

URS Building Internal and External Refurbishment

Preliminary Ecological Appraisal

Prepared on behalf of

University of Reading

Final Report

25 November 2024

30/40-1C

URS Building Internal and External Refurbishment

Preliminary Ecological Appraisal

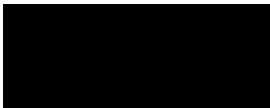
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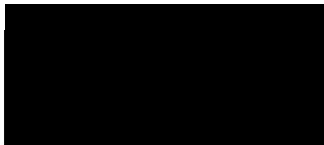
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URS Building Internal and External Refurbishment

Preliminary Ecological Appraisal

Contents

1. INTRODUCTION	1
2. NATURE AND EXTENT OF PREDICTED BIOPHYSICAL CHANGES	3
3. RESULTS OF PRELIMINARY ECOLOGICAL APPRAISAL	4
4. SUMMARY AND CONCLUSIONS.....	9

MAPS

Map 1a	Site Location and Statutory Designated Sites
Map 1b	Site Location and Sites Relevant to Planning Policy
Map 2	Habitats and Features

APPENDICES

Appendix 1	2360383-ACG-W033-00-DR-A-18310-Landscape Plan
Appendix 2	Summary of Relevant Legislation and Policy
Appendix 3	PEA Methodology
Appendix 4	Lighting Plan

URS Building Internal and External Refurbishment

Preliminary Ecological Appraisal

1. INTRODUCTION

Brief

- 1.1 Ecological Planning & Research Limited (EPR) was commissioned by University of Reading to carry out a Preliminary Ecological Appraisal (PEA) of proposals for the internal refurbishment of, and installation of external stairways to (hereafter referred to as “the Proposals”), the Urban and Regional Studies (URS) Building, Whiteknights Campus, University of Reading, hereafter referred to as “the Site” (Grid reference: SU 73330 71727). Site plans are shown in **Appendix 1**.

Background

- 1.2 The Proposals represent Phase 3 of the overall refurbishment of the URS building. As such, works on the previous phases has already begun and the Site itself is enclosed by hedges fencing.
- 1.3 EPR conducted a previous Ecological Appraisal in 2015 in relation to previous phases of the project.

The Study Area

- 1.4 The Site consists of the URS building itself and immediate surrounds composed of hardstanding, grassland and ornamental planting. Formal hedgerows run along the northern and eastern borders and part of the parking area to the west of the Site. A number of mature trees stand in the surrounding area.
- 1.5 The Site falls within the Thames Basin Heaths Natural England National Character Area.
- 1.6 The Site does not lie on any floodplain. The underlying geology is London Clay with superficial deposits of sand and gravel.

Scope

- 1.7 The purpose of this PEA is to obtain and present information on potential ecological constraints and opportunities that may be presented to the Proposals described above. Advice on further actions to address constraints and maximise opportunities in order to enable the proposals to proceed in accordance with nature conservation legislation and policy is also provided.
- 1.8 Please note that the results of a PEA are not equivalent to a full Ecological Impact Assessment (EclA) and so potentially significant ecological effects arising from a Proposal may not be fully understood at the time of reporting.

- 1.9 A PEA comprises two main elements: 1) A desktop review of the ecological and policy context; and 2) a field survey of the development site and, where possible, any other areas likely to be affected.
- 1.10 The following articles of nature conservation legislation and planning policy are of relevance to the Proposals, and have been considered as part of this PEA:
- The Environment Act 2021;
 - The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Wildlife and Countryside Act 1981 (as amended);
 - The Countryside and Rights of Way (CROW) Act 2000;
 - The Natural Environment and Rural Communities (NERC) Act 2006;
 - The Protection of Badgers Act 1992;
 - The National Planning Policy Framework (NPPF) (2023);
 - Wokingham Borough Core Strategy (adopted June 2010); and
 - Wokingham Borough Council, Managing Development Delivery Local Plan (adopted 21 February 2014).
- 1.11 In addition to the above, biodiversity objectives detailed in the following documents have been considered:
- The Government's Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (2011), 25 Year Environment Plan (2018) and Environmental Improvement Plan (2023); and
 - Wokingham Borough Council Biodiversity Action Plan 2012-2014.
- 1.12 Further information on the above is provided in **Appendix 2**.

Methods and Constraints

- 1.13 This PEA has drawn on information collected through both an extensive desktop study, and a field visit. The methodology used is described in more detail in **Appendix 3**.
- 1.14 EPR's approach takes account of the Chartered Institute of Ecology and Environmental Management's (CIEEM) advice in Guidelines for Ecological Impact Assessment in the UK and Ireland (2018, updated April 2022) and Guidelines for Preliminary Ecological Appraisal (2017).

2. NATURE AND EXTENT OF PREDICTED BIOPHYSICAL CHANGES

Predicted Biophysical Changes and the Zone of Influence

- 2.1 In order to understand the potential ecological constraints and opportunities which may be presented to the Proposals, it is necessary to predict both the likely biophysical changes which could occur, and the area over which ecological features could be affected (the 'Zone of Influence' (Zoi)). These are summarised in **Table 2.1** below.

Table 2.1: Provisional summary of predicted changes and Zone of Influence

Predicted Change	Likely Zone of Influence (Zoi)
Vegetation clearance	Site
Noise disturbance during works	Site and immediate surroundings
Potential loss of bat roosting features	Site

3. RESULTS OF PRELIMINARY ECOLOGICAL APPRAISAL

Introduction

3.1 The findings of the PEA are set out below, including:

- The potential for Important Ecological Features (IEFs) to be present within the ZOI that could be affected by the Proposals and potentially influence scheme design;
- A broad overview, where possible, of the potential impacts (both positive and negative) that could occur as a result of the predicted biophysical changes described in **Section 2**, in the absence of impact avoidance and mitigation measures;
- A broad overview, where possible, of the measures that are likely to be required to avoid, mitigate and as a last resort compensate for significant negative effects on IEFs;
- Opportunities to deliver Biodiversity Net Gain; and
- Recommendations for further research and/or survey work necessary to inform assessment and design of the above, compliance with policy, legislation and/or ongoing management of the Site.

3.2 The field visit was carried out by Liam Mayle and Siobhan Pryke of EPR on 02/09/24.

Designated Sites

3.3 **Maps 1a** shows the location of statutory designated sites for nature conservation up to 5km from the Site and **1b** shows the location of sites designated through planning policy within 2km from the Site. These are described briefly below.

Statutory Designated Sites

National

- 3.4 Maiden Erlegh Park LNR lies 1.4km to the southeast of the Site. It spans 10.2ha in total, consisting of a mix woodland and grassland as well as a 2.4ha lake and associated wetland. The site is managed by Earley Town Council and is also designated a LWS and PAW site.
- 3.5 Highwood pond Local Nature Reserve (LNR) lies 1.6km to the east of the Site. It spans 15.2ha and consists of both Lowland Mixed Woodland and Heathland. It is managed by Wokingham Borough Council and the volunteer group, Friends of Highwood. It is also designated a Local Wildlife Site (LWS) and Provisional Ancient Woodland (PAW).
- 3.6 Pearman's Copse LNR lies 2.2km to the south of the Site. It consists of 6.9ha of coppiced woodland and is owned and managed by Wokingham Borough Council. It is also designated a LWS.
- 3.7 Lodge Wood and Sandford Mill Site of Special Scientific Interest (SSSI) lies 4.6km to the east of the Site. The SSSI consists of 2.3ha of wet woodland bordering the River Loddon and is designated for its population of Loddon Lily *Leucojum aestivum*. It is managed by Berkshire, Buckinghamshire and Oxfordshire Naturalists Trust.

- 3.8 Ali's Pond LNR lies 4.1km northeast of the Site. It spans 0.4ha and consists of a pond and open grassland, bordered to the north by deciduous woodland. It was designated in 2000 for its population of Great Crested newt (GCN) *Triturus cristatus*. It is owned by Sonning Parish Council and managed by the Friends of Ali's Pond.
- 3.9 Alder Moors LNR lies 4.4km to the northeast of the Site and consists of 8.5ha of Alder *Alnus glutinosa* woodland. It is owned and managed by Wokingham Borough Council.
- 3.10 Clayfield Copse LNR lies 5km north of the Site. It spans 8.7ha and consists of a mix of open grassland and Hazel *Corylus avellana* coppice woodland. It is managed by Reading Borough Council.
- 3.11 Lavells Lake LNR lies 5km to the east of the Site. It spans 12.5ha and consists of a lake and surrounding grassland and woodland created from a disused gravel pit. It is managed by Wokingham Borough Council and the volunteer group, Friends of Lavells Lake.
- 3.12 Given the activities and ZOI associated with the proposals none of the national sites are affected by the proposals and are not considered further in this report.

