



University of Reading – Rowing Club

Preliminary Ecological Assessment

Final Report

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University of Reading – Rowing Club

Preliminary Ecological Assessment

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University of Reading – Boat Club

Preliminary Ecological Assessment

Executive Summary

EPR was commissioned by the University of Reading to undertake a Preliminary Ecological Assessment of proposals for a new Boat House at the University's Rowing Club, South of Abbotsmead Place, (SU 71305 74568), just North of the River Thames. The draft proposals are illustrated in **Appendix 1**.

The proposed development is likely to trigger the following biophysical change; a small amount of vegetation clearance (scrub and boundary trees and a small patch of amenity grassland).

The potential for these changes to affect important ecological features has been investigated through a detailed desktop study and field survey. The only change likely to affect an important ecological feature is the loss of potential nesting and foraging habitat for common species of garden birds.

The proposed location for the new Boat House is approximately 70m from the River Thames at Reading (Grid Reference; SU 71281 74703).

The site comprises a small patch of amenity grassland with surrounding trees and scrub.

It is understood the two existing boat storage buildings are to be demolished, just some of the immature boundary trees removed and scrub cleared for access. The other habitats will be largely retained, with small losses to the grassland and tall ruderal marginal vegetation.

As the habitats identified are of low ecological value, no further survey work has been recommended. Recommendations have been made on how to inform the scheme design and further enhance the Site for biodiversity. This information will inform the planning decision and allow the LPA to discharge their biodiversity duties.

Additional further actions have been recommended for reptiles and nesting birds to meet legal requirements and inform project timings.

The proposals still include open space areas that provide the opportunity for habitat creation, restoration and the potential to deliver biodiversity gain by the installation of bird, bat and hedgehog boxes.

University of Reading – Boat Club

Preliminary Ecological Assessment

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University of Reading – Rowing Club

Preliminary Ecological Assessment

1. INTRODUCTION

Brief

- 1.1. Ecological Planning and Research Limited (EPR) was commissioned by University of Reading to carry out a Preliminary Ecological Assessment (PEA) of proposals for development at the University of Reading Boat club, RG4 8BB, (Grid Reference; SU 71281 74703).

Background

- 1.2. The Proposals include a new Boat House for the university's rowing club to serve as a Boat Storage area; as illustrated in **Appendix 1**. This is to be built in front of the existing rowing club building on a patch of grassland, (shown in **Photograph 1**).

The Study Area

- 1.3. The study area includes primarily urban habitats, with the residential area of Abbotsmead Place and the Willows bordering the Site to the North and East, and the Iceland Car Park directly adjacent to the entrance access track. South of the Site is the tow path and River Thames. The study area falls within the Chilterns National Character Area, which is primarily dominated by patchwork of mixed agriculture and woodland set within hedged boundaries. The geology within the Zone of Influence (ZOI) is primarily loamy and clay based floodplain soils with naturally high groundwater.

Scope

- 1.4. 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 (Jan 2016).
- 1.5. This PEA is the first formal stage in the process of providing the ecology information that the Local Planning Authority (LPA) requires to:
- determine whether the Proposals accord with national and local planning policies; and
 - allow them to discharge their Biodiversity Duties under the NERC Act 2006 and the Conservation of Habitats and Species Regulations 2010 (as amended).
- 1.6. The PEA comprises two main elements: 1) A review of the ecological and policy context; and 2) a survey of the development site and, where possible, any other areas likely to be affected. As advised in paragraph 118 of the National Planning Policy Framework, the resulting information is used to:
- characterise potentially significant effects (including cumulative effects);
 - identify commitments to avoid or minimise these effects through scheme design;

- describe compensation for residual effects, if necessary; and
- deliver biodiversity gain (where possible).

Where relevant, legislative and policy considerations are highlighted, including:

- The Conservation of Habitats and Species Regulations 2010 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- Section 11 of the National Planning Policy Framework (NPPF)
- Reading Borough Council Core Strategy; CS36: Biodiversity and Geology
- Reading Sites and Detailed Policies Document from the Development Framework- (adopted October 2012); DM16 Provision for Open Space & DM17 Green Networks.

This includes advice on further work to provide the information that:

- the LPA may require to validate and/or determine an application, and to discharge their Biodiversity Duties in determining a planning application;
- The applicant needs to conform with other biodiversity legislation.

Methods and Constraints

- 1.7. A desktop study was conducted prior to the Site visit, which included an examination of recent and historic maps, aerial photographs, online sources of information and a search of records for protected and notable species, habitats and designated sites for nature conservation.
- 1.8. A field survey was conducted on the 25th September 2017 by Grace Turner of EPR. The purpose of the visit was to map habitats present on Site and within the Zone of Influence, and to determine their potential to support protected and/or notable species.
- 1.9. Full access was gained to the Site, the survey was carried out in good weather conditions and there were no limitations to the survey, a full methodology is included within **Appendix 2**.

2. NATURE AND EXTENT OF PREDICTED IMPACTS

- 2.1. Certain activities associated with the preparation, construction and operation of the Proposal are likely to generate biophysical changes. These changes, and the Zone of Influence (Zoi) over which they are likely to occur, are summarised in **Table 2.1** below.

Table 2.1: *Summary of predicted changes and Zone of Influence*

Predicted Change	Zone of Influence
Vegetation clearance	Site

- 2.2. For the most part, the predicted changes will extend no further than the boundary of the development site.
- 2.3. The construction works will result in a temporary increase in disturbance to species that inhabit the area, and a potential loss of habitats within the site itself during the site clearance and construction phase. The operational phase of the development will not lead to an increase in disturbance (noise or light) to wildlife. Due to the nature and scale of the development disturbance is likely to be of a low, possibly negligible level in view of existing human activity in the area. The main hours of operation for the proposals will be daylight hours.

3. IDENTIFICATION AND CHARACTERISATION OF IMPORTANT ECOLOGICAL FEATURES VULNERABLE TO DEVELOPMENT

Introduction

- 3.1. The following identifies and characterizes Important Ecological Features which may be affected by the Proposal. As set out in **Appendix 2**, this draws on information gathered through the following sources:

- A desktop study to gather information on the local ecological context (**Maps 1-2**);
- A review of the Local Plan and supporting documents to identify the potential for cumulative effects arising from other Local Plan policies; and
- A preliminary walkover survey of the Site and surrounding Zone of Influence (where publicly accessible/visible) (**Map 2**).

