QINETIQ SITE, FORT HALSTEAD, KENT

PRELIMINARY ECOLOGICAL APPRAISAL

A Report to: QinetiQ

Report No: RT-MME-150872-03 Rev B

Date: May 2021

MIDDLEMARCH ENVIRONMENTAL

Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
Tel: 01676 525880 Fax: 01676 521400
E-mail: admin@middlemarch-environmental.com Web: www.middlemarch-environmental.com

REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

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

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	17/09/2020	Jamie Fletcher BSc (Hons) (Senior Ecological Consultant)	Tom Docker CEcol MCIEEM (Managing Director)	Paul Roebuck MCIEEM (South-East Manager)
Rev A	04/05/2021	Jamie Fletcher BSc (Hons) (Senior Ecological Consultant)	Hannah Train ACIEEM (Principal Consultant)	Paul Roebuck MCIEEM (South-East Manager)
Rev B	27/05/2021	Jamie Fletcher BSc (Hons) (Senior Ecological Consultant)	Hannah Train ACIEEM (Principal Consultant)	Paul Roebuck MCIEEM (South-East Manager)

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 QinetiQ Ltd to carry out a Preliminary Ecological Appraisal of QinetiQ owned land at Fort Halstead, Kent to inform the strategic redevelopment of the site. To fulfil this brief an ecological desk study and a walkover survey (in accordance with Phase 1 Habitat Survey methodology) were undertaken.

The ecological desk study revealed no European statutory sites within 5 km of the survey area, no UK statutory sites within 2 km, 81 ancient woodland sites within 2 km, and six non-statutory sites within 2 km. The site is located within 10 km of a statutory site designated for bats. The desk study revealed records of numerous protected and notable species within 2 km of the survey area, including bats, terrestrial mammals, herpetofauna, birds, invertebrates and plants.

The walkover survey was undertaken on 6th August 2020 and 7th August 2020 by Jamie Fletcher (Senior Ecological Consultant). At the time of the survey, the site comprised a defence research facility which contained a number of buildings with associated areas of hardstanding, surrounded by parcels of semi-natural broadleaved woodland. Areas of unimproved calcareous grassland, poor semi-improved grassland and amenity grassland were also present, as well as patches of scrub, scattered trees and tall ruderal vegetation.

The site contains several important habitats, including ancient woodland and Habitats of Principal Importance (broad-leaved semi-natural woodland under 'Lowland Mixed Deciduous Woodland' and unimproved calcareous grassland under 'Lowland Calcareous Woodland'). The habitats present have the potential to support a range of species, including protected/notable species.

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

- **Ancient Woodland and Non-Statutory Sites:** The proposed works could potentially impact several Ancient Woodland and Non-Statutory Nature Conservation Sites if appropriate preventative measures are not implemented. Therefore, an Ecological Mitigation Strategy should be compiled for the site. The aim of the Ecological Mitigation Strategy is to minimise the potential impact of the construction phase of the development on the existing ecology of the site and off-site receptors, and ensure works proceed in accordance with current wildlife legislation. This document should be agreed with the Local Planning Authority ecologist prior to any works commencing. *Middlemarch Environmental Ltd has compiled an Ecological Mitigation Strategy (Report RT-MME-150872-06 Rev B).*
- **Habitat Retention:** The Ecological Mitigation Strategy should also detail protective measures for habitats that are being retained, such as the hedgerows and areas of woodland, calcareous grassland and neutral grassland which are Habitats of Principal Importance.
- **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.
- **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. Any trees that are removed should be mitigated within the landscaping design, through the inclusion of appropriate native or wildlife attracting species of adequate size.
- **Protected Species:** A series of recommendations have been made in relation to a range of protected species in Chapter 7. The recommendations related to these protected species must be adhered to.
- **Terrestrial Mammals:** 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.

.

CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

Middlemarch Environmental Ltd was commissioned by QinetiQ to undertake a Preliminary Ecological Appraisal at Fort Halstead in Kent. This assessment is required to support the strategic redevelopment of QinetiQ owned land within Fort Halstead. A full description of the proposals is provided in Section 6.1.

A range of ecological surveys were completed by Waterman Group between 2006 and 2013 and by Middlemarch Environmental Ltd in 2018, with further updated surveys in 2020, to inform a separate hybrid planning application associated with the redevelopment of the site. Land surveyed as part of these assessments included QinetiQ owned land.

To inform the current application and assess the existing ecological interest of the QinetiQ site an ecological desk study was carried out, and a walkover survey was undertaken on 6th August 2020 and 7th August 2020.

In addition to the Preliminary Ecological Appraisal, Middlemarch Environmental Ltd was also instructed to undertake a full suite of targeted surveys of the QinetiQ owned land, comprising:

- Preliminary Arboricultural Assessment (Report RT-MME-150872-01);
- Arboricultural Impact Assessment (Report RT-MME-150872-02 Rev B);
- Preliminary Bat Roost Assessment (Report RT-MME-150872-04 Rev B);
- Badger Survey (Report RT-MME-150872-05 Rev B);
- Dusk Emergence and Dawn Re-Entry Bat Surveys (Report RT-MME-153340-01 Rev C); and,
- Winter Hibernation Bat Survey (Report RT-MME-153704-02 Rev B).

An Ecological Mitigation Strategy (Report RT-MME-150872-06 Rev B), a Bat Protection Strategy for Building X78 (Report RT-MME-150872-08 Rev B) and a Bat Mitigation Strategy for Building X9 (Report RT-MME-150872-08 Rev B) have also been prepared.

Middlemarch Environmental Ltd has also prepared a Construction Ecological Management Plan (CEcMP, Report RT-MME-153844-03 Rev C), undertaken a Biodiversity Net Gain Assessment (Report RT-MME-153844-02 Rev B) and prepared a Landscape and Ecological Management Plan (LEMP, Report RT-MME-153844-03 Rev B) for the QinetiQ redevelopment.

1.2 SITE DESCRIPTION AND CONTEXT

The wider Fort Halstead site is located off Star Hill Road in Halstead, Kent, centred at National Grid Reference TQ 4970 5922. It is an irregular shaped parcel of land that measures 131.89 ha in size. The wider Fort Halstead site is bordered by the A224 Polhill to the north-east and Star Hill Road to the south-west. A mixture of arable and pastoral fields, pockets of woodland and farm buildings surround the site. The wider landscape is dominated by a rural setting, consisting of agricultural land interspersed with pockets of woodland and small settlements.

The planning application site extends to 15.8 ha and sits within the wider Fort Halstead site. The site is known as the QinetiQ enclave and is located on the southern-most boundary of the wider Fort Halstead site. The application site is bound by Crow Road to the north, the Scheduled Ancient Monument to the east, ancient woodland to the west and the existing site perimeter fence to the south.

At the time of the survey, the QinetiQ enclave comprised a defence research facility which contained a number of buildings with associated areas of hardstanding, surrounded by parcels of semi-natural and plantation woodland. Areas of neutral grassland, calcareous grassland and amenity grassland were also present, as well as patches of scrub and tall ruderal vegetation.

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
Proposed Site Plan / 30002236-BHK-00-XX-DR-A-003	Baker Hicks

Table 1.1: Documentation Provided by Client

2. METHODOLOGIES

2.1 DESK STUDY

As part of the Preliminary Ecological Appraisal completed for the wider Fort Halstead site in 2018 (Report RT-MME-127947-01 Rev B) 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,
- Kent and Medway Biological Records Centre.

The desk study included a search for European statutory nature conservation sites within a 5 km radius of the site (extended to 10 km for any statutory site designated for bats), UK statutory sites within a 2 km radius and non-statutory sites and protected/notable species records within a 2 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 2017 (The Habitats Regulations 2017)
The Habitats Regulations 2017 consolidate and update the Habitats Regulations 2010 (as amended). The Habitat Regulations 2017 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 2017 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 2017 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 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 2017, 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 February 2019, the National Planning Policy Framework (NPPF) was updated, replacing the previous framework published in 2012 and revised in 2018. 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 15, on conserving and enhancing the natural environment, sets out how the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing existing sites of biodiversity value;
- minimising impacts on and providing net gains for biodiversity; and,
- establishing coherent ecological networks.

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 development on land within or outside of a Site of Special Scientific Interest (SSSI) which is likely to have an adverse effect (either alone or in-combination with other developments) would only be permitted where the benefits of the proposed development clearly outweigh the impacts on the SSSI itself, and the wider network of SSSIs. Development resulting in the loss of deterioration of irreplaceable habitats (such as ancient woodland and ancient or

veteran trees) should be refused unless there are wholly exceptional reasons for the development, and a suitable compensation strategy is provided.

Chapter 15 identifies that development whose primary objective is to conserve or enhance biodiversity should be supported and opportunities to incorporate biodiversity improvements in and around development should be encouraged, especially where this can secure measurable net gains for biodiversity.

