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ELLIS STREET,

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ECOLOGICAL MITIGATION AND ENHANCEMENT PLAN

BMP2034

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ECOLOGICAL MITIGATION AND ENHANCEMENT PLAN

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Notice

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1.0 INTRODUCTION

Appointment & Background

1.1 BWB Consulting Ltd was appointed by Holloway Holdings Birmingham) Ltd to undertake an updated Preliminary Ecological Appraisal and Preliminary Bat Roost Appraisal for a proposed development on land off Ellis Street, Birmingham BWB, 2018). This is in accordance with Condition 8 of an existing planning consent 2015/05112/PA). Additonal surveys were recommended following on from this preliminary survey i.e. a single dusk or dawn nocturnal bat survey was recommended as was a black redstart *Phoenicurus ochruros* survey. This additional survey work is to be completed in 2019.

2.0 In order to satisfy an additional element of Condition 8, an Ecological Mitigation and Enhancement Plan (EMMP) has been produced. The plan assumes the results of the further survey work to be conducted ion 2019 will confirm a likely absence of bats and breeding black redstart. Should the surveys confirm the presence of roosting bats or breeding black redstart, additional mitigation measures may be required which would be submitted as an addendum to this document.

Site Setting

2.1 **Figure 1.1** shows the Site location. The scheme itself is split into Phases 1 and 2 as indicated in Figure 1. Brownsea drive, an existing road, separates the two phases. The proposed development site currently comprises two buildings and associated hardstanding within the phase 2 boundary). A third building had been present on-site south of Brownsea Drive within phase 1; this has already been demolished.

Figure 1: Site Location

Proposed Development

2.2 The proposed development will comprise the demolition of existing buildings and the redevelopment of the Site.

Aims

2.3 The primary purpose of this EMMP is to secure the satisfactory development of the application site and safeguard the amenities of occupiers of premises/dwellings in the vicinity in accordance with Paragraphs 3.8 and 3.10 of the Birmingham UDP 2005 and the NPPF.

Legislation and Planning Policy

2.4 The following legislation relates to species and habitats that could potentially occur in association with the Site:

- The Conservation of Habitats and Species Regulations 2017;
- The Wildlife and Countryside Act 1981 as amended);
- The Countryside and Rights of Way CRoW) Act 2000;
- Natural Environment and Rural Communities NERC) Act 2006;
- The Protection of Badgers Act 1992;
- Wild Mammals Protection) Act 1996; and
- The Hedgerow Regulations 1997.

2.5 Further information on the legislation relevant to this Site is provided in **Appendix 1**.

2.6 Consideration has also been given in this report to relevant National and Local Planning Policy as summarised below.

2.7 The National Planning Policy Framework NPPF) guides Local Planning Authorities LPAs) when developing their planning policies and considering planning applications affecting protected habitats, sites and species.

2.8 In respect of the natural environment, the NPPF states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) 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);

b) 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;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) 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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. "

2.9 In addition, the Adopted Birmingham Development Plan 2032 states under policy TP8 Biodiversity and Geodiversity):

"The maintenance, enhancement and restoration of sites of national and local importance for biodiversity and geology will be promoted and supported. These include Sites of Special Scientific Interest SSSIs), National Nature Reserves NNRs), Local Nature Reserves LNRs), Sites of Importance for Nature Conservation SINCs) and Sites of Local Importance for Nature Conservation SLINCs).

Development which directly or indirectly causes harm to sites of national importance SSSIs and NNRs) will not be permitted. An exception will only be made where the benefits of the development, at that site, clearly outweigh the impact that it is likely to have on the features that make the site special and any broader impacts on the national network of SSSIs.

Development which directly or indirectly causes harm to local sites of importance for biodiversity and geology LNRs, SINCs and SLINCs), priority habitats and important geological features, species which are legally protected, in decline, are rare within Birmingham or which are identified as national or local priorities will only be permitted if it has been clearly demonstrated that:

- *The benefits of the proposal outweigh the need to safeguard the designated site, or important habitat, species or geological feature.*
- *Damage is minimised, and measures can be put in place to mitigate remaining impacts.*
- *Where damage cannot be avoided or fully mitigated, appropriate compensation is secured.*

Development proposals which are likely to affect any designated site or important habitat, species or geological feature must be supported by adequate information to ensure that the likely impact of the proposal can be fully assessed.

The integrity of wildlife corridors and 'stepping stones' connecting them will be protected from development which would harm their function.

Priority habitats and priority species listed in Section 41 of the Natural Environment and Rural Communities Act 2006 or in the local Biodiversity Action Plans will be maintained and opportunities to enhance and add to these natural assets will also be identified. The Biodiversity Action Plan for Birmingham and the Black Country and data from EcoRecord the ecological database for Birmingham and the Black Country) will be used to inform the development of a strategic landscape-scale framework for the restoration and creation of priority habitats and recovery of priority species populations across Birmingham, including opportunities to create or restore linkages between important wildlife areas.

All development should, where relevant, support the enhancement of Birmingham's natural environment, having regard to strategic objectives for the maintenance, restoration and creation of ecological and geological assets, such as those identified for the Birmingham and Black Country Nature Improvement Area. Biodiversity and geodiversity enhancement measures should be appropriate to the nature and scale

of the development proposed. Development proposals should clearly identify how ongoing management of biodiversity and geodiversity enhancement measures will be secured."

3.0 ECOLOGICAL MITIGATION AND ENHANCEMENT PLAN

Brown Roofs

3.1 The existing site has the potential to provide suitable breeding and foraging habitat for black redstart i.e. flat, secluded roof tops on which to breed and areas of ephemeral/short perennial vegetation and scattered scrub in which to forage. Furthermore, the ephemeral/short perennial vegetation on-site would qualify as a Priority Habitat under the NERC Act 2006 i.e. "Open Mosaic Habitats on Previously Developed Land". In order to mitigate for the loss of this habitat, brown roofs will be incorporated into the final masterplan, the locations of which is indicated in **Appendix 1**.

3.2 The brown roofs will be created using existing substrate from the Site i.e. aggregate remaining on site from the demolition of the former building within Phase 1. Additionally, earth from around the perimeter of Phase 1 and the ground between Buildings 1 and 2 will be utilised as this is the existing seed bank.

Bird Boxes

3.3 Four integrate bird boxes will be incorporated in to the new buildings as indicated on **Appendix 2**. These will be positioned 2-4m up the walls of the buildings and comprise Schwegler 26 Brick Box Nests which are designed to support a range of species including black redstarts. These can be sourced from the link below:

https://www.wildcare.co.uk/schweglar-brick-box-type-26.html

Bat Boxes

3.4 Four integrated bat boxes wil be incorporated into the new buildings as indictaed on **Appendix 2**. These will be positioned as close to the eaves as possible and comprise Integrated Eco Bat Boxes. To suit as wide a range of species as possible, two crevice boxes and two cavity boxes will be installed. These can be sourced from the link below:

https://www.wildcare.co.uk/eco-crevice-bat-box-10554.html

Green Landscaping

3.5 A large proportion of the open spaces within the new site will comprise green landscaping including raised planters as indicated in **Appendix 3**. New planting should comprise native species or those with a known benefit to wildlife such as nectar rich flowers. The list of plants below are of proven value to wildlife. The list is not exhaustive and merely provides a guide for suggested planting for wildlife value. Planting should be tailored on a site by site basis. The list includes some native and ornamental species however the emphasis should always be on the use of predominantly native species.

Large Shrubs

N = Native, NN = Non-native.

- Hedge veronica/Hebe *Veronica* spp. NN
- Hawthorn *Crataegus monogyna* N
- Blackthorn *Prunus spinosa* N
- Rose: dog rose *Rosa canina*, field rose *R. arvensis*, burnet rose R. *pimpinellifolia* N
- California lilac *Ceanothus* spp., *C. arborea* NN
- Wild privet *Ligustrum vulgare* N
- Common holly *Ilex aquifolium* N
- Barberry *Berberis* spp., *B. darwinii*, *B. thunbergii*, *B. x stenophylla* NN
- Daisy Bush *Olearia* spp., *O. x hastii*, *O. macrodonta* and *O. traversii* NN
- Firethorn *Pyracantha coccinea* NN
- Hazel *Corylus avellana* N *C. maxima* NN
- Butterfly bush *Buddleja* spp., *B. alternifolia*, *B. globosa* NN
- Dogwood *Cornus sanguinea* N
- Broom *Cytisus scoparius* N
- Escallonia *Escallonia macrantha* NN
- Hardy fuchsia *Fuchsia magellanica* NN
- Buckthorn *Rhamnus cathartica* N
- Spindle *Euonymus europaeus* N
- Tutsan *Hypericum androsaemum* N
- Yew *Taxus baccata* N

Trees

- Cherry *Prunus* spp., wild cherry *P. avium*, bird cherry *P. padus*, domestic plum *P. domestica* N or cherry plum *P. cerasifera* NN
- Ash *Fraxinus excelsior* N
- Apple *Malus* spp., edible apple *M. domestica*, crab apple *M. sylvestris* N
- Pear *Pyrus* spp., edible pear *P. communis* NN
- Small-leaved lime *Tilia cordata* N
- Silver birch *Betula pendula* N
- Yew *Taxus baccata* N
- Black poplar *Populus nigra* N
- Foxglove tree *Paulownia tomentosa* NN
- Beech *Fagus sylvatica* N

Climbers

- Jasmine *Jasminum* spp., summer jasmine *J. officinale*, winter jasmine *J. nodiflorum* NN
- Ivy *Hedera helix* N
- Climbing hydrangea *Hydrangea anomala* ssp. *petiolaris* NN
- Honeysuckle *Lonicera* spp. *L. periclymenum* N
- Clematis *Clematis* spp. NN
- Hop *Humulus lupulus* N
- Firethorn *Pyracantha atalantioides* NN
- Nasturtium *Tropaeolum majus* NN

Bulbs

- English bluebell Hyacinthoides non-scripta N
- Squill species Scilla spp. N/NN
- Snowdrop Galanthus nivalis N
- Winter aconite Eranthis hyemalis E
- Crocus species Crocus spp. NN
- Wild Daffodil Narcissus pseudonarcissus N
- Onion species Allium spp. N/NN. N.B. Allium triquetrum three cornered leek) and Allium paradoxum few-flowered leek are Schedule 9 invasive plant species.
- Wood anemone Anemone nemorosa N
- Lesser celandine Ficaria verna

4.0 REFERENCES

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APPENDICES

APPENDIX 1: BROWN ROOF LOCATIONS

Significant hazards relative to the architectural design shown on this drawing have been assessed and highlighted with reasonable skill and care.

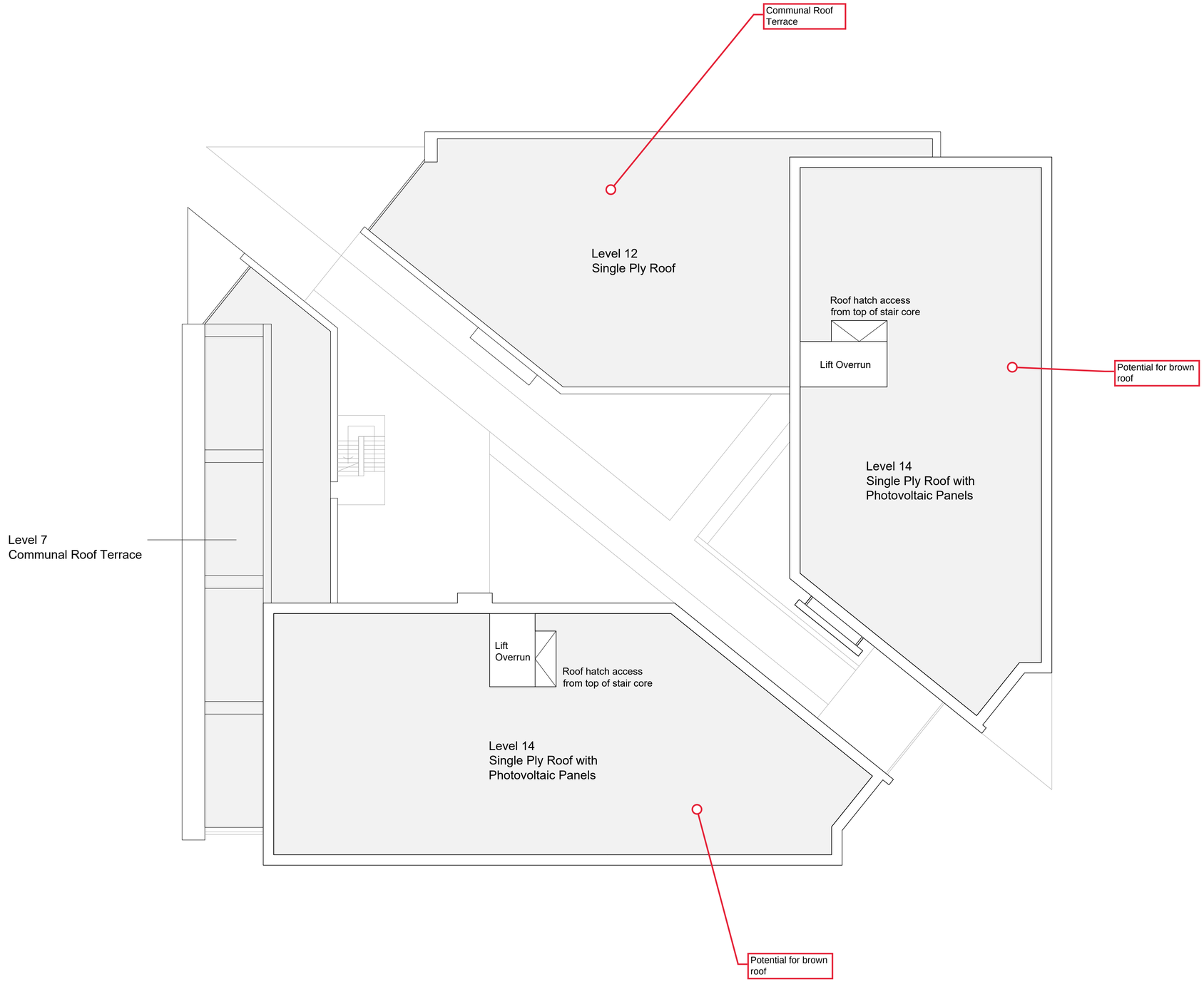
This drawing is to be read in conjunction with all other hazards/risks which have been identified and recorded within the construction phase H&S plan.