The information gathered during this process has been used to:

- Assess the likely impact of the predicted biophysical changes on Important Ecological Features, where possible;
- Scope out features which are not likely to be significantly affected by the proposals; and
- Scope the further work needed to inform the assessment.

Ecological Features

Habitats

- 3.2. Designated sites were considered during the desktop study; however, none were found to be in the considered Zol (**Map 1**).
- 3.3. Habitats identified during the site visit are shown on **Map 3** with associated photographs in **Appendix 3**. The site visit confirmed that the Site is of generally low ecological value with primarily amenity grassland which is regularly mown and kept a short sward (**Photographs 1 & 2**). Surrounding the grassland there was a small patch of tall ruderal vegetation consisting mostly of Common Nettle *Urtica dioica* and Bramble *Rubus fruticosus*, encroaching into scrub (**Photographs 3 & 4**). There were boundary trees on three sides, with a row of leylandii trees to the West. To the South there were several Grey Alder *Alnus incana* and Ash trees *Fraxinus excelsior*, at varying stages of maturity (shown in **Photographs 5 & 6**).
- 3.4. Of the habitats present on site and within the Zol, none are in themselves considered to be Important Ecological Features which may be negatively impacted by the development, although they may potentially support important faunal assemblages.

River Thames

- 3.5. The River is approximately 70m from the Site, this is a desirable feature for the Boat House, due to the accessible nature of the watercourse. At the access point, the northern bank is a vertical bank, approximately 0.5m high. The watercourse can easily be accessed from the Site and is therefore likely to be sensitive to pollution, due to its breadth across the landscape

within this NCA, it has been highlighted as of district value. The River Thames has been identified as an important “Green Link” under Policy DM16, Provision for Open Space, of the adopted Development Framework (2012). Green links have been highlighted to be maintained, protected and enhanced under this policy.

Hedgerow / Tree line

- 3.6. There were two main hedgerows on site. One was entirely *Leylandii*, and the other comprises mostly Common Hawthorn *Crataegus monogyna* and Bramble. They are not likely to be botanically important, but do provide food, shelter and connectivity for animals in the area. Reading Borough Council's Core Strategy (2008) within Policy states that linear features such as hedgerows will be protected where possible. However, the proposed development only contributes to temporary fragmentation and degradation of one single hedge, therefore this is considered of less than local value, and the hedgerow itself is not considered as an important ecological feature, and therefore has not been considered further.

Bats

- 3.7. The results of the data search showed six common species to be present within 2km of the potential development site, including Common and Soprano Pipistrelle (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*) Pipistrelle species *Pipistrellus spp.*, Noctule *Nyctalus noctula*, Brown Long-eared Bat *Plecotus auritus*, and Daubenton's Bat *Myotis daubentonii* (these records are shown on **Map 2**).
- 3.8. No roosting opportunities were identified as present on the Site, however within the Zol, it is likely bats use the River and boundary hedges for foraging and commuting routes to the wider landscape. There are two boat storage buildings to be demolished on Site, but it is thought neither have the potential to support roosting bats. It is not thought the presence of the new Boat House would significantly alter the behaviour of any existing bats on Site, therefore no further surveys to assess activity levels are required.

Great Crested Newts

- 3.9. No records of Great Crested Newt *Triturus cristatus* were returned within the data search; however, they are included within the Reading Biodiversity Action Plan.
- 3.10. There were no suitable aquatic habitats were identified on the Site, or any ponds located within a 500m radius. The Site does not support particularly suitable terrestrial habitat; therefore, it is considered unlikely that the proposals could generate significant adverse effects on GCN, therefore they have not been considered further in this assessment.

Otter

- 3.11. European Otter *Lutra lutra* records can be found upstream of the River Thames (1km East from the Site). The areas of River which is accessible from the Boat House is considered unlikely to support Otters due to human disturbance and lack of suitable terrestrial habitat.

Reptiles

- 3.12. There were no recent records of reptiles within the Zol, with the last record being a Slow Worm *Anguis fragilis* recorded approximately 500m to the West of the site in 2008.

- 3.13. The very small margins of vegetation on site, including ruderal vegetation and scrub habitat are potentially suitable reptile habitats for low numbers of common species, such as Slow Worm and Grass Snake *Natrix natrix*, therefore the Site is of less than local level importance for this ecological receptor.

Birds

- 3.14. The data search returned records for four notable bird species in the 2km search area; often associated with semi-urbanised environments; including Swift *Apus apus*, Starling *Sturnus vulgaris*, Black Redstart *Phoenicurus ochruros* and Peregrine Falcon *Falco peregrinus* (**Map 2**).
- 3.15. Several common garden birds were identified as using the Site during the survey, include Blue Tit *Cyanistes caeruleus* and Blackbird *Turdus merula*. The only bird of conservation concern to be noted was a Herring Gull *Larus argentatus* flying over, but no notable species were seen to be using the Site. The dense vegetation along the eastern and southern boundaries provide good nesting opportunities for breeding birds.
- 3.16. Due to the numbers of relatively common birds observed within the ZoI, and the habitats available, the bird assemblage is likely to be of less than local level importance and therefore is not considered to be an Important Ecological Feature. Nesting birds do however benefit from certain legal protection that needs to be considered, and this is discussed further below.

Policy Context and Potential for Cumulative Effects

- 3.17. Local Plan Policy Reading Borough Council's Core Strategy (2008) states that no development will be permitted that results in a significant effect on a Priority Species. In Reading, all bat species are highlighted as Priority Species. There is potential for cumulative effects arising from the loss of foraging habitat and potential temporary fragmentation of flight lines. Ahead of the publishing of an emerging Local Plan document, Reading Borough Council's Core Strategy (2008) provides interim planning policy for the borough. It sets out the following requirements for developments in relation to biodiversity:

CS36: Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.

On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:

- i. The need for development clearly outweighs the need to protect the value of the site; and*
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.*

b) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

4. IDENTIFICATION OF POTENTIAL IMPACTS AND NEED FOR FURTHER SURVEY

- 4.1. In the absence of avoidance or mitigation measures, the Proposal has the potential to generate impacts upon the Important Ecological Features identified in **Section 3**, as set out below.

River Thames

- 4.2. The River Thames has been highlighted as a sensitive ecological receptor which could be subject to watercourse pollution without appropriate mitigation in place. This could have disadvantageous effects on other faunal and floral assemblages associated with the River. No further survey is required, but recommendations to avoid pollution and reduce impacts are made in **Section 5**.