Chapter 11, making effective use of the land, sets out how the planning system should promote use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Substantial weight should be given to the value of using suitable brownfield land within settlements for homes and other identified needs. Opportunities for achieving net environmental gains, including new habitat creation, are encouraged.

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, geodiversity and ecosystems and green infrastructure', which was updated in July 2019. This document sets out information with respect to the following:

- the statutory basis for seeking to conserve and enhance biodiversity;
- the local planning authority's requirements for planning for biodiversity;
- what local ecological networks are and how to identify and map them;
- how plan-making bodies identify and safeguard Local Wildlife Sites, including Standard Criteria for Local Wildlife Sites;
- the sources of ecological evidence;
- the legal obligations on local planning authorities and developers regarding statutory designated sites and protected species;
- definition of green infrastructure;
- where biodiversity should be taken into account in preparing a planning application;
- how policy should be applied to avoid, mitigate or compensate for significant harm to biodiversity and how mitigation and compensation measures can be ensured;
- definitions of biodiversity net gain including information on how it can be achieved and assessed; and,
- the consideration of ancient woodlands and veteran trees in planning decisions and how potential impacts can be assessed.

The NPPG July 2019 issue also includes a section entitled 'Appropriate assessment: Guidance on the use of Habitats Regulations Assessment' which provides information in relation to Habitats Regulations Assessment processes, contents and approaches in light of case law. This guidance will be relevant to those projects and plans which have the potential to impact on European Sites and European Offshore Marine Sites identified under the Conservation of Habitats and Species Regulations 2017 (as amended).

3.3 LOCAL PLANNING POLICY - SEVENOAKS DISTRICT COUNCIL

The Core Strategy and the Allocations and Development Management Plan form the current Local Plan for the Sevenoaks District.

The Core Strategy Development Plan Document (DPD)

Sevenoaks District Council have committed to reviewing their Core Strategy over the next five years to ensure consistency with the NPPF. The Planning Policy Team is currently working to produce evidence to support a new Local Plan to cover the period 2015-2035.

The Core Strategy is the key document in the Local Plan, which draws together the objectives of a wide range of plans, programmes and strategies and provides the overarching principles that will deliver the essential development needs of the District. The Core Strategy was adopted by Full Council on 22nd February 2011. With respect to ecology the relevant policy is:

Policy SP 11 Biodiversity states that *'The biodiversity of the District will be conserved and opportunities sought for enhancement to ensure no net loss of biodiversity. Sites designated for biodiversity value will be protected, with the highest level of protection given to nationally designated Sites of Special Scientific Interest, followed by Local Wildlife Sites and sites of local importance for biodiversity. Designated sites will be managed with the primary objective of promoting biodiversity whilst also providing for appropriate levels of public access. Opportunities will be sought for the enhancement of biodiversity through the creation, protection, enhancement, extension and management of sites and through the maintenance and, where possible, enhancement of a green infrastructure network to improve connectivity between habitats.'*

Allocations and Development Management Plan

The Allocations and Development Management Plan was adopted by the Council on 17th February 2015. Policies of relevance to ecology include:

Policy EN1 – Design Principles – Parts b) and e)

b) the layout of the proposed development would respect the topography and character of the site and the surrounding area and sensitively incorporate natural features such as trees, hedges and ponds within the site.

e) the proposal would incorporate, within the design opportunities for increasing biodiversity potential, where possible, and retaining and enhancing Green Infrastructure features including sustainable drainage systems. Proposals that affect a site's existing biodiversity and Green Infrastructure should be designed in a way that avoids or mitigates any potential harm.

Policy GI 1 – Green Infrastructure and New Development

Proposals will be permitted where opportunities for provision of additional Green Infrastructure have been fully considered and would be provided where justified by the character of the area or the need for open space. Any open spaces provided as part of new development should, wherever practical and appropriate, be located where they can provide a safe link for the population and connectivity for biodiversity with the existing features of the Green Infrastructure Network. Additional green infrastructure and habitat restoration and/or re-creation, should be provided in accordance with the appropriate guidance contained in the Kent Design Guide and the Sevenoaks Countryside Assessment SPD and should take account of the guidance within the AONB Management Plans and associated guidance where appropriate.

Emerging Local Plan

The Sevenoaks District Council Local Plan was submitted to the Secretary of State for independent examination on Tuesday 30th April 2019.

In March 2020 the Planning Inspector concluded that the Local Plan was unsound as it failed in its statutory Duty to Cooperate. The High Court backed the Inspector's ruling in November 2020 and in December the Council asked for permission to challenge the Judicial Review that upheld the Planning Inspector's reasons for rejecting the draft Local Plan. The Council was informed in April 2021 that it has not succeeded with the challenge. Officers will be speaking with the Secretary of State to put forward a strategy that ensures a new Local Plan can be put in place as soon as possible.

4. DESK STUDY RESULTS

4.1 INTRODUCTION

The data search (based on the wider Fort Halstead site boundary) was carried out in July 2018 by Kent and Medway Biological Records 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

The desk study identified no statutory nature conservation sites within the search areas. However, the survey area does fall within several SSSI Impact Risk Zones for Sevenoaks Gravel Pits SSSI, which is located c. 2.5 km to the south-east.

The site is also located within 10 km of Westerham Mines SSSI, which is located 6.93 km to the south-west of the survey area. The principal interest of this site is the use of its abandoned ragstone mines by a variety of hibernating bats. With the increasing scarcity of bats in south-east England and the continued loss of the few suitable hibernacula remaining available to them, these mines represent an important winter refuge for bats in the county. Five species have been recorded hibernating here: Brandt's bat *Myotis brandti*, brown long-eared bat *Plecotus auratus*, Daubenton' bat *Myotis daubentoni*, Natterer's bat *Myotis nattereri* and whiskered bat *Myotis mystacinus*. The number of bats using the mines declined from the 1950s onwards, largely because of disturbance, but the fitting of grilles (allowing access for bats but not humans) and devices to maintain the air flow through the mines is thought to have led to an increase in numbers in recent years. However, it is very difficult to locate all the bats using the tunnels, and different species use them at different times during the winter. Thus, it is extremely hard to estimate the true numbers using the mines. There is also evidence that some use is made of the mines by bats in summer.

In addition, the desk study identified 81 parcels of ancient woodland within a 2 km radius of the wider Fort Halstead site, one of which forms part of the QinetiQ site, with more parcels located in close proximity.

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

Site Name	Designation	Proximity to QinetiQ Site	Description
Non-statutory Sites			
Chevening Estate	LWS	280 m south-west	Reference to aerial imagery indicates that this LWS comprises woodland.
Crown Meadow Wood	WT Reserve	1.22 km south-east	No information provided.
Chevening Churchyard	LWS	1.22 km south-west	No information provided.
Woodlands West of Shoreham	LWS	1.33 km north-east	Encompasses several parcels of ancient semi-natural and replanted woodland.
Polhill Bank	KWT Reserve	1.33 km north-east	Comprises almost 4 ha of chalk grassland on a south-east-facing slope.
Key: LWS: Local Wildlife Site KWT: Kent Wildlife Trust WT: Woodland Trust			

Table 4.1: Summary of Non-Statutory Nature Conservation Sites

4.3 PROTECTED / NOTABLE SPECIES

Table 4.2 and the following text provide a summary of protected and notable species records within a 2 km radius of the wider Fort Halstead site. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals – bats					
Natterer's bat *Myotis nattereri*	4	2016	On site	-	ECH 4, WCA 5, WCA 6
Unidentified myotis *Myotis* sp.	3	2016	On site	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Common pipistrelle *Pipistrellus pipistrellus*	17	2014	On site	-	ECH 4, WCA 5, WCA 6
Brown long-eared bat *Plecotus auratus*	5	2012	On site	✓	ECH 4, WCA 5, WCA 6
Leisler's bat *Nyctalus leisleri*	1	2007	On site	-	ECH 4, WCA 5, WCA 6
Serotine bat *Eptesicus serotinus*	20	2015	840 m south-east	-	ECH 4, WCA 5, WCA 6
Unidentified bat *Chiroptera* sp.	5	1999	960 m south-west	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Pipistrelle species *Pipistrellus* sp.	5	2005	1,150 m north	#	ECH 4, WCA 5, WCA 6
Noctule *Nyctalus noctule*	4	2011	1,410 m west	✓	ECH 4, WCA 5, WCA 6
Soprano pipistrelle *Pipistrellus pygmaeus*	2	2013	1,580 m east	✓	ECH 4, WCA 5, WCA 6
Long-eared bat *Plecotus* sp.	1	2002	1,960 m north-west	#	ECH 4, WCA 5, WCA 6
Mammals – other					
[redacted]					
Dormouse *Muscardinus avellanarius*	2	2015	510 m south	✓	ECH 4, WCA 5, WCA 6
Hedgehog *Erinaceus europaeus*	5	2014	1,360 m north	✓	WCA 6
Water vole *Arvicola amphibious*	1	2003	Potentially within 2 km**	✓	WCA 5
Reptiles					
Common lizard *Zootoca vivipara*	13	2015	On site	✓	WCA 5 S9(1) WCA 5 S9(5)
Slow worm *Anguis fragilis*	12	2015	On site	✓	WCA 5 S9(1) WCA 5 S9(5)
Grass snake *Natrix natrix*	16	2016	380 m east	✓	WCA 5 S9(1) WCA 5 S9(5)
Adder *Vipera berus*	6	2014	610 m east	✓	WCA 5 S9(1) WCA 5 S9(5)
Amphibians					
Common toad *Bufo bufo*	12	2013	800 m north-west	✓	WCA 5 S9(5)
Common frog *Rana temporaria*	24	2015	1,200 m north-west	-	WCA 5 S9(5)
Smooth newt *Lissotriton vulgaris*	1	2009	1,200 m north-west	-	WCA 5 S9(5)
Great crested newt *Triturus cristatus*	2	1989	Potentially within 2 km*	✓	ECH 2, ECH 4, WCA 5
Fish					
Bullhead *Cottus gobio*	3	2009	1,810 m east	-	ECH 2

