

Preliminary Ecological Appraisal

71-73 Caversham Road, Reading

A Report to: Quod
Report Number: 158559-01
Date: August 2022



Quality Assurance

Date	Version	Author	Checked by	Approved by
18/08/2022	Final	Amelia Collins BSc (Hons) (Ecological Project Officer) and Stephanie Packer BSc (Hons) (Senior Ecological Consultant)	Paul Roebuck MSc MCIEEM (South East Manager)	Paul Roebuck MSc MCIEEM (South East Manager)

Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of Practice for Planning and Development”. 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

Project Background

In July 2022, Quod commissioned Middlemarch to undertake a Preliminary Ecological Appraisal of the site of a proposed development at 71-73 Caversham Road, Reading. This assessment is required to inform a planning application associated with the proposed demolition of the existing warehouse building in the east of the site and redevelopment into a multi-storey apartment block with retail space on the ground floor. The office building in the west of the site will not be impacted.

Scope of Appraisal

To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on 2nd August 2022 by Amelia Collins (Ecological Project Officer). During the survey, a Habitat Condition Assessment was carried out to determine the ecological status of each habitat recorded. A Preliminary Evaluation was undertaken to determine which features are likely to be a material consideration for the proposed development at the site.

Material Considerations

The survey area falls within the Thames Valley National Character Area (NCA). There has been much development within the NCA in recent history, and continued pressures within the next 20 years provide scope for creating new landscapes with good green infrastructure links. Therefore, the NCA is assessed as being a material consideration for the proposed development.

The site was dominated by the built environment with scattered introduced shrubs. There are no habitats on site that are considered to be a material consideration in the planning system.

An evaluation of the potential presence of protected/notable species on site identified the following species or species groups as material considerations: bats, birds, badger and hedgehog.

Recommendations

In order to ensure compliance with wildlife legislation and relevant planning policy and to secure a net gain for biodiversity overall, the following recommendations are made:

Nature Conservation Sites	No recommendations are made regarding nature conservation sites.
Further Ecological Surveys	Bats – A Preliminary Bat Roost Assessment should be undertaken if works have not commenced within 12 months of the survey of Building B1, or if plans change to include works to Building B2.
Ecological Safeguarding Measures	Terrestrial Mammals including Badger and Hedgehog – Any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each workday to prevent animals entering/ becoming trapped. Nesting Birds – Vegetation and building clearance should be undertaken outside the nesting bird season. 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.
Scheme Design	The proposed development should be designed in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework, and the National Planning Practice Guidance. In accordance with the principles of the Environment Act 2021 the development should also secure an overall net gain for biodiversity. Please refer to the Biodiversity Net Gain Assessment (Report RT-MME-158559-02) for more details.

**Management Plans
and Strategies**

A Landscape and Ecology Management (LEMP) should be produced setting out the detailed establishment and management of all on site compensation and enhancement measures.

Contents

1. Introduction.....	7
1.1. Project Background	7
1.2 Site Description and Context.....	7
1.3 Documentation Provided	7
2. Methods.....	9
2.1 Desk study	9
2.2 Phase 1 Habitat Survey.....	9
2.3 Preliminary Evaluation.....	10
3. Desk Study	11
3.1 Landscape Initiatives	11
3.2 Nature Conservation Sites	11
3.3 Habitats.....	12
3.4 Protected / Notable Species.....	13
3.5 Invasive Species.....	16
4. Survey Results	17
4.1 Introduction.....	17
4.2 Habitats.....	17
4.3 Protected / Notable Species.....	17
4.4 Invasive Species.....	18
5. Preliminary Evaluation.....	19
5.1 Landscape Initiatives	19
5.2 Nature Conservation Sites	19
5.3 Habitats.....	19
5.4 Protected / Notable Species.....	20
5.5 Invasive Species.....	21
6. Preliminary Impact Assessment.....	22
6.1 Summary of Proposals	22
6.2 Landscape Initiatives	22
6.3 Nature Conservation Sites	22
6.4 Habitats.....	23
6.5 Protected / Notable Species.....	23
6.6 Invasive Plant Species	23
7. Recommendations	24
8. Drawings.....	26
9. Photographs	29

Appendix 1	31
General Biodiversity Legislation and Policy	31
Local Planning Policy	34
Appendix 2	36
Relevant Species Legislation	36
Appendix 3	39
Survey Timings.....	39

1. Introduction

1.1. Project Background

In July 2022, Quod commissioned Middlemarch to undertake a Preliminary Ecological Appraisal of the site of a proposed development at 71-73 Caversham Road, Reading. This assessment is required to inform a planning application associated with the proposed demolition of the existing warehouse building in the east of the site and redevelopment into a multi-storey apartment block with retail space on the ground floor. The office building in the west of the site will not be impacted.

Middlemarch has previously carried out a Preliminary Ecological Appraisal at this site in 2019. The findings of this survey are detailed in Report RT-MME-150997-01. Due to the amount of time that has elapsed since the previous survey was completed, it was recommended that an updated Preliminary Ecological Appraisal should be undertaken.

The purpose of the Preliminary Ecological Appraisal is to identify the features of ecological importance on site and provide a preliminary assessment of the potential impacts the proposed development could have on these features. In addition, Middlemarch has been commissioned to undertake a Biodiversity Net Gain Assessment for the site, the findings of which are detailed in Report RT-MME-158559-02.

A Preliminary Roost Assessment has also previously been carried out at this site in January 2022 by Amphibian, Reptile and Mammal Conservation Ltd.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Location	Reading, Berkshire
National Grid Reference	SU 712 740
Site Area (ha)	0.17
Topography	Flat
Land Cover (on site)	The site is dominated by the built environment, with some scattered introduced shrubs at the peripheries.
Land Cover (site surrounds)	The wider landscape is dominated by an urban setting, comprising a mixture of industrial units and residential properties.

Table 1.1: Summary of Site and Surroundings

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 1.2.

