MEASURES	21
5.3 BIODIVERSITY ENHANCEMENTS	21
6.0 References	22
APPENDIX 1 Desktop Survey Results	23
Table A1 Redacted bat records within 2 km of site from TVERC (2014)	23

SUMMARY

Protected Species Ecology Ltd were commissioned by Lochailort Reading Ltd & Canmoor Developments Ltd to undertake an Ecological Impact Assessment (EclA) for a proposed planning application at a site off Kings Meadow Road, Reading RG1 3JH. It is proposed to construct a multi-storey office block is proposed at the site with associated external landscaping and a basement.

A daytime survey of the site was undertaken by Murray Bracewell MSc MCIEEM. The site comprised hard standing, modern buildings and seven semi-mature ornamental trees surrounded by ornamental shrub planting. There was potential for nesting birds to exploit the small areas of ornamental shrub planting during the breeding season (March to September inclusive) and evidence of past breeding attempt by pigeons in one of the trees. However, the suitability of these areas was likely to be severely limited by disturbance and light.

The buildings offered low or negligible potential for bats and none of the trees had features likely to be used by bats for roosting. Although there was likely to be a roof void within the pitched roof section of one of the buildings, there were no access points for bats.

The site had low ecological value and therefore, the proposed re-development would have no adverse impact on biodiversity or protected species.

Recommendations for ecological enhancement

- Remove vegetation prior to the bird nesting season (March to September) or following an inspection by a suitably qualified ecologist. If nesting birds are found to be present, an area around the nest will need to be retained until the nesting cycle has been completed
- To provide new foraging opportunities for birds and insects, new planting should include high nectar content flowering shrubs and/or fruiting variety of shrubs/trees

1.0 Introduction

1.1 BACKGROUND

Protected Species Ecology Ltd (PSE Ltd) were commissioned by Lochailort Reading Ltd & Canmoor Developments Ltd to undertake an Ecological Impact Assessment (EclA) for a proposed multi-storey office block development at land adjacent to Kings Meadow Road and Vastern Road, Reading, RG1 3JH.

PSE Ltd completed two previous surveys of the site (in 2014 & 2016), and provided an Ecological Impact Assessment Report in December 2014, which was updated by letter on 14/11/2016.

1.2 SCOPE OF THIS REPORT & SURVEY OBJECTIVES

The data/information presented in this report are based on field surveys using standard survey methodologies, appropriate to a range of protected species. This approach is designed to identify the presence or absence of protected species based on field signs or direct observations, and/or the potential for protected species to be present/likely absence based on the suitability of the habitat within the survey area:

- To identify key ecological constraints to the proposed development
- To inform the proposed scheme, to allow significant ecological effects to be avoided or minimised wherever possible
- To determine the further ecological surveys needed to inform an ecological impact assessment to be identified and appropriately designed
- To allow likely mitigation or compensation measures to be developed
- To form a basis for agreeing the scope of the ecological impact assessment with relevant consultees