Table 4.2: Summary of Protected/Notable Species Records Within 2 km of Survey Area (Continues)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Invertebrates					
White-clawed crayfish *Austropotamobius pallipes*	3	1999	Potentially within 2 km*	✓	ECH 2, WCA 5 S9(1), WCA 5 S9(5)
Molluscs					
Roman snail *Helix pomatia*	13	2015	900 m west	-	ECH 2, WCA 5 S9(1), WCA 5 S9(5)
Plants and fungi					
Butcher's broom *Ruscus aculeatus*	9	2017	1,460 m north	-	ECH 5
Rough marsh-mallow *Malva setigera*	2	1989	1,980 m north-west	-	WCA 8
Snowdrop *Galanthus nivalis*	16	2016	Potentially within 2 km*	-	ECH 5
Oak polypore *Piptoporus quercinus*	8	2016	Potentially within 2 km**	✓	WCA 8
Green hound's-tongue *Cynoglossum germanicum*	1	2016	Potentially within 2 km*	✓	WCA 8
Lizard orchid *Himantoglossum hircinum*	5	2015	Potentially within 2 km**	-	WCA 8
Pennyroyal *Mentha pulegium*	2	2012	Potentially within 2 km*	✓	WCA 8
Jersey cudweed *Gnaphalium luteoalbum*	1	2012	Potentially within 2 km*	-	WCA 8
Bearded tooth *Hericium erinaceus*	11	2008	Potentially within 2 km**	✓	WCA 8
Early gentian *Gentianella anglica*	7	2003	Potentially within 2 km**	✓	ECH 2, ECH 4, WCA 8
Bog moss *Sphagnum* sp.	3	2003	Potentially within 2 km**	-	ECH 5
Deptford pink *Dianthus armeria*	2	2001	Potentially within 2 km**	✓	WCA 8
Large white-moss *Leucobryum glaucum*	1	2001	Potentially within 2 km**	-	ECH 5
Blunt-leaved bog-moss *Sphagnum palustre*	2	1999	Potentially within 2 km**	-	ECH 5
Feathery bog-moss *Sphagnum cuspidatum*	1	1991	Potentially within 2 km**	-	ECH 4
Fringed bog-moss *Sphagnum fimbriatum*	1	1991	Potentially within 2 km**	-	ECH 4
Magellanic bog-moss *Sphagnum magellanicum*	1	1991	Potentially within 2 km**	-	ECH 5
Papillose bog-moss *Sphagnum papillosum*	1	1991	Potentially within 2 km**	-	ECH 5
Red bog-moss *Sphagnum capillifolium*	1	1991	Potentially within 2 km**	-	ECH 5
Flat-topped bog-moss *Sphagnum recurvum*	1	1991	Potentially within 2 km**	-	ECH 5

Table 4.2 (Continued): Summary of Protected/Notable Species Records Within 2 km of Survey Area (Continues)

Key:
#: Dependent on species.
*: Grid reference provided was four figures only.
**: Grid reference provided was two figures only.
†: Badger records are confidential and therefore proximity is not provided within the report.

ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation.
ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection.
ECH 5: Annex V 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 taking in the wild and exploitation may be subject to management measures.
PBA: Protection of Badgers Act 1992.

WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).
WCA 5 S9(1): Schedule 5 Section 9(1) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to intentional killing, injury or taking.
WCA 5 S9(5): Schedule 5 Section 9(5) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal.
WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
WCA 8: Schedule 8 of Wildlife and Countryside Act 1981 (as amended). Protected plants and fungi.

Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.

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: Summary of Protected/Notable Species Records Within 2 km of Survey Area (Continued)

In addition, the desk study revealed records of the following protected/notable species within 2 km of the survey area:

Terrestrial mammals
Sixteen historical records of brown hare *Lepus europaeus*, dated between 1959 and 1979.

Birds
Records of 33 species of bird that are protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), including barn owl *Tyto alba*, brambling *Fringilla montifringilla*, fieldfare *Turdus pilaris*, goshawk *Accipiter gentilis*, hen harrier *Circus cyaneus*, hobby *Falco Subbuteo*, honey-buzzard *Pernis apivorus*, marsh harrier *Circus aeruginosus*, merlin *Falco columbarius*, osprey *Pandion haliaetus*, peregrine *Falco peregrinus*, red kite *Milvus milvus* and redwing *Turdus iliacus*.

Records of 31 species of bird that are listed as Species of Principal Importance, including corn bunting *Miliaria calandra*, cuckoo *Cuculus canorus*, house sparrow *Passer domesticus*, lesser spotted woodpecker *Dendrocopus minor*, marsh tit *Parus palustris*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, tree sparrow *Passer montanus*, turtle dove *Streptopelia turtur*, willow tit *Parus montanus*, yellow wagtail *Motacilla flava* and yellowhammer *Emberiza citronella*, which are also on the RSPB Red List, and bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, nightjar *Caprimulgus europaeus* and reed bunting *Emberiza schoeniclus*, which are also on the RSPB Amber List.

Records of numerous other bird species on the RSPB Red List and RSPB Amber List.

Invertebrates
Records of numerous invertebrates that are listed as Species of Principal Importance, including:

- 42 species of moth, including blood vein *Timandra comae*, cinnabar *Tyria jacobaeae,* ghost moth *Hepialus humuli*, knot grass *Acronicta rumicis*, latticed heath *Chiasmia clathrate*, mottled rustic *Caradrina morpheus*, oak hook-tip *Watsonalla binaria*, shaded broad-bar *Scotopteryx chenopodiata* and small square-spot *Diarsia rubi*.

- five species of butterfly namely dingy skipper *Erynnis tages*, grizzled skipper *Pyrgus malvae*, small heath *Coenonympha pamphilus*, wall *Lasiommata megera* and white admiral *Limenitis Camilla*;
- two species of beetle namely necklace ground beetle *Carabus monilis* and scarlet malachite beetle *Malachius aeneus*; and,
- a single species of bee namely red-shanked carder-bee *Bombus ruderarius*.

Plants and fungi

Records of twelve species of plants and fungi that are listed as Species of Principal Importance, including basil-thyme *Clinopodium acinos* which is located potentially on site (the six-figure grid reference overlaps the site boundary).

4.4 INVASIVE SPECIES

Table 4.3 provides a summary of invasive species records within a 2 km radius of Fort Halstead. 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
Himalayan balsam *Impatiens glandulifera*	9	2017	1,460 m north	WCA 9
Yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*	9	2017	1,830 m north-west	WCA 9
Japanese knotweed *Fallopia japonica*	11	2017	Potentially within 2 km*	WCA 9
New Zealand pigmyweed *Crassula helmsii*	4	2017	Potentially within 2 km*	WCA 9
Nuttall's waterweed *Elodea nuttallii*	3	2017	Potentially within 2 km*	WCA 9
Duck potato *Sagittaria latifolia*	1	2017	Potentially within 2 km*	WCA 9
Rhododendron *Rhododendron ponticum*	8	2016	Potentially within 2 km*	WCA 9
Canadian waterweed *Elodea canadensis*	2	2016	Potentially within 2 km*	WCA 9
Three-cornered garlic *Allium triquetrum*	2	2016	Potentially within 2 km*	WCA 9
Himalayan cotoneaster *Cotoneaster simonsii*	4	2015	Potentially within 2 km*	WCA 9
Virginia creeper *Parthenocissus quinquefolia*	1	2004	Potentially within 2 km**	WCA 9
False Virginia creeper *Parthenocissus inserta*	3	2002	Potentially within 2 km**	WCA 9
False Virginia creeper *Parthenocissus inserta*	3	2002	Potentially within 2 km**	WCA 9
Giant hogweed *Heracleum mantegazzianum*	2	2000	Potentially within 2 km**	WCA 9
Wall cotoneaster *Cotoneaster horizontalis*	1	1999	Potentially within 2 km**	WCA 9
Key: *: Grid reference provided was four figures only. **: Grid reference provided was two figures only. WCA 9: Schedule 9 of Wildlife and Countryside Act 1981 (as amended). Invasive, non-native, plants and animals.				