Document / Drawing Number	Author
Site Location Plan: MP_SW_1000 Rev P2	JTP Studios
Existing Site Plan: MP_SW_1004 Rev P1	JTP Studios
Proposed Site Plan: MP_SW_1001 Rev P1	JTP Studios
Proposed Ground Floor Plan: MP_PL_1102 Rev P2	JTP Studios
Proposed First Floor Plan: MP_PL_1103 Rev P2	JTP Studios
Proposed Second Floor Plan: MP_PL_1104 Rev P2	JTP Studios
Proposed Third Floor Plan: MP_PL_1105 Rev P1	JTP Studios
Proposed Fourth Floor Plan: MP_PL_1106 Rev P1	JTP Studios
Proposed Fifth Floor Plan: MP_PL_1107 Rev P1	JTP Studios
Proposed Roof Plan: MP_PL_1108 Rev P1	JTP Studios
Demolition – Existing Ground Floor Plan: MP_DL_1500 Rev P1	JTP Studios
Demolition – Existing First Floor Plan: MP_DL_1501 Rev P1	JTP Studios
Preliminary Roost Assessment	Amphibian, Reptile and Mammal Conservation Ltd

Table 1.2: Documentation Provided by Client

2. Methods

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 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;
- Reading Borough Council website; and,
- Thames Valley Environmental Records Centre.

The desk study included a search for:

- Landscape Scale Conservation Initiatives;
- European statutory nature conservation sites in the UK (now referred to as the 'National Site Network') 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 habitats and species records within a 1 km radius.

The data collected from the consultees are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are 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 Appendix 1).

2.2 Phase 1 Habitat Survey

A field survey was conducted following the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee¹ and the Institute of Environmental Assessment². 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, a Habitat Condition Assessment was carried out to determine the ecological status of each habitat recorded. The condition assessment was assessed using published criteria in Panks *et al.* (2022)³, the details of which are presented in Section 8.

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

² Institute of Environmental Assessment. (1995). *Guidelines for Baseline Ecological Assessment*, Institute of Environmental Assessment. E&FN Spon, An Imprint of Chapman and Hall. London.

³ Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) *The Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: Technical Supplement*. Natural England.

During the survey, the presence or potential presence of protected species was noted where observed. This included a review of suitable habitat opportunities or field signs of notable species groups (amphibians, bats, birds, terrestrial and aquatic invertebrates, terrestrial and aquatic mammals, plants and reptiles).

The survey was carried out on 2nd August 2022 by Amelia Collins (Ecological Project Officer). Table 2.1 details the weather conditions at the time of the survey

Parameter	Condition
Temperature (°C)	23
Cloud (%)	100
Wind (Beaufort)	F3
Precipitation	Nil

Table 2.1: Weather Conditions During Field Survey

Field Survey Constraints and Limitations

The survey was carried out in August, which is within the recommended timeframe for completing a Preliminary Ecological Appraisal (March – October). No survey constraints were experienced during the site visit.

2.3 Preliminary Evaluation

The Preliminary Evaluation is an initial review of the ecological data to determine which features are likely to be a material consideration for the proposed development at the site. A material consideration is an ecological feature that by virtue of its legal status, its inclusion in any national policy or plan, rarity or contribution to local ecological networks, is worthy of further consideration in the planning system. Typical material considerations include statutory or non-statutory nature conservation sites, species protected by law, Habitat and Species of Principal Importance in England as defined by the Natural Environment and Rural Communities (NERC) Act 2006 or other ecological corridors and biodiversity opportunities areas outlined in local policy.

3. Desk Study

3.1 Landscape Initiatives

National Character Areas (NCAs) are areas that share similar landscape characteristics and follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment. Reading is located within two NCAs: the Chilterns to the north of the River Thames and the Thames Valley to the south. The survey area falls within the Thames Valley NCA.

3.2 Nature Conservation Sites

The desk study revealed no statutory nature conservation sites within the search areas. Non-statutory nature conservation sites located in proximity to the survey area are summarised in Table 3.1.

Site Name	Designation	Proximity to the Survey Area	Description
Non-statutory Sites			
Cow Lane Depot	LWS	520 m south-west	A small isolated, triangular site bounded by a railway track. The site forms a mosaic of habitats ranging from willow scrub with mature trees, to standing open water with swamp to ruderal and tall herb grassland. The site has a varied topography with a steep north facing slope colonised by buddleia <i>Buddleja davidii</i> , hazel <i>Corylus avellana</i> and goat willow <i>Salix caprea</i> . Standing water has collected at the centre of the site with stands of greater pond sedge <i>Carex riparia</i> and reedmace <i>Typha latifolia</i> . There is a ground flora of predominantly nettle <i>Urtica dioica</i> and bramble <i>Rubus fruticosus</i> . There is an area of tall ruderal grassland, with species such as red fescue <i>Festuca rubra</i> and creeping bent <i>Agrostis stolonifera</i> .

Table 3.1: Summary of Nature Conservation Sites (continues)

Site Name	Designation	Proximity to the Survey Area	Description
Non-statutory Sites (continued)			
The Warren Woodlands Complex	LWS	930 m north-west	The Warren Woodlands Complex consists of six sites. Warren Woods Chalkpit is at the western end of the site and comprises a small chalkpit with a vertical face and scree. Soils are a mix of calcareous and neutral on spoil, with scattered scrub, young trees, ruderal and woodland herbs. Chalkpit Wood surrounds the chalkpit and is largely semi-natural woodland consisting mostly of beech <i>Fagus sylvatica</i> , ash <i>Fraxinus excelsior</i> and oak <i>Quercus</i> sp., with a diverse tree and shrub flora. Ground flora includes wood melick <i>Melica uniflora</i> , sanicle <i>Sanicula europaea</i> , and white helleborine <i>Cephalanthera damasonium</i> . Chazney Wood is a long section of semi-natural woodland, with a mixture of beech, ash and sycamore <i>Acer pseudoplatanus</i> , as well as scattered Scot's pine <i>Pinus sylvestris</i> and yew <i>Taxus baccata</i> . Grass Hill and Warren Court Wood consists of two adjoining sites, with mixed beech, ash, sycamore and yew. Woodrow Court Wood lies further to the east. The Long Drain is a linear site that includes a steep chalk bank. Tree species include beech and ash, with areas of wet woodland and sedge swamp, which supports the nationally scarce Loddon lily <i>Leucojum aestivum</i> .
Key: LWS: Local Wildlife Site			

Table 3.1 (continued): Summary of Nature Conservation Sites

The site is located within an Impact Risk Zone for Hartslock Site of Special Scientific Interest (SSSI), which is located 9.9 km north-west.