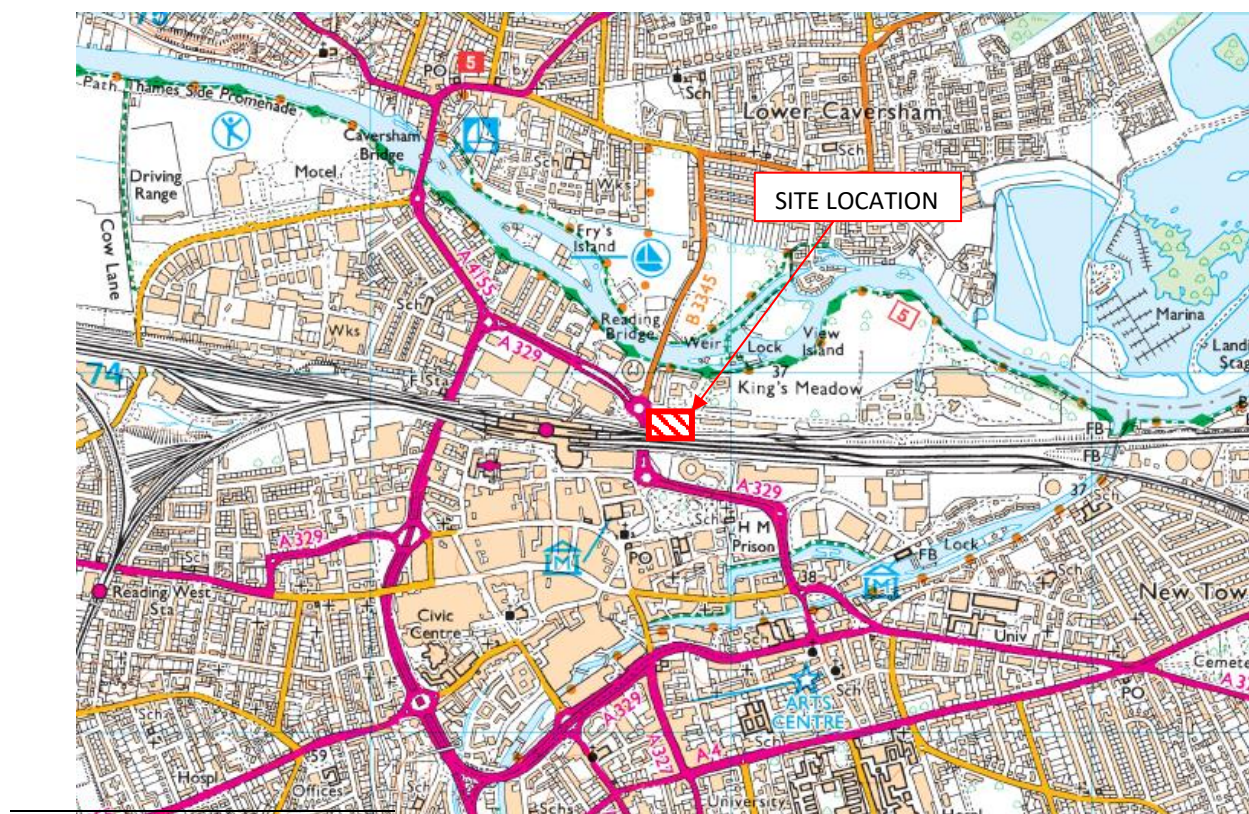
1.3 SITE CONTEXT AND STATUS

The site is located on the corner of Vastern Road and King's Meadow Road, on the northern edge of Reading town centre at Ordnance Survey Grid Reference SU718738, close to Reading town centre [see **Figures 1.1 and 1.2**]. It was approx. 0.6 hectares (ha) in area and was surrounded by commercial development, with Reading Railway Station and the railway lines immediately south of the site. To the north of the site, there was Kings Meadow Road, with a mixture of commercial and residential buildings, leading to open space (amenity grass fields and trees) alongside the River Thames, which was 125 m to the north of the site.

1.4 DESCRIPTION OF THE PROPOSED DEVELOPMENT

It is proposed to construct a multi-storey office block with a basement and a sky garden and mezzanine on the two top floors [see **Figure 1.3**].

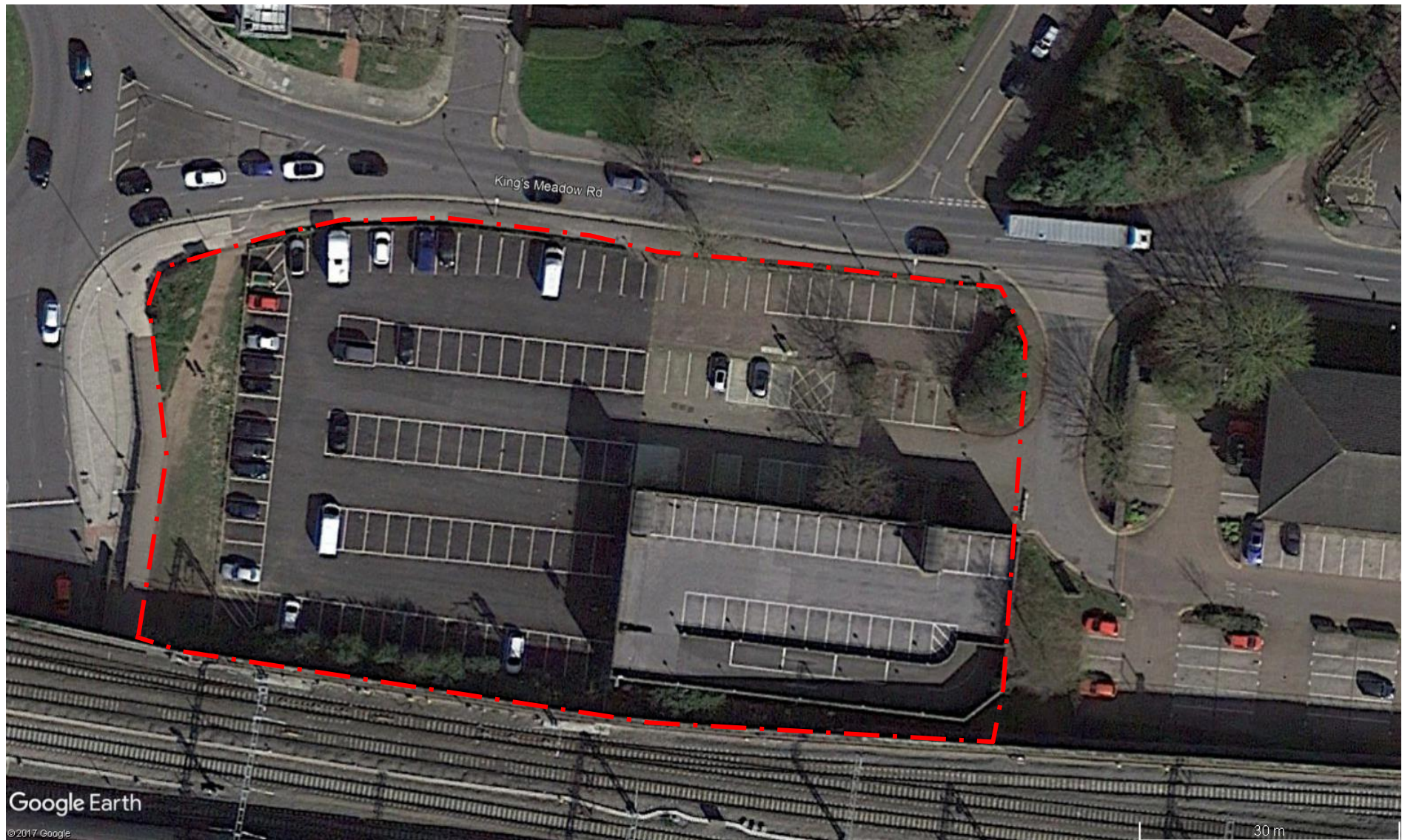
Figure 1.1 Site location OS 1:25,000 map¹



