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5th May 2016

John Hunt
SG Capital
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1-6 Yarmouth Place
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Dear John,

Jacksons Corner, Reading – Ecological Appraisal and Bat Building Inspection

Thank you for commissioning EPR to carry out an ecological survey to inform the proposed redevelopment of 1-9 King's Road, known as Jacksons Corner.

Jacksons Corner is located within Reading city centre and is surrounded by numerous large commercial buildings (National Grid Reference: SU717 734) (**Map 1**).

Redevelopment proposals currently comprise of the conversion of the existing buildings into flats and may incorporate living roof spaces into the design. I have completed an Ecological Appraisal and Bat Building Inspection of the buildings within the site boundary with the aim of identifying potential ecological constraints and opportunities associated with the current plans for the site as fully as possible. This letter provides a summary of survey methods, results and arising recommendations following a site visit.

Zone of Influence

In order to identify the full extent of potential ecological issues associated with the redevelopment proposals at the Site, I have considered the likely Zone of Influence (ZOI) of the proposed development of the site (CIEEM, 2016). Taking into account the type and scale of the current proposals, I consider that the potential Zone of Influence of the scheme, for the majority of biophysical changes, is likely to extend only to the building themselves and the immediately adjacent land.

Relevant Guidance, Legislation and Policy

Legislation and policy relevant to ecological assessment works at Jacksons Corner is set out under **Appendix 1** and summarised below.

In undertaking this assessment, I have had regard to best practice guidance, including that detailed within the Guidelines for Ecological Impact Assessment (EclA) in the UK and Ireland (CIEEM, 2016) and the Bat Conservation Trust (BCT) Bat Surveys, Good Practice Guidelines (BCT, 2016).

In preparing my recommendations, due consideration has been given to biodiversity conservation legislation, planning policy and nature conservation priorities, both national and international, including:

- The National Planning Policy Framework (NPPF);
- Legislation providing protection for sites and species, including the Conservation of Habitats and Species Regulations 2010 (the 'Habitats Regulations') and the Wildlife and Countryside Act 1981 (as amended);
- Biodiversity conservation priorities under the Natural Environment and Rural Communities (NERC) Act 2006, and Reading Biodiversity Action Plan (BAP).
- Nature conservation policy under the local planning system, namely that detailed within the existing Reading Borough Council Core Strategy (2008) (in place ahead of an emerging Local Plan document).

Methodology

Methods employed for completion of the Ecological Appraisal and Bat Building Inspection are set out under **Appendix 2** to this document and described in further detail, where necessary, below. The Ecological Appraisal and Bat Building Inspection comprised of a desktop study and two site visits to Jacksons Corner to access all parts of the buildings located within the site. I (a licensed bat ecologist: Class Licence 2015-18270-CLS-CLS), visited the site with my colleague Daniel O'Sullivan on Thursday 17th March and Wednesday 30th March 2016.

Desktop Study

As part of the desktop study, freely obtainable data from the Government's Multi-Agency Geographic Information for the Countryside (MAGIC) tool was sourced and a submission was made to the Thames Valley Environmental Records Centre (TVERC). These searches were necessary to identify sites designated for their conservation value and existing European Protected Species and notable species records within 2km of the Site.

Designated Sites

The locations of designated sites identified during the search are shown on **Map 1**.

Statutory

No statutory designated sites are located within 2km of the Site.

Non-Statutory

Nine non-statutory designated Local Wildlife Sites (LWS) sites are located within 2km of the Site. The closest is Holy Brook LWS which comprises of the brook, alder and willow lined banks and neighbouring meadows and is located approximately 1km South-east of the site. The Site is located approximately 100m north of the River Kennet. Further downstream, the River Kennet becomes a LWS which supports a chalk river which is a UK Biodiversity Action Plan (BAP) Priority Habitat. Further upstream, the River Kennet joins the River Thames with two LWS located nearby. Henley Road Pit LWS supports over wintering wildfowl and The Coal, Kennetmouth & Kings Meadow East LWS which supports a mosaic of habitats.

Recommendations with regards to designated sites

Due to the low-impact nature of current proposals and the isolation of the majority of designated areas from the Site by development and urban infrastructure, I do not consider that any designated conservation interests will be affected by the proposals at the site.

Protected Species

Relevant protected species records are shown on **Map 2** and discussed further in the below text, as appropriate.

Habitats and Botany

The site currently comprises entirely of buildings. There are no habitats or botanical features of interest currently within the site. The only plants present are a small number of common early successional species which have become established in gutters and crevices around the building.

Recommendations with regards to habitats and botany

To include botanical features and habitats which may support locally important species, living roof spaces could be incorporated into the plans. A substrate depth of 10-20cm should be used to create a semi-extensive (or deep) living roof if the buildings on which living roof spaces are to be included are suitable to support the weight. A semi-extensive living roof will increase the planting possibilities and should require less maintenance long term. For the avoidance of doubt, this recommended substrate depth is the depth of the “soil and substrate” layer of the roof alone, and does not inclusive of the depth of other layers, such as the drainage layer or filter sheet.

The nature of the substrate used should vary across the areas of green roof, with different diameters of particle size being used in different areas of the substrate. The core (“typical”) specification will be a low nutrient based aggregate such as crushed brick or expanded clay pellets with around 10% organic matter. This specification should be both beneficial for biodiversity, and relatively free-draining to minimise weight increase during heavy downpours. Other areas should be comprised of sandier substrate mixes, and patches of shingle or bare earth with the occasional larger boulder or log would be both beneficial to biodiversity, and increase the visual amenity and interest of the roof. This specification should also provide valuable foraging habitat for Black Redstart, a rare bird that is listed as a Priority Species on the Reading Biodiversity Action Plan (BAP) and is also on the National BAP, and has been recorded within 2km of the site (**Map 2**). A commercially available “living roof” seed mix continuing native species should be used. If living roof spaces are to be accessed by residents of the proposed flats, a higher organic content matter may be used and a “wild flower garden/meadow” seed mix with native species or non-native species with a known value to wildlife may be more suitable. Dead wood from nearby nature reserves or woodland may also be incorporated into the living roof as this should increase invertebrate diversity and may help “seed” the green roof with mosses and lichens.

