



Worton Grange, Imperial Way, Reading

Preliminary Ecological Appraisal

October 2015

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This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2008, BS EN ISO 14001: 2004 and BS OHSAS 18001:2007)

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1. Introduction

- 1.1. Waterman Infrastructure & Environment Ltd (Waterman) was commissioned by Kier Reading LLP (hereafter referred to as “the Applicant”) to carry out a Preliminary Ecological Appraisal (PEA) at an area of land known as Worton Grange, Imperial Way, Reading (hereafter referred to as “the Site”).
- 1.2. The PEA included an ecological desk study, ‘Extended’ Phase 1 Habitat Survey, a search for invasive species and ground based tree inspections for roosting bats.

The Site

- 1.3. The Site is approximately 8.023 hectares (ha) in area and is centred on Ordnance Survey Grid Reference SU 715 693. The majority of the Site currently consists of hard standing where former office buildings and associated car parks were demolished (as detailed below). Other habitats recorded at the Site include hardstanding, scrub, semi-improved grassland, rubble piles, running water and trees (**Figure 1**). The Site is bound by roads on all sides, notably Imperial Way, Basingstoke Road and the A33 Reading Relief Road.

Site History and Development Proposals

- 1.4. The Site was formerly occupied by Hewlett Packard’s offices. In 2006, Hewlett Packard (HP) relocated their offices to Bracknell and the Site was purchased by Worton Grange Industrial Limited (WGIL). The HP buildings remained vacant until their demolition in early 2010. Following this, the Site was granted outline planning permission (Application number: 10/01784/OUT) by Reading Borough Council (RBC) in September 2010 for:

“Outline application for redevelopment to provide two warehouse buildings (Class B8 storage and distribution) with ancillary office accommodation, comprising a total of 39,664m² floorspace (GEA), car, lorry, motorcycle and cycle parking, landscaping and associated works (access, layout and scale only)”

- 1.5. Since the 2010 outline planning permission was granted, the Site has been purchased by the Applicant who is now preparing a new planning application. The planning application will be a hybrid application for outline planning permission for the development of 175 new homes, including affordable housing (with all matters reserved apart from access) and full planning permission for the development of 12 commercial units to be used flexibly within Classes B1(c), B2 and B8 with ancillary retail sales to accommodate trade counters; two car showrooms with provision for MOT and servicing (Sui Generis); three retail warehouse units (Class A1); 120 bed hotel (Class C1); pub with restaurant facility (Class A4); coffee shop with drive through facility (Class A1); restaurant with drive through facility (Class A3); and bank with drive through facility (Class A2) (hereafter referred to as the ‘Development’).

Previous Survey Assessments

- 1.6. Previous ecological assessments were undertaken at the Site by RPS Planning & Development (RPS) to inform the 2010 outline planning application. These comprised:
 - Ecological desk study;
 - Phase 1 habitat survey;
 - Bat daytime tree assessment;

- Bat activity surveys; and
 - Reptile survey
- 1.7. The results of the above ecological assessments were detailed in an Ecological Impact Assessment Report¹ and have been referred to where relevant in this report.

Aims and Objectives of this Assessment

- 1.8. The previous ecological assessments undertaken at the Site are now considered out of date, and therefore this PEA aims to provide update information on the current ecological value of the Site to support the proposed new planning application for the Development.
- 1.9. The purpose of this report is to:
- Establish and evaluate the current ecological value of the Site;
 - identify any ecological issues, highlighted through the PEA that could constrain the current Development in relation to relevant nature conservation planning policy and legislation;
 - make recommendations for further survey and assessment work, if required, to enable the current Development works to be carried out; and
 - Outline ecological mitigation in association with the PEA, where required and identify opportunities for ecological enhancement, in line with relevant planning policy and legislation and to inform the design process.

¹ RPS Planning & Development (September 2010). Ecological Assessment Report – Worton Grange, Reading.

2. Relevant Legislation and Planning Policy

Legislation

- 2.1. Specific habitats and species, of relevance to the Site, receive legal protection in the UK under various pieces of legislation, including:
- The Conservation of Habitats and Species Regulations 2010 (as amended)²;
 - The Wildlife and Countryside Act (WCA) 1981 (as amended)³;
 - The Countryside and Rights of Way (CROW) Act 2000⁴;
 - The Natural Environment and Rural Communities (NERC) Act 2006⁵;
 - Wild Mammals (Protection) Act 1996⁶; and
 - The Protection of Badgers Act 1992⁷.
- 2.2. Further details of legislation in respect to legally protected species of relevance to the Site are provided in **Appendix A**.

Planning Policy

National Planning Policy

National Planning Policy Framework, 2012

- 2.3. The National Planning Policy Framework⁸ (NPPF) was published in March 2012. Section 11 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', effectively replaces former Planning Policy Statement 9: Biodiversity and Geological Conservation. However, Government Circular 06/2005⁹ - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System, remains valid and is referenced within the NPPF.
- 2.4. The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:
- *"Protecting and enhancing valued landscapes, geological conservation interests and soils;*
 - *Recognising the wider benefits of ecosystem services;*
 - *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the government's commitment to halt the overall decline in biodiversity, including by establishing ecological networks that are more resilient to current and future pressures;*
 - *Preventing both new and existing development from contributing to or being put at an unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*
 - *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".*

² HMSO. (2010). *The Conservation of Habitats and Species Regulations 2010* (as amended).

³ HMSO. (1981). *Wildlife and Countryside Act 1981* (as amended).

⁴ HMSO. (2000). *The Countryside and Rights of Way Act 2000*.

⁵ HMSO. (2006). *Natural Environment and Rural Communities Act 2006*.

⁶ HMSO. (1996). *Wild Mammals (Protection) Act*.

⁷ ODPM. (1992). *The Protection of Badgers Act*

⁸ Department of Communities and Local Government. (2012). *National Planning Policy Framework*.

⁹ Department of Communities and Local Government. (2005). *Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

- 2.5. The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, should seek to conserve and enhance biodiversity, by applying the following principles:
- *“Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; and*
 - *Opportunities to incorporate biodiversity in and around developments should be encouraged”.*
- 2.6. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful effects) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

National Planning Practice Guidance, 2014

- 2.7. The Government’s National Planning Practice Guidance¹⁰ (NPPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

Biodiversity 2020: A strategy for England’s wildlife and ecosystem services

- 2.8. In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. England’s response to this agreement was the publication of ‘*Biodiversity 2020: A strategy for England’s wildlife and ecosystem services*’¹¹. The mission for this strategy is:

“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.”

Local Planning Policy

Reading Borough Local Development Framework: Core Strategy

- 2.9. The Core Strategy¹² was adopted (with alterations) by Reading Borough Council on 27th January 2015. The Core Strategy is the main document in the Council’s Local Development Framework (LDF). It sets out how planning and development will achieve the Reading 2020 Vision for the town. It provides a framework for how Reading can grow in a sustainable way in the future. The following policies are of relevance to the Site:

- Policy CS36 ‘Biodiversity and Geology’ states:
 - “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*

¹⁰ Department for Communities and Local Government. (2014). *National Planning Practice Guidance*. DCLG, London.

¹¹ Defra. (2011) *Biodiversity 2020: A strategy for England’s wildlife and ecosystem services*.

¹² Reading Borough Council (January 2015). *Reading Borough Local Development Framework: Core Strategy*.

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."

- Policy CS38 'Trees, Hedges and Woodlands' states:

"Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended."

Reading Borough Council: Tree Strategy for Reading

2.10. The Tree Strategy for Reading¹³ sets out a shared vision and strategy for trees in Reading. It considers various issues and options in relation to trees and sets out a strategic approach towards future management. The following objectives are of relevance to this report:

2.11. Objective 5: Enhancing biodiversity states:

"The Council will seek to ensure that the management of its tree stock and woodlands is enhanced by:

- *Protecting trees and woodlands, particularly ancient or veteran trees and important woodlands;*
- *Writing and implementing woodland management plans;*
- *Conserving, enhancing and extending existing green corridors and creating new ones to enhance the borough's green infrastructure;*
- *Ensuring that native and wildlife friendly species of trees are used in new planting schemes in most cases; and*
- *Retaining standing and fallen dead wood habitat for biodiversity where health and safety and amenity considerations allow."*

2.12. Objective 6: The role of new developments states:

"New development will be expected to make a positive and sustainable contribution supporting the objectives of this strategy in enhancing Reading's urban environment. Such planting should be used to enhance streets and other public realm as part of planning permissions for all relevant new developments, particularly in higher density urban developments."

Biodiversity Action Plans

UK Post-2010 Biodiversity Framework

2.13. The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'¹⁴ covers the period from 2011 to 2020. This now

¹³ Reading Borough Council (June 2010). *Tree Strategy for Reading*.

