

**DALLOWAY ROAD, ARUNDEL,  
WEST SUSSEX**

**PRELIMINARY ECOLOGICAL APPRAISAL**

A Report to: Saville Jones Architects

Report No: RT-MME-124814-01

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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:                                                              |
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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 Saville Jones Architects to carry out a Preliminary Ecological Appraisal at the site of a proposed development located off Dalloway Road in Arundel, West Sussex. 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 identified no European statutory sites within 5 km of the survey area, one UK statutory site and numerous ancient woodland sites 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 revealed numerous records of protected/notable species within a 1 km radius of the survey area, including bats, dormouse, hedgehog, birds, herpetofauna, invertebrates and plants.

The walkover survey was undertaken on 19<sup>th</sup> April 2017 by Sarah Hickman (Senior Ecological Consultant) and Dean Moore (Arboricultural Consultant). At the time of the survey, the site comprised an ancient, semi-natural woodland with bare earth footpaths running through the centre. It forms part of Tortington Common which continues off site to the west. Dense scrub was present around the eastern and southern edges of the woodland, and a dry ditch was present along the western edge. The northern boundary was delineated by a mix of fencing types from adjacent residential gardens. An area of amenity grassland with scattered trees was present in the eastern part of the site, adjacent to Dalloway Road, and a small utility compound was present in the south-eastern corner of the site.

The key ecological features on and surrounding the site in relation to the works proposed are the numerous parcels of ancient woodland. The woodland on site is a Habitat of Principal Importance as well as being ancient. This woodland, as well as the scattered trees and dense scrub on site, could potentially support a wide range of protected/notable species, including bats, badgers, dormice, hedgehog, nesting birds, herpetofauna, invertebrates and plants.

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

- R1 Ancient Woodland:** The proposed works will directly impact upon Tortington Common which is designated as an ancient woodland site. The proposed development could also potentially impact upon several other parcels of ancient woodland. As such, consideration should be given to the guidelines set out in the NPPF regarding ancient woodland sites (see Chapter 3). Natural England's Standing Advice regarding ancient woodlands should be reviewed (see <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>) and Natural England, the Forestry Commission and the Local Planning Authority ecologist should be consulted. Further detailed surveys could be undertaken to confirm, or otherwise, whether the areas within the planning application boundaries are considered to actually comprise ancient woodland habitats.
- R2 Local Wildlife Sites:** The proposed development could also potentially impact upon several non-statutory sites in the surrounding area. As such the Local Planning Authority ecologist should be consulted prior to any works commencing to determine how works may proceed without adversely impacting these sites. If impacts cannot be avoided then suitable mitigation or, as a last resort, compensation should be provided in accordance with the ecological mitigation hierarchy.
- R3 Habitat Loss and Enhancement:** Biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed works to maximise the ecological value of the site.
- R4 Semi-Natural Broad-leaved Woodland, Scattered Trees and Dense Scrub:** The development proposals should be designed in such a way to allow for the retention of as much of the existing woodland, semi-mature/mature trees and dense scrub as possible. Appropriate replacement habitat creation will be required to mitigate/compensate for any habitat loss.
- R5 Trees:** Any trees on site, or overhanging the site, which are to be retained as a part of any proposed works should be protected prior to the commencement of any works on site.
- R6 Roosting Bats:** A preliminary ground level roost assessment should be undertaken on trees which may be impacted by the proposed development works. Preliminary ground level roost assessments can be completed at any time of year. Dependent upon the results of the preliminary survey, nocturnal emergence and dawn re-entry surveys could be required.

- R7 Foraging Bats:** A bat activity survey should be undertaken to determine bat use of the site. Foraging bat surveys can be completed in suitable weather in accordance with the Bat Conservation Trust Guidelines (Collins, 2016).
- R8 Bats and Lighting:** The development should aim to limit the impact of light pollution on bats through the careful use of lighting in critical areas only and at a low level with minimum spillage. Any lighting, either temporary or permanent, at the site should be kept to a minimum and directed away from suitable foraging and commuting features to maintain dark areas and corridors.
- R9 Badgers:** Given the suitable habitat present within the survey area and connectivity to adjacent habitat that is suitable for badgers, it is recommended that a pre-works walkover survey is undertaken to determine whether badgers have colonised the site. Should badger setts be identified, then a badger activity survey may be required.
- R10 Dormouse:** A dormouse survey should be undertaken to determine the presence/absence of this species on site. No single survey method is suitable for all types of sites, therefore a range of methodologies should be used in combination. A nut search is best undertaken between September and December. Nest searches are best undertaken in winter after much of the vegetation has died back. Nest tube surveys need to be undertaken between March/ April and November (inclusive).
- R11 Terrestrial Mammals including Badger, Dormouse and 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.
- R12 Breeding Birds:** Due to the importance of the survey area for birds, as highlighted by desk study material and initial field observations, it is recommended that a breeding bird survey be conducted to determine the use of the site by breeding birds. The survey should consist of three site visits between May and July, with each visit at least a week apart.
- R13 Great Crested Newts:** A great crested newt Habitat Suitability Index (HSI) assessment and presence/absence surveys should be undertaken for all ponds identified within 500 m of the edge of the proposed development site. Great crested newt surveys require 4-6 visits to each pond between March and June, with 2-3 visits required between mid-April and mid-May.
- R14 Reptiles:** A reptile survey should be undertaken of suitable habitats within the proposed development site. Reptile surveys can be completed in suitable weather conditions between April and September (inclusive).
- R15 Invertebrates:** An invertebrate survey should be undertaken for the habitats located on site to establish the presence/absence of notable species. This should consist of four site visits between June and September (one visit per month).
- R16 Notable Plants:** A National Vegetation Classification should be undertaken for the habitats located on the site to determine the existing botanical interest. The ideal time to undertake a botanical survey for woodland species is April to June.
- R17 Invasive Plants:** Due to the presence of potentially suitable habitat, it is recommended that vigilance is adopted throughout site-based works to avoid the spread of any invasive non-native plant species.

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## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND

In April 2017, Saville Jones Architects commissioned Middlemarch Environmental Ltd to undertake a Preliminary Ecological Appraisal of the site of a proposed development located off Dalloway Road in Arundel, West Sussex. This assessment is required to inform a planning application associated with the proposed construction of three or four new residential dwellings with a new access road, car parking spaces and gardens. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development.

To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on 19<sup>th</sup> April 2017. In addition, Middlemarch Environmental Ltd has been commissioned to undertake a Pre-development Arboricultural Survey at the site, the findings of which are detailed in Report RT-MME-124814-02.

### 1.2 SITE DESCRIPTION AND CONTEXT

The site is located off Dalloway Road in Arundel, West Sussex, centred at National Grid Reference TQ 0038 0641. It is a roughly rectangular shaped parcel of land that measures approximately 0.7 ha in size. The topography of the site was varied with a general slope down to its south-eastern corner evident.

At the time of the survey, the site comprised an ancient, semi-natural woodland with bare earth footpaths running through the centre. It forms part of Tortington Common which continues off site to the west. Dense scrub was present around the eastern and southern edges of the woodland, and a dry ditch was present along the western edge. The northern boundary was delineated by a mix of fencing types from adjacent residential gardens. An area of amenity grassland with scattered trees was present in the eastern part of the site, adjacent to Dalloway Road, and a small utility compound was present in the south-eastern corner of the site.

The site was bordered by residential properties to the north, Dalloway Road to the east, a pastoral field to the south and Priory Lane to the west, beyond which lies Tortington Common and a number of connecting ancient woodland sites. The wider landscape was dominated by a rural setting consisting of agricultural land interspersed with pockets of woodland, residential dwellings and occasional farm buildings.

### 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                   |
|----------------------------------------|--------------------------|
| Site Plan: 14101015                    | Offington Land Surveys   |
| Sketch Site Layout Option 2: 1515 SK02 | Saville Jones Architects |

**Table 1.1: Documentation Provided by Client**

The Sketch Site Layout is included in Chapter 7.

## **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,
- Sussex Biodiversity Record 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.

With respect to ancient woodland, paragraph 118 specifically states that:

*“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles...*

- *planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss”*

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 – ARUN DISTRICT, WEST SUSSEX

<http://www.arun.gov.uk/planning-policy>

#### **New Local Plan 2014 – 2029**

Once the Arun District Local Plan is adopted, all planning applications for development will be judged against its policies. It will replace the Current Local Plan 2003, however until this plan is adopted the Local Plan 2003 to 2011 will provide planning policy for the district. It anticipated that the new plan will be adopted in June 2017 following a consultation period regarding modifications to the plan.

#### **Current Local Plan 2003**

The Arun District Local Plan was adopted in April 2003 and covers the period up to 2011. It forms a statement of Arun District Council’s planning policies which are used as a basis for decision making in planning applications. The key aim of the plan is to apply the principles of sustainable development in assessing development proposals, striking the balance between the need for development and the protection of scarce resources. Policies and proposals within the plan seek to guide development to meet needs, such as economic regeneration and housing, and ensure the provision of appropriate infrastructure, whilst protecting precious resources such as the countryside, open spaces and sites important for nature conservation.

From 27 September 2007, some of the policies in the Local Plan ceased to have effect. The remaining policies continue to be a part of the development plan and are known as ‘Saved Policies’. The following policies are of relevance to ecology:

**Policy GEN2 ‘Built-up Area Boundary’** - Development or redevelopment will be permitted within the built-up area boundaries (as defined on the Proposals Map, see web resource detailed above), subject to the other policies in this plan. Outside the built-up area boundaries, development or redevelopment will not be permitted unless it is consistent with other Local Plan policies.