It is assumed that all works on this drawing will be carried out by a competent contractor working, where appropriate, to an approved method statement.

Significant hazards are defined as: -

- Those not likely to be obvious to a competent contractor or other designers.
- Those of an unusual nature.
- Those likely to be difficult to manage effectively.

NOTES:



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PLANNING

REV	DATE	NOTES	CHK
A	31.08.18	Issue for discharge of condition 15	JS

Client

HighStreetResidential

Project

HOLLOWAY HEAD

Drawing Title

GREEN/BROWN ROOF DETAILS
SOUTH SITE

Drawn	Checked	Paper Size	Scale	Date
CT	JS	A1	1:125	AUG 2018

Project No.	Drawing No.	Revision
18041	0346	A

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Figured dimensions only to be taken from this drawing. DO NOT SCALE. All contractors must visit the site and be responsible for checking all setting out dimensions and notifying the architect of any discrepancies prior to any manufacture or construction work.

Significant hazards relative to the architectural design shown on this drawing have been assessed and highlighted with reasonable skill and care.

This drawing is to be read in conjunction with all other hazards/risks which have been identified and recorded within the construction phase H&S plan.

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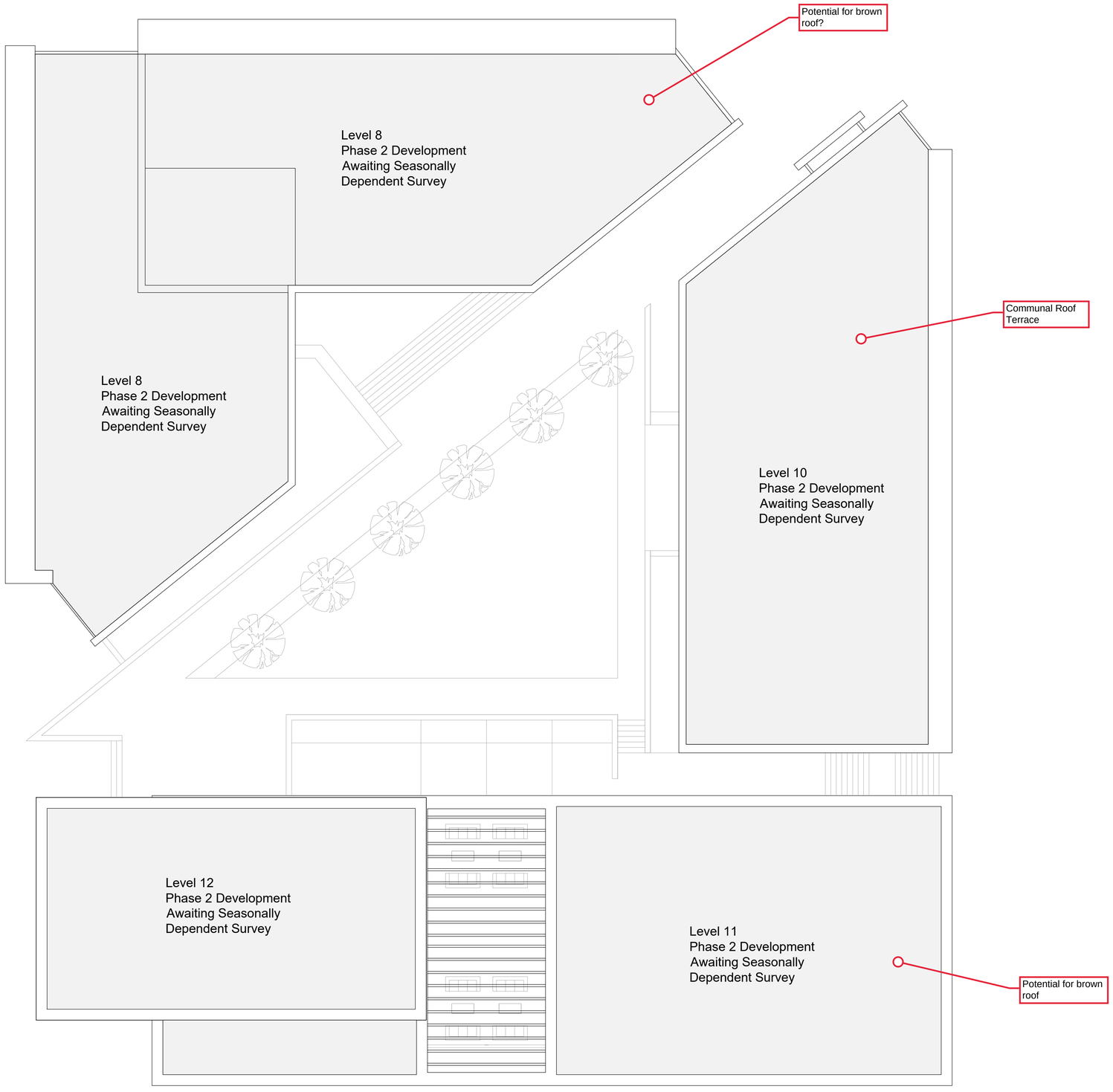

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PLANNING

REV	DATE	NOTES	CHK
A	31.08.18	Issue for discharge of condition 15	JS

Client

HighStreetResidential

Project

HOLLOWAY HEAD

Drawing Title

GREEN/BROWN ROOF DETAILS
NORTH SITE

Drawn	Checked	Paper Size	Scale	Date
CT	JS	A1	1:125	AUG 2018

Project No.	Drawing No.	Revision
18041	0347	A

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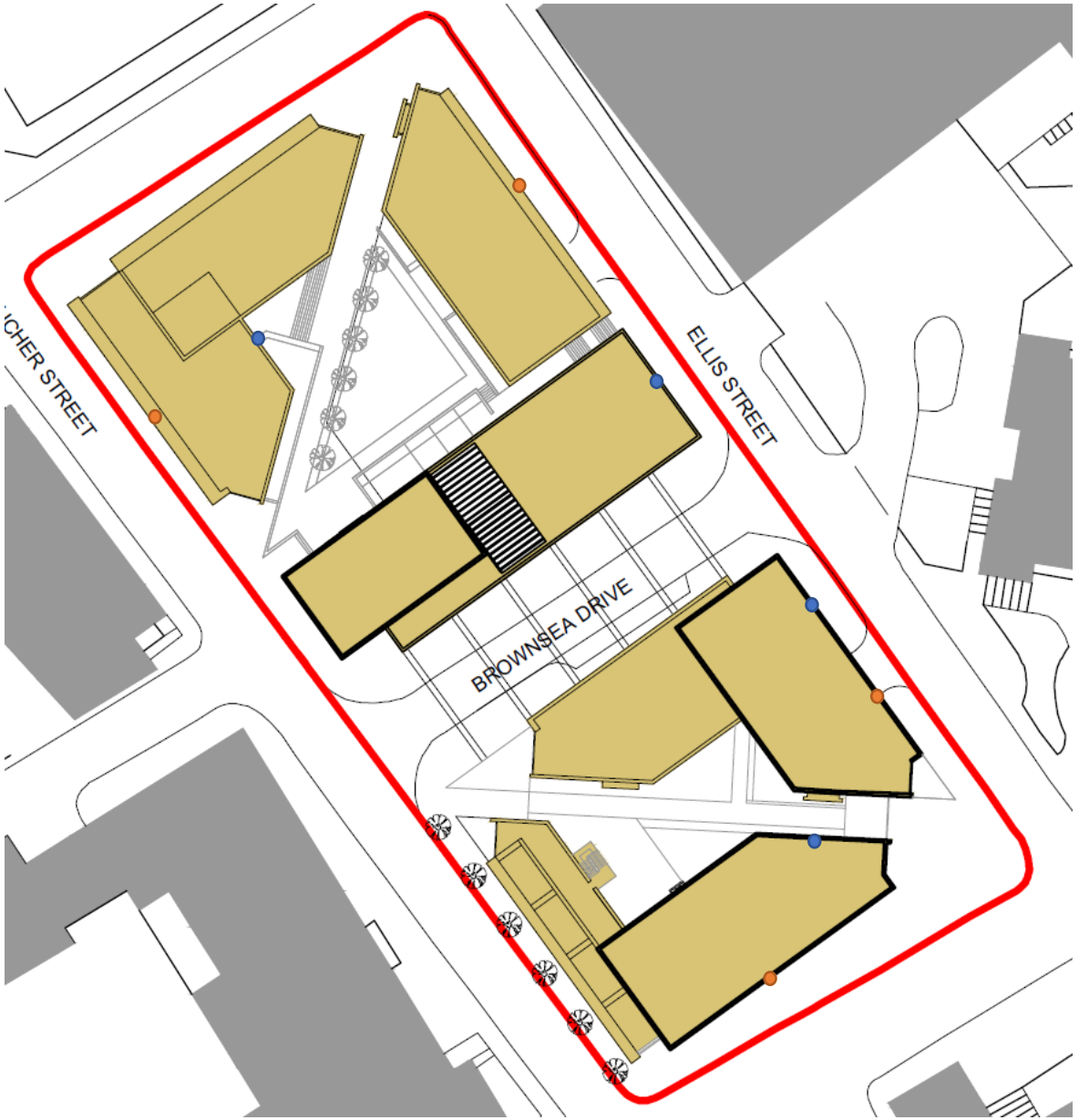
APPENDIX 2: LOCATION OF BAT AND BIRD BOXES

- Bat Box – Positioned as close to the eaves as possible
- Bird Box – Position 2-4m high.

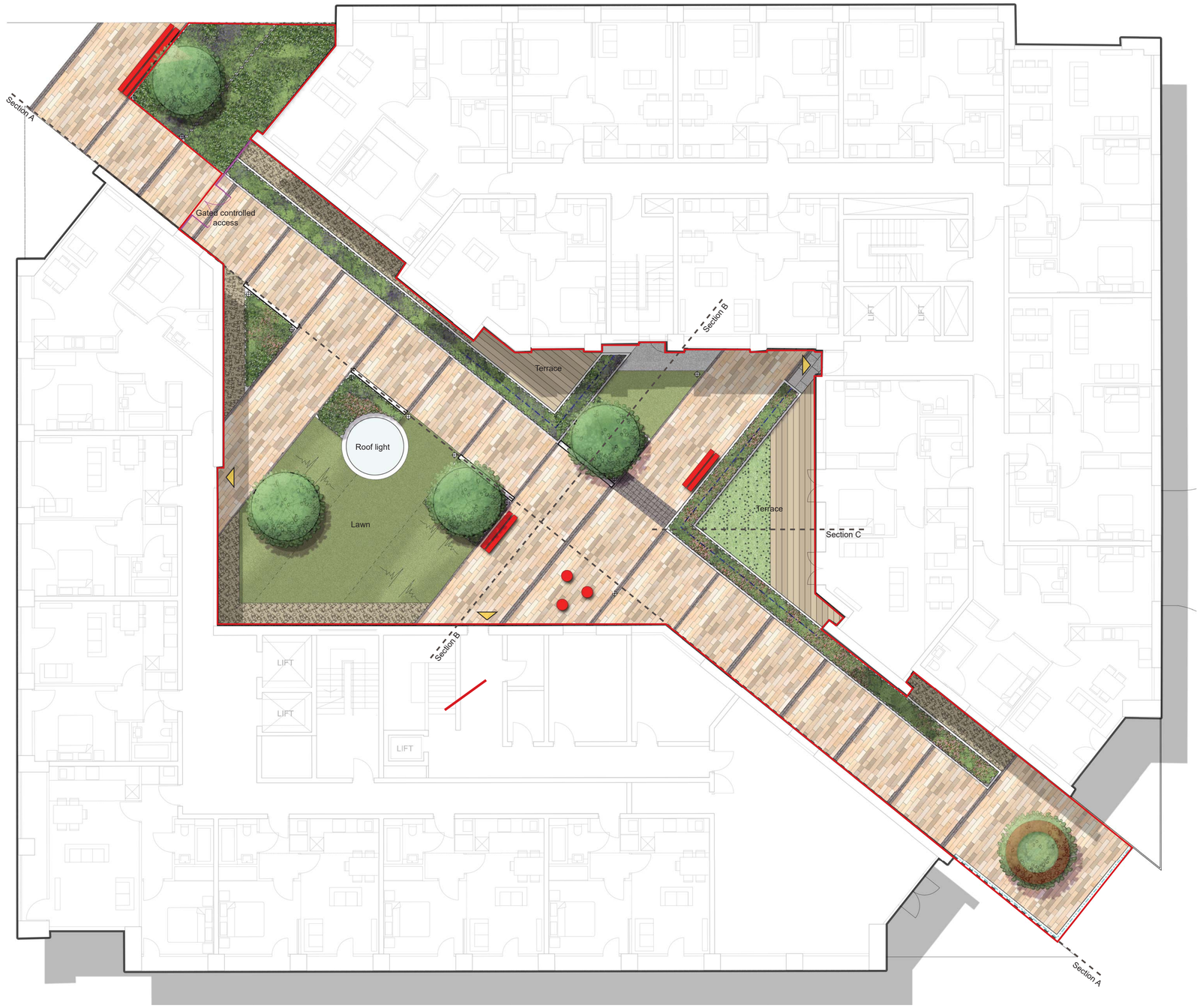


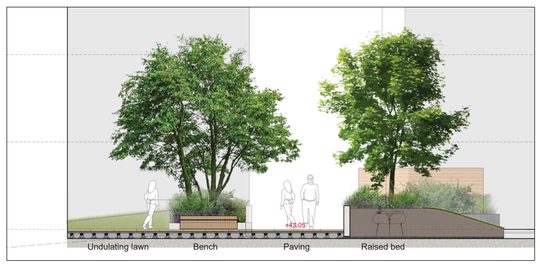
APPENDIX 3: PROPOSED LOCATIONS OF GREEN LANDSCAPING

amendements

- Lawn - Turf
- Shrub planting - Refer to planting plans for species. All shrub beds to be 450mm of suitable growing medium over 450 of suitable roof garden substrate. Beds to be mulched with 75mm minimum of bark nuggets.
- Clipped low hedge planting pregrown hedge 450mm minimum height
- Courtyard trees
- Natural stone paving on a paving support system
- Black Granite banding to paving
- Precast concrete wall to provide seating and planting depth for trees and shrubs .
- Raised planters - Stainless steel raised planter system 700mm above adjacent paving levels
- Benches - Concrete with timber top
- Seats - Concrete
- Composite decking
- Synthetic Turf
- Glass Balustrade
- Gravel Strip
- Access
- Courtyard Boundary

N





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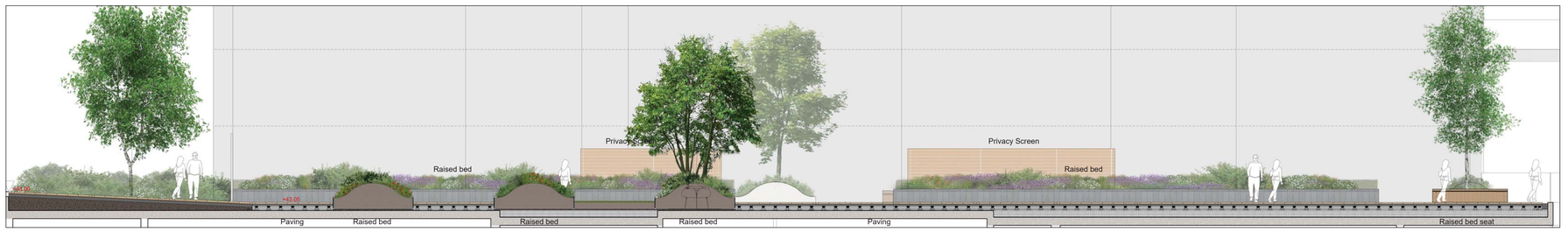

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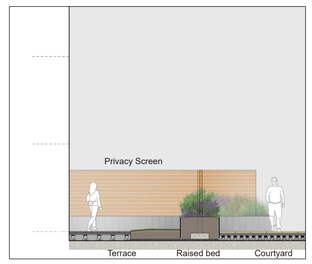

SECTION C

project:

Holloway Head
Birmingham

job number:

LP2148

drawing title:

Landscape General Arrangement
South Block Courtyard

drawing number:

LP2148-FIRA-GL-P-0001

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Lawn - Turf

Shrub planting - Refer to planting plans for species. All shrub beds to be 450mm of suitable growing medium over 450 of suitable roof garden substrate. Beds to be mulched with 75mm minimum of bark nuggets.