¹⁴ JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). (2012). *UK Post-2010 Biodiversity Framework*.

supersedes the UK Biodiversity Action Plan (UK BAP)¹⁵. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

- 2.14. Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England listed under Section 41 (S41) of the NERC Act 2006. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41.
- 2.15. Based on the results of the PEA, the following SoPIs listed under S41 are considered to be of potential value on and/or immediately adjacent to the Site:
- Common pipistrelle *Pipistrellus pipistrellus* (SoPI);
 - Soprano pipistrelle *Pipistrellus pygmaeus* (SoPI);
 - Noctule *Nyctalus noctula* (SoPI);
 - Brown long-eared *Plecotus auritus* (SoPI);
 - House sparrow *Passer domesticus* (SoPI);
 - Starling *Sturnus vulgaris* (SoPI); and
 - Song thrush *Turdus philomelos* (SoPI); and
 - Herring gull *Larus argentatus* (SoPI).

Local Biodiversity Action Plan

- 2.16. At a local level, the Site is covered by The Reading Biodiversity Action Plan (RBAP)¹⁶. The RBAP sets out a methodology to protect, conserve and enhance Reading's diversity of wildlife. Based on the results of the PEA, the following Habitat Action Plans (HAPs) and Species Action Plans (SAPs) listed on the RBAP are considered to be of potential value on and/or immediately adjacent to the Site:
- Semi-natural grassland;
 - Parkland and veteran trees;
 - Black redstart *Phoenicurus ochruros*;
 - House sparrow *Passer domesticus*; and
 - Bats.

¹⁵ HMSO. (1994) *Biodiversity The UK Action Plan*.

¹⁶ The Reading Biodiversity Action Plan

3. Methodology

- 3.1. This section summarises the methodologies used for undertaking the PEA based on current guidelines¹⁷. The PEA comprised an ecological desk study, an 'Extended' Phase 1 Habitat Survey, a search for invasive species and ground based tree inspections for roosting bats. The basis for evaluating the ecological resources is also described in this section.

Ecological Desk Study

- 3.2. The aim of the ecological desk study is to collate existing ecological records for the Site and adjacent areas. Obtaining existing records is an important part of the evaluation process, as it provides additional information that may not be apparent during a site survey.
- 3.3. An ecological desk study was undertaken in July 2015, during which all records of protected species, and / or other notable fauna and flora within 2km of the Site were requested from Thames Valley Environmental Records Centre (TVERC)¹⁸. Given the scale of the Site and the nature of the habitats recorded historically, it was considered the search area for the ecological records is sufficient to inform this PEA.
- 3.4. Records of important statutory and non-statutory sites designated for their nature conservation value within 2km (5km for statutory designated sites) of the Site were also requested from TVERC and searched for on the Multi-Agency Geographic Information for the Countryside (MAGIC)¹⁹. Sites with statutory, national or international designations could typically include Local Nature Reserves (LNR), notified or candidate Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites.
- 3.5. Within Berkshire, non-statutory sites are known as Local Wildlife Sites (LWS).
- 3.6. In addition, HoPI and SoPI under S41 of the NERC Act, as well as HAPs and SAPs listed under the RBAP, were consulted to assign an ecological context to the Site.

'Extended' Phase 1 Habitat Survey

- 3.7. An 'Extended' Phase 1 Habitat Survey of the Site was undertaken on 30th June 2015 using the Joint Nature Conservancy Council (JNCC, 2010)²⁰ standard 'Phase 1' survey technique. The Phase 1 Habitat Survey methodology was 'Extended' by undertaking an assessment of the Site to support protected and notable faunal species. All habitat types within the Site were mapped (**Figure 1**) with target notes (**Appendix B**) where appropriate.
- 3.8. Where access allowed, adjacent habitats were also considered to assess the Site within the wider landscape, and to provide information with which to assess possible impacts of the Development.
- 3.9. The Site survey was conducted within the optimum survey season (April-September) when the majority of plant species are visible; all plants were identified through their floristic and vegetative characteristics. A detailed floral species list was collated for the Site during the 'Extended' Phase 1 Habitat Survey. As such it is assessed that the species detailed within the results section of this report can be used to inform any future ecological BREEAM assessments.
- 3.10. During the 'Extended' Phase 1 Habitat Survey a check for the presence of common invasive species (as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) including; Japanese

¹⁷ Chartered Institute of Ecology and Environmental Management (2015). *Guidelines for Preliminary Ecological Assessment*. Technical Guidance Series.

¹⁸ Thames Valley Environmental Records Centre (July 2015). *Biodiversity Report TVERC Ref: B106.15*.

¹⁹ Magic.defra.gov.uk. (2014). *Magic*. [online] Available at: <http://magic.defra.gov.uk/> [Accessed April 2015].

²⁰ JNCC. (2010). *Handbook for Phase 1 Habitat Survey*. Nature Conservancy Council.

knotweed *Fallopia japonica*, giant knotweed *Fallopia sachalinensis*, hybrid knotweed *Fallopia baldschuanica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera* was undertaken.

Ground Based Tree Inspections for Bat Roost Potential

- 3.11. A preliminary ground based visual inspection of trees on the Site for bat roost potential was undertaken in combination with the 'Extended' Phase 1 Habitat Survey, guided by the current best practice guidelines.
- 3.12. Binoculars were used to inspect the trees from the ground to the canopy to look for features indicative of bat roosts. Signs of bat use such as droppings, staining from the fur or urine and scratches around the entry points were also inspected where applicable.
- 3.13. Following the ground based visual inspections, the trees were scored according to the criteria set out in **Table 1**, in accordance with current best practice guidelines to determine their potential to support roosting bats.

Table 1: Bat Conservation Trust Tree Guidelines, 2012

Tree category	Description
Known or confirmed roost	Evidence of roosting bats within the tree.
Category 1*	Trees with multiple, highly suitable features capable of supporting larger roosts.
Category 1	Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential use by single bats.
Category 2	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.
Category 3	Trees with no potential to support bat roosts.

Evaluation

- 3.14. The PEA evaluation of habitats and species is based on published guidance²¹ and does not constitute a full Ecological Impact Assessment (EclA). The value of specific ecological receptors is assigned using a geographic frame of reference, i.e. international value being the most important, followed by national, regional, county, district, local and lastly, within the boundary of the Site only. A negligible value is assigned where the habitat offers no or limited value to wildlife.
- 3.15. Value judgements are based on various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations (such as SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource. In terms of the latter, 'quality' can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type),

²¹ Institute of Ecology and Environmental Management. (2006). *Guidelines for Baseline Ecological Assessment in the United Kingdom*. E & F.N. Spon, Chapman & Hall, London.

other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

- 3.16. Value judgements are also based on the Ecologist's academic and professional qualifications, in addition to past experience of undertaking similar assessments.

Consultation

- 3.17. Giles Sutton (Planning Ecologist) at Reading Borough Council was contacted with regards to the scope of the baseline ecological surveys required to support the proposed planning application.
- 3.18. The scope of the recommended further bat surveys has been agreed with the above consultee (Section 5 and **Appendix D**).

Constraints and Limitations

- 3.19. Some areas of dense scrub were inaccessible during the survey. All trees in these areas however, were visible from the ground level to assess them for their potential to support roosting bats with the exception of some limbs which were not visible owing to the dense canopy preventing full observation. It is assessed however that a sufficient view of each tree was made from the ground level to define an accurate assessment of each tree to support roosting bats.
- 3.20. All other contractors, designers and the client should be aware of the following: The design recommendations within this report are assessed to be the most effective ecological solution at this initial stage of the project. No other pre-construction information has been provided, obtained or referred to during the preparation of this report (including, but not limited to, services information, geotechnical reports and ordnance reports). In deciding whether and how to progress with this project, it will be incumbent upon the client, designers and contractors to obtain and refer to relevant pre-construction information, as required by the Construction (Design and Management) Regulations. Waterman can assist with the development and co-ordination of this design to support effective risk management on this project upon request.

4. Results and Evaluation

Ecological Desk Study

Statutory Sites

- 4.1. The Site is not subject to any statutory designations. However there are two statutory designated sites within 5km of the Site (**Table 2**).

Non-Statutory Sites

- 4.2. The Site is not subject to any non-statutory designations. However there are nine non-statutory nature conservation designations which lie within 2km of the Site (**Table 2**).

Table 2: Summary of desk study records of designated sites within proximity to the Site

Site Name	Designation	Distance from Site (km)	Description/Citation
Statutory Sites / designations within 5km of the Site			
Pearman's Copse	LNR	1.91km east	Pearmans Copse is a small area of ancient woodland, covering 2 hectares. It contains ash, hazel, and oak trees.
Stanford End Mill and River Loddon	SSSI	4.11km east	Designated for its series of traditionally-managed seasonally waterlogged hay meadows. The site is of interest particularly for nationally important populations of two rare plants: the fritillary <i>Fritillary meleagris</i> and the Loddon pondweed <i>Potamogeton nodosus</i> .
Non-statutory Sites / designations within 2km of the Site			
Great Lea Pond	LWS	0.77km south east	Great Lea Pond consists of a mosaic of silted pools and bare mud, now heavily shaded by willow scrub, which is grading into secondary woodland.
Shinfield Park Nores Hill	LWS	0.98km east	A mixture of woodland including areas of semi-natural ancient woodland. These areas have a canopy of ash and oak with hazel coppice below. Dormouse has been recorded at this site in 1987.
The Cowsey	LWS	1.16km north-east	This west-facing hillside stretches over 17.8 ha and is largely covered by mature scrub and broadleaved woodland which surrounds grassy enclaves. There are natural springs, one supporting a ribbon of wetland plants in a shallow valley, one feeding a small pond and another drains an area of mature woodland.

