

**DEE PARK,
READING, PHASE 2C**

PRELIMINARY ECOLOGICAL APPRAISAL

A Report to: Dee Partnership c/o Reading Borough
Council

Report No: RT-MME-124455-01

Date: March 2017



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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	13/03/2017	Penelope Holgate BSc (Hons) GradCIEEM (Ecological Consultant) and Bethany Jepson (Ecological Project Assistant)	Colin Bundy MCIEEM (Associate Director)	Dr Phil Fermor MCIEEM CEnv (Managing Director)

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

VALIDITY OF DATA

The findings of this study are valid for a period of 24 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

NON-TECHNICAL SUMMARY

Middlemarch Environmental Ltd was commissioned by Dee Partnership c/o Reading Borough Council to carry out a Preliminary Ecological Appraisal at the site of a proposed new community centre and residential properties at Dee Park in Reading. To fulfil this brief an ecological desk study and a walkover survey (in accordance with Phase 1 Habitat Survey methodology) were undertaken.

The ecological desk study revealed no European statutory sites within 5 km of the survey area, four UK statutory sites within 2 km, three ancient woodlands within 2 km and two non-statutory sites within 1 km. The site is not located within 10 km of a statutory site designated for bats. The desk study also provided records of notable and protected species including bats, badger, hedgehog, amphibians, slow worm, birds and invertebrates.

The walkover survey was undertaken on 3rd March 2017 by Penelope Holgate, Ecological Consultant. The majority of the site was made up of three blocks of flats with associated hardstanding access, amenity grassland and bare ground. At the time of surveying the areas around the buildings had been subject to extensive tree and scrub cutting.

The key ecological features on site in relation to the works proposed are the presence of the buildings on site and their ability to potentially support roosting bats.

In order to ensure compliance with wildlife legislation and relevant planning policy, the following recommendations are made:

- R1 Habitat Loss and Enhancement:** In accordance with the provision of Chapter 11 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed works to maximise the ecological value of the site.
- R2 Roosting bats:** All recommendation provided within the Preliminary Bat Roost Assessment (RT-MME-124455-02) must be adhered to.
- R3 Foraging/Commuting Bats:** Bats may use the scrub and shrub on the site for foraging and commuting. Therefore, any lighting, either temporary or permanent, along these habitats should be kept to a minimum and directed away from these features to maintain 'dark' areas and corridors.
- R4 Nesting Birds:** Vegetation and building clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August).
- R5 Terrestrial Mammals including Hedgehog:** Any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In February 2017, Dee Partnership c/o Reading Borough Council commissioned Middlemarch Environmental Ltd to undertake a Preliminary Ecological Appraisal of the site of a proposed development at Dee Park in Reading. This assessment is required to inform a planning application associated with the demolition of the existing buildings in order to facilitate a new community centre and residential properties.

To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on 3rd March 2017. In addition, Middlemarch Environmental Ltd has been commissioned to undertake a Preliminary Bat Roost Assessment. The findings of this report are detailed in Report RT-MME-124455-02.

1.2 SITE DESCRIPTION AND CONTEXT

The development site is an L shaped parcel of land approximately 0.3 ha in size, located off Thurso Close, Reading at National Grid Reference SU 68440 73637. The majority of the site is made up of three blocks of flats with associated hardstanding access, amenity grassland and bare ground. At the time of surveying the areas around the buildings had been subject to extensive tree and scrub cutting.

The surrounding landscape is predominantly residential with playing fields to the south west and south east and woodland to the south west. In the wider landscape, the River Thames is present to the north with areas of mixed agricultural fields and woodland patches.

1.3 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Thurso Close 10+12 / A85	Reading Borough Council
Thurso Close 20+22 / A86	Reading Borough Council
24-26 Thurso Close / A87	Reading Borough Council

Table 1.1: Documentation Provided by Client

2. METHODOLOGIES

2.1 DESK STUDY

An ecological desk study was undertaken to determine the presence of any designated nature conservation sites and protected species in proximity to the site. This involved contacting appropriate statutory and non-statutory organisations which hold ecological data relating to the survey area. Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by these organisations.

The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites; and,
- Thames Valley Environmental Records Centre.

The desk study included a search for European statutory nature conservation sites within a 5 km radius of the site (extended to 10 km for any statutory site designated for bats), UK statutory sites within a 2 km radius and non-statutory sites and protected/notable species records within a 1 km radius.

The data collected from the consultees is discussed in Chapter 4. Selected raw data are provided in Appendix 1. In compliance with the terms and conditions relating to its commercial use, the full desk study data is not provided within this report.

The desk study also included a review of relevant local planning policy with regard to biodiversity and nature conservation (see Chapter 3).

2.2 PHASE 1 HABITAT SURVEY

The walkover survey was conducted following the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. During the survey, the presence, or potential presence, of protected species was noted.

Whilst every effort is made to notify the client of any plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981, as amended) present on site, it should be noted that this is not a specific survey for these species.

Data recorded during the field survey are discussed in Chapter 5.

3. LEGISLATION AND POLICY

This chapter provides an overview of the framework of legislation and policy which underpins nature conservation and is a material consideration in the planning process in England. The reader should refer to the original legislation for the definitive interpretation.

