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Project: 24_PEA_05_90
Site: Springwood, The Warren, Caversham, Reading, RG4 7TQ
Client: Maha Alkos

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Project Number:	24_PEA_05_90
Report Type:	Preliminary Ecological Appraisal Report (PEAR)
Site Address:	Springwood, The Warren, Caversham, Reading, RG4 7TQ

Role:	Name:	Position:	Date:
Surveyor	Connor Harmsworth	Field Ecologist	19/06/2024
Author	Max Shaw	Ecological Consultant	16/07/2024

Revision History		
Date:	Version number:	Summary of changes:
18/07/2024	1.0	First Draft
18/07/2024	1.0	First Issue
19/08/2025	2.0	Amendments

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Summary:	
Site Surveyed	Land at Springwood, The Warren, Caversham, Reading, RG4 7TQ. National Grid Reference: SU 6995 7505
Purpose & Brief	Preliminary ecological appraisal commissioned by Maha Alkos
Development Proposals	The proposed development is a two-storey rear extension measuring 5.26m, extension of the eastern single storey area, rear extension, a front two storey extension on the existing porch, and an upward extension of the existing western extension. New soft landscaping and planting will enhance the site's appearance and biodiversity, ensuring the scheme integrates well within the surrounding residential setting.
Methods	Desk Study UK Habitat Classification (UKHab) survey of the site. Assessment of likely significant effects as far as can be reasonably and proportionally known
Confirmed Ecological Constraints	None
Potential Ecological Constraints	Nesting birds
Recommendations For Further Survey Works	Production of wildlife sensitive lighting scheme
Opportunities For Ecological Enhancements	Bird boxes Native species planting

With the assumption that the existing conditions on-site remain unchanged. The results of this report are likely to remain valid for 12-months inline with the guidance published by CIEEM and the Bat Conservation Trust.

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Appendix 1: Site Location and Assessment Boundary
Appendix 2: Desktop Study
Appendix 3: Site Maps

Acknowledgements:

Data referred to within this report was sourced from Natural England Department for Environment, Food and Rural Affairs Multi-Agency Geographic Information for the Countryside (DEFRA MAGIC) database and through direct consultation with Thames Valley Environmental Records Centre (TVERC).

Client Documents:

This report has been completed on assumption that the plans provided by the client at the time of issue of this report remain the same. A list of the documents provided by the client can be found in the table below.

Table: Documents provided by the client as of June 2024.

Plans provided by client as of June 2024
LANDSCAPE 2
The Warren,Caversham,Reading,RG4 7TQ

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1 Introduction

1.1 ROAVR Group were commissioned to undertake a Preliminary Ecological Appraisal Report (PEAR) at Springwood, The Warren, Caversham, Reading, RG4 7TQ.

1.2 The survey was comprised of a desktop study, which was undertaken in July 2024 and a site survey, which was carried out by Connor Harmsworth on 19/06/2024.

1.3 The methodology and results are outlined within the report. Where applicable, recommendations for suitable mitigation and ecological enhancements are provided.

1.4 The report is to be submitted to support a planning application Full details of the proposals can be found on the planning portal.

1.5 The information and recommendations within this report have been prepared and provided in accordance with CIEEM's Code of Professional Conduct (CIEEM, 2022).

SITE DESCRIPTION

1.6 The survey site covers an area of approximately 1,078.4 sq metres and is centred on grid reference 'SU 6995 7505'.

1.7 The site is situated in a suburban area in the Reading Borough Council control area. The site is located on the north west side of Reading and is accessed via a private access driveway.

1.8 The site is currently a three storey detached dwelling, and two storey detached garage building at street level which can accommodate 3 off-road parking spaces. The property has existing extensions on either side, a single storey extension to the east and a 1.5 storey extension to the west side. The rear of the property backs onto the River Thames.

DEVELOPMENT PROPOSALS

1.9 The site is to be redeveloped with a two-storey rear extension measuring 5.26m, extension of the eastern single storey area, rear extension, a front two storey extension on the existing porch, and an upward extension of the existing western extension. New soft landscaping and planting will enhance the site's appearance and biodiversity, ensuring the scheme integrates well within the surrounding residential setting.

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SCOPE OF WORKS

1.10 The aims of this assessment were to:

- identify the likely ecological constraints associated with the proposed development;
- identify suitable mitigation measures (if required);
- determine whether further surveys are necessary;
- identify opportunities for ecological enhancement;

2 Methodology

DESKTOP STUDY

2.1 Site-specific information in relation to land designations, protected species and protected habitats within a 2km search area was sourced from DEFRA MAGIC and through direct consultation with Thames Valley Environmental Records Centre (TVERC).

2.2 In order to ensure that ecological data searches were up to date, species data was screened and all data records pre-2012 was omitted from the results.

2.3 Results of the desktop study should be considered to be indicative only.

UKHAB SURVEY

2.4 A Preliminary Ecological Appraisal, comprised of a site walkover and mapping was undertaken by Connor Harmsworth on 19/06/2024. The PEA was undertaken in line with CIEEM's 'Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). Connor has been completing preliminary ecological appraisals for over four years and regularly undertakes surveys of this scale. He has received professional training in all aspects covered in this report.

2.5 The survey was conducted from the ground. Habitats and features of importance were mapped using a GPS enabled handset.

2.6 A Site Habitat Map was produced in accordance with the UK Habitat Classification Manual (Butcher et al., 2020). (Appendix 3).

PRELIMINARY BAT ROOST ASSESSMENT (PRA)

2.7 A Preliminary Roost Assessment, comprised of a preliminary ground level roost assessment was undertaken during the site survey on 19/06/2024. The PRA was undertaken in line with the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023).

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2.8 The survey included an active search for bats, evidence of bats (such as droppings, feeding remains, urine splatters, oil staining, bat fur and/or scratch marks) and potential roosting features (PRFs). PRFs of trees are listed in Table 2.8.1. PRFs of built structures are listed in Table 2.8.2. The lists are not exhaustive but show examples of the most commonly used roosting features of built structures and trees.

Table 2.8.1: Potential roosting features (PRFs) in built structures listed in Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023).