Clipped low hedge planting pregrown hedge 450mm minimum height

Courtyard trees

Natural stone paving on a paving support system

Black Granite banding to paving

Precast concrete wall to provide seating and planting depth for trees and shrubs .

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Benches - Concrete with timber top

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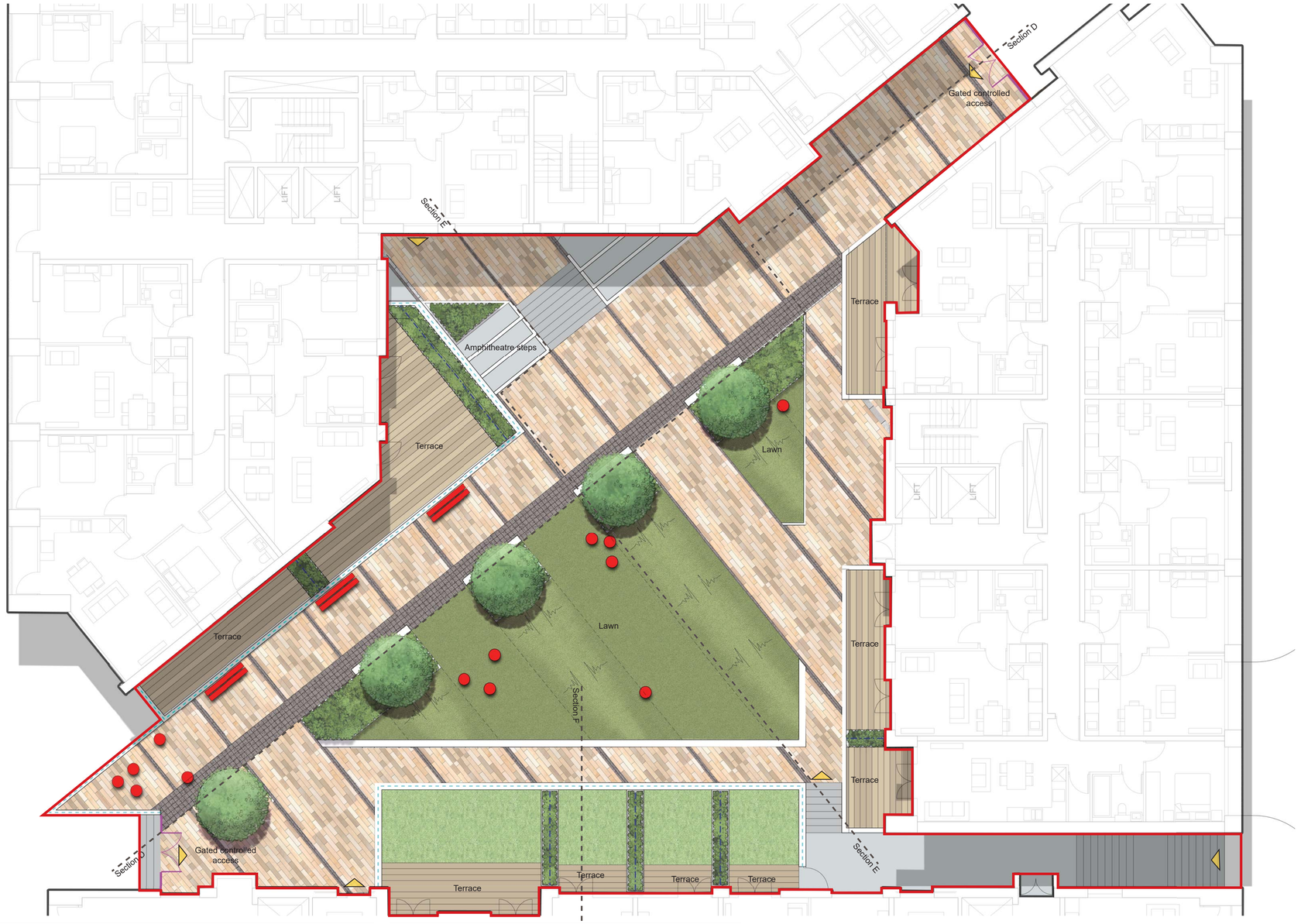
Glass Balustrade

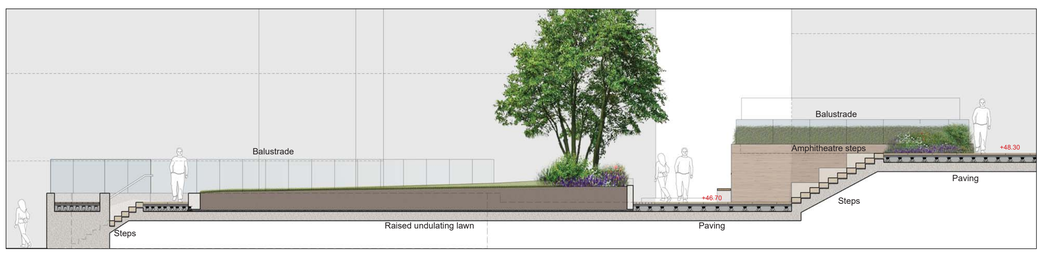
Gravel Strip

Access

Courtyard Boundary

N





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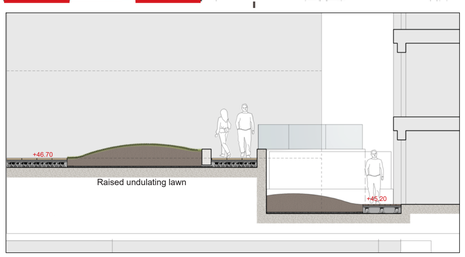

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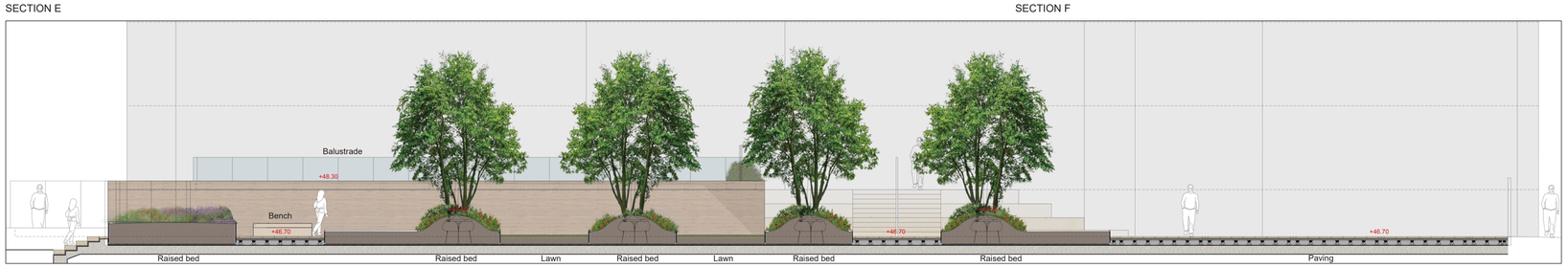

SECTION D

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project:

Holloway Head
Birmingham

job number:

LP2148

drawing title:

Landscape General Arrangement
North Block Courtyard

drawing number:

LP2148-FIRA-GL-P-0002

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Natural Stone Paving

Pebble strip to building edge

Privacy Screen between terraces

Seat

Black Stone Edging

Raised Planter System

Glass Balustrade

Lighting Bollard

Composite Decking to private terraces

Lawn edge detail

Indicative Access Gates

Typical Multistemmed tree in planting

Synthetic Turf to private terraces

Pre-cast concrete units to form tree planting depth requirements

Bench

Shrub Planting

project:

Holloway Head
Birmingham

job number:

LP2148

drawing title:

Landscape Courtyard Materials

drawing number:

LP2148-FIRA-GL-P-0003

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BETTER SOLUTIONS, INTELLIGENTLY ENGINEERED

CASCADE

Panther Securities

Ellis Street, Birmingham: Extended Phase 1 Habitat Survey

July 2015

Client: **Panther Securities**

Title: **Ellis Street, Birmingham: Extended Phase 1 Habitat Survey**

Project No: **CC1154**

Date of Issue: **10 July 2015**

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Produced By	**Authorised for Release By**
	
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Appendix A Photographs of survey features of interest
Appendix B Species recorded within 2.5km of site

1 INTRODUCTION

1.1 BACKGROUND

Cascade Consulting was commissioned by Panther Securities to undertake an Extended Phase 1 survey of a site on Ellis Street, Birmingham (grid reference SP0672980371). This was in support of a previous planning application for the proposed re-development of the site by maintaining the two main office block areas divided by Brownsea Drive but reconfiguring the current office layouts.

An Extended Phase 1 Habitat survey of the development site was originally completed by Cascade Consulting in May 2009 in support of this previous planning application.

The current planning application seeks to demolish the existing buildings and replace with a mixed use development within the boundaries established by the existing road network. This is a new planning application, however, an application has been submitted and consented for this site previously under application reference 2010/06724/PA. An outline application for a previous design was also submitted in 2014, planning reference. 2014/02464/PA. The design has subsequently been revised following submission of this application.

1.2 PURPOSE OF REPORT

This report provides a comprehensive desk-based study of existing ecological information for the site and outlines the findings of an Extended Phase 1 Habitat Survey undertaken by Cascade Consulting in February 2014. The survey documented in this report has been undertaken in order to identify habitats and provide an initial baseline assessment of their importance and potential to support species of conservation interest. This will provide an initial appraisal of habitats and species likely to be present at the site such that any effects of a potential re-development on any ecological receptors can be fully assessed. An update survey in 2015 was not considered necessary as the site comprises buildings and concrete and it is not considered to have materially changed since the previous survey in 2014.

The information presented within this report provides an assessment that will inform the design of appropriate ecological mitigation and enhancement measures, which can be incorporated within the completed scheme. The report also outlines recommendations for further surveys, where these may be required.

1.3 SURVEY AND STUDY AREA

The site is situated to the west of Birmingham City Centre, approximately 50m to the west of the Holloway Circus and the A38 Suffolk Street Queensway.

The site itself comprises a number of dilapidated office buildings and car parking areas, bordered by Gough Street to the north, Ellis Street on the east, Holloway Head to the south and Blucher Street to the west. The site is divided into two by Brownsea Drive. The site is currently being used for informal car parking. For reference, the national grid reference associated with the corner of Gough Street and Ellis Street at the northern end of the site is SP 06729 80371.

1.4 LEGISLATIVE AND POLICY CONTEXT

This report and its recommendations have been produced in accordance with relevant legislation, best practice guidance and local biodiversity targets. They also take into account National Planning Policy Framework (NPPF)[1] in addition to nature conservation policies within local and regional planning policy documents.

The principal legislation relating to ecological resources that are relevant to this appraisal are as follows:

- *Conservation of Habitats and Species Regulations (as amended) 2010* - these Regulations implement protection for European protected sites and species, updating and consolidating the Conservation (Natural Habitats &c.) Regulations (as amended) 1994. The level of protection afforded to habitats and species remains the same. The Regulations implement the Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC).

- *Wildlife and Countryside Act (1981) (as amended)* – this Act comprises the principal means of protecting wildlife in the UK and provides the mechanism by which a number of international directives are implemented in the UK.

- *Countryside and Rights of Way (CRoW) Act (2000)* – this Act strengthens the Wildlife and Countryside Act in relation to SSSIs and threatened species.

- *Natural Environment and Rural Communities (NERC) Act (2006)* – this Act places an obligation on public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.

- *Biodiversity Action Plan (BAP)* – the UK BAP and local BAPs is the UK Government's response to the Convention on Biological Diversity, signed in 1992. The BAPs describe the UK's biological resources and commits a detailed plan for the protection of these resources through the implementation of Habitat and Species Action Plans.

[1] National Planning Policy Framework (NPPF), Department for Communities and Local Government. March 2012.

1.5 PROTECTED SPECIES LEGISLATION

1.5.1 Flora

All wild plants are protected under Section 13 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to uproot a plant, defined as to '*dig up or otherwise remove the plant from the land on which it is growing*', without permission from the landowner or occupier. A number of higher and lower plant species receive additional protection under Section 8 of the Act, which makes it an offence to intentionally pick, uproot, destroy or trade in these plants.

Schedule 9 of the Act identifies invasive plant species and makes it an offence to plant these species or otherwise cause them to grow in the wild. Any material containing Japanese knotweed *Fallopia japonica* or giant hogweed *Heracleum mantegazzianum* is identified as 'controlled waste' under the Environment Protection Act 1990 and must be disposed of appropriately.

