



Reading Borough Council

READING GEORGE STREET

PRELIMINARY ECOLOGICAL APPRAISAL



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PRELIMINARY ECOLOGICAL APPRAISAL

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1 EXECUTIVE SUMMARY

- 1.1.1. WSP was instructed by Reading Borough Council to carry out an ecological appraisal of land at George Street, Reading (central National Ordnance grid reference SU70557374) at a site comprising the potential location of affordable housing provision within the borough, hereafter referred to as the 'Proposed Development'.
- 1.1.2. A survey was undertaken on 16th June 2017. The aim of the survey was to identify the habitats present, the Survey Area's potential to support protected and/or notable species, and any ecological constraints in relation to the Proposed Development.
- 1.1.3. A desk study was carried out in support of the assessment to establish any historical ecological data and designated sites which may pertain to inform the proposed works.
- 1.1.4. The survey found that the majority of the Survey Area consisted of hardstanding and bare ground which offers little potential to support species of nature conservation importance. The scrub on site has potential to be used by nesting birds in the breeding season.
- 1.1.5. The habitat on the Survey Area was not suitable for bats; however, the Survey Area sits within a wider landscape which has suitable habitat for foraging and commuting.
- 1.1.6. One designated site was recorded within 10 km and eight non-statutory designated sites were identified within 2 km of the development site. No negative impacts are envisaged on a designated sites in relation to the Proposed Development.
- 1.1.7. Certain species, habitats and nature conservation sites receive legislative protection which is detailed fully within Appendix A. Specific recommendations based upon the nature of the proposed works and compliance with this legislation are referenced within this PEA and include the following.
- 1.1.8. Under the Wildlife and Countryside Act 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young. Therefore, should any vegetation removal be carried out during the nesting bird season (March – September inclusive) then a nesting bird check would need to be carried out no earlier than 24 hours prior to the commencement of works.
- 1.1.9. As the surrounding areas of scattered trees and scrub offer some suitable foraging and commuting habitat for bats, it is recommended that any proposed use of lighting, either during construction or as a permanent external fixture, should be designed in a sensitive manner so as to avoid disturbance of bats. Direct illumination of trees and buildings in the surrounding area should also be avoided. To achieve this, lighting should be directed to where it is needed and spillage avoided via the use of accessories such as baffles, hoods or louvres. Light levels should be as low as guidelines allow, with lighting used only where and when necessary.

2 INTRODUCTION

2.1 BACKGROUND

PROJECT BACKGROUND

- 2.1.1. WSP was instructed by Reading Borough Council to carry out an ecological appraisal of land at George Street, Reading (central National Ordnance grid reference SU70557374). A Survey Area was defined encompassing the potential location of affordable housing provision within the borough, hereafter referred to as the 'Proposed Development'.

ECOLOGICAL BACKGROUND

- 2.1.2. The Survey Area covers approximately 0.30 ha and consists predominantly of hardstanding and bare ground, bordered on two sides by scrub. In the wider context, the Survey Area sits within an urban residential area and is bordered to the north and west by scrub, scattered trees and a railway line, to the south by residential housing, and to the east by amenity playing fields with a community centre and scattered trees.

2.2 SCOPE OF REPORT

- 2.2.1. The aims and objectives of the Preliminary Ecological Appraisal (PEA) were:
- to provide baseline ecological information about the Survey Area and a surrounding study area with particular reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present;
 - to provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
 - if necessary, to identify the need for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.

2.3 RELEVANT LEGISLATION AND POLICY

- 2.3.1. The appraisal has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. The context and applicability of each item is explained as appropriate in the relevant sections of the report and additional details are presented in Appendix A.
- The Conservation of Habitats and Species Regulations 2010 as amended (Habitats Regulations);
 - The Wildlife and Countryside Act 1981 (as amended) (WCA);
 - Countryside Rights of Way Act 2000;
 - The Natural Environment and Rural Communities (NERC) Act 2006;
 - The Wild Mammals (Protection) Act 1996;
 - The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012);
 - Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011);
 - UK Biodiversity Action Plan (UKBAP)¹;
 - The National Planning Policy Framework (NPPF) 2012 (DCLG, 2012); and
 - Reading Borough Local Development Framework, Core Strategy (Adopted January 2008, altered January 2015)

¹ The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

3 METHODS

3.1 OVERVIEW

- 3.1.1. This appraisal has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2013 and 2015), and Joint Nature Conservation Committee (JNCC, 2010); and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2013 (British Standards Institute (2013).
- 3.1.2. This PEA is based on the following data sources:
- an ecological desk study;
 - a habitat survey;
 - a protected/notable species assessment; and
 - a preliminary bat roost assessment.

3.2 DESK STUDY

- 3.2.1. The desk study was undertaken on 29th June 2017 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii around the Survey Area. This approach is consistent with current good practice guidance published by the CIEEM, 2013 and 2015. To provide the baseline data for the ecological desk study, the following information was requested from the Thames Valley Environmental Record Centre:
- Records of legally protected and notable species within 2 km of site;
 - Bat records within a 5 km radius of the Survey Area; and
 - Records of non-statutory sites designated for nature conservation value within 2 km of the Survey Area.
- 3.2.2. Freely downloadable datasets (available from Natural England) were consulted for information regarding the presence of statutory designated habitats² within 2 km of the Survey Area. This search was extended to 10 km for Natura 2000 sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) of European importance and internationally designated Ramsar sites.
- 3.2.3. Information regarding Habitats of Principal Importance (HPI)³ within 2 km of the Survey Area was provided by the Thames Valley Environmental Record Centre and woodland listed on the Ancient Woodland Inventory⁴.
- 3.2.4. In addition, open source 1:25,000 Ordnance Survey mapping was used to identify any mapped water bodies and watercourses within 500m of the Survey Area.
- 3.2.5. The findings of the desk study have been incorporated within Section 4 and Appendix B of this report.
- 3.2.6. The ecological desk study was carried out by an ecological consultant who is an associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and has over three years' experience in ecological consultancy.