Potential roosting features (PRFs) in built structures	
External	Internal
- Access/egress through windowsills, window panes and walls; - Behind peeling paintwork or lifted rendering; - Behind hanging tiles; - Weatherboarding; - Eaves; - Soffit boxes; - Fascias; - Lead flashing; - Gaps under felt (even including those of flats roofs); - Under tiles/slates; - Existing bat boxes; - Gaps in brickwork or stonework which provide access/egress to cavity or rubble-filled walls	- Behind wooden panelling; - In lintels above doors and windows; - Behind window shutters and curtains; - Behind pictures, posters, furniture, peeling paintwork, peeling wallpaper, lifted plaster and boarded windows; - Inside cupboards and in chimneys accessible from fireplaces; - Within attic roof voids; - The top of gable end or dividing walls; - The top of chimney breasts; - Ridge and hip beams and other roof beams; - Mortise and tenon joints; - All beams; - The junction of roof timbers, especially where ridge and hip beams meet; - Behind purlins; - Between tiles and the roof lining; - Under flat felt roofs

GROUND LEVEL TREE ASSESSMENT (GLTA)

2.9 A Preliminary Bat Roost Assessment, comprised of a preliminary ground level roost assessment was undertaken by Connor during the site survey on 19/06/2024. The GLTA was undertaken in line with the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023).

2.10 The survey included an active search for bats, evidence of bats (such as droppings, feeding remains, urine splatters, oil staining, bat fur and/or scratch marks) and potential roosting features (PRFs). PRFs of trees are listed in Table 2.10.1. The lists are not exhaustive but show examples of the most commonly used roosting features of trees.

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Table 2.10.1: Potential roosting features (PRFs) in trees listed in Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023) Table 6.6.

Table 2.10.1. PRF types that can be exploited by bats and how they form (adapted from Bat Roosts in Trees, BTHK, 2018) reproduced from Table 6.6. (Collins, 2023.)		
PRFs formed by disease and decay	*PRFs formed by damage*	*PRFs formed by association*
• *Woodpecker holes* • *Squirrel holes* • *Knot holes* • *Pruning cuts* • *Tear outs* • *Wounds* • *Cankers* • *Compression forks* • *Butt rots*	• *Lighting strikes* • *Hazard beams* • *Subsidence* • *Cracks* • *Shearing cracks* • *Transverse snaps* • *Welds* • *Lifting bark* • *Desiccation* • *Fissures* • *Frost cracks*	• *Fluting* • *Ivy*

Table 2.10.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.reproduced from Table 6.6. (Collins, 2023.)	
Suitability	*Description*
NONE	*Either no PRFs in the tree or highly unlikely to be any*
FAR	*Further assessment required to establish if PRFs are present in the tree*
PRF	*A tree with at least one PRF present*

2.11 A Site PRF Map was produced to show the location of built structures, trees and potential roosting features (PRFs). Habitats and features of importance were mapped using a GPS enabled handset.

SUITABILITY ASSESSMENT

2.12 The likelihood of occurrence of protected ecological features and species was ranked in accordance with the criteria listed in Tables 2.10.1 and 2.10.2. Likelihood of occurrence was assessed using data collected during the desk study and after evaluation of the habitats on-site (during the site survey) as to their likelihood to provide suitability for protected species (i.e. presence of breeding, nesting, roosting, foraging, commuting and/or refuge habitat for

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example).

Table 2.12.1: Criteria used to assess the likelihood of occurrence for protected ecological features and species on-site (excl. bats).

Likelihood of occurrence	Criteria
Present	Confirmed as present during the site survey or by confirmed historical records.
High	Species are known to be present within close proximity to the site (records present). Habitats on-site are of high quality for the species and/or likely to support a large population. The site is well connected to good quality habitat within the local area.
Moderate	Species are known to be present within the local area (records present). Habitats on-site are of moderate quality for the species and/or likely to support a moderate population. The site and connected habitats provide all of the ecological requirements of the species. Suitability of habitats on-site may be limited due to disconnectivity to the wider landscape, poor to moderate habitat available within the wider locality, and/or due to the presence of only a small area of suitable habitat.
Low	Few or no records of the species within the local area. Habitats on-site are of poor quality for the species and/or likely to support just a few individuals. The suitability of habitats may be limited due to disturbance, isolation and/or poor quality habitat available within the wider locality. However, species presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats (if all required ecological requirements for the species are present).
Negligible	While presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species. Connected habitats do not fulfil the ecological requirements of the species. There are no local records and/or the site is outside the known national range of the species.

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Table 2.12.2: Criteria used to assess the likelihood of occurrence (site's suitability) for bats, from Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023) (Table 4.1.)

Potential suitability	Description	
	Roosting bats	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e a complete absence of crevices / suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available for foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated habitat that could be used by small numbers of bats for foraging such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, appropriate conditions and/or suitable surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - with respect to roost type only).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees or linked back gardens. Habitat that is connected to the wider landscape that could be used for bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation sites.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats.

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		Site is close to and connected to known roosts.

ECOLOGICAL CONSTRAINTS AND MITIGATION

2.13 An evaluation of the potential ecological constraints to the proposed development and appropriate mitigation strategies was made following CIEEM's 'Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018).

LIMITATIONS

2.14 Only one site visit was undertaken, therefore, a full evaluation of species present throughout the year could not be made. Therefore, there were seasonal constraints to species identification. However, the data collected during the site survey was sufficient to make an appropriate assessment of the site.

2.15 The site maps shown in Appendix 3 were produced from an Ordnance Survey Tile purchased from our mapping supplier. A site walkover with a GPS enabled handset was used to inform the location and extent of existing habitats shown on the appended mapping and is as accurate as possible but some error must be allowed for without a full topographical survey.

3 Policy and Legislative Context

3.1 This section includes the legislative context of those protected species or other notable species that are recorded on-site, or have the potential to be present on-site. Details on specific legislation for other protected or notable species that have not been identified as being present, or having the potential to be present, are not included below.