1.5.2 Birds

All wild birds in England and Wales are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs. Furthermore, amendments to the provisions under the Conservation of Habitats and Species Regulations (as amended) 2010 require local planning authorities to have regard to "*the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK*" in the exercising of their functions. As a result, it is important to consider the habitat loss as a result of a development and opportunities for the provision of habitats in a planning application.

1.5.3 Bats

All bat species in England and Wales are fully protected through inclusion within the Conservation of Habitats and Species Regulations (as amended) 2010 as a European Protected Species (EPS). Under this legislation it is an offence to deliberately capture, injure or kill bat species. It is also a strict liability offence to damage or destroy sites or places which bat species use as breeding sites or resting places. Bats are also protected from deliberate disturbance which is likely to:

a) impair its ability:

   i. to survive, breed or reproduce, or to rear or nurture their young; or

   ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

b) to affect significantly the local distribution or abundance of the species to which they belong.

It may be possible to apply for a licence from Natural England to allow activities that would otherwise be an offence under these Regulations. However, it is an offence to breach a condition imposed by any such licence.

All bats are also partially protected in England and Wales through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to intentionally or recklessly disturb a bat whilst it is using a place of rest or shelter.

1.6 SURVEY AIMS AND OBJECTIVES

The overall survey aim was to assess the site for ecological importance by producing an inventory of, and target notes for, habitats that occur within the field survey area. The purpose of this was to highlight any ecological constraints associated with the proposed re-development of the site and to identify the need for any further ecological surveys to inform potential mitigation of any impacts of the proposal.

The specific survey objectives were to:

- Review existing ecological information for the site to inform the study
- Map all habitats within the field survey area and identify those that are ecologically valuable and/or have legal protection
- Identify dominant vascular plant species present within habitats
- Highlight the presence of invasive plant species within the field survey area
- Assess the potential of habitats to support and, where possible, undertake preliminary field surveys for any ecologically important and/or legally protected faunal species.

This information has been used to identify potential ecological constraints to the proposed development, to formulate reasonable ecological recommendations to alleviate the effects of these constraints, and to define the scope of future ecological works, if required.

2 METHODOLOGY

2.1 DESK STUDY

A targeted desk study was undertaken involving a search within a 10km radius of the site using the following online resources:

- Multi Agency Geographical Information Centre (www.magic.gov.uk)
- National Biodiversity Network (NBN) (www.nbn.org.uk).
- Ordnance Survey (OS) mapping online website
- UK Biodiversity Action Plan website (http://jncc.defra.gov.uk);

In addition to the web-based information sources, EcoRecord (the ecological record centre for the Black Country and Birmingham) was consulted to search for statutory and protected species, non statutory protected sites and locally important species within a 2.5km radius. The UK and Local (Birmingham and the Black Country) Biodiversity Action Plans were also consulted.

The aim of the desk study was to identify the presence of statutory and non-statutory wildlife sites and any legally protected or notable species records for the area.

2.2 EXTENDED PHASE 1 SURVEY

The extended Phase 1 survey was undertaken on the 25 February 2014, by an experienced surveyor. The area surveyed is shown in **Figure 2.1** and **Figure 2.2** of this report and the red line boundary has been included by Cascade Consulting to clarify the areas surveyed. The survey was undertaken on an overcast yet dry day. These conditions are considered appropriate for this type of survey.

The habitats found were indentified using the standard Phase 1 Habitat survey methodology[2]. Habitat types and dominant flora were mapped with target notes made to describe features of interest. The relative abundance of plant species present were noted according to the DAFOR scale. **Appendix A** sets out photographs of survey features of interest on and around the site, taken on 25 February 2014.

Detailed species surveys were not undertaken at this time, but the potential for the field survey area to support any legally protected or valuable species (e.g. BAP priority species) was assessed. Field signs or sightings of such species were recorded as seen, and the presence of any invasive plant species listed on Schedule 9 of the

[2] Joint Nature Conservancy Council (2007) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. Peterborough, UK.

Wildlife and Countryside Act 1981 (as amended) was also identified. Any suitable refugia capable of sheltering wildlife, such as sheets of wood, were lifted.

2.3 ASSESSMENT METHODOLOGY

Data from the desktop study and field survey area were analysed to determine the ecological value of the site based upon the Guidelines for Ecological Impact Assessment in the United Kingdom published by the Institute of Ecology and Environmental Management (IEEM)[3] now the Chartered Institute of Ecology and Environmental Management.

It is essential to distinguish between the *biodiversity value* of a receptor and its *legal status*. Features of high *biodiversity value* may not necessarily attract *legal protection* and vice versa. For example, a viable area of ancient woodland is likely to be considered of high biodiversity value even if it does not receive any formal statutory designations.

In accordance with the CIEEM guidelines, each biodiversity feature should be assessed as valuable, or potentially valuable, based on the following geographic frame of reference; some examples of ecological receptors that may be potentially valuable at each geographic scale are presented below:

- International – e.g. existing or warranting designation as a Special Area of Conservation (SAC) and/or of significant conservation status for Europe
- National – e.g. existing or warranting designation as a Site of Special Scientific Interest (SSSI) and/or of significant conservation status for England
- Regional – e.g. habitats or species valuable at a regional level and/or of significant conservation status for the West Midlands
- Metropolitan/County – e.g. existing or warranting designation as a County Wildlife Site (CWS) and/or of significant conservation status for Birmingham
- Borough/District– e.g. habitats or species populations of significant conservation status for Borough of Ladywood
- Local – e.g. habitats or species of significant conservation status within a local context (e.g. within c. 5km of the proposed scheme)
- Within the immediate survey area only – e.g. habitats or species populations of significant conservation status for the site and immediate surrounding lands.

[3] The Institute of Ecology and Environmental Management (IEEM) (2006) *Guidelines for Ecological Impact Assessment*. IEEM, Winchester.

2.4 SURVEY LIMITATIONS

Data collected from the Phase 1 Habitat Survey should be treated as a preliminary assessment of the habitats on site. The recommended optimum survey months for habitats are typically between April and September. The survey was undertaken in February following a discussion with Nicola Farrin[4] (Ecologist, Birmingham City Council) and it was agreed that survey at a sub-optimal time was acceptable as the site is dominated by buildings and hardstanding, with minimal vegetation. It is noted that some species or field signs may not be present at the time of survey. Therefore, it is necessary to carry out an evaluation of habitats to assess their potential to support species of particular conservation interest.

The buildings on the site could not be accessed for safety reasons due to their derelict condition. However, professional judgement has been used to provide an opinion as to the likely value or otherwise of such features on the site.

[4] Per Comms, 5 February 2014.

Figure 2.1 Aerial Photograph of Area of Interest with Site Boundary

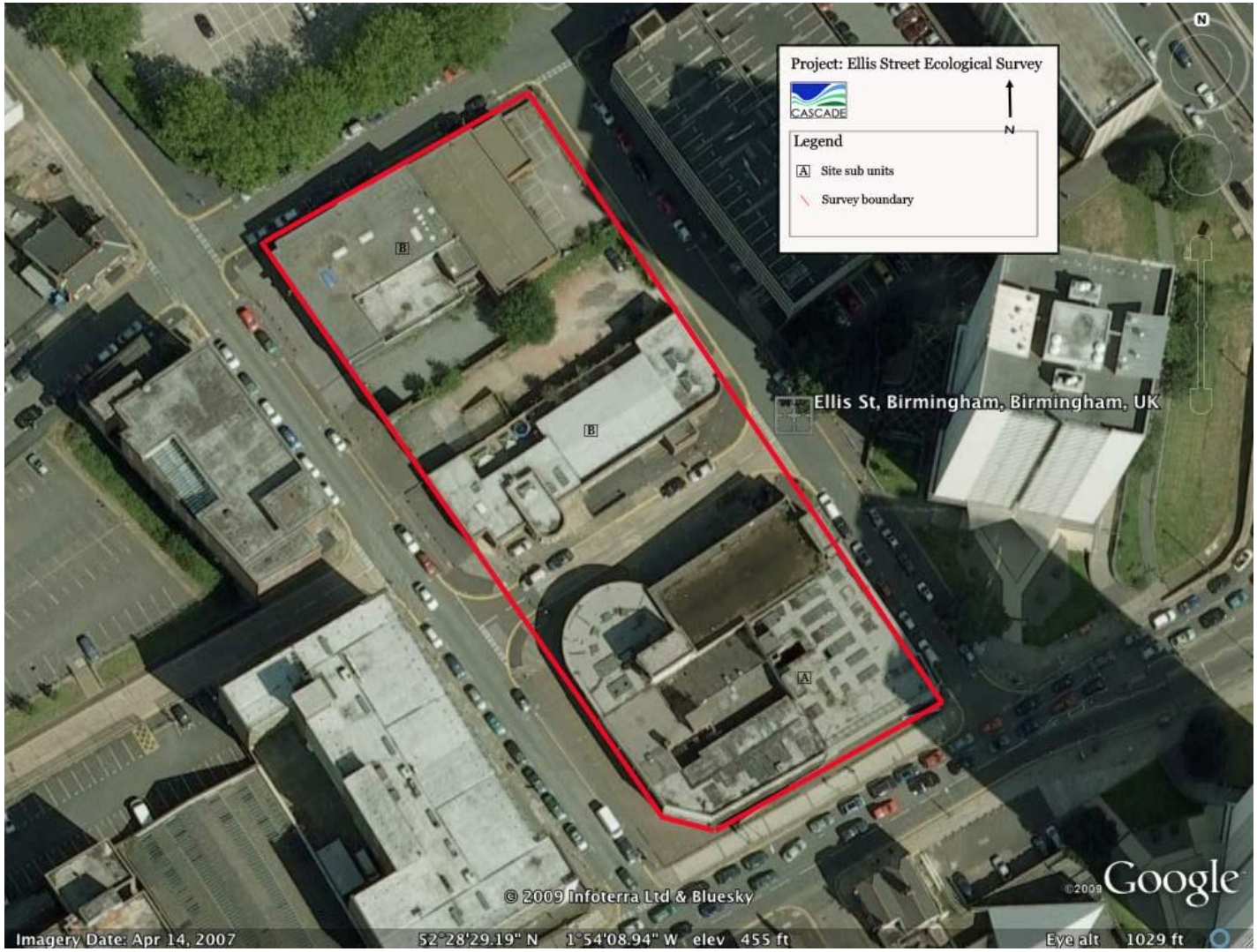


Figure 2.2 Study Area as Defined within the Red Line Boundary

3 RESULTS

3.1 DESK STUDY

3.1.1 Statutory Designated Sites

Five statutory designated sites are located within a 10km radius of the proposed development site (central grid reference taken as SP067863), comprising four Sites of Special Scientific Interest (SSSI) and one National Nature Reserve (NNR). No sites of international or European importance (Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsars) were present within 10km of the site boundary.

Sutton Park SSSI and NNR is located approximately 9.6km north of the site at its closest point and covers an area of 812ha. The site was designated a SSSI in 1987 for the presence of rich ancient woodland, heathland and wetland habitats.

Edgbaston Pool SSSI is located approximately 2.3km to the south west of the proposed development site, and covers an area of 15.6ha. The site was designated in 1986 for its diverse semi-natural community.

Berry Mound Pastures SSSI is located approximately 8.6km south/ south-east of the site and covers an area of 11.84ha. The site was designated in 1994 for its diverse semi-natural grassland habitat.

Bromsgrove Road Cutting, Tenterfields SSSI is just less than 10km at its closest point west/ south-west of the site and covers an area of 0.2ha. The site was designated 1994 for geological features as it is the best available exposure of the Basal Sandstone Member of the Halesowen Formation.

3.1.2 Non-statutory Designated Sites

A total of 11 non-statutory designated sites are located within 2.5km of the proposed development site, which include one Local Nature Reserve (LNR), three Sites of Importance for Nature Conservation (SINCs) and seven Sites of Local Importance for Nature Conservation (SLINCs).

Edgbaston Reservoir LNR and SINC is a large canal feeder reservoir with narrow fringes of parkland type woodland, predominantly noted for ornithological interest.

<u>Sites of Importance for Nature Conservation (SINCs)</u>

1) Chad Book SINC is a small brook that rises near Bearwood and is designated as it flows through a partly semi-natural corridor that connects valuable habitats,

including Edgbaston Pool SSSI, before joining Bourne Brook.

2) Edgbaston Park Golf Course SINC is locally designated for the presence of improved acid grassland habitat.
3) The Vale, Edgbaston SINC is an area of parkland with a lake which attracts a variety of wildfowl, notably waders.

Sites of Local Importance for Nature Conservation (SLINCs)

1) Birmingham Canal SLINC compromises three contour following loops crossing & joining later Birmingham with narrow strips of associated semi-natural habitat.
2) Digbeth Branch Canal SLINC supports limited aquatic flora and narrow strips of adjacent scrub.
3) Edgbaston Grove Woodland SLINC compromises two mature plantation woodlands and a connecting slope of natural grassland habitat.
4) Grand Union Canal SLINC incorporates a diverse corridor including well-wooded cuttings and narrow verges of grassland habitat.
5) Rea Valley SLINC contains corridor habitats, including woodland, that link several SINCs.
6) River Rea SLINC flows through a semi-natural corridor connecting several important sites.
7) Worcester and Birmingham Canal SLINC forms the connection between a number of key wildlife sites.

3.1.3 Habitats

There are no BAP Priority Habitat within the study area and no ponds or ditches evident on Ordnance Survey maps within 250m of the proposed development site.

3.1.4 Species

Information returned as part of a biological records data search through EcoRecord (the ecological record centre for the Black Country and Birmingham) identified a number of statutorily protected species as present within the study area. These records are identified in **Appendix B**. Key species of relevance to the development site are: black redstart *Phoenicurus ochruros*, peregrine falcon *Falco peregrinus*, kestrel *Falco tinnunculus* and six species of bat: pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, serotine *Eptesicus serotinus*, Daubenton's *Myotis daubentonii*, Natterers *Myotis nattereri* and noctule *Nyctalus noctula*.

A number of Schedule 9 invasive species were also identified within the study area, see **Appendix B**, with four species recorded in relatively close proximity to the site: wall cotoneaster *Cotoneaster horizontalis*, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum*

mantegazzianum.