Protected Species

As part of the Ecological Appraisal, the potential for onsite habitats within the Zone of Influence to support protected species was also assessed. Results and recommendations in relation to relevant protected species considerations are provided below.

Bats

Specific internal and external inspection of all areas of all buildings within the Site was completed with respect to the Sites potential to support roosting bats. Different buildings within the Site are described separately and shown in **Map 3**. As there is connectivity between most of the buildings within the site, the potential to support roosting bats has been determined for the Site rather than

separate individual buildings. To place the site in context with its surroundings, photos of the buildings and nearby habitat features of interest are shown in **Appendix 3** with locations of where photos were taken from shown in **Map 4**. Survey results are shown as Target Notes briefly described below with full descriptions given in **Appendix 4** and locations of target notes shown in **Map 5**.

Building Inspection

I understand that the department store which occupied much of the Site closed in 2013. Between 2013 and January 2016, parts of building had occasional use as a bicycle workshop amongst other things. I understand that the flats which comprise Building B were vacated during or before the summer of 2015. Access is open between Buildings A, C, D, E. Building B is separated from the other buildings, however, there are many adjoining walls which may allow bats to move between buildings where gaps and access is present.

Building A is located in the south-west corner of the Site and is largely comprised of the original department store building (P1, P2, P3, P4). This building is four stories high, is largely flat roofed and has a basement area. The majority of this building is comprised of large open rooms with large windows facing on to King's Road. Access into the building is possible through gaps around vents and windows (T1, T2, T14). Internally roosting opportunities are available in gaps between exposed timber and mortar and behind chimney breasts (T3, T4). The basement also provides roosting opportunities for bats (T5). A temperature of 10.5°C was recorded in the basement which has a number of entrance points, all of which are open, allowing access, but also circulation of air. Externally, gaps in brickwork, missing tiles and gaps behind fascia provide possible roosting opportunities (T11, T12, T13).

Building B, located in the south-east corner of the Site contains a modern flat conversion (P5, P6, P7). The loft space is open with a bitumen felt lining. The L-shaped space is approximately 1.5m high and has a partition wall half way along its longest length with access into the different section through a series of three loft hatches. A temperature of 17.5°C was recorded in the loft space. In the loft, access to cavity walls, gaps in brickwork and voids behind the bitumen felt lining are suitable for roosting bats (T22, T23, T24). Externally, access under raised hanging tiles and gaps in mortar may lead to suitable roost features (T15, T25).

Building C, located in the north-east corner of the Site is a three story warehouse building with a flat roof, but a pitched area at the northern end of this building (P8, P9, P10). Light enters the building through large south facing windows, making this building generally light and airy. Dark areas where potential roost features are present are behind boarding and in the voids behind the pitch on the northern aspect of the building (T6, T7). Building C had no obvious external features suitable for roosting bats.

Building D is located to the north of the Site is brick built with a corrugated asbestos type material pitched roof (P11, P12). A sky light is located in the centre of the roof with inaccessible timber clad areas either side. Features suitable for roosting bats may be present behind the timber cladding (T8). Externally, cracks and gaps in the roof covering may provide access into the building or the timber clad areas (T16, T17).

Building E is an old cottage which possibly pre-dates the department store (P13, P14). Internally, this building is in a poor state of repair, with missing plaster exposing timberwork behind which, voids and crevices may be present (T9). Externally missing tiles and raised ridge tiles potentially allow access to voids and crevices in the roof space (T18, T19).

There are a series of other areas within the building which connect the previously identified buildings. These other areas are in the large part, single story and have been built as extensions to connect the other buildings together (P15). Within these other areas, a gap in the brickwork provides access to cavity walls (T10). Externally, these other areas have a variety of roof structure and covering. Gaps between boarding and under slates and ridge tiles may lead to voids and crevices suitable for roosting bats (T20, T21).

Although no evidence of roosting bats was recorded during the survey, the buildings have a number of features offering potential to support roosting bats.

Foraging and Commuting Habitat

As the site is located in Reading city centre, expansive nearby foraging habitat is limited. The River Kennet, located approximately 100m south of the Site may however provide an important commuting corridor for bats within the city and may also provide foraging opportunities. Due to the proximity of the site to the River Kennet and the presence of Local Wildlife Sites within 2km of the site, some of which are associated with the River Kennet, this river should be considered a potential foraging and commuting habitat for any bats which may roost at Jacksons Corner.

Recommendations with regards to bat roosting potential

In light of the presence of access points for bats to gain entry into the buildings, a number of internal and external features with suitability to support roosting bats, the proximity of the site to the River Kennet and multiple existing bat records within 2 km of the site (**Map 2**), I consider that the buildings within the Jacksons Corner Site offers a **low potential** to support roosting bats.

All bat species are European Protected Species, protected under the provisions of the Wildlife and Countryside Act (1981) (as amended) and Habitats Regulations (2010). It is an offence to kill, injure or disturb any bat or disturb or destroy their roost sites. As I consider the Jacksons Corner site to offer a **low potential** to support roosting bats, in line with current guidelines (BCT 2016), I recommend that further survey work be conducted in order to assess the presence or likely absence of roosting bats within the building.

Further survey works should comprise of one dusk emergence or dawn re-entry surveys, during which surveyors will be positioned at previously-identified vantage points, with uninterrupted sight lines of the buildings, to observe any bats as they exit or re-enter roosts and record any bat activity in vicinity of the site. Current guidelines (BCT 2016) state that bat activity surveys must occur within the peak bat activity season which runs from the middle of May to the end of August inclusive.

To enhance the suitability of the site for bats, once established, the living roof should support insects which in turn may support foraging bats. Bat boxes suitable for species recorded close to the site and adapted to urban environments and/or foraging over nearby water courses such as Common Pipistrelle, Soprano Pipistrelle and Daubenton's Bat should be installed on external walls of the buildings. These three species of bat are listed as Priority Species under the Reading Biodiversity Action Plan (BAP).