NATIONAL PLANNING POLICY

3.2 The introduction of the National Planning Policy Framework (NPPF) in March 2012 sets out the Government's planning policies for England and how these are expected to be applied in the presumption in favour of sustainable development. It sets out the Government's requirements for the planning system, only to the extent that it is relevant, proportionate and necessary to do so and is a material consideration for local planning authorities in determining applications.

3.3 Planning Practise Guidance is relevant covering the Natural Environment alongside the NPPF. Therefore features of ecological value should be considered in the context of conserving and enhancing the natural environment.

3.4 The Government's objectives for planning are to promote sustainable development, to conserve, enhance and restore the diversity of England's wildlife and geology and to contribute to rural renewal and urban

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renaissance.

LOCAL PLANNING POLICY

3.5 This report has been commissioned in order to comply with policies upheld in the Reading Borough Local Plan 2019, especially the following:

- EN1: Protection and Enhancement of the Historic Environment
- EN3: Enhancement of Conservation Areas
- EN5: Protection of Significant Views with Heritage Interests
- EN11: Waterspaces
- EN12: Biodiversity and the Green Network
- EN13: Major Landscape Features and Areas of Outstanding Natural Beauty
- EN14: Trees, Hedges and Woodlands
- EN16: Pollution and Water Resources

https://images.reading.gov.uk/2019/12/Local_Plan_Adopted_November_2019.pdf

NATIONAL AND INTERNATIONAL LEGISLATION

3.6 Bern Convention on the Conservation of European Wildlife and Natural Habitats (1982)

3.7 Convention on the Conservation of Migratory Species of Wild Animals (1983)

3.8 Countryside and Rights of Way Act (2000)

3.9 National Parks and Access to the Countryside Act (1949)

3.10 Natural Environment and Rural Communities Act (2006)

3.11 Protection of Badgers Act (1992)

3.12 The Conservation of Habitats and Species Regulations (2017)

3.13 The Convention of International Trade in Endangered Species of Wild Fauna and Flora (1975)

3.14 The Hedgerows Regulations (1997)

3.15 UK Biodiversity Action Plan (1994)

3.16 Wildlife and Countryside Act (1981)

3.17 Wild Mammals (Protection) Act (1996)

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4 Desktop Study

SITE DESIGNATIONS

4.1 There is one designated site within the 2km search area.

Table 4.1.1: Designated sites recorded within a 2km radius of the survey site.

Site Name	Grid Reference	Area (ha)	Approx. Closest Distance from Site (km)	Notes
Chilterns AONB	SU 6944 7556	83830	0.6 km	The Chiltern Hills or the Chilterns are a chalk escarpment in southern England, northwest of London, covering 660 square miles across Oxfordshire, Buckinghamshire, Hertfordshire, and Bedfordshire
SSSI Impact Risk Zones	SU 6995 7505	NA	0 km	The site falls within SSSI Impact Risk Zones.

*Data from DEFRA MAGIC

LOCAL HABITAT

4.2 There were more than 10 priority habitats that were formerly mapped within the 2km search area.

Table 4.2.1: Priority habitats formerly mapped within a 2km radius of the survey site.

Habitat	Approx. Closest Distance from Site (km)
Good quality semi-improved grassland	1.6 km
Deciduous Woodland	0.01 km
Traditional Orchards	0.4 km

*Data from DEFRA MAGIC

4.3 There was one water body situated within a 500m radius of the survey site. The property backs directly onto the River Thames. It borders the site to the south and has excellent connectivity.

HISTORICAL SPECIES RECORDS

4.4 Protected species records relating to the site and 2km search area were obtained from the LERC as part of the desktop study. The data search contains confidential information that is not suitable for public release. Therefore, the data has not been included in the report.

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4.5 A full list of identified species recorded within the 2km search area can be requested from LERC.

4.6 The absence of identified records does not discount the presence of a species. An absence of identified records is primarily a result of a lack of survey or the non-submission of records. Furthermore, historical records of species do not confirm their current presence within an area.

4.7 The closest watercourse is the River Thames bordering the site to the south, a record search of TVERC found 0 records of aquatic species such as water vole (*Arvicola amphibius*) and white-clawed crayfish (*Austropotamobius pallipes*), are considered absent from site and are not considered further in this report. Only 1 record of otter (*Lutra lutra*) was returned dated 2020.

4.8 A record search returned 10 records of Brown long-eared bat (*Plecotus auritus*), 70 records of Soprano pipistrelle (*Pipistrellus pygmaeus*) with the latest being dated 2023, 60 records of Common pipistrelle (*Pipistrellus pipistrellus*), 22 records of Noctule bat (*Nyctalus noctula*), 2 records of Leislers bat (*Nyctalus leisleri*), 5 records of Chiroptera species, 20 records of Daubenton's bat (Myotis daubentonii), 10 records of Myotis bat species, 3 records of Nathusius pipistrelle (Pipistrellus nathusii), 1 record of Serotine bat (Eptesicus serotinus), and 1 record of Natterers bat (Myotis nattereri). A record search of DEFRA was also conducted, the results for all in-date EPSL licenses can be found in Table 4.8.1:

Table 4.8.1: Previous protected species licences for bats mapped within a 2km radius of the survey site

Reference, Date and Species	Approx. Distance from Site (km)
2015-18560-EPS-MIT - 31/01/2021 - Brown long-eared bat (Plecotus auritus), Soprano pipistrelle (Pipistrellus pygmaeus)	1000m N
2017-29064-EPS-MIT - 01/09/2027 - Soprano pipistrelle (Pipistrellus pygmaeus)	300m N
2016-27061-EPS-MIT - 03/01/2017 - Brown long-eared bat (Plecotus auritus), Common pipistrelle (Pipistrellus pipistrellus)	800m E

*Data from DEFRA MAGIC

4.9 35 records of badger (*Meles meles*) and 60 records of hedgehog (*Erinaceus europaeus*) were returned within 2km of the site. There are 3 records of dormouse (*Muscardinus avellanarius*) in the local area. A search on MAGIC identified no previous protected species licences for hazel dormouse within 2km of the site.

4.10 There are 7 records of reptile within 1km of the site, including slow-worm (*Anguis fragilis*), and grass snake (*Natrix helvetica*).