3.3 Habitats

Table 3.2 summarises known priority or notable habitats within a 1 km radius of the site.

Habitat Type	No. of Records	Location of Nearest Record
Lowland mixed deciduous woodland	17	350 m north
Wet woodland	1	520 m south-west
Open mosaic habitat	1	805 m west
Possible priority grassland	1	865 m north-west

Table 3.2: Summary of Priority/Notable Habitats

There are three watercourses within 1 km of the site. The closest is the River Thames, which runs 300 m north of the site. The Kennet and Avon Canal is located 880 m south-east of the site, and Holy Brook runs 900 m south of the site.

The desk study revealed no ponds within a 1 km radius of the site.

3.4 Protected / Notable Species

Table 3.3 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 Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Amphibians					
Common frog <i>Rana temporaria</i>	2	1997	370 m north-east	-	WCA 5 S9(5)
Smooth newt <i>Lissotriton vulgaris</i>	2	2008	750 m north	-	WCA 5 S9(5)
Great crested newt <i>Triturus cristatus</i>	1	2017	850 m east	✓	ECH 2, ECH 4, WCA 5
Birds					
Black redstart <i>Phoenicurus ochuros</i>	11	2014	270 m south-east	-	WCA1i
Peregrine <i>Falco peregrinus</i>	29	2018	270 m south-east	-	WCA1i
Greylag goose <i>Anser anser</i>	33	2020	420 m north	-	WCA1ii
Kingfisher <i>Alcedo atthis</i>	7	2020	910 m north-west	-	WCA1i
Avocet <i>Recurvirostra avosetta</i>	1	2003	*	-	WCA1i
Brambling <i>Fringilla montifringilla</i>	4	2013	*	-	WCA1i
Fieldfare <i>Turdus pilaris</i>	6	2017	*	-	WCA1i
Firecrest <i>Regulus ignicapilla</i>	2	2016	*	-	WCA1i
Goshawk <i>Accipiter gentilis</i>	2	2005	*	-	WCA 1i
Honey-buzzard <i>Pernis apivorus</i>	1	2000	*	-	WCA1i
Merlin <i>Falco columbarius</i>	1	2005	*	-	WCA1i

Table 3.3: Summary of Protected/Notable Species Records (continues)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Birds (continued)					
Montagu's harrier <i>Circus pygargus</i>	1	2004	*	-	WCA1i
Osprey <i>Pandion haliaetus</i>	1	2005	*	-	WCA1i
Red kite <i>Milvus milvus</i>	54	2020	*	-	WCA1i
Redwing <i>Turdus iliacus</i>	13	2020	*	-	WCA1i
Fish					
Barbel <i>Barbus barbus</i>	3	2005	770 m east	-	ECH 5
Invertebrates					
Stag beetle <i>Lucanus cervus</i>	59	2020	280 m north-east	✓	ECH 2, WCA 5 S9(5)
White-letter hairstreak <i>Satyrrium w-album</i>	1	2018	830 m west	-	WCA 5 S9(5)
Mammals - Bats					
Common pipistrelle <i>Pipistrellus pipistrellus</i>	68	2019	110 m west	-	ECH 4, WCA 5, WCA 6
Noctule <i>Nyctalus noctula</i>	45	2020	230 m south	✓	ECH 4, WCA 5, WCA 6
Daubenton's bat <i>Myotis daubentonii</i>	83	2019	240 m north	-	ECH 4, WCA 5, WCA 6
Nathusius's pipistrelle <i>Pipistrellus nathusii</i>	16	2021	240 m east	-	ECH 4, WCA 5, WCA 6
Pipistrelle <i>Pipistrellus</i> sp.	36	2020	240 m east	#	ECH 4, WCA 5, WCA 6
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	59	2020	240 m east	✓	ECH 4, WCA 5, WCA 6
Unidentified bat <i>Chiroptera</i> sp.	8	2019	240 m east	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Unidentified myotis <i>Myotis</i> sp.	17	2019	240 m east	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Long-eared bat <i>Plecotus</i> sp.	4	2018	690 m south	#	ECH 4, WCA 5, WCA 6
Serotine bat <i>Eptesicus serotinus</i>	3	2019	690 m south	-	ECH 4, WCA 5, WCA 6
Brown long-eared bat <i>Plecotus auritus</i>	6	2017	*	✓	ECH 4, WCA 5, WCA 6
Leisler's bat <i>Nyctalus leisleri</i>	1	2017	*	-	ECH 4, WCA 5, WCA 6

Table 3.3 (continued): Summary of Protected/Notable Species Records (continues)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals - Other					
Hedgehog <i>Erinaceus europaeus</i>	9	2021	440 m west	✓	WCA 6
Otter <i>Lutra lutra</i>	2	2019	580 m east	✓	ECH 2, ECH 4, WCA 5, WCA 6
Badger <i>Meles meles</i>	15	2021	†	-	WCA 6, PBA
Reptiles					
Grass snake <i>Natrix helvetica</i>	1	2016	520 m west	✓	WCA 5 S9(1), WCA 5 S9(5)
Slow worm <i>Anguis fragilis</i>	2	2008	830 m north	✓	WCA 5 S9(1), WCA 5 S9(5)
Common lizard <i>Zootoca vivipara</i>	2	2013	850 m west	✓	WCA 5 S9(1), WCA 5 S9(5)
Key: #: Dependent on species. †: Badger records are confidential and therefore proximity is not provided within the report. *: Potentially within a 1 km radius (grid reference provided was four 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. Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.					