Non-Statutory Designated Sites

Local Wildlife Sites (LWS)

- 3.13 The Site lies less than 1km west of Whiteknights Lake LWS. The LWS consists of a 5.9ha lake, approximately 20ha of woodland and a further 14.5ha of grassland habitats. The LWS is owned and managed by the University of Reading.
- 3.14 Whitley Park Farm/St Patricks Hall Pond LWS Lies less than 1km to the west of the Site. It consists of approximately 3.6ha of deciduous woodland.
- 3.15 The Cowsey LWS lies 1km to the southwest of the Site. It is a 20ha area of mixed deciduous woodland, scrub and grassland with a pond. It is managed by Reading Borough Council.
- 3.16 Redhatch Copse LWS lies 1.1km south of the Site. It consists of 3.6ha of semi-natural ancient woodland with a good diversity of ancient woodland indicators and is therefore also designated a PAW site. It is managed by Earley Town Council.
- 3.17 The Coal, Kennetmouth and Kings Meadow East LWS lies 2.2km north of the Site. It is a 3.4ha area of Mixed deciduous woodland, tall herb, grassland and scrub and is managed by Reading Borough Council.
- 3.18 Henley Road Gravel Pit LWS lies approximately 2.3km to the north of the Site. It is a Lake and surrounding habitat created from a disused gravel pit. It is managed by the Caversham Lakes Trust.

Provisional Ancient Woodland (PAW)

- 3.19 Bulmershe Park lies 2.5m northeast of the Site and is a 1.5ha area of ancient woodland managed by Woodley Town Council.

Habitats

- 3.20 The distribution of broad habitat types and features noted during the field visit are presented on **Map 2** and are described further below.

Modified Grassland

- 3.21 Areas of Modified Grassland lie around the URS Building. Species identified include Perennial Ryegrass *Lolium perenne*, Yorkshire Fog *Holcus lanatus*, Broadleaved Plantain *Plantago major*, Creeping Buttercup *Ranunculus repens*, Dock *Rumex sp.* and Ribwort Plantain *Plantago lanceolata*. This species assemblage is typical of modified grassland.
- 3.22 Site fencing has prevented regular management of the grassland within the site. Adjacent grassland outside the boundary, however, is heavily managed to facilitate public use and is indicative of how the onsite grassland has previously been managed, and how it will be managed upon completion of works..

Hedgerows

- 3.23 Formal Holly *Ilex aquifolium* hedgerows run along the North and West of the Site, with an additional Beech *Fagus sylvatica* hedge to the northwest. Portuguese Laurel *Prunus lusitanica* has invaded these hedges in places, but they are otherwise in good condition.

Non-Native Shrubs

- 3.24 Small areas of non-native shrubs are planted at the east, northwest and southwest of the Site.

Individual Trees

- 3.25 A number of individual mature trees stand close to the site boundary within the Zol. They are not present within the site itself and so will not be removed or pruned, however their root protection zones (RPZ's) are likely to extend into the site. The extent of the RPZ's should be confirmed by an arboriculturist and advice sought on avoiding or mitigating any affects.

Ornamental Pond

- 3.26 An ornamental concrete pond stands at the western end of the URS building. Its vertical sides, both inside and out, make it inaccessible to most terrestrial wildlife, and the first floor of the URS building extends over the entirety of the water body, meaning it is fully shaded. Flag Iris *Iris pseudacorus*, Purple Loosestrife *Lythrum salicaria* and Water Mint *Mentha aquatica* were planted in the margins with Water Lily *Nymphaeaceae sp.* in the middle of the water body

Fauna

Bats

- 3.27 The data search returned records for Barbastelle *Barbastella barbastellus*, Brown Long-eared *Plecotus auratus*, Common Pipistrelle *Pipistrellus pipistrellus*, Daubenton's *Myotis daubentonii*, Leisler's *Nyctalus leisleri*, Nathusius' Pipistrelle *P. nathusii*, Natterer's *Myotis nattereri*, Noctule *Nyctalus Noctula*, Serotine *Eptesicus serotinus* and Soprano Pipistrelle *P. pygmaeus* bats within 2km of the Site.

- 3.28 EPR has conducted surveys of the Site for bats previously, which are detailed in the associated technical note (EPR 2024). The most recent building inspection on 16/05/2023 assessed the building as of low suitability for bats. This was followed by an emergence survey on 05/06/2024, which found no evidence of bats roosting within the URS building, though bats were observed foraging along the hedgerows and surrounding trees.
- 3.29 The proposed lighting strategy (**Appendix 4**) has been reviewed. Given that the Site lies in an already well-lit environment, and that the species using the Site are particularly light tolerant, it is unlikely that the lighting plan will have significant impacts for bats.
- 3.30 The technical note (EPR 2024) makes the following recommendations.
- The proposed works should occur during the period when bats are active (April to October inclusive);
 - Toolbox talks should be delivered to all individuals working on the Site to allow them to identify bats and make them aware that the building has features that may support bats;
 - Should bats be discovered at any point during works, all works must be stopped immediately, and a suitable-qualified ecologist contacted for advice;
 - Alternative roosting opportunities should be provided in the form of bat boxes, either integrated into new buildings on the Whiteknights Campus or attached to mature trees surrounding the Site;

Birds

- 3.31 The desktop study returned records of a number of bird species of conservation concern which potentially could be using the Site. The vegetation on Site and immediately adjacent provides suitable nesting and foraging opportunities, particularly associated with trees and hedgerows. Given the size of the Site and the habitats available, the Proposals are unlikely to have an adverse effect on the conservation status of these species, therefore no further survey effort is required.
- 3.32 The vegetation surrounding the site provides opportunities for nesting birds, which could be disturbed by the works. Nesting bird checks should be conducted by a suitably experienced ecologist no more than 24 hours prior to the commencement of works. Should nesting birds be found, the ecologist will set up an appropriate exclusion zone around the nest which must not be entered until chicks have fledged.
- 3.33 Opportunities can be taken to enhance habitat provision for birds by providing bird boxes on surrounding the trees.

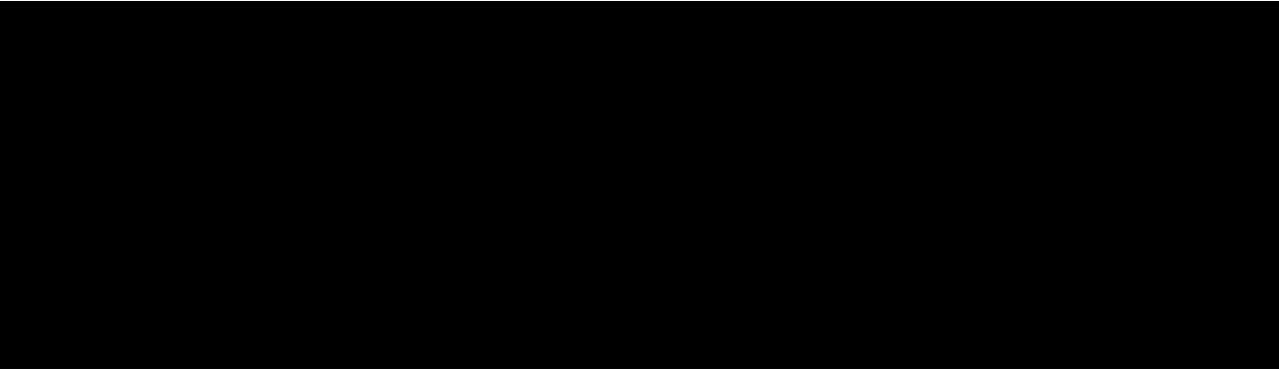
Reptiles

- 3.34 The data search returned records of Common Lizard *Zootoca vivipara*, Grass Snake *Natrix helvetica*, and Slow Worm *Anguis fragilis* within 2 km of the site, however, the A4, A329 and B3350 run between the site and all of these records, acting as barriers to movement into the site.

- 3.35 The management regime of the grassland habitat onsite makes it unsuitable for supporting reptiles, as the short sward provides no cover or protection from predators. It is therefore considered highly unlikely that they are using the site.

Amphibians

- 3.36 The data search returned no records of GCN within 2km of the Site. Though Ali's Pond LNR is designated for its GCN population, it is considered to be too far away for GCN to travel onto the Site. The two sites are also separated by major roads which act as a barrier to movement.
- 3.37 Whiteknights Lake was assessed as of poor quality via the GCN Habitat Suitability Index (HSI) (HSI score: 0.18) due to the absence of macrophytes that could be used for cover, foraging or breeding purposes, and the presence of waterfowl, which are known to degrade amphibian habitat. The abundance of algae also indicated poor water quality. It is therefore considered unsuitable habitat unlikely that Whiteknights Lake would support GCN.
- 3.38 The onsite ornamental pond was also assessed as poor quality (HSI score: 0.31) and as such is unlikely to support GCN. The vertical sides, both internal and external, make it unlikely that amphibians of any species can access the water body at all. The pond is shaded by the overhanging first floor of the URS building and the surrounding hard standing prevents suitable habitat cover from establishing. These features also prevent the pond from being meaningfully enhanced.
- 3.39 The data search returned records of Common Frog *Rana temporaria*, Common Toad *Bufo bufo* and Smooth Newt *Lissotriton vulgaris* within 2km of the site. The closest Common Toad record was within 100m of the Site, suggesting that they could make use of the Site itself. Common Toad is a Natural Environment and Rural Communities (NERC) Act (2006) Section 41 priority species and so should be considered during planning and development.
- 3.40 The usual management regime of the grassland habitat onsite makes it unsuitable for supporting amphibians as the short sward provides no cover or protection from predators and is unlikely to retain moisture. It is therefore considered highly unlikely that amphibians would typically be using the site. However, as the usual management has ceased during works, the sward has become higher and therefore more suitable for use by amphibians.
- 3.41 Due to the proximity of Common Toad records to the Site and present suitability of the grassland habitats, it is recommended that works be carried out under a non-licensed method statement to prevent harm to any herpetofauna that may be using the Site. Any clearance of the grassland area taking place during the active period (March – October, inclusive) should be supervised by a suitably experienced ecologist. Any herpetofauna found during the works will be relocated to a safe area near to the Site by the supervising ecologist. Should GCN be found, all works must cease, and further advice sought from Natural England.