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4.11 A record search of TVERC uncovered 0 records of Great crested newts (*Triturus cristatus*) within 2 km of the site. 2 records of Common frog (*Rana temporaria*) were returned, and 1 record of smooth newt (*Lissotriton vulgaris*) dated 2018.

4.12 There are over 100 records of protected birds within 2km of the site, comprising species of a variety of habitats including garden, wetland and woodland including Kestrel (*Falco tinnunculus*), Kingfisher (*Alcedo atthis*) and Redwing (*Turdus iliacus*).

4.13 The data search returned over 100 records of invertebrates within 2km of the site, including 309 records of stag beetle (*Lucanus cervus*) dated between 1998-2022.

4.14 The data search returned 0 records of invasive animals and 8 records of invasive plants including Japanese knotweed and Butterfly Bush.

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5 Site Survey

5.1 The site survey was undertaken on 19/06/2024. The weather conditions were considered to be appropriate to survey (Table 5.1.1).

Table 5.1.1: Weather conditions at the time of survey.

Date of site survey: 19/06/2024	
Temperature	15c
Wind	Gentle breeze from the north east.
Precipitation	0%

*Data from BBC Weather.

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PHASE 1 HABITAT SURVEY

5.2 The habitats presented consist of the following UKHAB Phase 1 Habitat categories:

- U1b5 Buildings
- U1b6 Other developed land
- 11 Scattered Trees
- H2 Hedgerow
- G4 Improved Grassland

5.3 A description of habitat present along with target notes is shown in Table 5.3.1. The location of habitats is shown in the Site Habitat Map, Appendix 3.

Table 5.3.1: Description of habitats present on-site (please also see the Site Habitat Map, Appendix 3).

Habitats and Target Notes	Description	Supporting Photo
U1b5 Buildings	B1 is a detached three-storey residential dwelling building. The building is made of brick, with tightly sealed concrete roof and ridge tiles. The plastic soffits and fascias are in good condition. The inside of B1 has been stripped back to a state of first fix, with no loft or void space. B2 is a two-storey detached out house/garage building. The building is made of brick, with tightly sealed concrete roof and ridge tiles. The plastic soffits and fascias are in good condition. Situated to the north of B1.	 Image 1 (B1)

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		 Image 2 (B1) Image 3 (B1)

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		Image 4 (B1) Image 5 (B1)

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U1b6 Other developed land	The first area of other developed land is the parking area on the roof of B2 which is concrete paved. There are a set of stairs leading down inbetween B1 and B2 made of concrete. The third area is located to the south of B1 leading down into the rear garden. Made of concrete slabs.	 Image 6 Image 7

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		 Image 8 Image 9

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		 Image 10
11 Scattered Trees	There were scattered mature trees to the south of B1 in the form of Chamaecyparis lawsoniana (Lawson Cypress), Magnolia (Magnolia), Acer negundo (Box Elder), Gleditsia triacanthos (Honey Locust), X Cupressocyparis leylandii (Leyland Cypress), Fraxinus excelsior (Ash), Crataegus monogyna (Hawthorn), Aesculus hippocastanum (Horse Chestnut) and Ilex aquifolium (Holly).	 Chamaecyparis lawsoniana (Lawson Cypress) - Image 11

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		 Magnolia (Magnolia), Acer negundo (Box Elder) - Image 12 Gleditsia triacanthos (Honey Locust), X Cupressocyparis leylandii (Leyland Cypress), Fraxinus excelsior (Ash), Crataegus monogyna (Hawthorn) - Image 13

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H2 Non-native Ornamental Hedgerow (vegetated garden)	There is a thick hedgerow running along the east and west boundary lines in the rear garden and encroaching into the north and east sides of B1. The main species included was Bambusa vulgaris (bamboo). Due to the site being within a residential curtilage this can be classified as a vegetated garden.	 Image 14 Image 15

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G4 Improved Grassland (vegetated garden)	The main area of the rear garden, to the south of B1 is improved grassland, it has a sward height of 1000mm and scattered trees are located throughout. Due to the site being within a residential curtilage this can be classified as a vegetated garden.	 Image 16 Image 17

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Target Notes	TN1 - To the south of the rear garden is the River Thames, which the garden directly backs onto.There is a boat ramp built into the river bank, and a concrete seating area. The area is fenced off by a wire link fence. Nesting Geese were observed using the area.	Image 18

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PRELIMINARY BAT ROOST ASSESSMENT (PRA)

5.4 There were no built structures on site capable of supporting roosting bats. Both B1 and B2 were stripped back to the first fix. Light levels throughout the loft void are high internally.

5.5 There were no trees on site capable of supporting roosting bats, therefore the site has been assessed as holding negligible potential for supporting roosting bats.

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6 Evaluation and Assessment

6.1 Results from the desktop study and site survey were evaluated to assess the likelihood of occurrence for protected ecological features and species potential (as per Table 2.10.1). An evaluation of the potential impacts due to the proposed development and recommendations for appropriate mitigation measures are provided in Table 6.1.1.

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Table 6.1.1: Likelihood of occurrence of protected ecological features and species on-site, potential impacts due to the proposed development and recommendations for appropriate mitigation measures.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Protected sites	Moderate.	The site is situated adjacent to, deciduous woodland to the north and directly bordered by the River Thames to the south.	If a precautionary approach is not followed, the adjacent habitats could be negatively affected by the proposed construction.	Protective barriers (in the form of HERAS fencing) must be placed around the construction zone and any access/egress in order to minimise the area of disturbance. The fencing must be signed appropriately and outlined within the tool box talk.
Protected habitats	Moderate.	The site is situated adjacent to, deciduous woodland to the north and directly bordered by the River Thames to the south.	If a precautionary approach is not followed, the adjacent habitats could be negatively affected by the proposed construction.	Protective barriers (in the form of HERAS fencing) must be placed around the construction zone and any access/egress in order to minimise the area of disturbance. The fencing must be signed appropriately and outlined within the tool box talk.
Protected plant species	Low.	There are no known records of protected plant species within 2km of the site. No protected plant species were observed during the site survey. Habitats on-site are not considered to be unique or of high quality to support protected plant species. However, their presence cannot be entirely discounted.	The site does not appear to support protected plant species, thus, the proposed development is unlikely to impact upon protected plant species.	Protective barriers (in the form of HERAS fencing) must be placed around the construction zone and any access/egress. Areas containing protected plant species situated within the construction zone should also be fenced off. The fencing must be signed appropriately and outlined within the tool box talk.