Table 3.3 (continued): Summary of Protected/Notable Species Records

Birds

The desk study returned records of 12 bird species listed as Species of Principal Importance, including house sparrow *Passer domesticus*, lesser redpoll *Acanthis cabaret*, and song thrush *Turdus philomelos*.

Invertebrates

Records of 17 moth species listed as Species of Principal Importance were returned, including shoulder-striped wainscot *Leucania comma*, cinnabar *Tyria jacobaeae*, buff ermine *Spilosoma lutea*, and white ermine *Spilosoma lubricipeda*.

In addition, one record of a Notable A species, the red-girdled mining bee *Andrena labiate*, was provided as well as a record of a Notable B species, the four-banded flower bee *Anthophora quadrimaculata*.

Furthermore, the desk study identified two records of species listed as Vulnerable, the beetle *Stenelmis canaliculate* and the mayfly *Ephemera lineata*.

3.5 Invasive Species

Table 3.4 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 Survey Area	Legislation / Conservation Status
Himalayan balsam <i>Impatiens glandulifera</i>	1	2015	840 m east	WCA 9
Japanese knotweed <i>Fallopia japonica</i>	4	2015	840 m east	WCA 9
Nuttall's waterweed <i>Elodea nuttallii</i>	1	2019	*	WCA 9
Key: *: Potentially within a 1 km radius (grid reference given to four figures only). WCA 9: Schedule 9 of Wildlife and Countryside Act 1981 (as amended). Invasive, non-native, plants and animals.				

Table 3.4: Summary of Invasive Species Records

4. Survey Results

4.1 Introduction

A Phase 1 Habitat Survey Drawing (Drawing C158559-01-01), illustrating the location and extent of all habitat types recorded on site, is provided in Chapter 8. Detailed habitat descriptions and a summary of the condition assessment for each habitat type using Panks *et al.* (2022)³ is also included in Chapter 8.

4.2 Habitats

Table 4.1 details the types, extent and ecological condition of the habitats which were recorded on site during the field survey visit. Photographs taken during the field survey are presented in Chapter 9.

Habitat	Area (ha) / Length (km)	Condition	Photo Reference
Buildings and hardstanding	0.17 ha	-	9.1 to 9.6
Scattered Introduced shrub	-	-	9.7
Boundaries – fence	0.02 km	-	9.8
Boundaries – wall	0.04 km	-	9.9

Table 4.1: Summary of Habitats Recorded on Site

4.3 Protected / Notable Species

Table 4.2 summarises the suitability of the site for protected/notable species and any species/evidence of species that were recorded during the survey. The time of year at which the survey is undertaken will affect species or field signs directly recorded during the survey.

Species/Group	Description
Amphibians	The site and surrounding area were dominated by the built environment. There was no aquatic or terrestrial habitat on site for amphibians, and there are no ponds within 500 m of the site.
Badger	The site and surrounding area were dominated by the built environment. There was no suitable sett building habitat on site or within the surrounding area. Also, there was no suitable foraging habitat on site. However, a railway line with vegetated sides is located approximately 120 m south-west of the site, which may provide suitable sett building habitat and foraging habitat for badgers. The residential gardens to the west of the site and the shrub beds within the car park to the south-west provide additional foraging opportunities in the vicinity of the site. Badgers are very mobile, and therefore they could potentially pass through the site occasionally.

Table 4.2: Summary of Species/Species Evidence Recorded on Site (continues)

Species/Group	Description
Bats	The Preliminary Roost Assessment carried out in January 2022 by Amphibian, Reptile and Mammal Conservation Ltd assessed the warehouse building (B1) as having negligible potential to support roosting bats. However, during the walkover survey the office building (B2) was noted to contain some potential roosting features. The site and surrounding area were dominated by the built environment. Lighting associated with the buildings and network of roads and footpaths is likely to discourage bats from using the site, particularly with it containing limited foraging habitat. However, the site is situated between a railway line and the River Thames, and therefore bats may commute over the site to reach these valuable foraging areas and commuting corridors.
Birds	The buildings provide suitable nesting opportunities for birds, particularly along the ledges and edge of the roofs. Bird droppings and several feathers were found on the floor beneath a ledge on the north-eastern corner of the warehouse building (B1), possibly indicating the presence of a nest. Whilst most of the scattered introduced shrubs growing on site were too immature and low level for nesting birds, some of the larger shrubs along the southern boundary could potentially support small passerines.
Dormouse	The site and surrounding area were dominated by the built environment. There was no suitable habitat for dormouse.
Hedgehog	The site and surrounding area were dominated by the built environment. There was no suitable foraging or refuge habitat for hedgehogs on site. However, a railway line with vegetated sides is located approximately 120 m south-west of the site, which may provide suitable habitat for hedgehogs. The residential gardens to the west of the site and the shrub beds within the car park to the south-west provide additional foraging/refuge opportunities in the vicinity of the site. Hedgehogs are very mobile, and therefore they could potentially pass through the site occasionally.
Invertebrates – aquatic	The site and surrounding area were dominated by the built environment. There was no aquatic habitat on site, or adjacent to the site, for aquatic invertebrates.
Invertebrates – terrestrial	The site and surrounding area were dominated by the built environment. There were limited opportunities for terrestrial invertebrates on site, with only scattered introduced shrubs growing on site. There was no deadwood present.
Reptiles	The site and surrounding area were dominated by the built environment. There was no suitable habitat on site, or adjacent to the site, for reptiles.
Semi-aquatic mammals	The site and surrounding area were dominated by the built environment. There were no watercourses or waterbodies on site, or adjacent to the site, to provide suitable habitat for otter or water vole.
Plants	The site and surrounding area were dominated by the built environment. Only a few common and widespread introduced shrub species were growing on site. No notable plant species were present.