Dormouse

- 3.45 The data search returned no records of Hazel Dormouse *Muscardinus avellanarius* within 2km of the site. The site does not contain or connect to suitable habitat, and so it is unlikely that Dormouse are using the site.

Otter/Water Vole

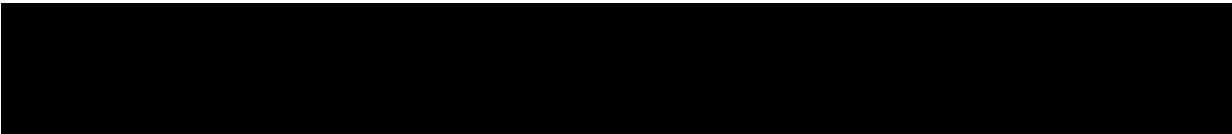
- 3.46 The data search returned records of Otter *Lutra lutra* and a single record of Water Vole *Arvicola amphibius* within 2km of the site to the North. Major roads run between the site and these records, presenting significant barriers to movement to the site. It is therefore unlikely that they are using the site.

Eurasian Hedgehog

- 3.47 The data search returned numerous records of Eurasian Hedgehog within 2km of the site in all directions. Hedgehogs are a Species of Principle Importance under S41 of the NERC Act 2006, and therefore sites with known hedgehog habitat nearby should provide enhancement measures for Hedgehogs. This can be achieved by providing hedgehog houses in the vegetation surrounding the site.

4. SUMMARY AND CONCLUSIONS

Summary of Potential Constraints

- 4.1 It is recommended that works be carried out under a non-licenced method statement to prevent harm to any herpetofauna that may be using the Site.
- 4.2 Linear features i.e. the hedgerows should be retained where possible.
- 4.3 Nesting bird checks should be conducted by a suitably experienced ecologist no more than 24 hours prior to the commencement of works.
- 

- 4.5 The proposed works should occur during the period when bats are active (April to October inclusive).

- 4.6 Toolbox talks should be delivered to all individuals working on the Site to allow them to identify bats and make them aware that the building has features that may support bats. Should bats be discovered at any point during works, all works must be stopped immediately, and a suitable-qualified ecologist contacted for advice.
- 4.7 Ambient light levels around URS building should be maintained at or below current levels.

Summary of Potential Opportunities

- 4.8 Wildlife boxes can be provided in the area immediately surrounding the site to provide nesting/roosting opportunities for birds and bats and resting places for Hedgehog.

Summary of Recommendations

- 4.9 Based on the results of the PEA outlined in **Section 3, Table 4.1** sets out a summary of the following additional survey and/or assessment work that is recommended to inform scheme design and the preparation of any mitigation strategies that may be required to allow the Proposals to proceed in accordance with legislation and planning policy.

Table 4.1: Recommended further work

Further Work	Seasonal Timing Constraints / Considerations	Recommended Stage of the Project	Reason for Recommendation
Delivery of toolbox talks concerning bats to all individuals working onsite	April to October inclusive	Prior to commencement of works	To avoid harm or disturbance to bats
Nesting bird checks	March – October, inclusive	<24 hours prior to commencement of works	To avoid disturbance of nesting birds.
Supervision of vegetation clearance	March – October, inclusive	During works	To avoid harm to herptofauna
Installation of wildlife boxes	Year round	Post-development	Habitat enhancement

Conclusions

- 4.10 The appraisal identified that the Site has the potential to support Important Ecological Features, which was limited to bats, birds, herpetofauna and Hedgehog.
- 4.11 Supervision of works has been recommended to prevent disturbance or harm to wildlife.
- 4.12 The Proposals offer opportunity to increase and enhance the Site for biodiversity through provision of wildlife boxes.

References

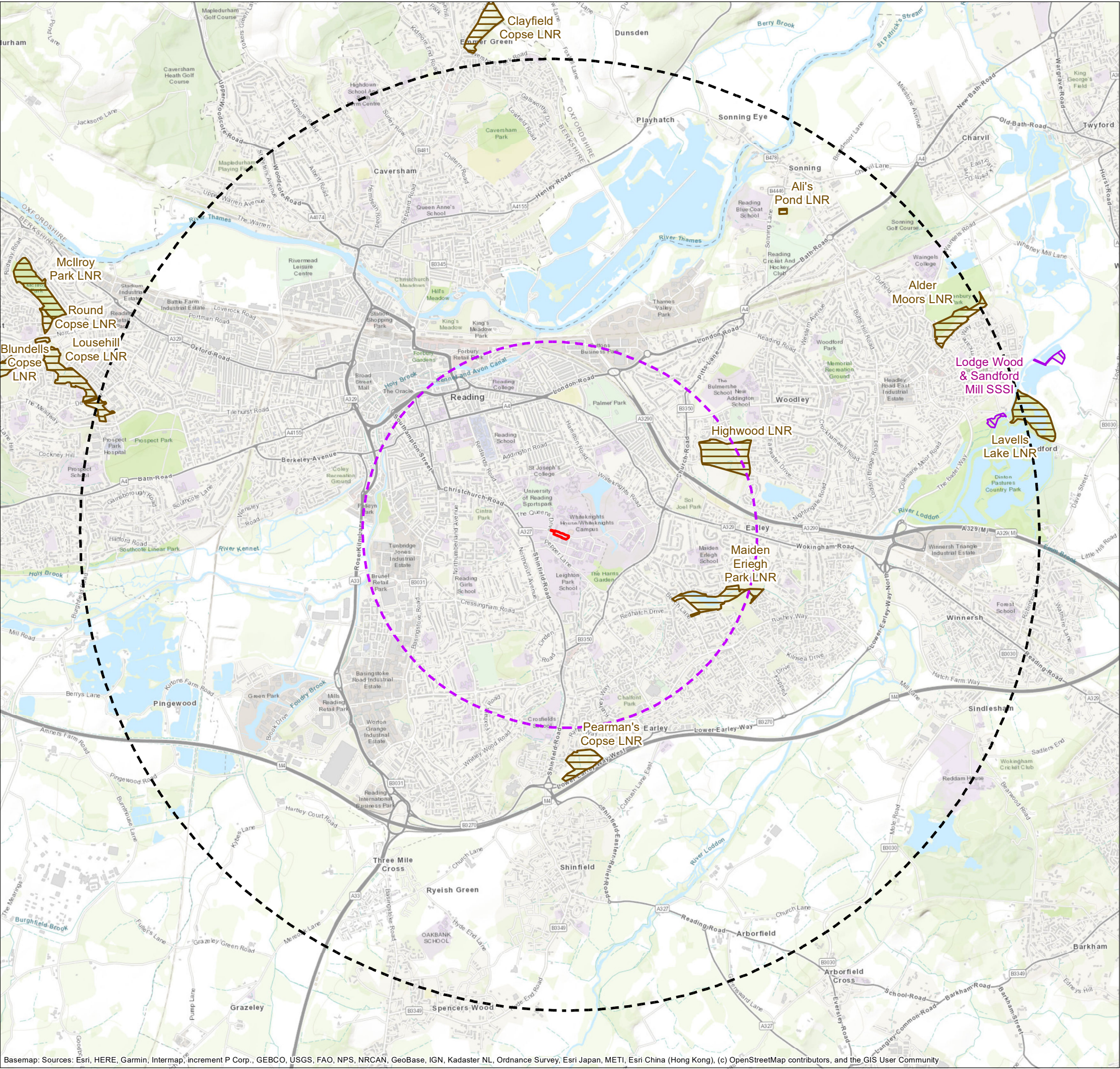
Bat Conservation Trust (2023) *Bat Surveys for Professional Ecologists - Good Practice Guidelines*. 4th Edition. Bat Conservation Trust, London.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2*. Chartered Institute of Ecology and Environmental Management, Ampfield.