Nesting Birds

Some externally accessible bat roosting features in the building such as gaps and crevices as described above have potential to support nesting activity by small species of bird such as House Sparrow (a Priority Species under the Reading BAP). A pigeon was also recorded on a balcony in the south-east corner of Building B and droppings, likely to be pigeon were recorded inside Building C.

Nesting birds are protected from disturbance and harm under the provisions of the Wildlife and Countryside Act (1981) (as amended). The potential for disturbance to nesting birds during works should therefore be considered.

Recommendations with regards to nesting birds

In order to avoid potential disturbance to nesting birds, any necessary removal or alteration of building features with potential to support nesting activity should be minimised and restricted to completion outside of the nesting bird season, which runs from March to September inclusive, however it should be noted that pigeons can nest all year round.

Should it be necessary to complete works within the breeding season, a nesting bird check may need to be completed. The check will entail a site visit by a suitably-qualified ecologist, no earlier than 24 hours prior to commencement of disturbing works, in order to inspect affected areas for active nests or signs of breeding bird activity. If breeding activity is identified during the survey, a suitable buffer zone will be introduced around the area, within which no disturbing works can proceed until a repeat visit by a suitably-qualified ecologist has confirmed all chicks have fledged.

To enhance the suitability of the site for birds, once established, the living roof should provide a valuable foraging resource for black redstart which is a Priority Species under the Reading BAP and also listed on the National BAP and recorded close to the Site. Bird boxes suitable for House Sparrows should be installed on external walls of the buildings. House Sparrows are a Priority Species under the Reading BAP and are currently experiencing a national decline in numbers.

Summary of Recommendations in Respect of Identified Constraints and Opportunities

Features of potential ecological interest identified during the Ecological Appraisal and Bat Building Survey and associated recommended actions, including their associated timescales, are detailed below.

Ecological Receptor	Recommended Action	Timings
Habitats and Botany	The inclusion of a living roof space will enhance biodiversity. If possible a semi-extensive living roof should be used with a substrate suitable for Black Redstart and seed mix containing native plant species.	During development design/implementation.
Bats	Complete a bat emergence or re-entry survey and appropriate reporting to determine presence or likely absence of bats. Install bat boxes suitable for Common Pipistrelle, Soprano Pipistrelle and Daubenton's bat species.	Middle of May to the end of August. During development design/implementation.
Birds	Nesting bird check to be completed by a suitably-qualified ecologist a maximum of 24 hours before commencement of any potentially disturbing works within the breeding season. Install bird boxes suitable House Sparrows and ensure living roof suitable for to support foraging Black Redstart.	If works commence between March and September inclusive. During development design/implementation

I consider that, should the above recommendations and any mitigation requirements emerging from further survey work be implemented at Jacksons Corner, existing proposals will accord with the requirements of relevant planning policy and legislation. It is therefore not considered that ecological interests should present any significant barrier to redevelopment of the Site.

I trust that the above provides you with sufficient information at this stage. Should you have any further enquiries, please do not hesitate to contact me.

With kind regards

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'P Brown', is positioned above the printed name.