3.3 HABITAT SURVEY

- 3.3.1. A Phase 1 habitat survey of the Survey Area was carried out on the 16th June 2017 in warm, dry weather conditions. The Phase 1 habitat survey was carried out by an ecological consultant who is a member of the

² Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

³ Mapped locations of HPI are usually not available, but HPI aligns in the most part with UKBAP habitats. Inventories of UKBAP habitat have been prepared by a variety of organisations and at a national (Natural England priority habitat inventory) and local scale (e.g. by local records centres). In some instances these are primarily based on aerial photograph analysis rather than field survey.

⁴ The ancient woodland inventory in England lists areas over two hectares in size which have been continuously wooded since at least 1600.

Chartered Institute of Ecology and Environmental Management (CIEEM) and has over four years' experience in ecological consultancy, including extensive experience completing PEAs.

- 3.3.2. Habitats were described and mapped following the standard Phase 1 habitat survey methodology (JNCC, 2010). Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species are recorded and habitats are classified according to their vegetation types. Where appropriate consideration was given to whether habitats qualify, or could qualify, as a Habitat of Principal Importance following habitat descriptions published by the Joint Nature Conservation Committee (JNCC, 2008).
- 3.3.3. A list of plant species was compiled (Appendix C), with relative plant species abundance estimated using the DAFOR scale⁵. The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2010) and are also listed in Appendix C.
- 3.3.4. Habitats were marked on a paper base map and were subsequently digitised using a Geographical Information System (GIS). All habitat areas were mapped.
- 3.3.5. Target notes were made to provide information on specific features of ecological interest (e.g. a *badger Meles meles* sett) or habitat features too small to be mapped. These are included in Appendix D.
- 3.3.6. Any invasive plant species listed on Schedule 9 of the WCA 1981 (as amended) which were evident during the Phase 1 habitat survey were also target noted. Detailed mapping of such species; or a full survey of the Survey area for all invasive plant species is beyond the scope of this commission.
- 3.3.7. Data collected as part of this Phase 1 Habitat survey is suitable for use in retrospective biodiversity unit calculations, if required.

3.4 PROTECTED SPECIES ASSESSMENT

- 3.4.1. The potential for the Survey Area to support legally protected and notable species was assessed using the desk study results and combined with field observations during the habitat survey. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat suitability assessment for key faunal groups: birds (Gilbert et al, 1998 and Bibby et al, 2000) and bats (Collins, 2016 and Mitchell-Jones, 2004).

3.5 NOTES AND LIMITATIONS

- 3.5.1. Every effort has been made to provide a comprehensive description of the Survey Area; however, the following specific limitations apply to this assessment:
- 3.5.2. Ecological survey data is valid for two years unless conditions change due to ecological processes or management of the Survey Area.
- 3.5.3. Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- 3.5.4. The Phase 1 Habitat survey was carried out over the period of a single day, as such only a selection of all species that occur within the Survey Area will have been recorded. However, through use of desk study information to supplement site survey data, it is considered that an accurate assessment of the potential for the Survey Area to support protected species or those of conservation concern was possible.
- 3.5.5. The extended Phase 1 habitat map (Figure 1) has been reproduced from field notes and plans. Whilst this provides a sufficient level of detail to fulfil the requirements of a PEA, the maps are not intended to provide exact locations of key habitats.

⁵ The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

4 RESULTS

4.1 DESIGNATED SITES

STATUTORY SITES

- 4.1.1. The desk study identified one statutory nature conservation sites within 10 km of the centre of the Survey Area. The site is of European Importance and a description of the site is detailed in Table 1 below.

Table 1 - Statutory designated sites of European or International importance

Site Name	Designation	Size (ha)	Approximate Distance and orientation from Site	Description
Hartslock Wood	SAC	34.16	9.6 km to the north-west	The site is designated for the presence of the Annexe I habitats: semi-natural dry grasslands and scrubland facies on calcareous substrates ("orchid rich sites") and <i>Taxus baccata</i> woods.

NON-STATUTORY SITES

- 4.1.2. The desk study identified eight non-statutory nature conservation sites within 2 km of the centre of the Survey Area. Local Wildlife Sites (LWS) are sites of significant value for the conservation of wildlife and represent local character and diversity. Biodiversity Opportunity Areas (BOA) are sites identified as offering the greatest opportunities for habitat creation and restoration. A description of these sites is detailed in Table 2 below.

Table 2 - Non-statutory designated sites

Site Name	Designation	Size (ha)	Distance and orientation from Site	Description
Cow Lane Depot	LWS	1.54	95 m to the north	A small isolated, triangle of land bounded by a railway track, situated towards the centre of Reading. The site forms a mosaic of habitats and provides a wildlife corridor in an urban landscape.
Warren Woodlands Complex	LWS	7.64	1.1 km to the south-east	The Warren Woodlands Complex consists of six sites, situated on the chalk scarp of the Warren in Caversham, Reading.
Holy Brook	LWS	4.5 km (Length)	1.2 km to the north	The Holy Brook is a stream that carries water from and emptying back into the River Kennet. A number of notable invertebrates have been recorded in Holy Brook as well as water vole <i>Arvicola amphibius</i> .