Assemblage of Bats

- 4.3. Without mitigation, the proposals would result in the potential loss of foraging areas and fragmentation of flight lines. The construction works will result in a temporary increase in disturbance to species that inhabit the area, and a potential loss of habitats within the site itself during the site clearance. Due to the nature and scale of the development, disturbance to wildlife is likely to be of a low, possibly negligible level in view of existing human activity in the area. The main hours of operation for the proposed boat house will be daylight hours.

5. MEASURES TO AVOID OR REDUCE IMPACTS AND DELIVER BIODIVERSITY GAIN

5.1. All agreed mitigation measures will be combined into a Biodiversity Mitigation and Management Strategy which will be submitted to the LPA for approval prior to the start of works on the site.

5.2. The following measures are recommended to avoid or reduce some of the impacts predicted in **Section 4**:

- Avoid pollution and runoff into the River during the construction of the Boat house;
- Most of the boundary hedges & treelines to be retained and fragmentation minimised;
- Installation of bird boxes on the new Boat House or on retained trees nearby in order to mitigate for the loss of trees
- Installation of invertebrate log pile & reptile hibernacula from the cleared trees to mitigate for the loss of scrub vegetation for reptiles and invertebrates.

5.3. The LPA is required to determine whether an application is likely to have a significant effect on the conservation status of Important Ecological Features, including European Protected Species. No further surveys are deemed necessary as there are no features to be removed that have bat roosting potential.

Opportunities for Ecological Enhancement and Net Gain in Biodiversity

5.4. Opportunities will be taken to incorporate the following into the designs:

- Bird and bat boxes (onto the new building and retained trees);
- Log piles for hibernating reptiles and amphibians;
- Hedgehog boxes can be placed in suitable retained vegetation (where cover is sufficient).

6. PRELIMINARY ECOLOGICAL ASSESSMENT

- 6.1. Predicted residual impacts on Important Ecological Features following the application of the avoidance and mitigation measures identified in **Section 5** are set out below, together with an initial assessment of their likely significance (if possible). A summary of this Assessment is provided in **Table 6.1**.

River Thames

- 6.2. Industry standard guidance should be followed when working near water to prevent pollution to watercourses. During the operational phase, as there is no significant change in land-use, therefore no negative residual impacts are predicted on the River Thames.

Assemblage of Bats

- 6.3. The proposals will result in the loss of some boundary vegetation which make up a small proportion of total foraging habitat to which the assemblage has access, as well as fragmentation and disturbance of small proportion of potentially important flight lines. However, the development will retain good foraging habitat post development.

- 6.4. The construction works will result in a temporary increase in disturbance to species that inhabit the area, and a temporary loss of habitats within the site itself during the site clearance and construction phase. The operational phase of the development will not significantly alter the current light or noise levels for wildlife. The main hours of operation for the proposals will be daylight hours, so will not cause any detrimental impact to nocturnal wildlife, such as bats.

Assemblage of Reptiles

- 6.5. There is potential for low numbers of common reptile species to be present within the area of vegetation which is subject to clearance for the installation of the new Boathouse. Due to small area of suitable habitat on the Site, a full reptile survey is not considered to be necessary and the vegetation can be cleared under a working method statement. This will be carried out under ecological watching brief, so that if any reptiles or other animals are uncovered during the clearance works, they can be relocated to a safe refuge by a Suitably Qualified Ecologist.

Table 6.1: *Summary: Preliminary Assessment of Residual Ecological Impacts and Opportunities for Biodiversity Gain*

Important Ecological Feature	Estimated importance/ condition/ trend	Potential impacts (alone/ in combination)	Impact avoidance or mitigation	Predicted residual impacts	Assessment of Likely Significant Effect	Further work required?	Opportunities for Biodiversity Gain
The River Thames	District / Stable	Aquatic pollution during construction	Follow the Industry Standard Guidelines for working near watercourses.	None predicted	Not significant	No	None
Assemblage of Bats	Local / Stable	Loss of foraging area & small fragmentation of flight lines	Most hedges and trees retained Fragmentation minimised	Temporary loss of boundary features and small proportion of foraging area Small scale fragmentation and disturbance of flight lines	Loss of potential roosts: Unlikely. Other effects: unknown	No	Restore and manage boundary hedges

7. LEGAL CONSIDERATIONS

7.1. Should planning permission be granted for the Proposals, the following legal considerations will apply, in accordance with the following items of legislation:

- The Conservation of Habitats and Species Regulations 2010 (as amended); and
- The Wildlife and Countryside Act 1981 (as amended).

Assemblage of Bats

7.2. No bat roosts are thought to be present on Site. If they were later identified then an EPS Licence may be required prior to the removal of trees with bat roost potential, should the presence of roosting bats be confirmed. In order to determine the planning application, the LPA needs confidence that the Proposal is therefore able to accommodate appropriate compensation, such that it is not unlikely that any required Licence would be granted. Any Licence application would need to be supported by sufficient survey data and a method statement, to enable Natural England to assess the likely effects and to fully design mitigation and compensation features.

7.3. Despite the changes to national level biodiversity policy, county and district level Biodiversity Action Plans (BAP'S) still apply. The Reading BAP identifies a number of priority species and habitats including the following of relevance to the Site; these include the following:

- Bats (all species found in Reading);
- House Sparrow;
- Urban 1 Habitats; and
- Urban 2 Habitats.

Assemblage of Reptiles

7.4. As set out in Section 3, it is very unlikely that the assemblage of reptiles, if present, could be sufficiently important to trigger a significant ecological effect which could affect the determination of the planning application. However, to comply with the Wildlife and Countryside Act 1981 (as amended) it will be necessary to avoid harm to reptiles should the application be approved. As these species reside underneath hedge banks and within dense scrub and tall ruderal patches, during the vegetation clearance it is necessary they are not harmed, due to their legal protection. Therefore, a supervised vegetation clearance has been recommended, any individuals found can be relocated to a safe refuge.

7.5. The proposals may result in the loss of some habitat for native species of reptile. Due to the small size of the suitable habitat on Site, no reptile surveys have been carried out, however, there may be a low population of common reptile species on Site; such as Slow Worm *Anguis fragilis* or Grass Snake *Natrix natrix*.

Birds

- 7.6. Under the Wildlife & Countryside Act 1981 (as amended), it is an offence to disturb any nesting bird, and therefore should planning permission be granted, any vegetation removal which has the potential to support nesting birds should either take place outside of the nesting season (March-September inclusive) or be subject to a nesting bird check by a suitably qualified ecologist prior to its removal.