Policy GEN3 'Protection of the Countryside' - Outside the Built-up Area, as defined on the Proposals Map (see web resource detailed above), the countryside will be safeguarded for its own sake. Development will not be permitted unless:

- i) It meets the operational needs of agriculture, forestry, the extraction of minerals or the deposit of waste; or
- ii) For quiet, informal recreation; or
- iii) For the diversification of the rural economy; or
- iv) For essential road schemes; or
- v) It is in accordance with a policy in Sections 2 and 3 of the plan referring to a specific use or type of development.

Permission will not be given for the extension of isolated groups of buildings or the consolidation of linear or sporadic development unless the proposal accords with criteria (i) to (iii) or (v).

Policy GEN23 'The Water Environment' - Development will not be permitted if it would have a direct or indirect unacceptable adverse impact on the water environment, notably in relation to rivers, ponds, wetlands, public access in river corridors and water related recreation. Where appropriate, the Council will support initiatives which seek to restore or enhance the water environment.

Policy GEN25 'Water Resources' - Development will only be permitted where the Local Planning Authority is satisfied that adequate water resources are available or will be provided in time to serve the development, and that provision is not considered detrimental to existing abstractions, river flows, water quality, fisheries, amenity or nature conservation.

Policy GEN28 'Trees and Woodland' - Development will not be permitted if it would damage or destroy one or more trees protected by a tree preservation order, identified as ancient woodland or in a conservation area unless: the removal of one or more trees would be in the interests of good Arboricultural practice; or the benefits of the proposed development outweigh the amenity value of the protected trees. Conditions may be used to ensure that, for any trees which are removed as part of the development, an equivalent number are planted on site.

Policy GEN29 'Nature Conservation across the District' - Development will only be permitted on sites which contain semi-natural habitats, features of nature conservation interest, or within wildlife corridors, where these can be largely retained and sympathetically incorporated into the scheme. Legal agreements may be used to offset the loss of, or impact on, any nature conservation resource present on the site prior to development.

Policy GEN33 'Light Pollution' - Planning permission will be permitted for proposals which involve outdoor lighting schemes subject to: no adverse impact on neighbouring uses or the wider landscape; light levels being the minimum required for security and working purposes; and minimising the potential glare and spillage. Where appropriate, the Local Planning Authority will seek to control the times of illumination.

Policy AREA1 'Areas of Special Character' - Within Areas of Special Character, as defined on the Proposals Map, planning permission will be granted subject to:

- i) The retention of buildings and other features such as boundary walls, hedges, trees, railings, open spaces, etc. which make positive contributions to the special character of the areas;
- ii) The maintenance of an appropriate mix of uses where this is an important element in the character of an area;
- iii) The development makes a positive contribution to the special character of these area, particularly with regard to the characteristics included in the descriptions for each area given in supplementary planning guidance.

Policy AREA13 'Sites of International Importance for Nature Conservation' - Proposals for development in, or likely to affect (directly or indirectly) a site of international importance for nature conservation will be subject to the most rigorous examination. Development not directly connected with or necessary to the management of the site which is likely to have an adverse effect on the site, will not be permitted unless: there is no alternative solution, there are reasons of public health or public safety, or there are benefits of primary importance to the environment.

Where such sites do not host a priority habitat or species, development will not be permitted unless there are imperative reasons of overriding public interest.

Where development is permitted, the use of conditions or planning obligations will be considered in order to avoid and minimise harm to the site, to enhance the site's nature conservation interest, and to secure any compensatory or mitigation measures and appropriate management that may be required.

Policy AREA14 'Sites of National Importance for Nature Conservation' - Proposals for development in, or likely to affect (directly or indirectly) Sites of Special Scientific Interest will be subject to special scrutiny. Where such development is likely to have an adverse effect, it will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the site itself and the national policy to safeguard the national network of such sites.

Where the site concerned is a National Nature Reserve, a site identified by the Nature Conservation Review or Geological Conservation Review, particular regard will be paid to the national importance of that site.

Where development is permitted, harm to the nature conservation interest must be minimised. The use of conditions or planning agreements will be considered to ensure the protection and enhancement of the nature conservation interest, and to provide appropriate compensatory or mitigation measures and site management.

Policy AREA15 'Sites of Local Importance for Nature Conservation' - Proposals for development in, or likely to have an adverse effect (directly or indirectly) on a Local Nature Reserve, Site of Nature Conservation Importance (including ancient woodlands or wildlife corridors) or Regionally Important Geological/Geomorphological Site will not be permitted unless it can be demonstrated that reasons for the proposal outweigh the need to safeguard the nature conservation value of the site/feature. Where development is permitted which would damage the nature conservation value of the site/feature, such damage should be kept to a minimum.

Conditions or planning obligations will be used to secure necessary compensatory or mitigation measures, enhancement and site management.

Where appropriate, the Authority will consider the use of legal agreements to provide appropriate compensatory measures, enhancement and site management.

## 4. DESK STUDY RESULTS

### 4.1 INTRODUCTION

The data search was carried out in April 2017 by Sussex Biodiversity Record Centre. 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------|-------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UK Statutory Sites</b>        |             |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Arundel Park                     | SSSI, AWS   | 1,400 m north-east       | The site is an old deer park consisting of a series of spurs and valleys, with chalk grassland and a variety of woodland types including ancient and semi-natural woodland. It is one of the most important sites in the country for invertebrates including a number of rare and notable species, and it also has a diverse breeding and wintering bird community.                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Non-statutory Sites</b>       |             |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Binsted Wood Complex             | LWS, AWS    | 40 m north-east          | Binsted Wood is a complex of woodland sites which includes Hundredhouse Copse in the west and Stewards Copse to the east. There is a mixture of ancient woodland, recent woodland, conifer plantation, species rich pasture and old tracks and shaws. The mix of habitats and geology gives rise to a very rich and diverse flora. The paths and rides are especially species rich and Scotland Lane supports an outstanding wet ride flora that includes at least 11 species of sedge including long-stalked yellow-sedge <i>Carex viridula</i> ssp. <i>brachyrhyncha</i> , a county rarity at its only recorded West Sussex location. This is the largest block of ancient semi-natural woodland south of the South Downs in Sussex. |
| Rewell Wood Complex              | LWS, AWS    | 1,800 m north-west       | Rewell Wood is a large ancient woodland complex. It has a diversity of habitats including ancient semi-natural woodland, worked sweet chestnut <i>Castanea sativa</i> coppice, conifer plantation, beech <i>Fagus sylvatica</i> plantation and species-rich chalk grassland. Wide rides and glades support a rich flora and butterfly fauna. The disused gravel pits are of entomological importance. Rewell Wood supports a good population of dormice <i>Muscardinus avellanarius</i> . About six pairs of nightjar <i>Caprimulgus europaeus</i> breed annually.                                                                                                                                                                     |
| <b>Ancient Woodland Sites</b>    |             |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Tortington Common                | AWS         | On site (cont. west)     | Ancient and semi-natural woodland with replanted areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Rocks Copse, Rooke's Coppice     | AWS         | 660 m north-east         | Ancient and semi-natural woodland.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| The Waterwoods                   | AWS         | 720 m north-east         | Ancient and semi-natural woodland with replanted areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Tortington Common & Lodge Meadow | AWS         | 740 m north-west         | Ancient and semi-natural woodland.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Paine's Wood                     | AWS         | 1,030 m north-west       | Ancient replanted woodland.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Spinningwheel Copse              | AWS         | 1,350 m west             | Ancient and semi-natural woodland.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Stringer's Piece                 | AWS         | 1,360 m north-west       | Ancient and semi-natural woodland.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Table 4.1: Summary of Nature Conservation Sites (cont)**

| Site Name                                                                                                             | Designation | Proximity to Survey Area | Description                        |
|-----------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|------------------------------------|
| Lake Copse                                                                                                            | AWS         | 1,380 m south-west       | Ancient and semi-natural woodland. |
| Mill & Castle Hanger, Old Keep Moat Flower Garden                                                                     | AWS         | 1,480 m north-east       | Ancient and semi-natural woodland. |
| Copy Thorn Copse                                                                                                      | AWS         | 1,530 m west             | Ancient and semi-natural woodland. |
| Furze field Copse                                                                                                     | AWS         | 1,530 m west             | Ancient and semi-natural woodland. |
| Wincher's Copse                                                                                                       | AWS         | 1,630m north-west        | Ancient and semi-natural woodland. |
| Fowler's Copse                                                                                                        | AWS         | 1,720m north-west        | Ancient and semi-natural woodland. |
| Goblestubbs Copse                                                                                                     | AWS         | 1,770 m north-west       | Ancient replanted woodland.        |
| Pedlers Croft                                                                                                         | AWS         | 1,780 m north-west       | Ancient and semi-natural woodland. |
| The Rough                                                                                                             | AWS         | 1,840 m north            | Ancient replanted woodland.        |
| Brickkiln Copse                                                                                                       | AWS         | 1,890 m north-west       | Ancient and semi-natural woodland. |
| <b>Key:</b><br>SSSI: Site of Special Scientific Interest.<br>AWS: Ancient Woodland Site.<br>LWS: Local Wildlife Site. |             |                          |                                    |

**Table 4.1: Summary of Nature Conservation Sites (cont'd)**

The desk study revealed an additional thirteen parcels of ancient woodland within the search area that were unnamed.