Prospect Park	LWS	24.1	1.5 km to the south-west	The site consists of Prospect Park and includes the Rookery, which prior to the notification of Prospect Park, was already a LWS. The park is a historic parkland site in the heart of Reading and the Rookery is a small area of woodland above the park.
River Kennet/Kennet and Avon Canal	LWS	n/a	1.5 km to the south-east	A section of the River Kennet and the Kennet and Avon Canal. The River Kennet is one of the best examples of a chalk river nationally and is a UK BAP Priority Habitat.
Fobney and Kennet Valley Meadows	LWS	140.4	1.8 km to the south	A large area of permanent pasture with some wet grassland and patches of swamp vegetation. There are also areas of unmanaged grassland with areas of swamp, scrub and tall herb vegetation.
Kennet Valley East	BOA		1.9 km to the south	The Kennet Valley runs from Newbury to Reading, extending to include large areas of gravel pits in the east
Old Cemetery Victoria Road	LWS	1.5	1.9 km to the north	This small Victorian cemetery provides a sheltered man-made habitat in the midst of an urban environment.

OTHER HABITATS OF CONSERVATION IMPORTANCE

- 4.1.3. No woodlands listed in the Ancient Woodland Inventory (AWI) were recorded within 2 km of the Survey Area. There are seven HPI habitats within 2 km of the Survey Area including: coastal and floodplain grazing marsh, lowland fens, lowland mixed deciduous woodland, lowland wood pasture and parkland, ponds, traditional orchards and wet woodland.

PROTECTED AND NOTEWORTHY SPECIES RECORDS

- 4.1.4. A total of 24 records of protected and noteworthy species records was found within 2 km of the Survey Area, this was extended to 5 km in the case of bat species. A list of protected and noteworthy species records and their legal/conservation status can be found in Appendix B.

4.2 HABITAT SURVEY OVERVIEW

- 4.2.1. The Survey Area is a small triangular site bordered on the north side by a railway track, which is dominated by areas of unmanaged scrub, situated towards the centre of Reading. It is situated adjacent to a community centre which is surrounded by amenity grassland and scattered broadleaved trees. The Survey Area has recently undergone clearance and predominantly consists of bare ground with patches of scrub bordering the Survey Area along its edges.
- 4.2.2. The following account summarises the findings of the Phase 1 habitat survey. Three Phase 1 habitat types were identified in the Survey Area. They are mapped on Figure 1 and are listed in Table 3 along with areas in hectares (or length for linear features). A description of the dominant and notable species; and the composition and management of each habitat is provided below and an indicative species list is provided in

Appendix C. Target notes are provided in Appendix D where applicable and photographs in Appendix E. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification (JNCC, 2010). The order of the habitat descriptions below reflects their ordering in the Phase 1 habitat survey manual and does not reflect habitat importance.

Table 3 - Phase 1 habitat Areas

Phase 1 Habitat	Area (ha)	Length (m)
A2.2 Scrub		20
J4 Bare ground	0.15	
Hardstanding	0.15	

PHASE 1 HABITAT SCRUB – A2.2

- 4.2.3. Scattered scrub is present on the Survey Area along the boundary. Dominant species include bramble *Rubus fruticosus* agg. and common nettle *Urtica dioica*. There are no noteworthy species or characteristics

PHASE 1 HABITAT BARE GROUND – J4

- 4.2.4. The west side of the Survey Area is predominantly bare ground. There are no noteworthy species or characteristics

PHASE 1 HABITAT HARDSTANDING

- 4.2.5. The east side of the Survey Area consists of hardstanding. There are no noteworthy species or characteristics.

4.3 PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 4.3.1. The potential for the Survey Area to support legally protected and notable species has been assessed using the results of the desk study and observations made during the Survey Area survey of habitats within and immediately surrounding the Survey Area. A summary of desk study information is included within Appendix B. Desk study records have only been considered below if they are recent (from the last 10 years) and/or if they relate to species that may be supported by habitats at the Survey Area. The bare ground and hard standing habitats on Site offer little potential to support species of nature conservation importance. Consideration is given below to the likelihood for the following species to be present within or adjacent to the Survey Area:

- Bats;
- Birds; and
- Non-native Invasive Species.

- 4.3.2. The Survey Area does not provide suitable habitat for other protected or notable species and other species, beyond those listed above, will not be considered further in this PEA.

BATS

- 4.3.3. No records of bat roosts were provided within the Survey Area or within 2 km. There are records of at least seven species of bats foraging or flying within 5 km of the Survey Area. The closest records were for common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus* and noctule *Nyctalus noctula* which were recorded approximately 1 km south of the Survey Area in 2015. Serotine *Eptesicus serotinus*, Daubenton's bat *Myotis daubentonii* and Nathusius' pipistrelle *Pipistrellus nathusii* were recorded further afield.
- 4.3.4. The potential of the Survey Area to support roosting, foraging or commuting bats has been assessed as negligible. However, the Survey Area sits within a wider landscape which has suitable habitat for foraging and commuting.

BIRDS

- 4.3.5. Three records of protected and notable birds recorded within 2 km of the Survey Area were provided. The closest record was for peregrine *Falco peregrinus* which was recorded approximately 800 m east of the Survey Area.
- 4.3.6. The areas of scrub within the Survey Area offers suitable habitat for nesting birds.

NON-NATIVE INVASIVE PLANT SPECIES

- 4.3.7. Two records Japanese Knotweed *Fallopia japonica* and one record of Canadian Waterweed *Elodea Canadensis* were recorded approximately 500 m north-west of the Survey Area, but no non-native invasive species were recorded within the Survey Area at the time of the survey.

5 DISCUSSION AND RECOMMENDATIONS

- 5.1.1. This section considers the potential for effects on designated sites, legally protected species, notable species and notable habitats as a consequence of the Proposed Development. Where further surveys or detailed assessment of potential effects are required in order to design suitable mitigation this is identified.

5.2 STATUTORY DESIGNATED SITES

- 5.2.1. A single designated site, the Hartslock Wood Special Area of Conservation (SAC), was recorded within 10 km of the Survey Area. No negative impacts are envisaged on this SAC owing to its distance from the Survey Area (over 9 km) and lack of ecological connectivity between the Survey Area and the SAC.