8. PROPOSED FURTHER ACTIONS

- 8.1. No further surveys are required due to the low ecological value of the Site; however, it is recommended that the vegetation works is supervised to avoid disturbance to any hibernating newts or reptiles, under a working method statement. If the vegetation is to be cleared within nesting bird season (March to August inclusive) then a nesting bird check from a Suitably Qualified Ecologist will be required.
- 8.2. **Table 8.1** sets out the actions proposed to be undertaken prior to clearance for development, which may inform project timings should planning permission be granted:

Table 8.1: *Further actions required to determine planning application and allow LPA to discharge their biodiversity duties*

Action	Timing
Supervised vegetation clearance under Method Statement (for reptiles)	November to March
Nesting bird check (only required if vegetation is to be removed in Spring / Summer months)	March to September
Replanting of hedgerow trees	Post construction of Boat house
Installation of bird & Bat boxes, log piles and hedgehog box.	Post construction of Boat house

9. REFERENCES

Chartered Institute of Ecology and Environmental Management (CIEEM) (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland*. CIEEM, Winchester.

Department for Communities and Local Government (2012). *National Planning Policy Framework*.

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Department for the Environmental and Rural Affairs (DEFRA): MAGIC: <http://magic.defra.gov.uk/> Accessed for data search September 2017

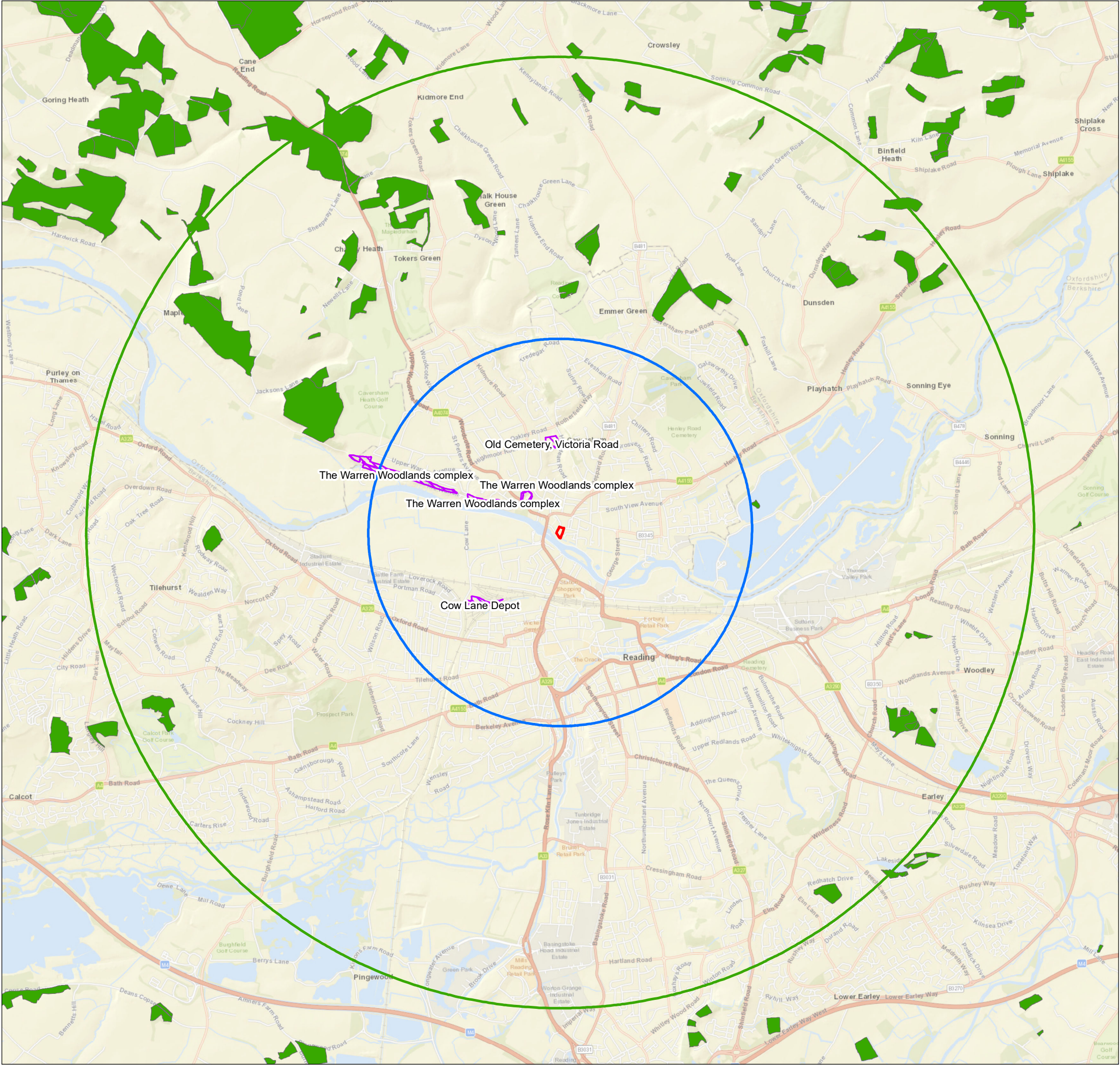
Pollution Prevention Guidelines (PP5)- Works in or near Watercourses: Accessed October 2017) <https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-ppg5-prevent-pollution> - (Now withdrawn but still relevant)

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(Accessed October 2017)

Maps

Map 1	Site Location & Conservation Designations
Map 2	Protected & Notable Species
Map 3	Habitats & Features



MAP 1 Site Location & Conservation Designations

KEY

- Site Boundary
- 5km Linear Distance to Site Boundary
- 2km Linear Distance to Site Boundary
- Ancient Woodland
- Local Wildlife Sites

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres



CLIENT: University of Reading

PROJECT: UOR Boat Club

DATE: November 2017



MAP 2 Protected and Notable Species

KEY

Site Boundary

2km Linear Distance to Site BoundarySlow-wormSmooth NewtCommon Club-tailStag BeetleEurasian BadgerEuropean OtterBrown Long-eared BatCommon PipistrelleDaubenton's BatNoctule BatPipistrelle Bat speciesSoprano PipistrelleBlack RedstartPeregrineStarlingSwift