Ecological Planning & Research Ltd. (2024) URS Building – University of Reading Technical Note: Bat Emergence Survey

Maps

Map 1a	Site Location and Statutory Designated Sites
Map 1b	Site Location and Sites Protected by Planning Policy
Map 2	Habitats and Features



MAP 1a Site Location & Statutory Designated Sites

KEY

-  Site boundary
-  2km linear distance from site boundary
-  5km linear distance from site boundary
-  Sites of Special Scientific Interest (SSSI)
-  Local Nature Reserves (LNR)

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CLIENT: University of Reading

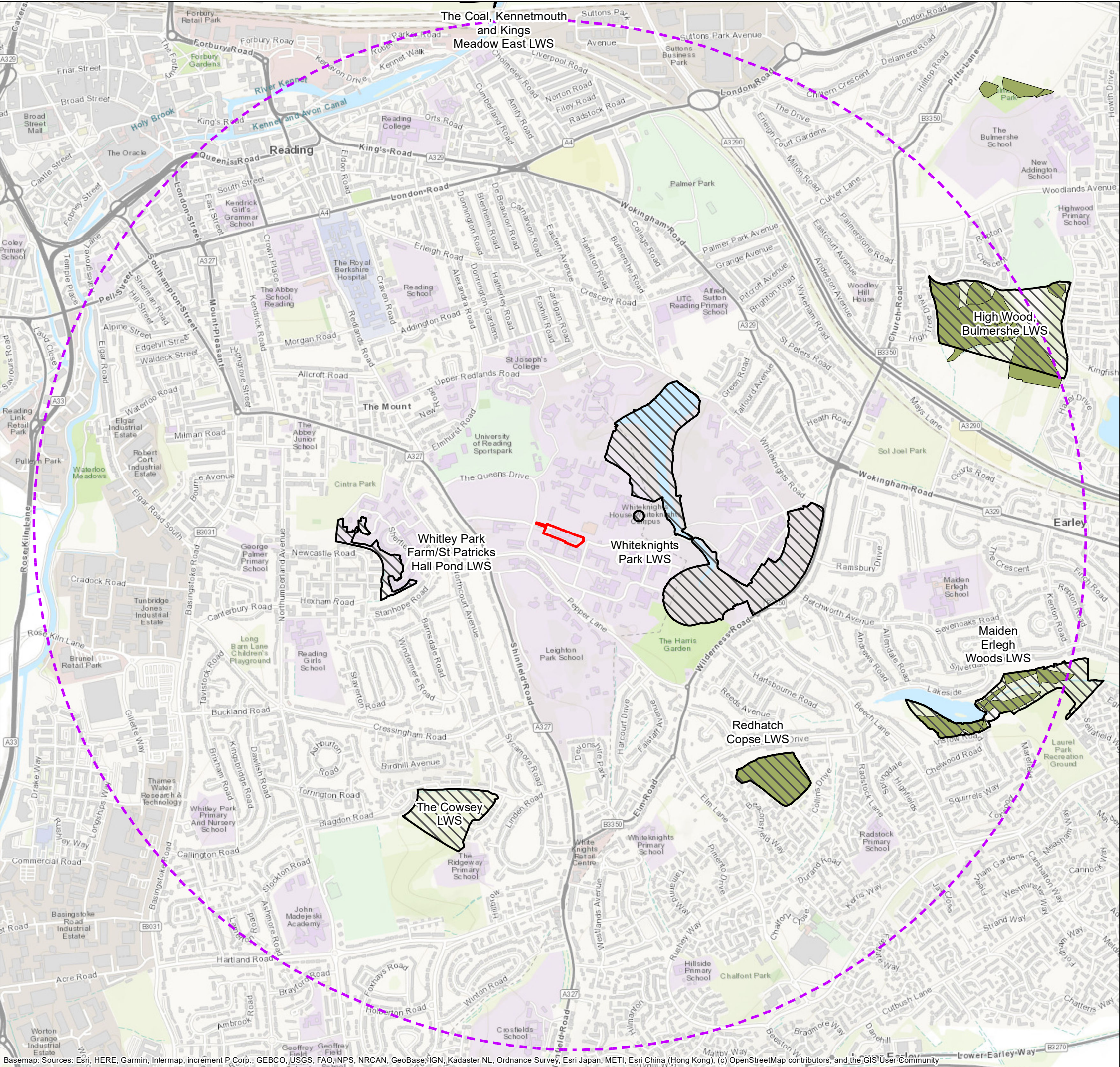
PROJECT: URS Building

DATE: 15 November 2024

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MAP 1b Site Location & Sites Protected by Planning Policy

KEY

- Site boundary
- 2km linear distance from site boundary
- 5km linear distance from site boundary
- Local Wildlife Sites (LWS)
- Provisional Ancient Woodland

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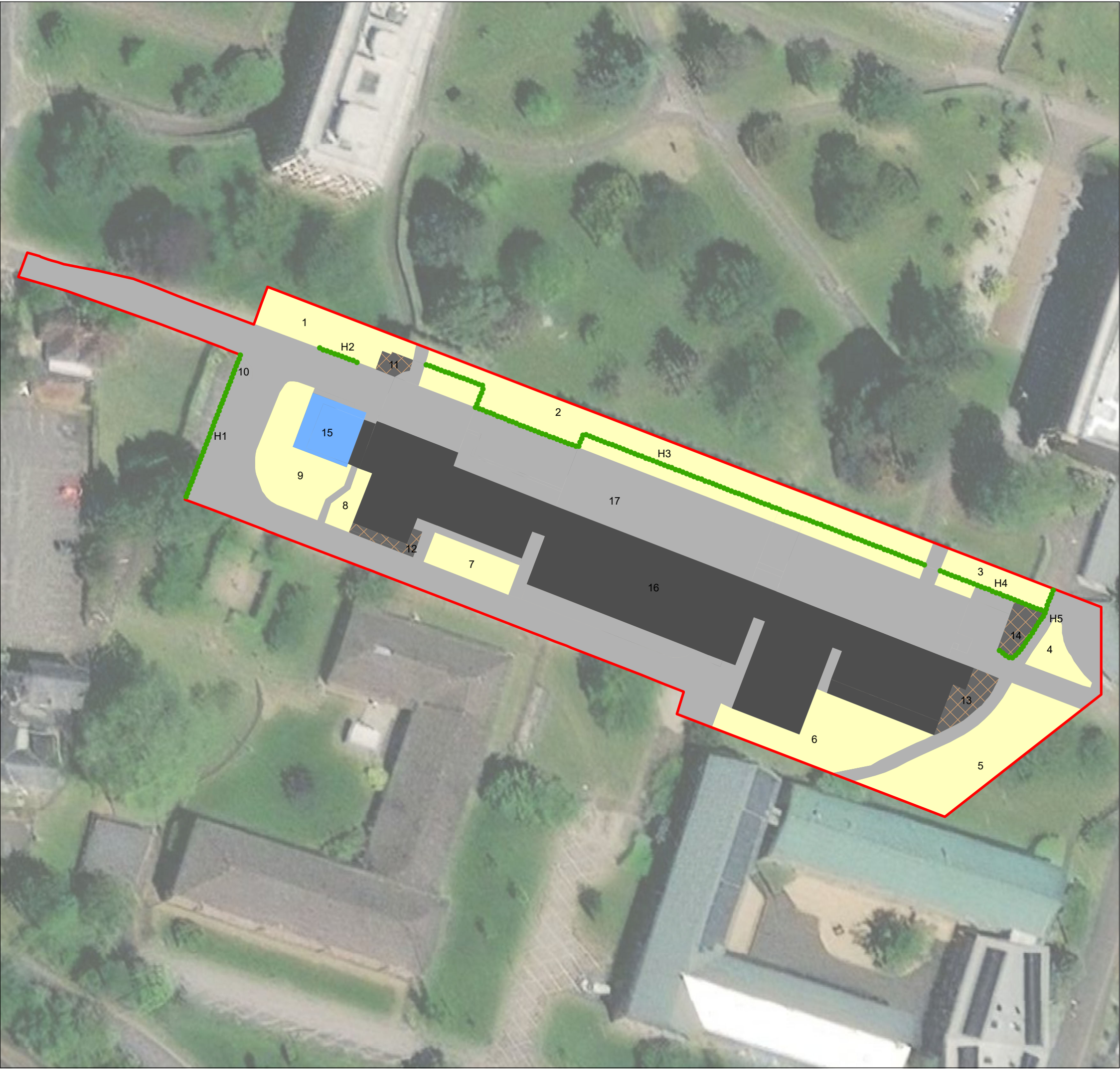
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CLIENT: University of Reading

PROJECT: URS Building

DATE: 15 November 2024



MAP 2 Habitats and Features

KEY

- Site boundary
- h2 - Hedgerows
- g4 - Modified grassland
- r1 - Standing open water and canals
- u1 - Built-up areas and gardens
- u1b - Developed land, sealed surface
- u1b5 - Buildings