3.1 GENERAL BIODIVERSITY LEGISLATION AND POLICY

Conservation of Habitats and Species Regulations 2010 (as amended)

The Habitats Regulations 2010 consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 and all its various amendments. The Habitats Regulations 2010 are the principal means by which the EEC Council Directive 92/43 (The Habitats Directive) as amended is transposed into English and Welsh law.

The Habitats Regulations 2010 place duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. The regulations also place a duty upon the government to maintain a register of European protected sites designated as a result of EC Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA) and, in conjunction with SACs, form a network of sites known as Natura 2000. The Habitats Directive introduces for the first time for protected areas, the precautionary principle; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest.

The Habitats Regulations 2010 also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively. Schedule 2 includes species such as otter and great crested newt for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations.

The Habitats Regulations 2010 were amended in August 2012 to ensure clearer transposition of the provisions of Articles 2, 3, 4(4) (second sentence) and Article 10 of the Wild Birds Directive, by giving additional and specific duties to relevant bodies. A number of amendments were also made to transpose more clearly certain elements of the Habitats Directive.

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

The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Habitat Regulations 2010 (as amended), offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species.

The Countryside and Rights of Way (CROW) Act 2000

The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the National Assembly for Wales to have regard for biodiversity, and provides increased powers for the protection and maintenance of SSSIs. The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The Natural Environment and Rural Communities (NERC) Act 2006

Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. These lists superseded Section 74 of the CROW Act 2000.

The Hedgerow Regulations 1997

The Hedgerow Regulations make provision for the identification of important hedgerows which may not be removed without permission from the Local Planning Authority.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (BAP), published in 1994, was the UK Government's response to signing the Convention on Biological Diversity (CBD) at the 1992 Rio Earth Summit. The new UK Post-2010 Biodiversity Framework replaces the previous UK level BAP. The UK Post-2010 Biodiversity Framework covers the period 2011-2020 and forms the UK Government's response to the new strategic plan of the United Nations Convention on Biological Diversity (CBD), published in 2010 at the CBD meeting in Nagoya, Japan. This includes five internationally agreed strategic goals and supporting targets to be achieved by 2020. The five strategic goals agreed were:

- Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
- Reduce the direct pressures on biodiversity and promote sustainable use;
- To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- Enhance the benefits to all from biodiversity and ecosystem services; and,
- Enhance implementation through participatory planning, knowledge management and capacity building.

The Framework recognises that most work which was previously carried out under the UK BAP is now focused on the four individual countries of the United Kingdom and Northern Ireland, and delivered through the countries' own strategies. Following the publication of the new Framework the UK BAP partnership no longer operates but many of the tools and resources originally developed under the UK BAP still remain of use and form the basis of much biodiversity work at country level. In England the focus is on delivering the outcomes set out in the Government's 'Biodiversity 2020: a Strategy for England's Wildlife and Ecosystem Services' (DEFRA, 2011). This sets out how the quality of our environment on land and at sea will be improved over the next ten years and follows on from policies contained in the Natural Environment White Paper.

Species and Habitats of Material Consideration for Planning in England

Previous planning policy (and some supporting guidance which is still current, e.g. ODPM Circular 06/2005, now under revision), refers to UK BAP habitats and species as being a material consideration in the planning process. Equally many local plans refer to BAP priority habitats and species. Both remain as material considerations in the planning process but such habitats and species are now described as Species and Habitats of Principal Importance for Conservation in England, or simply priority habitats and priority species under the UK Post-2010 Biodiversity Framework. The list of habitats and species remains unchanged and is still derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006. As was previously the case when it was a BAP priority species hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

3.2 NATIONAL PLANNING POLICY FRAMEWORK AND PRACTICE GUIDANCE

In early 2012, the National Planning Policy Framework (NPPF) replaced much previous planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. The government circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System, which accompanied PPS9, still remains valid. A presumption towards sustainable development is at the heart of the NPPF. This presumption does not apply however where developments require appropriate assessment under the Birds or Habitats Directives.

Chapter 11, on conserving and enhancing the natural environment, sets out how the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and, where possible, provide net gains in biodiversity. Opportunities to incorporate biodiversity gains into a development should be encouraged.

If a proposed development would result in significant harm to the natural environment which cannot be avoided (through the use of an alternative site with less harmful impacts), mitigated or compensated for (as a last resort) then planning permission should be refused.

In March 2014 the Department for Communities and Local Government released guidance to support the National Planning Policy Framework (NPPF), known as the National Planning Practice Guidance (NPPG).

This has been produced to provide guidance for planners and communities which will help deliver high quality development and sustainable growth in England. The guidance includes a section entitled 'Natural Environment: Biodiversity, ecosystems and green infrastructure' which sets out information with respect to the following:

- the statutory basis for minimising impacts on biodiversity and providing net gains where possible;
- the local planning authority's requirements for planning for biodiversity;
- what local ecological networks are and how to identify and map them;
- the sources of ecological evidence;
- the legal obligations on local planning authorities and developers regarding statutory designated sites and protected species;
- the considerations for local (non-statutory) designated sites;
- definition of green infrastructure;
- where biodiversity should be taken into account in preparing a planning application;
- how development can enhance biodiversity;
- how policy is applied to avoid, mitigate or compensate for significant harm to biodiversity and how mitigation and compensation measures can be ensured; and,
- the consideration of ancient woodlands and veteran trees in planning decisions.