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Amphibians (incl. Great Crested Newts)	Low.	There are no known records of Great Crested Newts within 2km of the site. Common and widespread amphibians could utilise the site.	The proposed development will not result in any disturbance to suitable amphibious habitats.	The grassland should continue to be maintained and kept short through mowing and management up until the point of any construction works commencing on-site to prevent the habitat from becoming more favourable to amphibians. Vegetation removal must be undertaken using hand tools under ECoW supervision. Cut vegetative materials should be checked and removed from site immediately.
Bats (Chiroptera)	**Roosting bats**			
	Negligible.	The PRA determined that all built structures on-site had negligible potential for roosting bats.	The proposed development will not result in any disturbance to suitable roosting habitats.	None required.
	Foraging/Commuting bats			
	Moderate.	Amenity grassland and deciduous habitats on-site were considered to be suitable for foraging / commuting bats. Furthermore, the site has good connectivity to high quality habitats within the wider locality, including the River Thames and deciduous	Mitigation measures must be put in place to ensure that disturbance does not increase during and/or post-development. The proposed development will not result in any substantial habitat loss that will impact upon local	Construction works should be limited to daylight hours (excl. dawn and dusk) in order to prevent disturbance to nighttime foraging activity. Post-construction, the use of artificial lighting should be limited where possible. Motion sensors on outside lighting will

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
		woodland.	populations long-term.	prevent prolonged disturbance. It is recommended that outside lighting be set on short-timers (1 minute) and that the sensitivity is set to large moving objects only.
Birds	High.	Birds were identified on-site. No birds nests were noted. However, to the south of the garden, a group of geese have congregated.	The proposed development will not result in any loss to suitable habitat for breeding birds.	The location of the geese should be cordoned off if construction is required in that area, and they are still present by the time construction starts in the area. The trees should be protected from site with HERAS fencing before any works commence on-site. The fencing must be signed appropriately and outlined within the tool box talk. Tree works (if required) should take place outside the breeding season (typically March-October).
Invertebrates	Moderate.	There are records of protected invertebrate species within 2km of the site. However, none were noted during the site visit.	The site does not appear to support protected invertebrate species, thus, the proposed development is unlikely to impact upon protected invertebrate species. The proposed development will not result in any	None required.

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
			substantial habitat loss that will impact upon local populations long-term.	
Reptiles	Low.	There are records of reptiles within 2km of the site. WB1 was situated within 10 metres of the site and was considered to be well connected. No reptiles, or evidence of reptiles, was found during the site survey. The site was well connected to suitable habitats within the wider locality, including open grassland, hedgerows and woodland. Amenity grassland and hedgerow habitats on-site were considered to be suitable to support a small population of common and widespread reptile species (such as Slow Worm).	The proposed development requires the removal of a small area of ground-level vegetation on-site. Vegetation removals have the potential to disturb, injure and/or kill reptiles (if present). Thus, a precautionary approach is required. The proposed development will not result in any substantial habitat loss that will impact upon local populations long-term.	The grassland should continue to be maintained and kept short through mowing and management up until the point of any construction works commencing on-site to prevent the habitat from becoming more favourable to reptiles.

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Other terrestrial mammals (excl. bats).	**Badgers (*Meles meles*)**			
	Low.	There are known records of Badgers within 2km of the site. No Badger setts were identified during the site visit and no evidence of Badgers was found. However, amenity grassland habitat is considered to be somewhat suitable for sett building and foraging/commuting.	The proposed development will not result in any substantial habitat loss to impact upon local populations long-term.	Construction works should be limited to daylight hours in order to prevent disturbance to nighttime foraging activity. Any trenches or other excavations left open overnight should be well covered to deter Badgers from entering.
	Dormice (Gliridae)			
	Negligible.	There are known records of Dormice within 2km of the site. However, a site walkover deemed them absent from site.	None.	The grassland should continue to be maintained and kept short through mowing and management up until the point of any construction works commencing on-site to prevent the habitat from becoming more favourable to dormice.

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
	Hedgehogs (*Erinaceus europaeus*)			
	Moderate.	There are known records of Hedgehogs within 2km of the site. Amenity grassland, debris, and hedgerow habitats on-site were considered to be suitable for the species. The site was well connected to suitable suburban habitats However, there were not ample access/egress points to adjacent gardens making it poorly commutable.	Mitigation measures must be put in place to ensure that disturbance does not increase during and/or post-development. The proposed development will not result in any substantial habitat loss that will impact upon local populations long-term.	Construction works should be limited to daylight hours (excl. dawn and dusk) in order to prevent disturbance to nighttime foraging activity. During hibernation season (October to March), piles of leaf litter and logs should be retained to ensure hibernating hedgehogs are not harmed. If removal is unavoidable, the piles must be carefully checked before burning. Any trenches or other excavations left open overnight should either be well covered or provided with an escape ramp (comprised of a sloped side or wooden plank reaching up to ground level or slightly above), to allow any Hedgehogs that fall into escape.
	Otters (*Lutra lutra*)			
	Negligible.	There are known records of Otters within 2km of the site.	None.	None required.

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
	Common and widespread mammals			
	High.	There was no evidence of Mammals on-site but there is suitable habitat.	The proposed development will not result in a substantial loss that will impact upon local populations long-term. Mitigation measures must be put in place to minimise disturbance during the construction phase.	Any necessary excavation of animal burrows should be done carefully to avoid unnecessary suffering (such as crushing or asphyxiation). Construction works should be limited to daylight hours in order to prevent disturbance to nighttime foraging activity. Any trenches or other excavations left open overnight should either be well covered or provided with an escape ramp (comprised of a sloped side or wooden plank reaching up to ground level or slightly above), to allow any wildlife that falls to escape. Any newly built boundary features should incorporate 'wildlife gaps' (comprising a 13x13cm gap at the base of the feature), to allow wildlife to pass through.