Site Name	Designation	Distance from Site (km)	Description/Citation
			Some grassland areas are locally damp and support patches of rushes.
The Grove	LWS	1.31km east	A small mosaic of rank grassland, scrub, secondary woodland, broadleaved plantation and two ponds completely enclosed by roads towards the north of Shinfield. The majority of the site consists of a mosaic of scrub and a tall grassland sward which is dominated by forbs.
Pearman's Copse	LWS	1.76km east	Pearmans Copse is a small area of ancient woodland, covering 2 hectares. It contains ash, hazel, and oak trees.
River Kennet / Kennet and Avon Canal	LWS	1.90km north-west	A section of the River Kennet and the Kennet and Avon Canal from near Burghfield Bridge, south-east of Reading, to Waterloo Meadows adjacent to Edgar Road near the centre of Reading. The River Kennet is one of the best examples of a chalk river nationally, and is an UK BAP Priority Habitat. The Kennet & Avon Canal section is also fed by water from the River Kennet and is also calcareous in nature.
Fobney and Kennet Valley Meadows	LWS	1.90km north	A large area of permanent pasture with some wet grassland and patches of swamp vegetation. The site has a good series of ditches with tall wetland and aquatic species and a small area of woodland.
Clare's Green Road Grasslands	LWS	1.95km south	The site is composed of four semi-improved mesotrophic grassland fields previously managed as paddocks for horse grazing. Almost all the grassland falls into the National Vegetation Classification (NVC) community-type MG6.
Burghfield Gravel Pits	LWS	1.95km west	An extensive area of gravel pits with well-developed wooded areas, islands and marginal vegetation. This area attracts a good variety of wildfowl and other birds including Wildlife and Countryside Act Schedule 1 species as well as uncommon passage migrants.

Protected and Notable Species

- 4.3. Records of legally protected or otherwise notable species of flora and fauna within 2km of the Site were provided by TVERC. A summary of the most significant results of relevance to the Site are provided in **Table 3** below. Full results can be obtained from the data providers but cannot be presented in this report as a result of copy right. For some records only a four figure grid reference has been provided by TVERC and therefore 'within 2km' has been stated in **Table 3**.

Table 3: Summary of desk study records of flora and fauna within 2km of the Site

Species	Location of records relevant to the survey area
Amphibians Records of common toad <i>Bufo bufo</i> , smooth newt <i>Lissotriton vulgaris</i> and common frog <i>Rana temporaria</i> .	Nearest records: Common toad 1.46km east (1998); smooth newt 1.46km east (1998) and common frog 0.71km north-east (2008).
Badger	Nearest badger <i>Meles meles</i> record is 1.33km south-west (2011) of the Site.
Bats Records of serotine <i>Eptesicus serotinus</i> , noctule <i>Nyctalus noctula</i> , common pipistrelle <i>Pipistrellus pipistrellus</i> , Nathusius's pipistrelle <i>Pipistrellus nathusii</i> , soprano pipistrelle <i>Pipistrellus pygmaeus</i> , pipistrelle sp <i>Pipistrellus</i> sp., and brown long-eared bat <i>Plecotus auritus</i> .	Nearest records: serotine (within 2km, 2010), noctule (within 2km, 2013), Nathusius's pipistrelle (within 2km, 2013), common pipistrelle 0.81km north-west (2010), soprano pipistrelle (within 2km, 2013), pipistrelle sp 1.6km east (1987) and brown long-eared 1.73km south (2007).
Birds Records include Eurasian teal <i>Anas crecca</i> , mallard <i>Anas platyrhynchos</i> , common pochard <i>Aythya farina</i> , tufted duck <i>Aythya fuligula</i> , common swift <i>Apus apus</i> , northern lapwing <i>Vanellus vanellus</i> , black-headed gull <i>Chroicocephalus ridibundus</i> , herring gull <i>Larus argentatus</i> , mew gull <i>Larus canus</i> , lesser black-backed gull <i>Larus fuscus</i> , great black-backed gull <i>Larus marinus</i> , common sandpiper <i>Actitis hypoleucos</i> , common snipe <i>Gallinago gallinago</i> , common greenshank <i>Tringa nebularia</i> , green sandpiper <i>Tringa ochropus</i> , common tern <i>Sterna hirundo</i> , common kingfisher <i>Alcedo atthis</i> , common cuckoo <i>Cuculus canorus</i> , red kite <i>Milvus milvus</i> , peregrine falcon <i>Falco peregrinus</i> , common kestrel <i>Falco tinnunculus</i> , grey partridge <i>Perdix perdix</i> , skylark <i>Alauda arvensis</i> , reed bunting <i>Emberiza schoeniclus</i> , common linnet <i>Carduelis cannabina</i> , common bullfinch	The nearest bird record to the Site is common kingfisher which has been recorded 0.32km south-west of the Site (2014) in a pond at Reading International Business Park. All other bird species detailed adjacent have been recorded 700m or more from the Site.

Species	Location of records relevant to the survey area
<i>Pyrrhula pyrrhula</i> , house martin <i>Delichon urbicum</i> , barn swallow <i>Hirundo rustica</i> , sand martin <i>Riparia riparia</i> , grey wagtail <i>Motacilla cinerea</i> , house sparrow <i>Passer domesticus</i> , hedge accentor <i>Prunella modularis</i> , common nightingale <i>Luscinia megarhynchos</i> , whinchat <i>Saxicola rubetra</i> , common starling <i>Sturnus vulgaris</i> , common grasshopper warbler <i>Locustella naevia</i> , willow warbler <i>Phylloscopus trochilus</i> , common whitethroat <i>Sylvia communis</i> , redwing <i>Turdus iliacus</i> , song thrush <i>Turdus philomelos</i> , fieldfare <i>Turdus pilaris</i> , mistle thrush <i>Turdus viscivorus</i> , green woodpecker <i>Picus viridis</i> and little grebe <i>Tachybaptus ruficollis</i> .	
Dormouse	Two records from Shinfield Park Woodlands 1.2km east of the Site (1986 & 1987).
Hedgehog	Nearest hedgehog <i>Erinaceus europaeus</i> record is 0.67km south-west (2012) of the Site.
Fish Records of European eel <i>Anguilla Anguilla</i> and barbell <i>Barbus barbus</i> .	Nearest records: European eel 1.23km north-west (2006) and barbell 1.92km north-west (1985).
Hedgehog	Nearest hedgehog record is 687m north-west (1999).
Invertebrates Records include stag beetle <i>Lucanus cervus</i> , buff ermine <i>Spilosoma luteum</i> , cinnabar <i>Tyria jacobaeae</i> , oak hook-tip <i>Watsonalla binaria</i> , September thorn <i>Ennomos erosaria</i> , blood-vein <i>Timandra comae</i> , chalk hill blue <i>Polyommatus (Lysandra) coridon</i> , small square-spot <i>Diarsia rubi</i> , figure of eight <i>Diloba caeruleocephala</i> and small heath <i>Coenonympha pamphilus</i> .	Nearest records: Stag beetle 1.43km south (2002), buff ermine 1.1km east (2003), cinnabar 1.43km west (2005), oak hook-tip 1.1km east (2004), September thorn 1.1km east (2001), blood-vein 1.1km east (2001), chalk hill blue (within 2km, 1992), small square-spot 1.1km east (2001), figure of eight 1.1km east (2002) and small heath 1.84 north-east (1994).

Species	Location of records relevant to the survey area
Reptiles Records of grass snake <i>Natrix natrix</i> and slow worm <i>Anguis fragilis</i> .	Nearest records: Grass snake record 0.63km south-east (2007) and slow worm 0.58km north-east (2007).
Water Vole	Nearest water vole <i>Arvicola amphibius</i> record is 1.22km north-west (2000) from the River Kennet.
Flora Records include bluebell <i>Hyacinthoides non-scripta</i> and grape hyacinth <i>Muscari neglectum</i> . Other flora records were provided in the data search, however only those protected by legislation or listed as SoPI under S41 are detailed here.	Nearest records: Bluebell record 0.92km south-west (1988) and grape hyacinth 1.7km north-east (2014).