Table 4.2 (continued): Summary of Species/Species Evidence Recorded on Site

4.4 Invasive Species

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

5. Preliminary Evaluation

5.1 Landscape Initiatives

The River Thames provides a unifying feature through a diverse landscape of urban and suburban settlements, infrastructure networks, fragmented agricultural land, historic parks, commons, woodland, reservoirs and extensive minerals workings. There has been much development within the Thames Valley NCA in recent history, and continued pressures within the next 20 years provide scope for creating new landscapes with good green infrastructure links. Therefore, the NCA is assessed as being a material consideration for the proposed development.

5.2 Nature Conservation Sites

European Statutory Sites

There are no European statutory nature conservation sites within 5 km of the survey area.

UK Statutory Sites

The site is located within an Impact Risk Zone for Hartslock SSSI. SSSI's are statutory nature conservation sites of national importance, and so Hartslock SSSI is a material consideration for the proposed development.

Non-Statutory Sites

There are two non-statutory nature conservation sites located within 1 km of the survey area: Cow Lane Depot LWS and The Warren Woodlands Complex LWS. LWS's are of local importance and help contribute towards landscape initiatives. Therefore, these two sites are a material consideration for the proposed development.

5.3 Habitats

An evaluation of the importance of each habitat recorded on site is summarised in Table 5.1.

Habitat Type	Material Consideration?	Rationale
Buildings	No	Whilst the buildings may provide potential roosting locations for bats and nesting locations for birds, buildings are a common and widespread habitat that can easily be replaced.
Hardstanding	No	The areas of hardstanding do not provide any opportunities for biodiversity.
Scattered introduced shrub	No	This is a common, widespread habitat with low ecological value, and it can easily be replaced.

Table 5.1: Preliminary Evaluation of Habitats

All habitats have the capacity to be important in the context of the site as they contribute to the overall biodiversity value of the site when quantified using a biodiversity metric tool. The Biodiversity Metric tool uses habitat attribute data to assign a comparable value of biodiversity using habitat area, quality (distinctiveness) and condition. Therefore, habitats of high quality and those of low quality with a high spatial coverage, can still be of intrinsic importance for achieving biodiversity net gain targets irrespective of whether they are a material consideration or not.

5.4 Protected / Notable Species

An evaluation of the potential presence of protected / notable species on site is summarised in Table 5.2.

Species/Species Group	Material Consideration?	Rationale
Amphibians	No	It is considered highly unlikely that amphibians are present and using the site due to a lack of suitable habitat and high levels of human disturbance.
Badger	Yes*	Whilst there is no suitable habitat for badgers on site, there is suitable sett building habitat along the railway line located approximately 120 m south-west of the site, and there is foraging habitat within the residential gardens to the west of the site and the shrub beds in the car park to the south-west. Badgers are very mobile, and therefore they could potentially pass through the site occasionally. The desk study revealed 15 records of badger within a 1 km radius of the survey area. Badgers and their setts are protected under the Protection of Badgers Act 1992.
Bats	Yes*	The site supports some bat roosting features, but there are limited foraging opportunities on site. However, there are records of at least eight bat species within a 1 km radius of the site, with notable commuting corridors afforded by the vegetated railway line 120 m to the south-west and the River Thames 300 m to the north. Several bat species are Species of Principal Importance, and all afford full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (As amended).
Birds	Yes*	The site supports some suitable nesting habitat for birds, with evidence of a possible bird nest on the north-eastern corner of the warehouse building (B1). The desk study revealed records of numerous notable bird species within a 1 km radius of the survey area. Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended).
Dormouse	No	There is no suitable habitat on site, or adjacent to it, for dormouse.
Hedgehog	Yes*	Whilst there is no suitable habitat for hedgehogs on site, there is suitable habitat along the railway line located approximately 120 m south-west of the site, and there is foraging/refuge habitat within the residential gardens to the west of the site and the shrub beds in the car park to the south-west. Hedgehogs are very mobile, and therefore they could potentially pass through the site occasionally. The desk study revealed 9 records of hedgehog within a 1 km radius of the survey area. Hedgehogs receive some protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) and they are a Species of Principal Importance for Nature Conservation in England.

Table 5.2: Preliminary Evaluation of Species (continues)

Species/Species Group	Material Consideration?	Rationale
Invertebrates – aquatic	No	There is no suitable habitat on site, or adjacent to it, for aquatic invertebrates.
Invertebrates – terrestrial	No	It is considered highly unlikely that notable terrestrial invertebrates are present on site due to a lack of suitable habitat and high levels of human disturbance.
Reptiles	No	It is considered highly unlikely that reptiles are present and using the site due to a lack of suitable habitat and high levels of human disturbance.
Semi-aquatic mammals	No	There is no suitable habitat on site, or adjacent to it, for semi-aquatic mammals.
Plants	No	It is considered highly unlikely that notable plants are present on site due to a lack of suitable habitat and high levels of human disturbance.
Key: * Features assessed as material consideration based on available evidence such as existing records or habitat suitability. Conclusions should be evaluated if and when further information about the status of the species becomes available.		

Table 5.2 (continued): Preliminary Evaluation of Species

5.5 Invasive Species

The desk study revealed records of three invasive plant species within a 1 km radius of the survey area. However, no invasive plant species were recorded on site during the survey. Therefore, invasive plant species are not a material consideration for the proposed development.

6. Preliminary Impact Assessment

6.1 Summary of Proposals

Proposals comprise the demolition of the existing warehouse building in the east of the site and redevelopment into a multi-storey apartment block with retail space on the ground floor. The office building in the west of the site will not be impacted.

Construction Phase

The following activities are likely to be associated with the proposed development during the construction phase.