Philip Brown BSc (Hons)
Assistant Ecologist, EPR Ltd

MAPS AND APPENDICES

Map 1 Site Location & Nature Conservation Designations

Map 2 Relevant Protected & Notable Species Records

Map 3 Buildings

Map 4 Photo Locations

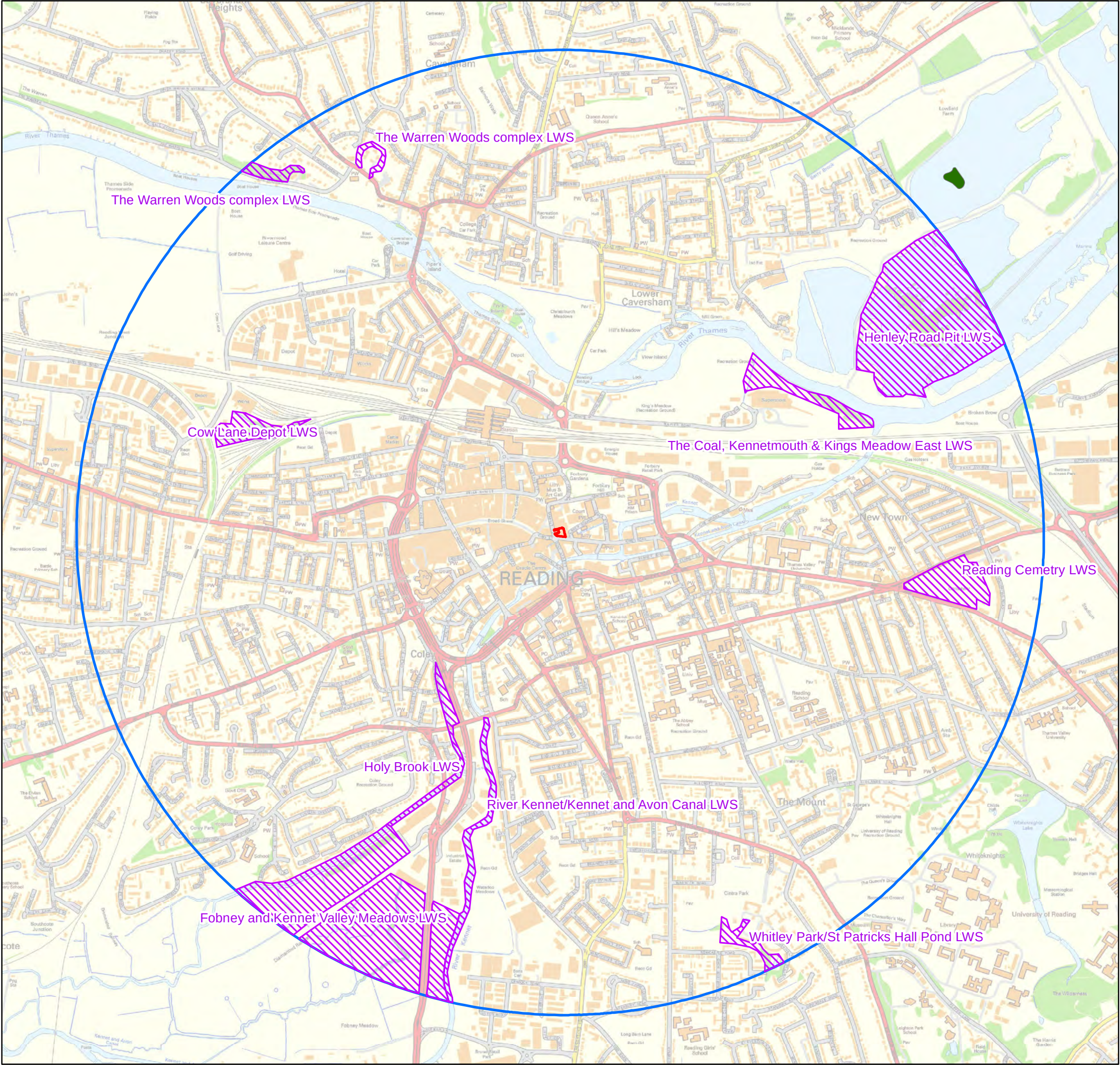
Map 5 Target Notes

Appendix 1 Relevant Nature Conservation Planning Policy and Legislation

Appendix 2 Ecological Appraisal and Bat Building Inspection Methodology

Appendix 3 Photos from Bat Building Inspection

Appendix 4 Target Notes from Bat Building Inspection



MAP 1 Site Location & Nature Conservation Designations

KEY

-  Site boundary
-  2km linear distance from site boundary
-  Ancient Woodland
-  Local Wildlife Site (LWS)

SCALE: 1:15,724 at A3

0 250 500 750 1,000 Metres



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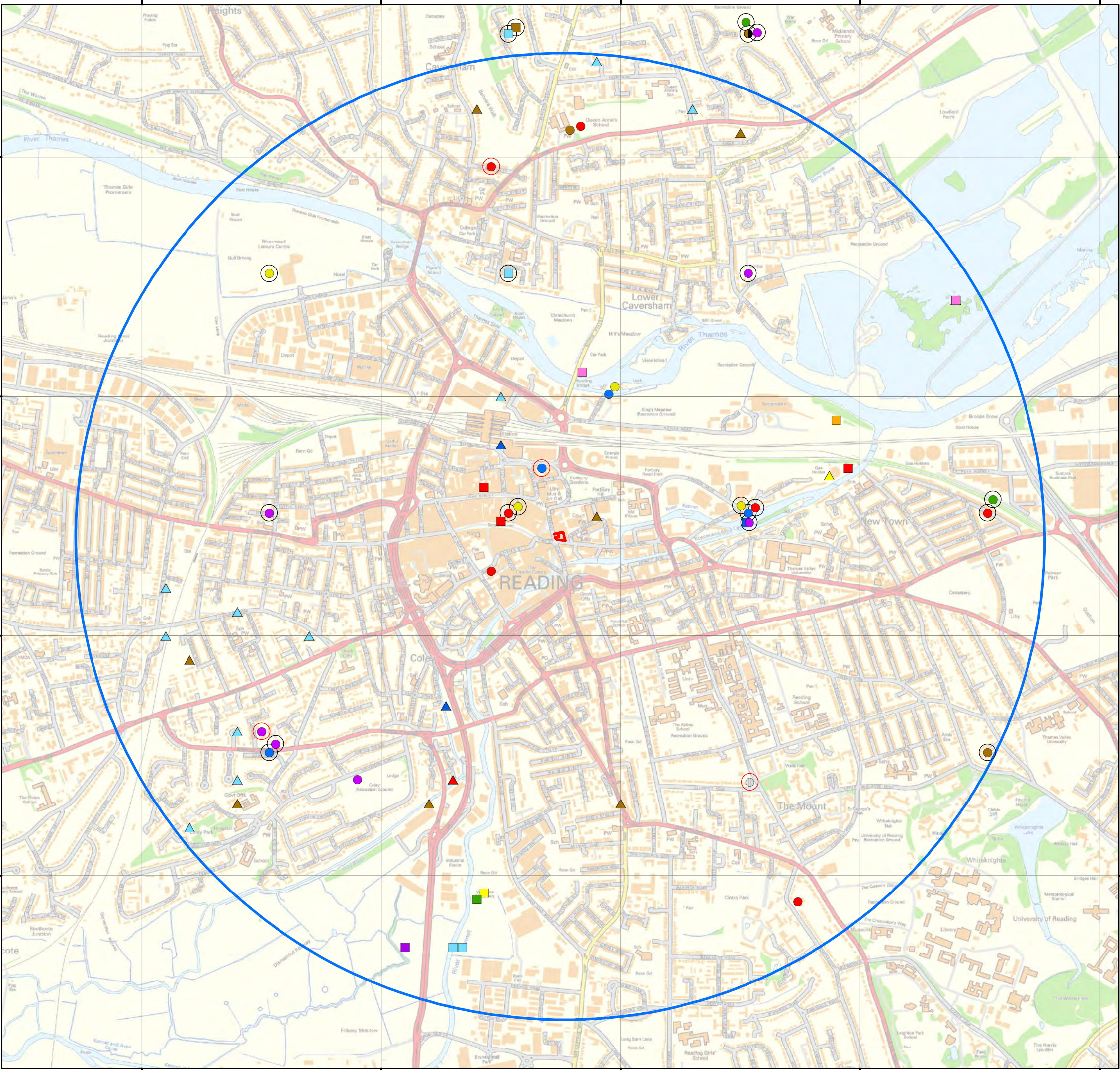
PROJECT: Jacksons Corner

DATE: May 2016

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P??/??