'Extended' Phase 1 Habitat Survey

Habitats

- 4.4. The following habitat types, described in more detail below, were identified on the Site during the 'Extended' Phase 1 Habitat Survey:
- Hardstanding;
 - Rubble piles;
 - Running water;
 - Scrub;
 - Semi-improved grassland;
 - Trees.
- 4.5. The habitat descriptions given below should be read in conjunction with **Figure 1**, the Target Notes presented in **Appendix B** and the photographs (Plates) presented in **Appendix C**.

Hardstanding

- 4.6. The majority of the Site comprises hardstanding as a result of the footprint of the former HP office buildings and associated car park areas (**Plate 1**). Sparse patches of vegetation were recorded scattered across the Site within cracks of the hard standing (see semi-improved grassland section).
- 4.7. This habitat lacks any value for ecology and is therefore considered to be of **negligible** ecological value.

Rubble Piles

- 4.8. Seven rubble piles (**Plate 2**), which are presumed to be the remains of the demolished HP office buildings, are present at the Site. Limited sporadic patches of vegetation were recorded upon the rubble piles (see semi-improved grassland section).
- 4.9. This habitat lacks any value for ecology and is therefore considered to be of **negligible** ecological value.

Running Water

- 4.10. A wet ditch is located adjacent to the southern Site boundary (**Plate 3, Target Note 1**). The ditch is approximately 40m in length and is culverted at both its eastern and western ends. Stagnant water approximately 15cm deep was observed at the western end of the ditch, whilst running water could be heard (scrub prevented visibility to this area) at the eastern end. From the observation of OS mapping, this ditch flows towards a drain located approximately 40m south-west of the Site, which connects to Foundry Brook located approximately 946m north-west of the Site. Emergent vegetation recorded within the ditch included bulrush *Typha* sp., and great willowherb *Epilobium hirsutum*, whilst no aquatic vegetation was present. The banks of the ditch are approximately 45 degrees and densely vegetated. The northern bank is dominated by scrub and the southern bank is dominated by semi-improved grassland.
- 4.11. The ditch is considered to provide opportunities for common species of invertebrates, amphibians and a water source for bats and birds. Owing to the limited extent of this ditch, it is considered to be of value **within the boundary of the Site only**.

Scrub

- 4.12. Areas of dense overgrown scrub and scattered scrub are present at the Site. The most extensive area of dense scrub is located along the south-western boundary of the Site (**Target Note 2**). Whilst smaller pockets are present around the remainder of the Site boundaries. In addition areas of scattered scrub are also present amongst the semi-improved grassland. It is considered that the scattered scrub in these areas has developed as a result of a lack of management of the semi-improved grassland in recent years. Species recorded include bramble *Rubus fruticosus*, ash *Fraxinus excelsior*, ivy *Hedera helix*, buddleia *Buddleia davidii*, nettle *Urtica dioica*, field maple *Acer campestre*, red dead nettle *Lamium purpureum*, dog rose *Rosa canina*, downy rose *Rosa sherardii*, common hogweed *Heracleum sphondylium*, common mallow *Malva neglecta*, common dogwood *Cornus sanguinea*, hawthorn *Crataegus monogyna*, willow *Salix* sp., smooth hawksbeard *Crepis capillaris*, grey poplar *Populus canescens*, common broom *Cytisus scoparius*, hazel *Corylus avellana*, Lawson's cypress *Chamaecyparis lawsoniana*, alder *Alnus glutinosa*, silver birch *Betula pendula*, elm *Ulmus* sp., gorse *Ulex europaeus*, vetch *Vicia* sp., perforate st. John's wort *Hypericum perforatum*, blackthorn *Prunus spinosa* and cherry *Prunus* sp.
- 4.13. The scrub habitats are considered to provide a green corridor within the Site and also give opportunities for invertebrates, nesting and foraging birds and foraging and commuting bats. Owing to the extent of the scrub habitat at the Site and its isolation from off-Site habitats, it is considered to be of value **within the boundary of the Site only**.

Semi-Improved Grassland

- 4.14. Areas of unmanaged semi-improved grassland dominate the Site, particularly at the boundaries (**Plate 4**). Owing to a lack of management, this former amenity grassland has become tussocky, with an average sward height of approximately 30-50cm. Scattered scrub was recorded in patches amongst the semi-improved grassland, which as previously detailed is considered to have developed as a result of a lack of management. Species recorded within the semi-improved grassland sward include perennial rye-grass *Lolium perenne*, ribwort plantain *Plantago lanceolata*, dandelion *Taraxacum officinale*, white clover *Trifolium repens*, yarrow *Achillea millefolium*, Yorkshire fog *Holcus lanatus*, bristly oxtongue *Helminthotheca echioides*, ragwort *Senecio jacobaea*, creeping thistle *Cirsium arvense*, common catsear *Hypochaeris radicata*, cocks-foot *Dactylis glomerata*, fescue *Fescue sp.*, broad leaved dock *Rumex obtusifolius*, wild carrot *Daucus carota*, groundsel *Senecio vulgaris*, spear thistle *Cirsium vulgare*, buddleia, field bindweed *Convolvulus arvensis*, common mallow, great willowherb, willow sapling *Salix sp.*, nettle, common hogweed, ivy, elder saplings *Sambucus nigra*, common poppy *Papaver rhoeas*, Canadian fleabane *Conyza canadensis*, feverfew *Tanacetum parthenium*, smooth hawksbeard, tansy *Tanacetum vulgare*, creeping buttercup *Ranunculus repens*, bird's-foot-trefoil *Lotus corniculatus*, red clover *Trifolium pratense* and annual meadow grass *Poa annua*,
- 4.15. Semi-natural grassland habitat is listed on the RBAP, however given the lack of management of this habitat and that it was formerly landscaped amenity grassland for the HP Office Park, it is considered that the semi-improved grassland on Site does not meet the criteria to qualify under the RBAP Habitat Action Plan for semi-natural grassland. However, the semi-improved grassland at the Site is considered to provide a green corridor within the Site and also give opportunities for invertebrates, foraging birds and foraging and commuting bats. Although it should be noted that this habitat is isolated from off-Site habitats given that the Site is bound by roads on all sides. As such, the semi-improved grassland is considered to be of value **within the boundary of the Site only**.

Trees

- 4.16. Individual trees and groups of trees are present at the boundaries of the Site. Tree ages range from saplings recorded amongst scrub habitat (see above) and semi-mature and mature specimens. Species recorded at the Site include oak, ash, sycamore, white willow *Salix alba*, false acacia *Robinia pseudoacacia*, silver birch, cherry, alder, grey poplar, Scot's pine *Pinus sylvestris*, Lawson's cypress, horse chestnut *Aesculus hippocastanum* and field maple.
- 4.17. Parkland and veteran tree habitat is listed on the RBAP. The mature trees present at the Site, notably the two oak trees in the north of the Site (**Target Note 3, Plate 5**) and a group of white willows (**Target Note 4, Plate 6**) at the south-east Site boundary, are considered to qualify under the Parkland and veteran tree Habitat Action Plan given their age. All other trees on Site are considered too young to qualify under this habitat action plan.
- 4.18. The trees are considered to be of potential value to roosting bats (see bat section below) and nesting birds, as well as providing foraging opportunities for invertebrates and in turn bats. Trees are common to the local area, and are therefore considered to be of value **within the boundary of the Site only**, with the exception of the mature trees on Site which are considered to be of **local value**.

Invasive Species

- 4.19. No commonly known invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (as amended) were recorded at the Site during the 'Extended' Phase 1 Habitat Survey. As such no further reference to invasive species is made within this report.

Flora

- 4.20. No protected or notable flora species were recorded at the Site during the 'Extended' Phase 1 Habitat Survey. As such no further reference to protected or notable flora is made within this report.

Adjacent Habitats

- 4.21. The Site is bound by roads on all sides, notably Imperial Way, Basingstoke Road and the A33 Reading Relief Road. These adjacent habitats offer no opportunities for wildlife and are therefore considered to be of **negligible value**.

Protected and Notable Fauna

- 4.22. As a result of the 'Extended' Phase 1 Habitat Survey and a review of the ecological data search and previous ecological reporting by RPS an assessment is made below on the potential of the Site to support:
- Amphibians;
 - Badger;
 - Bats;
 - Birds;
 - Common Dormouse;
 - Fish;
 - Hedgehog;
 - Terrestrial Invertebrates;
 - Reptiles;
 - Water Vole; and
 - White-clawed Crayfish
- 4.23. The fauna descriptions provided below should be read in conjunction with **Figure 1**, the Target Notes presented in **Appendix B** and the photographs (Plates) presented in **Appendix C**.

Amphibians

- 4.24. Records of common toad, smooth newt and common frog were returned within the data search, whilst no records of great crested newts were returned.
- 4.25. Common toad is listed as a SoPI under S41 of the NERC Act. The wet ditch on Site could support common toad and common amphibian species (e.g common frog and smooth newt), however owing to the short extent of the ditch on Site, it is considered unlikely that any significant populations would be present.