SCALE: 1:16,000 at A3

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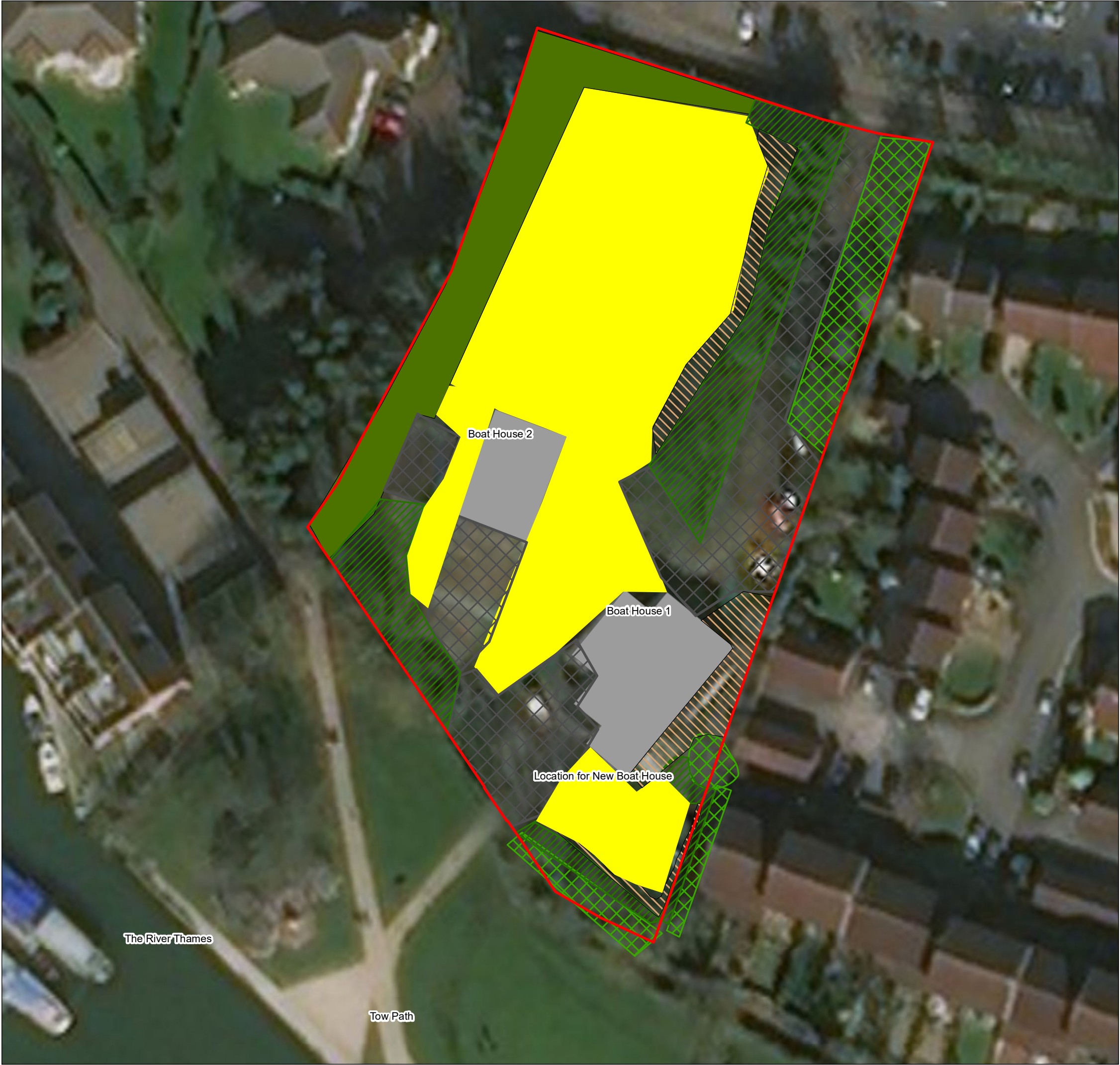


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DATE: November 2017



MAP 3 Habitats & Features

KEY

- Site Boundary
- Amenity Grassland
- Building
- Hardstanding / track
- Leylandii
- Scrub
- Tall Ruderal
- Treeline

SCALE: 1:500 at A3

0 10 20 30 Metres



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CLIENT: University of Reading