#### 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 |
|--------------------------------------------------------------|----------------|--------------------|-------------------------------------------|----------------------------------|-----------------------------------|
| <b>Mammals – bats</b>                                        |                |                    |                                           |                                  |                                   |
| Common pipistrelle<br><i>Pipistrellus pipistrellus</i>       | 6              | 2015               | 70 m north                                | -                                | ECH 4, WCA 5, WCA 6               |
| Long-eared bat<br><i>Plecotus</i> sp.                        | 1              | 2003               | 250 m south-east                          | #                                | ECH 4, WCA 5, WCA 6               |
| Whiskered/Brandt's bat<br><i>Myotis mystacinus/ brandtii</i> | 1              | 2015               | 560 m north                               | -                                | ECH 4, WCA 5, WCA 6               |
| Soprano pipistrelle<br><i>Pipistrellus pygmaeus</i>          | 1              | 2015               | 560 m north                               | ✓                                | ECH 4, WCA 5, WCA 6               |
| Unidentified bat<br>Chiroptera sp.                           | 1              | 2000               | 650 m east                                | #                                | ECH 2 #, ECH 4, WCA 5, WCA 6      |
| <b>Mammals – other</b>                                       |                |                    |                                           |                                  |                                   |
| Water vole<br><i>Arvicola amphibius</i>                      | 1              | 2010               | 400 m south                               | ✓                                | WCA 5                             |
| Dormouse<br><i>Muscardinus avellanarius</i>                  | 18             | 2016               | 510 m west                                | ✓                                | ECH 4, WCA 5, WCA 6               |
| Hedgehog<br><i>Erinaceus europaeus</i>                       | 3              | 2016               | 550 m north                               | ✓                                | WCA 6                             |

**Table 4.2: Summary of Protected/Notable Species Records Within 1 km of Survey Area (cont)**

| Species                                               | No. of Records | Most Recent Record | Proximity of Nearest Record to Study Area | Species of Principal Importance? | Legislation / Conservation Status |
|-------------------------------------------------------|----------------|--------------------|-------------------------------------------|----------------------------------|-----------------------------------|
| <b>Birds</b>                                          |                |                    |                                           |                                  |                                   |
| Nightjar<br><i>Caprimulgus europaeus</i>              | 39             | 2008               | 140 m north-west                          | ✓                                | Amber                             |
| Hobby<br><i>Falco subbuteo</i>                        | 10             | 2015               | 270 m north                               | -                                | WCA1i                             |
| Marsh tit<br><i>Poecile palustris</i>                 | 33             | 2015               | 360 m north                               | ✓                                | Red                               |
| Reed bunting<br><i>Emberiza schoeniclus</i>           | 9              | 2014               | 610 m south-east                          | ✓                                | Amber                             |
| Linnet<br><i>Linaria cannabina</i>                    | 7              | 2014               | 670 m south-east                          | ✓                                | Red                               |
| Yellowhammer<br><i>Emberiza citrinella</i>            | 5              | 2014               | 680 m south                               | ✓                                | Red                               |
| Lapwing<br><i>Vanellus vanellus</i>                   | 42             | 2015               | 830 m east                                | ✓                                | Red                               |
| Kingfisher<br><i>Alcedo atthis</i>                    | 34             | 2015               | 870 m east                                | -                                | WCA1i, Amber                      |
| Wood warbler<br><i>Phylloscopus trochilus</i>         | 5              | 2015               | 920 m west                                | ✓                                | Red                               |
| Cetti's warbler<br><i>Cettia cetti</i>                | 68             | 2015               | Potentially within 1 km*                  | -                                | WCA1i                             |
| Skylark<br><i>Alauda arvensis</i>                     | 42             | 2015               | Potentially within 1 km*                  | ✓                                | Red                               |
| Red kite<br><i>Milvus milvus</i>                      | 19             | 2015               | Potentially within 1 km*                  | -                                | WCA1i                             |
| Cuckoo<br><i>Cuculus canorus</i>                      | 10             | 2015               | Potentially within 1 km*                  | ✓                                | Red                               |
| Little ringed plover<br><i>Charadrius dubius</i>      | 8              | 2015               | Potentially within 1 km*                  | -                                | WCA1i                             |
| Firecrest<br><i>Regulus ignicapilla</i>               | 7              | 2015               | Potentially within 1 km*                  | -                                | WCA1i                             |
| Starling<br><i>Sturnus vulgaris</i>                   | 7              | 2014               | Potentially within 1 km*                  | ✓                                | Red                               |
| Hawfinch<br><i>Coccothraustes coccothraustes</i>      | 5              | 2014               | Potentially within 1 km*                  | ✓                                | Red                               |
| Turtle dove<br><i>Streptopelia turtur</i>             | 4              | 2014               | Potentially within 1 km*                  | ✓                                | Red                               |
| Yellow wagtail<br><i>Motacilla flava</i>              | 1              | 2014               | Potentially within 1 km*                  | ✓                                | Red                               |
| Mediterranean gull<br><i>Larus melanocephalus</i>     | 1              | 2014               | Potentially within 1 km*                  | -                                | WCA1i, Amber                      |
| Crossbill<br><i>Loxia curvirostra</i>                 | 2              | 2012               | Potentially within 1 km*                  | -                                | WCA1i                             |
| Corn bunting<br><i>Emberiza calandra</i>              | 2              | 2010               | Potentially within 1 km*                  | ✓                                | Red                               |
| Barn owl<br><i>Tyto alba</i>                          | 6              | 2007               | Potentially within 1 km*                  | -                                | WCA1i                             |
| Willow tit<br><i>Poecile montana</i>                  | 6              | 2005               | Potentially within 1 km*                  | ✓                                | Red                               |
| Lesser spotted woodpecker<br><i>Dendrocopos minor</i> | 7              | 1995               | Potentially within 1 km*                  | ✓                                | Red                               |
| Bittern<br><i>Botaurus stellaris</i>                  | 3              | 1993               | Potentially within 1 km*                  | -                                | WCA1i, Amber                      |
| Curlew<br><i>Numenius arquata</i>                     | 2              | 1993               | Potentially within 1 km*                  | ✓                                | Red                               |
| Grey partridge<br><i>Perdix perdix</i>                | 1              | 1993               | Potentially within 1 km*                  | ✓                                | Red                               |
| Garganey<br><i>Anas querquedula</i>                   | 1              | 1993               | Potentially within 1 km*                  | -                                | WCA1i, Amber                      |

**Table 4.2 (cont'd): Summary of Protected/Notable Species Records Within 1 km of Survey Area (cont)**

| Species                                                 | No. of Records | Most Recent Record | Proximity of Nearest Record to Study Area | Species of Principal Importance? | Legislation / Conservation Status |
|---------------------------------------------------------|----------------|--------------------|-------------------------------------------|----------------------------------|-----------------------------------|
| Pintail<br><i>Anas acuta</i>                            | 1              | 1993               | Potentially within 1 km*                  | -                                | WCA1ii, Amber                     |
| Spotted flycatcher<br><i>Muscicapa striata</i>          | 1              | 1989               | Potentially within 1 km*                  | ✓                                | Red                               |
| Song thrush<br><i>Turdus philomelos</i>                 | 6              | 2011               | Potentially within 1 km**                 | ✓                                | Red                               |
| House sparrow<br><i>Passer domesticus</i>               | 3              | 2011               | Potentially within 1 km**                 | ✓                                | Red                               |
| Dunnock<br><i>Prunella modularis</i>                    | 3              | 2008               | Potentially within 1 km**                 | ✓                                | Amber                             |
| <b>Amphibians</b>                                       |                |                    |                                           |                                  |                                   |
| Common frog<br><i>Rana temporaria</i>                   | 2              | 2011               | 90 m west                                 | -                                | WCA 5 S9(5)                       |
| Common toad<br><i>Bufo bufo</i>                         | 1              | 2008               | 620 m north                               | ✓                                | WCA 5 S9(5)                       |
| Smooth newt<br><i>Lissotriton vulgaris</i>              | 1              | 2002               | 770 m east                                | -                                | WCA 5 S9(5)                       |
| Palmate newt<br><i>Lissotriton helveticus</i>           | 1              | 1998               | 920 m west                                | -                                | WCA 5 S9(5)                       |
| <b>Reptiles</b>                                         |                |                    |                                           |                                  |                                   |
| Adder<br><i>Vipera berus</i>                            | 4              | 2011               | 70 m north                                | ✓                                | WCA 5 S9(1)<br>WCA 5 S9(5)        |
| Grass snake<br><i>Natrix natrix</i>                     | 7              | 2002               | 220 m east                                | ✓                                | WCA 5 S9(1)<br>WCA 5 S9(5)        |
| Slow-worm<br><i>Anguis fragilis</i>                     | 3              | 2005               | 940 m north-west                          | ✓                                | WCA 5 S9(1)<br>WCA 5 S9(5)        |
| Common lizard<br><i>Zootoca vivipara</i>                | 3              | 1990               | Potentially within 1 km*                  | ✓                                | WCA 5 S9(1)<br>WCA 5 S9(5)        |
| <b>Invertebrates</b>                                    |                |                    |                                           |                                  |                                   |
| Stag beetle<br><i>Lucanus cervus</i>                    | 12             | 2015               | 280 m north-east                          | ✓                                | ECH 2,<br>WCA 5 S9(5)             |
| Oak hook-tip moth<br><i>Watsonalla binaria</i>          | 6              | 2008               | 360 m north                               | ✓                                | -                                 |
| Small square-spot moth<br><i>Diarsia rubi</i>           | 2              | 2006               | 360 m north                               | ✓                                | -                                 |
| White admiral butterfly<br><i>Limenitis camilla</i>     | 40             | 2016               | 560 m north-west                          | ✓                                | VU                                |
| Buff ermine moth<br><i>Spilosoma lutea</i>              | 4              | 2008               | 620 m north                               | ✓                                | -                                 |
| Mouse moth<br><i>Amphipyra tragopoginis</i>             | 3              | 2008               | 620 m north                               | ✓                                | -                                 |
| Small emerald moth<br><i>Hemistola chrysoprasaria</i>   | 3              | 2008               | 620 m north                               | ✓                                | -                                 |
| White ermine moth<br><i>Spilosoma lubricipeda</i>       | 3              | 2008               | 620 m north                               | ✓                                | -                                 |
| Mottled rustic moth<br><i>Caradrina morpheus</i>        | 2              | 2006               | 620 m north                               | ✓                                | -                                 |
| Pretty chalk-carpet moth<br><i>Melanthia procellata</i> | 2              | 2006               | 620 m north                               | ✓                                | -                                 |
| Centre-barred sawfly moth<br><i>Atethmia centrugo</i>   | 1              | 2006               | 620 m north                               | ✓                                | -                                 |
| Pale eggar moth<br><i>Trichiura crataegi</i>            | 1              | 2006               | 620 m north                               | ✓                                | -                                 |
| Small phoenix moth<br><i>Ecliptopera silaceata</i>      | 1              | 2005               | 620 m north                               | ✓                                | -                                 |
| Broom-tip moth<br><i>Chesias rufata</i>                 | 1              | 2001               | 750 m north-west                          | ✓                                | -                                 |
| Wall butterfly<br><i>Lasiommata megera</i>              | 1              | 2013               | Potentially within 1 km*                  | ✓                                | NT                                |