3.3 LOCAL PLANNING POLICY

Core Strategy

The Core Strategy document sets out the Council's adopted planning strategy for the Borough. It sets out how planning and development will achieve the Reading 2020 Vision for the town and provides a framework for how Reading can grow in a sustainable way in the future. It was adopted in January 2008 and altered in January 2015. The policies of relevance to ecology are as follows:

Policy CS8: Waterspaces

Reading's waterspaces will be protected, so that they can continue to contribute to local and regional biodiversity and ecology, local character and visual amenity, and the provision of accessible leisure and recreational opportunities.

Where development in the vicinity of waterways is acceptable, it will provide:

- Appropriate, attractive uses and buildings that enhance the relationship of buildings, spaces and routes and creates a high quality public realm;
- Positive contributions to the distinct character, appearance, landscape and amenity of the waterways;
- A strengthened role for waterways as important landscape features, wildlife corridors and recreation opportunities;
- Good, level access to the waterways for all those who want to use them; and
- Improved quality of waterway environment through protecting habitats and ensuring that habitat creation is balanced with access and urban uses.

Policy CS36: Biodiversity and Geology

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

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

- i. The need for development clearly outweighs the need to protect the value of the site; and,
 - ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.
- b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

- c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

Policy CS38: Trees, Hedges and Woodlands

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

New Local Plan

A new local plan is currently in production, which will replace the current development plans, including the Core Strategy, with a new plan setting out how Reading will develop up to 2036. It is expected that this plan will be available for consultation during 2017.

4. DESK STUDY RESULTS

4.1 INTRODUCTION

The data search was carried out in February 2017 by Thames Valley Environmental Ltd. All relevant ecological data provided by the consultees was reviewed and the results from these investigations are summarised in Sections 4.2 to 4.4. Selected data are provided in Appendix 1.

4.2 NATURE CONSERVATION SITES

Statutory and non-statutory nature conservation sites located in proximity to the survey area are summarised in Table 4.1.

Site Name	Designation	Proximity to Survey Area	Description
UK Statutory Sites			
Lousehill Copse	LNR	270 m south-west	This site consists of three parcels of broadleaved semi-natural woodland separated by roads within the urban area of Reading. The woodland lies on an escarpment with London Clay overlying Reading Beds and there are some steep slopes dipping north-east.
McIlroy Park	LNR	500 m north-west	This site is a Local Nature Reserve and the north end (Kentwood Grove) is ancient woodland. It is a hilltop park with areas of grassland that are mown occasionally along with areas of scrub and woodland and including an old gravel pit. The woodlands has mixed coppice including hazel <i>Corylus avellana</i> and hornbeam <i>Carpinus betulus</i> with oak <i>Quercus</i> sp, ash <i>Fraxinus excelsior</i> and birch <i>Betula</i> sp. standards as well as some beech <i>Fagus sylvatica</i> . The ground flora is quite rich in places where dog's mercury <i>Mercurialis perennis</i> is abundant and species such as sanicle, wood anemone <i>Anemone nemorosa</i> , wood spurge <i>Euphorbia amygdaloides</i> and pignut <i>Conopodium majus</i> are found.
Round Copse	LNR	550 m north-west	Round Copse is an area of lowland mixed deciduous woodland dominated by oak and ash with hazel coppice in the understorey along with field maple <i>Acer campestre</i> coppice. The ground flora is largely ivy <i>Hedera helix</i> , cleavers <i>Galium aparine</i> and bramble <i>Rubus fruticosus</i> agg. Some species typical of long established woodland are present including wood melick <i>Melica uniflora</i> , bluebell <i>Hyacinthoides non-scripta</i> , wood-sedge <i>Carex sylvatica</i> , yellow archangel <i>Lamium galeobdolon</i> , wood anemone and wood millet <i>Milium effusum</i> .
Blundells Copse	LNR	815 m west	This is a small broadleaved woodland in a shallow valley which has a wide range of plant species characteristic of ancient woodland. The valley crosses the boundary between the London Clay to the underlying Reading Beds and the stream drains to the north-east. This wet woodland is characterized by alder <i>Alnus glutinosa</i> , ash and willow <i>Salix</i> sp.
Non-statutory Sites			
West Reading Woodlands	BOA	135 m west	The west of the site encompasses the escarpments at the edge of the pang Valley where there is much woodland and land owned by Englefield Estate. The rest of the area includes the Reading Woodlands, a group of mainly wooded sites within Tilehurst as well as a number of other woodlands in this area.