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Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Invasive plant species	Low.	No invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were found during the survey. As there were seasonal constraints to plant identification, it is possible that invasive plant species are present and have yet to be identified.	Invasive plant species have the potential to impact protected species and habitats	If invasive plant species are found, it is recommended to consider appropriate methods of removal.

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7 Biodiversity Net Gain

7.1 The development should be used as an opportunity for biodiversity net gain, by creating new opportunities for wildlife.

BIRDS

7.2 It is recommended to place new bird boxes on-site.

7.3 A traditional nest box should be placed 3 metres above ground level in an area of low disturbance. The box should be sheltered away from prevalent weather conditions, commonly associated within the UK, such as strong sunlight, prevailing winds and rain.

INVERTEBRATES

7.4 It is recommended to install invertebrate boxes on-site. The boxes should be suitable for solitary bees.

7.5 Nectar-rich wildflowers should be planted within close proximity to the bee bricks/invertebrates boxes to create new opportunities for pollinators.

TERRESTRIAL MAMMALS

7.6 It is recommended to plant native species-rich hedgerows on-site, which will enhance connectivity and provide refuge for small mammals. Suitable species would include Common Beech (*Fagus sylvatica*), Common Hawthorn (*Crataegus monogyna*), Rowan (*Sorbus aucuparia*) and Crab Apple (*Malus sylvestris*) for example.

TREES

7.7 New tree planting would be a welcomed addition to development. New tree planting should be considered carefully, with consideration to species, location and future management. New trees should be robust and of high quality. Where possible, native species should be used. However, considerations should be given to climate change and potential pathogens.

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8 Conclusions

8.1 The site at Springwood, The Warren, Caversham, Reading, RG4 7TQ is to be redeveloped with a two-storey rear extension measuring 5.26m, extension of the eastern single storey area, rear extension, a front two storey extension on the existing porch, and an upward extension of the existing western extension. New soft landscaping and planting will enhance the site's appearance and biodiversity, ensuring the scheme integrates well within the surrounding residential setting.

8.2 The development will result in a loss of building, grassland, and other developed land. However, the scheme will deliver new ecologically valuable habitats, including extending areas of grassland and creating species-rich soft landscaping and native planting designed to support pollinators

ECOLOGICAL CONSTRAINTS

8.3 Development proposals must have regard for protected species identified as potentially occurring on, or near to, the site (e.g., amphibians, birds, terrestrial mammals, and reptiles). Mitigation measures to protect these species have been produced within this report to ensure that the proposed works comply with relevant UK legislation.

8.4 Further mitigation measures have been outlined within the report to ensure that protected species are not impacted by the development. Ecological Clerk of Works (ECoW) supervision will be required throughout the construction phase to ensure that the recommended mitigation measures are implemented appropriately.

MITIGATION STRATEGIES

8.5 A tool box talk should be given to all relevant personal by a suitable qualified ecologist before any works commence on-site to outline ecological constraints and the required mitigation measures.

8.6 The existing amenity grassland should be retained at a short sward prior to any demolition/construction works commencing on-site in order to ensure that the habitat does not become more favourable to amphibians and/or reptiles.

8.7 Tree works (if required) should take place outside the breeding season (typically March-October) or once a suitability qualified ecologist has inspected the trees for breeding birds and confirmed that there are no active nests.

8.8 Construction works should be limited to daylight hours (excl. dawn and dusk) in order to prevent disturbance to nighttime foraging activity.

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8.9 Vegetation removal must be undertaken using hand tools. Cut vegetative materials should be checked and removed from site immediately.

8.10 Any trenches or other excavations left open overnight should be well covered to deter Badgers from entering. If this is not possible, any trenches or other excavations left open overnight should either be provided with an escape ramp (comprised of a sloped side or wooden plank reaching up to ground level or slightly above), to allow any wildlife that falls in to escape.

8.11 Any necessary excavation of animal burrows should be done carefully to avoid unnecessary suffering (such as crushing or asphyxiation).

8.12 During hibernation season (October to March), piles of leaf litter and logs should be retained to ensure hibernating hedgehogs are not harmed. If removal is unavoidable, the piles must be carefully checked before burning.

8.13 Post-construction, the use of artificial lighting should be limited where possible. Motion sensors on outside lighting will prevent prolonged disturbance. It is recommended that outside lighting be set on short-timers (1 minute) and that the sensitivity is set to large moving objects only.

8.14 Any newly built boundary features should incorporate 'wildlife gaps' (comprising a 13x13cm gap at the base of the feature), to allow wildlife to pass through.

8.15 A new bat roost should be created on-site to promote the area for local bats. It is recommended that the roost be suitable for crevice dwelling species which are most likely to utilise the existing structures. Where possible, bat roosts should be incorporated into the proposed built footprint to ensure that permanent features are created.

BIODIVERSITY NET GAIN

8.16 The project is to be used as an opportunity for biodiversity net gain by creating new opportunities for wildlife. New habitat creation is to be implemented on-site and should be included within the final project design.

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RESPONSE TO REFUSAL (READING BOROUGH COUNCIL)

8.17 The updated habitat proposals for Springwood have been carefully designed to address the concerns raised by the LPA. Importantly, no developed land extends into the river margin, ensuring that there is no encroachment or direct adverse impact on the River Thames. Instead, habitat creation is focused towards the garden area adjacent to the river, enhancing biodiversity and ecological value in this sensitive location.

8.18 Trees and Ecology

The baseline surveys recorded a mix of small and medium urban trees, as well as non-native and ornamental hedgerow. These features are retained under the proposed scheme, with additional planting of introduced shrub and enhanced vegetated garden areas. This responds directly to concerns of harm to on-site ecology, as no priority habitats are lost and new ecologically valuable planting is introduced. This approach strengthens the ecological baseline and avoids the significant impacts suggested in the original refusal.