5.3 NON-STATUTORY DESIGNATED SITES

- 5.3.1. Eight non-statutory designated sites were identified within 2 km of the development site: including seven Local Wildlife Sites (LWS) and a Biodiversity Opportunity Area (BOA). Most of these sites are over 1 km from the development site and it is not envisaged that these will be affected by the proposed development however, the Cow Lane Depot LWS lies within close proximity to the Survey Area. LWS are designated by local authorities as being of local conservation interest. These sites are defined in local plans and are a material consideration when planning applications are being considered. BOAs are landscapes that have been identified as supporting high concentrations of UKBAP habitats and species, and are targets for habitat management and restoration.
- 5.3.2. The Cow Lane Depot LWS lies 95 m to the north, but is separated from the Survey Area by a railway line on a raised embankment. No negative impacts are therefore envisaged on this site.
- 5.3.3. No negative impacts are envisaged on any other designated sites identified in section 4.1 of this PEA owing to their distance from the proposed development site (over 1 km).

5.4 HABITATS

- 5.4.1. No mitigation or further survey is required of the Phase 1 habitat types identified in section 4.2 of this PEA.
- 5.4.2. The habitats identified within the Phase 1 habitat survey are considered to be negligible ecological value. No negative impacts are envisaged on any Phase 1 habitat types identified in Section 4.2 of this PEA as these habitats are all of low nature conservation interest.

5.5 PROTECTED AND NOTABLE SPECIES

- 5.5.1. The results of the desk study, Phase 1 habitat Survey and protected species assessment highlighted the potential presence of several protected species or species of conservation concern within the immediate surroundings of the Survey Area. These include bats and birds. The legal protection afforded to these species is outlined below and, where appropriate, the requirement for further survey and/ or mitigation measures is identified.

BATS

- 5.5.2. All species of bats recorded within the UK are protected from killing, injury and disturbance⁶ and their roosts protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.
- 5.5.3. Certain species of bats, including the Bechstein's bat *Myotis bechsteinii*, greater and lesser horseshoe bats (*Rhinolophus ferrumequinum* and *Rhinolophus hipposideros*), noctule bat, brown long-eared bat and soprano pipistrelle bat are also listed as Species of Principal Importance (SPI) for the conservation of biodiversity in England in accordance with Section 41 of the NERC 2006. Section 40 obliges public bodies (including local

⁶ Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

planning authorities) to have regard for the conservation of biodiversity (including SPI) when discharging their duties (including determining planning applications).

- 5.5.4. No further surveys are required for this species as the Survey Area has negligible potential for use by roosting, foraging or commuting bats, as described in section 4.3. However, the surrounding areas of scattered trees and scrub offer some suitable foraging and commuting habitat. Therefore, any proposed use of lighting on the Survey Area, either during construction or as a permanent external fixture, should be designed in a sensitive manner so as to avoid disturbance of bats. Direct illumination of trees and buildings, including the community centre adjacent to the Survey Area, in the surrounding area should also be avoided. To achieve this, lighting should be directed to where it is needed and spillage avoided via the use of accessories such as baffles, hoods or louvres. Light levels should be as low as guidelines allow, with lighting used only where and when necessary.
- 5.5.5. No negative impacts are envisaged on all other features suitable for bats in the wider landscape.

BIRDS

- 5.5.6. Under the amendments to the Habitat Regulations (16th August 2012) Reg 9A(2) & (3) state that local authorities '*must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...*'. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.
- 5.5.7. Under the Wildlife and Countryside Act 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young.
- 5.5.8. Should any vegetation removal be carried out during the nesting bird season (March – September inclusive) then a nesting bird check would need to be carried out no earlier than 24 hours prior to the commencement of works.

5.6 FURTHER SURVEY REQUIREMENTS

- 5.6.1. No further surveys are required to ensure legal and planning policy compliance at this time.

5.7 ENVIRONMENTAL BEST PRACTICE

- 5.7.1. In addition, general environmental protection measures must be implemented during the construction phase of the proposed scheme. Such measures include best environmental practice guidance outlined in the Environment Agency's Pollution Prevention Advice and Guidance (Environment Agency, 2007) and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The following minimum standards must be adhered to prevent ecological impacts beyond the site boundary:
- Measures must be taken to prevent dust and other emissions from construction affecting land beyond the site;
 - Chemicals and fuels must be stored in secure containers located away from watercourses or water bodies. Spill kits must be available;
 - Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the site is closed (e.g. overnight) to prevent entrapment of animals;
 - Noise and vibration must be controlled and kept to the minimum necessary; and
 - Lighting used for construction must be switched-off when not in use and positioned so as not to spill on to adjacent land or retained vegetation within the site.

5.8 ECOLOGICAL ENHANCEMENT OPPORTUNITIES

- 5.8.1. The National Planning Policy Framework (NPPF) (2012) states that at an overview level the 'planning system should contribute to and enhance the national and local environment by... 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 coherent ecological networks that are more resilient to current and future pressures'. At a local level, the Local Plan states that the aim 'is to maintain and enhance the quality of the Borough's landscapes and biodiversity features' and to 'have minimal impacts on biodiversity'.