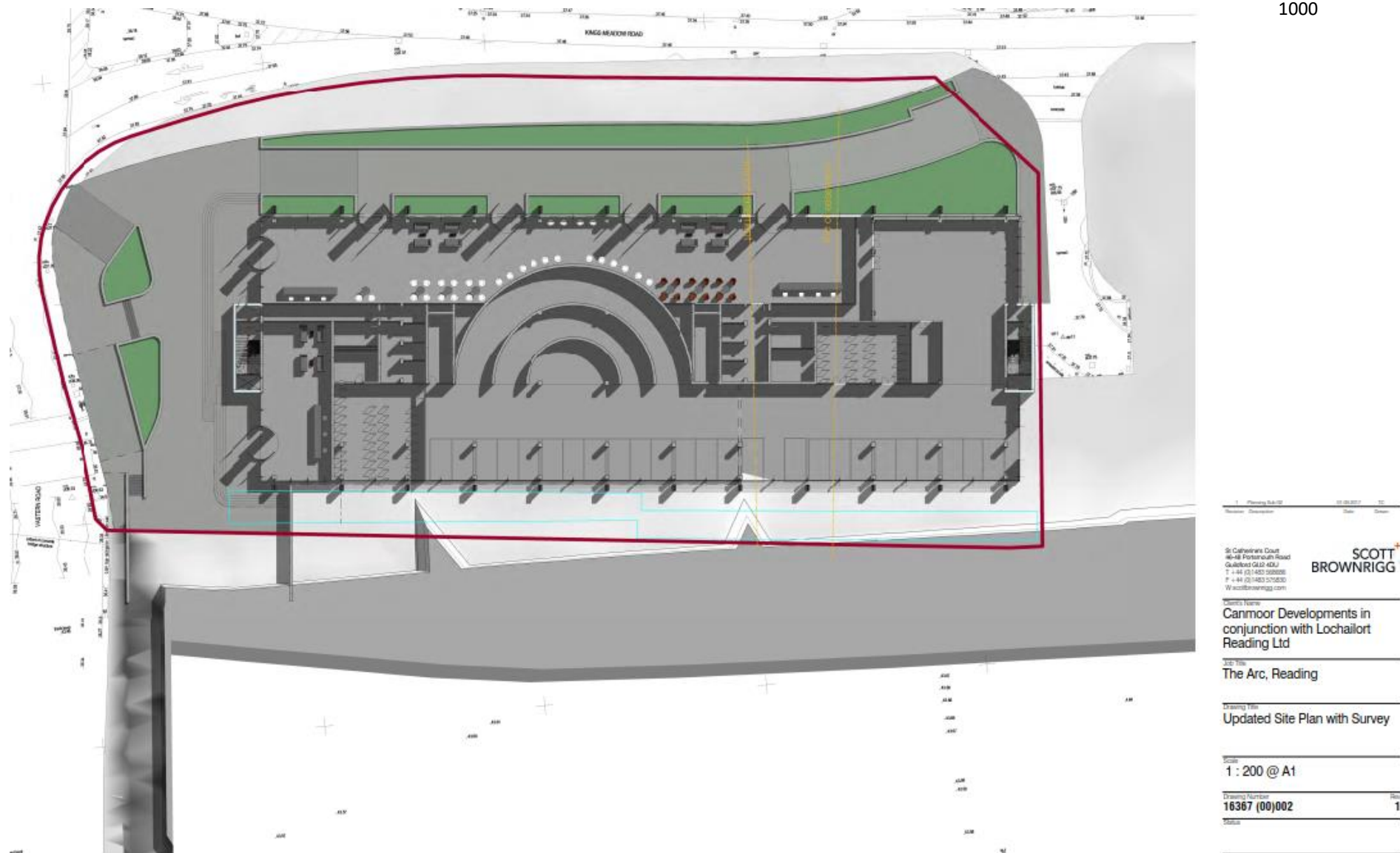
¹ This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's