Table 4.3: Summary of Invasive Species Records Within 2 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 C150872-03-01) 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 6th August 2020 and 7th August 2020 by Jamie Fletcher (Senior Ecological Consultant). Table 5.1 details the weather conditions at the time of the survey.

Parameter	Condition	
	06/08/2020	07/08/2020
Temperature (ºC)	35	30
Cloud (%)	0	0
Wind (Beaufort)	F0	F0
Precipitation	Nil	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;
- Broad-leaved semi-natural woodland;
- Buildings;
- Fencing;
- Hardstanding;
- Poor semi-improved grassland;
- Scattered scrub;
- Scattered trees;
- Tall ruderal vegetation; and,
- Unimproved calcareous grassland.

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

Amenity grassland
Areas of regularly mown amenity grassland were present on verges and between buildings throughout the site. The short sward was dominated by common grass species such as perennial ryegrass *Lolium perenne*.

Broad-leaved semi-natural woodland
A parcel of broad-leaved semi-natural woodland was located in the southern section of the site. Further areas of broad-leaved semi-natural woodland were also located to the north, south, east and west of the survey area within the wider Fort Halstead site and abutting the site boundaries. The broad-leaved semi-natural woodland on site and surrounding the survey area all contained species and features associated with ancient woodland. The canopies consisted of ash, beech, cherry, English oak, horse chestnut *Aesculus hippocastanum*, larch *Larix* sp., rowan, Scots pine *Pinus sylvestris*, silver birch, sweet chestnut, sycamore *Acer pseudoplatanus*, whitebeam, sallow *Salix sp*. and yew, with an understory of bramble, blackthorn *Prunus spinosa*, cherry laurel, dog-rose *Rosa canina*, elder *Sambucus nigra*, hawthorn, hazel, holly *Ilex aquifolium*, wild privet *Ligustrum vulgare*, wayfaring tree *Viburnum lantana*, field maple *Acer campestre*, spindle *Euonymus europaeus* and dogwood *Cornus sanguinea*. The ground flora contained several species indicative of ancient woodlands, including bluebell *Hyacinthoides non-scripta*, dog's mercury *Mercurialis perennis*, primrose *Primula vulgaris* and lords-and-ladies *Arum maculatum*. Other species present included bracken, bugle *Ajuga reptans*, clematis, common nettle, dog violet *Viola riviniana*, ground ivy *Glechoma*

hederacea, herb-Robert *Geranium robertianum*, honeysuckle *Lonicera periclymenum*, ivy *Hedera helix*, St John's-wort *Hypericum* sp., sow thistle *Sonchus oleraceus*, wild strawberry *Fragaria vesca*, rosebay willowherb *Chamerion angustifloium*, enchanters nightshade *Circaea lutetiana* and wood avens *Geum urbanum*.

Buildings
In excess of 70 buildings occupy the survey area. The buildings on site were highly varied in their composition, design, size and purpose, and include brick buildings, concrete buildings, warehouses constructed from corrugated metal, plastic and asbestos, metal containers, concrete pill boxes, underground bunkers, concrete magazines, sheds and open fronted storage buildings.

For details regarding the potential of these buildings to support roosting bats, refer to the Preliminary Bat Roost Assessment (Report RT-MME-150872-04 Rev B).

Fencing
Metal wire fencing topped with razor wire and set within a buried concrete base enclosed the majority of the site boundary. The fencing measured approximately 2.5 m in height. Further sections of chain link fencing measuring from approximately 1.2 m to 2 m tall was also present around buildings and sensitive areas on site.

Hardstanding
Many roads, car parking areas, footpaths, storage areas and loading areas constructed from a mixture of tarmac, concrete and gravel were present on site.

Poor semi-improved grassland
Areas of poor semi-improved grassland were located throughout the survey area. Such areas were located between and around buildings and in large open 'lawned' areas adjacent to Crow Road. Smaller areas were also located throughout the site, forming roadside verges. The sward consisted predominantly of grass species such as cock's-foot *Dactylis glomerata*, false oat-grass *Arrhenatherum elatius*, perennial rye-grass and Yorkshire fog *Holcus lanatus*, with other species including bird's-foot trefoil *Lotus corniculatus*, buttercup *Ranunculus sp*., cleavers *Galium aparine*, clover *Trifolium* sp., common nettle, daisy *Bellis perennis*, dandelion *Taraxacum sp*., dock *Rumex* sp., thistle sp. *Cirsium sp*., creeping cinquefoil *Potentilla reptans*, wild strawberry *Fragaria vesca*, hawkbit sp. *Leontodon sp.,* ribwort plantain *Plantago lanceolata*, yarrow *Achillea millefolium* and primrose *Primula vulgaris*.

Scattered scrub
Patches of scattered scrub were present throughout the areas of unimproved calcareous grassland in the southern part of the site. Species included blackthorn, bramble, dog-rose, dogwood, elder, hawthorn, spindle, wild privet and wayfaring tree.

Scattered trees
Numerous early-mature and mature scattered trees were present throughout the site. Species included ash, beech, hornbeam, cherry, crab apple, English oak, hawthorn, Leyland cypress *X Cupressocyparis leylandii*, oak *Quercus* sp., rowan, silver birch, lime sp. *Tilia sp*., sweet chestnut, whitebeam and yew.

Tall ruderal vegetation
Areas of tall ruderal vegetation were present within the unimproved calcareous grassland located in the south of the site. Species present included common nettle, rosebay willowherb and wild angelica *Angelica sylvestris.*

Unimproved calcareous grassland
Unimproved calcareous grassland dominated the southern part of the site, known as the Downs Range. This habitat was divided into two areas by a fence line. The sward was dominated by grass species such as fescue *Festuca* sp. Other species present included betony *Betonica officinalis*, salad burnet *Sanguisorba minor*, agrimony *Agrimonia eupatoria*, pyramidal orchid *Anacamptis pyramidalis*, bird's-foot trefoil, buttercup sp., crosswort *Cruciata laevipes*, daisy, field scabious *Knautia arvensis*, ragwort, self-heal *Prunella vulgaris*, speedwell *Veronica* sp., wild marjoram *Origanum vulgare*, wild strawberry, wild thyme *Thymus polytrichus*, creeping thistle *Cirsium arvense* and perforate St John's wort *Hypericum perforatum*.

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.

Mammals

Several terrestrial mammals were observed on site during the field survey: bank vole *Myodes glareolus*, field vole *Microtus agrestis*, fox *Vulpes vulpes*, grey squirrel *Sciurus carolinensis*, mouse (likely to be wood mouse *Apodemus sylvaticus*), rabbit *Oryctolagus cuniculus* and shrew (likely to be common shrew *Sorex araneus*).

Please refer to the Badger Survey (Report RT-MME-150872-05 Rev B) for details of any evidence of badger *Meles meles* activity recorded on site.

Birds

A range of bird species were observed on site during the field survey. These are listed in Table 5.2.