SCALE: 1:650 at A3

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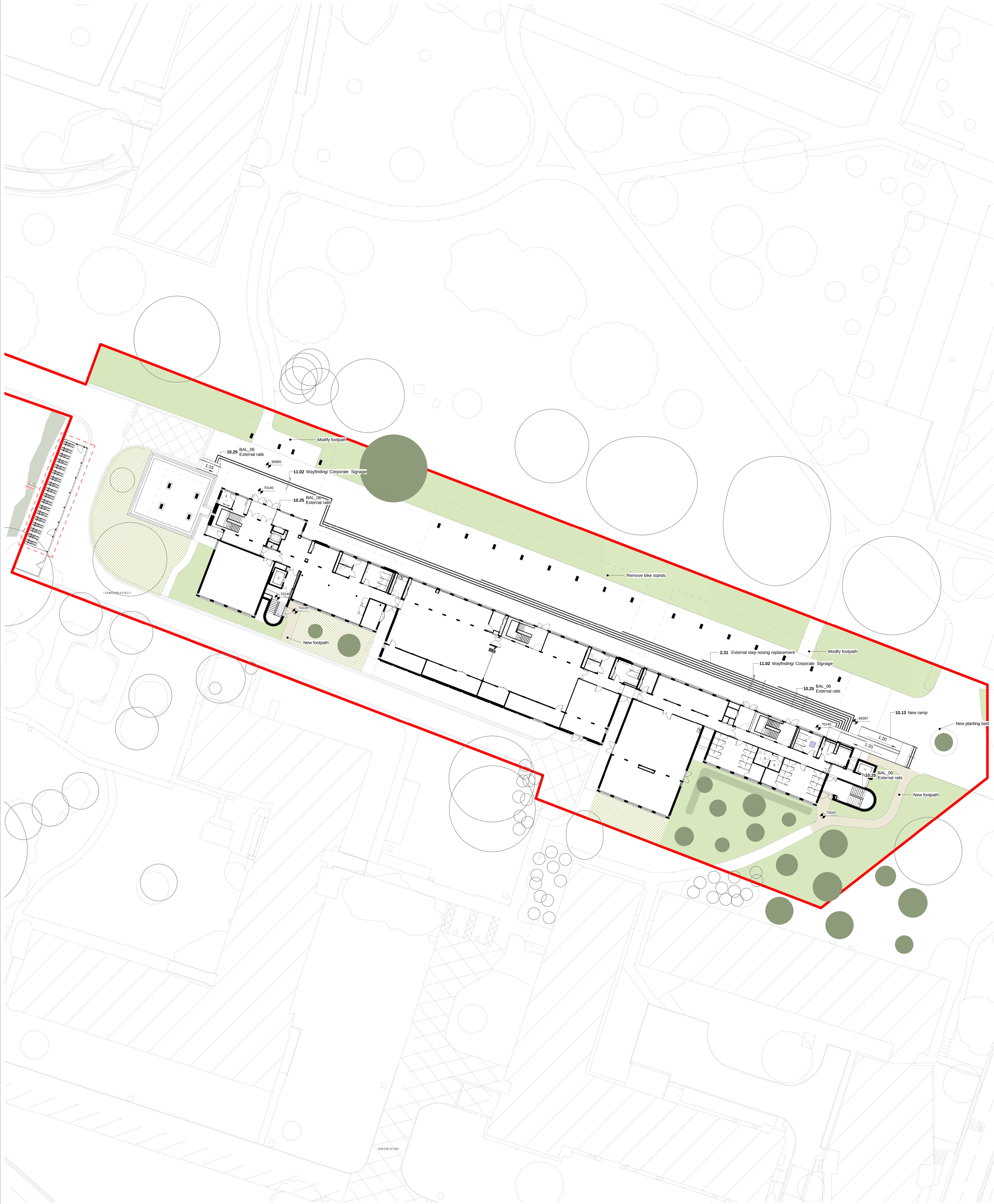
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DATE: 15 November 2024

Appendix 1

2360383-ACG-W033-00-DR-A-18310-Landscape Plan



1 18310-Level 0 Plan
1 : 200

A0

SCALE
1 : 200

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NOTES:

DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.

All dimensions to be checked on site.
Drawing to be read in conjunction with all relevant Architectural, interiors, Structural, M&E, Drainage/ Public Health, Landscape and Civil drawings and specifications. Any discrepancies between consultants' drawings to be reported to the Architect before any work commences.
The Contractor's attention is drawn to the Health & Safety matters identified in the Health & Safety plan as being potentially hazardous.
These items should not be considered as a full and final list.

The Work Package Contractor's normal Health & Safety obligations still apply when undertaking constructional operations both on and off site.

Ayre Chamberlain Gaunt take no responsibility for the location of legal boundaries indicated on this drawing and advise a separate drawing to be completed by specialist surveyor in order to establish exact boundaries.
DWG files provided for information only. Refer to PDF record.

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Proposed trees

Proposed hedge

Proposed meadow area

New footpath

Existing grassland

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AYRE
CHAMBERLAIN
GAUNT

PROJECT

URS Building
University of Reading

DRAWING TITLE

Landscape Plan

REV.

DATE

DESCRIPTION

P1	11.10.24	Stage 3 Draft Issue 2
P2	25.10.24	Stage 3 Draft Issue 3
P3	31.10.24	Stage 3 Issue
P4	06.11.24	Draft Planning Issue

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APPD BY

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DRAWING NO.

project code: acg-urs-bldg; version: level 000; title: number

2360383-ACG-W033-00-DR-A-18310

STAGE

3

SUITABILITY

S2

Suitable for information

Appendix 2

Relevant Legislation & Planning Policy

LEGISLATION

The Environment Act 2021

The Environment Act 2021 places a requirement on the Secretary of State to make regulations setting out long-term targets for air quality, water, biodiversity, resource efficiency and waste reduction. It also requires the Government to produce an Environmental Improvement Plan, to report on progress towards its goals annually, to meet the targets that are set in relation to the improvement of the natural environment and to produce remedial plans should this not be achieved.

In relation to water quality, the Act places new duties on the Government, Environment Agency and sewerage undertakers to reduce the frequency and harm of discharges from storm overflows on the environment, and for monitoring the quality of watercourses affected by those overflows.

It also includes a requirement for an independent Office for Environmental Protection (OEP) to be established, with responsibilities for monitoring and reporting on progress against environmental improvement plans and targets. The OEP will also have investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act makes provisions for 10% biodiversity gain to become a condition of planning permission in England, through amendments to the Town and Country Planning Act 1990. This will be measured through a biodiversity metric to be published by the Secretary of State. The Act also establishes Biodiversity Net Gain as a requirement for Nationally Significant Infrastructure Projects (NSIPs).

The Act also strengthens the biodiversity duty placed on public authorities through amendments to the Natural Environment and Rural Communities Act 2006 Section 40, requiring such authorities to not only conserve but also enhance biodiversity when exercising their functions. Public authorities will also be required to publish summary reports of actions taken under Section 40 at least every five years.

The Act provides the legal basis for the creation of Local Nature Recovery Strategies (LNRSSs) for England (including specifying their content), and the preparation and publication of species conservation strategies and protected sites strategies.

It also creates a new legal vehicle known as a 'Conservation Covenant' which is a voluntary, legally binding private agreement between landowners and responsible bodies (the latter designated by the Secretary of State) which conserve the natural or heritage features of the land, enabling long-term conservation. Conservation Covenants are designed to 'run with the land' when it is sold or passed on and are intended to eventually become a primary mechanism for the delivery of Biodiversity Net Gain (BNG).

The Act provides new powers for the Government to amend in future Regulation 9 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') – but “only if satisfied that the regulations do not reduce the level of environmental protection provided by the Habitats Regulations”.

Several aspects of protected species licencing have also been adjusted by the Act. These include the removal of several inconsistencies between the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended), ensuring that licences issued under the former piece of legislation also apply under the latter, and making it now possible for licences to be issued under Section 16(3) of the Wildlife &

Countryside Act 1981 (as amended) for purposes of overriding public interest. The maximum term of a licence that can be issued by Natural England has also been extended from 2 to 5 years.

All biodiversity-related commitments and requirements (as set out in Part 6 of the Act) will come into force upon the adoption of secondary legislation and regulations, following a period of consultation. Timescales are to be confirmed, but this is currently expected to be around late 2023.

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (known as the “Habitats Regulations”) were originally drawn up to transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the “Habitats Directive”) into UK legislation. Following the UK’s exit from the European Union, the Habitats Regulations – as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – remain in force until such a time as they are superseded by new or updated domestic legislation.

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which previously formed part of the Natura 2000 network of protected areas across Europe and are now part of the UK’s “National Sites Network”. New National Sites may be designated under the Regulations.

The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra* and all native species of bat.

Further information on SPAs, SACs and European Protected Species is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Relevant Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)

Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.
Schedule 9a	Allows environmental authorities to issue species control orders to landowners, obliging them to control/eradicate invasive and/or non-native species.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CROW) Act 2000 have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CROW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. This was published in 2007 and is commonly referred to as the "S41 list". Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Appendix.