Table 4.2 (cont'd): Summary of Protected/Notable Species Records Within 1 km of Survey Area (cont)

| Species                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No. of Records | Most Recent Record | Proximity of Nearest Record to Study Area | Species of Principal Importance? | Legislation / Conservation Status |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|-------------------------------------------|----------------------------------|-----------------------------------|
| Pearl-bordered fritillary butterfly<br><i>Boloria euphrosyne</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7              | 1999               | Potentially within 1 km*                  | ✓                                | WCA 5 S9(5), EN                   |
| Grizzled skipper butterfly<br><i>Pyrgus malvae</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2              | 1998               | Potentially within 1 km*                  | ✓                                | VU                                |
| <b>Plants</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |                    |                                           |                                  |                                   |
| Bluebell<br><i>Hyacinthoides non-scripta</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 8              | 2008               | 350 m north                               | -                                | WCA 8 S13(2)                      |
| Sanicle<br><i>Sanicula europaea</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2              | 2008               | 350 m north                               | -                                | NT                                |
| Tormentil<br><i>Potentilla erecta</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2              | 2003               | 360 m north                               | -                                | NT                                |
| Corn buttercup<br><i>Ranunculus arvensis</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1              | 2003               | 360 m north                               | ✓                                | CR                                |
| Common cow-wheat<br><i>Melampyrum pratense</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2              | 2016               | 420 m west                                | -                                | NT                                |
| Bitter-vetch<br><i>Lathyrus linifolius</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1              | 1988               | 420 m west                                | -                                | NT                                |
| Wood-sorrel<br><i>Oxalis acetosella</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1              | 1988               | 420 m west                                | -                                | NT                                |
| Divided sedge<br><i>Carex divisa</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2              | 2005               | 710 m east                                | ✓                                | VU                                |
| Marsh-mallow<br><i>Althaea officinalis</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3              | 2011               | 770 m east                                | -                                | NT                                |
| Chaffweed<br><i>Centunculus minimus</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1              | 1992               | 850 m north-west                          | -                                | EN                                |
| Star sedge<br><i>Carex echinata</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1              | 1997               | Potentially within 1 km*                  | -                                | NT                                |
| Opposite-leaved pondweed<br><i>Groenlandia densa</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1              | 1994               | Potentially within 1 km*                  | -                                | VU                                |
| <b>Key:</b><br>#: Dependent on species.<br>*: Grid reference provided was four figures only.<br>**: Grid reference provided was two figures only.<br><br>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.<br>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.<br><br>WCA 1i: Schedule 1 Part 1 of Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties at all times.<br>WCA 1ii: Schedule 1 Part 2 of Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties during close season.<br>WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).<br>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.<br>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.<br>WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.<br>WCA 8: Schedule 8 of Wildlife and Countryside Act 1981 (as amended). Protected plants and fungi.<br>WCA 8 S13(2): Schedule 8 Section 13(2) of Wildlife and Countryside Act 1981 (as amended). Protection limited to selling, offering for sale, possessing or transporting for purpose of sale, or advertising for sale, any live or dead plant, or any part of, or anything derived from, such plant.<br><br>Species of Principal Importance: Species of Principal Importance for Nature Conservation in England. |                |                    |                                           |                                  |                                   |

**Table 4.2 (cont'd): Summary of Protected/Notable Species Records Within 1 km of Survey Area (cont)**

Red: Species included on RSPB Red List of Conservation Concern.  
Amber: Species included on RSPB Amber List of Conservation Concern.

CR: Critically Endangered – the best available evidence indicates that the taxon is facing an extremely high risk of extinction in the wild.

EN: Endangered – when the best available evidence indicates that it meets any of the criteria for this status, and it is therefore considered to be facing a very high risk of extinction in the wild.

VU: A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria for this status, and it is therefore considered to be facing a high risk of extinction in the wild.

NT: A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

Note. This table does 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 (cont'd): Summary of Protected/Notable Species Records Within 1 km of Survey Area**

In addition, the desk study revealed records of the following notable species within a 1 km radius of the survey area:

### Birds

Bird species that are included on the RSPB red and amber lists but are not Species of Principal Importance in England or protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

### Invertebrates

Invertebrate species that are Red Data listed and rare in Sussex, including alder leaf beetle *Agelastica alni*, black-headed cardinal beetle *Pyrochroa coccinea*, diving beetle *Agabus sturmi*, diving beetle *Hydaticus seminiger*, hazel leaf roller (beetle) *Byctiscus betulae*, rufous grasshopper *Gomphocerippus rufus*, barred white-clothes moth *Nemapogon clematella*, Cypress carpet moth *Thera cupressata*, festoon moth *Apoda limacodes*, maple prominent moth *Ptilodon cucullina*, mocha moth *Cyclophora annularia*, orange footman moth *Eilema sororcula*, red-necked footman moth *Atolmis rubricollis*, rosy marbled moth *Elaphria venustula*, satin lute-string moth *Tetheella fluctuosa*, scarce merveille du jour moth *Moma alpium*, square-spotted clay moth *Xestia stigmatica*, triangle moth *Heterogenea asella*, triple-spotted pug moth *Eupithecia trisignaria*, waved carpet moth *Hydrelia sylvata*, white-line snout moth *Schrankia taenialis*,

### Plants

Plant species that are rare in Sussex, including green figwort *Scrophularia umbrosa*, long-stalked yellow-sedge *Carex viridula* subsp. *brachyrrhyncha*, small teasel *Dipsacus pilosus* and Welsh poppy *Meconopsis cambrica*.

## 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 |
|------------------------------------------------|----------------|--------------------|-------------------------------------------|-----------------------------------|
| <b>Fauna</b>                                   |                |                    |                                           |                                   |
| Grey squirrel<br><i>Sciurus carolinensis</i>   | 4              | 2003               | 450 m north                               | WCA 9, INNS                       |
| Harlequin ladybird<br><i>Harmonia axyridis</i> | 1              | 2008               | 620 m north                               | INNS                              |
| Mandarin duck<br><i>Aix galericulata</i>       | 276            | 2015               | 920 m west                                | WCA 9, INNS                       |
| Canada goose<br><i>Branta Canadensis</i>       | 192            | 2015               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Black swan<br><i>Cygnus atratus</i>            | 15             | 2015               | Potentially within 1 km*                  | WCA 9, INNS                       |