Common name	Latin name	Conservation status
Blackbird	*Turdus merula*	-
Blackcap	*Sylvia atricapilla*	-
Blue Tit	*Cyanistes caeruleus*	-
Bullfinch	*Pyrrhula pyrrhula*	RSPB Amber; Species of Principal Importance
Carrion Crow	*Corvus corone*	-
Chaffinch	*Fringilla coelebs*	-
Chiffchaff	*Phylloscopus collybita*	-
Common Buzzard	*Buteo buteo*	-
Common Whitethroat	*Sylvia communis*	-
Dunnock	*Prunella modularis*	RSPB Amber; Species of Principal Importance
Goldfinch	*Carduelis carduelis*	-
Great Spotted Woodpecker	*Dendrocopos major*	-
Great Tit	*Parus major*	-
Green Woodpecker	*Picus viridis*	-
Jackdaw	*Corvus monedula*	-
Long-Tailed Tit	*Aegithalos caudatus*	-
Magpie	*Pica pica*	-
Marsh Tit	*Poecile palustris*	RSPB Red; Species of Principal Importance
Mistle Thrush	*Turdus viscivorus*	RSPB Red
Nuthatch	*Sitta europaea*	-
Pheasant	*Phasianus colchicus*	-
Red Kite	*Milvus milvus*	WCA1i
Robin	*Erithacus rubecula*	-
Song Thrush	*Turdus philomelos*	RSPB Red; Species of Principal Importance
Wren	*Troglodytes troglodytes*	-

RSPB Red - species are those that are globally threatened, whose population or range has declined rapidly in recent years (i.e. by more than 50% in 25 years), or which have declined historically and not recovered.
RSPB Amber - species are those whose population or range has declined moderately in recent years (by more than 25% but less than 50% in 25 years), those whose population has declined historically but recovered recently, rare breeders (fewer than 300 pairs), those with internationally important populations in the UK, those with localised populations, and those with an unfavourable conservation status in Europe.
Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.
WCA1i – listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

Table 5.2: Bird Species Observed during the Field Survey

Invertebrates

Several common species of butterfly were observed on site during the survey, including gatekeeper *Pyronia tithonus*, marbled white *Melanargia galathea*, common blue *Polyommatus icarus*, holly blue *Celastrina argiolus*, red admiral *Vanessa atalanta*, large white *Pieris brassicae*, meadow brown *Maniola jurtina* and speckled wood *Pararge aegeria*. Other invertebrates observed on site included: Roesel's bush-cricket *Metrioptera roeselii*, field grasshopper *Chorthippus brunneus*, meadow grasshopper *Chorthippus paralleus*, common green grasshopper *Omocestus viridulus* and wasp spider *Argiope bruennichi*.

5.5 INVASIVE PLANT SPECIES

No invasive plant species were recorded within the survey area.

6. DISCUSSIONS AND CONCLUSIONS

6.1 SUMMARY OF PROPOSALS

The proposals for the site are as follows:

> *Works to the proposed QinetiQ enclave comprising the erection of perimeter security fence, erection of a new reception building, creation of a new main site entrance along Crow Road, refurbishment of existing buildings including plant installation, creation of a new surface level car park and access, installation of two new explosive magazine stores and surrounding pendine block walls, demolition of existing buildings, installation of 6no. storage containers, installation of new site utilities and landscaping works.*

6.2 NATURE CONSERVATION SITES

The desk study exercise identified no European statutory sites within 5 km of the wider Fort Halstead site, no UK statutory sites within 2 km, 81 ancient woodland sites within 2 km, and six non-statutory sites within 2 km. The site is located within 10 km of a statutory site designated for bats. The significance of these sites to the proposed development is discussed below.

UK Statutory Sites

The desk study identified no statutory nature conservation sites within the search areas. However, the survey area does fall within several SSSI Impact Risk Zones for Sevenoaks Gravel Pits SSSI, which is located c. 2.5 km to the south-east. Despite this, the proposed development does not fall within any of the categories of concern (see list in Appendix 1).

The site is also located within 10 km of Westerham Mines SSSI, which is located 6.93 km to the south-west of the survey area. This SSSI is designated for bats. It is understood that all of the existing woodland on site is to be retained as part of the strategic redevelopment, and therefore connectivity with the surrounding area and wider landscape will be maintained. As long as appropriate lighting is installed, and the boundary features remain unlit, no impacts on commuting bats are anticipated. A recommendation regarding sensitive lighting is made in Section 7.3.

Non-Statutory Sites

The desk study identified six non-statutory nature conservation sites within the 2 km search area. The nearest of these to the development site were Chevening Estate LWS and Woodlands West of Shoreham LWS, which are located 10 m to the south-west and 10 m to the east of Fort Halstead respectively. The proposed development works will not directly impact these nature conservation sites, with the proposed works on site confined to QinetiQ owned land and largely restricted to the redevelopment or repair of existing buildings and features.

Ancient Woodland Sites

The desk study identified 81 parcels of ancient woodland within the 2 km search area. It is understood that the existing woodland on site is to be retained as part of the strategic redevelopment.

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 deemed to have low ecological value. Therefore, it is not a notable consideration.

Broad-leaved semi-natural woodland
This habitat is classed as 'Lowland Mixed Deciduous Woodland' which is a Habitat of Principal Importance. The woodland on site is also ancient, as discussed in Section 6.2, meaning it is a very important habitat. It is understood that the existing woodland on site is to be retained as part of the strategic redevelopment. However, there is potential for the development works to impact the woodland if appropriate protective measures are not adopted. Therefore, a recommendation regarding the production of an Ecological Mitigation Strategy for the development is made in Section 7.1.

Buildings
Buildings are a common habitat. The examples on site have the potential to support protected species such as roosting bats and nesting birds. This is discussed further in Section 6.4.

Fencing
Fencing is a common habitat deemed to have negligible ecological value. Therefore, it is not a notable consideration.

Hardstanding
Hardstanding is a common habitat deemed to have negligible ecological value. Therefore, it is not a notable consideration.

Poor semi-improved grassland
Poor semi-improved grassland is a common habitat deemed to have low ecological value. Based on current understanding of the proposals it is not anticipated that this habitat will be impacted. Therefore, it is not a notable consideration.

Scattered scrub
Scattered scrub is a common habitat. Based on current understanding of the proposals it is not anticipated that this habitat will be impacted. Therefore, it is not a notable consideration.

Scattered trees
Early-mature and mature trees have intrinsic value and cannot be readily replaced if lost. Based on current understanding of the proposals it is not anticipated that this habitat will be impacted. However, there is potential for the proposed works to impact retained trees if appropriate protection measures are not adopted. Therefore, a recommendation regarding the protection of retained trees is made in Section 7.2.

Tall ruderal vegetation
Tall ruderal vegetation is a common habitat. Based on current understanding of the proposals it is not anticipated that this habitat will be impacted. Therefore, it is not a notable consideration.

Unimproved calcareous grassland
The calcareous grassland on site is classed as a Habitat of Principal Importance under the 'Lowland Calcareous Grassland' habitat. It is understood that this habitat will be retained as part of the strategic redevelopment. However, there is potential for the proposed works to impact this habitat if appropriate protection measures are not adopted. Therefore, an Ecological Mitigation Strategy should be produced for the site to minimise any impacts on this important habitat. A recommendation regarding the Ecological Mitigation Strategy is made in Section 7.1.

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

Habitat Type	Habitat of Principal Importance?	Summary of Potential Impacts
Broad-leaved semi-natural woodland	✓	Structural damage (to roots and canopy)
Scattered trees	-	Structural damage (to roots and canopy)
Unimproved calcareous grassland	✓	Habitat degradation

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 11 different bat species within a 2 km radius of the survey area, five of which were located on site: brown long-eared bat, common pipistrelle, Leisler's bat, Natterer's bat and an unidentified Myotis species.

Furthermore, bat surveys completed on site by Middlemarch Environmental Ltd in 2018 identified ten species of bat: common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, brown-long eared bat, Daubenton's bat, noctule, serotine, Leisler's bat, Natterer's bat and whiskered bat. Additionally, six buildings within the wider Fort Halstead site were confirmed to be supporting roosting bats. The buildings/structures on site could potentially support roosting bats, and the trees, woodland, scrub and grassland offer suitable foraging and commuting opportunities for bats. Middlemarch Environmental Ltd has been commissioned to undertake a suite of bat surveys at the site, including a Preliminary Bat Roost Assessment and Dusk Emergence and Dawn Re-entry Surveys, to determine the presence/absence of roosting bats and establish bat usage at the site. The findings of the surveys and appropriate recommendations are detailed in Reports RT-MME-150872-04 Rev B and RT-MME-153340-01 Rev C.

Mammals – other

[redacted]

Brown hare

The desk study revealed 16 historical records of brown hare within a 2 km radius of the survey area. It should be noted that the absence of recent records should not be taken as confirmation that a species is absent from the search area. Suitable habitat for brown hare, in the form of open grassland, is present on site and in the surrounding area, and therefore the presence of brown hare cannot be ruled out. There is the potential for brown hare to become trapped or injured if excavations or open pipework are left uncovered overnight, and as such a recommendation regarding the safeguarding of terrestrial mammals is made in Section 7.3.

Dormouse

The desk study revealed two records of dormouse within a 2 km radius of the survey area, the nearest of which was located 510 m to the south. The scrub and woodland on site offer suitable habitat for dormouse, and therefore the presence of dormouse cannot be ruled out. Furthermore, surveys completed on site by Middlemarch Environmental Ltd in 2018 recorded dormouse presence in the semi-natural broadleaved woodland located in the south of the survey area. It is understood that the existing woodland and scrub on site is to be retained as part of the strategic redevelopment, and as such suitable breeding, foraging, hibernation and refuge areas will be maintained. A recommendation regarding the detail of the Ecological Mitigation Strategy is made in Sections 7.1 and 7.3. This document will detail suitable timings and working methods to ensure dormice are not harmed during the construction phase of the development; notably the installation of new perimeter fencing adjacent to semi-natural broadleaved woodland in the south of the site.