- 4.26. Furthermore, the wet ditch on Site is not considered suitable to support great crested newts given that it contains moderately fast running water. Furthermore, although there are other waterbodies within 500m of the Site, these are isolated from the Site by main roads.
- 4.27. Based on the above, the Site is considered to be of **negligible** value to GCN. As such, no further GCN survey work is recommended and this species is not discussed further within this report. The ditch is however considered to be of value **within the boundary of the Site only** to other species of amphibians such as common toad.

Badger

- 4.28. No badger setts or conclusive signs of badger were recorded on Site during the current survey. Areas of dense scrub, particularly the south-western boundary of the Site, were not subject to an exhaustive check for badgers during the 'Extended' Phase 1 Habitat Survey due to access restrictions. However, no pathways or other evidence of badgers were noted in the vicinity of these areas, which suggests that badgers are not using these habitats. Furthermore no reference to evidence of badgers was recorded during the previous surveys undertaken previously by RPS.
- 4.29. The majority of the Site, notably hard standing, is of negligible value to badger. The areas of scrub, semi-improved grassland and trees at the Site offer suitable potential foraging habitat for badgers. However given the isolation of the Site by roads, and the lack of evidence at the Site, together with no nearby records of badger returned within the data search, the Site is considered to be of **negligible** value with regard to badgers.

Bats

- 4.30. Numerous bat species records were returned in the data search from within 2km of the Site.
- 4.31. During the 'Extended' Phase 1 Habitat Survey, two oak trees (**Target Note 3, Plate 5**) and a group of white willows (**Target Note 4, Plate 6**) were assessed as having potential to support roosting bats. The two mature oak trees present at the northern Site boundary contain features of potential value to roosting bats including branch scars, split limbs and cavities (**Plate 7**). These two oak trees were subject to an aerial inspection in July 2008 by RPS. The aerial inspection concluded that none of the features on the oak tree were suitable for roosting bats upon close inspection. However, it should be noted that the aerial inspection undertaken by RPS was undertaken approximately seven years ago and the potential bat roosting features within the trees are likely to have changed in the interim. As such, based on the current ground based visual assessment, the mature oaks are assessed as having Category 1 potential to support roosting bats..
- 4.32. The group of mature white willows at the south-western Site boundary contain several woodpecker holes (**Plate 8**) which could offer potential opportunities for roosting bats. As such these white willows are also assessed as having Category 1 potential to support roosting bats i.e.. It should be noted that these trees were not recorded as having potential to support roosting bats by RPS in 2008.
- 4.33. All other trees on Site were assessed to not offer any opportunities for roosting bats (i.e Category 3) at the time of survey. This is due to their young age or absence of bat roosting features such as woodpecker holes and cavities.
- 4.34. The linear boundary habitats which comprise scrub, semi-improved grassland and trees, offer foraging and commuting opportunities for bats. The bat activity surveys conducted by RPS in July

2008 recorded low numbers of common pipistrelle bats foraging and commuting in unlit areas of boundary vegetation.

- 4.35. Given the evidence presented above, it is considered that the Site is of value **within the boundary of the Site only** to bats and further bat surveys are required to establish presence / likely absence of roosting bats within trees and the value of the foraging and commuting habitat available on Site (see Section 5 below).

Birds

- 4.36. Numerous bird species records were returned in the data search from within 2km of the Site.
- 4.37. During the 'Extended' Phase 1 Habitat Survey carrion crow *Corvus corone*, wood pigeon *Columba palumbus* and a green woodpecker *Picus viridis* were observed within the canopy of the group of white willow trees at the south-west boundary of the Site (**Target Note 4**). In addition, a red kite *Milvus milvus* was observed flying over the Site.
- 4.38. Green woodpecker is on the Amber List of Birds of Conservation Concern²². This species spends most of its time feeding on the ground and breeds in holes which they peck in trees. Given the observation of woodpecker holes in the canopy of the group of white willow trees at the south-west boundary of the Site (**Target Note 4**), it is considered that this species could be breeding on Site.
- 4.39. Red kite is also on the Amber List and is listed on Schedule 1 of the WCA Act (as amended). Red kite occur in a wide range of habitats, but require large trees (10-15m in height) with open access to build a nest. No nesting material was observed within any of the larger trees at the Site during the 'Extended' Phase 1 Habitat Survey and therefore it is considered unlikely that this species is breeding at the Site.
- 4.40. The sparse patches of semi-improved grassland which have colonised hard standing and the rubble piles are considered to offer some suitable foraging habitat for black redstart which are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). However, given that this habitat has developed within the last four years (i.e since demolition activities), it is unlikely that the Site is a historically important foraging resource for local populations of black redstart. Furthermore no records of black redstarts were returned within the data search. No suitable breeding or nesting opportunities for this species are present on Site due to a lack of buildings and / or built structures with suitable features such as ledges or singing posts.
- 4.41. The Site provides nesting opportunities for bird species owing to the presence of scrub and trees. Given the size of the Site and the dominant habitat type being hardstanding, it is considered unlikely that any significant bird populations would be present at the Site. As such it is considered that the Site is of value **within the boundary of the Application Site only** to birds.
- 4.42. No further survey works with regards to birds are recommended, however good practice measures are detailed within Section 5 below.

Common Dormouse

- 4.43. The data search returned two records of common dormouse from Shinfield Park Woodlands located 1.2km east of the Site (1986 & 1987).
- 4.44. The Site does not contain any habitats of value to common dormice such as woodland and hedgerows. Furthermore the Site is isolated on all sides by roads and therefore has no connectivity to off-Site woodland habitat. As such, the Site is considered to be of **negligible** value to dormice and this species is not discussed further within this report

²² Eaton et al (2009). *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*.

Fish

- 4.45. The data search provided records of two fish species from within 2km of the Site, notably European eel and barbell. The European eel breeds at sea and migrates into rivers to mature, whilst the barbell is usually found in gravel and rocky bottom slow flowing waters. Given the characteristics of the ditch on Site, it is considered that neither of these species would be present.
- 4.46. The wet ditch on Site may support some common species of fish (e.g stickleback *Gasterosteus aculeatus*), however owing to its extent within the Site boundary it is unlikely to support any large or notable populations. The Site is therefore considered to be of **negligible ecological value** to protected or notable fish. As such, no further fish survey work is recommended and this species group are not discussed further within this report.

Hedgehog

- 4.47. The closest hedgehog record returned within the data search is 687m north-west (1999) of the Site.
- 4.48. Given that the Site is isolated on all sides by roads and there is no connectivity to off-Site habitat, it is considered that the Site is of **negligible** value to hedgehog. Therefore this species is not discussed further within this report.

Terrestrial Invertebrates

- 4.49. Numerous invertebrate species records were returned in the data search from within 2km of the Site. The nearest stag beetle record was recorded 1.43km south (2002) of the Site. Stag beetles require dead wood to complete their life cycle²³. Given the lack of dead wood habitat at the Site, it is considered that the Site would not support this species.
- 4.50. The scrub, semi-improved grassland and trees are likely to offer opportunities for common species of invertebrates, however owing to the extent and isolation of these habitats, it is considered unlikely that they would support any large or notable species. The Site is therefore considered to be of **negligible ecological value** to protected or notable invertebrates.

Reptiles

- 4.51. The data search returned records of grass snake and slow worm from within 2km of the Site.
- 4.52. RPS undertook a reptile survey of the Site in May 2010, during which no reptiles were recorded.
- 4.53. The Site contains habitats of potential value to reptiles such as the semi-improved grassland and scrub habitats. However, given the absence of reptiles during the 2010 survey and the isolation of these habitats by surrounding hard standing it is considered highly unlikely that any reptiles would be currently present at the Site. As such, the Site is considered to be of **negligible** value to reptile species and no further reference is made to this species group within this report.

Water Vole

- 4.54. The data search provided records of water vole from within 2km of the Site, with the nearest water vole *Arvicola amphibius* record being 1.22km north-west of the Site (2000). This record is from the River Kennet, which is separated from the Site by urban development.
- 4.55. A single water body is present at the Site, notably the wet ditch located at the southern Site boundary (**Plate 3, Target Note 1**). No evidence of water vole was recorded during the 'Extended' Phase 1 Habitat Survey and the ditch is not considered suitable given a lack of food sources and poor

²³ London Wildlife Trust (2000). Stage Beetle: An advice note for its conservation in London.

connectivity to habitats of value in the wider area. As such, the Site is considered to be of **negligible** value to water vole and no further reference is made to this species within this report.

White-clawed Crayfish

- 4.56. No white-clawed crayfish records were returned within the data search.
- 4.57. The ditch present at the Site is assessed to be of **negligible** value to white-clawed crayfish due to the poor habitat quality it provides to this species. The ditch contains a high degree of sediment and lacks suitable refuges such as boulders and large cobbles. As such, the Site is considered to be of **negligible** value to white-clawed crayfish and no further reference is made to this species within this report.