3.1.5 Local Biodiversity Action Plan

The Birmingham local BAP identifies a number of habitats and species whose presence in the county is considered to be of ecological importance which includes the following:

Habitats

- Ancient broad-leaved (semi-natural)
- Lowland neutral and base-rich grassland
- Lowland dry acid grassland
- Lowland wet grassland
- Wet and dry lowland heath
- Rivers and streams
- Canals
- Arable Fields
- Field margins and beetle banks
- Urban wasteland
- Managed greenspace (garden allotments, parks and open space)

Species

- Bluebell *Hyacinthoides non-scripta*
- Orchids
- Vaccinium spp.
- Floating water plantain *Luronium* natans
- Skylark *Alauda arvensis*
- Snipe *Gallinago gallinago*
- Song thrush *Turdus philomelos*
- Tree sparrow *Passer montanus*
- Grey partridge *Perdix perdix*
- Little ringed plover *Charadrius dubius*
- Black redstart
- Kestrel *Falco tinnunculus*
- Green Hairstreak *Callophrys rubi*
- Wall butterfly *Lasiommata megera*
- Dingy skipper *Erynnis tages*
- White-clawed Crayfish *Austropotamobius pallipes*

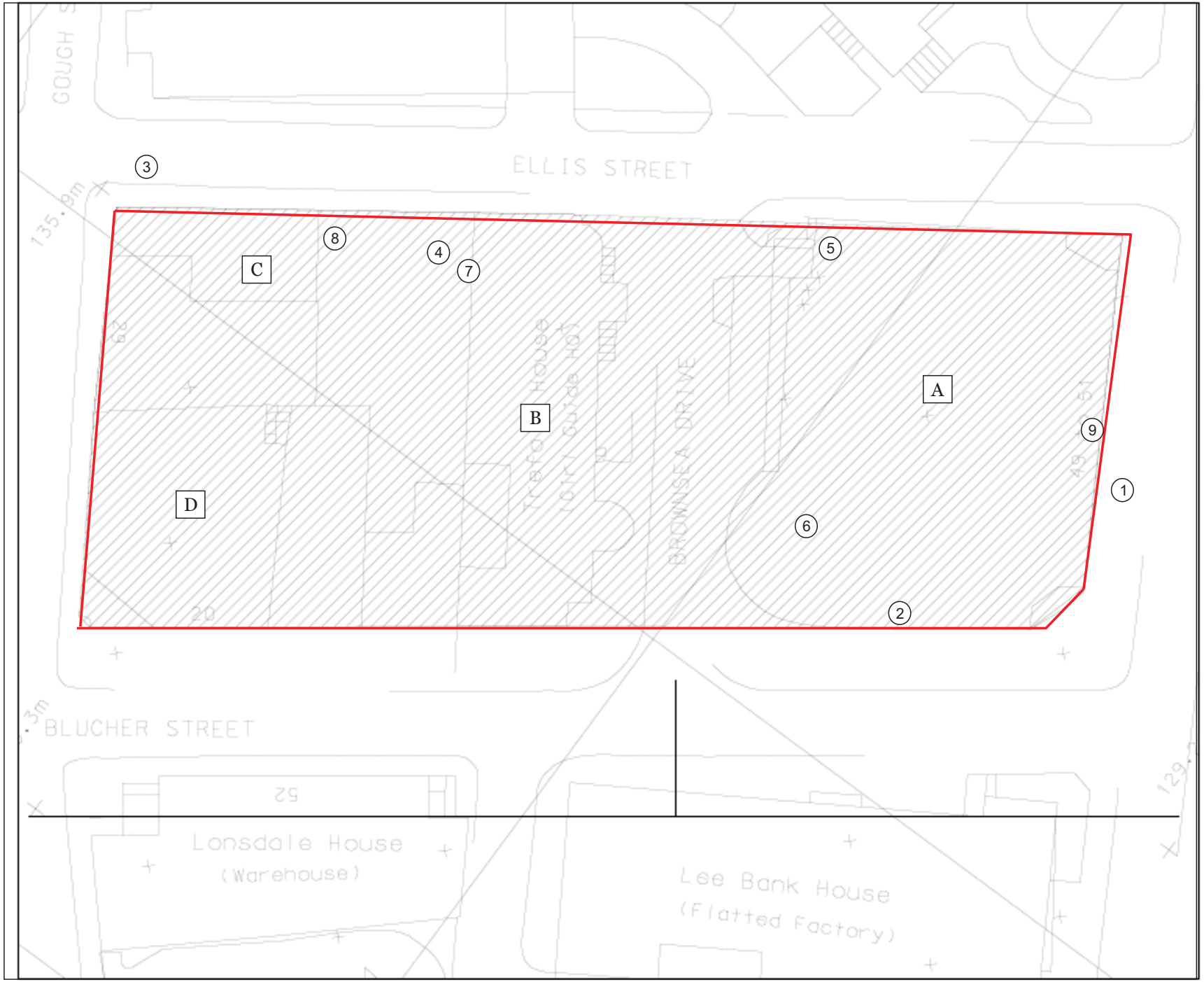
- Amphibians
- Great Crested Newt *Triturus cristatus*
- Badger *Meles meles*
- Brown Hare *Lepus europaeus*
- Bats
- Water vole *Arvicola amphibious*

3.2 EXTENDED PHASE 1

3.2.1 Overview of Site

The site comprises four building units, for ease of reference, the sites will be described as buildings A, B, C and D as referenced on the annotated map (**Figure 3.1**).

All the buildings referenced above are currently derelict and in a state of considerable disrepair with broken windows and collapsing roofs. Features of interest around the site have been presented as photographs in **Appendix A.** The location of each plate has also been marked on **Figure 3.1**.



A Building Reference

1 Photograph Plate Locations

N

CASCADE

Figure 3.1

TITLE TEXT

OS PLAN

				A1
06140	0007			–

SMC CORSTORPHINE & WRIGHT

3.2.2 Habitats

Within the defined boundary of the site, as indicated in **Figure 3.1,** there is very little natural habitat of ecological interest or importance.

Scattered scrub

The survey area supports limited areas of individual scrub species, which have established themselves within the open hardstanding areas. This included butterfly bush *Buddleja davidii* and bramble species with a ground flora including common nettle *Urtica dioica*, cleavers *Galium aparine and* ribwort plantain *Plantago lanceolata*. The habitat is relatively common locally and nationally and does not comprise any part of a BAP habitat. Therefore, it is considered to be of intrinsic biodiversity value **within the immediate survey area only**. However, the habitat does have potential to support common breeding birds.

Buildings

The buildings associated with the site were derelict and clearly in a state of significant disrepair with broken windows and collapsing roofs. Due to health and safety reasons, access for internal inspection of the buildings was deemed inappropriate.

The southern-most building (Unit A) is of industrial design with extensive external glazing and a flat roof which for the most part is on one level, although there is a small unit above this and the centre of the building incorporates a slightly lower pitched roof. The building shows signs of considerable decay, with most of the windows broken and boarded up and internal suspended ceilings having collapsed in many places. The external fabric of the building shows similar signs of decay, with peeling render and cracked brickwork evident in several locations from street level. The building does not have any soffits or bargeboards, with the walls tightly joining the masonry roof type.

The building in the middle of the site (Unit B, Trefoil House) is brick built and also comprises a flat roof, with two storeys in places. The building is in a much better state than Unit A, with the majority of the brickwork in tact, glazing in place and internal structures retained. However, on the northern side of the building at the upper level it is evident that the rendering has started to break away and has revealed some gaps in the brick work where the mortar has broken away. In addition to this, the wall along the back of the property (bordering the car par) has a number of gaps and cracks. The building does not have any soffits or bargeboards, with the brickwork tightly joining the masonry roof type.

The northern-most building comprises two different types of building, with a

industrial warehouse type building in the north-east corner (Unit C), which is of brick construction and has a flat roof, and an industrial building (Unit D) similar to Unit A with extensive glazing in the northwest corner. The brick building is in relatively good condition, however, the glazed building is in similar state of disrepair as Unit A. Both buildings have a flat roof, with multiple levels present. Neither building has soffits or bargeboards, with the brickwork/walls tightly joining the masonry roof type.

The buildings offer very limited ecological value in themselves and are not considered to comprise any part of a BAP habitat. Consequently, the buildings are considered to be of intrinsic biodiversity value **within the immediate survey area only**. However, the features present have the potential to support breeding birds, notably black redstart, or bat species.

Hardstanding

The site is dominated by hardstanding surrounding the buildings, most of which are being utilised as car park areas, and comprise a variety of tarmac and laid paving. The habitat has very limited ecological value, and as such is considered to be of intrinsic biodiversity value **within the immediate survey area only**.

3.2.3 Species

Flora

No species listed under Schedules 8 or 9 of the Wildlife and Countryside Act (as amended) 1981 or identified in the national or local BAP were identified at the time of survey.

Breeding Birds

The limited scattered scrub habitats present on site and derelict buildings provide suitable nesting habitat for common breeding bird species. Due to the limited extent and quality of this habitat the potential presence of common breeding bird species is likely to be restricted to relatively common species and in low numbers.

Birmingham and the Black Country support a significant population of black redstart, with sites historically associated with canals or railway lines as these provide a source of food. Although the site is not directly linked to a railway or canal, the Birmingham canal at Gas Street is in relatively close proximity and represents one of the traditional breeding grounds in Birmingham for the species[5]. As a result, ledges and secluded roof tops associated with the buildings have the potential to support nesting black redstart.

[5] Black Redstart Distribution in Birmingham and the Black Country. Accessed through www.blackredstarts.org.uk on 7 March 2014.

The presence of common breeding bird species is considered to be of intrinsic biodiversity value **within the immediate survey area only**, however, the presence of nesting black redstart would be of significance and hold an intrinsic biodiversity value of at least **County level**. The presence of nesting black redstart has legal implications.

Bats

The buildings present on site have potential to support roosting bats, with broken render and cracks/gaps between bricks providing suitable opportunities for individual bats. Although access to the buildings were not possible for health and safety reasons, those in a dilapidated state with open access could also support roosting bats.

The presence of roosting bats of common species, most likely pipistrelle sp, would be considered to be of intrinsic biodiversity value at the **local scale**, however, the presence of a less common species would attract greater biodiversity value. The presence of roosting bats would have legal implications to the development.

3.3 SUMMARY OF SIGNIFICANT ECOLOGICAL RECEPTORS

Table 3.4 provides a summary of the significant ecological receptors within the study area. These include the designated sites, important habitats and the confirmed and potential fauna present within the field survey area. The likelihood of constraints associated with these features is discussed in Section 4.

Table 3.4 Summary of Significant Ecological Receptors

Biodiversity Feature	Likely Biodiversity Value	Legal Status and Relevant Protective Policies/Guidance
Common Breeding Birds	Within the immediate survey area only	Protection under the Wildlife and Countryside Act 1981 (as amended) from killing and injury and/or destruction to an active nest. Conservation of Habitats and Species Regulations (as amended) 2010 requires Local Planning Authorities to take account of wild bird habitats.
Black Redstart	County, but could be up to Regional	Fully protected under Schedule 1 of the Wildlife and Countryside Act (as amended) 1981 from killing, injury, destruction of an active nest and disturbance whilst nesting.
Bats	Local, but could be greater depending on species	Fully protected through inclusion within the Conservation of Habitats and Species Regulations 2010 (as amended) for deliberate capture, injury or killing, damage or destruction of sites or places which bat species use as breeding sites, and disturbance. They also receive partial protection under the Wildlife and Countryside Act 1981 (as amended) for intentional or reckless disturbance whilst using a place of rest or shelter.

4 DISCUSSIONS AND RECOMMENDATIONS

For the purpose of this assessment, potential significant ecological constraints are considered to be those features (sites, habitats and species) identified in Section 3 that are considered to be of at least local biodiversity value and/or have legal protection or are referenced in policy. Only those features that meet this criteria are discussed below, with the features falling short of the criteria not considered to represent potential constraints to the development.

4.1 SPECIES

Breeding Birds

There is potential for common breeding bird species to be present within the limited scattered scrub habitats within the field survey area. Breeding birds are only likely to pose a constraint to any proposed works during the breeding season (March to August inclusive). If any woody vegetation requires removal as part of the development, this should be done outside the breeding season. If works to remove woody vegetation during the breeding season are unavoidable, then suitable vegetation should be checked for the presence of active nests by an appropriately qualified ecologist prior to removal. If active nests are found, then all work within close vicinity to the nest should cease until the young have fledged.

To comply with requirements under the Conservation of Habitats and Species Regulations (as amended) 2010, it is recommended that a suitable planting schedule is put together to provide nesting habitat for birds in the final design. These should seek to utilise native species and, where possible, consider the provision of food resources.

Black Redstart

There is potential for black redstart to be nesting on the roof or ledges of the buildings, with the nearby Gas Street comprising one of the traditional nesting sites for the species. It is recommended that a survey is undertaken prior to demolition of the existing buildings to determine the presence/likely absence of black redstart and identify the requirement for further mitigation measures.

As a Schedule 1 species, if the species is nesting then the buildings cannot be demolished until the birds have finished nesting, from September onwards. This includes the buildings surrounding the nesting birds, as the species are protected from disturbance.

Bats

As the buildings have the potential to support roosting bats, it is recommended that further survey is undertaken to identify the presence/likely absence of roosting bats. In the first instance, an internal inspection should be carried out (advised to be undertaken in May or June) to confirm any potential roosting opportunities within the buildings, subject to the removal of health and safety constraints. An external emergence/re-entry survey should be carried out (advised to be undertaken between June and August) to confirm the potential for external features to support bats, with repeat surveys to be undertaken should internal access not be possible.

As an EPS, the presence of a bat roost has implications to the development as these are protected from damage/destruction. If roosting bats are found to be present, then a Natural England licence will be required for the removal of the roosts and further mitigation required to compensate for the loss of that roost.

5 SUMMARY AND CONCLUSIONS

Cascade Consulting was commissioned to carry out an Extended Phase 1 Habitat survey of the proposed Ellis Street development in Birmingham. The habitats present on site have been mapped and their biodiversity value and supporting value for ecologically sensitive and/or legally protected species identified.

The survey established that the habitats on site were of limited ecological value and had limited supporting value for ecologically sensitive and/or legally protected species.

As the potential ecological constraints to the development are limited to common breeding birds, black redstart and bats, recommendations for the development and opportunities are limited to the following:

- Vegetation clearance on the site should be undertaken prior to the breeding bird season (March to August inclusive) to avoid the constraint posed by common breeding birds.
- Should vegetation clearance outside of the breeding bird season be unavoidable, then vegetation should be checked prior to removal by a suitably qualified ecologist and an appropriate buffer maintained around any vegetation found to support breeding birds until the young have fledged.
- A further targeted black redstart survey should be undertaken prior to demolition as detailed in Section 4.1. Specific mitigation or enhancement measures can be made following further survey.
- A targeted bat survey should be undertaken in accordance with recommendations made in Section 4.1. Specific mitigation or enhancement measures can be made following further survey.

