LAND AT VICARS CLOSE, BIDDENHAM

PRELIMINARY ECOLOGICAL APPRAISAL

A Report to: Phillips Planning Services Ltd

Report No: RT-MME-152783

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

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

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	12/08/2020	[redacted]	[redacted]	[redacted]
Rev A	13/08/2020	[redacted]	[redacted]	[redacted]
Rev B	14/08/2020	[redacted]	[redacted]	[redacted]

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 Phillips Planning Services Ltd to carry out a Preliminary Ecological Appraisal at the site of a proposed development at Land at Vicars Close in Biddenham, Bedfordshire. To fulfil this brief, an ecological desk study and a walkover survey (in accordance with Phase 1 Habitat Survey methodology) were undertaken. This assessment is required to inform a planning application associated with a potential residential development.

The desk study exercise identified no European statutory sites within 5 km of the survey area, two UK statutory sites within 2 km and two non-statutory sites within 1 km. The site is not located within 10 km of a statutory site designated for bats. The desk study also provided records of protected/ notable species within a 1 km radius of the survey, including: bats, badger, hedgehog, brown hare, amphibians, reptiles, birds, invertebrates, aquatic mammals and plants.

The walkover survey was undertaken on 30th July 2020 by Dominic Bowyer, Ecological Consultant. The site comprises an arable field that is surrounded by hedgerows and a linear broadleaved woodland block on the southern boundary. Other habitats on site include dry ditch, poor semi-improved grassland, scattered scrub, scattered shrub and tall ruderal vegetation. To ensure compliance with wildlife legislation and relevant planning policy, the following recommendations are made (please refer to Chapter 7 for more detail):

Habitat Recommendations

- **Habitat Retention and Protection:** The development proposals should be designed (where feasible) to allow for the retention of existing notable habitats comprising: broadleaved woodland and hedgerows.
- **Biodiversity Enhancement:** In accordance with the provision of Chapter 15 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed development to work towards delivering net gains for biodiversity.
- **Lighting:** In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

Protected/Notable Species Recommendations

- **Roosting Bats:** A Preliminary Ground Level Bat Roost Assessment should be undertaken on the woodland and hedgerow trees which may be impacted by the proposed development works. This assessment can be completed at any time of year.
- **Great Crested Newt:** A Great Crested Newt Habitat Suitability Index (HSI) Assessment should be undertaken for all ponds identified within 500 m of the edge of the proposed development. Great Crested Newt HSI Assessments can be carried out at any time of year, although if possible it is preferable to carry out the assessments between March and October.
- **Reptiles:** A Reptile Survey should be undertaken of suitable habitats within the proposed development site. Reptile Surveys can be completed in suitable weather conditions between April and September (inclusive).
- **Badger:** Badgers are a notable consideration in relation to the development and the recommendations made within the Confidential Badger Annex should be adhered to.
- **Nesting Birds:** Vegetation 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).
- **Terrestrial Mammals including Badger, Hedgehog and Brown hare:** 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.
- **Invasive plant species**: Vigilance should be used throughout the course of the works to ensure that the works are not causing invasive plant species to spread in the wild.

CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

In July 2020 Phillips Planning Services Ltd commissioned Middlemarch Environmental Ltd to undertake a Preliminary Ecological Appraisal of a proposed development site at Land at Vicars Close in Biddenham, Bedfordshire. This assessment is required to inform a future planning application for a residential development, comprising 12 houses, however plans are within the early stages of development. The site is anticipated to be a 'residential allocation' site in the upcoming Local Plan review for Bedford Borough Council.

To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on 30th July 2020.

1.2 SITE DESCRIPTION AND CONTEXT

The survey area comprises a square shaped arable field measuring approximately 2.7 ha, located off Vicars Close in Biddenham, Bedfordshire. The site is centred at National Grid Reference TL 0220 4963 and, at the time of the survey, was dominated by an arable field that was surrounded by hedgerows on the northern, eastern and western boundaries and a linear broadleaved woodland block on the southern boundary.

Biddenham village is situated to the north and apart from one arable field to the east, The Bedford Great Denham Golf Course surrounds the site to the west, south and east. The River Great Ouse is approximately 600 m south east of the site and the centre of Bedford town is approximately 2.75 km east.

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
Official Copy (Title Plan) – BD172208	H.M. Land Registry

Table 1.1: Documentation Provided by Client

2. METHODOLOGIES

2.1 DESK STUDY

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

The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites;
- Bedfordshire and Luton Biodiversity Recording and Monitoring Centre; and,
- Bedfordshire Bat Group.

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

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

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

2.2 PHASE 1 HABITAT SURVEY

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

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

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

3. LEGISLATION AND POLICY

This chapter provides an overview of the framework of legislation and policy which underpins nature conservation and is a material consideration in the planning process in England.

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 – BEDFORD BOROUGH

Local Plan 2030

Bedford Borough Council has prepared a local plan that sets out how much growth there should be in the borough in coming years (housing, jobs and associated infrastructure) and where it should take place. The Bedford Borough Local Plan 2030 was adopted by Full Council on 15th January 2020. Policies of relevance to ecology are detailed below:

Policy 29 – Design quality and principles

All new development should:

i. Be of the highest design quality and contribute positively to the area's character and identity,
ii. Respect the context within which it will sit and the opportunities to enhance the character and quality of the area and local distinctiveness,
iii. Protect and where appropriate, enhance heritage assets and their settings and successfully integrate with the historic environment and character,

iv. Have particular regard to the environment and biodiversity within it and ensure there are no significant effects on Natura 2000 sites (notably Portholme (SAC), The Ouse Washes (SAC/ SPA, Ramsar), Eversden and Wimpole Woods (SAC), Upper River Nene Gravel Pits (SPA/Ramsar)) designated species or habitats,
v. Promote accessibility and permeability for all by creating safe and welcoming places that connect with each other,
vi. Promote a sense of place to include attractive streets squares and other public spaces with a defined sense of enclosure, with multifunctional green spaces and corridors,
vii. Incorporate measures to promote community safety ensuring that private and public amenity spaces are clearly defined and are designed to be inclusive, useable safe and enjoyable,
viii. Integrate functional needs such as refuse / recycling storage and collection points, car and cycle parking.

Proposals meeting the following criteria will be expected to be guided by a design code to be agreed with the local planning authority as part of the application process:

i. Proposals for residential developments of 200 dwellings or more.
ii. Proposals for residential developments of 50 dwellings or more in areas with a historic urban form or where the landscape interface with the built form is of importance.
iii. Other large-scale developments. The need for a design code should be discussed with the Council pre-application.