Hedgehog

The desk study revealed five records of hedgehog within a 2 km radius of the survey area, the nearest of which was located 1,360 m to the north. The scrub, woodland and grassland on site offer suitable refuge, foraging and commuting opportunities for hedgehogs, and therefore the presence of hedgehogs cannot be ruled out. It is understood that the existing woodland on site is to be retained as part of the strategic redevelopment, and as such suitable refuge areas will be maintained. However, there is the potential for

hedgehogs to become trapped or injured if excavations or open pipework are left uncovered overnight, and as such a recommendation regarding the safeguarding of terrestrial mammals is made in Section 7.3.

Water vole

The desk study revealed one record of water vole located potentially within a 2 km radius of the survey area. There are no watercourses or waterbodies on site or immediately adjacent to it, and therefore water voles are not a notable consideration in relation to the proposed development.

Birds

The desk study revealed numerous records of birds within a 2 km radius of the survey area, including protected species and notable species. In addition, a range of bird species were observed on site at the time of the initial survey. The trees, woodland, scrub, grassland and buildings on site offer suitable nesting and foraging opportunities for birds. Furthermore, surveys completed on site by Middlemarch Environmental Ltd in 2018 recorded a number of species of high conservation priority breeding on site including: dunnock, marsh tit, spotted flycatcher, song thrush, bullfinch, yellowhammer and linnet. Therefore, the presence of protected/notable species cannot be ruled out. The clearance of any buildings or vegetation during the nesting season therefore has the potential to cause injury or harm to birds. A recommendation regarding the need for pre-works Nesting Bird Surveys is made in Section 7.3.

Reptiles

The desk study revealed records of four reptile species within a 2 km radius of the survey area, two of which were located on site: common lizard and slow worm. The scrub, woodland and grassland on site offer suitable habitat for reptiles. Furthermore, surveys completed on site by Middlemarch Environmental Ltd in 2018 identified good populations of both common lizard and slow worm within the lower Downs Range section of the site, thus qualifying the area as a Key Reptile Site in line with Froglife criteria. Therefore, the presence of reptiles cannot be ruled out. It is understood that a concrete pad is to be installed within the upper Downs Range area of the site. Whilst this area was of low value to reptiles during the survey as a result of frequent mowing, it is directly connected to the lower Downs Range, which was identified as a Key Reptile Site during surveys in 2018. A recommendation regarding the detail of the Ecological Mitigation Strategy is made in Sections 7.1 and 7.3. This document will detail suitable timings and working methods to ensure no protected species are harmed during the construction phase of the development, with specific focus on the construction of a concrete pad in the upper Downs Range.

Amphibians

The desk study revealed records of three common amphibians within a 2 km radius of the survey area, the nearest of which was common toad located 800 m to the north-west. The desk study also revealed two records of great crested newt located potentially within a 2 km radius of the survey area. The scrub, woodland and grassland on site offer suitable terrestrial habitat for amphibians. However, there was no aquatic habitat for breeding purposes present on site. Reference to Ordnance Survey mapped data showed three waterbodies within a 250 m radius of the survey area, but these are located over 400 m away from the proposed works area and therefore it was considered unlikely that any amphibians, particularly great crested newts, will be encountered during the development works. A recommendation regarding the detail of the Ecological Mitigation Strategy is made in Sections 7.1 and 7.3. This document will detail suitable timings and working methods to ensure no protected species are harmed during the construction phase of the development.

Fish

The desk study revealed three records of bullhead within a 2 km radius of the survey area, the nearest of which was located 1,810 m to the east. There are no watercourses or waterbodies on site or immediately adjacent to it, and therefore fish are not a notable consideration in relation to the proposed development.

Invertebrates

The desk study revealed numerous records of invertebrates within a 2 km radius of the survey area, including protected species and notable species. The scrub, woodland and grassland on site offer suitable habitat for a range of terrestrial invertebrates, and therefore the presence of protected/notable species cannot be ruled out.

There were three records of white-clawed crayfish located potentially within a 2 km radius of the survey area. There are no watercourses or waterbodies on site or immediately adjacent to it, and therefore white-clawed

crayfish and other aquatic invertebrates are not a notable consideration in relation to the proposed development.

Plants
The desk study revealed numerous records of notable plants within a 2 km radius of the survey area. The grassland and woodland on site, particularly the areas of calcareous grassland and parcels of ancient woodland, have the potential to support a range of notable plant species. Therefore, the presence of notable plant species cannot be ruled out.

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: otter *Lutra lutra*, pine marten *Martes martes*, polecat *Mustela putorius*, red squirrel *Sciurus vulgaris* and stag beetle *Lucanus cervus*,

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 due to lighting.
[redacted]		
Dormouse	✓	Direct harm or injury.
Terrestrial mammals	#	Direct harm or injury.
Herpetofauna	#	Loss of suitable habitat, direct harm or injury.
Key: #: Dependent on species.		

Table 6.2: Summary of Potential Impacts on Notable Species

6.5 INVASIVE PLANT SPECIES

The desk study revealed records of fifteen invasive plant species within a 2 km radius of the survey area. Despite this, no invasive plant species were recorded within the survey area. Therefore, invasive plant species are a not notable consideration in relation to the proposed works.

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 recommendation is made regarding nature conservation sites:

R1 **Ancient Woodland and Non-Statutory Sites:** The proposed works could potentially impact several Ancient Woodland and Non-Statutory Nature Conservation Sites if appropriate preventative measures are not implemented. Therefore, an Ecological Mitigation Strategy should be compiled for the site. The aim of the Ecological Mitigation Strategy is to minimise the potential impact of the construction phase of the development on the existing ecology of the site and off-site receptors, and ensure works proceed in accordance with current wildlife legislation. This document should be agreed with the Local Planning Authority ecologist prior to any works commencing.

Middlemarch Environmental Ltd has compiled an Ecological Mitigation Strategy (Report RT-MME-150872-06 Rev B).

7.2 HABITATS

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

R2 **Habitat Retention:** The Ecological Mitigation Strategy in **R1** should detail protective measures for habitats that are being retained, such as areas of woodland and calcareous grassland which are Habitats of Principal Importance.

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) and Local Planning Policy (Biodiversity - SP11), 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
    - 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, starling and swift, and bat boxes for species such as pipistrelle.
- Provision of containers capable of capturing rainwater as a source of drinking water for birds.
- Creation of hibernation habitat for herpetofauna and hedgehogs.

- 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 **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. Any trees that are removed should be mitigated within the landscaping design, through the inclusion of appropriate native or wildlife attracting species of adequate size.

7.3 PROTECTED / NOTABLE SPECIES

To ensure compliance with wildlife legislation and Local Planning Policy (Policy EN17B Nature Conservation), the following recommendations are made:

R5 **Roosting Bats:** Middlemarch Environmental Ltd has been commissioned to undertake a Preliminary Bat Roost Assessment of the buildings and structures at the site, as well as Nocturnal Emergence and Dawn Re-Entry Bat Surveys. The recommendations made within Reports RT-MME-150872-04 Rev B and RT-MME-153340-01 Rev C, respectively, must be adhered to.

R6 [redacted]

R7 **Herpetofauna:** The Ecological Mitigation Strategy will detail how the proposed works associated with the construction of a concrete pad on the upper Downs Range will be undertaken in a sensitive manner to avoid any potential breach of legislation. This document should describe working methods, timings and should detail any ecological control measures that will be implemented e.g. vegetation management and ecological supervision.