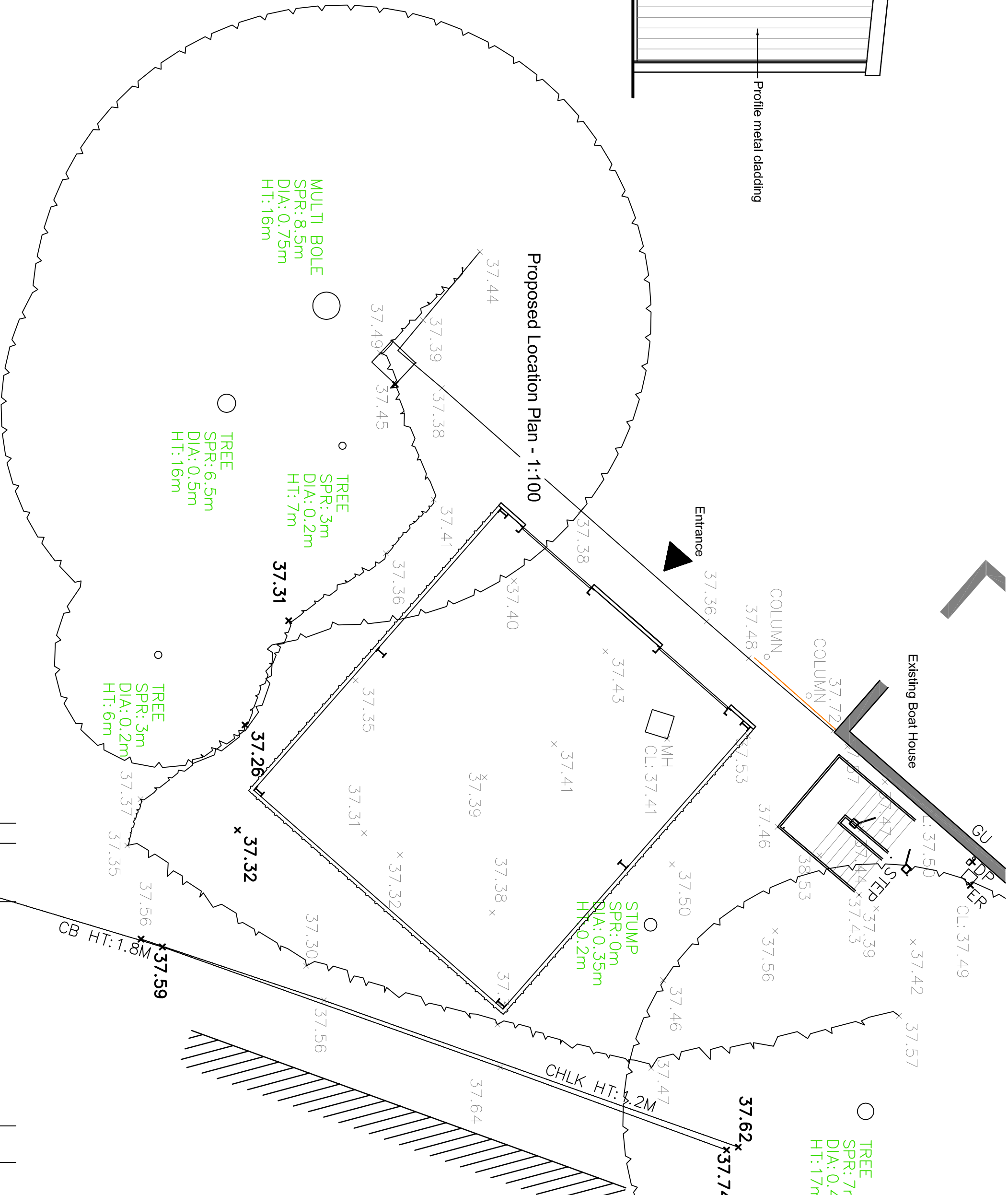
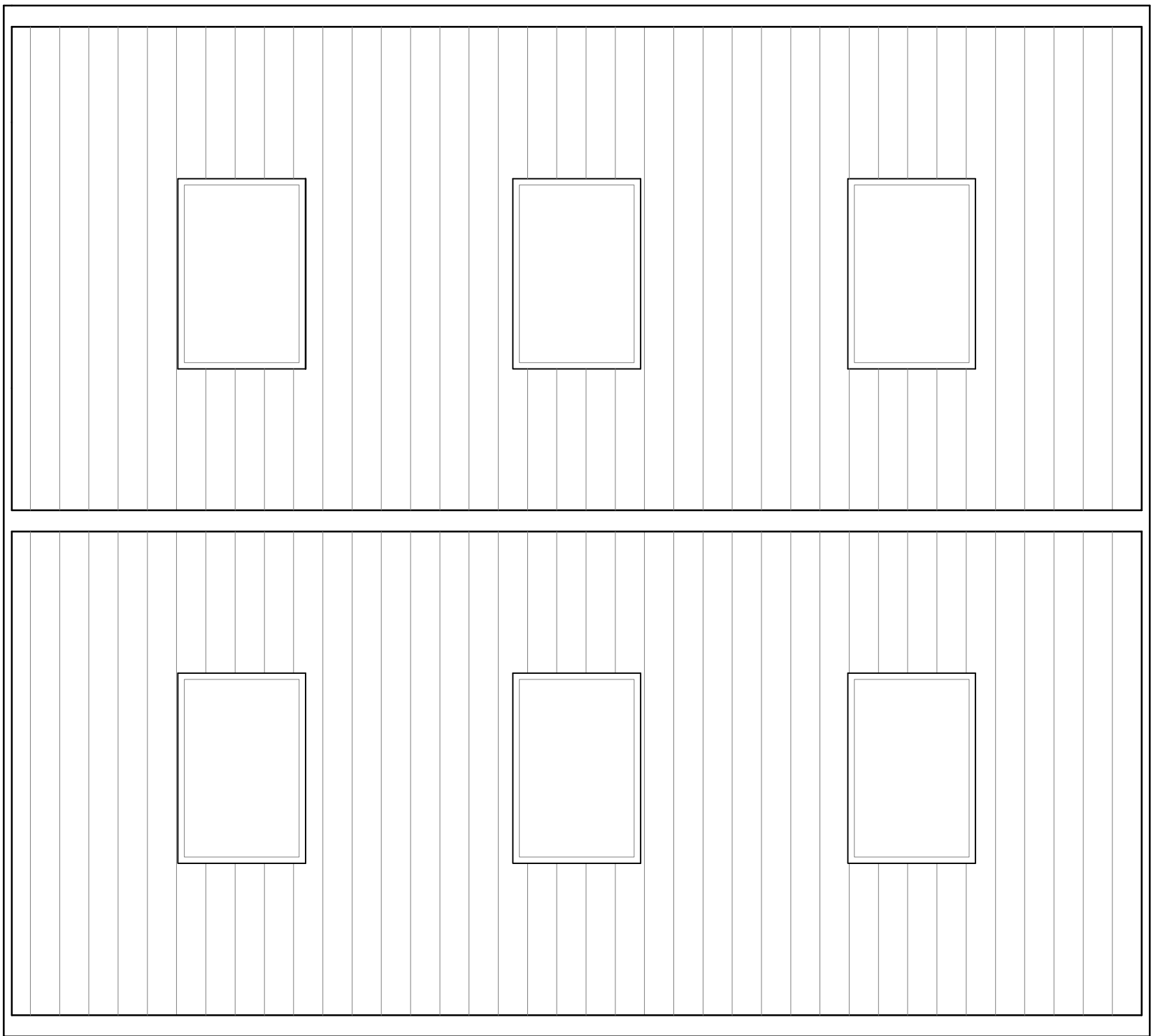
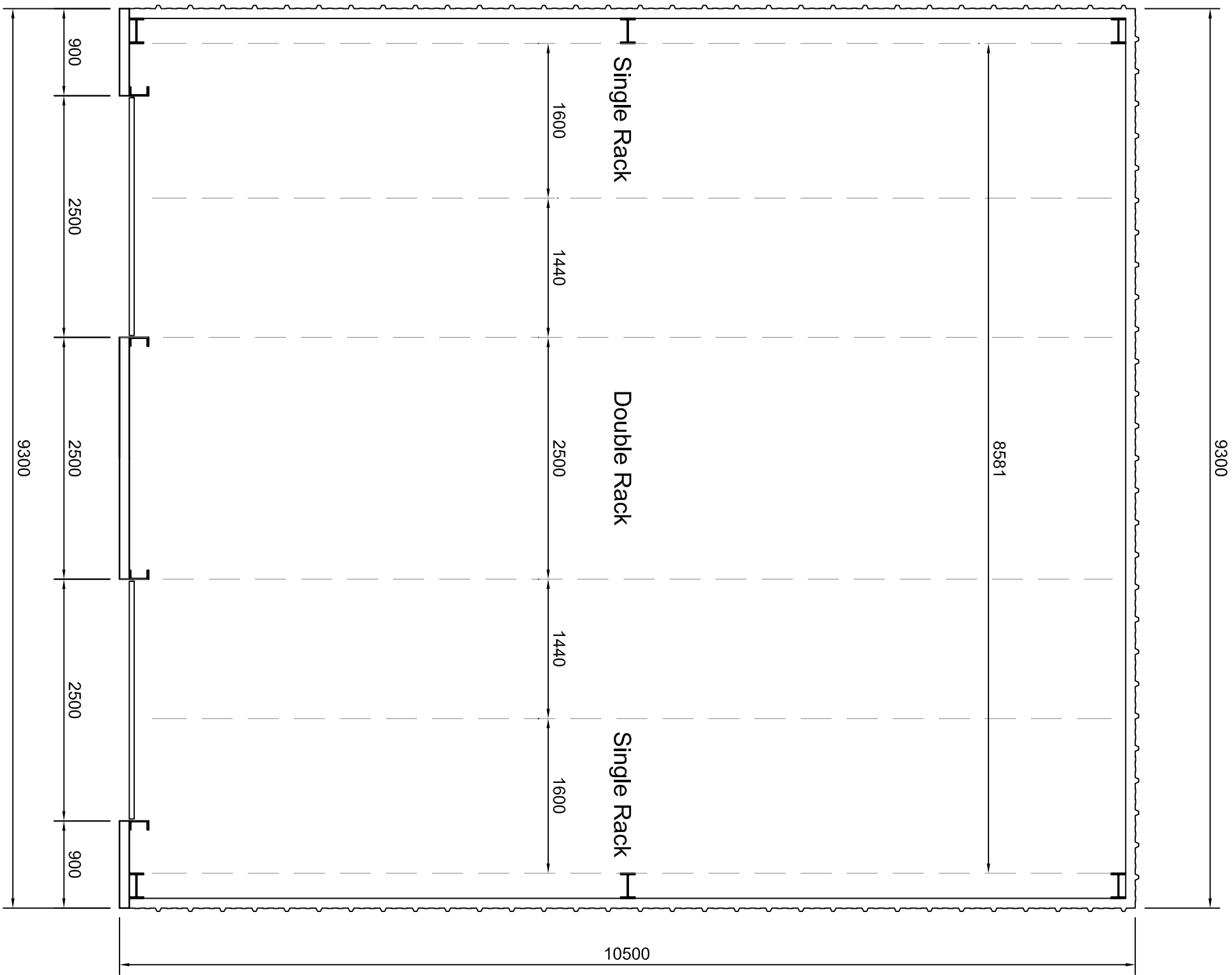