- Site clearance and ground preparation;
- Use and movement of heavy goods vehicles and machinery;
- Storage of plant, materials and waste; and,
- Presence of and movement of site personnel.

Operational Phase

The following activities are likely to be associated with the operational phase of the proposed development.

- Permanent siting of buildings, structures and roads;
- Frequent movement of heavy goods vehicle, cars and other forms of transportation;
- Use of lighting associated with roads and buildings;
- Presence of and movement of site personnel; and,
- Maintenance of landscaping.

6.2 Landscape Initiatives

The proposed development will not result in the loss or fragmentation of habitats as the site and surrounding area were dominated by the built environment. However, increases in development may restrict future opportunities to create good green infrastructure links within the Thames Valley NCA.

6.3 Nature Conservation Sites

European Statutory Sites

There are no European statutory nature conservation sites within 5 km of the survey area.

UK Statutory Sites

The site is located within an Impact Risk Zone for Hartslock SSSI. However, the proposed development does not fall within any of the risk categories for this Impact Risk Zone. Furthermore, given that the site is physically separated from the SSSI by built development and major transport corridors, there is no obvious connectivity between the site and features for which the SSSI is notified, it is considered unlikely that the proposed development will have an adverse effect on the SSSI.

Non-Statutory Sites

There are two non-statutory nature conservation sites located within 1 km of the survey area: Cow Lane Depot LWS and The Warren Woodlands Complex LWS. Given that the site is physically separated from the LWSs by built development and major transport corridors, there is no obvious connectivity between the site and these nature conservation sites, it is considered unlikely that the proposed development will have an adverse effect on the LWSs.

6.4 Habitats

There are no habitats on site that are considered to be a material consideration in the planning system. Therefore, an impact assessment of habitat features was not carried out.

6.5 Protected / Notable Species

Table 6.2 below summarises the potential impacts on species/species groups that are likely to occur as a result of the construction and operational activities of the proposed development described in Section 6.1 above. Only species/species groups considered to be a material consideration in the planning system are included in the impact assessment.

Species / Species Group	Summary of Potential Impacts
Badger	● Killing or injury of badgers during construction phase.
Bats	● Killing or injury of bats and/or damage or disturbance of a bat roost during construction phase. ● Habitat fragmentation, degradation or displacement of foraging/commuting routes due to light spill.
Birds	● Killing or injury of birds and/or damage or disturbance of a bird nest during construction phase. ● Physical loss of bird nesting habitat.
Hedgehog	● Killing or injury of hedgehogs during construction phase.

Table 6.2: Summary of Potential Impacts on Protected/Notable Species

6.6 Invasive Plant Species

No invasive plant species were recorded on site during the survey. Therefore, the proposed development is not expected to result in the disturbance or spread of an invasive plant species during the construction phase or as a result of inappropriate post-construction landscape management.

7. Recommendations

All recommendations provided in this section are based on Middlemarch'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.

R1 Ecological Surveys: The Preliminary Ecological Appraisal has highlighted the presence or potential presence of a range of protected and notable species. It is recommended that the following species surveys are undertaken:

- Bats – Preliminary Bat Roost Assessment (if works have not commenced within 12 months of the survey of Building B1, or if plans change to include works to Building B2).

All further ecological surveys should be undertaken in accordance with best practice methodologies, during the appropriate survey windows. Please refer to Appendix 3.

R2 Ecological Safeguarding Measures: The Preliminary Ecological Appraisal has highlighted the presence or potential presence of a range of protected and notable species. It is recommended that the following safeguarding measures are employed to minimise adverse effects on biodiversity and ensure compliance with UK Wildlife Legislation:

- Terrestrial Mammals including Badger and Hedgehog – Any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each workday to prevent animals entering/becoming trapped.
- Vegetation and building clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation/buildings to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

R3 Scheme Design: The proposed development should be designed in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG). The mitigation hierarchy requires all development schemes to apply the following principles:

- *Avoidance* – the proposed development should seek to avoid/minimise losses of valuable habitats in the first instance and incorporate these features in the landscaping layout of the scheme accordingly. This will help to further avoid and minimise impacts to protected and notable species.
- *Mitigation* – where significant harm cannot be wholly or partially avoided, adverse effects should be minimised by design or through the use of effective mitigation measures such as minimising light spill or providing replacement habitat features.
- *Compensation* – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last

resort or planning permission could be refused. Compensation should include the remediation of lost habitats and/or connectivity, the creation of new habitats of ecological value (taking into account local nature conservation targets of the existing Thames Valley NCA) and providing novel compensation solutions to minimise effects on protected or notable species to ensure compliance with UK wildlife legislation.

In accordance with the principles of the Environment Act 2021 the development should also secure an overall net gain for biodiversity. Biodiversity Net Gain is a planning process that aims to leave biodiversity on site in a better state than it was before, going beyond solely avoiding, mitigating and compensating adverse effect on biodiversity and actively seeking to enhance the site's biodiversity value overall. A Biodiversity Metric tool should be used to help guide and quantify the baseline and proposed value of the scheme.