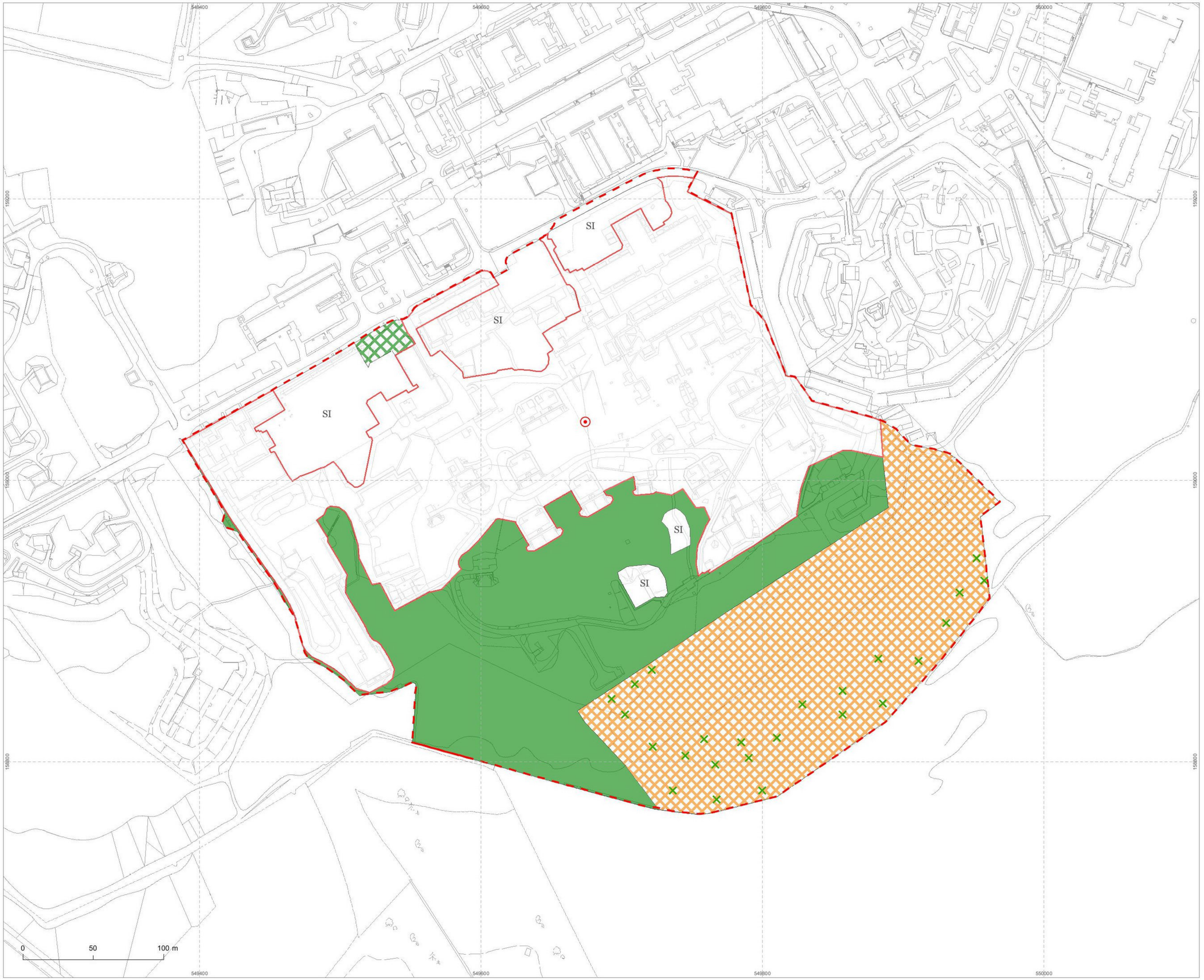
R8 **Dormice**: The Ecological Mitigation Strategy will detail how the proposed works associated with the installation of new perimeter and security fencing in areas close to woodland or scrub, notably in the south and west of the site, will be undertaken in a sensitive manner to avoid any potential breach of legislation. This document should describe working methods, timings and should detail any ecological control measures that will be implemented e.g. vegetation management or ecological supervision.

R9 **Terrestrial Mammals**: 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.

R10 **Nesting Birds:** Any proposed vegetation and/or building clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation/buildings to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them should be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

8. DRAWINGS

Drawing C150872-03-01 – Phase 1 Habitat Map



C150872-03-01-RevA

Legend

- Site boundary
- Scattered scrub
- Dense scrub
- SI — Poor semi-improved grassland
- Semi-natural broad-leaved woodland
- Unimproved calcareous grassland
- Other habitat: area supports high number of scattered trees and poor semi-improved grassland around buildings

Note: central section of site includes habitats including buildings, hardstanding, scattered trees, scattered scrub, poor semi-improved grassland, amenity grassland, fence, wall and introduced shrub.

N

Project: QinetiQ Site, Fort Halstead, Kent	
Drawing: Phase 1 Habitat Map	
Client: QinetiQ	
Drawing Number: C150872-03-01-RevA	Revision: Rev A
Scale @ A3: 1:2,500	Date: May 2021
Approved By: JF	Drawn By: RP

MIDDLEMARCH ENVIRONMENTAL

Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
T:01676 525880 F:01676 521400
E:admin@middlemarch-environmental.com

9. PHOTOGRAPHS

Plate 9.1: Broad-Leaved Semi-Natural Woodland

Plate 9.2: Example of Building

Plate 9.3: Unimproved Calcareous Grassland and Scattered Scrub

Plate 9.4: Poor Semi-Improved Grassland and Scattered Trees

REFERENCES AND BIBLIOGRAPHY

Bickmore, C.J. (2002) *Hedgerow survey handbook: a standard procedure for local surveys in the UK*. DEFRA, London.

British Standards Institution (2013). *British Standard 42020: 2013. Biodiversity – Code of practice for planning and development.* British Standards Institution, London.

British Standards Institution. (2012). *British Standard 5837:2012, Trees in relation to design, demolition and construction – recommendations.* British Standards Institution, London.

Institute of Environmental Assessment. (1995). *Guidelines for Baseline Ecological Assessment, Institute of Environmental Assessment*. E&FN Spon, An Imprint of Chapman and Hall. London.

Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint).* Joint Nature Conservation Committee, Peterborough.

Joint Nature Conservation Committee (2012). *UK Post-2010 Biodiversity Framework*. Available: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

Middlemarch Environmental Ltd. (2020). *Preliminary Arboricultural Assessment. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-150872-01.

Middlemarch Environmental Ltd. (2021). *Arboricultural Impact Assessment. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-150872-02 Rev B.

Middlemarch Environmental Ltd. (2021). *Preliminary Bat Roost Assessment. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-150872-04 Rev B.

Middlemarch Environmental Ltd. (2021). *Badger Survey. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-150872-05 Rev B.

Middlemarch Environmental Ltd. (2021). *Ecological Mitigation Strategy. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-150872-06 Rev B.

Middlemarch Environmental Ltd. (2021). *Construction Ecological Management Plan. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-153844-01 Rev C.

Middlemarch Environmental Ltd. (2021). *Biodiversity Net Gain Assessment. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-153844-02 Rev B.

Middlemarch Environmental Ltd. (2021). *Landscape Enhancement Management Plan. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-153844-03 Rev B.

Middlemarch Environmental Ltd. (2021). *Dusk Emergence and Dawn Re-entry Bat Surveys. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-153340-01 Rev C.

Middlemarch Environmental Ltd. (2021). *Bat Protection Strategy. QinetiQ Site, Fort Halstead, Kent.* Report Number RT-MME-153340-02 Rev B.

Ministry of Housing, Communities and Local Government (2019). *National Planning Policy Framework*. Available: https://www.gov.uk/government/publications/national-planning-policy-framework--2

Waterman Group (2015) *Ecological Appraisal: Fort Halstead, Kent*. Report Number EED12715-102.R.2.3.7.LM.

Waterman Group (2015) *Protected Species and Habitats Survey: Fort Halstead, Kent*. Report Number EED12715-102.R.3.3.6.LM

Waterman Group (2015) *Environmental Statement - Ecology and Nature Conservation: Fort Halstead, Kent*.

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 Wed Aug 15 2018.
Centroid Grid Ref: TQ49605947.
The following features have been found in your search area:

Ramsar Sites (England)
No Features found

Proposed Ramsar Sites (England)
No Features found

Special Areas of Conservation (England)
No Features found

Possible Special Areas of Conservation (England)
No Features found

Special Protection Areas (England)
No Features found

Possible Special Protection Areas (England)
No Features found

Ancient Woodland (England)
Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499155
Area (Ha): 0.435939

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499157
Area (Ha): 0.500005

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499158
Area (Ha): 0.395511

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499172
Area (Ha): 0.609495

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499145
Area (Ha): 1.49716

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499146
Area (Ha): 1.687847

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499149
Area (Ha): 3.398151

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500061
Area (Ha): 1.760625

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500062
Area (Ha): 0.328448

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500065
Area (Ha): 0.748889

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500096
Area (Ha): 1.634746

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500144
Area (Ha): 0.47314

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500200
Area (Ha): 0.203103

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500136
Area (Ha): 0.271282

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500137
Area (Ha): 0.342673

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500169
Area (Ha): 4.331074

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500172
Area (Ha): 0.816794

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499842
Area (Ha): 1.234817

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499844
Area (Ha): 0.979234

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499845
Area (Ha): 1.160824

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499856
Area (Ha): 0.414182

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499857
Area (Ha): 0.770287

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499858
Area (Ha): 2.68219

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499859
Area (Ha): 0.802532

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499860
Area (Ha): 0.616579

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499864
Area (Ha): 0.2996

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499867
Area (Ha): 1.375106

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499997
Area (Ha): 0.192866

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499827
Area (Ha): 0.424623

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499830
Area (Ha): 1.404432

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499833
Area (Ha): 2.49751

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499896
Area (Ha): 0.438576

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499389
Area (Ha): 0.563742

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499391
Area (Ha): 2.397889

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499392
Area (Ha): 2.27695

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499399
Area (Ha): 0.289581

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499403
Area (Ha): 11.784932

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499408
Area (Ha): 2.076173

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499422
Area (Ha): 2.964376

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499423
Area (Ha): 5.222715

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501523
Area (Ha): 0.259592

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501544
Area (Ha): 0.452666

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501441
Area (Ha): 0.529501

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501400
Area (Ha): 9.582959

Wood Name
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501402
Area (Ha): 9.365341