Policy 38 – Landscaping in new development

Where appropriate, development shall provide landscaping on site or where more suitable, landscaping shall be provided off site and the proposed scheme shall meet all of the following criteria:

i. Existing landscape features shall be recorded in a detailed site survey in accordance with the principles of the relevant industry guidance and best practice.
ii. Existing features of landscape or nature conservation value should be incorporated into the landscaping scheme.
iii. The proposed landscaping scheme should consider the character of the site, site constraints, function, diversity of existing and proposed landscaping, soil type, ecological value and resilience based on the location of the site.
iv. New tree planting as part of a proposed landscaping scheme will be selected, planted and established in accordance with current best practice guidance within the relevant British Standard and shall have regard to guidance in the Council's Trees and Development SPD
v. Provision of the planting of hedgerows, shrub planting and other soft landscaping to include specimen trees with a mature height of 15-20 metres within both hard and soft landscaped areas.
vi. The proposed landscaping shall make a positive contribution to the streetscape and integrate with the built development and where applicable, adjoining developments.
vii. Trees within adoptable areas shall be incorporated as part of the infrastructure planning and design stage in accordance with current best practice and shall have regard to the Council's guidance in the Trees and Development SPD ensuring sustainability and longevity.
viii. The proposed landscaping should not lead to significant effects on the Natura 2000 sites of Portholme (SAC) and the Ouse Washes (SAC/SPA/Ramsar), as a result of surface run-off into the River Great Ouse.

Policy 39 – Retention of trees

In considering proposals for development all of the following criteria will apply:

i. Applicants shall consider opportunities to retain trees of high amenity and environmental value taking into consideration both their individual merit and their contribution as part of a group or broader landscape feature. Existing trees on and immediately adjacent the development site shall be recorded following guidance in the relevant British Standard.
ii. Development applications shall provide details as to how the retained trees, hedges and hedge banks will be protected prior to, during and after construction.
iii. No building, hard surfacing drainage or underground works will be permitted that does not accord with the principles of the relevant British Standard unless, exceptionally, the Council is satisfied that such works can be accommodated without harm to the trees concerned or there are overriding reasons for development to proceed.
iv. Planning permission will be refused for development resulting in the loss or deterioration of ancient woodland and the loss of aged or veteran trees found outside ancient woodland (including from

indirect impacts such as increased visitor pressure), unless the need for, and benefits of, the development in that location clearly outweigh the loss.

v. The Council will protect existing trees through the making of Tree Preservation Orders where appropriate.

Policy 40 - Hedgerows

Any hedgerows should be retained on development sites, unless there are overriding benefits that justify their removal. Where removal is deemed necessary, details addressing the criteria under the Hedgerow Regulations 1997 (as amended) shall be submitted to demonstrate the validity for removal and details of the replacement hedgerows. Replacement hedgerows shall be of an equal scale, native and species-rich and should be provided where possible, elsewhere on the development site.

Where there are gaps in the existing hedgerows on the site, the development should provide for additional hedgerow planting.

Policy 42s – Protecting biodiversity and geodiversity

Planning applications for development are required to assess the impact of the proposal on the biodiversity and geodiversity value of the site and its surroundings. This should be carried out by a suitably qualified professional in accordance with industry standards.

A proposal which is likely to have an adverse effect on a Site of Special Scientific Interest (SSSI) or Natura 2000 site will not be permitted unless there are exceptional reasons that outweigh the harm to the site.

Development should be designed to prevent any adverse impact on locally important sites, species and habitats of principal importance contained within the Natural Environment and Rural Communities (NERC) Act 2006. However, in these circumstances where an adverse impact is unavoidable, the application shall demonstrate how the harm will be reduced through appropriate mitigation.

Where protected species or priority habitats of principal importance are adversely affected, the application will need to demonstrate how the proposed mitigation will reduce the adverse effects. If adequate mitigation is not possible, the application will need to demonstrate that the overriding reasons outweigh the impacts on the biodiversity and geodiversity of the borough otherwise the development will be refused.

Developments with potential to have an adverse impact, either alone or in-combination, on the integrity of a European Designated Site will be assessed in accordance with the requirements of the Habitats Regulations.

Policy 43 – Enhancing biodiversity

Development proposals should provide a net increase in biodiversity through the following:

i. Enhancement of the existing features on the site; or
ii. The creation of additional habitats on the site; or
iii. The linking of existing habitats to create links between ecological networks and where possible, with adjoining features.

Policy 44 – River Great Ouse

Development proposals along and adjoining the River Great Ouse will be required to:

i. Improve access to the River Great Ouse including canoe portage areas and related facilities will be supported as outlined in the 2011 Bedford Waterspace Study (or as amended) where it can be demonstrated that there will be no harmful impact on the character or environment,
ii. Deliver improvements as relevant to the site and area of the river which have regard to the 2011 Bedford Waterspace Study,
iii. Ensure that new river moorings have pedestrian access and vehicle access to an adopted road, unless it can be demonstrated that there is an alternative means of access,
iv. Ensure that new marinas have access to an adopted road and car parking is provided in accordance with the Parking Standards for Sustainable Communities: Design and Good Practice supplementary planning document to accommodate visitors' and residents' vehicles,
v. Ensure that any new development or activities do not lead to adverse impacts on Natura 2000 sites downstream of Bedford i.e. Portholme (SAC) and The Ouse Washes (SAC/SPA/Ramsar) including as a result of increased flooding or because of pollution.

4. DESK STUDY RESULTS

4.1 INTRODUCTION

The data search was carried out in July 2020 by Bedfordshire and Luton Biodiversity Recording and Monitoring Centre, and the Bedfordshire Bat Group. All relevant ecological data provided by the consultees was reviewed and the results from these investigations are summarised in Sections 4.2 to 4.4. Selected data are provided in Appendix 1.

4.2 NATURE CONSERVATION SITES

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

Site Name	Designation	Proximity to Survey Area	Description
UK Statutory Sites			
Biddenham Pit	SSSI/CWS	620 m north	This old gravel pit provides exposures in terrace gravel laid down by the Bedfordshire Ouse. The deposits here include clayey and silty layers, which have yielded interglacial mollusca and mammalian remains. A prolific Palaeolithic industry has also been identified in the lowest part of the gravels. Research into the possibility that microfossil material may be present, as well as attempts to identify the interglacial represented at Biddenham is currently being undertaken. The combination of Palaeolithic and palaeotological material at this site ensures that the Biddenham pit is of considerable scientific significance.
Bromham Lake	LNR	1.7 km north-east	The reserve was created from 25 acres of former mineral workings. Habitats include grassland, woodland, open water, limestone cliff and wildflower meadow.
Non-statutory Sites			
River Great Ouse	CWS	600 m south-east	This County Wildlife Site is recognised for the fen, marsh and swamp (Broad habitat) and flooplain grazing marsh habitats adjacent to the river and features which are considered part of the river system. Other habitats also include neutral grassland, scrub, mature trees and pollards, copses and plantations and ruderal vegetation.
Key: SSSI: Site of Special Scientific Interest LNR: Local Nature Reserve CWS: County Wildlife Sites (Bedfordshire and Luton)			

Table 4.1: Summary of Nature Conservation Sites

The survey area falls within a SSSI Impact Risk Zone for Hanger Wood SSSI, which is located 2.1 km west.