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Figure 1.2 Aerial photograph showing location of site (image dated 25/3/17)



1000



1.5 PLANNING POLICY AND LEGISLATION

The National Planning Policy Framework (NPPF) has superseded the previous Planning Policy Statement 9 (PPS9), but in the absence of new specific guidance, the government's objectives for planning, as applied by local planning authorities in England, remain the same, and seek to protect and enhance biodiversity and geological conservation. Amongst other things, NPPF aims to integrate nature conservation into planning decisions, ensure that the UK's international and national obligations for site, species and habitat protection are fully met and look for development to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally

When deciding planning applications that may affect nature conservation, local planning authorities are required, amongst other things, to

1. ensure that appropriate weight is attached to designated sites of international, national and local importance
2. protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans
3. ensure that decisions are informed by adequate information about the potential effects of development on nature conservation
4. ensure that the range and population of protected species is sustained by adopting a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects

Under the Natural Environment and Rural Communities (NERC) Act 2006, Section 41 lists habitats and species of principal importance for the conservation of biodiversity in England. There are 56 habitats of principal importance included on the S41 list and 943 species of principal importance. **Table 1.1** lists some of the protected species and habitats that are present in England.

Table 1.1 List of relevant legislation

Legislation		
The Conservation of Habitats and Species Regulations (2010)	All species listed in Annex IV or II of the European Habitats Directive	For European protected species, it is a criminal offence to: Deliberately capture, injure or kill, disturb, take or destroy their eggs / damage or destroy a breeding or resting place / deliberately pick, collect, cut, uproot or destroy a wild plant. It covers, amongst others, all species of bats, great crested newt, dormouse and otter. Special Areas of Conservation (SAC) are strictly protected sites designated because of making a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). Annex II species include greater horseshoe, lesser horseshoe bat, Bechstein's and barbastelle bat.
Wildlife & Countryside Act 1981 (as amended)	Birds	Under Section 1 it is an offence to intentionally kill, injure or take any wild bird (or egg), intentionally damage or destroy the nest of any wild bird while that nest is in use or being built. It includes strict protection for certain species such as barn owl with of £5000 for each offence
	Mammals	Under Section 9, full protection (against killing, injury, disturbance or damage to place of rest) is afforded to red squirrel, dormouse, water vole, otter, pine marten and all bats .
	Reptiles	Under Section 9, full protection is afforded to sand lizard & smooth snake . Partial protection (making it an offence to intentionally kill or injure an individual) is given to adder, grass snake, slow-worm, common lizard
	Amphibians	Under Section 9, full protection is afforded to great crested newt & natterjack toad .
	Invertebrates	Under Section 9, full protection to a number of rare or localised species such as marsh fritillary and large copper, river pearl mussel and white clawed crayfish . Partial protection to stag beetle .
	Plants	Section 13 prohibits the unauthorised intentional uprooting of any wild plant species and forbids any picking, uprooting or destruction of plants listed on Schedule 8 and under Section 14 it is an offence 'to plant or otherwise encourage' the growth of Japanese Knotweed .
Protection of Badgers Act (1992)	Badger	Under the Act, badgers are protected from killing, injury or cruel treatment, and their setts (defined as a place or structures showing signs of current use by badger) are protected from damage or obstruction. It is an offence to disturb a badger whilst occupying a sett, although what constitutes disturbance is now limited to prolonged and sustained actions, not temporary or incidental.
Natural Environment and Rural Communities (NERC) Act 2006	Habitats and Species listed in Section 41 (England) or 42 (Wales)	The lists include habitats and species of principal importance for the conservation of biodiversity. These include UK BAP species and habitats, and for Reading, these include the following local priority species: black poplar, loddon lilly, glow worm, stag beetle, all bat species, water vole, black redstart, house sparrow, sand martin, great crested newt, slow worm, species rich hedges, broad-leaved woodland, urban habitats, parkland & veteran trees and semi-natural grassland .

2.0 Method

2.1 DESKTOP STUDY

A data search request was submitted to Thames Valley Environmental Records Centre (TVERC) requesting bat records within 2km and all other protected species records within 500m of the site in 2014. In addition, the MAGIC² and NBN³ websites were reviewed for information regarding nature conservation designations and species records. The GoogleEarth⁴ website was viewed to examine current and historic aerial photographs of the site, providing information of current and historic land use changes.