- 5.8.2. Ecological enhancements will also deliver other green infrastructure benefits such as storm water attenuation and reducing the urban heat island effect.
- 5.8.3. To encourage compliance with planning policy the following measures are recommended for inclusion within the Proposed Development:
- installation of two Schwegler 1FF or equivalent bat boxes and bird boxes on new buildings;
 - sensitive/low UV lighting;
 - naturalistic/wildlife planting using insect-attracting native species;

6 CONCLUSIONS

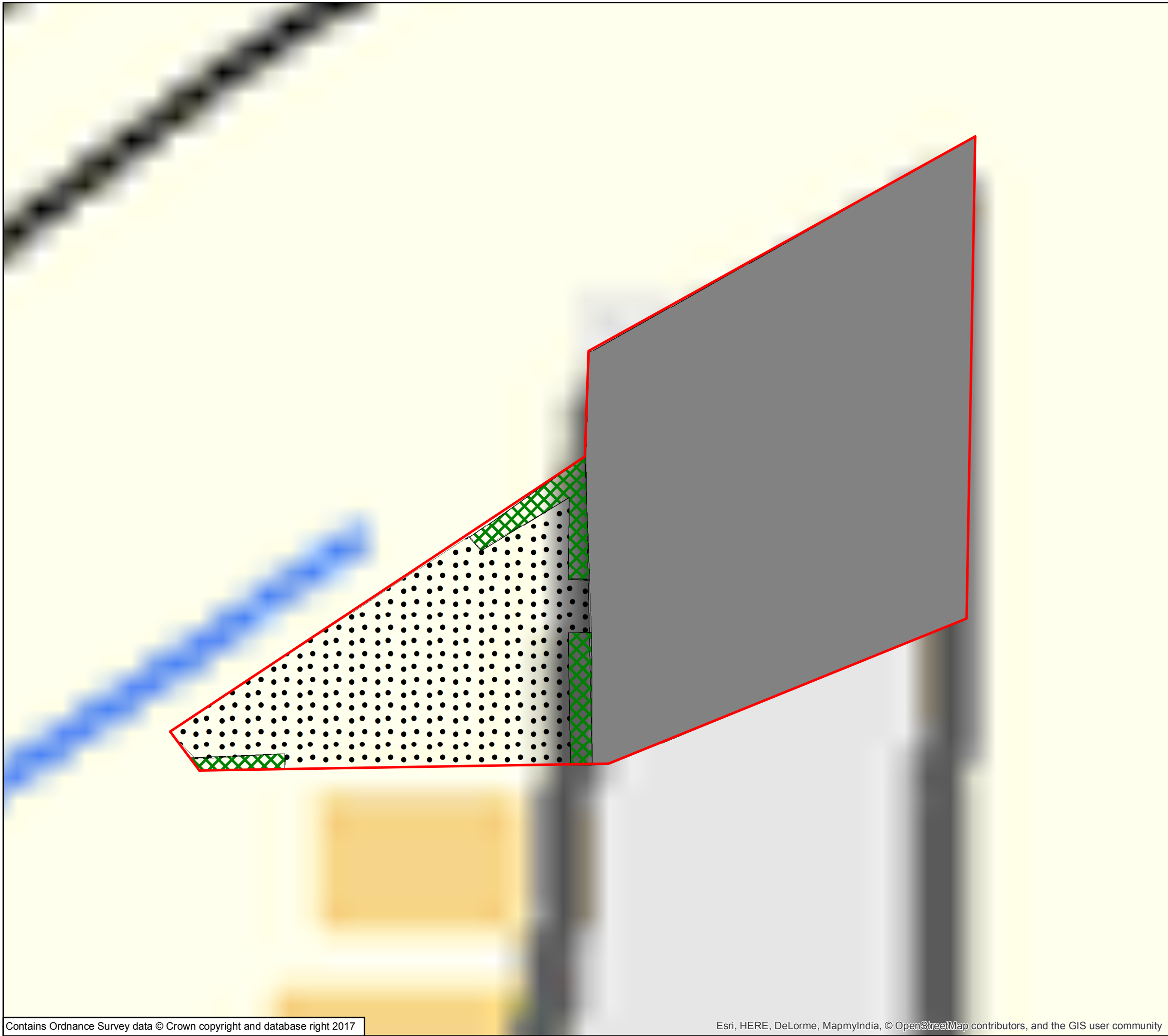
- 6.1.1. The bare ground and hard standing habitats within the Survey Area offer little potential to support species of nature conservation importance.
- 6.1.2. The areas of scrub within the Survey Area offer suitable habitat for nesting birds which are protected under the Wildlife and Countryside Act 1981 (as amended).
- 6.1.3. The surrounding areas of scattered trees and scrub offer some suitable foraging and commuting habitat for bats and consideration should be given to the design of a sympathetic lighting scheme to prevent light spill into these adjacent areas.
- 6.1.4. The habitats identified within the Phase 1 habitat survey are considered to be negligible ecological value and are all of low nature conservation interest.
- 6.1.5. No negative impacts are envisaged and no mitigation or further survey is required of the Phase 1 habitat types identified in Section 4.2 of this PEA.

7 REFERENCES

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8 FIGURES

Figure 1- Site Location Plan



Key

-  Survey Area Boundary
-  Bare Ground
-  Hardstanding
-  Scrub - Dense/Continuous



Client:	Reading Borough Council		
Project:	70012984 - RBC Housing Sites, Reading		
Title	George Street - Phase 1 Habitat Map		
Drawing No:	1	Drawn:	ES
Date:	06/07/2017	Checked:	
Scale:	162 @ A3	Approved:	

Appendix A

RELEVANT LEGISLATION AND

PLANNING POLICY



ENGLAND & WALES LEGISLATION AND POLICY CONTEXT

This report has been compiled with reference to relevant wildlife legislation, planning policy and the UK Biodiversity Framework. An overview and context of relevant legislation is provided, with the relevant protection each species groups or species receives summarised in Table 1.

The Wildlife and Countryside Act 1981, (as amended) (WCA)

Protected birds, animals and plants are listed under Schedules 1, 5, 8 and 9 respectively of the WCA, a description of these Schedules and their meaning is provided below.