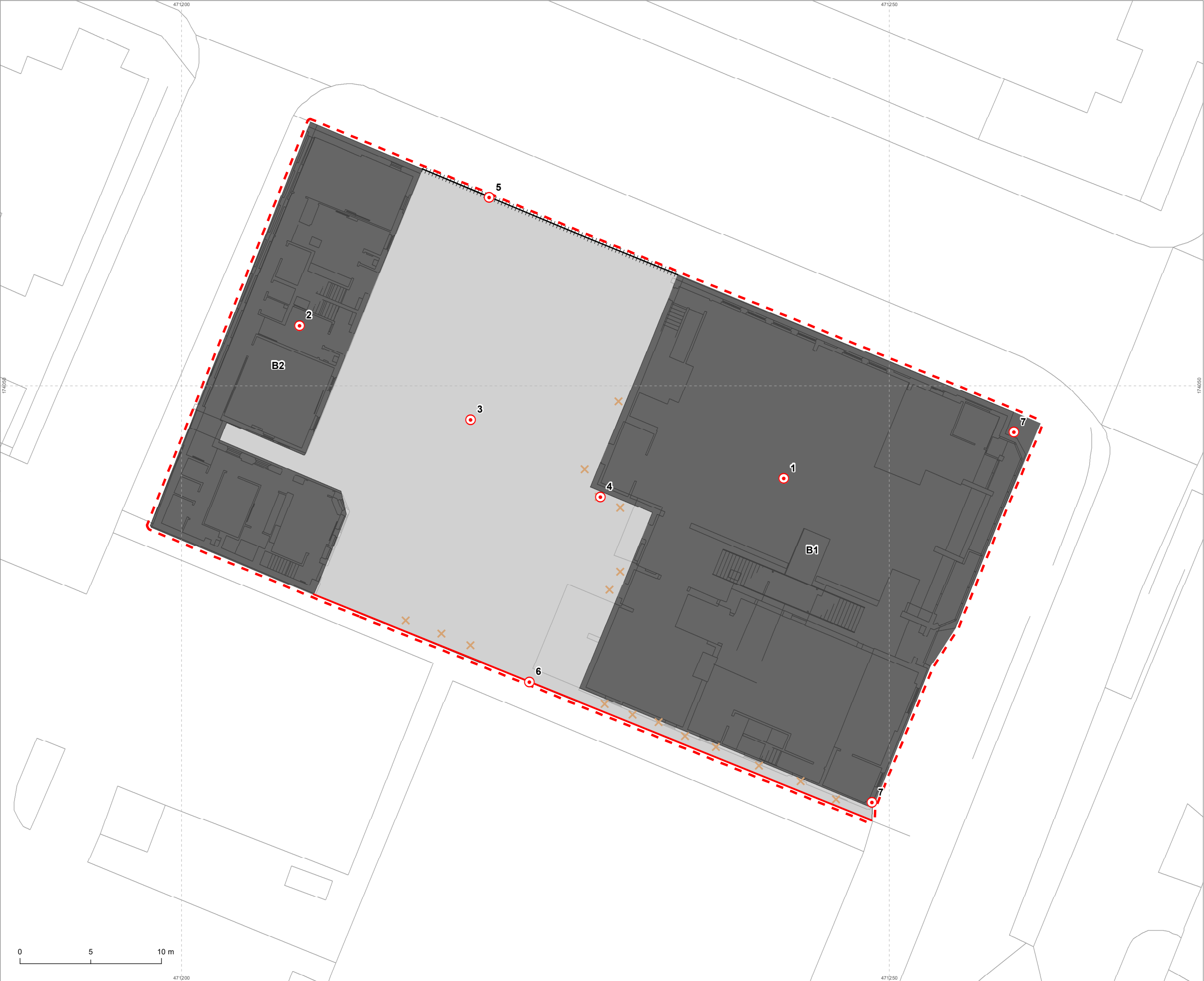
Please refer to the Biodiversity Net Gain Assessment (Report RT-MME-158559-02) for more details.

R4 Landscape and Ecology Management Plan (LEMP): A Landscape and Ecology Management should be produced setting out the detailed establishment and management of all on site compensation and enhancement measures. In accordance with Biodiversity Net Gain Best Practice Principles, and the principles of the Environment Act 2021, the LEMP should cover a period of 30 years from the date of commencement with provisions for long-term monitoring and contingency actions linked to the Biodiversity Net Gain objectives of the project.

The LEMP should be submitted to the Local Planning Authority for approval (typically to discharge planning conditions) and should be implemented in full thereafter.

8. Drawings

Drawing C158559-01-01 – Phase 1 Habitat Map



C158559-01-01

Legend

- - -

Site boundary

x

Scattered introduced shrub

+++++

Fence

—

Wall

■

Building

■

Hardstanding

○

Target note

Project

71–73 Caversham Road, Reading

Drawing

Phase 1 Habitat Map

Client

Quod

Drawing Number

C158559-01-01

Revision

00

Scale @ A3

1:250

Date

August 2022

Approved By

AC

Drawn By

JR

MIDDLEMARCH

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

This map is reproduced from the Ordnance Survey material with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationary Office. © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution of civil proceedings.
Licence Number: 100040519

The following table includes full habitat descriptions and summarises the condition assessment for habitats using Panks *et al.* (2022)³.

Area Habitat				Condition Sheet Criteria Score																
Polygon / Line Ref.	Phase 1 Habitat Type	UK Hab (Field Key)	Habitat Description	Condition Sheet Used	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	Total Score	Condition Assessment	
TN1	Building	Urban – Developed land; sealed surface	A brick-built, disused warehouse was situated within the east of the site. It had several pitched roofs, including slate tiled and corrugated asbestos. Most of the windows and doors were boarded up and some damaged brickwork was noted.	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TN2	Building	Urban – Developed land; sealed surface	A two-storey, brick-built office building with a hipped slate tiled roof was situated within the west of the site. It had lofts with skylights. The building was in good condition and in use at the time of survey.	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TN3	Hardstanding	Urban – Developed land; sealed surface	Tarmac car parking area in the centre of site between the two buildings. In use at the time of survey and was generally in good condition. Very sparse ephemeral vegetation in cracks at peripheries.	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TN4	Scattered Introduced shrub	Urban - Introduced shrub	Some scattered stands of buddleia <i>Buddleia davidii</i> were present at the peripheries of the hardstanding, adjacent to B1 (warehouse) and along the southern boundary wall.	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TN5	Boundaries - fence	Urban - Built linear features	A metal palisade fence bordered the northern boundary of the hardstanding car park. This was approximately 2.5 m in height and devoid of vegetation	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TN6	Boundaries - wall	Urban - Built linear features	A brick wall bordered the southern site boundary. Section adjacent to car park was approximately 2 m in height. Section bordering B1 was approximately 1.5 m in height.	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 8.1: Habitat Descriptions and Condition Assessments