8.19 Hardstanding and Landscape Character

The proposed layout reduces the extent of hardstanding along the river edge, keeping built development contained to the existing footprint. By concentrating new sealed surfaces around the main dwelling and incorporating new planting areas, the scheme avoids further visual intrusion into the riverside corridor. This ensures the character of the Thames Valley Major Landscape Feature is preserved in line with Local Plan policy.

8.20 Flood Risk

Although the refusal noted insufficient information on runoff, the revised plans ensure that no additional hard surfacing is introduced in areas that would increase flood risk. Permeable garden areas and vegetated zones are retained and enhanced towards the river edge, helping to intercept surface water and reduce runoff. This approach aligns with policy EN18 of the Reading Borough Local Plan.

SUMMARY

8.21 Subject to the implementation of the recommended mitigation measures, the proposed development is unlikely to have a significant ecological impact.

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Should you require any further information, please do not hesitate to contact us at any time.

Max Shaw
Ecological Consultant

Max Shaw

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Prepared by: Max Shaw BSc QCIEEM
Checked by: Matt Harmsworth BSc

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Appendix 1: Site Location and Assessment Boundary

Figure A1.1: Extract from Google Maps showing the site location.(Google, 2024)

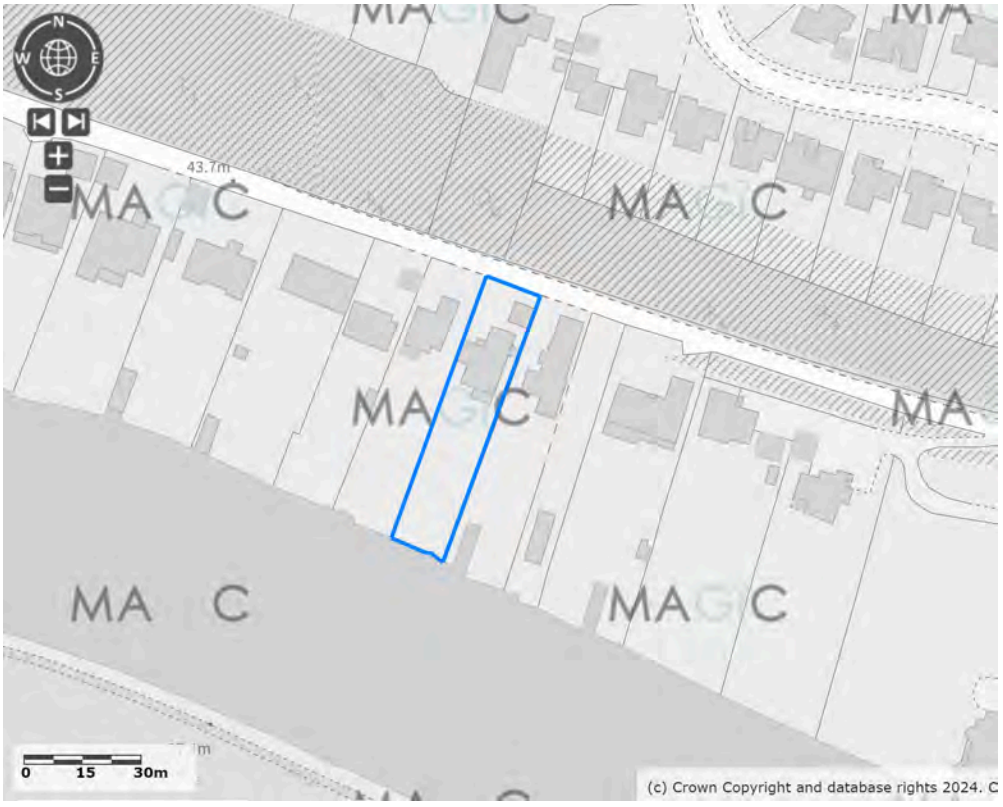

Figure A1.2: Extract from DEFRA MAGIC showing the assessment boundary.(MAGIC, 2024)

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Appendix 2: Desktop Study

*Data from DEFRA.

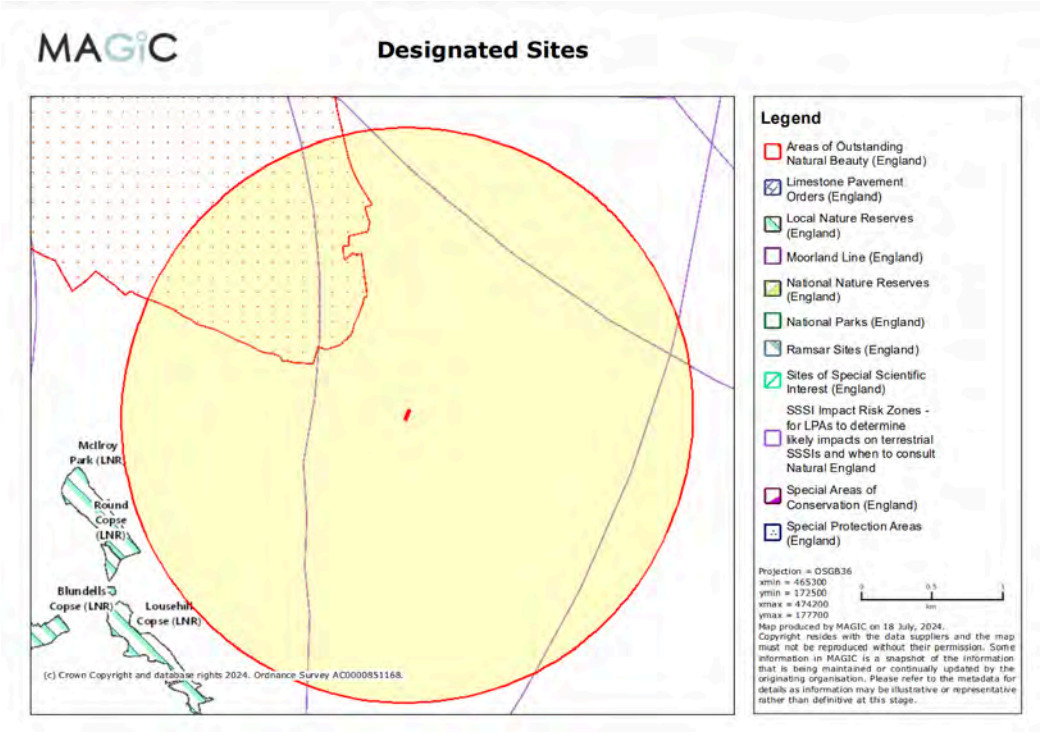

Figure A2.1: Location of Designated Sites situated within a 2km search radius of the site.