Under the WCA (England and Wales) all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected by the WCA. It is an offence to:

- Intentionally kill, injure, or take any wild bird,
- Take or destroy an egg of any wild bird.
- Damage or destroy the nest of any wild bird (whilst being built, or in use). Under the WCA the clearance of vegetation within the survey area boundary, or immediately adjacent to the survey area during the bird nesting season could result in an offence occurring by the disruption or destruction of nest sites. The bird breeding season can be taken to occur between March - August inclusive, although is subject to variations based on species, geographical and seasonal factors.

Schedule 1

Birds listed under Schedule 1 of the WCA⁷ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Schedule 5

Species listed in Schedule 5 can either be fully protected or be partially protected under Section 9, which makes it unlawful to intentionally:

- Part 1: kill, injure or take;
- Part 2: possess or control (live or dead animal, part or derivative);
- Part 4 (a): damage or destruct any structure used for shelter or protection;
- Part 4 (b): disturb them in a place of shelter or protection;
- Part 4 (c): obstruct access to place of shelter or protection;
- Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);
- Part 5 (b): advertise for buying or selling.

Schedule 8

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

Schedule 9

Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that certain bird species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

Countryside Rights of Way Act 2000 (CRoW Act)

The CRoW Act has amended the WCA in England and Wales strengthening the protection afforded to Sites of Special Scientific Interest (SSSI) and the legal protection for threatened species. It adds the word ‘reckless’ to the wording of the offences listed under Section 9(4) of the WCA. This alteration makes it an offence to recklessly commit an offence, where previously an offence had to be intentional to result in a breach of legislation.

Natural Environment and Rural Communities (NERC) Act 2006

Species and Habitats of Principal Importance in England and Wales are listed under Section 41 and Section 42 respectively of the NERC Act. The Section 41 and 42 lists detail species that are of principal importance for the conservation of biodiversity in England and Wales, and should be used to guide decision-makers such as local and regional authorities when implementing their duty to have regard for the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006.

The Environment (Wales) Act 2016

The Environment (Wales) Act 2016 (<http://www.legislation.gov.uk/anaw/2016/3/contents/enacted>) puts in place the legislation needed to plan and manage Wales’ natural resources in a more proactive, sustainable and cohesive way. Section 7 replaces the duty in Section 42 of the NERC Act 2006 and it places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitats which they consider are of key significance to sustain and improve biodiversity in Wales. The species and habitat lists are identical to those in Section 42 but it should be noted it is currently under review (23.03.2017).

⁷ To view the current list of Schedule 1 listed birds visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/1> [Accessed April 2018/03.2017].

The Protection of Badgers Act (1992)

It is an offence to wilfully take, kill, injure, possess or ill-treat a badger. Under the Act their setts are protected against intentional or reckless interference. Sett interference includes damaging or destroying a sett, obstructing access to any part of the sett, or disturbance of a badger whilst it is occupying a sett. The Act defines a badger sett as ‘any structure or place, which displays signs indicating the current use by a badger’ and Natural England (NE) takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by badgers (Natural England, 2009⁸).

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence.

The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)

This Framework lists the UK’s most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) process is delivered nationally, regionally and locally and should be used as a guide for decision-makers to have regards for the targets set by the framework and the goals they aim to achieve. The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant (UK Post-2010 Biodiversity Framework, 2012⁹).

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017, and extend to England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 42 of the Habitats Regulations it is unlawful to:

- Deliberately kill, capture or disturb;
- Deliberately take or destroy the eggs of; and
- Damage or destroy the breeding site/resting place of any species protected under this legislation.

If the Ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site specific mitigation licence from Natural England (NE) or Natural Resources Wales (NRW). Low Impact Class licences are also available in both England and Wales for bats and great crested newts. This enables Registered Low Impact Consultants to undertake certain low impact activities reducing the EPS application paperwork and process length.

Certain EPS are also listed under Annex II of the Habitats Directive and are afforded protection by the establishment of core areas of habitat known as Special Areas of Conservation. This means these species are a relevant consideration in a Habitats Regulations Assessment (HRA).

The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I¹⁰ of the Birds Directive are rare or vulnerable and afforded protection by the classification of Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance (Article 4). This means these bird species and communities are a relevant consideration in HRA.

⁸ Natural England, June 2009, Protection of Badgers Act 1992 (as amended), Guidance on ‘Current Use’ in the definition of a Badger Sett WMLG17, Natural England, Peterborough.

⁹ JNCC and Defra (on behalf of the Four Countries’ Biodiversity Group), July 2012, UK Post-2010 Biodiversity Framework, Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf [Accessed April 201802.03.2017].

¹⁰ To view birds listed under Annex I visit: http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm [accessed insert: 06042017]

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Species	Legislation, Planning Policy and UK Biodiversity Framework							
	Wildlife and Countryside Act 1981 (as amended), (WCA)				The Conservation of /Habitats and Species Regulations 2010 (as amended) (Habitats Regulations) - Regulation 41	Natural Environment and Rural Communities (NERC) Act 2006 / The Environment(Wales) Act (2016)	The Protection of Badgers Act 1992	The UK Post-2010 Biodiversity Framework 2011-2020 (JNCC and DEFRA, 2012)
	Schedule1	Schedule 5	Schedule 8	Schedule 9	European Protected Species (Annex IV of the EC Habitats Directive),			
Badger							✓	
Bats		✓ ¹¹ (part)			✓ ¹²	✓ ¹³		✓ ¹⁴
Hazel Dormouse		✓ 5(part)			✓	✓		✓
Otter		✓ 5(part)			✓	✓		✓
Water vole		✓ ¹⁵ (full)				✓		✓
Birds	✓			✓ ¹⁶		✓ ¹⁷		✓ ¹⁸
Reptiles		✓ ¹⁹ (part)□		✓ ⁹	✓ ²⁰	✓ ²¹		✓ ²²

¹¹ These species are partially protected under section 9(4)(b), (4)(c) and (5).

