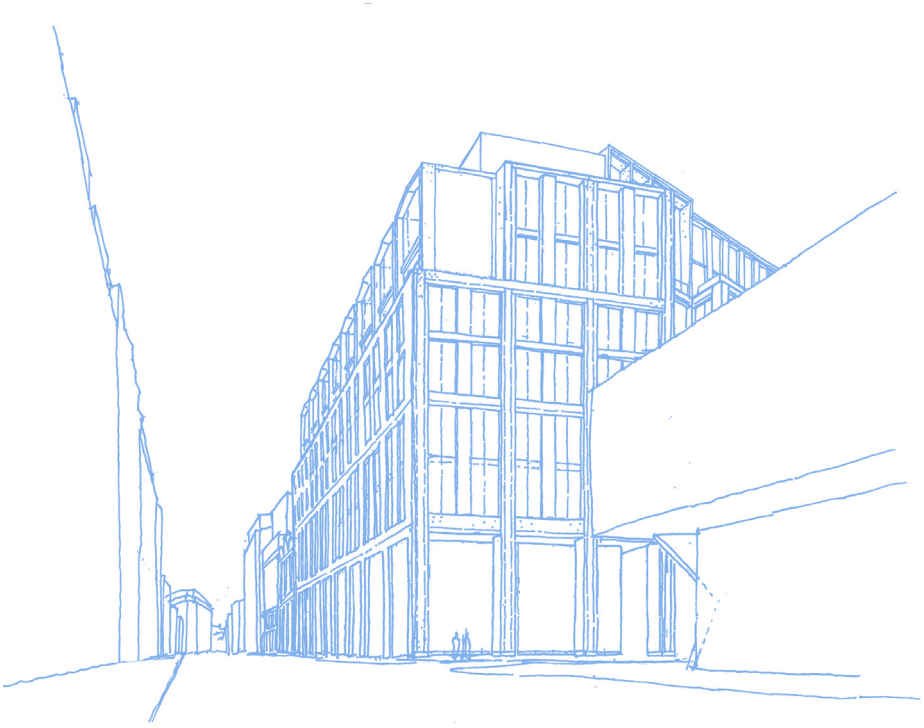
Prepared by Basecology
On behalf of Royal London Mutual Insurance Society

Phase 1 Habitat Survey & BREEAM: UK New Construction (2014)

Castlewood House & Medius House, WC1A



January 2017

Phase 1 Habitat Survey &
BREEAM: UK New Construction (2014)

Castlewood W1A, New Oxford Street,
Camden, London

CBRE:UK

ISSUE

January 2017

CONTENTS

LIST OF ABBREVIATIONS

BAP	Biodiversity Action Plan
BREEAM	BRE Environmental Assessment Method
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	The Countryside and Rights of Way Act 2000
CWS	County Wildlife Site
EPSL	European Protected Species Licence
GCN	Great crested newt
GiGL	Greenspace Information for Greater London
JNCC	Joint Nature Conservation Committee
LBAP	London Biodiversity Action Plan
LNR	Local Nature Reserve
NERC	The Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
NPPF	National Planning Policy Framework 2012
PRA	Preliminary Roost Assessment
PRF	Potential [bat] Roost Feature
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WCA	The Wildlife and Countryside Act 1981 (as amended)

EXECUTIVE SUMMARY

Introduction	BASEcology was commissioned by CBRE:UK on behalf of Royal London Mutual Insurance Society to undertake a Phase 1 Habitat Survey and BREEAM Assessment of two adjacent sites (Castlewood House and Medius House) to support a mixed use commercial and residential planning application in Camden, Greater London.
Methodology	Desk study: Records of protected / notable species, sites and habitats were obtained and reviewed within a defined search area from the centre of the site. The search radius was 2 km for statutory designated sites, 1 km for non-statutory designated sites and protected / notable species, and 500 m for Habitats and Species of Principal Importance and Biodiversity Action Plan (BAP) priority habitats and species. The respective search radii were considered suitable for the scale and type of the proposed development. Phase 1: Survey was carried out following standard methodology published by the Joint Nature Conservation Committee (JNCC). This methodology is a standardised technique for rapidly obtaining baseline ecological information over a large area of land. All habitat types present on site were recorded on a map. In accordance with best practice, the standard survey methodology was extended to consider and include all protected / notable fauna and habitats suitable to support them. Any incidental records or evidence of species were target noted and each habitat was evaluated for its potential to support protected or notable species. BREEAM: Assessment was undertaken in accordance with The BREEAM: UK New Construction (2014) and has been undertaken by an Ecologist meeting the definition of a 'Suitably Qualified Ecologist' (SQE).
Results	Desk study: Six non-statutory sites and one Habitat of Principal Importance (also listed as UKBAP and London BAP priority habitat) were identified were noted within the search area (no statutory designated sites were present). Greenspace Information for Greater London (GiGL) holds records of plants, invertebrates, birds, and bats within the search radius. None of the records are located within the developmental zone of influence or potentially connected to the site via green infrastructure. Phase 1: Four habitats were identified during the Phase 1 Habitat Survey including scattered broadleaved trees (A.3.1), ornamental scrub (J.1.3), species-poor hedge (J.2.1.2), and buildings and hardstanding (J.3.6). BREEAM: • LE 01: Site selection (1 credit) • LE 02: Ecological value of site and protection of ecological features (2 credits) • LE 03: Minimising impact on existing site ecology (2 credits) • LE 04: Enhancing site ecology (1 credit) • LE 05: Long-term impact on bio-diversity (2 credits) Total: 8 out of 10 credits are available subject to the design team accepting the ecologist's recommendations.
Recommendations	• A brown roof is created for black redstart (*Phoenicurus ochruros*). Different grades of aggregate substrates (e.g. crushed brick and concrete graded from 25 mm to dust) should be added to a flat section of roof into order to create suitable habitat for black redstart. Vegetation can be introduced onto the roof although it is recommended it be left to colonize naturally. • The following invertebrate and bird boxes (or suitable alternative approved by an SQE) to be added to the green space surrounds of the respective buildings: 1 x Schwegler insect–Combi box, 2 x Schwegler 16s swift box, and 2 x Schwegler brick box Type 25. • New woody vegetation should not be subject to any maintenance during the bird breeding season (March to July inclusive). Where maintenance of berry bearing species is required, management

	should be delayed until late winter, so that birds may take the berries. • External lighting should be directed so that it does not illuminate areas of planting.