5. Discussion and Recommendations

- 5.1. The potential ecological impacts of the Development proposals are discussed below. In addition, any recommendations for protected and notable species surveys that are considered to be required to ensure the works comply with legislative requirements are made, along with suggested mitigation measures to be implemented to minimise any potential detrimental ecological impacts. In addition ecological enhancements measures are also suggested in line with planning policy and guidance requirements.

Designated Sites

Statutory Sites

- 5.2. Pearman's Copse LNR (located 1.91km east of the Site) and Stanford End Mill and River Loddon SSSI (located 4.11km east of the Site) are the closest statutory designated sites to the Site. Given the distance between the Site and these statutory designated site, and the scale of the Development, it is considered highly unlikely that there would be any direct or indirect effects on them as a result of the Development. However it is recommended that a Construction Environmental Management Plan (CEMP) (see below for further details) is implemented as a matter of best practice during the construction phase of the Development.

Non-Statutory Sites

- 5.3. The nearest non-statutory designated site is Great Lea Pond, which lies 0.77km south-east of the Site. It is considered unlikely that there would be any direct or indirect effects on any non-statutory designated sites as a result of any future Development of the Site owing to the separation and distance (all other non-statutory site are greater than 0.77km from the Site) of the non-statutory sites from the Site by surrounding urban development and infrastructure. The only exception to this is the River Kennet / Kennet and Avon Canal LWS which, although is located 1.9km north-west of the Site, it is hydrologically connected to the wet ditch on Site via Foundry Brook, To prevent the water quality of the River Kennet / Kennet and Avon Canal LWS being adversely impacted as a result of the Development (e.g. as a result of pollution or silt), it is recommended that a CEMP (see below for further details) is implemented during the construction phase.

Habitats

- 5.4. The Site consists of habitats assessed to be of **local** value (mature trees), of value **within the boundary of the Site only** (running water, scrub, semi-improved grassland and semi-mature/immature trees) and of **negligible** value (hard standing and rubble piles).
- 5.5. In line with the NPPF and Local Planning Policy (Policy CS38 and the Tree Strategy for Reading), the following protection measures should be adhered to during the construction phase of the Development:
- Any trees to be retained should be appropriately protected in accordance with BS 5837:2012 - *"Trees in relation to design, demolition and construction – Recommendations"*²⁴; and
 - As a matter of best practice, it is recommended that a Construction Environmental Management Plan (see below for further details) is produced covering demolition and construction activities at the Site. The CEMP should include measures to minimise potential pollution events such as surface run-off, dust arisings, noise and vibration, where appropriate.

²⁴ BSI (2012): *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*.

5.6. To conserve and increase the ecological value of habitats at the Site and in line with planning policy, the following recommendations and enhancements could be considered as part of the Development:

- In line with Local Planning Policy CS36 'Biodiversity and Geology', CS38 'Trees, Hedges and Woodlands' and the Tree Strategy for Reading, it is recommended the trees on Site are retained, where possible, and placed under a suitable management regime, as part of any future Development proposals;
- In line Objective 5 of the Tree Strategy for Reading, any future Development proposals should conserve, enhance and extend green corridors within landscape proposals to create and connect habitats of value to wildlife. The use of native species or species of benefit to wildlife within any proposed landscape scheme to provide foraging opportunities for birds, bats, invertebrates and other fauna is recommended to enhance the Site for wildlife;
- Where new landscaping is to be undertaken as part of the Development proposals horticultural practice should include the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) will be discouraged to prevent fatal effects on the food chain particularly invertebrates, birds and/or mammals. Any pesticides used should be non-residual;
- Additional habitat should be created above ground level utilising roof top space. For example brown roofs could be provided with a gravel substrate and allowed to self-seed with ruderal/ephemeral species. Green roofs could also be provided by creating grassland on roofs by sowing sedum and hardy plant species in shallow low-nutrient soils. This would potentially provide a food source for invertebrates on which, in turn other invertebrates and birds and bats may feed. They can also provide breeding and nesting habitat for invertebrates and birds (including the house sparrow, a SoPI) and green / brown roofs are ideal for including bird boxes on (see bird section below). Brown roofs would also provide a suitable foraging for black redstarts (S41) which would replace the potential foraging habitat lost as part of the Development, and nest box provision for this species could also be provided on overlooking vertical structures; and
- Green walls could be created simply by designing trellis features on external walls of new buildings within the proposed Development extending two or three storeys from the ground level. A range of native climbing plants could be used including ivy, honeysuckle *Lonicera periclymenum*, hop *Humulus lupulus* and wild clematis *Clematis vitalba*. These species can provide an invaluable food source for invertebrates which feed on the leaves, flowers and nectar of certain species, and can also provide over-wintering and hibernation habitat.

Construction Environmental Management Plan

5.7. A Construction Environmental Management Plan (CEMP) could be produced and implemented to allow future Development proposals to be implemented whilst minimising the impacts on any retained habitats on Site. Measures to be included within the CEMP comprise:

- Works to be undertaken during daylight hours or lighting to be controlled to ensure there is minimal light spill on habitats used by nocturnal species e.g. bats;
- The use of British Standards Best Practice Guidelines to reduce disturbance resulting from noise, surface run-off and vibration during construction works;
- Careful siting and appropriate bunding of storage facilities for fuel and hazardous materials;
- Delivery of oils and fuels to be supervised at all times;

- Dust build up and mud deposits should be avoided and stockpiled material to be covered or stored within a contained area to enable run-off to be treated; and
- Use of trip trays when filling smaller containers from tanks or drums to avoid spillage entering the ground or drainage systems.

Protected and Notable Fauna

Amphibians

- 5.8. The wet ditch on Site has potential to support common toad and common species of amphibian. It is therefore recommended that this ditch is retained on Site as part of the Development. To enhance the Site further for amphibian species it is recommended that water features such as ponds are included within the Development proposals.

Badger

- 5.9. No evidence of badger was found at the Site during the current survey and the Site is considered to be of **negligible** value to this species.
- 5.10. Some areas of the Site were however inaccessible to survey for the presence of badgers and as such and as a precautionary measure if any badger setts are discovered during the Development works, activities should cease, and an ecologist should be contacted for advice immediately. If the setts are considered active, further survey work and the design of a mitigation strategy would be required. A Natural England badger licence may be required under these circumstances.

Bats

- 5.11. Two oak trees (**Target Note 3, Plate 5**) and one group of white willow trees on Site (**Target Note 4, Plate 6**) have been identified as having Category 1 potential to support roosting bats. It is currently understood that these trees will be retained within the Development. As such no direct impacts to roosting bats, should they be present, would occur as a result of the Development. Current best practice guidelines (Hundt, 2012) state that trees with Category 1 potential to support roosting bats should be subject to further survey if felling is required. As such, if the Development proposals change, resulting in the requirement for arboricultural works to any of the Category 1 trees, it is recommended that further assessment is undertaken. This would comprise an aerial tree inspection to look at potential features of value to roosting bats in greater detail. This would be undertaken by appropriately trained tree climbers who hold a Class 2, Natural England Bat Licence. If the climbing inspection confirms that the features upon the trees are not suitable for roosting bats, no further survey will be required. However, should potential features be recorded dusk and dawn re-entry survey (not within the same 24 hour period) should be carried out upon each of these trees during the optimal survey period (May to August), to determine the presence or absence of roosting bats within these trees.
- 5.12. If any trees are confirmed to support roosting bats the survey effort detailed above would need to be increased to conform to current best practice guidelines. The additional surveys would assist in adequately assessing the number of bats present and the roost classification to advise the requirement for mitigation. Furthermore, if any of the trees that would be directly impacted on by Development proposals are confirmed as supporting a bat roost, it is recommended that a detailed

mitigation strategy to support a Natural England European Protected Species (EPS) development licence is prepared, in order to avoid infringement of relevant legislation. The licence application would detail the proposed mitigation including provisions of alternative bat roosting opportunities on the Site, timing of the proposed works and the provision of ecological supervision during the tree removal phase. Post Development monitoring of the mitigation provided may also be required as part of the licence and the survey data would need to be within 18 months of age to support the licence application. It should be noted that Natural England require a minimum of 30 working days to process a licence application.