The Water Environment Regulations 2017

Currently, the overriding legislation relating to freshwater is the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The Regulations set out objectives to deliver a better water environment based upon achieving a 'good status' for freshwater bodies. The concept of 'good status' is a more rigorous measure of environmental quality than previous measures, which now takes into account not just the chemical status but also the ecological health and the extent of artificial physical modification to rivers.

The Regulations are based upon the concept of protecting water through the management of river basin districts (RBDs) and require the implementation of River Basin Management Plans (RBMPs). Regulation 33 requires public bodies to 'have regard' to the RBMP when making planning decisions, for example through the granting of planning permission with appropriate planning conditions and/or obligations. These could require measures to be implemented (e.g. Sustainable Urban Drainage Systems (SUDS), grey water recycling etc.) or funds to be provided for habitat enhancement schemes.

The Regulations also affect planning policy through the implementation of Programmes of Measures for each river basin district. This involves bringing together funding from various sources and co-ordination of the activities of organisations with an interest in the use of land and water, including developers.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory (legal) protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites: International

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2017 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK.

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the European Habitats Directive 92/43/EEC. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the European Birds Directive 2009/147/EC. Following the UK's exit from the EU, these now form part of the "National Sites" network rather than the EU Natura 2000 network.

Ramsar sites are wetlands of international importance and although not covered under the Habitats Regulations they are, as a matter of national planning policy, subject to the same strict protection as SACs and SPAs. The majority of terrestrial Ramsar sites in England are also notified as SPAs and/or Sites of Special Scientific Interest (SSSIs).

To avoid confusion with the nationally designated sites described below, EPR refers to SACs and SPAs as 'International sites', given the reasons for their designation.

Any plan or project considered likely to affect an international site (SAC, SPA or Ramsar) must be subject to a Habitats Regulations Assessment (HRA), as set out under Regulation 63 (and Regulation 105 in respect of Land Use Plans) of the Habitats Regulations 2017 (as amended) and the National Planning Policy Framework (NPPF) 2021.

The local authority (or other 'competent authority') carries out the HRA, but the onus is on the developer to provide the necessary information to inform this process, usually in the form of a report.

Under the Habitats Regulations 2017 (as amended), the competent authority must determine in the first instance whether a proposed development is likely to have a significant effect on the SAC/SPA, either alone or in combination with other plans and projects. This stage of the HRA process is known as 'screening'.

If a likely significant effect cannot be precluded (screened out) on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives. A precautionary approach must be taken with respect to determining whether or not there would be a significant effect, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed, the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the SAC/SPA. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Regulation 16A of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 sets out the management objectives of the National Site Network, which can be summarised as follows:

- to maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive within the UK's territory to a favourable conservation status (FCS); and
- 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 in meeting the above objectives, including breeding, moulting, staging and wintering areas for in the case of migratory bird species;
- their importance for the coherence of the national sites network; and
- the threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

Government guidance¹ also states that competent authorities have a duty to help protect, conserve and restore the designated features of SACs and SPAs when carrying out their statutory work, including taking decisions that might affect a site. They also have a duty to consider how they can help to prevent the deterioration of the site's habitats from human activity or natural changes, including habitats that support designated species, and prevent significant disturbance of the site's designated species from human activity or natural changes.

Competent authorities include (but are not limited to) local planning authorities, councillors, planning committee members and statutory agencies such as Natural England.

Statutory Sites: National

Nationally important sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). A development proposal that is likely to affect a nationally important site will be subject to special scrutiny by the local planning authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly

on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites, as set out in Section 15 of the National Planning Policy Framework (NPPF).

Sites of Special Scientific Interest

The Wildlife and Countryside Act 1981 (as amended) and the CROW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSIs). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity.

Public bodies have a duty to take reasonable steps to conserve and enhance the special features of sites of special scientific interest (SSSIs) when carrying out their statutory duties and giving others permission for works, such as reviewing planning applications.

¹ <https://www.gov.uk/guidance/duty-to-protect-protect-protect-and-restore-european-sites>

National Nature Reserves

National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

Statutory Sites: Regional/Local

Local Nature Reserves

Local Nature Reserves (LNRs) are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local planning authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance and the NERC Act place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

The S41 list also includes species as explained below under 'Species of Principal Importance in England'.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal Importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow classed as 'important' under the criteria set out by the Regulations without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain important hedgerows unless satisfied that the circumstances justify their removal.

Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are primarily put in place to preserve amenity or for landscape conservation reasons. The importance of trees as wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation and are generally dealt with by an arboricultural consultant rather than an ecologist. Further guidance on TPOs in relation to development is available from the Department for Communities and Local Government.

Ancient Woodland & Veteran Trees

Ancient woodlands are defined as areas continuously wooded since at least 1600 AD. Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are advised under the NPPF and National Planning Practice Guidance (NPPG) not to grant planning permission for any development that would result in

the loss or deterioration of ancient woodland, ancient trees or veteran trees unless there are 'wholly exceptional reasons' and 'a suitable compensation strategy in place'. Local Planning Authorities must take into account Natural England and the Forestry Commission's *Standing Advice for Ancient Woodland and Veteran Trees*, available on the www.gov.uk website.

Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature.

Guidance on pollution prevention is hosted on the Government's website and focuses on regulatory requirements. This covers topics including the prevention of pollution if you are a business, managing business and commercial waste, oil storage, working on or near water, and managing water on land. Careful planning and the application of these guidelines can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

Water Resources Act (WRA) 1991

Under the WRA there is strict regulation of discharges (including sediment, chemicals, nutrients) to rivers, lakes, estuaries and groundwaters. It also aims to ensure that polluters cover the costs associated with pollution incidents.

SPECIES PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England. When preparing a planning application, it is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by a proposed development. This can best be achieved by undertaking surveys early in the planning process. Avoidance and/or mitigation measures may be required to address any predicted impacts upon protected species and may necessitate a licence. The Government website offers standing advice from Natural England and DEFRA which can be applied to planning applications that affect protected species.

Bats

There are 18 species of bat in the UK, seven of which are Species of Principal Importance in England. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitats Regulations 2017 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England.

Great Crested Newt

The Great Crested Newt *Triturus cristatus* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Great Crested Newts;
- Intentionally, deliberately or recklessly disturb Great Crested Newts in such a way as to be likely to significantly affect the ability of any significant group of Newts to survive, breed, or rear or nurture their young or the local distribution of or abundance the species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Great Crested Newts for shelter or protection, or intentionally or recklessly disturb a Great Crested Newt whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Great Crested Newt; and
- Possess, sell or transport a Great Crested Newt, or anything derived from it.

Development proposals affecting the Great Crested Newt require a European Protected Species mitigation licence from Natural England.

Intentional or reckless behaviour leading to an offence being committed as detailed above may result in maximum penalties of:

- Up to £5,000 fine per offence committed;
- A custodial sentence of up to six months instead of, or in addition to, a fine; and/or
- Items of equipment involved in committing the offence may be seized and detained.

In addition to the above penalties, it is likely that any EPS mitigation licence obtained for a site will be revoked whilst any wildlife offence is investigated. This will lead to immediate temporary and, depending on investigation outcomes, possible permanent restrictions on site works, as well as associated cost.

Hazel Dormouse

The Hazel Dormouse *Muscardinus avellanarius* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Dormice;
- Intentionally, deliberately or recklessly disturb Dormice in such a way as to be likely to significantly affect the ability of any significant group of Dormice to survive, breed, or rear or nurture their young or the local distribution of or abundance of the species;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Dormice for shelter or protection (whether occupied or not) or intentionally or recklessly disturb a Dormouse whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Dormouse;

- Possess or transport a Dormouse (or any part thereof) unless under licence; and
- Sell or exchange Dormice.

Development proposals affecting the Dormouse require a European Protected Species mitigation licence from Natural England.

European Otter

The European Otter *Lutra* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Otters;
- Intentionally, deliberately or recklessly disturb Otters in such a way as to be likely to significantly affect the ability of any significant group of Otters to survive, breed, or rear or nurture their young or the local distribution of or abundance of Otters;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Otters for shelter or protection (whether they occupied or not) or intentionally or recklessly disturb an Otter whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of an Otter;
- Possess or transport an Otter (or any part thereof) unless under licence; and
- Sell or exchange otters.

Development proposals affecting the Otter require a European Protected Species licence from Natural England.

Reptiles

All four of the widespread British species of reptile, namely the Common Lizard *Zootoca vivipara*, Slow-Worm *Anguis fragilis*, Grass Snake *Natrix helvetica* (previously *Natrix natrix*) and Adder *Vipera berus*, are Species of Principal Importance in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance and potential project delays.