4.3 PROTECTED / NOTABLE SPECIES

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

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals - Bats					
Common pipistrelle *Pipistrellus pipistrellus*	3	2017	270 m north-west	-	ECH 4, WCA 5, WCA 6
Unidentified bat *Vespertilionidae* sp.	6	2005	280 m north	#	#
Pipistrelle *Pipistrellus* sp.	6	2017	350 m east	#	ECH 4, WCA 5, WCA 6
Soprano pipistrelle *Pipistrellus pygmaeus*	1	2015	490 m south-east	✓	ECH 4, WCA 5, WCA 6
Brown long-eared bat *Plecotus auritus*	1	1998	510 m north-east	✓	ECH 4, WCA 5, WCA 6
Natterer's bat *Myotis nattereri*	1	2008	630 m west	-	ECH 4, WCA 5, WCA 6
Daubenton's bat *Myotis daubentonii*	1	2009	740 m south-east	-	ECH 4, WCA 5, WCA 6
Mammals - Others					
Hedgehog *Erinaceus europaeus*	8	2013	700 m north	✓	WCA 6
Otter *Lutra lutra*	4	2017	870 m south-west	✓	ECH 2, ECH 4, WCA 5, WCA 6
Brown hare *Lepus europeaus*	2	2005	Potentially within a 1 km radius**	✓	-
Badger *Meles meles*	8	2017	†	-	WCA 6, PBA
Amphibians					
Smooth newt *Lissotriton vulgaris*	4	2019	350 m north-west	-	WCA 5 S9(5)
Great crested newt *Triturus cristatus*	6	2013	350 m north-west	✓	ECH 2, ECH 4, WCA 5
Common frog *Rana temporaria*	5	2016	680 m south	-	WCA 5 S9(5)
Midwife toad *Alytes obstetricans*	3	2019	Potentially within a 1 km radius*	-	ECH 4
Reptiles					
Grass snake *Natrix natrix*	6	2019	700 m north	✓	WCA 5 S9(1) WCA 5 S9(5)
Common lizard *Zootoca vivipara*	1	1994	Potentially within a 1 km radius**	✓	WCA 5 S9(1) WCA 5 S9(5)
Birds					
Kingfisher *Alcedo atthis*	13	2018	800 m west	-	WCA1i
Common scoter *Melanitta nigra*	1	2016	Potentially within a 1 km radius*	✓	WCA1i
Crossbill *Loxia curvirostra*	1	2011	Potentially within a 1 km radius*	-	WCA1i
Eurasian hobby *Falco subbuteo*	10	2017	Potentially within a 1 km radius*	-	WCA1i
Fieldfare *Turdus pilaris*	2	2018	Potentially within a 1 km radius*	-	WCA1i

Table 4.2: Summary of Protected/Notable Species Records within 1 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
Goldeneye *Bucephala clangula*	1	2016	Potentially within a 1 km radius*	-	WCA 1i
Greylag goose *Anser anser*	5	2018	Potentially within a 1 km radius*	-	WCA1ii
Osprey *Pandion haliaetus*	3	2015	Potentially within a 1 km radius*	-	WCA1i
Peregrine *Falco peregrinus*	22	2004	Potentially within a 1 km radius*	-	WCA1i
Red kite *Milvus milvus*	7	2018	Potentially within a 1 km radius*	-	WCA1i
Redwing *Turdus iliacus*	6	2016	Potentially within a 1 km radius*	-	WCA1i
Barn owl *Tyto alba*	6	2004	Potentially within a 1 km radius**	-	WCA1i
Bony fish					
Barbel *Barbus barbus*	2	1997	800 m west	-	ECH 5
European eel *Anguilla anguilla*	7	2000	Potentially within a 1 km radius**	✓	-

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

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 1i: Schedule 1 Part 1 of Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties at all times.
WCA 1ii: Schedule 1 Part 2 of Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties during close season.
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.

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 1 km of Survey Area (continued)

Birds

The desk study provided records of 17 bird species listed as Species of Principal Importance, comprising: bullfinch *Pyrrhula pyrrhula,* corn bunting *Emberiza calandra*, cuckoo *Cuculus canorus,* dunnock *Prunella modularis*, herring gull *Larus argentatus,* house sparrow *Passer domesticus*, lapwing *Vanellus vanellus,* lesser redpoll *Acanthis cabaret,* linnet *Linaria cannabina,* marsh tit *Poecile palustris*, reed bunting *Emberiza schoeniclus,* skylark *Alauda arvensis,* song thrush *Turdus philomelos*, spotted flycatch *Muscicapa striata,* starling *Sturnus vulgaris*, yellow wagtail *Motacilla flava* and yellowhammer *Emberiza citronella.*

The desk study provided records of three bird species which are under the RSPB Red List, comprising: grey wagtail *Motacilla cinereal*, mistle thrush *Turdus viscivorus* and pochard *Aythya ferina*.

The desk study provided records of 22 bird species listed under the RSPB Amber List, comprising: black-headed gull *Chroicocephalus ridibundus*, common gull *Larus canus*, common tern *Sterna hirundo*, gadwall *Anas Strepera*, house martin *Delichon urbicum,* kestrel *Falco tinnunculus,* lesser black-backed gull *Larus fuscus,* mallard *Anas platyrhynchos,* meadow pipit *Anthus pratensis,* mute swan *Cygnus olor*, oystercatcher *Haematopus ostralegus*, shoveler *Anas clypeata*, snipe *Gallinago gallinago*, stock dove *Columba oenas*, swift *Apus apus,* teal *Anas crecca.* wigeon *Anas Penelope*, willow warbler *Phylloscopus trochilus* and tawny owl *Strix aluco*.

Invertebrates
The desk study provided records of small heath *Coenonympha pamphilus* and white-letter hairstreak *Satyrium w-album,* butterfly species listed as Species of Principal Importance.

The desk study provided records of 30 moth species listed as Species of Principal Importance, comprising: beaded chestnut *Agrochola lychnidis*, blood-vein *Timandra comae*, brown-spot pinion *Agrochola litura*, buff ermine *Spilosoma luteum*, centre-barred sallow *Atethmia centrago*, cinnabar *Tyria jacobaeae*, deep-brown dart *Aporophyla lutulenta*, dot moth *Melanchra persicariae*, dusky brocade *Apamea remissa*, dusky thorn *Ennomos fuscantaria*, garden tiger *Arctia caja*, ghost moth *Hepialus humuli*, green-brindled crescent *Allophyes oxyacanthae*, grey dagger *Acronicta psi*, knot grass *Acronicta rumicis*, lackey *Malacosoma neustria*, large nutmeg *Apamea anceps*, large wainscot *Rhizedra lutosa*, rustic *Caradrina Morpheus*, mouse moth *Amphipyra tragopoginis*, oak hook-tip *Watsonalla binaria*, powedered quaker *Orthosia gracilis*, rosy rustic *Hydraecia micacea*, rustic *Hoplodrina blanda*, shaded broad-bar *Scotopteryx chenopodiata,* small emerald *Hemistola chrysoprasaria*, small phoenix *Ecliptopera silaceata*, small square-spot *Diarsia rubi*, sprawler *Asteroscopus sphinx* and white ermine *Spilosoma lubricipeda*.

The desk study provided a record of water boatman *Corixa panzer*, a species that is listed as Locally Notable.

The desk study provided records of emerald damselfly *Lestes sponsa*, a damselfly species that is listed as Locally Important.