Table 4.1: Summary of Nature Conservation Sites (continues)

Site Name	Designation	Proximity to Survey Area	Description
Non-statutory sites (continued)			
Prospect Park (includes The Rookery)	LWS	700 m south-east	This site consists of Prospect Park and includes The Rookery. The Rookery is a small area of lowland mixed deciduous woodland sitting on a small plateau raised above the surrounding Prospect Park to the south. The canopy is largely oak dominated and even aged in some areas the canopy is joined by occasional other trees including ash, horse-chestnut <i>Aesculus hippocastanum</i> , beech <i>Fagus sylvatica</i> , sycamore <i>Acer pseudoplatanus</i> and common lime <i>Tilia europaea</i> . The understorey has occasional hazel, blackthorn <i>Prunus spinosa</i> and hawthorn <i>Crataegus monogyna</i> , but is largely sparse and open.
Meadway Fringe	LWS	740 m south	A nice strip of broad-leaved woodland interspersed with some Scots pine <i>Pinus sylvestris</i> and larch <i>Larix</i> sp., squeezed between housing and a road. In spite of heavy use and misuse, it retained a good vertical structure and a good range of woodland plants including ancient woodland indicators. A section of unimproved, species-rich neutral grassland lay between garden fences and the car park for Meadway Precinct shopping centre and had both southerly and easterly aspects. It was at the top of a steep slope leading down to the car park, with the soil left undisturbed and nutrient-poor, evidence of which was provided by numerous ant-hills and a great diversity of herbs including cowslip <i>Primula</i> sp. and bird's-foot trefoil <i>Lotus</i> sp.
Ancient Woodland Sites			
Kentwood Grove	ASNW	1060 m north-west	No information provided.
Church End Copse	ASNW	1490 m north-east	No information provided.
Chazey Wood	ARW	1900 m north	No information provided.
Key: LNR: Local Nature Reserve LWS: Local Wildlife Site ASNW: Ancient Semi-Natural Woodland ARW: Ancient Replanted Woodland BOA: Biodiversity Opportunity Area			

Table 4.1 (continued): Summary of Nature Conservation Sites

No Sites of Special Scientific Interest (SSSIs) are located within a 2 km radius of the survey area, however the survey area does fall within a SSSI Impact Risk Zone for Sulham and Tidmarsh Woods and Meadows which is located 4.1 km west of the survey area.

4.3 PROTECTED / NOTABLE SPECIES

Table 4.2 and the following text provide a summary of protected and notable species records within a 1 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals-bats					
Unidentified bat <i>Chiroptera</i> sp.	21	2014	350 m north-west	#	#
Common pipistrelle <i>Pipistrellus pipistrellus</i>	1	2011	560 m west	-	ECH 4, WCA 5, WCA 6
Pipistrelle <i>Pipistrellus</i> sp.	2	2007	710 m west	#	ECH 4, WCA 5, WCA 6
Mammals-other					
Badger <i>Meles meles</i>	7	2015	†	-	WCA 6, PBA
Hedgehog <i>Erinaceus europaeus</i>	7	2014	320 m south	✓	WCA 6
Amphibians					
Common frog <i>Rana temporaria</i>	3	2008	220 m south	-	WCA 5 S9(5)
Smooth newt <i>Lissotriton vulgaris</i>	3	2011	220 m south	-	WCA 5 S9(5)
Reptiles					
Slow worm <i>Anguis fragilis</i>	1	2009	280 m south-west	✓	WCA 5 S9(1) WCA 5 S9(5)
Birds					
Redwing <i>Turdus iliacus</i>	2	1997	170 m south-west	-	WCA1i
Fieldfare <i>Turdus pilaris</i>	1	1997	780 m north-west	-	WCA1i
Invertebrates					
Stag beetle <i>Lucanus cervus</i>	22	2007	350 m north-west	✓	ECH 2, WCA 5 S9(5)
Key: #: Dependent on species. †: Badger records are confidential and therefore proximity is not provided within the report. ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. PBA: Protection of Badgers Act 1992. WCA 1i: Schedule 1 Part 1 of Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties at all times. WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). WCA 5 S9(1): Schedule 5 Section 9(1) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to intentional killing, injury or taking. WCA 5 S9(5): Schedule 5 Section 9(5) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal. WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods. Species of Principal Importance: Species of Principal Importance for Nature Conservation in England. Local: Reading Biodiversity Action Plan Note. These tables do not include reference to the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats), the Bonn Convention on the Conservation of Migratory Species of Wild Animals or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).					

Table 4.2: Summary of Protected/Notable Species Records Within 1 km of Survey Area

Birds

The desk study provided records of seven species of bird that are listed as Species of Principal Importance comprising dunnoek *Prunella modularis*, song thrush *Turdus philomelos*, spotted flycatcher *Muscicapa striata*, marsh tit *Poecile palustris*, starling *Sturnus vulgaris*, house sparrow *Passer domesticus* and bullfinch *Pyrrhula pyrrhula*.

Invertebrates

The desk study provided records of three species of invertebrates that are listed as Species of Principal Importance including red-shanked carder-bee *Bombus ruderarius*, shaded broad-bar moth *Scotopteryx chenopodiata* and cinnabar moth *Tyria jacobaeae*.

4.4 INVASIVE SPECIES

Table 4.3 provides a summary of invasive species records within a 1 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Legislation / Conservation Status
Three-cornered garlic <i>Allium triquetrum</i>	2	2006	230 m south-west	WCA 9
Japanese knotweed <i>Fallopia japonica</i>	1	1987	490 m north-west	WCA 9
Key: WCA 9: Schedule 9 of Wildlife and Countryside Act 1981 (as amended). Invasive, non-native, plants and animals.				

Table 4.3: Summary of Invasive Species Records Within 1 km of Survey Area

5. PHASE 1 HABITAT SURVEY

5.1 INTRODUCTION

The results of the Phase 1 Habitat Survey are presented in the following sections. An annotated Phase 1 Habitat Survey Drawing (Drawing C124455-01) is provided in Chapter 8. This drawing illustrates the location and extent of all habitat types recorded on site. Any notable features or features too small to map are detailed using target notes. Photographs taken during the field survey are presented in Chapter 9.