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MAP 2 Relevant Protected & Notable Species Records

KEY

- Site boundary
- 2km linear distance from site boundary
- Bat roost
- Record only accurate to 1km. Record placed in centre of 1km grid square.

Bats

- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Bat species
- Brown Long-eared Bat
- Long-eared Bat species
- Daubenton's Bat
- Noctule Bat
- Serotine
- Unidentified Bat

- Dunnock
- Eurasian Badger
- European Eel
- European Otter
- European Water Vole
- Honey-buzzard
- House Sparrow
- Kingfisher
- Peregrine
- Song Thrush
- Starling
- Stock Dove
- West European Hedgehog

Other species

- Black Redstart
- Caspian Tern
- Common Tern

SCALE: 1:15,724 at A3

0 250 500 750 1,000 Metres



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PROJECT: Jacksons Corner

DATE: May 2016

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MAP 3 Buildings

KEY

-  Site boundary
-  Buildings

SCALE: 1:200 at A3

0 2.5 5 7.5 10 Metres



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DATE: May 2016

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MAP 4 Photo Locations

KEY

Site boundary

Photo location with ID and direction arrow

SCALE: 1:400 at A3

0 2.5 5 7.5 10 Metres



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CLIENT: SG Capital

PROJECT: Jacksons Corner

DATE: May 2016

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MAP 5 Target Notes

- KEY
-  Site boundary
 -  TargetNotes

SCALE: 1:200 at A3

0 2.5 5 7.5 10 Metres



CLIENT: SG Capital

PROJECT: Jacksons Corner

DATE: May 2016

Appendix 1

Relevant Nature Conservation Planning Policy and Legislation

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This Appendix is intended to provide an overview of the main features of legislation and policy relating to nature conservation in England and the implications for development.

KEY WILDLIFE LEGISLATION

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010¹ (known as the “Habitats Regulations”) transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the European “Habitats Directive”) into UK legislation. These regulations consolidate all the various amendments made to the preceding “Conservation Regulations” 1994 for England and Wales.

The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.²

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. The above actions can be made lawful through the granting of licenses after Natural England (the licensing authority in England) is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild populations of the EPS.

Further information on SPAs, SACs and European Protected Species (Licensing and Protected Species) is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981³ is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

¹ The Conservation of Habitats and Species Regulations 2010. Available from: <http://www.legislation.gov.uk/ukSI/2010/490/contents/made>

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <http://www.legislation.gov.uk/ukSI/2012/1927/contents/made>

³ The Wildlife and Countryside Act 1981. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

Table A1.1: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000⁴ have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

⁴ The Countryside and Rights of Way (CRoW) Act 2000. Available from: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006⁵ was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England⁶. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on species and habitats of Principal Importance is provided in the relevant sub-section of this Appendix.

PLANNING POLICY & GUIDANCE

Listed below is the main planning policy and government guidance that relates to the conservation of nature and development at all levels of government.

National Level

National Planning Policy Framework (NPPF)

The National Planning Policy Framework⁷ sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. It specifies that when determining planning applications, local planning authorities should aim to **conserve and enhance** biodiversity by applying the following principles:

⁵ The Natural Environment and Rural Communities Act 2006. Available from: www.legislation.gov.uk/ukpga/2006/16/contents

⁶ The S40 list replaces the previously prepared list of habitats and species of Principal Importance for the conservation of biological diversity in England that was published under Section 74 (2) of the Countryside and Rights of Way Act 2000.

⁷ DCLG (2012). *National Planning Policy Framework*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions *may* be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05⁸ to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they and set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;

⁸ ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*. Available from: <http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

Good Practice & Standards

DCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG)⁹ was launched by the Department for Communities and Local Government (DCLG) as a web-based tool in March 2014 to accompany the National Planning Policy Framework. The webpages are set out in an accessible Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* (see [below](#)). It also lists a number of issues that should be considered in relation to biodiversity, including local biodiversity plans and strategies, Section 41 species and habitats, the need for ecological surveys, local ecological networks, and statutory obligations with regard to internationally and nationally designated sites – all of which are discussed throughout this Appendix.

The guidance also requires that “an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate” and recommends that “local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development.”

Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available to help manage biodiversity through the development process. Of particular note is *British Standard BS42020:2013 Biodiversity – Code of practice for planning and development*,¹⁰ published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*.

This document is designed to complement the National Planning Policy Framework and is aimed at organisations concerned with ecological issues throughout the planning process, including local authorities, developers, planners and ecological consultants. It sets out clear, step-by-step recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high quality and appropriate

⁹ DCLG (2014). Planning Practice Guidance. Available from: <http://planningguidance.planningportal.gov.uk/>

¹⁰ The British Standards Institution (2013). BS42020:2013 Biodiversity – Code of practice for planning and development. Available from: <http://shop.bsigroup.com/ProductDetail/?pid=000000000030258704>

ecological information, effective decision making, and high standards of professional conduct and competence.

Local Level

Ahead of the publishing of an emerging Local Plan document, Reading Borough Council's Core Strategy (2008) provides interim planning policy for the borough. It sets out the following requirements for developments in relation to biodiversity:

"CS36: Biodiversity and Geology

- a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.

On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:

- i. The need for development clearly outweighs the need to protect the value of the site; and
 - ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.
- b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.
- c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to "promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets" (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from

the international through to the district level. An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework*¹¹ and individual national biodiversity strategies. The UK framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010. The Framework's overall vision is that "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*¹² is the national biodiversity strategy, which has the stated mission "(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets objectives relating to terrestrial and marine habitats and ecosystems, species and people. These include:

- Establishing coherent and resilient ecological networks, described as "a network of high quality sites, protected by buffer zones, and connected by wildlife corridors and smaller, but still wildlife-rich, 'stepping-stone' sites";
- Taking targeted action for the recovery of priority species whose conservation is not delivered through wider habitat-based and ecosystem measures ;
- Establishing Nature Improvement Areas and Marine Protected Areas;
- Bringing more SSSIs into favourable condition;
- Reducing environmental pressures by working with sectors such as agriculture, forestry, planning and development.