The Smooth Snake *Coronella austriaca* and the Sand Lizard *Lacerta agilis* are the rarest reptile species in Britain. In addition to the protection that is afforded to the widespread species of reptile listed above, these species are protected further under Schedule 5 (Sections 9.4b and 9.4c) of the Wildlife and Countryside Act 1981 (as amended). They are also European Protected Species protected under the Habitats Regulations 2017 (as amended). This legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Sand Lizards or Smooth Snakes;
- Intentionally, deliberately or recklessly disturb Sand Lizards or Smooth Snakes in such a way as to be likely to significantly affect the ability of any significant group of Sand Lizards or Smooth Snakes to survive, breed, or rear or nurture their young or the local distribution or abundance of either species;

- Intentionally or recklessly damage, destroy or obstruct any place used by Sand Lizards or Smooth Snakes for shelter or protection, or intentionally or recklessly disturb a Sand Lizard or Smooth Snake whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Sand Lizard or Smooth Snake;
- Keep, sell, or exchange Sand Lizards or Smooth Snakes or their eggs; and
- Deliberately take or destroy their eggs.

Development proposals affecting Smooth Snake or Sand Lizard require a European Protected Species mitigation licence from Natural England.

Water Vole

The Water Vole *Arvicola terrestris* is a Species of Principal Importance in England. The legal protection for Water Voles was increased in 2008 to fully cover the species under Section 5 of the Wildlife and Countryside Act 1981 (as amended). The legislation makes it an offence to:

- Intentionally or deliberately (but not recklessly) kill, injure or take Water Voles;
- Intentionally, deliberately or recklessly damage, destroy or obstruct access to any structure or place used by Water Voles for shelter or protection;
- Intentionally, deliberately or recklessly disturb Water Voles whilst they occupy a structure or place used for that purpose;
- Sell Water Voles or offer or expose for sale or transport for sale; and
- Possess or control live or dead Water Voles or derivatives.

Developers who wish to maintain, build on or alter areas used by Water Voles must ensure that unnecessary damage is avoided and all reasonable steps are taken to minimise impacts on Water Voles and their burrows. The Wildlife and Countryside Act provides a defence against the offences listed above, provided the action is the incidental result of an otherwise lawful operation and could not reasonably have been avoided.

A licence to displace Water Voles must be obtained from Natural England before conducting any activities involving displacement operations (this is different to a conservation licence, which is required for survey methods that involve disturbing Water Voles or their burrows, or capturing them). To obtain a displacement licence, it is necessary to demonstrate that the activity/activities will result in a conservation benefit for Water Voles.

Birds

49 species of bird are listed as Species of Principal Importance in England. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence.

Regulation 10 of the Conservation of Habitats and Species Regulations 2017 (as amended) requires appropriate authorities and conservation bodies, in the exercise of their functions, to take such steps that they consider appropriate in order to secure “*the preservation, maintenance and re-establishment*”

of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat (...)".

European Badger

The Protection of Badgers Act 1992 offers considerable protection to both Badgers and Badger setts. This legislation was enacted to protect the European Badger *Meles* against baiting and not as a means of species recovery as it is common in England. It is an offence to cruelly treat, kill or take Badgers, but it is also illegal to intentionally or recklessly damage or disturb a Badger sett while it indicates signs of current use by a Badger.

The Government website contains information to help developers and their proponents avoid sett disturbance and to identify setts that are in current use. It is important to maintain adequate foraging territory in development proposals affecting Badgers as the destruction or severance of large areas of foraging territory could also be taken to include habitat loss. Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

Wild Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

White-Clawed Crayfish

The White-Clawed Crayfish *Austropotamobius pallipes* is a Species of Principal Importance in England. Outside designated sites (e.g. SACs), the White-Clawed Crayfish receives limited protection under Schedule 5 (Sections 9.1, 9.5a and 9.5b) of the Wildlife and Countryside Act 1981 (as amended), the Habitats Regulations 2017 (as amended) and the Salmon and Freshwater Fisheries Act 1975. This legislation does not provide strict protection of individual crayfish or their habitats but it does prevent prohibit the capture of this species without a licence. A conservation licence must therefore be obtained from Natural England before conducting any mitigation involving the capture and handling of this species.

European Eel

The Eels Regulations 2009 (as amended in 2011) aim to combat the population decline of the European eel *Anguilla anguilla* through protection of migration routes and controls on the numbers of eels allowed to be taken. In order to protect migration routes, any structures which may prevent upstream or downstream migration of eels must be reported to the Environment Agency. Eel passages must be constructed where needed and maintained in a good condition.

Freshwater Fish

The Salmon and Freshwater Fisheries Act 1975 protects freshwater fish, particularly salmon and trout. It prevents the destruction of spawning grounds and the obstruction of migratory passages through the building of weirs, dams etc.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the legislation, and only

where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Mitigation Licences

A European Protected Species mitigation licence (EPSL) is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitats Regulations 2017 (as amended); including *inter alia* all species of bats, Hazel Dormouse, Great Crested Newt and European Otter. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

1. The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. There is no satisfactory alternative; and
3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Conservation Licences

In the context of development, conservation licences are normally only relevant to mitigation involving the capture of Water Voles or White-Clawed Crayfish. Conservation licences are granted to permit the trapping and translocation of these species on the condition that the development activity is properly planned and executed and thereby contributes to the conservation of the population of the species.

[REDACTED]

[REDACTED]

[REDACTED]

Species of Principal Importance in England

943 species have been identified as being of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. The S41 list includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier). While many of these species may not be legally protected (some are protected under the legislation described above), there is a clear responsibility on local planning authorities to further their conservation. These species can be a material consideration in development

control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species, and to enhance their habitats where possible. Additional guidance to developers is typically provided in local level planning policies.

Invasive Non-Native Species

There are a number of species not ordinarily resident in the UK, such as Japanese Knotweed. Those which pose a significant threat, if uncontrolled, to our ecology and economy are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). For an offence to be committed, a species must be released or allowed to escape into the wild. For example, if a plant listed on Schedule 9 is not adequately controlled by a landowner, once they are aware that it is present, and the species is allowed to spread into adjoining areas, then this could constitute an offence.

Japanese Knotweed is also classed as 'controlled waste' under the Environment Protection Act 1990 (as amended) and if taken off site it must be disposed of safely at a licensed landfill site. Soil containing rhizome material should also be regarded as contaminated and treated accordingly.

Species Control Orders

A new schedule 9A was inserted into the Wildlife and Countryside Act 1981 (as amended) by Sections 23 to 25 of the Infrastructure Act 2015. This gives environmental authorities (in England the Secretary of State, Environment Agency, Natural England and the Forestry Commission) the power to offer 'species control agreements' to landowners in respect of invasive and/or non-native species, such as Japanese Knotweed. If the landowner does not comply with a species control agreement, or refuses to enter into one, the environmental authority may issue a 'species control order', requiring the owner to eradicate or control the species, or to allow the environmental authority access to carry out these operations themselves.

If the owner does not comply with the species control order, the maximum penalty if convicted is a fine of up to £40,000 and/or imprisonment for up to 51 weeks. The environmental authority can also recover costs for carrying out the necessary work themselves.

PLANNING POLICY & GUIDANCE

This section set out the main planning policy and government guidance that relates to the conservation of nature at all levels of government.

National Level

National Planning Policy Framework 2021

The National Planning Policy Framework (NPPF) 2021 sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 11), with economic, social and environmental objectives. This presumption does not apply where a plan or project has failed the 'appropriate assessment' test under the Habitats Regulations (paragraph 182).

Section 15 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system, as summarised below.

Firstly, planning policies and decisions should contribute to and enhance the natural and local environment by applying the following key principles:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.

Section 15 also requires planning policies and decisions to limit the impact of artificial light pollution on nature conservation.

Secondly, when determining planning applications, local planning authorities should apply the following key principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and ancient or veteran trees, unless there are 'wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported, while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

In the case of SSSIs and irreplaceable habitats, exceptions may be made if it can be clearly demonstrated that the benefits of the development, in that location, clearly outweigh the costs in terms of loss or adverse impacts.

Section 15 specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Section 15 includes the following text on air quality:

- Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas;
- Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications; and
- Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

The NPPF also sets out principles for plan-making, including the allocation of land with the least environmental or amenity value, and taking a strategic approach to maintaining and enhancing networks of habitats and green infrastructure by identifying, mapping and safeguarding components of local wildlife-rich habitats, wider ecological networks, wildlife corridors and stepping stones, and those areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05 to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

MHCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG) was launched by the Department for Communities and Local Government (now the Ministry of Housing, Communities and Local Government, MHCLG) as a web-based tool in March 2014 to accompany the NPPF. The webpages are set out in a Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to

consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

The guidance also requires that "an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate", and recommends that "local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development."

Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available in relation to biodiversity and the development process. Of particular note is *British Standard BS42020:2013 Biodiversity – Code of practice for planning and development*, published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*.

This document is designed to complement the NPPF and is aimed at organisations concerned with ecological issues throughout the planning process, including local authorities, developers, planners and ecological consultants. It sets out step-by-step recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high quality and appropriate ecological information, effective decision making, and high standards of professional conduct and competence.

Regional Level

Regional plans (such as the South East Plan Regional Spatial Strategy) have been revoked, but some specific policies have been saved. The only policy saved from the South East Plan is Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area (TBH SPA).