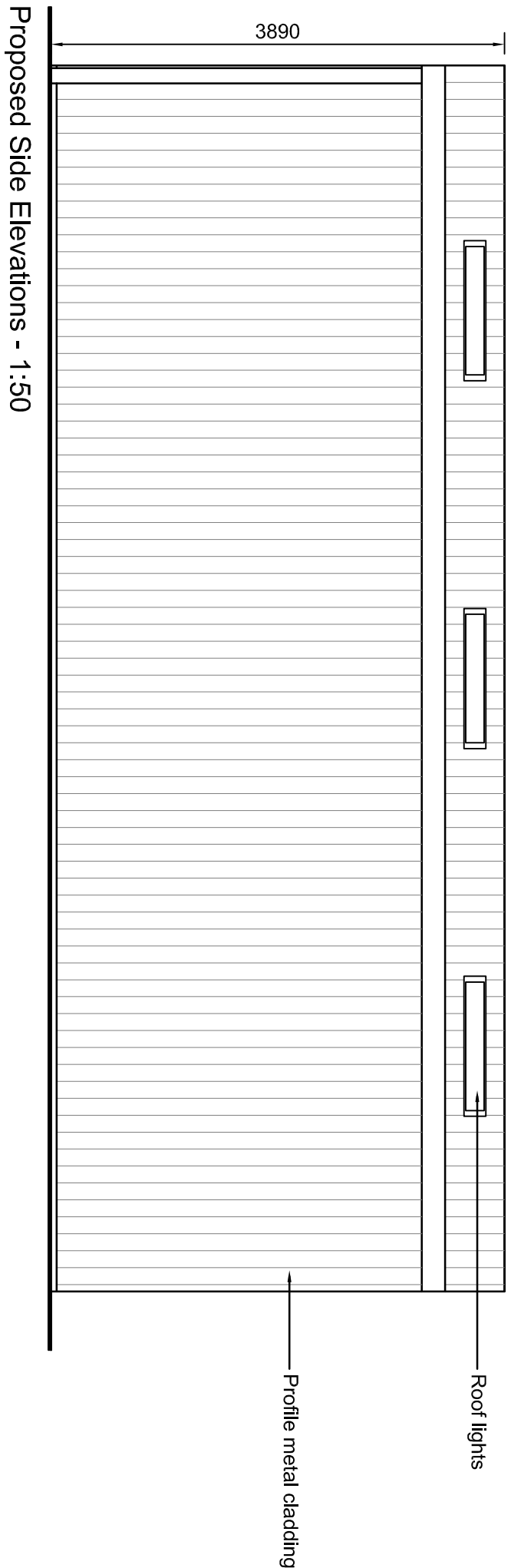
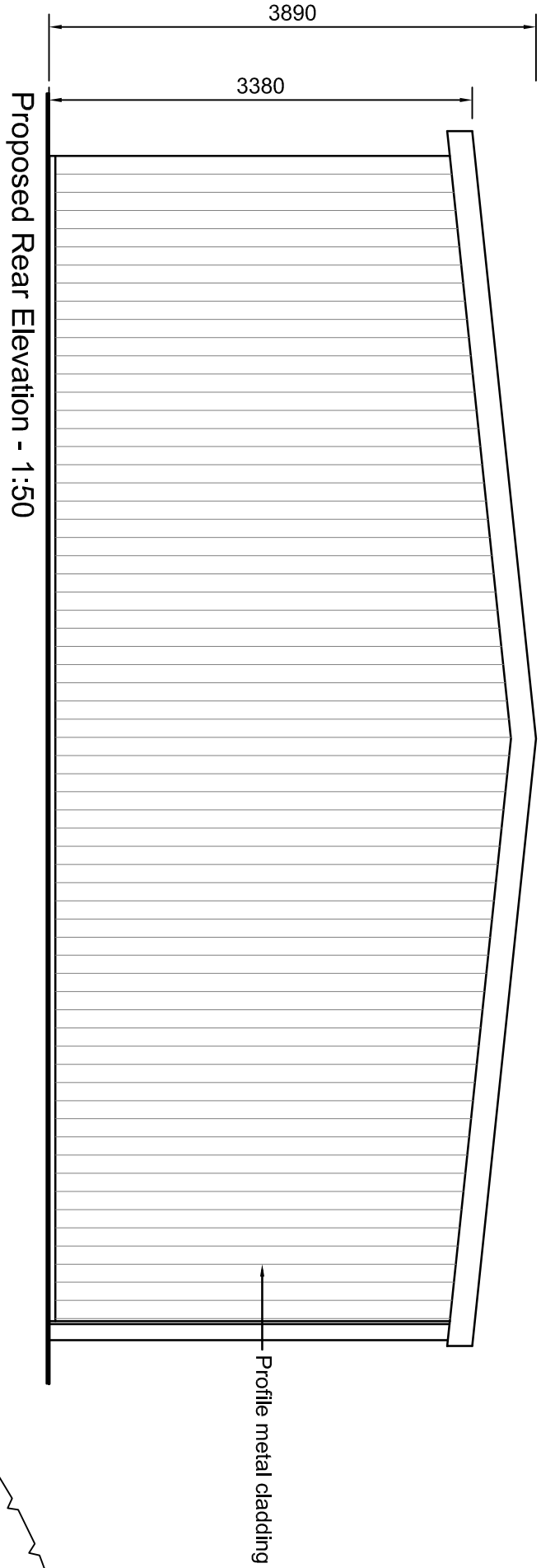
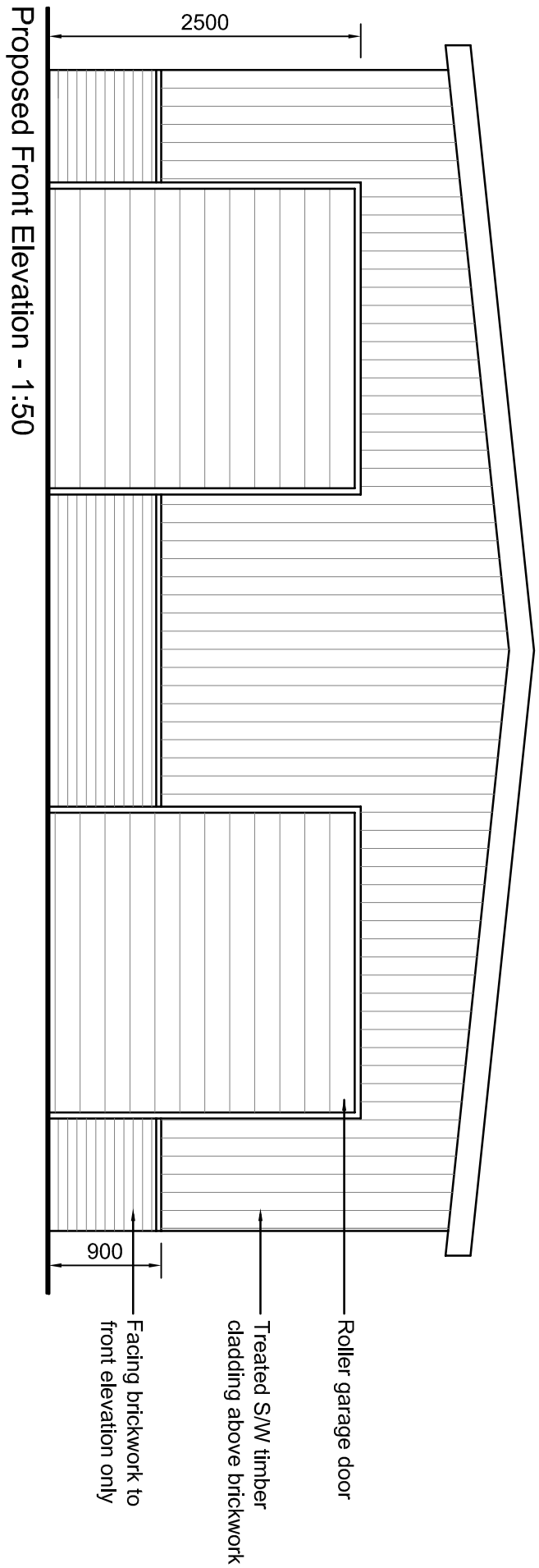
PROJECT: UOR Boat Club