**Table 4.3: Summary of Invasive Species Records Within 1 km of Survey Area (cont)**

| Species                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No. of Records | Most Recent Record | Proximity of Nearest Record to Study Area | Legislation / Conservation Status |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|-------------------------------------------|-----------------------------------|
| Ruddy shelduck<br><i>Tadorna ferruginea</i>                                                                                                                                                                                                                                                                                                                                                                                                                                | 5              | 2014               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Ruddy duck<br><i>Oxyura jamaicensis</i>                                                                                                                                                                                                                                                                                                                                                                                                                                    | 194            | 2013               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Egyptian goose<br><i>Alopochen aegyptiacus</i>                                                                                                                                                                                                                                                                                                                                                                                                                             | 9              | 2013               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Carolina wood duck<br><i>Aix sponsa</i>                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20             | 2011               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Barnacle goose<br><i>Branta leucopsis</i>                                                                                                                                                                                                                                                                                                                                                                                                                                  | 11             | 2005               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Snow goose<br><i>Anser caerulescens</i>                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2              | 2005               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Bar-headed goose<br><i>Anser indicus</i>                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2              | 1998               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Red-crested pochard<br><i>Netta rufina</i>                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1              | 1997               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Emperor goose<br><i>Anser canagicus</i>                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1              | 1988               | Potentially within 1 km*                  | WCA 9, INNS                       |
| Ring-necked parakeet<br><i>Psittacula krameri</i>                                                                                                                                                                                                                                                                                                                                                                                                                          | 1              | 1983               | Potentially within 1 km*                  | WCA 9, INNS                       |
| <b>Flora</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                    |                                           |                                   |
| Rhododendron<br><i>Rhododendron ponticum</i>                                                                                                                                                                                                                                                                                                                                                                                                                               | 5              | 2009               | 20 m south                                | WCA 9, INNS                       |
| Cherry laurel<br><i>Prunus laurocerasus</i>                                                                                                                                                                                                                                                                                                                                                                                                                                | 3              | 2009               | 350 m north                               | INNS                              |
| Least duckweed<br><i>Lemna minuta</i>                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3              | 2010               | 610 m south-east                          | INNS                              |
| Hybrid bluebell<br><i>Hyacinthoides x massartiana</i>                                                                                                                                                                                                                                                                                                                                                                                                                      | 3              | 2011               | 780 m north-east                          | INNS                              |
| Evergreen oak<br><i>Quercus ilex</i>                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5              | 2011               | Potentially within 1 km**                 | INNS                              |
| Winter heliotrope<br><i>Petasites fragrans</i>                                                                                                                                                                                                                                                                                                                                                                                                                             | 3              | 2006               | Potentially within 1 km**                 | INNS                              |
| Montbretia<br><i>Crocsmia x crocosmiiflora</i>                                                                                                                                                                                                                                                                                                                                                                                                                             | 1              | 2006               | Potentially within 1 km**                 | WCA 9, INNS                       |
| Japanese knotweed<br><i>Fallopia japonica</i>                                                                                                                                                                                                                                                                                                                                                                                                                              | 1              | 2006               | Potentially within 1 km**                 | WCA 9, INNS                       |
| New Zealand pigmyweed<br><i>Crassula helmsii</i>                                                                                                                                                                                                                                                                                                                                                                                                                           | 1              | 2005               | Potentially within 1 km**                 | WCA 9, INNS                       |
| Parrot's-feather<br><i>Myriophyllum aquaticum</i>                                                                                                                                                                                                                                                                                                                                                                                                                          | 1              | 2005               | Potentially within 1 km**                 | WCA 9, INNS                       |
| <b>Key:</b><br>*: Grid reference provided was four figures only.<br>**: Grid reference provided was two figures only.<br><br>WCA9: Schedule 9 of Wildlife and Countryside Act 1981 (as amended). Invasive, non-native, plants and animals.<br>INNS: Sussex Invasive Non-Native Species report. Includes non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and 26 additional species which pose a particular risk in Sussex. |                |                    |                                           |                                   |

**Table 4.3 (cont'd): 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 C124814-01-01) 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 19<sup>th</sup> April 2017 by Sarah Hickman (Senior Ecological Consultant) and Dean Moore (Arboricultural Consultant). Table 5.1 details the weather conditions at the time of the survey.

| Parameter        | Condition |
|------------------|-----------|
| Temperature (°C) | 4         |
| Cloud (%)        | 20        |
| Wind (Beaufort)  | F1        |
| Precipitation    | Nil       |

**Table 5.1: Weather Conditions During Field Survey**

### 5.2 SURVEY CONSTRAINTS AND LIMITATIONS

No constraints were experienced during the survey.

### 5.3 HABITATS

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

- Amenity grassland;
- Bare ground;
- Dense scrub;
- Dry ditch;
- Fencing;
- Hardstanding;
- Scattered trees;
- Semi-natural broad-leaved woodland; and,
- Structures.

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

#### **Amenity grassland**

An area of amenity grassland was present in the eastern part of the site, adjacent to Dalloway Road (Plate 9.1). The sward measured approximately 20 cm in length at the beginning of the survey but it was cut short during the site visit. The grassland was dominated by perennial rye-grass *Lolium perenne* with a range of forb species recorded including buttercup *Ranunculus* sp., cinquefoil *Potentilla* sp., daisy *Bellis perennis*, dandelion *Taraxacum officinale* agg., ground-ivy *Glechoma hederacea*, lesser celandine *Ranunculus ficaria*, self-heal *Prunella vulgaris* and speedwell *Veronica* sp.

#### **Bare ground**

Two footpaths ran through the centre of the site, connecting Dalloway Road and Priory Lane. Both footpaths consisted of bare ground.

#### **Dense scrub**

A strip of dense scrub was present along the southern woodland edge (Plate 9.2). This measured approximately 0.5 – 1.5 m in height and up to 3 m in width. Smaller pockets of dense scrub were also present along the eastern woodland edge. Species included blackthorn *Prunus spinosa*, bramble *Rubus fruticosus* agg. and hawthorn *Crataegus monogyna*.

### Dry ditch

A dry ditch was present along the western boundary of the site, adjacent to Priory Lane (Plate 9.3). It measured approximately 0.75 m in width and 0.5 m in depth. A dense layer of leaf litter covered the bottom of the ditch, creating two damp areas where rainwater was slow to drain (Plate 9.4).

### Fencing

A mix of fencing types from adjacent residential gardens, including wooden panel and chain-link, delineated the northern boundary. The fencing measured up to approximately 2 m in height. Metal fencing also enclosed a utility compound in the south-eastern corner of the site.

### Hardstanding

A hardstanding footpath was present in the eastern part of the site, adjacent to Dalloway Road. No significant amount of vegetation was noted.

### Scattered trees

A number of scattered trees were set within the area of amenity grassland adjacent to Dalloway Road (Plate 9.5). These ranged from young to mature in age and measured up to approximately 20 m in height. Species included ash *Fraxinus excelsior*, English oak *Quercus robur*, field maple *Acer campestre*, purple-leaved plum *Prunus cerasifera* var *nigra* and Scots pine *Pinus sylvestris*.

For further details, refer to the Pre-development Arboricultural Survey (Report RT-MME-124814-02).

### Semi-natural broad-leaved woodland

The site was covered by an area of ancient semi-natural broad-leaved woodland (visible in Plate 9.2). It forms part of Tortington Common which continues off site to the west. The canopy was dominated by English oak with occasional ash, beech *Fagus sylvatica*, common lime *Tilia x europaea*, English yew *Taxus baccata*, flowering cherry *Prunus* sp., goat willow *Salix caprea*, Scots pine, silver birch *Betula pendula*, sweet chestnut *Castanea sativa* and sycamore *Acer pseudoplatanus*. The trees ranged from young to mature in age and measured up to approximately 22 m in height. Some of the trees had a light covering of ivy *Hedera helix* on them, and others possessed potential roosting features such as cracks, rot holes and woodpecker holes. A few trees had fallen or were leaning significantly (Plate 9.6). A standing dead tree was noted to have a split in its trunk and peeling bark which could potentially offer suitable roosting opportunities for bats (Target Note 1, Plate 9.7).

The understorey comprised blackthorn, butchers broom *Ruscus aculeatus*, elder *Sambucus nigra*, hawthorn, hazel *Corylus avellana* and holly *Ilex aquifolium*.

The ground flora was diverse with the following species recorded: bluebell *Hyacinthoides* sp., bramble, cleavers *Galium aparine*, common nettle *Urtica dioica*, cow parsley *Anthriscus sylvestris*, daffodil *Narcissus* sp., garlic mustard *Alliaria petiolata*, ground-ivy, herb-Robert *Geranium robertianum*, hogweed *Heracleum sphondylium*, honeysuckle *Lonicera periclymenum*, ivy, lesser celandine, lords-and-ladies *Arum maculatum*, three-cornered leek *Allium triquetrum* and wood anemone *Anemone nemorosa*. Ferns and sedges were also recorded along the western edge.

For further details, refer to the Pre-development Arboricultural Survey (Report RT-MME-124814-02).

### Structures

An electricity substation was present within the utility compound located in the south-eastern corner of the site (Target Note 2, Plate 9.8).

## 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

The following bird species were observed on site during the field survey: blackbird *Turdus merula*, blue tit *Cyanistes caeruleus*, marsh tit *Poecile palustris*, robin *Erithacus rubecula* and woodpigeon *Columba palumbus*.

### **Mammals**

A mammal pathway was present in the south-western corner of the site, although no conclusive evidence of badger *Meles meles* activity was recorded on site.

### **5.5 INVASIVE PLANT SPECIES**

No invasive plant species were recorded on site during the survey.

## 6. DISCUSSIONS AND CONCLUSIONS

### 6.1 SUMMARY OF PROPOSALS

Proposals involve clearing a large area of the existing ancient woodland on site to facilitate the construction of three or four new residential dwellings with associated access road, car parking spaces and gardens.

### 6.2 NATURE CONSERVATION SITES

The desk study exercise identified no European statutory sites within 5 km of the survey area, one UK statutory site and numerous ancient woodland sites 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

One SSSI, Arundel Park, was identified within the 2 km search area. This was located 1,400 m to the north-east of the survey area, and as such the development site lies within the SSSI Risk Impact Zone for Arundel Park. However, the proposed development does not fall within any of the categories of concern listed in Appendix 1. Furthermore, the SSSI is separated from the survey area by residential areas, roads, agricultural land and woodland. Due to the large distance and lack of connectivity between the survey area and the SSSI, the proposed development is not expected to have any impacts on the SSSI.

#### Ancient Woodland Sites

The desk study identified 49 parcels of ancient woodland within a 2 km radius of the survey area, including the survey area itself which forms part of Tortington Common. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. This loss of ancient woodland habitat is considered to be an adverse impact, and as such a recommendation regarding the need for consultation with Natural England, the Forestry Commission and the local authority ecologist is made in Section 7.1.