The survey was carried out on 3rd March 2017 by Penelope Holgate, Ecological Consultant. Table 5.1 details the weather conditions at the time of the survey.

Parameter	Condition
Temperature (°C)	7
Cloud (%)	10
Wind (Beaufort)	F0
Precipitation	Dry

Table 5.1: Weather Conditions During Field Survey

5.2 SURVEY CONSTRAINTS AND LIMITATIONS

There were no significant constraints experienced at the time of the survey.

5.3 HABITATS

The following habitat types were recorded on site during the field survey:

- Amenity grassland;
- Bare ground;
- Buildings;
- Hardstanding; and,
- Introduced shrub.

These habitats are described below. They are ordered alphabetically, not in order of ecological importance.

Amenity grassland

Areas of amenity grassland dominated by rye-grass *Lolium* sp. were present around each of the buildings (Plate 9.1).

Bare ground

Areas of bare ground were present along the southern boundary of the survey area (Plate 9.2). These areas have been subject to intensive tree and scrub cutting.

Buildings

Three blocks of flats were present on site at the time of the survey (Plate 9.3). The buildings were brick built with rendered walls and varied between two and three storeys in height. A number of gaps were noted in the wooden soffits and many of the windows had the glass panes removed or boarded up. The ceiling of one of blocks of flats had been broken in one place. Several small sheds were present around the grounds of the buildings. Further details of the buildings are available within the Preliminary Bat Roost Assessment, Report RT-MME-124455-02.

Hardstanding

Hardstanding footpaths were present leading into the building entrances. The perimeter of each building had high fencing.

Introduced shrub

Two introduced shrubs were present to the west of the most northerly block of flats (Plate 9.4), one of which had been cut down.

5.4 FAUNA

During the survey field signs of faunal species were recorded. The time of year at which the survey is undertaken will affect species or field signs directly recorded during the survey.

Birds

Gulls *Laridae* sp. were observed on site at the time of the survey.

5.5 INVASIVE PLANT SPECIES

No invasive plant species were observed on site at the time of the survey.

6. DISCUSSIONS AND CONCLUSIONS

6.1 SUMMARY OF PROPOSALS

It is understood that the proposed development involves the demolition of the existing buildings and construction of a new community centre and residential properties.

6.2 NATURE CONSERVATION SITES

The desk study exercise identified no European statutory sites within 5 km of the survey area, four UK statutory sites within 2 km, three ancient woodlands within 2 km and two non-statutory sites within 1 km. The site is not located within 10 km of a statutory site designated for bats. The significance of these sites to the proposed development is discussed below.

UK Statutory Sites

The closest UK Statutory Site was Lousehill Copse located 270 m south-west of the survey area. The remaining UK Statutory Sites were located over 500 m away from the survey area. Due to the distances between the survey area and these nature conservation sites and the built-up nature of the intervening habitats it is considered unlikely that there will be any adverse impacts upon UK Statutory sites as a result of the proposed development.

The survey area also falls within the SSSI Impact Risk Zone for Sulham and Tidmarsh Woods and Meadows which is located 4.1 km west of the survey area. The development proposals do not fall under any of the development risk categories (please refer to Appendix 1). Therefore, UK Statutory Sites are not a notable consideration in relation to the proposed development.

Non-Statutory Sites

The closest non-statutory site is West Reading Woodlands located 135 m west of the survey area. Even though this development site is within close proximity to this nature conservation site, the built-up nature of the intervening habitats and the small number of new properties will ensure that there are no direct or indirect impacts upon West Reading Woodlands as a result of the proposed development.

The remaining nature conservation sites are located over 700 m away from the survey area. Due to the distances between these nature conservation sites and the survey area and the built-up nature of the intervening habitats, no direct or indirect impacts upon these sites are anticipated as a result of the works. Therefore, the non-statutory sites are not a notable consideration in relation to the proposed development.

6.3 HABITATS

The ecological importance of the habitats present on site is determined by their presence on the list of Habitats of Principal Importance in England and on the Local BAP. It also takes into account the intrinsic value of the habitat. Those habitats which are considered to be of intrinsic importance and have the potential to be impacted by the site proposals are highlighted as notable considerations.

A discussion of the implications of the site proposals with regard to the habitats present on site is provided in the text below. A separate discussion of the value of the habitats on site to protected or notable species is provided in Section 6.4.

Amenity grassland, bare ground, buildings, hardstanding and introduced shrub

All the habitats present on site are well represented locally have low species and can be easily recreated post development. Any loss of these habitats would be considered to have minimal impact on the ecology of the local area. These habitats are therefore not a notable consideration in relation to the proposed development.

6.4 PROTECTED/NOTABLE SPECIES

The following paragraphs consider the likely impact of the site proposals on protected or notable species. This is based on those species highlighted in the desk study exercise (Chapter 4) and other species for which potentially suitable habitat occurs within or adjacent to the survey area.