¹² Only Barbastelle (*Barbastella barbastellus*), Bechstein’s bat (*Myotis bechsteinii*), greater horseshoe bat (*Rhinolophus ferrumequinum*) and lesser horseshoe bat (*Rhinolophus hipposideros*) are listed on Annex II of the Habitats Directive.

¹³ Greater horseshoe bat, lesser horseshoe bat, Bechstein’s bat, noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and barbastelle are listed as Species of Principal Importance in England with the addition of common pipistrelle (*Pipistrellus pipistrellus*) in Wales listed under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

¹⁴ Barbastelle bat, Bechstein’s bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat, lesser horseshoe bat are listed as UK BAP species of bat.

¹⁵ Class Licences are available to Registered Consultants to intentionally disturb, damage or destroy water vole burrows or to displace water voles from their burrows in relation to a development proposal where the licensed action provides a conservation benefit for water voles. Certain displacement operations may be carried out under a Class licence by a registered person in England, however in Wales all displacement operations must be carried out under a site specific licence.

¹⁶ To view plants and animals listed on Schedule 9 Part 1 visit <http://www.legislation.gov.uk/ukpga/1981/69/schedule/9> [accessed 6 April 2017]

¹⁷ There are 49 species of birds listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 and 51 species in Wales under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

¹⁸ To view the current list of UK BAP priority birds visit: <http://jncc.defra.gov.uk/page-5163> [Accessed April 2018].

¹⁹ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

²⁰ Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*) are the only reptiles to be designated as European Protected Species.

²¹ All 6 reptile species are listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 5 species, excluding smooth snake, listed under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

²² To view the current list of UK BAP priority herptile species visit: <http://jncc.defra.gov.uk/page-5166> [Accessed April 2018].

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Species	Legislation, Planning Policy and UK Biodiversity Framework							
Amphibians		✓ 23(part)		✓ 24	✓ 25, 26	✓ ²⁷		
White-clawed Crayfish		✓ 28(partial)			✓ ²⁹	✓		✓
Invertebrates		✓ 30(full/part)		✓	✓ 31, 32	✓ ³³		✓ ³⁴
Fish		✓ ³⁵ (full/part)		✓ ⁹	✓ 36, 37	✓ ³⁸		✓ ³⁹
Plants			✓ ⁴⁰	✓ ⁹	✓ 41, 42	✓ 43		✓ 44

Table A 1

²³ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

²⁴ Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Smooth newt (*Lissotriton vulgaris*) and Palmate newt (*Lissotriton helveticus*) are offered partial protection under section 9(5). Great crested newt (*Triturus cristatus*) and Natterjack toad (*Epidalea calamita*) are offered partial protection under section 9(4)(b) and (c) and (5). Pool frog (*Pelophylax lessonae*) is offered partial protection under section 9(4)(b) and (c)(1) only and with respect to England only.

²⁵ Great crested newt, Natterjack toad and Pool frog are the only amphibians to be designated European Protected Species.

²⁶ Great crested newt is the only amphibian listed on Annex II of the Habitats Directive.

²⁷ Great crested newt, Natterjack toad and Common toad are listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 and under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

²⁸ Under the Wildlife and Countryside Act it is illegal to take or sell white clawed crayfish under the WCA. A licence is required to survey (hand net or trap) for the species. To undertake work within WCC inhabited rivers a Class Licence maybe issued by the relevant authority to move WCC away from harm prior to works. Although WCC are not protected from killing or injury Natural England state in their Class licence that due to declining numbers all efforts should be made to conserve the species.

²⁹ White clawed crayfish are listed under Annex II and V of the Habitats Directive.

³⁰ To view the current list of invertebrates that are protected under this Act either in part or full visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed April 2018].

³¹ The Large blue butterfly (*Maculinea arion*), Fisher's estuarine moth (*Gortyna borelii lunata*) and Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) are the only invertebrates to be designated European Protected Species.

³² There are currently twelve invertebrates listed in Annex II of the Habitats Directive; White-clawed crayfish (*Austropotamobius pallipes*), Southern damselfly (**Coenagrion mercuriale**), Marsh fritillary butterfly (**Eurodryas aurinia**), Violet click beetle (**Limonicus violaceus**), Stag beetle (**Lucanus cervus**), Freshwater pearl mussel (**Margaritifera margaritifera**), Narrow-mouthed whorl snail (**Vertigo angustior**), Round-mouthed whorl snail (**Vertigo genesii**), Geyer's whorl snail (**Vertigo geyeri**), Desmoulin's whorl snail (**Vertigo moulinsiana**), Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) and Fisher's estuarine moth (*Gortyna borelii lunata*).

³³ There are currently 379 invertebrate species (not including marine species) listed as Species of Principal Importance in England http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwivvu7J9trSAhXiCsAKHX4TBGcQFggvMAM&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6518755878240256&usq=AFQjCNEpiUWYuOghVcfSDvi_3iK2TJytfQ and 188 species in Wales http://www.eryri-npa.gov.uk/_data/assets/pdf_file/0003/486156/SpeciesList.pdf listed under Section 41 of the NERC Act 2006 and listed under Section 7 of the of the Environment (Wales) Act 2016. [Accessed April 2018]

³⁴ To view the current list of UK BAP priority invertebrates visit: <http://jncc.defra.gov.uk/page-5169> [Accessed April 2018].

³⁵ To view the current list of fish either part or fully protected under the Act visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed April 2018].

³⁶ Sturgeon (*Acipenser sturio*) is the only fish to be designated a European Protected Species.

³⁷ There are eight fish species listed on Annex II of the Habitats Directive. To view the current list visit: <http://jncc.defra.gov.uk/page-1523> [Accessed April 2018].

³⁸ There are 35 species of fish listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 10 species in Wales listed under Section 7 of the Environment (Wales) Act 2016.