2.2 FIELD SURVEYS

A daytime survey of the site was undertaken on 24/11/14 and on 11/11/16 by Senior Ecologist Murray Bracewell MSc MCIEEM, and on 26/07/17 by Penny Lewns CEcol CEnv MCIEEM. Photos were taken of the site using a digital camera. The weather was dry with clear skies.

Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (1997) for vascular plant species.

2.2.1 Phase 1 Habitat surveys

A Phase 1 Habitat survey of the site was completed following the protocol described in The Handbook for Phase 1 Habitat Survey (JNCC, 2010) using standard notation and codes, and adding informative target notes for features of interest. As part of this assessment, a visual survey was carried out for invasive or notifiable plants such as ragwort *Senecio jacobaea*, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens grandiflora* and giant hogweed *Heracleum mantegazzianum*.

² <http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>

³ <http://www.nbn.org.uk/>

⁴ <https://earth.google.co.uk/>

2.2.2 Protected species surveys

A survey and an evaluation of the suitability of the site to support the following protected species was completed as follows:

- Any trees within or close to the site were examined using binoculars and torches to check for evidence of bats and/or features suitable for roosting bats, as described in the Bat Survey guidelines (Hundt 2012).
- A detailed visual survey was undertaken for badger *Meles meles* setts and field signs, according to the criteria used in the National Badger Surveys (Cresswell *et al* 1990).
- A visual survey for the presence of suitable habitat for dormice *Muscardinus avellanarius* was completed, and, if present, fallen hazel nuts were gathered to look for evidence of dormice feeding, according to the standard methodology given in Bright *et al* (1994).
- A visual survey for the presence of suitable habitat and for field signs (scats, footprints, nests or den sites) for a range of Biodiversity Action Plan (BAP) mammal species was carried out. The species surveyed for included brown hare *Lepus europaeus*, hedgehog *Erinaceus europaeus*, harvest mouse *Micromys minutus*, pine marten *Martes martes* and polecat *Mustela putorius*, in order to determine if these species were likely to be present.
- The banks of any water-courses and ditches were checked visually for signs of water vole *Arvicola amphibious* activity (i.e. holes, latrines and feeding signs), according to the standardised methodology given in Strachan & Moorhouse (2006). Where present, the banks of water courses and rivers were checked visually for signs of otter *Lutra lutra* activity (i.e. footprints, spraint and feeding signs), according to the standardised methodology given in RSPB, NRA & RSNC (1994).
- A visual survey of bird activity and suitable habitat (scrub, trees etc) was carried out during the site visit, following the methodology based on the Common Bird Census (Bibby *et al*, 1992).
- A day time survey for the presence of suitable habitat in around the site was carried out for reptiles and amphibians, according to the criteria given in the Great Crested Newt Mitigation Guidelines (English Nature, 2001), the Herpetofauna Workers' Manual (Gent & Gibson, 1998) and the National Survey 2008 Protocols (National Amphibian and Reptile Recording Scheme (NARRS))⁵.
- A visual survey for the presence of suitable habitat for native or white-clawed crayfish *Austropotamobius pallipes* was carried out according to the criteria given in Ecology of White-clawed Crayfish (Holdich 2003).

⁵ <http://www.narrs.org.uk/index.htm>

2.3 PRESENCE OR ABSENCE ASSESSMENT

The likelihood of occurrence was ranked as follows and relies on the current survey and evaluation of existing data.

- **Negligible** – while presence cannot be absolutely discounted, the site includes very limited or poor-quality habitat for particular species or species group. No local returns from a data search, surrounding habitat considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species.
- **Low** - on site habitat of poor to moderate quality for a given species/species group. Few or no returns from data search, but presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc.
- **Medium** – on-site habitat of moderate quality, providing most or all of the known key requirements of given species/species group. Local returns from the data search, within national distribution, suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, habitat severance, and disturbance.
- **High** – on site habitat of high quality for given a species/species group. Site within/peripheral to a national or regional stronghold. Good quality surrounding habitat and good connectivity.
- **Present** – presence confirmed from the current survey or by recent, confirmed records.

2.4 LIMITATIONS

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

3.0 Results

3.1 DESK TOP STUDY

3.1.1 Designated sites

There were no designated sites within 2km.

3.1.2 Protected species records

The data search returned a total of twenty one records; these included a historical record for slow worm *Anguis fragilis* dated 1982 approximately 390 south east of the site, a record for a field sign of otter *Lutra lutra* approximately 300m north of the site in 2010, a record for black redstart *Phoenicurus ochruros* dated 2005, 450m south west of the site, and records for common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Daubenton's bat *Myotis daubentonii*, brown long-eared bat *Plecotus auritus* and unidentified bat species within 2km.