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499238
Area (Ha): 2.036746

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499240
Area (Ha): 2.105502

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499241
Area (Ha): 4.250213

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499247
Area (Ha): 7.1159

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499248
Area (Ha): 6.678501

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499250
Area (Ha): 6.834274

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1500135
Area (Ha): 0.17063

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499147
Area (Ha): 4.800711

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499159
Area (Ha): 0.593388

Wood Name
Theme Name: Ancient Replanted Woodland
Theme ID: 1499171
Area (Ha): 0.214343

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499385
Area (Ha): 4.706078

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500088
Area (Ha): 20.802609

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500171
Area (Ha): 1.313831

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient Replanted Woodland
Theme ID: 1499233
Area (Ha): 4.29852

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient Replanted Woodland
Theme ID: 1499234
Area (Ha): 1.584905

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient Replanted Woodland
Theme ID: 1499235
Area (Ha): 1.024303

Wood Name: ASH PLATT/SUNDRIDGE HILL WOODS
Theme Name: Ancient Replanted Woodland
Theme ID: 1500170
Area (Ha): 0.317008

Wood Name: ANDREWS WOOD
Theme Name: Ancient Replanted Woodland
Theme ID: 1499246
Area (Ha): 11.883337

Wood Name: CHALKHURST WOOD
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499418
Area (Ha): 4.281867

Wood Name: Close Heath Wood
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499407
Area (Ha): 0.888665

Wood Name: CHEVENING WOOD
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499377
Area (Ha): 5.849744

Wood Name: Darnets Spring
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499852
Area (Ha): 0.881686

Wood Name: DEEERLEAP WOOD-NORTH
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499413
Area (Ha): 1.885299

Wood Name: Golden Grove/Broadhams/Russets/ Broadham Fir Plantation/Anis
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499390
Area (Ha): 9.749881

Wood Name: Golden Grove/Broadhams/Russets/ Broadham Fir Plantation/Anis
Theme Name: Ancient Replanted Woodland
Theme ID: 1499236
Area (Ha): 2.488748

Wood Name: LATTICE COPPICE
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499160
Area (Ha): 3.401908

Wood Name: LATTICE COPPICE
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501401
Area (Ha): 27.47822

Wood Name: LEES/ASHFIELD/MINNY WOOD
Theme Name: Ancient Replanted Woodland
Theme ID: 1499239
Area (Ha): 2.718228

Wood Name: Oak Plantation Close Rye Wood & Shaw
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499381
Area (Ha): 1.445601

Wood Name: Ryleybank Shaw
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499866
Area (Ha): 0.680614

Wood Name: Golden Grove/Broadhams/Russets/ Broadham Fir Plantation/Anis
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1500063
Area (Ha): 1.227275

Wood Name: Golden Grove/Broadhams/Russets/ Broadham Fir Plantation/Anis
Theme Name: Ancient Replanted Woodland
Theme ID: 1500064
Area (Ha): 1.176922

Wood Name: LATTICE COPPICE
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499401
Area (Ha): 5.982926

Wood Name: LATTICE COPPICE
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1501522
Area (Ha): 4.211682

Wood Name: MEENFIELD WOOD
Theme Name: Ancient Replanted Woodland
Theme ID: 1499249
Area (Ha): 23.826774

Wood Name: RAKEFIELD WOOD
Theme Name: Ancient & Semi-Natural Woodland
Theme ID: 1499376
Area (Ha): 2.991606

Local Nature Reserves (England)
No Features found

National Nature Reserves (England)
No Features found

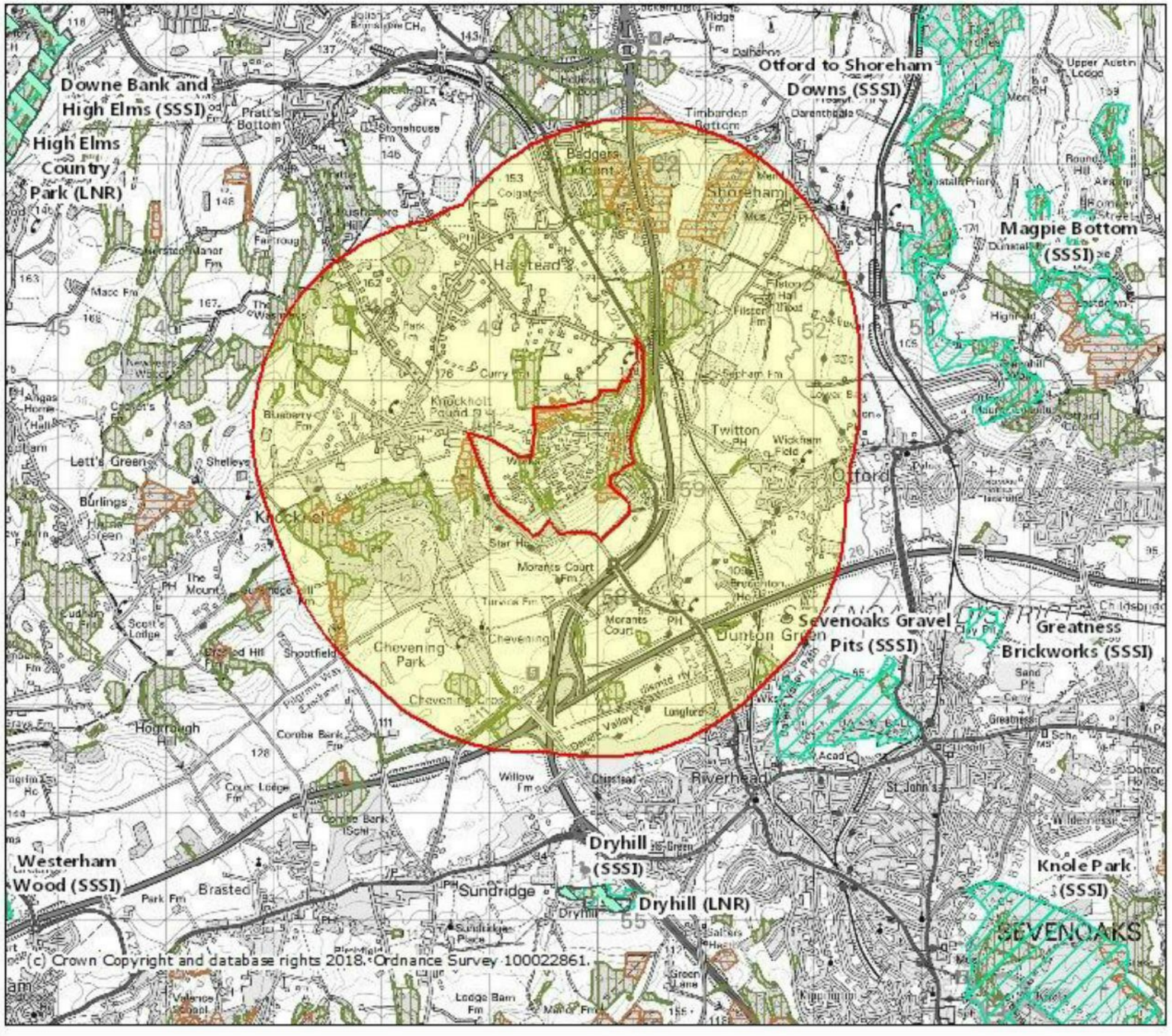
Sites of Special Scientific Interest (England)
No Features found

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
Infrastructure: 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: Livestock & poultry units with floorspace > 500m^2, slurry lagoons > 750m^2 & manure stores > 3500t.
Discharges: Any discharge of water or liquid waste of more than 5m^3/day to ground (i.e. to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location). **AND** Any discharge of water or liquid waste of more than 20m^3/day to ground (i.e. to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).

GUIDANCE - How to use the Impact Risk Zones
/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf

MAGiC

UK Statutory Sites within 2km



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Sites of Special Scientific Interest (England)

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
xmin = 536200
ymin = 151800
xmax = 563600
ymax = 165700

0 1 2
km

Map produced by MAGIC on 15 August, 2018.

APPENDIX 2

Overview of Relevant Species-Specific Legislation

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

[redacted]

Bats

Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). 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 2017, 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 2017 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.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

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

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

Birds

The Conservation of Habitats and Species Regulations 2017, (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019) 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.

Dormouse

Dormice and the places they use for shelter or protection receive European protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). 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 2017, 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 2017 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.

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 helvetica* 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.