#### Non-Statutory Sites

Two LWSS, Binsted Wood Complex and Rewell Wood Complex, were identified within the 1 km search area. These were located 40 m to the north-east and 1,800 m to the north-west of the survey area respectively. Due to the close proximity of Binsted Wood Complex to the proposed development site, there is potential for site clearance/preparation and construction works to impact the LWS and ancient woodland site. As such, a recommendation regarding the need for consultation with Natural England, the Forestry Commission and the local authority ecologist is made in Section 7.1.

### 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

Amenity grassland is a common habitat that is generally considered to have negligible ecological value. The example on site contained a few interesting species which have encroached from the adjacent ancient woodland, such as lesser celandine. However, a species-rich sward can easily be recreated following the completion of the proposed development. Therefore, the existing area of amenity grassland is not a notable consideration.

#### Bare ground

Bare ground is a common habitat deemed to have negligible ecological value and it can easily be recreated. Therefore, it is not a notable consideration.

### Dense scrub

Dense scrub is a common habitat that tends to establish relatively quickly. However, the example on site is located along the edge of an ancient woodland, and as such may be considered an integral part of the woodland habitat. It is not clear from the proposed plans whether any of the existing dense scrub habitat is to be removed as part of the proposed works. Therefore, a recommendation regarding its retention where possible is made in Section 7.3.

### Dry ditch

The dry ditch on site was not considered to be notable.

### Fencing

Fencing is a common habitat deemed to have negligible ecological value and it can easily be replaced. Therefore, it is not a notable consideration.

### Hardstanding

Hardstanding is a common habitat deemed to have negligible ecological value and it can easily be replaced. Therefore, it is not a notable consideration.

### Scattered trees

Mature trees have intrinsic value as they cannot be readily replaced. Therefore, they are a notable consideration. The proposed plans show the existing scattered trees are to be retained as part of the new development. However, in the absence of appropriate protective measures, there is potential for the proposed works to cause structural damage to these trees (e.g. damage to roots or canopy caused by storage of heavy vehicles and materials next to the trees). As such, a recommendation regarding the protection of retained trees is made in Section 7.3.

### Semi-natural broad-leaved woodland

Semi-natural broad-leaved woodland is classed as a Habitat of Principal Importance in England under the Lowland Mixed Deciduous Woodland type. The example on site is also ancient. Therefore, the woodland on site is a notable consideration. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. As such, recommendations regarding the retention and protection of this habitat are made in Section 7.3.

### Structures

The electricity substation was not considered to be notable.

Habitats considered to be of relevance to the proposed development are summarised in Table 6.1.

| Habitat Type                       | Habitat of Principal Importance? | Local BAP Habitat? | Summary of Potential Impacts                              |
|------------------------------------|----------------------------------|--------------------|-----------------------------------------------------------|
| Dense scrub                        | -                                | -                  | Habitat loss                                              |
| Scattered trees                    | -                                | -                  | Habitat loss, structural damage (e.g. to roots or canopy) |
| Semi-natural broad-leaved woodland | ✓                                | ✓                  | Habitat loss, structural damage (e.g. to roots or canopy) |

**Table 6.1: Summary of Potential Impacts on Notable Habitats**

## 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 revealed records of five species of bat within a 1 km radius of the survey area, the closest was common pipistrelle located 70 m to the north. A number of the trees within the woodland on site possessed potential roosting features such as cracks, splits, peeling bark, rot holes and woodpecker holes. In addition, the woodland, scattered trees and dense scrub offer suitable foraging and commuting opportunities for bats, linking the site to alternative roosting, foraging and commuting features in the

surrounding area. Therefore, it is considered likely that the site will be used by bats in some capacity. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. Therefore, further survey effort is required to establish the usage of the site by bats. Recommendations regarding the undertaking of further bat surveys are made in Section 7.3.

## **Mammals – other**

### Badger

The desk study revealed no records of badger within a 1 km radius of the survey area. A mammal pathway was present in the south-western corner of the site, although no conclusive evidence of badger activity was recorded on site. The site offers suitable sett-building habitat and foraging opportunities for badgers, with connectivity to alternative badger habitats in the surrounding area. Therefore, it is considered likely that badgers may pass through the survey area. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. As such, a recommendation regarding the undertaking of a pre-works walkover survey to establish whether badgers have colonised the site is made in Section 7.3. It is also recommended that any excavations and open pipework are covered to prevent animals from becoming trapped.

### Dormouse

The desk study revealed eighteen records of dormouse within a 1 km radius of the survey area, the closest was located 510 m to the west. The woodland on site contained suitable food sources for dormouse in the form of hazel, holly and bramble. As the site is well-connected to other dormouse habitat in the surrounding area, it is considered likely that dormouse may pass through the survey area. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. As such, a recommendation regarding the undertaking of a dormouse survey is made in Section 7.3.

### Hedgehog

The desk study revealed three records of hedgehog within a 1 km radius of the survey area, the closest was located 550 m to the north. The site offers suitable refuge and foraging opportunities for hedgehogs, with connectivity to alternative hedgehog habitats in the surrounding area. Therefore, it is considered likely that hedgehogs may pass through the survey area. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. As such, a recommendation regarding the covering of any excavations and open pipework to prevent animals from becoming trapped is made in Section 7.3.

### Water vole

The desk study revealed one record of water vole within a 1 km radius of the survey area, located 400 m to the south. There was no aquatic habitat suitable for water voles present within, or immediately adjacent to, the survey area. Therefore, water voles are not a notable consideration in relation to the proposed development.

## **Birds**

The desk study revealed records of numerous notable bird species within a 1 km radius of the survey area. The woodland, scattered trees and scrub on site offer suitable breeding habitat for a range of bird species. Furthermore, common species were recorded on site during the survey. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. Therefore, if any vegetation is to be removed or disturbed during the bird nesting season, then there is potential for the works to impact breeding and nesting birds. As such, a recommendation regarding the undertaking of a breeding bird survey is made in Section 7.3.

## **Amphibians**

The desk study revealed records of four common amphibian species within a 1 km radius of the survey area, the closest was common frog located 90 m to the west. The woodland and scrub on site offer suitable terrestrial habitat for great crested newts and common amphibians. No aquatic habitat was present on site; however, reference to Ordnance Survey mapped data and aerial imagery shows three ponds and three wet ditches within a 500 m radius of the survey area which may offer suitable breeding habitat. These waterbodies are well-connected to the site, and therefore it is considered likely that amphibians will be present on site. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. As such, a recommendation regarding the undertaking of a great crested newt habitat suitability index assessment and presence/absence surveys of these waterbodies is made in Section 7.3.

## Reptiles

The desk study revealed records of four reptile species within a 1 km radius of the survey area, the closest was adder located 70 m to the north. The woodland and scrub on site offer suitable hunting and hibernation habitat for reptiles, and therefore it is considered likely that reptiles will be present on site. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. As such, a recommendation regarding the undertaking of a reptile survey is made in Section 7.3.

## Invertebrates

The desk study revealed records of numerous notable invertebrate species within a 1 km radius of the survey area, including stag beetle located 280 m to the north-east. The fallen and standing dead wood on site offers suitable habitat for stag beetles. Due to the nature of the habitats recorded, it is considered likely that notable woodland species may also be present. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. Therefore, a recommendation regarding the undertaking of an invertebrate survey is made in Section 7.3.

## Plants

The desk study revealed records of numerous notable plant species within a 1 km radius of the survey area. Due to the nature of the habitats recorded, it is considered likely that notable woodland species may be present. No notable plant species were recorded on site during the survey; however, a more detailed survey should be completed. It is understood that a large area of the existing ancient woodland on site is to be cleared to facilitate the proposed development. Therefore, a recommendation regarding the undertaking of a botanical survey is made in Section 7.3.

## 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: brown hare *Lepus europeaus*, fish, harvest mouse *Micromys minutus*, otter *Lutra lutra*, pine marten *Martes martes*, polecat *Mustela putorius*, red squirrel *Sciurus vulgaris* and white-clawed crayfish *Austropotamobius pallipes*.

## 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, direct harm or injury, fragmentation of suitable habitats caused by lighting. |
| Badger                                  | -                                | Loss of suitable habitat, direct harm or injury.                                                        |
| Dormouse                                | ✓                                | Loss of suitable habitat, direct harm or injury.                                                        |
| Hedgehog                                | ✓                                | Loss of suitable habitat, direct harm or injury.                                                        |
| Birds                                   | #                                | Loss of suitable habitat, direct harm or injury.                                                        |
| Herpetofauna                            | #                                | Loss of suitable habitat, direct harm or injury.                                                        |
| Invertebrates                           | #                                | Loss of suitable habitat, direct harm or injury.                                                        |
| Plants                                  | #                                | Loss of suitable habitat, direct harm.                                                                  |
| <b>Key:</b><br>#: Dependent on species. |                                  |                                                                                                         |

**Table 6.2: Summary of Potential Impacts on Notable Species**

## 6.5 INVASIVE PLANT SPECIES

The desk study revealed numerous records of invasive plant species within a 1 km radius of the survey area. No invasive plant species were recorded on site during the survey; however, the site is considered to provide suitable habitat for invasive plant species such as rhododendron, cherry laurel and hybrid/Spanish bluebell. Therefore, a precautionary recommendation is made in Section 7.4.

## 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

The following recommendations are made regarding nature conservation sites:

- R1 Ancient Woodland:** The proposed works will directly impact upon Tortington Common which is designated as an ancient woodland site. The proposed development could also potentially impact upon several other parcels of ancient woodland. As such, consideration should be given to the guidelines set out by the NPPF regarding ancient woodland sites (see Chapter 3). Natural England's Standing Advice regarding ancient woodlands should be reviewed (see <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>) and Natural England, the Forestry Commission and the Local Planning Authority ecologist should be consulted.