9. Photographs



Plate 9.1: Disused warehouse in the east of the site – northern elevation



Plate 9.2: Disused warehouse in the east of the site – eastern elevation



Plate 9.3: Disused warehouse in the east of the site – southern elevation



Plate 9.4: Disused warehouse in the east of the site – western elevation



Plate 9.5: Office building in the west of the site – eastern elevation



Plate 9.6: Office building in the west of the site – western elevation



Plate 9.7: Scattered introduced shrub



Plate 9.8: Metal palisade fence on northern site boundary



Plate 9.9: Brick wall on southern site boundary

Appendix 1

General Biodiversity Legislation and Policy

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (the Habitats Regulations 2019)

The Habitats Regulations 2017 (as amended) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into English and Welsh law. Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1 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 sites or species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

The Habitats Regulations 2019 have created a 'National Site Network' on land and at sea, including both the inshore and offshore marine areas in the UK. The National Site Network includes:

- Existing Special Areas of Conservation (SACs), which are designated due to their importance to the habitats and species listed in Annexes I and II of the Habitats Directive;
- Existing Special Protection Areas (SPAs), which are designated due to their importance for wild birds in accordance with the Wild Birds Directive; and,
- New SACs and SPAs designated under these Regulations.

SACs and SPAs in the UK no longer form part of the European Union's Natura 2000 ecological network. Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new National Site Network. However, guidance provided by Freeths (2020)⁴ recommends that SACs and SPAs can continue to be referred to as "European sites" / "European marine sites".

Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats. All Ramsar sites remain protected in the same way as SACs and SPAs.

The 2019 Regulations establish management objectives for the National Site Network. The network objectives are to:

- Maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status; and,

⁴ Freeths (2020). *The Habitats Regulations Assessment regime after 31 December 2020 – how will it look?*
Available: <https://www.freeths.co.uk/2020/10/22/the-habitats-regulations-assessment-regime-after-31-december-2020-how-will-it-look/?cmpredirect>

- Contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

The appropriate authorities must also have regard to the:

- Importance of protected sites;
- Coherence of the National Site Network; and,
- Threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

The network objectives contribute to the conservation of UK habitats and species that are also of pan-European importance, and to the achievement of their favourable conservation status within the UK.

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 and the Habitats Regulations 2019, 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.

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 Environment 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.

National Planning Policy Framework and Practice Guidance

In July 2021, the National Planning Policy Framework (NPPF) was updated, replacing the previous framework published in 2012 and revised in 2018 and 2019. 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 improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature.

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).

Local Planning Policy

Reading Borough Local Plan

The Local Plan is the main planning document for Reading and was adopted as the Council’s official policy on 4th November 2019. It replaces the three previous development plan documents – the Core Strategy (adopted 2008, amended 2015), Reading Central Area Action Plan (adopted 2009) and Sites and Detailed Policies Document (adopted 2012, amended 2015). This document contains planning policies to manage development in Reading up to 2036. Within the Local Plan the policies of relevance to ecology are as follows:

EN11: Waterspaces

Reading’s waterspaces will be protected and enhanced, so that they can continue to contribute to local and regional biodiversity and ecology, flood mitigation, local character, heritage and visual amenity, the provision of accessible leisure and recreational opportunities and, where appropriate, navigation. There will be no adverse impact on the functions and setting of any watercourse and its associated corridor.

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

- Provide appropriate, attractive uses and buildings that enhance the relationship of buildings, spaces and routes to the watercourse, including through creating or enhancing views of the watercourse, and create a high quality public realm;
- Make positive contributions to the distinct character, appearance, historic significance, landscape and amenity of the watercourses;
- Provide a strengthened role for watercourses as important landscape features, wildlife corridors, historic features and recreation opportunities;
- Wherever practical and consistent with its biodiversity role, provide good, level access to and along the waterside for all those who want to use it;

- Be set at least ten metres back from the watercourse wherever practicable and appropriate to protect its biodiversity significance;
- Improve the quality of watercourse environment through protecting and enhancing habitats and ensuring that habitat creation is balanced with access and urban uses; and
- Pursue opportunities for deculverting of watercourses.

EN12: Biodiversity and The Green Network

- a) The identified Green Network, the key elements of which are shown on the Proposals Map (available her: <https://www.reading.gov.uk/planningpolicy>), shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:
- Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and
 - Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.

New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.

- b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:
- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and
 - Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.

In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

EN14: Trees, Hedges and Woodlands

Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading’s vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced.

New development shall make provision for tree retention and planting within the application site, particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained.

Appendix 2

Relevant Species Legislation

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

Badger

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

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

A badger sett is defined in the legislation as:

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

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

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

Bats

Bats and the places they use for shelter or protection (i.e. roosts) receive 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 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.

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.

Nesting 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.

Appendix 3

Survey Timings

Survey Type	J	F	M	A	M	J	J	A	S	O	N	D
Preliminary Bat Roost Assessment												
Bat Emergence / Re-entry Surveys												
Bat Activity Surveys												
Badger Survey												
Great Crested Newt HSI Assessment												
Great Crested Newt Survey												
Great Crested Newt eDNA												
Hedgerow Regulations Survey												
Invasive Species Survey												
Reptile Survey												
Water Vole Survey												
Otter Surveys												
Dormouse Habitat Assessment												
Dormouse Presence/Absence Survey (nest tubes)												
Dormouse Presence/Absence Survey (nut searches)												
White Clawed Crayfish Survey												
White Clawed Crayfish eDNA Sampling												
NVC Botanical Survey												
Nesting Bird Surveys												
Breeding Bird Survey												
Black Redstart Survey												
Peregrine Falcon Survey												
Wintering Bird Survey												

Terrestrial Invertebrates												
Freshwater Invertebrates (standing water)												
Freshwater Invertebrates (flowing water)												
Key:												
	Survey period											
	Optimal survey period											