A network of 48 Local Nature Partnerships have been set up across England to help deliver these objectives.

Note that as these changes are still relatively new, some local plans and government guidance documents/circulars still refer to the UK BAP and 'UK BAP priority habitats and species'. These habitats and species are listed under Section 41 of the NERC Act, and **remain a material consideration in the planning process.** They are now described as 'Species/Habitats of Principal Importance', though they are also commonly referred to as 'Section 41 Species/Habitats' or simply 'Priority Species/Habitats'. Further guidance is given in the relevant sections below.

¹¹ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

¹² DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

Local level

Despite the changes to national level biodiversity policy described above, county and district level Biodiversity Action Plans (BAP'S) still apply. The Reading BAP identifies a number of priority species and habitats including the following of relevance to the Site:

Species:

- Bats (all species found in Reading).
- House Sparrow.

Habitats:

- Urban 1.
- Urban 2.

Delivering Biodiversity Opportunities

Where practicable, opportunities should also be sought to achieve a **net gain** (i.e. enhancement) of biodiversity. Support for biodiversity enhancement is provided in the Public Authority 'Biodiversity Duty' under the NERC Act 2006 and in the key principles of the NPPF, as described above.

Enhancement projects may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable urban drainage schemes (SUDS) and green roofs. Planning conditions and obligations are increasingly being used to mandate biodiversity enhancement on or off a development site, either through design or through financial support.

Many ideas for incorporating ecological enhancement into planning and development can be found in the biodiversity action plans and/or strategies relevant to the policy or development area, or through initiatives led by the Local Nature Partnership. At the national level, twelve Nature Improvement Areas were set up in 2012 in order to deliver landscape-scale conservation objectives, and many regions and counties have also identified and mapped 'Biodiversity Opportunity Areas', 'Nature Maps' or 'Strategic Nature Areas' where conservation action such as habitat creation and restoration will deliver the greatest benefits for biodiversity.

Other sources of ideas and opportunities include schemes led by conservation NGOs, such as the Wildlife Trusts' 'Living Landscapes' and the RSPB's 'Futurescapes', which are working in partnership with landowners and local communities across the country to restore ecosystems and ecological networks.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites

Internationally Important Sites

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2010 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in Great Britain. Ramsar sites are, as a matter of national planning policy, subject to the same strict protection. Any plan or project considered likely to affect a SAC, SPA or Ramsar site must be subject to an assessment, as set out under Regulation 61, and Regulation 102 in respect of Land Use Plans.

Ramsar sites are wetlands of international importance. The majority of terrestrial Ramsar sites in England are also notified as SPAs and/or Sites of Special Scientific Interest (SSSIs).

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the EU Habitats Directive 1992. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the EU Birds Directive 1979. Together, SACs and SPAs make up the Natura 2000 network of Sites of Community Importance throughout Europe.

Development Control

Development proposals or damaging activities which may affect a European or international site will be subject to rigorous examination by local planning authorities (or other 'competent authority'), through a process commonly referred to as 'Habitats Regulations Assessment'. The onus is on the developer to provide the necessary information to inform this process.

Under the Conservation of Habitats and Species Regulations 2010 (as amended), the competent authority must determine in the first instance whether a proposed development is likely to have a significant effect on the European or Ramsar site, either alone or in combination with other plans and projects.

If a likely significant effect cannot be precluded on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives. A precautionary approach must be taken with respect to determining whether or not there would be an impact, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed, the competent authority may not undertake or authorise the plan or project until they have established (based on the

conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the European or Ramsar site. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Nationally Important Sites

Sites of Special Scientific Interest (SSSI)

The Wildlife and Countryside Act 1981 (as amended) and the CROW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSI). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity.

Development Control

A development proposal that is likely to affect nationally important sites will be subject to special scrutiny by the local authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites.

Regionally & Locally Important Sites

Local Nature Reserves

Local Nature Reserves are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance in England for the conservation of biodiversity under Section 41 of the NERC Act 2006¹³. The NPPF, Government Circular 06/05, good practice guidance and the NERC Act place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

SPECIES PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England. It is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by proposed development. This can best be achieved by undertaking surveys early in the planning process. Mitigation measures are required to minimise disturbance to protected species and may necessitate a licence. Natural England offers further detailed advice which can be applied to planning applications that affect protected species¹⁴.

Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

The following species of mammal are protected further by law in England:

¹³ The S41 List of Species & Habitats of Principal Importance in England is available from: <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

¹⁴ Natural England. 2011. *Standing Advice for Protected Species*. Available from: <http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

Bats

There are 18 species of bat in the UK, seven of which are Species of Principal Importance in England. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species licence from Natural England.

Birds

49 species of bird are listed as Species of Principal Importance in England. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the law, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Licences

A European Protected Species Licence is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitat Regulations 2010 (as amended); including *inter alia* all species of bats, Dormouse, Great Crested Newt and Otter. Natural England must

be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

1. The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. There is no satisfactory alternative; and
3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance in England for the conservation of biodiversity under Section 41 (S41) of the NERC Act 2006. This list of species includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier¹⁵). While these species may not be legally protected, there is a clear responsibility on planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species and habitats and to enhance them where possible. Additional guidance to developers is typically provided in level planning policies.

¹⁵ The Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

Appendix 2

Appraisal Methodologies

The ecological appraisal has been completed following guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for the Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd Edition* (January 2016).

DESKTOP STUDY METHODOLOGY

A desktop study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved investigation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), Natural England's Nature on the Map, aerial photos, current Ordnance Survey maps and the Old Maps online database. Reference was also made to local planning strategies, and strategies and initiatives relating to biodiversity.

Thames Valley Environmental Records Centre (TVERC) was commissioned to provide data on statutory and non-statutory designated wildlife sites within 2 km of the site, along with existing biological records of protected and/or notable species within 2 km of the site.