Further detailed surveys could be undertaken to confirm, or otherwise, whether the areas within the planning application boundaries are considered to actually comprise ancient woodland habitats.

- R2 Local Wildlife Sites:** The proposed development could also potentially impact upon several non-statutory sites in the surrounding area. As such the Local Planning Authority ecologist should be consulted prior to any works commencing to determine how works may proceed without adversely impacting these sites. If impacts cannot be avoided then suitable mitigation or, as a last resort, compensation should be provided in accordance with the ecological mitigation hierarchy.

### 7.2 HABITATS

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

- R3 Habitat Loss and Enhancement:** In accordance with the provision of Chapter 11 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment), biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed works to maximise the ecological value of the site. This will involve, for example:
- Planting of habitats which will be of value to wildlife, such as:
    - native seed/fruit bearing species
    - nectar-rich species to attract bees and butterflies
    - native woody scrub species for birds
    - species which attract night flying insects which will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.

- Provision of nesting/roosting habitat, such as installation of nest boxes for species such as house sparrow, dense scrub or native thicket for species such as song thrush, and bat boxes for species such as pipistrelle.
- Provision of hedgehog passes under fence lines.
- Creation of hibernation habitat for herpetofauna and hedgehogs.
- Creation of deadwood habitat for invertebrates.
- Implementation of good horticultural practice, including the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets etc.) should be discouraged to prevent cumulative fatal effects to animals via the food chain, particularly invertebrates, birds and mammals. Any pesticides used should be non-residual.

**R4 Semi-Natural Broad-leaved Woodland, Scattered Trees and Dense Scrub:** The development proposals should be designed in such a way to allow for the retention of as much of the existing woodland, semi-mature/mature trees and dense scrub as possible. Appropriate replacement habitat creation will be required to mitigate/compensate for any habitat loss.

**R5 Trees:** Any trees on site, or overhanging the site, which are to be retained as a part of any proposed works should be protected in accordance with British Standard 5837: 2012 "Trees in relation to design, demolition and construction - recommendations". Protection should be installed on site prior to the commencement of any works on site.

### 7.3 PROTECTED / NOTABLE SPECIES

To ensure compliance with wildlife legislation, the following recommendations are made:

**R6 Roosting Bats:** A preliminary ground level roost assessment should be undertaken on trees which may be impacted by the proposed development works. Preliminary ground level roost assessments can be completed at any time of year. Dependent upon the results of the preliminary survey, nocturnal emergence and dawn re-entry surveys could be required. Surveys should be undertaken in line with best practice survey guidelines (Collins, 2016), during the bat activity season. The bat activity season is considered to extend from May to September (inclusive), with the optimum survey period between mid-May and August (inclusive).

**R7 Foraging Bats:** A bat activity survey should be undertaken to determine bat use of the site. Foraging bat surveys can be completed in suitable weather in accordance with the Bat Conservation Trust Guidelines (Collins, 2016).

**R8 Bats and Lighting:** In line with paragraph 125 of the National Planning Policy Framework, the development should aim to limit the impact of light pollution on bats through the careful use of lighting in critical areas only and at a low level with minimum spillage. Any lighting, either temporary or permanent, at the site should be kept to a minimum and directed away from suitable foraging and commuting features to maintain dark areas and corridors.

**R9 Badgers:** Given the suitable habitat present within the survey area and connectivity to adjacent habitat that is suitable for badgers, it is recommended that a pre-works walkover survey is undertaken to determine whether badgers have colonised the site. Should badger setts be identified, then a badger activity survey may be required. Badger surveys can be completed at any time of the year. Should a badger sett be identified that will be required to be disturbed or closed, works to the badger sett will require a licence from Natural England. Badger setts can be closed between July and November inclusive.

**R10 Dormouse:** A dormouse survey should be undertaken to determine the presence/absence of this species on site. No single survey method is suitable for all types of sites, therefore a range of methodologies should be used in combination. A nut search is best undertaken between September and December. Nest searches are best undertaken in winter after much of the vegetation has died back. Nest tube surveys need to be undertaken between March/ April and November (inclusive).

- R11 Terrestrial Mammals including Badger, Dormouse and 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.
- R12 Breeding Birds:** Due to the importance of the survey area for birds, as highlighted by desk study material and initial field observations, it is recommended that a breeding bird survey be conducted to determine the use of the site by breeding birds. The survey should consist of three site visits between May and July, with each visit at least a week apart.
- R13 Great Crested Newts:** A great crested newt Habitat Suitability Index (HSI) assessment and presence/absence surveys should be undertaken for all ponds identified within 500 m of the edge of the proposed development site. Great crested newt surveys require 4-6 visits to each pond between March and June, with 2-3 visits required between mid-April and mid-May.
- R14 Reptiles:** A reptile survey should be undertaken of suitable habitats within the proposed development site. Reptile surveys can be completed in suitable weather conditions between April and September (inclusive).
- R15 Invertebrates:** An invertebrate survey should be undertaken for the habitats located on site to establish the presence/absence of notable species. This should consist of four site visits between June and September (one visit per month).
- R16 Notable Plants:** A National Vegetation Classification should be undertaken for the habitats located on the site to determine the existing botanical interest. The ideal time to undertake a botanical survey for woodland species is April to June.

#### 7.4 INVASIVE PLANT SPECIES

The following recommendation is made regarding invasive plant species:

- R17 Invasive Plants:** Due to the presence of potentially suitable habitat, it is recommended that vigilance is adopted throughout site-based works to avoid the spread of any invasive non-native plant species.

## **8. DRAWINGS**

Drawing C124814-01-01 – Phase 1 Habitat Map

Drawing 1515 SK02 – Sketch Site Layout Option 2



C124814-01-01

## Legend

- Site boundary
- Scattered tree
- Dry ditch
- +++++ Fence
- Mammal path
- A Amenity grassland
- Bare ground
- XXXX Dense scrub
- Hardstanding
- Semi-natural broad-leaved woodland
- Target note:
  1. Standing dead tree
  2. Utility compound



Project  
Land west of Dolloway Road, Arundel

Drawing  
Phase 1 Habitat Map

Client  
Saville Jones Architects

Drawing Number  
C124814-01-01

Revision  
00

Scale @ A4  
1:900

Date  
May 2017

Approved By  
SH

Drawn By  
GP

**MIDDLEMARCH**  
ENVIRONMENTAL

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## 9. PHOTOGRAPHS



**Plate 9.1: Amenity grassland and footpath adjacent to Dalloway Road**



**Plate 9.2: Dense scrub along southern edge of woodland**



**Plate 9.3: Dry ditch filled with leaf litter**



**Plate 9.4: Damp area of ditch**



**Plate 9.5: Scattered trees adjacent to Dalloway Road**



**Plate 9.6: Fallen and leaning trees**



**Plate 9.7: Split in tree**



**Plate 9.8: Electricity substation in south-eastern corner of site**

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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

### **Site Check Report**

Report generated on Fri May 05 2017.

Centroid Grid Ref: TQ003064.

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

#### **Ancient Woodland (England)**

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1476072

Area (Ha): 0.517378

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475979

Area (Ha): 3.496839

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475985

Area (Ha): 0.882172

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475928

Area (Ha): 0.575262

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475971

Area (Ha): 1.691912

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475975

Area (Ha): 0.640125

Wood Name:

Theme Name: Ancient Replanted Woodland

Theme ID: 1475917

Area (Ha): 1.565044

Wood Name: Binsted Wood

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475940

Area (Ha): 20.240878

Wood Name: Copy Thorn Copse

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475909

Area (Ha): 0.294874

Wood Name: Fowler's Copse

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475939

Area (Ha): 6.338219

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475977

Area (Ha): 1.17742

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475983

Area (Ha): 2.019367

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1476140

Area (Ha): 5.862434

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475937

Area (Ha): 3.751394

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475973

Area (Ha): 1.150112

Wood Name:

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475923

Area (Ha): 0.422193

Wood Name: Arundel Park

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1476142

Area (Ha): 1.537973

Wood Name: Brickkiln Copse

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475924

Area (Ha): 3.829244

Wood Name: Furze field Copse

Theme Name: Ancient & Semi-Natural Woodland

Theme ID: 1475976

Area (Ha): 0.661469

Wood Name: Goblestubby Copse

Theme Name: Ancient Replanted Woodland

Theme ID: 1475947

Area (Ha): 18.46722

Wood Name: Mill & Castle Hanger, Old Keep Moat Flower Garden  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475982  
Area (Ha): 4.575758

Wood Name: Rocks Copse, Rooke's Coppice  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475974  
Area (Ha): 0.406538

Wood Name: Pedlers Croft  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475972  
Area (Ha): 2.568731

Wood Name: Spinningwheel Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475926  
Area (Ha): 1.413206

Wood Name: Steward's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475960  
Area (Ha): 0.647588

Wood Name: Steward's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475962  
Area (Ha): 0.538899

Wood Name: Stringer's Piece  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475938  
Area (Ha): 8.173643

Wood Name: Tortington Common  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475930  
Area (Ha): 1.264312

Wood Name: Tortington Common  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475951  
Area (Ha): 11.223104

Wood Name: Tortington Common  
Theme Name: Ancient Replanted Woodland  
Theme ID: 1475931  
Area (Ha): 71.164667

Wood Name: The Waterwoods  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475932  
Area (Ha): 1.505791

Wood Name: The Waterwoods  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475941  
Area (Ha): 28.172708

Wood Name: The Waterwoods  
Theme Name: Ancient Replanted Woodland  
Theme ID: 1475933  
Area (Ha): 7.011496