It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

3.2 SURVEY RESULTS

3.2.1 Habitat Description

Hard Standing:

The majority of the site comprised tarmaced hard standing, used for car parking [see **Figure 3.1**]. There was a 4-5 m high brick retaining wall topped by a metal palisade fence to the railway line (southern boundary) and the remainder of the boundaries were absent or comprised a low wooden post and rail fence.

Buildings:

The only building on the site was a multi-storey carpark, which was constructed of block, brick and concrete. The former car showroom and workshops were demolished prior to the 2016 survey, with the cleared area now being used as a pay and display car park.

Trees and shrubs:

To the front and side of the multi-storey car park (north-east part of the site), there were four semi-mature Italian alder *Alnus cordata* with heavily-trimmed ornamental shrub planting at the bases dominated by *Cotoneaster* and *Berberis*. In addition, there was a small triangular bed of *Cotoneaster* and *Berberis*, with occasional emergent ash *Fraxinus excelsior* on the north-west corner of the site.

Adjacent to the railway line, to the rear of the multi-storey car park and along the southern boundary of the car park, there was a 1 m wide strip of land dominated by buddleia *Buddleja davidii*, with bramble *Rubus fruticosus* agg and sycamore *Acer pseudoplatanus* saplings.

Outside of the site boundary, on the pavement immediately to the north of the site, there was a mature London Plane tree *Platanus hispanica*, which showed evidence of previous management by pollarding [see **Photograph 8 & Target Note (TN) 1 on Figure 3.1**].

Amenity grassland

There was a 5-m wide strip of short-mown amenity grass on the western boundary of the site, which incorporated a 2-m strip of bare ground where pedestrians had cut across the corner. A narrow strip (0.5 m or less) of amenity grassland remained around the northern boundary, below the low wooden fence.

There were no invasive or notable species of plant present within the site.

3.2.2 Mammals

The multi-storey car park had brick clad walls with openings covered in steel railings. Fluorescent lighting was present and the building was well lit. At each end of the car park there was a stairwell, with a glass atrium lighting it from above. There were no fascias, barge

boards or soffits or tiled roof to the building. Therefore, it offered no potential roosting opportunities for bats.

None of the trees had sections of lifted bark, cracks or holes suitable for use by bats, and so offered negligible potential for bats.

Most of the buildings adjacent to the site offered low or negligible potential for bats, being modern commercial buildings. However, there were some traditional, pre-1950 buildings, in particular, the swimming pool at Kings Meadow Road, and former Lodge (22 Kings Meadow Road), which offered high potential for bats.

Bats are likely use the nearby River Thames, and the Kings Meadow Recreation Ground for commuting and foraging. Bats could forage around the London plane tree to the north of the site and the ornamental trees within the site, although these trees were isolated within hard standing area and are likely to be subject to high levels of noise and light disturbance. There are a number of mature trees closer to the river and surrounding the recreational ground, which are more likely to be exploited by bats.

There was no evidence of and no suitable habitat for any of the other protected or BAP mammal species.

3.2.3 Birds

No birds were noted during the survey. There was potential for common bird species, such as blackbird *Turdus merula*, to nest in the shrubs on the southern boundary (particularly to the rear of the multi-storey car park, where disturbance would be lower). Elsewhere, the high levels of disturbance meant birds were unlikely to nest in the shrubs, although they could forage on the cotoneaster berries during autumn. The site offered no suitable habitat for protected, priority or Biodiversity Action Plan (BAP) species of bird such as black redstart.

3.2.4 Amphibians & Reptiles

There was no suitable habitat within or immediately adjacent to the site for amphibians or reptiles, and there was no connectivity to areas of suitable habitat nearby (King Meadow Road Recreational Ground).