The desk study also provided records of purple emperor *Apatura iris*, a butterfly species that is listed under the Red Data List as Near Threatened.

The desk study also provided records of gypsy moth *Lymantria dispar* and small ranunculus *Hecatera dysodea*, moth species that are listed under the Red Data List as Extinct.

The desk study also provided records of three invertebrate species that are considered Notable, comprising: *Nothochrysa fulviceps* (lacewing), giant water-venneer *Schoenobius gigantella* (moth) and spindle knot-horn *Nephopterix angustella* (moth).

Botanical
The desk study also provided records of five species of plant that are listed as Nationally Scarce, comprising: scot's pine *Pinus Sylvestris*, fringed water-lily *Nymphoides peltate*, greater dodder *Cuscuta europaea*, sea-buckthorn *Hippophae rhamnoides* and white horehound *Marrubium vulgare*.

The desk study provided a record of upright spurge *Euphorbia serrulate*, a plant species that is listed as Nationally Rare.

The desk study provided records of ten species of plants that are listed on the Bedfordshire Rare Plant register, comprising: columbine *Aquilegia vulgaris*, fine-leaved water-dropwort *Oenanthe aquatica*, mare's-tail *Hippuris vulgaris*, shining pondweed *Potamogeton lucens*, sweet-briar *Rosa rubiginosa*, white comfrey *Symphytum orientale*, field gromwell *Lithospermum arvense*, bird's-nest orchid *Neottia nidus-avis*, dwarf spurge *Euphorbia exigua* and good-king-henry *Chenopodium bonus-henricus*.

The desk study also provided records of eight plant species that are listed under the Red Data List as Near Threatened, comprising: common valerian *Valeriana officinalis*, field scabious *Knautia arvensis*, hoary

plantain *Plantago media*, marsh ragwort *Senecio aquaticus*, tormentil *Potentilla erecta*, wild clary *Salvia verbenaca*, wild strawberry *Fragaria vesca* and pansy *Viola tricolor* subsp. *Tricolor*.

The desk study also provided records of chicory *Cichorium intybus* and whorl-grass *Catabrosa aquatica*, plant species that are listed under the Red Data List as Vulnerable.

4.4 INVASIVE SPECIES

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

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Legislation / Conservation Status
Japanese rose *Rosa rugosa*	1	2001	200 m east	WCA 9
Yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*	1	1998	220 m north-west	WCA 9
Water fern *Azolla filiculoides*	2	1997	350 m north-west	WCA 9
Canadian waterweed *Elodea canadensis*	4	1999	Potentially within a 1 km radius**	WCA 9
Japanese knotweed *Fallopia japonica*	1	2003	Potentially within a 1 km radius**	WCA 9
Key: **: Grid reference provided was two figures only. WCA9: Schedule 9 of Wildlife and Countryside Act 1981 (as amended). Invasive, non-native, plants and animals.				

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

5. PHASE 1 HABITAT SURVEY

5.1 INTRODUCTION

The results of the Phase 1 Habitat Survey are presented in the following sections. An annotated Phase 1 Habitat Survey Drawing (Drawing C152783-01) 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 30th July 2020 by Dominic Bowyer, Ecological Consultant. Table 5.1 details the weather conditions at the time of the survey.

Parameter	Condition
Temperature (ºC)	25
Cloud (%)	40
Wind (Beaufort)	F1
Precipitation	Nil

Table 5.1: Weather Conditions during Field Survey

5.2 SURVEY CONSTRAINTS AND LIMITATIONS

The mid-section of the broadleaved woodland (approximately a quarter of this habitat) was not accessible due to the presence of dense vegetation.

5.3 HABITATS

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

- Arable;
- Dry ditch;
- Intact species-poor hedgerow with trees;
- Poor semi-improved grassland;
- Scattered scrub;
- Scattered shrub;
- Semi-natural broadleaved woodland; and,
- Tall ruderal vegetation.

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

Arable
The arable field was the dominant habitat on site, with a barley *Hordeum vulgare* crop at the time of the survey (Plate 9.1)**.**

Dry ditch
Four dry ditches were present on site. One ditch ran along the eastern boundary, underneath hedgerow H1. The ditch was approximately 20 cm in depth with the banks angled at 20°. A second ditch, with similar dimensions, also ran along the western boundary, under hedgerow H2. The third ditch was present along the northern edge of the woodland. This was approximately 75 cm deep with steep sides (70°) and was overgrown with vegetation such as bramble *Rubus fruticosus* agg., dog rose *Rosa canina* and vegetation consistent with the edge of the woodland. The final ditch was within the woodland, running the length of the woodland east to west and was approximately 1.5 m deep with steep sides (70°). Vegetation growing within the ditch was consistent with the woodland understory.

Intact species-poor hedgerow with trees
A number of hedgerows were recorded along the site boundaries (Plate 9.3), these are labelled on drawing C152783-01 for ease of reference and are further described below:

H1 – This hedgerow was located along the eastern boundary of the site, measuring approximately 4 m in height, 2.5 m wide and 170 m long. The sides showed signs of being managed however the top was not.

Species present included pedunculate oak *Quercus robur*, elm *Ulmus procera*, horse-chestnut *Aesculus hippocastanum*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, elder *Sambucus nigra*, field maple *Acer campestre* and field-rose *Rosa arvensis*. Hawthorn was dominant and blackthorn abundant within the hedgerow with six tree standards present. A thin grassland margin (approximately 2 m wide) was present on either side and a public footpath was present directly adjacent to the eastern side of the hedgerow.

H2 – This hedgerow was located along the western boundary of the site and was approximately 6 m in height, 3 m wide and 140 m long. The sides showed signs of being trimmed and managed however the top was not. Hawthorn was dominant and blackthorn abundant. Other species present included elm (occasional), elder, pedunculate oak, field maple and dog-rose (rare). Five tree standards were present, including a mature pedunculate oak. A thin grassland margin (approximately 2 m wide) was present along the eastern edge. A golf course was present to the west of the hedgerow.

H3 – This hedgerow was located along the northern boundary of the site, directly beyond which were the gardens of adjacent properties. Stock fence ran through the centre of the hedgerow. H3 was approximately 5 m in height, 2 m wide and 130 m long. The hedgerow appeared to be partially managed in places (tops and sides trimmed) but for the majority of the length (arable field side) it was trimmed. Hawthorn was dominant and elm frequent. Species included elder, oak, holly *Ilex aquifolium*, dog-rose, sycamore *Acer pseudoplatanus*, walnut *Juglans regia*, aspen *Populus tremula* and white poplar *Populus alba* occurred rarely. A thin grassland margin (approximately 2 m wide) was present on the southern (arable field) side.

Poor semi-improved grassland
On the northern, eastern and western edges of the site, between the hedgerow and the arable crop (Plate 9.4) was a thin poor semi-improved grassland strip. This was approximately 2 m wide and ran the length of each boundary. The sward was approximately 40 cm in height and appeared to be mown annually. The strips were dominated by grasses such as false oat-grass *Arrhenatherum elatius*, Yorkshire-fog *Holcus lanatus*, perennial rye-grass *Lolium perenne* and cock's-foot *Dactylis glomerata*. Herbs present included abundant nettle *Urtica dioica*, frequent prickly sow-thistle *Sonchus asper*, white dead-nettle *Lamium album* and bramble; with occasional creeping thistle *Cirsium arvense*, and rare herb-bennet *Geum urbanum*, curled dock *Rumex crispus*, spear thistle *Cirsium vulgare*, fat-hen *Chenopodium album*, white bryony *Bryonia dioica,* yarrow *Achillea millefolium* and common mallow *Malva sylvestris*. Oat *Avena sativa* was also present.