APPENDIX A

PHOTOGRAPHS OF SURVEY FEATURES OF INTEREST

(taken on 25 February 2014)

Plate 1
Building A: viewed from Holloway Head

Plate 2
Blucher Street viewed from junction with Gough Street

Plate 3
Ellis Street viewed from junction with Gough Street

Plate 4
Typical view of brickwork with bat potential and scrub encroachment

Plate 5
Corner of Building A with crack brickwork viewed from Ellis Street

Plate 6
Rear of Building A with crack mortar and brickwork, viewed from Brownsea Drive

Plate 7
Cracked brickwork along wall between the two sections of building B

Plate 8
Scattered scrub between building B in hard standing car park area

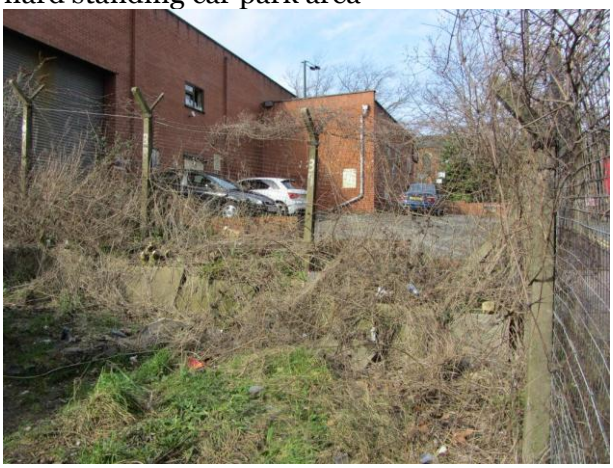


Plate 9
Example of ledges suitable for nesting black redstart, Building A, view from Holloway Head

APPENDIX B

SPECIES RECORDED WITHIN 2.5KM OF SITE

Table 1 Species List within 2.5km of Site

Species (scientific name)	Species (common name)	Closest distance site (km)	Subject to local BAP
Acronicta psi	Grey Dagger	1.99	No
Acronicta rumicis	Knot Grass	1.84	No
Alcedo atthis	Common Kingfisher	1.84	No
Amara (Celia) praetermissa	insect - beetle (Coleoptera)	1.49	No
Anas crecca	Eurasian Teal	2.43	No
Anas platyrhynchos	Mallard	1.39	No
Anser brachyrhynchus	Pink-footed Goose	2.19	No
Anthus pratensis	Meadow Pipit	1.55	No
Apamea remissa	Dusky Brocade	1.96	No
Apus apus	Common Swift	1.39	No
Arctia caja	Garden Tiger	2.37	No
Arvicola amphibius	European Water Vole	1.61	Yes
Aulogastromyia anisodactyla	insect - true fly (Diptera)	1.00	No
Aythya ferina	Common Pochard	2.33	No
Aythya fuligula	Tufted Duck	1.70	No
Branta leucopsis	Barnacle Goose	2.33	No
Brassica oleracea	Wild Cabbage	0.94	No
Brassica oleracea var. capitata	Cabbage	0.94	No
Bucephala clangula	Common Goldeneye	2.43	No
Bufo bufo	Common Toad	1.96	No
Buxus sempervirens	Box	1.21	No
Caradrina morpheus	Mottled Rustic	2.28	No
Carduelis cannabina	Common Linnet	1.70	No
Centaurea cyanus	Cornflower	1.49	No
Centaurea nigra x jacea = C. x moncktonii	Hybrid Knapweed	1.48	No
Ceutorhynchus punctiger	insect - beetle (Coleoptera)	1.77	No
Chamaemelum nobile	Chamomile	1.63	No
Chenopodium bonus-henricus	Good-King-Henry	1.53	No
Chiasmia clathrata	Latticed Heath	1.77	No
Chiasmia clathrata subsp. clathrata	Latticed Heath	1.77	No
Chorisops nagatomii	Bright Four-spined Legionnaire	1.00	No
Chroicocephalus ridibundus	Black-headed Gull	1.21	No
Cladonia chlorophaea	Fungus	1.17	No
Cleptes semiauratus	insect - hymenopteran	1.43	No
Cnemacantha muscaria	insect - true fly (Diptera)	1.77	No

Species (scientific name)	Species (common name)	Closest distance site (km)	Subject to local BAP
Coenosia stigmatica	insect - true fly (Diptera)	1.49	No
Columba oenas	Stock Dove	1.96	No
Crossocerus (Crossocerus) distinguendus	insect - hymenopteran	1.00	No
Curculio rubidus	insect - beetle (Coleoptera)	1.61	No
Dactylorhiza praetermissa	Southern Marsh-orchid	1.97	Yes
Delichon urbicum	House Martin	2.12	No
Dendrocopos minor	Lesser Spotted Woodpecker	1.96	No
Deronectes latus	insect - beetle (Coleoptera)	2.42	No
Diarsia rubi	Small Square-spot	1.96	No
Ecliptopera silaceata	Small Phoenix	1.96	No
Ectemnius (Clytochrysus) ruficornis	insect - hymenopteran	1.77	No
Emberiza citrinella	Yellowhammer	2.38	No
Emberiza schoeniclus	Reed Bunting	2.38	No
Ennomos quercinaria	August Thorn	2.06	No
Epipactis helleborine	Broad-leaved Helleborine	1.84	No
Eptesicus serotinus	Serotine	2.40	Yes
Erinaceus europaeus	West European Hedgehog	1.96	No
Euxoa nigricans	Garden Dart	2.06	No
Falco peregrinus	Peregrine Falcon	0.40	No
Falco tinnunculus	Common Kestrel	0.42	Yes
Fiebrigella palposa	insect - true fly (Diptera)	1.77	No
Filago vulgaris	Common Cudweed	2.43	No
Galeopsis speciosa	Large-flowered Hemp-nettle	2.14	No
Gymnadenia conopsea	Fragrant Orchid	2.06	Yes
Haematopus ostralegus	Eurasian Oystercatcher	2.43	No
Helleborus foetidus	Stinking Hellebore	1.25	No
Hesperia comma	Silver-spotted Skipper	1.49	No
Hippodamia (Adonia) variegata	Adonis' Ladybird	1.80	No
Hippophae rhamnoides	Sea-buckthorn	1.94	No
Hirundo rustica	Barn Swallow	2.12	No
Homoneura tesquae	insect - true fly (Diptera)	1.77	No
Hoplodrina blanda	Rustic	1.96	No
Hyacinthoides non-scripta	Bluebell	1.21	Yes
Hyacinthoides non-scripta x hispanica = H. x massartiana	Bluebell	1.12	No
Hydraecia micacea	Rosy Rustic	1.96	No
Hylaeus (Prosopis) signatus	Large Yellow-Faced Bee	1.43	No
Larus argentatus	Herring Gull	0.92	No
Larus canus	Mew Gull	2.33	No
Larus fuscus	Lesser Black-backed Gull	0.58	No
Larus marinus	Great Black-backed Gull	2.43	No

Species (scientific name)	Species (common name)	Closest distance site (km)	Subject to local BAP
Larus ridibundus	Black-headed Gull	1.96	No
Lasioglossum (Lasioglossum) quadrinotatum	insect - hymenopteran	1.49	No
Lasiommata megera	Wall butterfly	1.55	Yes
Lissotriton helveticus	Palmate Newt	1.87	Yes
Lissotriton vulgaris	Smooth Newt	0.85	Yes
Lonchaea peregrina	insect - true fly (Diptera)	1.00	No
Longitarsus parvulus	Flax Flea Beetle	1.00	No
Lutra lutra	European Otter	2.13	No
Meconopsis cambrica	Welsh Poppy	1.30	No
Meles meles	Eurasian Badger	0.72	Yes
Meligethes fulvipes	insect - beetle (Coleoptera)	1.49	No
Meromyza sp. indet.	insect - true fly (Diptera)	1.49	No
Motacilla cinerea	Grey Wagtail	0.89	No
Muscicapa striata	Spotted Flycatcher	1.96	No
Mustela putorius	Polecat	2.19	No
Myotis daubentonii	Daubenton's Bat	2.13	Yes
Myotis nattereri	Natterer's Bat	1.89	Yes
Natrix natrix	Grass Snake	1.14	No
Norellia spinipes	insect - true fly (Diptera)	1.00	No
Nyctalus noctula	Noctule Bat	1.87	Yes
Nymphoides peltata	Fringed Water-lily	2.02	No
Nysson trimaculatus	insect - hymenopteran	1.49	No
Oenanthe oenanthe	Northern Wheatear	1.55	No
Omphiscola glabra	Mud Snail	2.39	No
Passer domesticus	House Sparrow	0.81	No
Passer montanus	Eurasian Tree Sparrow	1.84	Yes
Pelurga comitata	Dark Spinach	2.06	No
Phoenicurus ochruros	Black Redstart	0.36	Yes
Phylloscopus trochilus	Willow Warbler	2.14	No
Phyllotreta cruciferae	Cabbage Flea Beetle	1.80	No
Picus viridis	Green Woodpecker	0.89	No
Pinus sylvestris	Scots Pine	0.76	No
Pipistrellus pipistrellus	Pipistrelle	0.14	Yes
Pipistrellus pygmaeus	Soprano Pipistrelle	1.44	Yes
Pipunculus zugmayeriae	insect - true fly (Diptera)	1.77	No
Platyderus depressus	insect - beetle (Coleoptera)	1.49	No
Prunella modularis	Dunnock	1.96	No
Prunella modularis	Hedge Accentor	0.81	No
Pyrrhula pyrrhula	Common Bullfinch	1.21	No
Rana temporaria	Common Frog	0.85	Yes
Spergula arvensis	Corn Spurrey	2.00	No

Species (scientific name)	Species (common name)	Closest distance site (km)	Subject to local BAP
Spilosoma luteum	Buff Ermine	1.96	No
Sterna hirundo	Common Tern	2.24	No
Sterna paradisaea	Arctic Tern	1.73	No
Stratiotes aloides	Water-soldier	2.12	No
Sturnus vulgaris	Common Starling	0.40	No
Tachybaptus ruficollis	Little Grebe	2.43	No
Tilia platyphyllos	Large-leaved Lime	2.43	No
Tilia platyphyllos x cordata = T. x europaea	Lime	0.40	No
Turdus iliacus	Redwing	0.70	No
Turdus philomelos	Song Thrush	1.21	Yes
Turdus pilaris	Fieldfare	1.80	No
Turdus viscivorus	Mistle Thrush	0.64	No
Tyria jacobaeae	Cinnabar moth	1.49	No
Viola tricolor	Wild Pansy	1.84	No
Volucella inanis	insect - true fly (Diptera)	1.49	No
Xanthia icteritia	Sallow	2.28	No

Table 2 Invasive Species within 2.5km of Site

Species (scientific name)	Species (common name)	Closest distance site (km)
Azolla filiculoides	Water Fern	2.16
Cotoneaster horizontalis	Wall Cotoneaster	0.42
Cotoneaster horizontalis sens.str.	Wall Cotoneaster	1.84
Cotoneaster integrifolius	Small-Leaved Cotoneaster	1.33
Cotoneaster simonsii	Himalayan Cotoneaster	1.33
Crassula helmsii	New Zealand Pigmyweed	1.99
Crocosmia pottsii x aurea = C. x crocosmiiflora	Montbretia	1.33
Elodea canadensis	Canadian Waterweed	1.96
Fallopia japonica	Japanese Knotweed	0.32
Fallopia japonica x sachalinensis (F. x bohemica)	a knotweed	2.20
Fallopia japonica x sachalinensis = F. x bohemica	Knotweed	2.22
Fallopia sachalinensis	Giant Knotweed	2.06
Heracleum mantegazzianum	Giant Hogweed	0.81
Impatiens glandulifera	Himalayan Balsam	0.42
Rhododendron luteum	Yellow Azalea	2.50
Rhododendron ponticum	Rhododendron	1.92
Rosa rugosa	Japanese Rose	1.48

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Ecological Impact Assessment

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Notice

EXECUTIVE SUMMARY

BWB Consulting (BWB) was instructed by Holloway Holdings Ltd to carry out an Ecological Impact Assessment relating to land off Ellis Street, Birmingham. The table below contains a summary of the likely significant effects of the proposed residential development relating to the construction phase, the completed development and cumulative effects.

An Extended Phase 1 Habitat survey was undertaken at the Site to determine the habitats present and their potential value for protected and notable species. As a result of the recommendations following on from the survey, a Black Redstart Survey and Nocturnal Bat Survey were also conducted.

The Site is dominated by an existing building and hardstanding.

Potential Effect	**Nature of Effect** (Permanent/Temporary)	**Significance** (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	**Mitigation / Enhancement Measures**	**Geographical Importance***							**Residual Effects** (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)
				I	UK	E	R	C	B	L	
Construction											
Designated Sites	None envisaged	Not applicable									
Habitat	Temporary loss of Open Mosaic Habitats on Previously Developed Land (NERC Act 2006)	Minor adverse effect at the National Level	Comparable habitat of a greater area to be included in final development.		*						Negligible
Amphibians	None envisaged	Not applicable									
Bats	None envisaged	Not applicable									
Badgers	None envisaged	Not applicable									

Potential Effect	**Nature of Effect** (Permanent/Temporary)	**Significance** (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	**Mitigation / Enhancement Measures**	**Geographical Importance***							**Residual Effects** (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	B	L	
Birds	Temporary habitat loss; and destruction of nests	Minor adverse effect at Local Level	Comparable habitat of a comparable area to be included in final development. Seasonal timing; nesting bird checks prior to vegetation clearance.							*	Negligible
Reptiles	None envisaged	Not applicable									
Hedgehogs	Potential for being trapped in trenches/open pipework	Minor adverse effect at Local Level	Works to proceed following best practice guidelines							*	Negligible
Completed Development											
Not Applicable											
* Geographical Level of Importance I = International; UK = United Kingdom; E = England; R = Regional; C = County; B = Borough; L = Local											

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APPENDICES

APPENDIX 1: Relevant Legislation
APPENDIX 2: Extended Phase 1 Habitat Map
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1. INTRODUCTION

Instruction

1.1 BWB Consulting Ltd (BWB) was instructed by Holloway Holdings Ltd (the Client) to carry out an Ecological Impact Assessment at Ellis Street, Birmingham city centre in relation to a proposed residential development.

Site Setting

1.2 The proposed development site currently comprises two buildings and associated hardstanding. A third building had been present on-site south of Brownsea Drive; this has already been demolished. The Site is in the centre of an urban area and as such is surrounded by buildings and roads. **Figure 1** shows the Site location.