Photographs 1 to 8





5. Carpark



6. Carpark

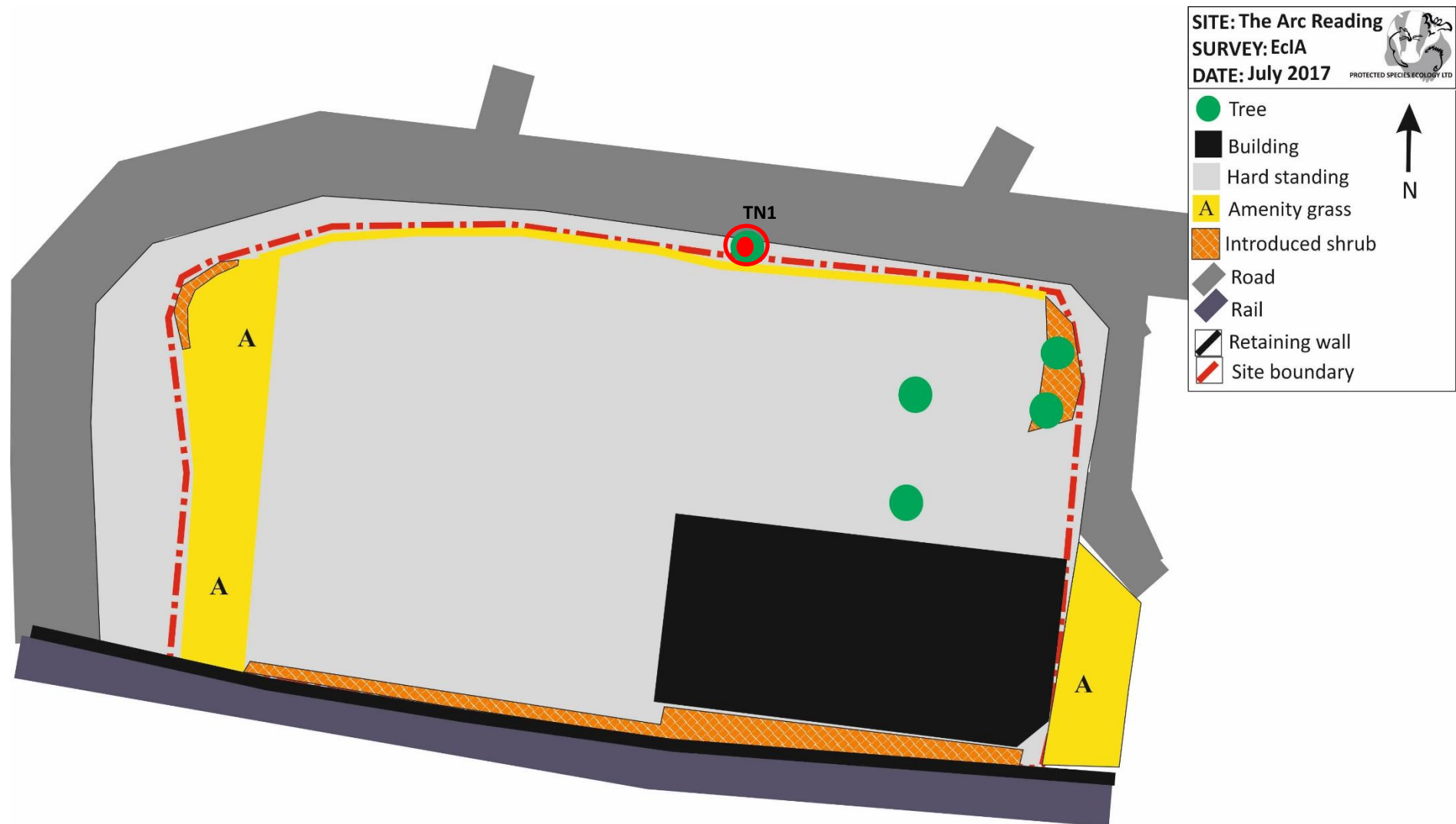


7. Ornamental shrub planting



8. London Plane tree (

Figure 3.1 Phase 1 Habitat plan



4.0 Assessment

4.1 CONSTRAINTS ON STUDY INFORMATION

There was no limit on visibility or access.

4.2 POTENTIAL IMPACTS

4.2.1 Habitat

The site comprised hard standing, amenity grass and ornamental shrub/trees, all with low ecological value. The London Plane tree to the north of the site was more mature, but its position (on the road-side) meant that its ecological/biodiversity value was severely limited.

The proposed development would result in the loss of all existing habitats, including the London Plane tree (which will be removed as a result of a separate planning application to widen the road). However, given the low ecological value of the habitats within the site, these losses would have a negligible impact on biodiversity.

4.2.2 Protected/priority species

The building offered low or negligible potential for bats and none of the trees had features likely to be used by bats for roosting. Therefore, there would be no direct impact on bats through re-development of the site.

The site offered limited foraging opportunities for bats and was not part of linear corridor or other feature likely to be used by bats for commuting; therefore, there would be no indirect impacts on bats as a result of the re-development of the site.

There was potential for nesting birds to exploit the small areas of ornamental shrub planting during the breeding season (March to September inclusive). Provided the vegetation was removed at a time when birds were not nesting or following an

inspection by an ecologist to verify there were no birds present, the loss of shrubs/trees would have a no impact on nesting birds.

New landscaping associated with the development could provide replacement nesting/foraging opportunities for bird species. With the inclusion of fruiting/flowering varieties of shrubs/trees, the impact on bird species is likely to be neutral to positive.

5.0 Recommendations

5.1 FURTHER SURVEY

None required. However, as habitat and potential usage by species can change, if development works does not begin within twelve months of the date of this report, further survey work will be required to identify any change of use of the site by protected species.

5.2 MITIGATION MEASURES

The proposed development will result in the loss of an area of habitat with low ecological value and low/negligible potential for protected/priority species, 3except for nesting birds during the period March to September.