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*Data from DEFRA.

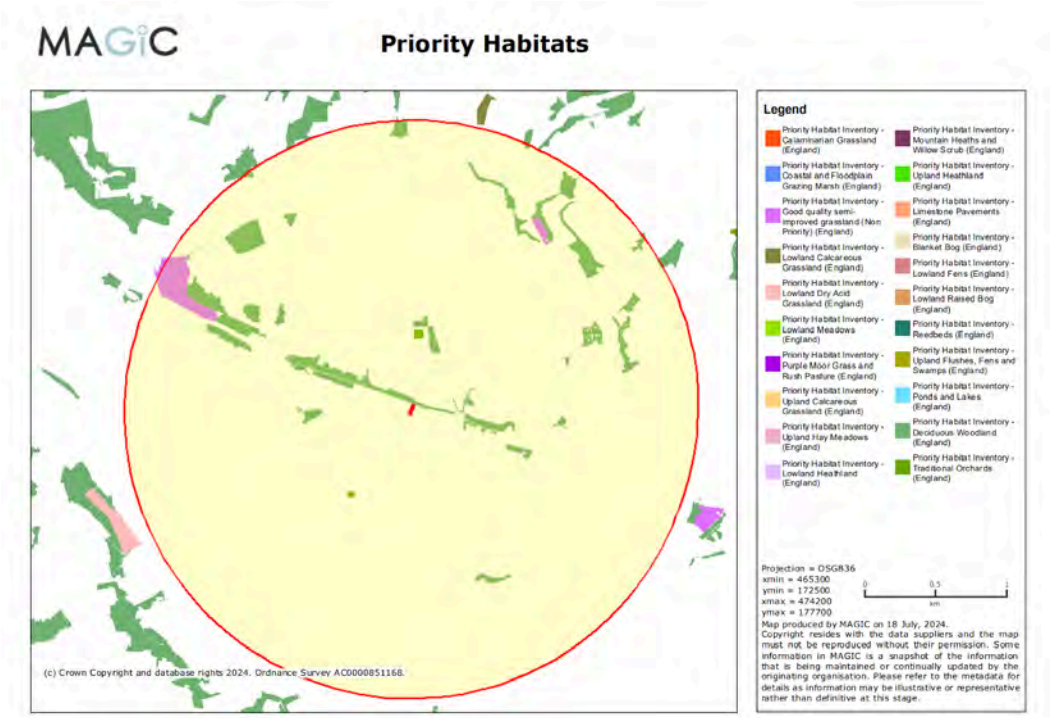

Figure A2.2: Priority habitats formerly mapped within a 2km search radius of the site..

*Data from Bing Maps

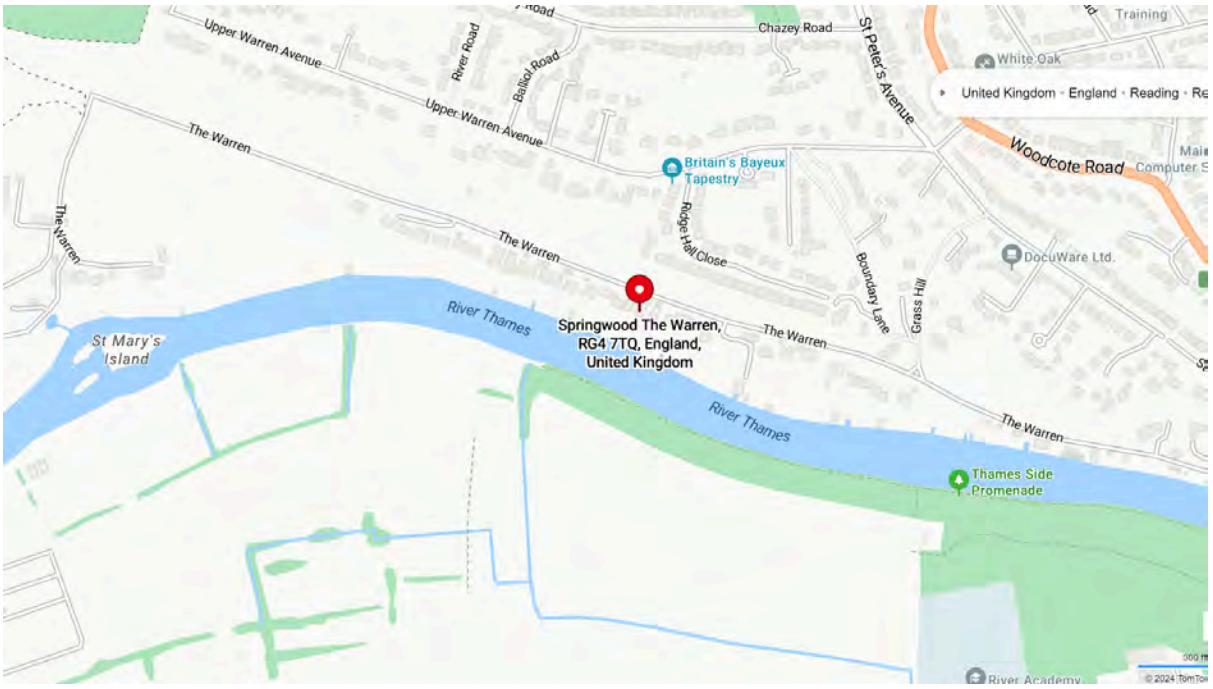

Figure A2.3: Standing water bodies formerly mapped within a 500m search radius of the site.

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Appendix 3: Site Maps

A3.1 The Site Habitat Map was produced in accordance with the UK Habitat Classification Manual (Butcher et al., 2020).

Habitat Map - Baseline (2025)

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Habitat Map - Proposed (2025)

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