Scattered scrub
In the north western corner of the site was a small patch of scattered scrub, comprising two to three bushes of blackthorn.

Scattered shrub
In the north west corner, a small patch of shrub comprising leyland *Leylandii* sp. was present. This appeared to be part of the garden boundary to the houses directly adjacent to the north and was approximately 6 m long, 3 m high and 1.5 m wide.

Semi-natural broadleaved woodland
The southern boundary of the site comprised of semi-natural broadleaved woodland (Plate 9.6). The woodland measured approximately 20 m wide and 160 m long and with a public footpath on the southern edge (outside of the site boundary).

The canopy layer comprised mature and semi-mature trees including pedunculate oak, ash *Fraxinus excelsior*, yew *Taxus baccata* and hybrid black poplar *Populus canadensis*. The understorey was dense and consisted of elder, hawthorn, blackthorn, elm, hazel *Corylus avellana*, field maple, dog-rose, holly and yew. The ground flora was sparse and consisted predominantly of ivy *Hedera helix* with lord's-and-*ladies Arum maculatum* occurring rarely.

Tall ruderal vegetation
Towards the southern end of the site between the broadleaved woodland and the arable field (Plate 9.5) was a strip of tall ruderal habitat that appeared to have been an uncultivated strip of land that had been colonised by tall ruderal vegetation and ephemeral herbs. The strip was approximately 10 m wide and spanned the length of the southern site boundary (approximately 160 m). The sward was roughly 50 cm in height and contained large amounts of bare ground within it. Species include abundant pale smartweed *Persicaria lapathifolia*, occasional prickly sow-thistle, oat, Yorkshire-fog, creeping thistle and bloody crane's-bill

Geranium sanguineum and rare teasel *Dipsacus* sp., hairy willowherb *Epilobium hirsutum*, common ragwort *Senecio jacobaea*, curled dock, fat-hen and redshank *Persicaria maculosa*.

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.

Invertebrates
During the walkover survey meadow brown *Maniola jurtina* butterfly and seven-spot ladybird *Coccinella septempunctata* were observed on site.

Birds
The following bird species were observed on site during the field survey: wren *Troglodytes troglodytes*, blue tit *Parus caeruleus*, dunnock *Prunella modularis* and green woodpecker *Picus viridis*.

Mammals
A red fox *Vulpes vulpes* was observed on site.

This report is also accompanied by a Confidential Badger Annex. Please refer to this for further information.

5.5 INVASIVE PLANT SPECIES

During the field survey, no invasive plant species were observed.

6. DISCUSSIONS AND CONCLUSIONS

6.1 SUMMARY OF PROPOSALS

It is understood that this site has the potential to be a 'residential allocation' site in the upcoming Local Plan review. A residential development of 12 houses is planned for the site. Given the plans are in early stages of development, a precautionary approach has been adopted when discussing the potential for impacting nature conservation sites and which habitats and species are notable considerations. The discussions and recommendations should be reviewed and amended, where appropriate, once the proposals are finalised.

6.2 NATURE CONSERVATION SITES

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

UK Statutory Sites
The closest site is Biddenham Pit SSSI/CWS, located 620 m north of the survey area. As this is a geological SSSI it falls outside of the scope of this ecological assessment and is therefore not a notable consideration. Bromham Lake LNR is also located 1.7 km north-east of the survey area. Given the spatial separation between the survey area and the conservation sites, as well as the built-up nature of the intervening habitats, the risk of significant impacts to these statutory sites is considered negligible.

The development site also falls within a SSSI Impact Risk Zone associated with Hanger Wood, which is located 2.1 km west of the survey area. However, if the proposed development for the 'allocated site' remains residential it will not fall into any of the risk categories for this conservation site (please refer to Appendix 1). Given this, the intervening distance separating the site from the survey area, the risk of significant harm or disturbance to this SSSI is considered negligible.

Non-Statutory Sites
The River Great Ouse is located 600 m south-east of the survey area. The river is separated from the survey area by the golf course and a residential area of Great Denham, Bedford. Given this spatial separation the risk of significant impacts to this non-statutory site is considered negligible.

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.

Hedgerows
A hedgerow is defined as any boundary line of trees or shrubs over 20 m long and less than 5 m wide, and where any gaps between the trees or shrub species are less than 20 m wide (Bickmore, 2002). All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are listed as a Habitat of Principal Importance in England. The three hedgerows on site (H1, H2 and H3) meet these criteria and are therefore a notable consideration. Hedgerows are also listed as a priority habitat in the Bedfordshire and Luton Biodiversity Action Plan and are a consideration under Policy 40 'Hedgerows' of the Bedford Borough Local Plan. It is not yet known if the hedgerows will be removed to facilitate the future development and therefore a recommendation for retention and protection of these hedgerows has been made in Section 7.2.

Broadleaved woodland
'Lowland mixed deciduous woodland' is a Habitat of Principal Importance for Nature Conservation in England. The semi-natural broadleaved woodland on site meets the criteria to be classified as Habitat of Principal Importance. Lowland mixed deciduous woodland is also a priority habitat in the Bedfordshire and Luton Biodiversity Action Plan and is a consideration under Policy 39 'Retention of trees' of the Bedford Borough Local Plan. It is not yet known if the woodland will be removed to facilitate the future development and therefore a recommendation for retention and protection of the woodland has been made in Section 7.2.

Arable, dry ditch, poor semi-improved grassland, scattered scrub, scattered shrub and tall ruderal vegetation.
The remaining habitats on site are well represented locally, have low-species diversity or can easily be replaced within the new development. Therefore, they are not a notable consideration for the proposed development

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

Habitat Type	Habitat of Principal Importance?	Local BAP Habitat?	Summary of Potential Impacts
Hedgerows	✓	✓	Habitat loss, root compaction
Broadleaved woodland	✓	✓	Habitat loss, root compaction

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 provided records of five bat species within a 1 km radius of the site, the closest of which was located 270 m north-west.

The hedgerows and broadleaved woodland on site provide suitable foraging and commuting opportunities for bats, with good connectivity via hedgerows to suitable foraging habitat in the surrounding landscape, including arable farmland, pockets of woodland and The Bedford Great Denham Golf Course. Loss of sections of hedgerow or woodland as well as any temporary or permanent lighting, required as part of the future proposed development, has the potential to cause fragmentation to foraging and commuting habitat for bats. Foraging bats are therefore a notable consideration in relation to the development and recommendations regarding habitat retention and lighting are made in Section 7.2.