Mammals

Bats

The desk study provided records of at least one species of bat located within a 1 km radius of the survey area. The closest record was of an unidentified bat located 350 m north-west. The gaps within the soffit boxing provided suitable points of ingress for roosting bats. The broken ceiling and open windows provided direct flight access for bats into the buildings for foraging and roosting. It is understood that these buildings are to be demolished as part of the proposed development, this has the potential to cause direct harm/injury to roosting bats as a result of the proposed development. Therefore, roosting bats are a notable consideration in relation to the proposed development and a recommendation has been provided within Section 7.3. The reader is referred to the Preliminary Bat Roost Assessment, Report RT-MME-124455-02 for further details.

The mosaic of bare ground with cut trees and scrub provides very limited suitable foraging and commuting habitat for bats. However, the windows in the building had no glass, allowing free flight access into the buildings for foraging bats. If the development involves the illumination of any of these features, then it would result in a severance of potential bat commute features. Therefore, a precautionary recommendation regarding foraging/commuting bats recommendation has been given in Section 7.3.

Badger

The desk study provided seven records of badger located within a 1 km radius of the survey area. No evidence of badger was observed on site at the time of the survey such as setts, prints or latrines. The survey area provided no suitable sett building or foraging habitat for badger due to the managed nature of the habitats on site. The survey area was not well connected to suitable habitat within the wider area as it was isolated within an urban landscape. Due to the lack of suitable habitat on site and within the wider it was considered unlikely that badger will be present on site. Therefore, badgers are not a notable consideration in relation to the proposed development.

Hedgehog

The desk study provided seven records of hedgehog located within a 1 km radius of the survey area. The closest record was located 320 m south of the survey area. The amenity grassland and scrub provides limited suitable foraging habitat for hedgehog within the survey area. The residential gardens within the surrounding landscape provide suitable foraging habitat for hedgehogs. As hedgehogs are mobile mammals, they may forage on or pass through the site to access these areas of suitable habitat. Hedgehog may fall into excavations required as part of the proposed development causing direct harm/injury. Therefore, a precautionary recommendation regarding hedgehog has been provided within Section 7.3.

Amphibians

The desk study provided records of common frog and smooth newt located within a 1 km radius of the survey area. No suitable breeding habitat was located on or immediately adjacent to site. The survey area also provided sub-optimal habitat for amphibians during the terrestrial phase of their life cycle due to the managed nature of the habitats present on site. Reference to Ordnance Survey data and aerial imagery indicated that there was one waterbody located within a 500 m radius of the survey area. This waterbody was located over 300 m away from the survey area. Due to the lack of suitable habitats present on site and the urban nature of the surrounding landscape it was considered unlikely that any amphibians will be present on site. Therefore, amphibians are not a notable consideration in relation to the proposed development.

Reptiles

The desk study provided an individual record of a slow worm located 280 m south-west of the survey area. There is a large amount of debris and rubbish on the areas of amenity grassland and bare ground that may provide suitable refugia and basking habitat for reptiles. However, it is considered unlikely that reptiles will be present on site as there is no suitable foraging habitat on site and the survey area is isolated within an urban area. Therefore, reptiles are not a notable consideration in relation to the proposed development.

Birds

The desk study provided records of two species of bird that were listed as Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) within a 1 km radius of the survey area as well as several records of bird that are listed as Species of Principal Importance. The one remaining introduced shrub on site provided suitable nesting and foraging habitat for a range of bird species. If the proposals involve the removal of vegetation during the nesting bird season, then there is potential for impact upon nesting birds as such a recommendation regarding the timings of the works has been provided within Section 7.3.

Invertebrates

The desk study provided twenty-two records of stag beetle, the closest record was located 350 m north-west of the survey area. The survey area provided sub-optimal habitat for stag beetle due to the lack of deadwood, hedgerows and woodland habitat. It was considered unlikely that any stag beetles will be present on site. The survey area provided some suitable habitat for other common invertebrates, such habitats are common within the surrounding area and the proposed development are unlikely to impact upon invertebrates in the long-term. Nevertheless, as some loss of habitat will occur enhancement recommendations have been provided within Section 7.2.

Other Species

The following protected species are not considered to be material considerations due to the lack of desk study records and absence of suitable habitats within the development site and its surroundings: dormouse *Muscardinus avellanarius*, pine marten *Martes martes*, polecat *Mustela putorius* and red squirrel *Sciurus vulgaris*.

Summary

Species considered to be of relevance to the proposed development are summarised in Table 6.2.

Species / Species Group	Species of Principal Importance?	Summary of Potential Impacts
Bats	#	Loss of suitable habitat, disturbance through increased lighting
Hedgehog	#	Direct harm/injury, habitat loss/disturbance
Birds	✓	Direct harm/injury, habitat loss/disturbance

Table 6.2: Summary of Potential Impacts on Notable Species

6.5 INVASIVE PLANT SPECIES

The desk study provided records three-cornered garlic and Japanese knotweed located within a 1 km radius of the survey area. The closest record was of three-cornered garlic located 230 m south-west of the survey area. However, no invasive plant species were observed on site at the time of the survey. Therefore, invasive plant species are not a notable consideration in relation to the proposed development.

7. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

The ecological mitigation hierarchy should be applied when considering development which may have a significant effect on biodiversity. The ecological mitigation hierarchy, as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG) should follow these principles:

- **Avoidance** – development should be designed to avoid significant harm to valuable wildlife habitats and species.
- **Mitigation** – where significant harm cannot be wholly or partially avoided, it should be minimised by design or through the use of effective mitigation measures.
- **Compensation** – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, compensation should be used to provide an equivalent value of biodiversity.