- 5.13. All other trees on Site have been assessed as being of **negligible** potential to support roosting bats. Current best practice guidelines state that trees with negligible potential for bats do not require further survey. However, if there is a significant period of time (two years is considered standard in most local planning authorities) between this report and the proposed Development works, these trees may deteriorate in condition and therefore should be subject to an update survey to determine if their potential to support roosting bats has changed.
- 5.14. In order to determine the use of the Site by foraging and commuting bats, activity surveys are recommended. These surveys should be based on current best practice guidelines and would include a total of three activity surveys (2 evening activity surveys and 1 pre-dawn activity survey) between May and September. Each evening activity survey will commence from sunset to at least 2 hours and each pre-dawn activity survey will commence at least 2 hours prior to sunrise.
- 5.15. In line with current best practice guidelines, automated surveys through the use of a static detector should also be undertaken. The automated detector survey would comprise the deployment of an automated detector for three consecutive nights on three separate occasions.
- 5.16. As detailed in section 3, the scope of the further bat surveys recommended above has been agreed with Giles Sutton (Planning Ecologist) at Reading Borough Council (**Appendix D**).
- 5.17. The provision of enhanced bat roosting opportunities should be considered as part of the Development. Bat roosting opportunities could be enhanced through the provision of bat boxes/tubes and/ or bricks incorporated into any proposed buildings/structures and/or mounted onto existing / newly planted trees. It is recommended that bat boxes/tubes and/ or bricks are targeted at SoPI species and those species recorded at the Site in the recommended bat surveys. Appropriate bat box/tube and/ or brick models include Schwegler N27 bat box brick, Schwegler 1FD bat box and Schwegler 1FR bat tube. Bat bricks (e.g. Schwegler N27) can be incorporated into the fabric of the buildings and are available in a variety of external fascia materials; providing bat roosting opportunities which are unobtrusive. The location of the bat boxes/tubes and/ or bricks would be specified by an ecologist but should face vegetated habitats and be away from public accessible roof spaces (if included). The boxes/tubes and/ or bricks should be orientated facing between south-east and south-west, and at least 4m above ground level with a clear aspect.
- 5.18. The provision of enhanced bat foraging and commuting opportunities should be considered as part of the Development. In line with the provision of green space recommended above, the landscape plan could also include the planting of night-scented plants to attract night-flying insects which would in turn offer a foraging and commuting resource for local bats. Recommended night scented plant species include evening primrose *Oenothera biennis*, white jasmine *Jasminum officinale*, honeysuckle *Lonicera periclymenum* and sweet rocket *Hesperis matronalis*.

- 5.19. A sensitive lighting scheme could be designed as part of the Development to minimise any associated negative impacts of the Development on bats either commuting / foraging and roosting on Site.
- 5.20. Please note that the recommendations detailed above will be updated accordingly in a separate bat survey report based on the results of the further bat surveys proposed at the Site and on receipt of the emerging Development scheme design.

Birds

- 5.21. The habitats at the Site including scrub, semi-improved grassland and trees are considered unlikely to support any large populations of birds. However green woodpecker (Amber Listed) has been observed on the Site and there are opportunities on Site to support common species of breeding birds. The following mitigation and enhancement measures for birds should be considered as part of the Development;
- Brown roofs incorporated into the Development as described above in order to mitigate for the loss of vegetation which has potential to provide a foraging resource for black redstart;
 - Should any habitats of value to nesting birds require removal to facilitate the Development this will be undertaken outside of the breeding bird season (March to August inclusive). However, if works cannot be undertaken outside the breeding bird season an ecologist will inspect any vegetation to be removed. An experienced ecologist will be deployed to carry out an inspection at least within 24 hours prior to the clearance. If an occupied nest is detected, a buffer zone (typically 5m) will be created around the nest, and clearance of this area delayed until the young have fledged;
 - It is recommended that the scrub and trees are retained on the Site where possible, to retain the interest for nesting birds. Should these habitats require removal to facilitate the Development, then they should be replaced by habitats of value to nesting birds; and
 - The use of native plants species as recommended above would provide additional foraging habitat for local bird species.
- 5.22. In addition opportunities to enhance the Site for birds could be incorporated into the design of the Development. Simple measures could include provision of artificial nest sites within new habitats. It is recommended that artificial nest sites are targeted at green woodpecker, SoPI species and RBAP species. The following bird boxes are recommended:
- 'Schweglar Starling Nest Box 3S' – This nest box has been designed with a large, deep cavity and 45mm entrance hole to attract starlings. Can be installed on mature trees or buildings. As well as starlings, this nest box is suitable for woodpecker species;
 - 'Schweglar Sparrow Terrace 1SP' – Suitable for house sparrows and tree sparrows. The nest box contains three separate nesting cavities. They can be installed on buildings either affixed to the exterior wall or incorporated into the wall; and
 - 'Schwegler Nest Box 1B' – Available with a range of entrance hole sizes. Suitable for many bird species including tits, sparrows and redstarts. Can be installed on mature trees or buildings.
- 5.23. The bird boxes should be placed at least 3m above ground level to prevent vandalism and face east or west.

- 5.24. As recommended previously, the provision of green space within the Development design would provide foraging and nesting opportunities at the Site for local bird species.

Invertebrates

- 5.25. Only common UK invertebrate species are considered to utilise the Site's habitats. As such, any loss of these habitats is not considered to impact any protected or notable invertebrate species.
- 5.26. Opportunities at the Site for invertebrates should be considered as part of the Development and could be enhanced through new landscape planting. The incorporation of deadwood features within landscape areas, plus the use of native plants species, as recommended above would provide increased opportunities for a range of invertebrates.

Other Fauna

- 5.27. The Site is not considered to be of value to any other protected/notable species. As such, no further survey work other than that detailed above is considered necessary to support the planning application.

6. Conclusions

- 6.1. The Site is not subject to any statutory or non-statutory designations. There are designated sites within 5km of the Site, however it is considered that these will not be affected as a result of the Development owing to their physical distances from the Site and their separation by roads and other built development. The only exception being the River Kennet / Kennet and Avon Canal LWS which, although is located 1.9km north-west of the Site, it is hydrologically connected to the wet ditch on Site via Foundry Brook. To prevent the water quality of the River Kennet / Kennet and Avon Canal LWS being adversely impacted as a result of the Development it is recommended that a CEMP is implemented as a matter of best practice.
- 6.2. The Site consists of habitats assessed to be of **local** value (mature trees), of value **within the boundary of the Site only** (running water, scrub, semi-improved grassland and semi-mature/immature trees) and of **negligible** value (hard standing and rubble piles).
- 6.3. Based on the results of this PEA, the Site has potential to support notable and protected species including bats and nesting birds. Based on the current Development plans, **Table 4** below outlines the further survey requirements. The results of the recommended additional bat surveys will confirm the presence or absence of roosting bats (if tree assessments are undertaken) and determine how they are utilizing the Site.

Table 4: Summary of Further Survey Work Required

Species	Survey	Timing
Bats	Aerial climbing inspection / Emergence and re-entry surveys of trees (Target Note 3 and 4)*	May to August inclusive
	Activity (and automated) surveys of the Site	May to September inclusive

*Only to be undertaken if these trees are proposed to be subject to arboricultural works.

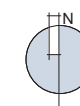
- 6.4. In addition, it is recommended that the level of mitigation and enhancement measures detailed within this report are reviewed based on the emerging Development scheme proposals.
- 6.5. It should be noted that this PEA is relevant to the legislation detailed in Section 2 and **Appendix A** at the time of writing. If there are any changes to legislation prior to the Development being completed, the advice within this PEA may require amending / updating in line with any legislative updates.
- 6.6. If there is a significant period of time (most LPAs consider this period to be to 18 months) between this PEA and the Development commencing, the ecological value of the Site may change and the Site should therefore be subject to an update survey.

FIGURES

Figure 1: 'Extended' Phase 1 Habitat Plan (ref: WIB14723-101_GR_EC_1A)



-  Site Boundary
-  Semi-improved Grassland
-  Hardstanding
-  Running Water
-  Scrub
-  Scattered Scrub
-  Rubble Pile
-  Tree
-  Target Note



Project Details	WIB14723-100: Worton Grange, Reading
Figure Title	Figure 1: 'Extended' Phase 1 Habitat Plan
Figure Ref	WIB14723-100_GR_EC_1A
Date	July 2015
File Location	\\s-Incs\wiel\projects\eed14723\100\graphics\ec\issued figures



APPENDICES

A. Species and Habitat Legislation

Badgers

Badgers *Meles meles* receive legal protection under the Protection of Badger Act 1992 and the WCA. Taken together it is an offence to:

- Wilfully attempt or attempt to kill, injure, ill-treat or take a badger;
- Dig for badgers;
- Use badger tongs or a firearm other than the type specified under the exceptions within the Act;
- Interfere, damage, destroy or obstruct a badger sett;
- Allow or cause a dog to enter a sett or disturb an occupied sett either intentionally or by neglect;
- Sell or offer for sale a live badger;
- Have possession or control of a live badger; and
- Mark or attach a ring, tag or other marking device to a badger.

Bats

In summary, all UK bat species are protected by the Conservation of Habitats and Species Regulations 2010 (as amended) and by the WCA. Taken together it is an offence to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats in such a way as to be likely significantly to affect (i) the ability of any significant group of bats to survive, breed, or rear / nurture their young; or (ii) the local distribution of that species;
- Damage or destroy any breeding or resting place used by bats; and
- Intentionally or recklessly obstruct access to any place used by bats for shelter or protection.