Several trees on site contained features suitable for use by roosting bats. Trees identified with roosting features are denoted under Target Note 1 within the Phase 1 Habitat Survey Drawing (Drawing C152783-01). Within hedgerow H1, one tree had potential bat roost features. The mature pedunculate oak within hedgerow H2 also displayed bat roost potential. Within the woodland the trees were semi-mature to mature and several had bat roost features e.g. loose bark, missing branches, or woodpecker holes. It is not yet known if these trees will be removed to facilitate a future development and as such roosting bats are a notable consideration. A recommendation for further investigation has been made in Section 7.3.

Badger
This report is accompanied by a Confidential Badger Annex. Please refer to this for further information.

Hedgehog and Brown hare
The desk study provided eight records of hedgehog, the closest of which was located 700 m north of the survey area. The desk study also provided two records of brown hare within a 1 km radius.

The arable field with associated margins and hedgerows provides suitable habitat for these species within the survey area. The woodland and scrub also provide suitable foraging and hibernation habitat for

hedgehogs. In addition, the site is well connected to suitable habitat in the surrounding landscape. Taking this into consideration there is a risk of these mammals being harmed during the construction phases of any future development in the absence of appropriate protection measures. Therefore, a recommendation has been provided in Section 7.3.

Dormouse

The desk study provided no records of dormouse *Muscardinus avellanarius* within a 1 km radius of the survey area. Although the hedgerows and woodland on site provide suitable habitat for dormouse, they were limited in extent. The site has limited connectivity to significant areas of woodland in the wider landscape and therefore it is not considered likely dormouse will be present on site.

Aquatic mammals – otter

The desk study provided four records of otter, the closest of which was located 870 m south-west of the survey area. The site lacks suitable aquatic habitat for this species. Otter are known to be present along the River Great Ouse, however this is separated from the survey area by residential dwellings and the golf course providing sub-optimal connecting habitats. Therefore, otters are unlikely to traverse the site and are not a notable consideration in relation to any future proposed development.

Amphibians

The desk study provided records of smooth newt, common frog and midwife toad within 1 km of the survey area. The desk study also provided six records of great crested newt, the closest of which was located 350 m north-west of the survey area. There were no ponds (potential breeding sites) present on site, however the woodland, hedgerow understory, poor semi-improved grassland, tall ruderal and field margins provide areas of suitable habitat for the terrestrial phase of their life cycle. Reference to Ordnance Survey mapped data and aerial imagery indicates that there are nine ponds within a 500 m radius of the survey area. The closest pond is located 120 m south. Due to the suitable terrestrial habitat on site and the proximity of suitable ponds a recommendation for further survey work has been made in Section 7.3.

Reptiles

The desk study provided six records of grass snake, the closest of which was located 700 m north of the survey area. The desk study also provided a record of common lizard within 1 km of the survey area. The woodland, tall ruderal, poor semi-improved grassland margins and hedgerow understory on site provide suitable habitat for reptiles offering opportunities for foraging, refuge and hibernation. The site is also well connected to suitable habitat in the surrounding landscape (poor semi-improved grassland within the adjacent golf course). If suitable habitat is to be removed to facilitate a development in the future, there is the potential for impacts to reptiles. Therefore, a recommendation for further survey work has been made in Section 7.3.

Birds

The desk study provided records of twelve bird species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) within a 1 km radius of the survey area. The desk study also provided several records of Species of Principal Importance within a 1 km radius of the survey area. The specific breeding ranges and habitat requirements of the Schedule 1 species (listed in Table 4.2) mean that they are unlikely to nest within the survey area. There was, however, suitable nesting habitat for notable and common bird species within the scrub, trees and hedgerows. The tall ruderal vegetation was also considered suitable to support ground nesting species. Clearance of these habitats, if required, has the potential to directly impact nesting birds if undertaken during the nesting season. Therefore, a recommendation regarding the timing of works has been made in Section 7.3.

If significant areas of nesting habitat are to be lost to facilitate the development (lengths of hedgerow or woodland) then appropriate compensation will be required in line with the mitigation hierarchy. Please refer to Section 7.2.

Invertebrates

The desk study provided records of two butterflies and 30 moths that are listed as Species of Principal Importance, within a 1 km radius of the survey area. Although any invertebrate species present within the site may be temporarily displaced during the construction phase any future development, providing new habitats are created as part of the development incorporating nectar-rich plant species, no long-term impact

on terrestrial invertebrates is anticipated. A recommendation regarding general habitat enhancement, which would increase the value of the site for invertebrates is made in Section 7.2.

Bony fish
The desk study provided seven records of European eel potentially within a 1 km radius of the survey area and two record of barbel located 800 m west of the survey area. The site lacks a suitable watercourse or connections to a suitable watercourse. Therefore, bony fish are not a notable consideration

Botanical
The desk study provided records several plant species within a 1 km radius of the survey area. No notable plant species were recorded on site during the field survey which was undertaken at a suitable time of year for botanical assessments. In addition, given the common and widespread nature of the habitats on site, it is unlikely to support any notable plant species. Therefore, plants are not a notable consideration with regards to the proposed development.

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: white-clawed crayfish *Austropotamobius pallipes* and water vole *Arvicola amphibius.*

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	#	Direct harm/injury, habitat loss, fragmentation through increases in lighting
Hedgehog	✓	Direct harm/injury, habitat loss / disturbance
Brown hare	✓	Direct harm/injury, habitat loss / disturbance
Amphibians	#	Direct harm/injury, habitat loss/ disturbance
Reptiles	✓	Direct harm/injury, habitat loss/ disturbance
Birds	#	Direct harm/injury, habitat loss/ disturbance
Key: #: Species dependent		

Table 6.2: Summary of Potential Impacts on Notable Species

6.5 INVASIVE PLANT SPECIES

The desk study provided five records of invasive plant species within a 1 km radius of the survey area. No invasive plant species were recorded on site during the survey which was undertaken at a suitable time of year for botanical assessments. A precautionary recommendation for vigilance has been made in Section 7.4 given that parts of the woodland could not be fully inspected.

7. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the potential development. Once the proposal for the site is finalised, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

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

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

7.1 NATURE CONSERVATION SITES

No recommendations are made in regard to nature conservation sites.

7.2 HABITATS

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

R1 **Habitat Retention and Protection:** The development proposals should be designed (where feasible) to allow for the retention of existing notable habitats comprsing: broadleaved woodland and hedgerows. Protection measures comprise:

- Trees/Hedgerows: Any trees/hedgerows on or overhanging the site, which are 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.

If retention is not possible, appropriate replacement planting should be incorporated into the soft landscape scheme in accordance with the ecological mitigation hierachy. Only native and/or wildlife attracting species should be planted.

R2 **Biodiversity Enhancement:** In accordance with the provision of Chapter 15 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy (Policy 43), biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed development to work towards delivering net gains for biodiversity. This will involve, for example:

- Planting of habitats which will be of value to wildlife, such as:
  - native seed/fruit bearing species to provide foraging habitat for mammals and birds;
  - nectar-rich species to attract bees, butterflies and moths;
  - wildflower grassland margins to provide larval food for caterpillars and to attract butterfly and moth species such as small heath; and,
  - 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*.
- Inclusion of hedgehog passes under any fence lines to allow connectivity between the site and the wider area.
- Provision of nesting/roosting habitat, such as installation of nest boxes for species such as house sparrow, dense scrub for species such as song thrush, and bat boxes for species such as pipistrelle.