7.1 NATURE CONSERVATION SITES

No recommendations regarding nature conservation sites have been provided.

7.2 HABITATS

The following recommendations are made regarding the habitats present on site:

- R1 Habitat Loss and Enhancement:** In accordance with the provision of Chapter 11 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed works to maximise the ecological value of the site:
- Planting of habitats which will be of value to wildlife, such as:
 - native seed/fruit bearing species to provide foraging habitat for mammals and birds;
 - nectar-rich species to attract bees, butterflies and moths; and,
 - species which attract night flying insects which will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea*,
 - Provision of nesting/roosting habitat, such as installation of nest boxes for species such as house sparrow, dense scrub for species such as song thrush, and bat boxes for species such as pipistrelle and brown long eared.

7.3 PROTECTED / NOTABLE SPECIES

To ensure compliance with wildlife legislation and relevant planning policy [Reading Borough Council Core Strategy 'Policy CS36 Biodiversity and Geology'], the following recommendations are made:

- R2 Roosting bats:** All recommendation provided within the Preliminary Bat Roost Assessment (RT-MME-124455-02) must be adhered to.
- R3 Foraging/Communing Bats:** Bats may use the scrub and shrub on the site for foraging and commuting. Therefore, any lighting, either temporary or permanent, along these habitats should be kept to a minimum and directed away from these features to maintain 'dark' areas and corridors. The lighting strategy for any future development of the site should involve the use of low level and directional lighting, such as bollard lighting, to help to minimise light spill.
- R4 Nesting Birds:** Vegetation and building clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation/buildings to be removed or disturbed should be checked by an experienced ecologist for

nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

- R5 Terrestrial Mammals including Hedgehog:** Any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each work day to prevent animals entering/becoming trapped.

7.4 INVASIVE PLANT SPECIES

No recommendations regarding invasive plant species have been provided.

8. DRAWINGS

Drawing C124455-01 – Phase 1 Habitat Map



C124455-01

Legend

- Site boundary
- ✕ Introduced shrub
- A Amenity grassland
- Building
- Hardstanding
- ✕ Mosaic: bare ground with cut trees and scrub



Project	
Dee Park, Reading, Phase 2C	
Drawing	
Phase 1 Habitat Map	
Client	
Dee Partnership c/o Reading Borough Council	
Drawing Number	Revision
C124455-01	00
Scale @ A4	Date
1:800	March 2017
Approved By	Drawn By
PH	RP



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9. PHOTOGRAPHS



Plate 9.1: Amenity grassland



Plate 9.2: Bare ground



Plate 9.3: Buildings



Plate 9.4: Introduced shrub

REFERENCES AND BIBLIOGRAPHY

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APPENDICES

APPENDIX 1: Summary of Statutory Nature Conservation Sites

APPENDIX 2: Overview of Relevant Species Specific Legislation

APPENDIX 1

Summary of Statutory Nature Conservation Sites

UK Statutory Sites located within 2 km

Site Check Report generated on Thu Mar 09 2017

You selected the location: Centroid Grid Ref: SU684736

The following features have been found in your search area:

Ancient Woodland (England)

Wood Name

CHURCH END COPSE

Theme Name

Ancient & Semi-Natural Woodland

Theme ID

1495024

Area (Ha)

6.319908

Wood Name

CHAZEY WOOD

Theme Name

Ancient Replanted Woodland

Theme ID

1475894

Area (Ha)

28.794722

Wood Name

KENTWOOD GROVE

Theme Name

Ancient & Semi-Natural Woodland

Theme ID

1496236

Area (Ha)

3.655695

Local Nature Reserves (England)

Reference

1009369

Name

BLUNDELLS COPSE

Hectares

5.55

Hyperlink

http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009369

Reference

1009372

Name

LOUSEHILL COPSE

Hectares

13.03

Hyperlink

http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009372

Reference

1009628

Name

ROUND COPSE

Hectares

1.66

Hyperlink

http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009628

Reference

1009374

Name

MCILROY PARK

Hectares

11.98

Hyperlink

http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1009374

National Nature Reserves (England)

No Features found

Sites of Special Scientific Interest (England)

No Features found

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

All Planning Applications

Infrastructure

Airports, helipads and other aviation proposals.

Wind & Solar Energy

Minerals, Oil & Gas

Rural Non Residential

Residential

Rural Residential

Air Pollution

Pig & poultry units, slurry lagoons > 750m³ & manure stores > 3500t.