DATE: November 2017

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Appendix 1

Proposed Boat Store- Drawing number: 29055-000-G-001



Rev		Description	DR	RMP
A	10.08.17	Location plan included		

baileypartnership
CONSTRUCTION AND PROPERTY CONSULTANTS
www.baileypartnership.co.uk

REF: YTD
BRISTOL 011779 474390
EXETER 01392 433241
PLYMOUTH 01752 229259
SEVENOAKS 01732 868835
TRURO 01872 561686

Project
Proposed Boat Store
University of Reading

Title
Proposed Plans & Elevations

Client
University of Reading

Drawn	Checked	DO NOT SCALE FROM THIS DRAWING
DR	RMP	THIS DRAWING IS COPYRIGHT ©
Scale	Date	Issue Status
1:50	25.05.17	Preliminary
Drawing No.	CAD ref.	Revision
29055-000-G-001	29055-000-E-001.dwg	A

Appendix 2

Assessment Methods

This PEA has been completed following guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland* (January 2016).

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 such as The Regional Spatial Strategy for the South East; Policy NRM5 Conservation or Improvement on biodiversity and also the Reading Borough Council Core Strategy; Policy CS36: Biodiversity and Geology.

A request was made to Thames Valley Environmental Records Centre (TVERC) 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 Grace Turner of EPR on 25th September 2017. The Boat House Site and immediate 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 Phase 1 Habitat Survey methodology (JNCC 1993). Botanical nomenclature in this report follows Stace (2010).

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 PEA.

Badgers

Consideration was given to the presence of habitat potentially suitable for supporting Badgers, including woodland and grassland. Potential evidence of the presence of Badgers was looked out for and noted, including earthworks that might be Badger setts, and signs such as dung pits, mammal pathways through ground vegetation and under fences, and hairs on fences.

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 window sills. 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 3

Photographs on Site

Photograph 1: Area of grassland proposed area for new Boat House



Photograph: 2: Existing Boat House



Photograph 3: Boundary Scrub vegetation



Photograph 4: View of Tall Ruderal boundary vegetation



Photograph 5: Boundary trees with no bat potential



Photograph 6: Boundary Trees and hardstanding