R3 **Lighting:** In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential

disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

- Avoiding the installation of new lighting in proximity to key ecological features, such as the woodland edge or hedgerows.
- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.
- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.
- For internal lights, recessed light fittings cause significantly less glare than pendant type fittings. The use of low-glare glass may also be appropriate where internal lighting has the potential to influence sensitive ecological receptors.

7.3 PROTECTED / NOTABLE SPECIES

To ensure compliance with wildlife legislation and Bedford Borough Local Plan 2030 Policy 42s 'Protecting biodiversity and geodiversity', the following recommendations are made:

R4 **Roosting Bats:** A Preliminary Ground Level Bat Roost Assessment should be undertaken on the woodland and hedgerow trees which may be impacted by the proposed development works. This assessment can be completed at any time of year. Dependent upon the results of the preliminary assessment, nocturnal emergence and dawn re-entry surveys could be required. Surveys should be undertaken in line with best practice survey guidelines (Collins, 2016), during the bat activity season. The bat activity season is considered to extend from May to September (inclusive), with the optimum survey period between mid-May and August (inclusive).

R5 **Badger:** Badgers are a notable consideration in relation to the development and the recommendations made within the Confidential Badger Annex should be adhered to.

R6 **Terrestrial Mammals including Badger, Hedgehog and Brown hare:** 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.

R7 **Great Crested Newt:** A Great Crested Newt Habitat Suitability Index (HSI) Assessment should be undertaken for all ponds identified within 500 m of the edge of the proposed development. Great Crested Newt HSI Assessments can be carried out at any time of year, although if possible it is preferable to carry out the assessments between March and October. The HSI Assessment will inform the need for full presence/absence surveys.

R8 **Reptiles:** A Reptile Survey should be undertaken of suitable habitats within the proposed development site. Reptile Surveys can be completed in suitable weather conditions between April and September (inclusive).

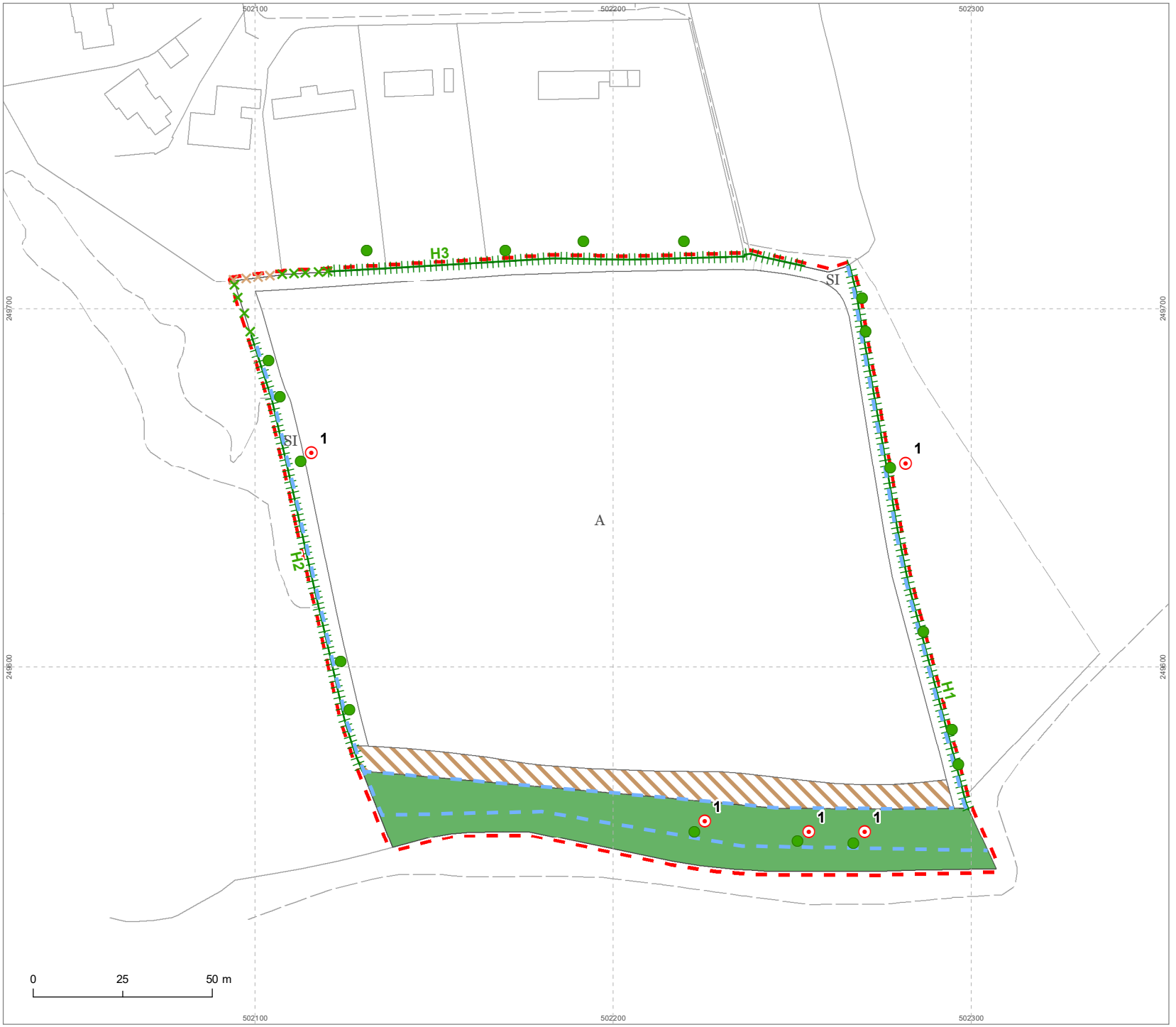
R9 **Nesting Birds:** Vegetation clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation to be removed or disturbed 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.

7.4 INVASIVE PLANT SPECIES

R10 **Invasive plant species**: Vigilance should be used throughout the course of the works to ensure that the works are not causing invasive plant species to spread in the wild.