Figure 1: Site Location

Aims

1.3 The primary purpose of this assessment is to provide a baseline of all ecological considerations and associated impacts relating to the development proposals. This will include the inclusion of mitigation and enhancement as appropriate.

Scope of Works

1.4 The ecological appraisal was informed by a desk-based study and a site survey. The approach to this Ecological Impact Assessment follows best practice published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the British Standards Institution (BSI, 2013). Further details are provided later in this report.

Legislation and Planning Policy

1.5 The following legislation relates to species and habitats that could potentially occur in association with the Site:

- The Conservation of Habitats and Species Regulations 2019 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Protection of Badgers Act 1992;
- Wild Mammals (Protection) Act 1996; and
- The Hedgerow Regulations 1997.

1.6 Further information on the legislation relevant to this Site is provided in **Appendix 1**.

1.7 Consideration has also been given in this report to relevant National and Local Planning Policy as summarised below.

1.8 The National Planning Policy Framework (NPPF) guides Local Planning Authorities (LPAs) when developing their planning policies and considering planning applications affecting protected habitats, sites and species.

1.9 In respect of the natural environment, the NPPF states that:

1.10 *"Planning policies and decisions should contribute to and enhance the natural and local environment by:*

a) 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);

b) 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;

c) *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*

d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

e) *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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*

f) *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate*."

1.11 Through the NPPF and Section 40 of the NERC Act, LPAs have a duty to consider habitats and species listed as being of principal importance for nature conservation in England on Section 41 (S41) of the Act when considering a planning application. In addition, the biodiversity duty of local planning authorities also covers species and habitats listed in local biodiversity action plans.

1.12 In addition, the Adopted Birmingham Development Plan 2032 states under policy TP8 (Biodiversity and Geodiversity):

"The maintenance, enhancement and restoration of sites of national and local importance for biodiversity and geology will be promoted and supported. These include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Local Nature Reserves (LNRs), Sites of Importance for Nature Conservation (SINCs) and Sites of Local Importance for Nature Conservation (SLINCs).

Development which directly or indirectly causes harm to sites of national importance (SSSIs and NNRs) will not be permitted. An exception will only be made where the benefits of the development, at that site, clearly outweigh the impact that it is likely to have on the features that make the site special and any broader impacts on the national network of SSSIs.

Development which directly or indirectly causes harm to local sites of importance for biodiversity and geology (LNRs, SINCs and SLINCs), priority habitats and important geological features, species which are legally protected, in decline, are rare within Birmingham or which are identified as national or local priorities will only be permitted if it has been clearly demonstrated that:

- *The benefits of the proposal outweigh the need to safeguard the designated site, or important habitat, species or geological feature.*

- *Damage is minimised, and measures can be put in place to mitigate remaining impacts.*

- *Where damage cannot be avoided or fully mitigated, appropriate compensation is secured.*

Development proposals which are likely to affect any designated site or important habitat, species or geological feature must be supported by adequate information to ensure that the likely impact of the proposal can be fully assessed.

The integrity of wildlife corridors and 'stepping stones' connecting them will be protected from development which would harm their function.

Priority habitats and priority species listed in Section 41 of the Natural Environment and Rural Communities Act 2006 or in the local Biodiversity Action Plans will be maintained and opportunities to enhance and add to these natural assets will also be identified. The Biodiversity Action Plan for Birmingham and the Black Country and data from EcoRecord (the ecological database for Birmingham and the Black Country) will be used to inform the development of a strategic landscape-scale framework for the restoration and creation of priority habitats and recovery of priority species populations across Birmingham, including opportunities to create or restore linkages between important wildlife areas.

All development should, where relevant, support the enhancement of Birmingham's natural environment, having regard to strategic objectives for the maintenance, restoration and creation of ecological and geological assets, such as those identified for the Birmingham and Black Country Nature Improvement Area. Biodiversity and geodiversity enhancement measures should be appropriate to the nature and scale of the development proposed. Development proposals should clearly identify how ongoing management of biodiversity and geodiversity enhancement measures will be secured."

2. METHODS

Scope of the Assessment

Zone of Influence (ZOI)

2.1 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- 10km around the Site for sites of International Importance (e.g. Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site);
- 2km around the Site for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR)); and
- 2km around the Site for sites of County Importance (e.g. Sites of Importance for Nature Conservation (SINC)/Wildlife Sites and species records (e.g. protected, UK BAP or notable species).

2.2 The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the Site boundaries. However, there are no physical or hydrological links to other habitats in the wider area.

Consultation

2.3 EcoRecord was contacted to request records of any locally designated sites and/or protected species from the Site and land within a 2km radius. These will be submitted as an addendum and the recommendations/conclusions updated as necessary.

2.4 In addition, the data sources listed below were also searched to gather additional ecological data of relevance to the project, including the identification of non-designated ecologically sensitive habitats such as vegetation corridors, woodlands, watercourses and standing water.

- Multi-Agency Geographic Information for the Countryside (MAGIC);
- Ordnance Survey 1:25,000 mapping; and
- Aerial imagery (Google – imagery dated 2016).

2.5 The summary of these consultations is contained in **Table 1**.

Table 1: Outcome of Consultations

Consultee and Date of Correspondence	Statutory or Non-Statutory	What was the Consultation Regarding	Outcome of Consultation	Method of Communication
Multi Agency Geographic Information for the Countryside (MAGIC) – March 2019	Statutory.	Location of statutory sites.	Edgbaston Pool SSSI located approximately 1.9km south. No SAC, Ramsar or SPAs within a 10km radius of the development site.	Via website.

Extended Phase 1 Habitat Survey

2.6 A site survey was undertaken on 14th August 2018 by Chris Grocock MSc BSc (Hons) GradCIEEM. Chris has extensive experience in survey and site assessment for protected species and is appropriately qualified for the surveys based on the CIEEM competencies for species surveys (CIEEM, 2017). Chris is registered to use a Natural England Class Licence to survey for bats (2016-24827-CLS-CLS) and great crested newts (GCN) *Triturus cristatus* (2015-17144-CLS-CLS).

2.7 The visit was completed using Phase 1 habitat survey techniques as defined in the standard methodology (JNCC, 2010).

2.8 The aim of the visit was to gather sufficient baseline information on the habitats within the Site in order to allow an interpretation of the ecological value of the land.

2.9 In addition, the methodology was extended to include a search for incidental evidence of protected / notable fauna and an assessment of the Site's potential to support protected / notable fauna. Specific consideration was given to the following species:

- Birds;
- Bats;
- Amphibians, including GCN;
- Reptiles;
- Badgers *Meles meles*;
- Priority Species, such as hedgehog *Erinaceus europaeus*.

2.10 Standard methodologies were used where applicable.

2.11 Habitats adjacent to the Site were viewed, where possible, from the Site boundaries in order to assess their potential to support protected species that could be utilising the survey Site.

Survey Comments

2.12 The survey methodology highlights habitats and features with potential for protected / notable species but is not designed to provide a comprehensive presence / absence survey.

2.13 In line with standard guidance, the results and recommendations within this report are valid for up to two years from the date of survey, assuming there are no significant changes to the survey Site or its immediate surroundings. Updated survey work may be required to support any future planning applications outside of this time period.

Black Redstart Survey

2.14 Three Black Redstart *Phoenicurus ochruros* Surveys were undertaken at the site on 23rd April 2019, 9th May 2019 and 28th May 2019 during suitable conditions by experienced ornithologist Toby Fisher MCIEEM CEnv.

2.15 The surveys were based on the standard Black Redstart survey method described by Gilbert et al (1998). During each survey visit, all bird observations were recorded on 1:10,000 scale maps using standard British Trust for Ornithology (BTO) notation including information on behaviour and evidence of breeding. The survey transect route involved walking a transect route through the site and along the site boundaries such that all parts of the site were approached within 50 metres and to enable visual and audible coverage of all the landforms within the site and land immediately adjacent to the site.

2.16 The data collected were subject to territory mapping analysis in order to determine the number and distribution of breeding bird species within the area. In addition, birds were classified as Non-breeding, Possible, Probable and Confirmed breeding dependent on the activity recorded.

2.17 In addition to Black Redstart, particular attention was focused on Species of Principal Importance; and BoCC Red List species.

2.18 All three survey visits were undertaken during suitable weather conditions. The survey conditions are presented in **Table 2**. The surveys were undertaken during the optimal season for breeding bird surveys and were spaced at least 2 weeks apart. There were no significant survey limitations.

Table 2: Bird Survey Conditions

Date	Survey time	Weather conditions	Visibility	Survey constraints
23.04.2018	06:10 – 08:10	Dry, wind Bft 1, cloud 80%, 12°C.	Very good	None
09.05.2018	06:30 – 08:30	Drizzle, wind Bft 0, cloud 100%, 7°C.	Good	None
28.05.2018	06:00 – 08:00	Dry, wind Bft 1, cloud 90%, 10ºC.	Very good	None

Nocturnal Bat Survey

2.20 A single dawn re-entry survey was conducted on 1st May 2019 led by Sarah Stone MSc BSc (Hons). Sarah is registered to use a Natural England Class Licence to survey for bats (2015-11997-CLS-CLS). The survey began at 0405 and ended at sunrise at 0537 (8ºC, 0 wind, no rain). A total of three surveyors conducted the survey to cover all potential roosting features.

The Project

2.21 The proposed development includes the demolition of the existing building and construction of residential apartments.

Assessment

2.22 The Ecological Impact Assessment has been undertaken following guidelines provided by CIEEM (CIEEM, 2018).

2.23 In order to assess the significance of effects, Important Ecological Features that could potentially be affected by the development have been identified and described and the potential effects quantified using a range of parameters (e.g. extent, magnitude and duration).

2.24 For the purposes of this assessment, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national / local nature conservation policy) or more wide-ranging (enhancement of biodiversity) (CIEEM, 2018).

2.25 Only where significant effects are predicted have mitigation measures been proposed, although it should be noted that a number of precautionary measures have been included and these are detailed within this document for completeness.

2.26 The potential for mitigation and enhancement measures were then considered to avoid, reduce or compensate for any significant adverse effects, where possible.

2.27 The current guidelines identify various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include:

- naturalness;
- animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
- ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages;
- endemic species or locally distinct sub-populations of a species;
- habitats that are rare or uncommon;
- habitats that are effectively irreplaceable;
- habitat diversity;
- size of habitat or species population;
- habitat connectivity and/or synergistic associations;
- habitats and species in decline;
- rich assemblages of plants and animals;
- large populations of species or concentrations of species considered uncommon or threatened in a wider context;
- plant communities (and their associated animals) that are considered to be typical of valued natural / semi-natural vegetation types, including examples of naturally species-poor communities; and
- species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.

Significance Criteria

2.28 Current guidelines propose the following frame of reference for defining geographic context, which should be adapted to suit local circumstances:

- International and European;
- National;
- Regional;
- Metropolitan, County, vice-county or other local authority-wide area; and
- Local.

3. BASELINE CONDITIONS

Designated Sites

3.1 No Statutory Sites were present within 2km of the Site. The Site is within a Site of Special Scientific Interest (SSSI) Risk Zone, but the development type is not included within a risk category.

3.2 A desk-based search shows that there are several Sites of Importance for Nature Conservation (SINCs) and Sites of Local Importance for Nature Conservation (SLINCs) as outlined in **Table 3**. These are non-statutory sites and are a material consideration in the planning process. The closest non-statutory site to the Site was Worcester and Birmingham Canal SLINC approximately 0.3km west of the Site.

Table 3: Non-statutory Sites

Site Name	Habitats of note
Edgbaston Park Golf Course SLINC	Lowland dry acid grassland (UKPH), Plantation woodland.
Beechwood Hotel SLINC	Standing open water, Standard trees, Broad-leaved plantation woodland, Neutral grassland, Standing open water.
Birmingham and Fazeley Canal SLINC	Canal, Neutral grassland, Tall herb, Scrub.
Birmingham Canal SLINC	Canal, Scrub, Tall herb, Neutral grassland.
Digbeth Branch Canal SLINC	Canal, Scrub, Tall herb, Neutral grassland.
Edgbaston Grove Woodland SLINC	Broad-leaved plantation woodland, Neutral grassland.
Grand Union Canal SLINC	Canal, Broad-leaved woodland, Neutral grassland, Tall herb.
Worcester and Birmingham Canal SLINC	Canal

Habitats and Botanical Species

Overview

3.3 The Extended Phase 1 Habitat Survey Results Map is provided in **Appendix 2** with accompanying habitat descriptions below. Relevant photographs are shown in **Appendix 3.** Botanical species nomenclature follows Stace (2019).

3.4 The majority of the Site comprised buildings and hardstanding. The buildings are described with reference to their potential to support roosting bats overleaf.

3.5 The courtyard between the two buildings comprised a bare earth/gravel substrate through which ephemeral/short perennial species and scattered scrub grew, including Yorkshire fog *Holcus lanatus*, butterfly bush *Buddleja* sp., hedge bindweed *Calystegia sepium*, willow *Salix* sp., elder *Salix* sp., bramble *Rubus fruticosus* and creeping thistle *Cirsium arvense*.

3.6 Although small in area, the ephemeral / short perennial vegetation on-site would qualify as a Priority Habitat under the NERC Act 2006 i.e. "Open Mosaic Habitats on Previously Developed Land":

The priority habitat usually occurs during the first five years following demolition or abandonment of buildings, hardstanding or features such as railway lines, or following the reclamation of contaminated land. The substrate has been highly modified and can comprise brick rubble, concrete, furnace slag and road surfaces. The characteristic features include a high percentage of bare ground with a mixture of native and non-native annuals and perennials. Where the substrate is compacted, and drainage becomes impeded, ephemeral ponds and seasonally flooded areas form.

Typical species for Birmingham and the Black Country include poppies, Weld, mulleins, vetches and Buddleia. Due to the open nature of the vegetation and the long flowering period, these areas are important for invertebrates and attract bird species, especially Black Redstart and Skylark. This habitat is concentrated within former industrial areas.

3.7 South of the buildings on the southern side of Brownsea Drive was a large expanse of bare ground in which a building had been present. This has now been demolished. Scattered scrub and tall ruderal species grew around the boundary of this fenced area of land including butterfly bush, creeping thistle, common nettle *Urtica dioica*, willowherb *Epilobium* sp. and silver birch *Betula pendula*.