Combustion

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

Waste

Composting

Discharges

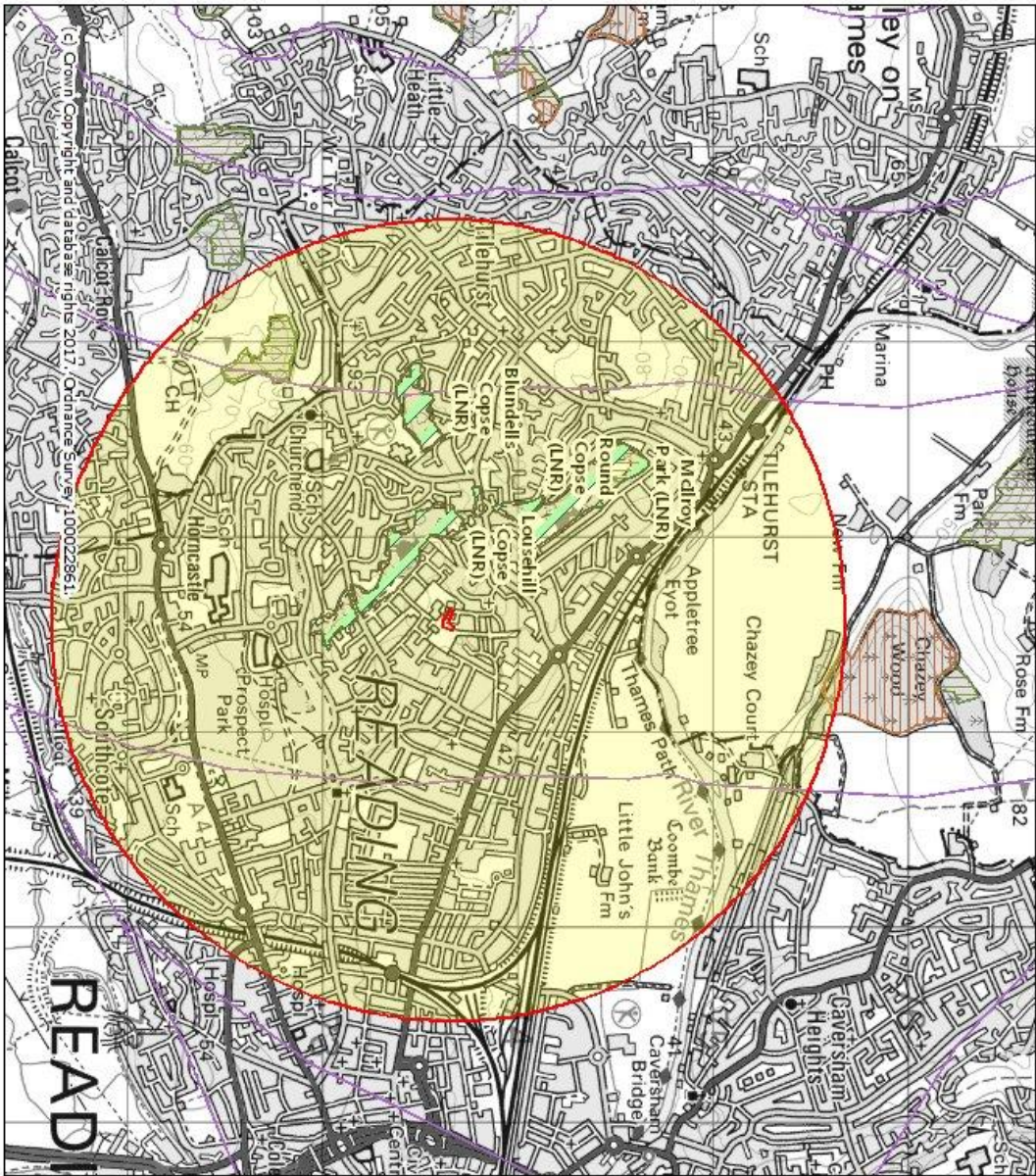
Water Supply

GUIDANCE – How to use the Impact Risk Zones

[/Metadata for magic/SSSI IRZ User Guidance MAGIC.pdf](#)



UK Statutory Sites within 2 km



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Ancient Woodland (England)
- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
xmin = 463200
ymin = 171600
xmax = 473300
ymax = 176500
Map produced by MAGIC on 9 March, 2017.
Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

UK Statutory Sites located within a 5 km radius

Site Check Report Report generated on Thu Mar 09 2017

You selected the location: Centroid Grid Ref: SU684736

The following features have been found in your search area:

Ramsar Sites (England)

No Features found

Special Areas of Conservation (England)

No Features found

Special Protection Areas (England)

No Features found

APPENDIX 2

Overview of Relevant Species Specific Legislation

Hedgehogs

Hedgehogs receive some protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended); this section of the Act lists animals which may not be killed or taken by certain methods, namely traps and nets, poisons, automatic weapons, electrical devices, smokes/gases and various others. Humane trapping for research purposes requires a licence.

Hedgehogs are a Species of Principal Importance for Nature Conservation in England and are thus capable of being material considerations in the planning process.

Birds

The Conservation of Habitats and Species Regulations 2010 (as amended) places a duty on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds.

Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended).

Subject to the provisions of the act, if any person intentionally:

- kills, injures or takes any wild bird;
- takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Some species (listed in Schedule 1 of the WCA) are protected by special penalties. Subject to the provisions of the act, if any person intentionally or recklessly:

- disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird, he shall be guilty of an offence.

Several bird species are Species of Principal Importance for Nature Conservation in England, making them capable of being material considerations in the planning process.

Bats

Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2010, as amended (Habitats Regulations 2010, as amended). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2010 (as amended), states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2010 (as amended) for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or *obstruct access to*, any structure or place which a protected species uses for shelter or protection.

- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The following bat species are Species of Principal Importance for Nature Conservation in England:

Barbastelle Bat *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule Bat *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros*.