FIELDWORK METHODOLOGY

The field survey was completed over two site visits by Philip Brown (a licensed bat ecologist: Class Licence 2015-18270-CLS-CLS) and Daniel O'Sullivan of EPR Ltd on Thursday 17th March and Wednesday 30th March 2016. The Site was inspected in detail, recording habitats and features of potential value to wildlife and an evidence of (or potential for) protected or notable species or habitats. The survey methods used are described below.

Land Use, Habitat Types, Vegetation Communities and Flora

Within the study area the land use, habitat types and landscape features (such as hedgerows and veteran trees) were described and mapped where present. For each main habitat type the dominant vegetation communities were recorded, along with any notable or indicator plant species, (including Japanese Knotweed where present). A preliminary evaluation of the structure, quality and likely management of each habitat or feature was also carried out.

The survey method used to record this information was based on Phase 1 Habitat Survey methodology (JNCC 1993).

Badgers

Consideration was given to the presence of habitat potentially suitable for supporting Badgers, including woodland and grassland. Potential evidence of the presence of Badgers was looked out for and noted, including earthworks that might be Badger setts, and signs such as dung pits, mammal pathways through ground vegetation and under fences, and hairs on fences.

Bats

Bats use buildings and trees for roosting and breeding and a detailed assessment of the potential for these features to support bats was undertaken during the survey in accordance with best practice guidance, including that set out within the Bat Conservation Trust's *Bat Surveys-Good Practice Guidelines* (2016). A summary of the methodology used to assess bat roosting potential is given below.

Internal and External Building Inspection for Bats

The building was inspected externally with binoculars and a Clulite torch, where required. Internal areas of the building (voids) were inspected, where accessible and bats and evidence of bats was looked for, including bats themselves, dead bat carcasses, bat droppings, urine staining, feeding remains, scratching and wear around access points. Where necessary endoscopes were used to investigate small spaces.

Potential roosting areas may include gaps beneath roof or hanging tiles, in soffits, or beneath the end of ridge tiles, but also under the edge of felt on flat roofs. Features considered during the external inspection, to assess the potential of a building to support a bat roost, are listed below in **Table 2a**:

Table 2a *External features*¹

Lower Potential	Higher Potential
Modern construction with few gaps Prefabricated with steel/ sheet materials Flat roof Roof shaded from sun	Pre/ early 20 th Century construction Pitched roof Tiled roof with natural gaps Hanging tiles or wooden cladding Cellar (hibernation potential) Bat evidence (droppings/staining etc)

Preliminary evidence was obtained through noting any staining around potential roost entrances, and looking for bat droppings, for example on window sills. A preliminary evaluation was also undertaken of potential bat foraging habitat in the area, including woodland, pasture, hedges and watercourses.

The internal survey noted potential roosting opportunities for bats which can be factored into assessing the potential of the building to support roosting bats and the likely value of any such roost. If bats/ bat droppings are found, the building is a confirmed roost and it will be necessary to give the building a potential value to bats.

In addition to the features described above, the immediate surroundings of a building, which will influence the potential of a building to support roosting bats, were investigated. **Table 2b** below describes location factors that may affect a building's potential to support roosting bats.

Table 2b *Location factors*²

Lower Potential	Higher Potential
Urban setting with few foraging areas Industrial sites Increased lighting	Rural Setting Close to woodland and/ or water Surrounded by good connective habitat

¹ See Bat Mitigation Guidelines 2004 (Table 5.1) for further examples.

² See Bat Mitigation Guidelines 2004 for further examples.

Assigning potential and value

Information from the external and internal inspection surveys was used to categorise a building as having negligible, low, medium or high potential to support roosting bats, and the likely value of any such roost. This was then used to contribute to an assessment of the overall potential value of the development site or survey site for bats.

Foraging habitat and commuting corridors

In addition to the various features described above, other features that may be of value to bats include foraging habitat and commuting corridors. These were noted during the Ecological Appraisal. **Table 2e** outlines foraging and commuting features and their potential value to bats.

Table 2e: Foraging and commuting habitat features and their potential to be of value to bats

Lower potential to be of value	Higher potential to be of value
Arable field Hardstanding Defunct species poor hedgerows Isolated trees	Grazed pasture Ancient woodland Ponds with diverse marginal vegetation Wet ditches Species rich dense intact hedgerows

Overall Assessment and Assigning Value

In order to conclude whether further survey is required and if so, to design a suitable survey strategy, the overall **Potential Value** to bats is assessed, considering all of the features likely to be of value to bats (see above), and all roost features present are assigned a probability of being used by bats. This information then informs an assessment of the overall **Potential Value** for bats.

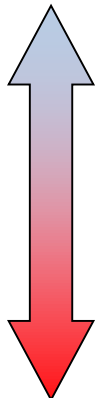
The value of a development site for bats will depend on a variety of factors (as shown in **Figure 2.1** below). Bats are nomadic and require a variety of roosts in addition to foraging areas and commuting routes.

Figure 2.1: Factors affecting the value of a site for bats



Table 2f below provides an example of the “value continuum” (adapted from BCT *Good Practice Guidelines*, **Table 4.2**).

Table 2f: *How habitat features influence the potential value to bats*

Potential Value	Site features
LOW  HIGH	- No features likely to be used by bats (for roosting foraging or commuting). - Small number of potential roost sites unlikely to support high numbers, or rarer bat species. No maternity or hibernation potential. - Isolated site with habitats that could be used by small numbers of foraging bats. - Several potential roost sites in buildings, trees or other structures. - Habitat likely to be used by foraging bats - Site connected to the wider landscape by linear features and could be used by commuting bats. - High quality foraging habitat (broadleaved woodland, water courses etc). - High potential roost features with the potential to support maternity roosts and/or rarer species of bat.

Dormouse

The type and quality of habitat with the potential to be suitable for supporting Dormice, such as woodland and hedgerows, was considered during the survey. In particular the presence of oak, hazel and berry-bearing shrubs was noted, and the connectivity of habitat recorded.