Local Level

Wokingham Borough Council, Managing Development Delivery Local Plan, adopted 21 February 2014

The following policies are considered to be of most relevance:

- CC01: Presumption in favour of sustainable development. Planning applications that accord with the policies of Wokingham Borough Council Development Plan will be approved without delay unless material considerations indicate otherwise.
- CC03: Green infrastructure, trees and landscaping. Green routes and Green Route Enhancement Areas are defined on the Policies Map (available on the WBC website, see footnote). Development proposals should demonstrate how they have considered and achieved the following criteria within scheme proposals:
 - Provide new or protect and enhance the Borough Green Infrastructure networks, including the need to mitigate potential impacts of new development;
 - Promote accessibility, linkages and permeability between and within existing green corridors;
 - Promote the integration of the scheme with any adjoining public open space or countryside;
 - Protect and retain existing trees, hedgerows and other landscape features;
 - Incorporate high quality, ideally, native planting and landscaping as an integral part of the scheme.
 - Development proposals that result in the loss, fragmentation or isolation of areas of green infrastructure will not be acceptable.
- TB23: Biodiversity and Development. Planning permission for development will only be granted where it meets Policy CP7 of the Core Strategy and also demonstrates how the following can be provided:
 - opportunities to incorporate new biodiversity features or enhance existing features;
 - provide appropriate buffer zones between development proposals and designated sites as well as habitats and species of principal importance for nature conservation;
 - ensure all existing and new development are ecologically permeable through the protection of existing and provision of new continuous wildlife corridors, which shall be integrated and linked to the wider green infrastructure network.

Supplementary Planning Document: South of M4 Strategic Development Location, adopted October 2011

Four strategic development locations have been identified within the Core Strategy of Wokingham Borough Council, South of the M4 is one of these. This SPD sets out WBCs expectations on masterplanning, design quality and infrastructure requirements for this SDL and will be a material consideration in determining planning applications.

The following policies are considered to be of most relevance:

- CP1 - Sustainable development. Planning applications that accord with the policies of Wokingham Borough Core Strategy will be granted and this policy will be delivered through the Managing Development Delivery DPD and Sustainable Development SPD.
- CP7 - Biodiversity. Sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance.

Development:

- A) Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or
- B) Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly, or
- C) That compromises the implementation of the national, regional, county and local biodiversity action plans will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and:
 - i) Mitigation measures can be put in place to prevent damaging impacts; or
 - ii) Appropriate compensation

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species, and identify and pursue opportunities for securing measurable net gains for biodiversity” (paragraph 174). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level.

An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The *UK Biodiversity Action Plan 2007* (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework* and individual national biodiversity strategies. The UK Framework sets out the overarching vision, strategic goals and priority activities for the UK’s work towards international biodiversity targets (known as the ‘Aichi Targets’), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010.

In England, *Biodiversity 2020: A strategy for England’s wildlife and ecosystem services* is the national biodiversity strategy, which has the stated mission “(...) to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.” In order to focus activity and assess performance in

achieving this mission, Biodiversity 2020 sets out objectives relating to terrestrial and marine habitats and ecosystems, species and people.

Local level

While BAPs at the national level have now been superseded by *the UK Post-2010 Biodiversity Framework* and *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, many county and district level BAPs still exist.

Wokingham Borough Council Biodiversity Action Plan 2012-2024 (Draft), February 2014

This BAP retains the structure of the former plan (*Wokingham District's Biodiversity Action Plan 2003-2012*) and contains the same five Habitat Action plans:

- • Communities, Towns and Villages HAP;
- • Woodland HAP;
- • Grassland and Hedgerow HAP;
- • Wetland HAP;
- • Heathland HAP.

Biodiversity Net Gain

The Environment Act 2021 makes provisions for 10% biodiversity gain, as measured by a metric (currently published by Defra), to become a condition of planning permission in England. This will come into force upon the adoption of secondary legislation and regulations. Timescales are to be confirmed, but this is currently expected to be around late 2023. A publicly accessible register of Biodiversity Gain Sites will be set up during this time, and the Secretary of State will publish and consult on the biodiversity metric to be used, as well as on the wording of the secondary legislation itself.

The Act specifies that biodiversity gain can be delivered on and/or offsite, and establishes the basis for purchasing off-site credits to meet the 10% obligation if required. Land used to deliver biodiversity gain must be maintained for at least 30 years, and planning conditions will require a biodiversity gain plan to be submitted to and approved by the planning authority prior to commencement of development.

It also clarifies that the baseline biodiversity value of a site should be taken from the date on which planning consent is granted, unless otherwise agreed with the LPA (but not before the secondary legislation comes into force). This excludes any activities undertaken without planning permission (or other relevant permissions) after 30 January 2020 which have had the effect of reducing the biodiversity value of the land. In such cases, "the pre-development biodiversity value is to be taken to be its biodiversity value immediately before the carrying on of the activities."

Biodiversity net gain (BNG) is already enshrined in the key principles of the NPPF, and some local planning policies already include a requirement to deliver a minimum net gain figure (typically 10% or 20%).

Enhancement measures may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable drainage schemes (SUDS) and green roofs.

Appendix 3

Ecological Appraisal Methodology

The ecological appraisal was completed in order to inform the masterplanning process and establish the appropriate scope of an Ecological Impact Assessment (EclA) in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Guidelines for the Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. (2018). CIEEM's 2017 Guidelines for Preliminary Ecological Appraisal were also taken into account.

DESK STUDY METHODOLOGY

A desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), aerial photos, current Ordnance Survey maps and historical maps. Reference was also made to local planning policies, strategies and initiatives relating to biodiversity.

A request was made to Thanes Valley Environmental Records Centre for any existing biological records in their database. The local records search and other desktop research was over a 2km radius for nationally and locally important features and a 5km radius for European Protected Species and sites of European significance.

FIELDWORK METHODOLOGY

The field survey was completed by Liam Mayle and Siobhan Pryke of EPR on 02/09/24. The entirety of the Site and immediately surrounding land was walked recording habitats and features of potential value to wildlife and any evidence of, or potential for, protected or notable species or habitats, in accordance with the methods described below.

Land Use, Habitat Types, Vegetation Communities and Flora

Within the study area the land use, habitat types and landscape features (such as hedgerows and veteran trees) were described and mapped. For each main habitat type the dominant vegetation communities were recorded, along with any notable or indicator plant species, (including invasive species such as Japanese Knotweed where present). A preliminary evaluation of the structure, quality and likely management of each habitat or feature was also carried out.

The survey method used to record this information was based on the UK Habitat Classification System (UK Hab, 2020). Botanical nomenclature in this report follows Stace (2019).

Fauna

The potential for habitats and features to support protected or notable species, or species of principal importance for the purpose of conserving biodiversity, were recorded, as were any signs encountered. The following is a summary of the approach taken for this Ecological Appraisal.







Bats

Bats use buildings and trees for roosting and breeding and, where present, a preliminary assessment of the potential for these features to support bats was undertaken during the survey. Potential may include gaps beneath roof or hanging tiles, in soffits, or beneath the end of ridge tiles, but also under the edge of felt on flat roofs. In trees potential roosting features include woodpecker holes, splits in branches and peeling bark.

Preliminary evidence was obtained through noting any staining around potential roost entrances, and looking for bat droppings, for example on windowsills. A preliminary evaluation was also undertaken of potential bat foraging habitat in the area, including woodland, pasture, hedges and watercourses.

Dormouse

The type and quality of habitat with the potential to be suitable for supporting Dormice, such as woodland and hedgerows, was considered during the survey. In particular the presence of Oak, Hazel and berry-bearing shrubs was noted, and the connectivity of habitat recorded.

Water Voles

The presence and quality of watercourses with the potential to support Water Voles was recorded during the survey. Potential evidence of Water Voles, including burrows in the tops and vertical face of riverbanks, and feeding evidence was recorded where appropriate.

European Otter

Where watercourses are present, a preliminary evaluation of the quality of the riparian habitat for potentially supporting Otters was made. A preliminary search was made for signs of Otters, including spraints which are often left in prominent places on river banks, such as logs and bare patches of ground.

Birds

Any birds seen whilst carrying out the survey were recorded, and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting, and habitat with the potential to support valued species, including breeding and wintering birds.

Amphibians

Consideration was given to the presence of habitat potentially suitable for supporting amphibians, including water bodies (ponds, ditches), woodland, scrub and rough grassland, and features such as log piles that might provide hibernation areas. Where appropriate, effort to gather direct evidence of amphibians was undertaken by making a preliminary search for eggs by examining

vegetation within reach of the margins of water bodies, and for resting animals on land by looking under potential refuges, such as stones, wood and rubbish near to water bodies.

Reptiles

The presence and quality of habitat considered potentially suitable for supporting reptiles was recorded. This included areas providing basking and foraging areas, hibernation and breeding sites, such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedgebanks and water bodies.

Invertebrates

Readily identifiable invertebrates seen during the survey were recorded, and habitats and features likely to support noteworthy groups and species were noted, for example herb-rich grasslands, areas of bare ground and deadwood habitats, including woodland and veteran trees.

Appendix 4

Lighting Strategy