8. DRAWINGS

Drawing C152783-01 – Phase 1 Habitat Map



C152783-01-01

Legend

- Site boundary
- Scattered shrub
- Scattered scrub
- Scattered tree
- Dry ditch
- Species-poor hedgerow with trees
- A — Arable
- SI — Poor semi-improved grassland
- Semi-natural broad-leaved woodland
- Tall ruderal
- Target note
  1. Tree with bat potential

N

Project	Land at Vicars Close, Biddenham
Drawing	Phase 1 Habitat Map
Client	Phillips Planning Ltd
Drawing Number: C152783-01-01	Revision: 00
Scale @ A4: 1:1500	Date: Agosto 2020
Approved By: DB	Drawn By: CD

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9. PHOTOGRAPHS

Plate 9.1: Arable field

Plate 9.2: Dry ditch and Scattered scrub

Plate 9.3: Intact species-poor hedgerows with trees

Plate 9.4: Poor semi-improved grassland

Plate 9.5: Tall ruderal vegetation

Plate 9.6: Semi-natural broadleaved woodland

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APPENDICES

APPENDIX 1: Summary of Statutory Nature Conservation Sites

APPENDIX 2: Overview of Relevant Species Specific Legislation

APPENDIX 1

Summary of Statutory Nature Conservation Sites

UK Statutory Sites

Local Nature Reserves (England)
Reference
1008808
Name
BROMHAM LAKE
Hectares
10.89
Hyperlink
https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1008808

Sites of Special Scientific Interest (England)
Name
Biddenham Pit SSSI
Reference
1002809
Natural England Contact
NAOMI STEVENSON
Natural England Phone Number
0845 600 3078
Hectares
0.42
Citation
1000892
Hyperlink
http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000892

Ancient Woodland (England)
No Features found

National Nature Reserves (England)
No Features found

OK Cancel Print

SSSI Impact Risk Zones

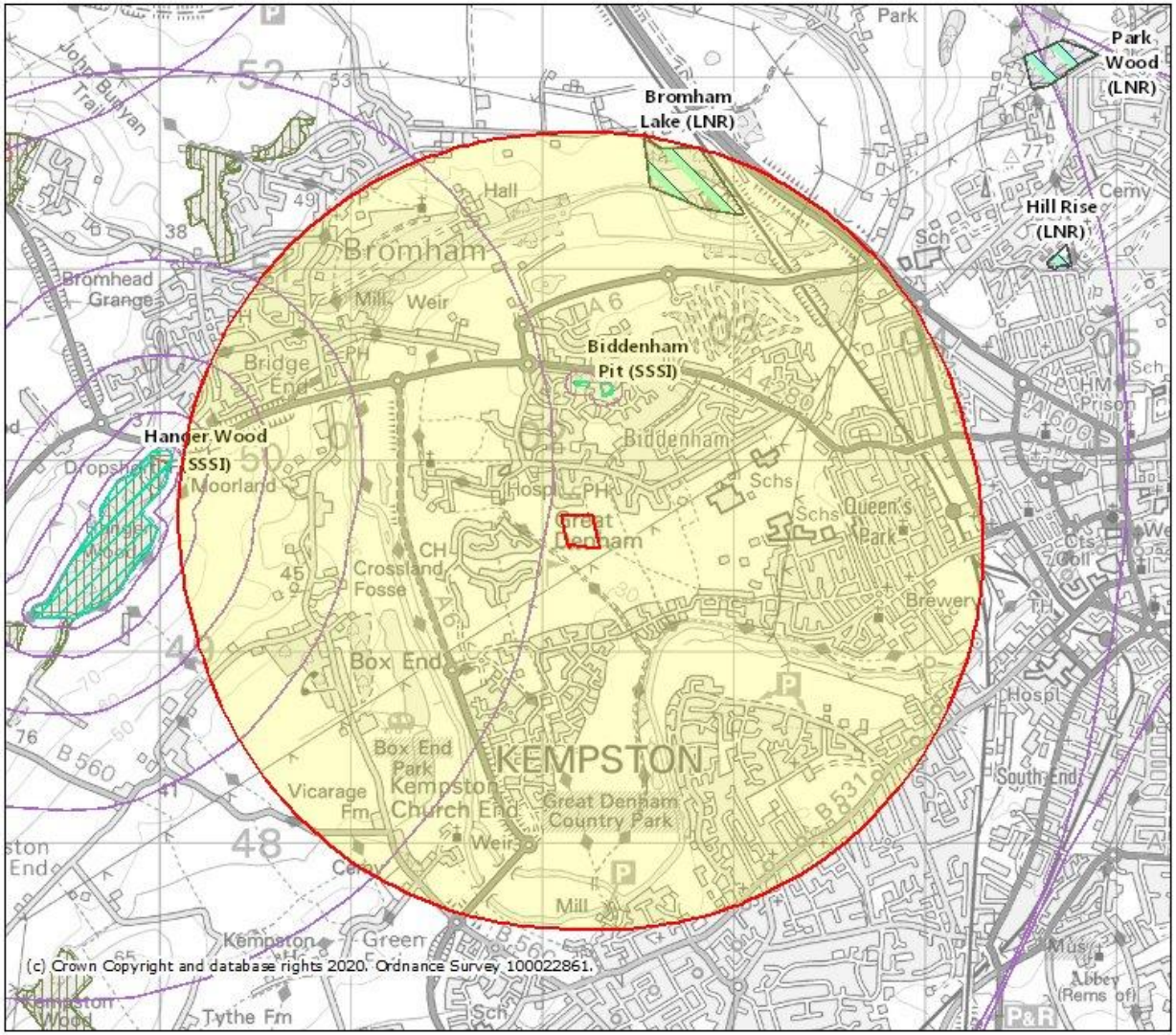
SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications
Infrastructure
Airports, helipads and other aviation proposals.
Wind & Solar Energy
Minerals, Oil & Gas
Rural Non Residential
Residential
Rural Residential
Air Pollution
Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.
Combustion
Waste
Composting
Discharges
Water Supply
Notes 1
Notes 2
GUIDANCE - How to use the Impact Risk Zones
/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf

European Statutory Sites

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
Potential Special Protection Areas (England)
No Features found

MAGiC

UK Statutory Sites within 2 km



Legend

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

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
xmin = 496800
ymin = 247100
xmax = 507700
ymax = 252300

0 0.55 1.1
km

Map produced by MAGIC on 7 August, 2020.

APPENDIX 2

Overview of Relevant Species Specific Legislation

Bats
Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). 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.

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

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

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

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

The following bat species are Species of Principal Importance for Nature Conservation in England: Barbastelle Bat *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule Bat *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros*.

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

- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

A badger sett is defined in the legislation as:

- *'Any structure or place that displays signs indicating current use by a badger'*.

'Current use' is not synonymous with current occupation and a sett is defined as such (and thus protected) as long as signs of current usage are present. Therefore, a sett is protected until such a time as the field signs deteriorate to such an extent that they no longer indicate 'current usage'.

Badger sett interference can result from a multitude of operations including excavation and coring, even if there is no direct damage to the sett, such as through the disturbance of badgers whilst occupying the sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England[30]. In England a licence must be obtained from Natural England before any interference with a badger sett occurs.

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.

Great Crested Newt
Great crested newts (GCN) and the places they use for shelter or protection receive European protection under The Conservation of Habitats and Species Regulations 2017, (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that GCN, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a GCN;
- deliberately disturb GCN;
- deliberately take or destroy eggs of a GCN; or
- damage or destroy a GCN breeding site or resting place.

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

It is an offence under the Habitats Regulations 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 GCN, part of a GCN or anything derived from GCN, which has been unlawfully taken from the wild. This legislation applies to all life stages of GCN.

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

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

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

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

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 are not known to occur within Bedfordshire. Common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), adder (*Vipera berus*) and grass snake (*Natrix natrix*) are protected under the Wildlife and Countryside Act 1981 as amended from intentional killing or injuring.

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

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

Birds

The Conservation of Habitats and Species Regulations 2017 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.

CONFIDENTIAL BADGER ANNEX