To avoid harm to nesting birds shrubs and trees should be removed outside of the bird nesting season (i.e. during the period late September to February inclusive). Outside of this time period, vegetation must be checked by an ecologist for evidence of nesting birds, prior to removal. The inspection will take place no more than 48 hours before clearance is due to take place.

5.3 BIODIVERSITY ENHANCEMENTS

To enhance the site, it is recommended that shrubs/trees providing high nectar content flowers and/or fruit (berries) are included in the planting scheme.

6.0 References

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APPENDIX 1 Desktop Survey Results

Table A1 Redacted bat records within 2 km of site from TVERC (2014)

Common Name	Date	Type of Record	Comment
an unidentified bat	01/09/2009	reported to recorder	Droppings around house
Unidentified Bat	09/07/1991	house	
Unidentified Bat	14/01/1993	building	
Unidentified Bat	24/07/1991	house	
Unidentified Bat	18/07/1983	house	
Unidentified Bat	21/07/1986	house	
Unidentified Bat	11/06/1991	house	
Daubenton's Bat	24/08/1998	aural bat detector	
Daubenton's Bat	30/08/1998	aural bat detector	
Daubenton's Bat	13/08/1999	aural bat detector	
Daubenton's Bat	26/08/1999	aural bat detector	
Daubenton's Bat	21/08/2000	aural bat detector	
Daubenton's Bat	12/08/2000	aural bat detector	
Daubenton's Bat	04/08/2001	aural bat detector	
Daubenton's Bat	19/08/2001	aural bat detector	
Daubenton's Bat	10/08/2002	aural bat detector	
Daubenton's Bat	17/08/2002	aural bat detector	
Daubenton's Bat	07/08/2003	aural bat detector	
Daubenton's Bat	18/08/2003	aural bat detector	
Daubenton's Bat	04/08/2004	aural bat detector	
Daubenton's Bat	16/08/2004	aural bat detector	
Daubenton's Bat	01/08/2005	aural bat detector	
Daubenton's Bat	16/08/2005	aural bat detector	
Daubenton's Bat	25/07/1991	other	
Daubenton's Bat	17/06/2001	field record	
Daubenton's Bat	05/07/2004	aural bat detector	
Daubenton's Bat	01/08/2008	field record	
Daubenton's Bat	22/05/2011	aural bat detector	
Noctule Bat	1999	field record	
Noctule Bat	01/01/1999 - 31/12/1999	field record	
Noctule Bat	21/05/2001	aural bat detector	
Noctule Bat	10/04/2007	aural bat detector	
Pipistrelle Bat species	04/06/1993	house	
Pipistrelle Bat species	23/07/1993	house	
Pipistrelle Bat species	1994 - 2000	Roost	
Pipistrelle Bat species	12/07/1993	house	
Pipistrelle Bat species	2002	field record	
Pipistrelle Bat species	2002	field record	
Pipistrelle Bat species	22/08/2011	Injured Bat Record	
Pipistrelle Bat species	1994 - 2000	field record	
Pipistrelle Bat species	29/06/1987	house	
Pipistrelle Bat species	02/06/1993	house	
Pipistrelle Bat species	07/06/1993	house	
Pipistrelle Bat species	13/12/1994	building	
Pipistrelle Bat species	19/06/1997	house	
Pipistrelle Bat species	20/04/2011	Injured Bat Record	
Pipistrelle Bat species	22/06/2011	Injured Bat Record	
Pipistrelle Bat species	22/06/2011	Injured Bat Record	
Pipistrelle Bat species	03/08/1993	house	
Pipistrelle Bat species	30/04/1994	house	
Pipistrelle Bat species	2002	field record	
Pipistrelle Bat species	01/08/2011	aural bat detector	
Pipistrelle Bat species	21/05/2001	aural bat detector	
Nathusius' Pipistrelle	1997	field record	
Nathusius' Pipistrelle	01/01/1997 - 31/12/1997	field record	
Common Pipistrelle	15/06/2009	reported to recorder	
Common Pipistrelle	01/07/2011	reported to recorder	
Common Pipistrelle	22/05/2011	aural bat detector	

Common Name	Date	Type of Record	Comment
Common Pipistrelle	20/04/2011	Injured Bat Record	
Common Pipistrelle	27/03/2007	aural bat detector	
Soprano Pipistrelle	01/05/2010	reported to recorder	Small roost
Soprano Pipistrelle	24/07/2012	aural bat detector	
Soprano Pipistrelle	22/05/2011	aural bat detector	
Soprano Pipistrelle	10/04/2007	aural bat detector	
Soprano Pipistrelle	27/03/2007	aural bat detector	
Long-eared Bat species	24/09/2005	dung/droppings/frass/pellet, etc.	
Brown Long-eared Bat	1998	field record	
Brown Long-eared Bat	01/01/1998 - 31/12/1998	field record	
Brown Long-eared Bat	01/07/2011	reported to recorder	