³⁹ To view the current list of UK BAP priority fish visit: <http://jncc.defra.gov.uk/page-5164> [Accessed April 2018].

⁴⁰ To view the current list of Schedule 8 listed plants visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/8> [Accessed April 2018].

⁴¹ There are nine plant species designated as European Protected Species. To view the current list visit: <http://www.legislation.gov.uk/ukxi/2010/490/schedule/5/made> [Accessed April 2018].

⁴² To view the current list of plant species on Annex II of the Habitats Directive visit: <http://jncc.defra.gov.uk/page-1523> [Accessed April 2018].

⁴³ There are currently 152 vascular plants listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 77 species in Wales listed under Section 7 of the Environment (Wales) Act 2016.³¹ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed April 2018].

⁴⁴ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed April 2018].

Appendix B

SUMMARY OF ECOLOGICAL DESK



STUDY DATA

Table 5 - Protected and notable species (excluding birds) for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁵
Smooth Newt	<i>Lissotriton vulgaris</i>	2	W&CA
Common Toad	<i>Bufo bufo</i>	3	W&CA NERC UKBAP
Common Frog	<i>Rana temporaria</i>	5	W&CA
Bluebell	<i>Hyacinthoides nonscripta</i>	10	W&CA LBAP
Eurasian Badger	<i>Meles meles</i>	13	Badgers Act 1992
Eurasian Otter	<i>Lutra lutra</i>	3	W&CA HabReg NERC UKBAP LBAP
Slow-worm	<i>Anguis fragilis</i>	14	W&CA NERC
Common Lizard	<i>Zootoca vivipara</i>	1	W&CA NERC UKBAP
Grass Snake	<i>Natrix natrix</i>	3	W&CA NERC UKBAP LBAP

Table 6 - Protected and notable birds for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁶
Red Kite	<i>Milvus milvus</i>	1	W&CA BoCC Amber
Peregrine	<i>Falco peregrinus</i>	2	W&CA
Black Redstart	<i>Phoenicurus ochruros</i>	4	W&CA BoCC Amber LBAP

⁴⁵ HabReg = Conservation of Habitats and Species Regulations (2010), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

⁴⁶ HabReg = Conservation of Habitats and Species Regulations (2010), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, BoCC Red = Birds of Conservation Concern Red List, BoCC Amber = Birds of Conservation Amber List.

Table 7 - Protected and notable invertebrates for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁷
Stag Beetle	<i>Lucanus cervus</i>	143	W&CA NERC UKBAP LBAP

Table 8 – Bat records within 5km

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁸
Unidentified Bat	<i>Chiroptera species</i>	1	W&CA HabReg NERC UKBAP LBAP
Serotine	<i>Eptesicus serotinus</i>	2	W&CA HabReg NERC UKBAP LBAP
Unidentified Myotis Bat	<i>Myotis species</i>	13	W&CA HabReg NERC UKBAP LBAP
Daubenton's Bat	<i>Myotis daubentonii</i>	21	W&CA HabReg NERC UKBAP LBAP
Noctule	<i>Nyctalus noctula</i>	31	W&CA HabReg NERC UKBAP LBAP
Pipistrelle Bat	<i>Pipistrellus species</i>	30	W&CA HabReg NERC UKBAP

⁴⁷ HabReg = Conservation of Habitats and Species Regulations (2010), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

⁴⁸ HabReg = Conservation of Habitats and Species Regulations (2010), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁸
			LBAP
Nathusius Pipistrelle	<i>Pipistrellus nathusii</i>	1	W&CA HabReg NERC UKBAP LBAP
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	134	W&CA HabReg NERC UKBAP LBAP
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	99	W&CA HabReg NERC UKBAP LBAP
Long-eared Bat	<i>Plecotus species</i>	1	W&CA HabReg NERC UKBAP LBAP
Brown Long-eared Bat	<i>Plecotus auritus</i>	21	W&CA HabReg NERC UKBAP LBAP

Appendix C

PLANT SPECIES RECORDED

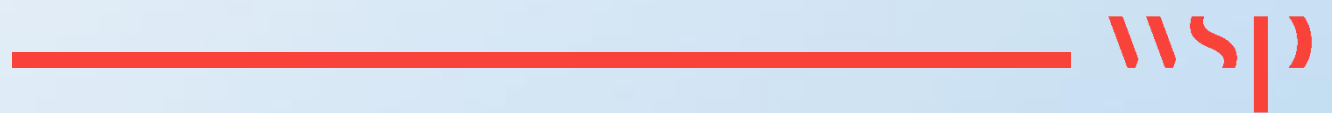
wsp

Table 9 - Plant species recorded

Common name	Latin name	Frequency (DAFOR)
Scrub		
Bramble	<i>Rubus fruticosus agg.</i>	A
Common nettle	<i>Urtica dioica</i>	A
Cleavers	<i>Galium aparine</i>	F
Buddleia	<i>Buddleia Sp.</i>	O

Appendix D

TARGET NOTES



No target notes recorded for the Survey Area.

Appendix E

PHOTOGRAPHS

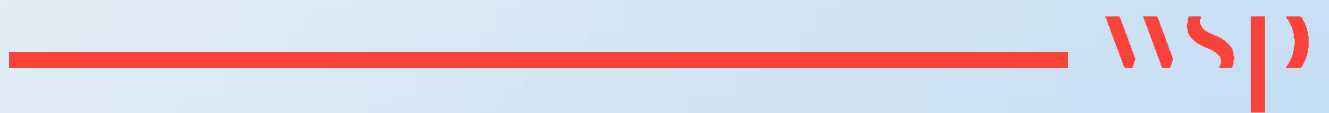


Table 10 - Photographs



Bare ground with bordering scrub



Hardstanding with bordering scrub



Mountbatten House
Basing View
Basingstoke, Hampshire
RG21 4HJ

wsp.com