Birds

Any birds seen whilst carrying out the survey were recorded, and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting, and habitat with the potential to support valued species, including breeding and wintering birds.

Amphibians

Consideration was given to the presence of habitat potentially suitable for supporting amphibians, including water bodies (ponds, ditches), woodland, scrub and rough grassland, and features such as log piles that might provide hibernation areas. Where appropriate, effort to gather direct evidence of amphibians was undertaken by making a preliminary search eggs by examining vegetation within reach of the margins of water bodies, and for resting animals on land by looking under potential refuges, such as stones, wood and rubbish near to water bodies.

Reptiles

The presence and quality of habitat considered potentially suitable for supporting reptiles was recorded. This included areas providing basking and foraging areas, hibernation and breeding sites, such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedgebanks and water bodies.

Invertebrates

Readily identifiable invertebrates seen during the survey were recorded, and habitats and features likely to support noteworthy groups and species were noted, for example herb-rich grasslands, areas of bare ground and deadwood habitats, including woodland and veteran trees.

Appendix 3

Photos from Bat Building Inspection

Photo Reference	Photos	Description
	BUILDING A	
P1		Southern and western aspects of Building A, taken from the corner of High Street and King's Road.
P2		Southern aspect Building A, taken from King's Road.
P3		Northern aspect of Building A, taken from flat roof area in middle of site.

P4		Eastern aspect of Building A, taken from flat roofed area in middle of site.
BUILDING B		
P5		Southern aspect of Building B, taken from King's Road.
P6		Northern aspect of Building B, taken from fire escape of Building C.
P7		Roof of building B, taken from roof of Building A.

	BUILDING C	
P8		Western aspect of Building C, taken from roof of Building A.
P9		Southern aspect of Building C, taken from flat roof area in middle of site.
P10		Northern aspect of Building C, taken from alley-way off of High Street.

	BUILDING D	
P11		Southern and western aspects of Building D, taken from roof of Building A.
P12		Northern and eastern aspects of Building D, taken from alley-way off of High Street.
	BUILDING E	
P13		Southern and eastern aspects of Building E, taken from flat roof area in middle of site.

P14		Roof of building E, taken from fire escape of Building C.
OTHER AREAS		
P15		Flat roofed connecting areas between buildings, taken from roof of Building A.
NEARBY HABITAT FEATURES		
P16		View eastwards along the River Kennet, taken from the bridge on London Street/Duke Street.

P17		View westwards along the River Kennet, taken from the bridge on London Street/Duke Street.
P18		View towards Jacksons Corner, taken from the bridge on London Street/Duke Street.
P19		View towards the River Kennet, taken from the corner of King's Road and London Street/Duke Street.
P20		View towards Jacksons Corner, taken from the corner of King's Road and Highbridge Wharf.

P21



View towards the River Kennet, taken from the corner of King's Road and Highbridge Wharf.

Appendix 4

Target Notes from Bat Building Inspection

Target Note Number	Photos	Description
	BUILDING A – INTERNAL	
T1		Potential access point into Building A through large gaps around vent on first floor (externally, this vent appears to be part of Building B, however internally, part of the first floor of Building B has been incorporated into Building A with no access between the two buildings).
T2		Gaps around multiple window frames on third floor could allow access into the building and/or provide access to cavity walls.
T3		Gaps between timber and mortar on the third floor could provide roosting opportunities for bats.

T4		Voids behind chimney breasts on the third floor and throughout the building could provide roosting opportunities for bats and lead to other cavities, crevices or voids.
T5		The basement area is not lit by windows and skylights like other parts of the building. Numerous roosting opportunities for bats exist amongst timber beams and in crevices in brickwork. At a temperature of 10.5°C with good air circulation through numerous open doors, this basement area has limited hibernation potential.
BUILDING B – INTERNAL		
T22		A gap in the brickwork in the roof could lead to cavities which may provide roosting opportunities for bats.

T23		Access to the cavity wall at the gable end could provide roosting opportunities for bats.
T24		Loose fitting bitumen lining provides a voids which could support roosting bats between the bitumen and roof covering.
BUILDING C – INTERNAL		
T6		A crevice behind boarding, covering a rough brick wall on the ground floor could provide roosting opportunities for bats.

T7		A timber framed dark void on the third floor could provide roosting opportunities for bats.
BUILDING D – INTERNAL		
T8		Inaccessible timber clad areas in roof space may support features suitable for roosting bats.
BUILDING E – INTERNAL		
T9		Missing plaster provides roosting opportunities and may lead to voids and crevices.
OTHER AREAS – INTERNAL		

T10		Access to the cavity wall on the lower ground floor of connecting areas between the buildings could provide roosting opportunities for bats.
BUILDING A – EXTERNAL		
T11		Missing roof tiles, may lead to voids and crevices in the roof.
T12		Gap between fascia and brickwork provide roosting opportunities and may lead to voids and crevices.
T13		A gap in the brickwork provides a roosting opportunity for bats and may lead to cavities in the wall.

T14		A missing window with boarding behind may allow access into building and may provide roosting opportunities around the boarding.
	BUILDING B – EXTERNAL	
T15		A possible gap in mortar at the apex, could potentially lead to voids and crevices in the roof.
T25		Lifted hanging tiles provides access for bats to voids between the tiles and the external wall.
	BUILDING C – EXTERNAL	
	No external features with potential to support bats identified.	
	BUILDING D – EXTERNAL	

T16		Cracks in roof covering, potentially allowing access to voids and crevices within the roof.
T17		Gaps around the edge of the roof covering, potentially allowing access to voids and crevices within the roof.
BUILDING E – EXTERNAL		
T18		Slipped and missing tiles potentially leading to voids and crevices in the roof.

T19		Raised ridge tiles potentially leading to voids and crevices in the roof.
OTHER AREAS – EXTERNAL		
T20		Gap between wooden board and lead flashing, potentially leading to voids and crevices behind the boarding and within the roof space.
T21		Gaps under slates and ridge tiles potentially leading to voids and crevices in the roof.