Protected / Notable Species

Amphibians

3.8 The Site provided some areas of suitable terrestrial habitat for great crested newts (GCN) *Triturus cristatus* within the ephemeral / short perennial vegetation and scrub. However, a search of OS maps and aerial photography did not highlight the presence of any ponds within 500m of the Site and no ponds were present within the Site boundary. There were no desk study records of GCN.

3.9 GCN were considered highly unlikely to be present on-site and are not considered further within this report.

Badgers

3.10 No evidence of badgers was found on-site such as hairs, latrines, footprints or setts. The habitats were sub optimal for sett building and foraging and the Site was surrounded by busy roads.

3.11 Badgers were considered highly unlikely to be present on-site and are not considered further within this report.

Bats

3.12 Two buildings, B1 and B2, were present on-site.

3.13 B1 was a two-storey building constructed from red brick with a flat roof, with two storeys in places. B1 was largely in a good state of repair. No enclosed roof spaces were present and no potential access points to allow bats into the building were recorded. However, on the northern side of the building a linear crack was present between two courses of brickwork proving potentially suitable roosting features for crevice dwelling bats. The building was classified as proving low potential to support roosting bats. However, no bats were recorded entering or emerging from the building during the dawn re-entry survey.

3.14 B2 comprised an industrial warehouse of red-brick construction with a pitched corrugated asbestos roof. The roof was not visible as the ridge was below the height of the parapet walls formed by the outer brickwork. Two areas of missing pointing were present within the brickwork on the eastern and western aspects of the building providing potentially suitable roosting features for crevice dwelling bats. It was also unclear as to whether additional roosting features may have been present associated with the roof due to restricted visibility. The building was classified as proving low potential to support roosting bats. However, no bats were recorded entering or emerging from the building during the dawn re-entry survey.

3.15 The habitats on-site were small in area, subject to disturbance from surrounding street/building lighting and the habitats were unlikely to attract a significant abundance of invertebrate prey for foraging bats.

3.16 There were few desk study records of bats and those which were recorded were common species i.e. *Pipistrellus* sp. No bats were recorded during the dusk emergence survey.

Birds

3.17 No birds were recorded during the site visit. The Site offered some potential for foraging and nesting opportunities primarily within the scrub.

3.18 Birmingham and the Black Country support a significant population of Black Redstart and numerous records were returned with the desk study data. Black Redstarts are a species which often associates with canals or railway lines as these provide foraging habitat for this species. The site is not directly linked to a railway or canal but there are railway lines and a network of canals within 0.3km of the Site. Birmingham Canal at Gas Street is in relatively close proximity and represents one of the traditional breeding grounds in Birmingham for the species. Ledges and secluded roof tops associated with the buildings have the potential to support nesting Black Redstart with the ephemeral/short perennial habitat providing suitable foraging habitat. However, no Black Redstart were recorded during the Black Redstart Survey. The only bird confirmed

as breeding on-site was a Dunnock *Prunella modularis* which is Amber listed on the latest Birds of Conservation Concern List (Eaton et al, 2014).

Reptiles

3.19 No reptiles or evidence of reptiles was recorded on-site. The habitats on-site, although suitable to support foraging reptiles, were small in area, isolated and lacked suitable refugia, hibernacula or egg laying substrates.

3.20 There were no desk study records of reptiles. Reptiles were considered highly unlikely to be present on-site and are not considered further within this report.

Other Species

3.21 The site was considered unlikely to support any other protected species.

4. NATURE CONSERVATION EVALUATION

4.1 The valuation of the nature conservation interest of the ecological features present on the Site and whether or not they are subject to detailed impact assessment is summarised in **Table 4**.

Table 4: Nature Conservation Evaluation

Receptor	Important Ecological Feature	Value of Receptor or Value of Site to Receptor	Potential for Impact	Subject to Detailed Assessment
Statutory Designations				
Edgbaston Pool SSSI	Yes – SSSI	National	No – distance and lack of connectivity.	No
Non-statutory Designations				
Edgbaston Park Golf Course SLINC	Yes - SLINC	Local	No – distance and lack of connectivity.	No
Beechwood Hotel SLINC	Yes – SLINC	Local	No – distance and lack of connectivity.	No
Birmingham and Fazeley Canal SLINC	Yes – SLINC	Local	No – distance and lack of connectivity.	No
Birmingham Canal SLINC	Yes – SLINC	Local	No – distance and lack of connectivity.	No
Digbeth Branch Canal SLINC	Yes – SLINC	Local	No – distance and lack of connectivity.	No
Edgbaston Grove Woodland SLINC	Yes – SLINC	Local	No – distance and lack of connectivity.	No
Grand Union Canal SLINC	Yes – SLINC	Local	No – distance and lack of connectivity.	No
Worcester and Birmingham Canal SLINC	Yes - SLINC	Local	No – distance and lack of connectivity.	No
Habitats				
Scattered scrub/tall ruderal	No - Species are common and widespread. Not listed as Priority Habitat under the Natural Environment and Rural Communities (NERC) Act 2006.	Less than Local	Yes – direct habitat loss.	No

Receptor	Important Ecological Feature	Value of Receptor or Value of Site to Receptor	Potential for Impact	Subject to Detailed Assessment
Ephemeral/short-perennial	Yes - Priority Habitat under the NERC Act 2006 i.e. "Open Mosaic Habitats on Previously Developed Land".	National	Yes - direct habitat loss.	Yes
Ornamental shrubs	No - Species are common and widespread. Not listed as Priority Habitat under the Natural Environment and Rural Communities (NERC) Act 2006.	Less than Local	Yes – direct habitat loss.	No
Species				
Badger	Yes – protected under Protection of Badgers Act 1992	Local	No – highly unlikely to be present.	No
Bats	Yes – legally protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).	Local	No – no roosting bats recorded and highly unsuitable foraging/commuting habitat subject to high levels of disturbance.	No
Great Crested Newt	Yes – legally protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).	Not applicable	No – highly unlikely to be present.	No

Receptor	Important Ecological Feature	Value of Receptor or Value of Site to Receptor	Potential for Impact	Subject to Detailed Assessment
Birds	Yes – legally protected under the Wildlife and Countryside Act 1981 (as amended).	Local	Yes - Loss of sub-optimal foraging and nesting habitat during construction phase. Potential for disturbance during any vegetation clearance/building demolition during construction phase.	Yes
Reptiles	Yes – legally protected under the Wildlife and Countryside Act 1981 (as amended).	Not applicable	No – highly unlikely to be present.	No

4.2 Therefore, the ecological receptors which are taken forward for further assessment are as follows:

- Ephemeral/short-perennial;
- Birds;

5. ASSESSMENT OF EFFECTS

5.1 This section identifies the effects on habitats and species during different stages of the development, prior to any mitigation measures.

Ephemeral/Short-perennial

5.2 The works will result in the loss of a small area of ephemeral/short perennial vegetation which would qualify as a Priority Habitat under the NERC Act 2006 i.e. "Open Mosaic Habitats on Previously Developed Land".

5.3 In the absence of mitigation, the construction phase will result in direct habitat loss i.e. permanent adverse effect of significance at the national level.

Birds

5.4 The Site may support low breeding populations of common bird species and low numbers of foraging birds. There will be a temporary loss of foraging and nesting habitat and potential disturbance to nesting birds during the construction phase. However, there is a comparable area of greenspace and brown roof-space proposed for the new development.

5.5 The construction phase will result in direct temporary habitat loss for these species, resulting in a temporary adverse effect of significance at the Local level.

6. MITIGATION MEASURES

Ephemeral/Short-perennial

6.1 Several roof-tops on the proposed buildings will be used to create brown roofs consisting of gravel, stones, sand and crushed brick. This will be allowed to colonise naturally to produce habitat comparable to that which already exists. The area will be greater than that already present.

Birds

6.2 There is a comparable area of greenspace and brown roof-space proposed for the new development to providing alternative nesting habitat.

6.3 As all species receive legal protection during nesting, any vegetation clearance and building demolition will be conducted outside of the breeding bird season of March to August (inclusive). Vegetation clearance outside of this period will still be preceded by a nesting bird survey carried out by contractors, as some species can nest all year round. Vegetation clearance within this period will be preceded by a nesting bird check conducted by an ecologist. Any active nests will remain unaffected until all chicks have fledged.

7. RESIDUAL AND CUMULATIVE EFFECTS

7.1 With the mitigation measures suggested and outlined above, no residual effects are envisaged. Therefore the proposed works will not contribute to any impacts from related / nearby proposed developments and Cumulative Effects are not relevant.

8. COMPENSATION AND ENHANCEMENT MEASURES

General

8.1 Although not all habitats were taken through to a full assessment due to their relative low-quality, there is still a requirement under NPPF to ensure no net loss of biodiversity. With this in mind, any new planting should be of native species of known benefit to wildlife.

Bats

8.2 Opportunities for roosting bats should be incorporated into the final masterplan. These should be integrated into / onto the new building.

Birds

8.3 Opportunities for nesting birds should be incorporated into the final masterplan. These should be integrated into / onto the new building.

9. SUMMARY

9.1 **Table 5** contains a summary of the likely significant effects of the Development relating to the construction phase, the completed development and cumulative effects.

Table 5: Significance

Potential Effect	Nature of Effect (Permanent/Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement Measures	Geographical Importance*							Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)
				I	UK	E	R	C	B	L	
Construction											
Designated Sites	None envisaged	Not applicable									
Habitat	Temporary loss of Open Mosaic Habitats on Previously Developed Land (NERC Act 2006)	Minor adverse effect at the National Level	Comparable habitat of a greater area to be included in final development.		*						Negligible
Amphibians	None envisaged	Not applicable									
Bats	None envisaged	Not applicable									
Badgers	None envisaged	Not applicable									
Birds	Temporary habitat loss; and destruction of nests	Minor adverse effect at Local Level	Comparable habitat of a comparable area to be included in final development. Seasonal timing; nesting bird checks prior to vegetation clearance.							*	Negligible
Reptiles	None envisaged	Not applicable									
Hedgehogs	Potential for being trapped in trenches/open pipework	Minor adverse effect at Local Level	Works to proceed following best practice guidelines							*	Negligible
Completed Development											
Not Applicable											

Potential Effect	**Nature of Effect** (Permanent/Temporary)	**Significance** (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	**Mitigation / Enhancement Measures**	**Geographical Importance***							**Residual Effects** (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)
				I	UK	E	R	C	B	L	
* Geographical Level of Importance I = International; UK = United Kingdom; E = England; R = Regional; C = County; B = Borough; L = Local											

10. REFERENCES

10.1 Bat Conservation Trust (2018) Bats and Artificial Lighting in the UK – Guidance Note 08/18

10.2 British Standards Institution (2013) BS42020:2013 Biodiversity – code of practice for planning and development. BSI Standards Ltd, London

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

10.4 Chartered Institute of Ecology and Environmental Management (2017) Guidelines for Ecological Report Writing. CIEEM, Winchester.

10.5 Chartered Institute of Ecology and Environmental Management (2017) Guidelines for Preliminary Ecological Appraisal. CIEEM, Winchester

10.6 Collins J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust, London.

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10.8 Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods. RSPB, Sandy.

10.9 Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey: a technique for environmental audit. JNCC, Peterborough.

10.10 Ministry of Housing, Communities and Local Government (July 2018) National Planning Policy Framework. ISBN: 978-1-4098-5302-2

10.11 Multi-Agency Geographic Information for the Countryside Website.

http://www.magic.gov.uk/

10.12 Stace, C.S. (2019) New Flora of the British Isles, 3rd edition. University Press, Cambridge

APPENDICES

APPENDIX 1: Relevant Legislation

European Protected Species

All British bat species, great crested newt, hazel dormice and otters are fully protected through The Conservation of Habitats and Species Regulations 2019 (as amended) as a European Protected Species (EPS). They also receive some protection through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Under the legislation, it is an offence to deliberately capture, injure or kill these species. It is an offence to damage or destroy a breeding site or resting place of these species; or obstruct access to any structure or place which they use for that purpose.

It is also an offence to deliberately disturb these species. Disturbance of animals includes in particular any disturbance which is likely (a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or (b) to affect significantly the local distribution or abundance of the species to which they belong.

The 'appropriate authority' (Natural England in England) has powers to issue licences for various purposes including - (a) scientific or educational purposes… and (b) preserving 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. The appropriate authority shall not grant a licence under this regulation unless they are satisfied - (a) that there is no satisfactory alternative, and (b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range. It is an offence for any person authorised by virtue of a licence to which this paragraph applies to contravene or fail to comply with any condition which the licence requires him to comply with.

Nesting birds

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Bird species listed in Schedule 1 of the 1981 Act, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

Badgers

The Protection of Badgers Act 1992 was introduced in recognition of the additional threats that badgers face from illegal badger digging and baiting. Under the Act, it is an offence inter alia to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by:
- damaging a sett or any part of one;
- destroying a sett;
- obstructing access to or any entrance of a sett;
- causing a dog to enter a sett; or
- disturbing a badger when it is occupying a sett.

Reptiles

Four species of reptile, the adder *Vipera berus*, grass snake *Natrix natrix*, slow worm *Anguis fragilis* and common lizard *Lacerta vivipara* are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) as well as being listed on the UK Post-2010 Biodiversity Framework (formerly UK BAP).

In net effect, it is an offence to deliberately capture, injure or kill common lizard, adder, grass snake or slow worms.

Two reptiles, the sand lizard *Lacerta agilis* and the smooth snake *Coronella austrica*, are European Protected Species under The Conservation of Habitats and Species Regulations 2019 (as amended). They are also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are protected by Parts 4(b), 4(c) and 5 of Section 9 of that Act.

APPENDIX 2: Extended Phase 1 Habitat Map

Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.

2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.

4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key

Google Satellite
- Scattered Scrub
- Building
- Ephemeral and Short Perennial
- Bare Ground

Rev	Date	Details of issues/ revision	Drw	Rev
P01	22.08.18	FINAL ISSUE	CG	GB

Issues & Revisions

Birmingham | 0121 233 3322
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Project Title
Ellis Street, Birmingham

Drawing Title
Extended Phase 1 Habitat Map

Drawn:	CG	Reviewed:	GB	
BWB Ref:	BWB2004	Date:	22.08.18	Scale@A3: 1:1000

Drawing Status
FINAL

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
ESB-BWB-ZZ-XX-EN-RP-0001	S2	P01

APPENDIX 3: Site Photographs

B1 - Front	
B1 – Potential roosting feature	
B2	
B2 – Missing pointing	

Ephemeral/Short-perennial between B1 and B2	
Bare ground and scattered scrub – site of previous building demolition	

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