Four bat species (lesser horseshoe *Rhinolophus hipposideras*, greater horseshoe *Rhinolophus ferrumequinum*, barbastelle *Barbastella barbastellus* and Bechstein's *Myotis bechstenii*) are listed on Annex II of The Conservation of Habitats and Species Regulations 2010. Annex II species may be protected through the designation of European protected sites known as Special Areas of Conservation (SAC).

Birds

The level of protection afforded under the law varies from species to species. Identified game and pest species may lawfully be hunted and killed, usually under licence, whilst the most threatened or rarest breeding species are listed on Schedule 1 of the Wildlife & Countryside Act (as amended)²⁵ and are protected by special penalties for offences.

All of the native bird species of Britain are additionally covered by the European Union (EU) Directive on the Conservation of Wild Birds 2009 ('The Birds Directive'). The EU Birds Directive (79/409/EEC) resulted in the designation of Special Protection Areas (SPAs) for rare or vulnerable bird species listed on Annex 1 (The species listed in Annex I of the Birds Directive are, according to the Directive, those in danger of extinction, rare, vulnerable to specific changes in their habitat or requiring particular attention for reasons of the specific nature of their habitat) of the Directive and for regularly occurring migratory species. The Birds Directive applies to all wild birds, their eggs, nests and habitats, and provides for the protection, management and control of all species of birds naturally

occurring within each member state of the European Union. It requires the UK to take measures to ensure the preservation of sufficient diversity of habitats to maintain populations of all wild birds at ecologically and scientifically sustainable levels. The requirements of the Birds Directive are implemented in the UK primarily through the Wildlife & Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2010.

In addition to statutory protection, the bird species of Britain are also subject to various conservation designations intended to indicate their rarity, population status and conservation priority. These do not have statutory force but may be instrumental in determining local, regional and national planning and development policy. The main categories of designation comprise the British Trust for Ornithology (BTO) 'Species Alert' lists, the Royal Society for the Protection of Birds (RSPB) 'Birds of Conservation Concern' lists and species listed in the UK and local Biodiversity Action Plans (BAPs).

The BTO Conservation Alert System lists of 'Birds of Conservation Concern' including a 'Red List' for birds of high conservation concern. Red List species are those that are globally threatened according to the International Union for Conservation of Nature (IUCN) criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery, including:

- Globally threatened according to the IUCN;
- Historical population decline in UK during 1800-1995;
- Rapid (>50%) decline in UK breeding population over the last 25 years; and
- Rapid (>50%) contraction of UK breeding range over the last 25 years.

The BTO Conservation Alert System lists 'Birds of Conservation Concern' including an 'Amber List' for birds of medium conservation concern. 'Amber List' species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations, including:

- Historical population decline during 1800-1995, but recovering: population size has more than doubled over last 25 years;
- Moderate (25-49%) decline in UK breeding population over the last 25 years;
- Moderate (25-49%) contraction of UK breeding range over the last 25 years;
- >50% of UK breeding population in 10 or fewer sites;
- >20% of European breeding population in UK;
- Species with unfavourable conservation status in Europe; and
- It is important to note that certain 'Red list' species also qualify for 'Amber List' criteria.

An updated list of 'Red' and 'Amber List' species was published in May 2009²⁶.

Statutory protection is given to all nesting birds in the UK under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird, take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for species listed on Schedule 1 of the Act, it is an offence to intentionally or recklessly disturb birds while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

²⁶ Eaton et al (2009). *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*.

B. Target Notes

Target Note	Description
1	A wet ditch is located adjacent to the southern Site boundary. The ditch is considered to provide opportunities for common species of invertebrates and a water source for bats and birds.
2	An area of dense scrub located along the south-western boundary of the Site. The scrub habitats are considered to provide a green corridor within at the Site and give opportunities for invertebrates, nesting and foraging birds and foraging and commuting bats.
3	Two mature oak trees present at the northern Site boundary offering medium potential to support roosting bats.
4	Group of white willows present at the south-eastern Site boundary offering medium potential to support roosting bats.

C. Photographs



Plate 1 – The majority of the Site comprises hard standing as a result of the footprint of the former HP office buildings and associated car park areas. Sparse patches of vegetation were recorded within cracks of the hard standing.



Plate 2 - Seven rubble piles, which are presumed to be the remains of the demolished HP office buildings, are present at the Site.



Plate 3 – A wet ditch is located adjacent to the southern Site boundary (Target Note 1).



Plate 4 – Unmanaged semi-improved grassland located along the eastern Site boundary.



Plate 5 – Two mature oak trees present at the northern Site boundary (Target Note 3) offering medium potential to support roosting bats.



Plate 6 – Group of white willows present at the south-eastern Site boundary (Target Note 4) offering medium potential to support roosting bats.



Plate 7 – A split limb which could provide potential opportunities for roosting bats located on one of the mature oak trees at the northern Site boundary (Target Note 3).



Plate 7 – A woodpecker hole which could provide potential opportunities for roosting bats located on one of the white willow trees at the south-eastern Site boundary (Target Note 4).

D. Consultee Correspondence

From: [Sutton, Giles](#)
To: [Bishop, Hayley](#)
Subject: RE: Worton Grange, Reading - Ecology Consultation
Date: 17 July 2015 12:19:40

Dear Hayley,

Thanks for your email. The survey work you propose should be sufficient to inform the planning application,

Kind regards,

Giles Sutton MSc MCIEEM CEnv
Ecologist - Reading Borough Council (Planning / Parks)
Tel (direct dial): 0118 9373826 - Fax: 0118 939 0435 -
Civic Centre, Reading, RG1 7AE
The Council has adopted a Tree Strategy for Reading. For more information see:
www.reading.gov.uk/treestrategy

From: Bishop, Hayley [mailto:hayley.bishop@watermangroup.com]
Sent: 16 July 2015 12:01
To: Sutton, Giles
Subject: Worton Grange, Reading - Ecology Consultation

Giles,

I understand that you are the Planning Ecologist for Reading Borough Council. I tried to call you earlier to discuss ecological matters at a site in Reading, however my call went to your voicemail, so I thought I would email you instead.

I am currently working on a proposed scheme at a site called Worton Grange in Reading (The site location plan and habitat plan is attached). A previous scheme was consented in 2010 (Planning Application ref: 10/01784/OUT), however the site has since been sold and our client is looking to submit a new planning application for a mixed use development. To support the previous planning application, an ecological desk study (2008), phase 1 habitat survey (2008), bat daytime and climbing tree assessment (2008), bat activity surveys (2008) and reptile survey (2010) were undertaken. I have recently undertaken an update Preliminary Ecological Appraisal of the site to determine its current ecological value. Based on the results of this survey I am recommending further surveys for bats to support the proposed planning application. I would like to confirm your agreement with the bat survey scope outlined below:

Bat Surveys:

Bat Activity and Automated Detector Surveys

The previous bat activity surveys conducted in July 2008 recorded low numbers of common pipistrelle bats foraging and commuting in unlit areas of boundary vegetation. In order to determine the current use of the Site by bats, activity surveys are proposed. These surveys will be based on current best practice guidelines (Bat Conservation Trust, 2012) and will include a total of three activity surveys (2 evening and 1 pre-dawn) conducted within the remainder of the bat survey season (i.e completed by the end of September). Each evening activity survey will commence from sunset to at least 2 hours and the dawn activity survey will commence at least 2 hours prior to sunrise.

Automated surveys through the use of a static detector are also proposed to be undertaken. The automated detector survey would comprise the deployment of an automated detector for three consecutive nights on three separate occasions conducted within the remainder of the bat survey season.

Trees

Two oak trees (see Target Note 3 on attached plan) and one group of white willow trees on Site (see Target Note 4 on attached plan) have been identified as having Category 1 potential to support roosting bats during the current survey. It is proposed that these trees will be retained within the Development. As such no direct impacts to roosting bats, should they be present, would occur as a result of the Development, therefore no further survey work upon these trees in relation to bats is proposed. It should also be noted that climbing inspections of the two oak trees (see Target Note 3 on attached plan) were previously undertaken in 2008 and no evidence of roosting bats was found and upon close inspection of these trees no features were considered suitable to support roosting bats.

All other trees on site have been assessed as having Category 3 (negligible) potential to support roosting bats and therefore no further surveys of these trees would be undertaken.

Reptiles

The previous reptile survey of the Site undertaken in May 2010 recorded no reptiles. The Site contains habitats of potential value to reptiles such as the semi-improved grassland and scrub habitats. However, given the absence of reptiles during the 2010 survey and the isolation of these site habitats by surrounding hard standing (i.e busy roads) it is considered highly unlikely that any reptiles would currently be present at the Site. As such, no update reptile survey is recommended to support the new planning application.

Please can you confirm your agreement with the above survey scope? Don't hesitate to contact me should you have any questions.

Kind regards,

Hayley Bishop
Senior Ecologist
Waterman Infrastructure & Environment Ltd

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