Wood Name: Lake Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475929  
Area (Ha): 2.545869

Wood Name: Rewell Wood  
Theme Name: Ancient Replanted Woodland  
Theme ID: 1475944  
Area (Ha): 169.243941

Wood Name: Paine's Wood  
Theme Name: Ancient Replanted Woodland  
Theme ID: 1475927  
Area (Ha): 16.847474

Wood Name: Steward's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475935  
Area (Ha): 13.617533

Wood Name: Steward's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475961  
Area (Ha): 0.815138

Wood Name: Steward's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475963  
Area (Ha): 0.521534

Wood Name: Tortington Common  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475901  
Area (Ha): 0.824724

Wood Name: Tortington Common  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475934  
Area (Ha): 0.105979

Wood Name: Tortington Common  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475952  
Area (Ha): 1.442791

Wood Name: The Rough  
Theme Name: Ancient Replanted Woodland  
Theme ID: 1476137  
Area (Ha): 11.630647

Wood Name: The Waterwoods  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475936  
Area (Ha): 0.380251

Wood Name: The Waterwoods  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475980  
Area (Ha): 0.57529

Wood Name: Tortington Common & Lodge Meadow  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475981  
Area (Ha): 1.889231

Wood Name: Tortington Common & Lodge Meadow  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475984  
Area (Ha): 0.575157

Wood Name: Wincher's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475925  
Area (Ha): 2.344428

Wood Name: Wincher's Copse  
Theme Name: Ancient & Semi-Natural Woodland  
Theme ID: 1475978  
Area (Ha): 0.885189

#### Sites of Special Scientific Interest (England)

Name: Arundel Park SSSI  
Reference: 1000217  
Natural England Contact: SUSAN SIMPSON  
Natural England Phone Number: 0845 600 3078  
Hectares: 133.98  
Citation: 1004038  
Hyperlink: <http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1004038>

#### 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:  
Infrastructure: Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.  
Minerals, Oil & Gas: Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.  
Air Pollution: Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, pig & poultry units, slurry lagoons > 200m<sup>3</sup> & manure stores > 250t).  
Combustion: General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.  
Waste: Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.  
Composting: Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.  
Water Supply: Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m<sup>2</sup> or more.  
GUIDANCE – How to use the Impact Risk Zones: [/Metadata\\_for\\_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

#### Local Nature Reserves (England)

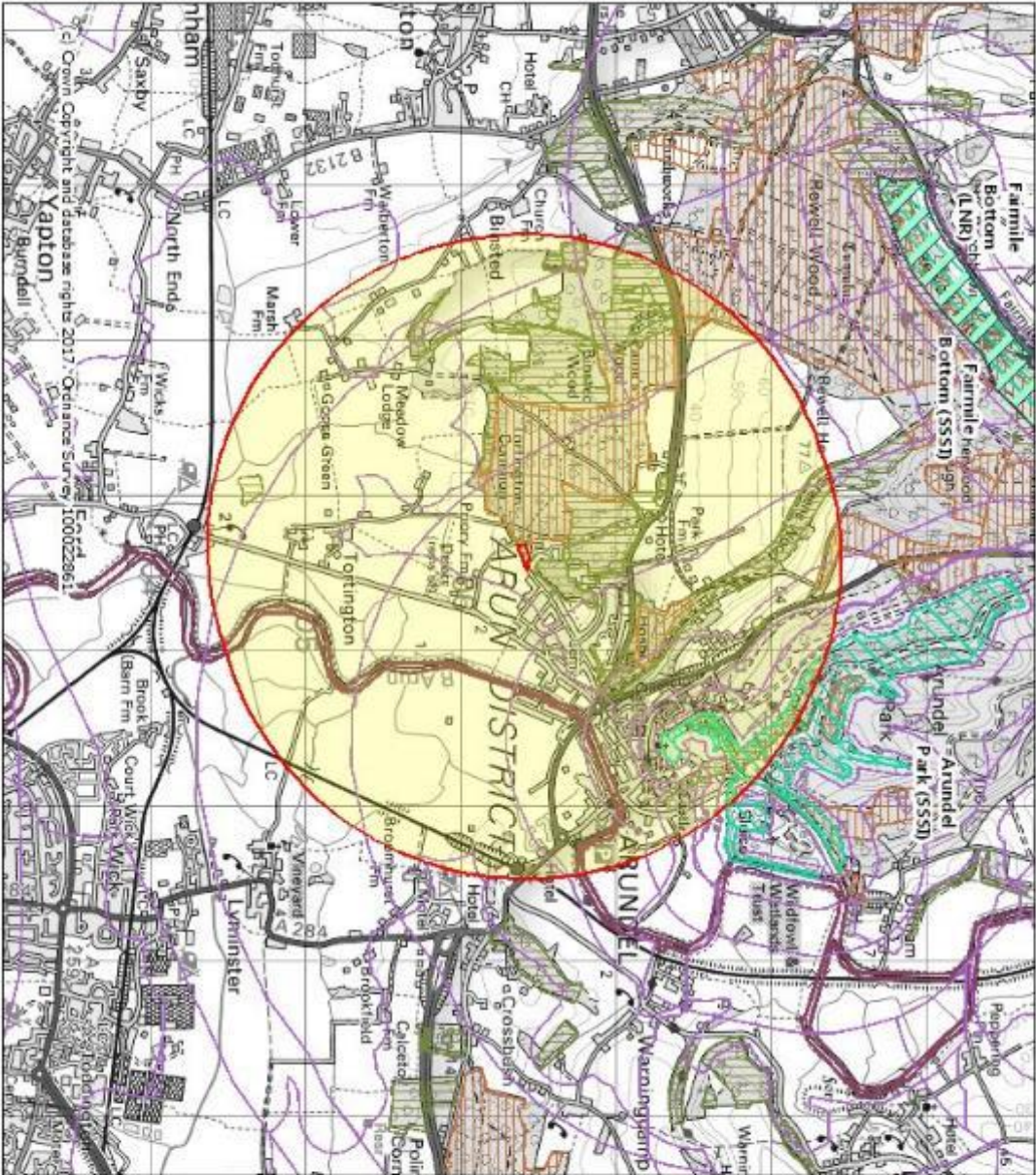
No Features found

#### National Nature Reserves (England)

No Features found



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 = 494300  
ymin = 101800  
xmax = 506900  
ymax = 111000

Map produced by MAGiC on 5 May, 2017.  
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## **APPENDIX 2**

### Overview of Relevant Species Specific Legislation

The reader should refer to the original legislation for the definitive interpretation.

### Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992. The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury, badgers are not protected for conservation reasons. The following are criminal offences:

- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.
- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

A badger sett is defined in the legislation as: 'Any structure or place that displays signs indicating current use by a badger'. 'Current use' is not synonymous with current occupation and a sett is defined as such (and thus protected) as long as signs of current usage are present. Therefore, a sett is protected until such a time as the field signs deteriorate to such an extent that they no longer indicate 'current usage'.

Badger sett interference can result from a multitude of operations including excavation and coring, even if there is no direct damage to the sett, such as through the disturbance of badgers whilst occupying the sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England. In England a licence must be obtained from Natural England before any interference with a badger sett occurs.

### 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*.

## 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.

## Common amphibians

Common frogs, common toad, smooth newt and palmate newt are protected in Britain under Schedule 5 of the Wildlife and Countryside Act (1981, as amended) with respect to sale only. They are also listed under Annex III of the Bern Convention 1979. Any exploitation of wild fauna specified in Appendix III shall be regulated in order to keep the populations out of danger. The convention seeks to prohibit the use of all indiscriminate means of capture and killing and the use of all means capable of causing local disappearance of, or serious disturbance to, populations of a species.

Common toad is listed as a Species of Principal Importance for Nature Conservation in England.

## Dormouse

Dormice and the places they use for shelter or protection receive European protection under The Conservation of Habitats and Species Regulations 2010 (Habitats Regulations 2010, as amended). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that dormice, 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 dormouse;
- deliberately disturb dormice; or
- damage or destroy a 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 dormouse, part of a dormouse or anything derived from a dormouse, 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.

Dormice are listed as a Species of Principal Importance for Nature Conservation in England.

### Great crested newt

Great crested newts (GCN) and the places they use for shelter or protection 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 GCN, 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 GCN;
- deliberately disturb GCN;
- deliberately take or destroy eggs of a GCN; or
- damage or destroy a GCN 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 GCN, part of a GCN or anything derived from GCN, which has been unlawfully taken from the wild. This legislation applies to all life stages of GCN.

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.

### Hedgehog

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.

### Invasive plants

The Wildlife and Countryside Act 1981 provides the primary controls on the release of non-native species into the wild in Great Britain. It is an offence under section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II. This list contains 36 plant species and their hybrids. The Infrastructure Act 2015 makes it possible, under certain circumstances, to compel land owners or occupiers to carry out control or eradication operations, or to allow them to be carried out by the issuing authority.

### Reptiles

All of the UK's native reptiles are protected by law. The two rarest species – sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* – benefit from the greatest protection; however these two species have a limited geographical distribution and special habitat requirements. Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix* are protected under the Wildlife and Countryside Act 1981 as amended from intentional killing or injuring.

In England and Wales, this Act has been amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions and increases penalties. The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on Government Departments to have regard for the conservation of biodiversity and maintains lists of species and habitats which are of principal importance for the purposes of conserving biodiversity in England and Wales. All native reptile species are included on these lists.

This is a simplified description of the legislation. In particular, the offences mentioned here may be absolute, intentional, deliberate or reckless. Note that where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.