This sheet is intended as a summary only

SECTION 1

INTRODUCTION

1 INTRODUCTION

1.1 Overview and Site Context

1.1.1 BASEcology was commissioned by CBRE:UK on behalf of Royal London Mutual Insurance Society to undertake a Phase 1 Habitat Survey and BREEAM Assessment to support a mixed use commercial and residential planning application in Camden, Greater London.

1.1.2 The site is made up of two distinct buildings (Medius House, 63-69 New Oxford Street; and Castlewood House, 77 - 91 New Oxford Street) in the London Borough of Camden. Castlewood House is an existing office (Class B1) building providing 13,099 sqm GEA of commercial floorspace over nine storeys. The existing post-war building is predominantly a brown brick facade above a single storey stone plinth. It is solely office use, from lower ground floor (looking out into the sunken courtyards to the rear of the building) to level 08, with the main entrance accessed from New Oxford Street.

1.1.3 Medius House comprises 652 sqm GEA of retail (Class A1) at ground floor level and 1,610 sqm GEA of office (Class B1) floorspace over five upper floors. The existing interwar building of five storeys, stepping up to six storeys at the junction with Dyott Street. Although of a plainer and heavier architectural style, it shares the rusticated brickwork of its neighbour.

1.1.4 The immediate site environs are dominated by commercial development and associated infrastructure, with Tottenham Court Road underground station approximately 200 m west and the River Thames c. 1 km south. The local green infrastructure surrounding the site is considered poor in context of the site location in central London.

1.2 Proposed Development

1.2.1 The proposal incudes the demolition of the existing building, at Castlewood House, and construction of a replacement ten storey mixed use building, plus ground and two basement levels, including the provision of retail (Class A1 and/or A3) and office (Class B1) floor space. External alterations to Medius House including partial demolition, retention of the existing façade and two floor extension to provide 20 affordable housing units (Class C3), together with associated highway improvements, public realm, landscaping, vehicular and cycle parking, bin storage and other associated works.

1.3 Objectives

1.3.1 The objective of this report is to provide evidence under BREEAM: New Construction UK (2014) Ecology and Landscape.

1.3.2 The objectives are as follows:

- Determine whether the site is of ecological interest, and evaluate that interest;
- Identify appropriate mitigation measures which might be employed; and,
- Identify potential for wildlife enhancements.

1.3.3 The following will also be assessed under BREEAM: International New Construction (2014) Ecology and Landscape[1]:

- LE 01 Site selection;
- LE 02 Ecological value of site and protection of ecological features;
- LE 03 Mitigating ecological impact;
- LE 04 Enhancing site ecology; and
- LE 05 Long term impact on biodiversity.

1.4 Legislation and Policy Context

1.4.1 Relevant wildlife and countryside legislation have been used along with planning policy guidance and the UK Biodiversity Framework to inform this assessment. Their context and applicability is explained as appropriate in the relevant sections of the report and additional details are presented in Appendix A.

1.4.2 The key articles of relevance are:

- The Conservation of Habitats and Species Regulations 2010, as amended (Habitats Regulations);
- The Wildlife and Countryside Act 1981, as amended (WCA);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- National Planning Policy Framework (NPPF) 2012;
- The Protection of Badgers Act 1992;
- The Hedgerow Regulations 1997;
- The UK Post-2010 Biodiversity Framework (2011-2020);
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services;
- UK Biodiversity Action Plan (UKBAP); and
- London Biodiversity Action Plan (LBAP).

[1] http://www.breeam.com/new-construction - accessed 03/08/16.

SECTION 2

METHODOLOGY

2 METHODOLOGY

2.1 Desk Study

2.1.1 A desk study was undertaken to obtain and review records of protected / notable species and habitats within a defined search area from the centre of the site. The search radius was 2 km for statutory designated sites, 1 km for non-statutory designated sites and protected / notable species, and 500 m for Habitats and Species of Principal Importance and Biodiversity Action Plan (BAP) priority habitats and species. The respective search radii were considered suitable for the scale and type of the proposed development.

2.1.2 The designated sites included within this search were as follows:

- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- Ramsar Sites;
- Sites of Special Scientific Interest (SSSI);
- National Nature Reserves (NNR);
- Local Nature Reserves (LNR); and
- Sites of Importance for Nature Conservation (SINC).

2.1.3 The following data sources were used, contacted and/or reviewed:

- Greenspace Information for Greater London (GiGL);
- Multi Agency Geographic Information for the Countryside (MAGIC)[2];
- Species and habitats of principal importance in England, Section 41 of the Natural Environment and Rural Communities Act 2006[3];
- UKBAP[4]; and
- LBAP[5].

2.2 Phase 1 Habitat Survey

2.2.1 A Phase 1 Habitat Survey was undertaken by a suitably experienced ecologist on 31st May 2016. The survey assessed the ecological value of the site, and recorded any protected habitats and evidence of, or potential for, any protected or notable species on site or within the relevant surrounding area.

2.2.2 The Phase 1 Habitat Survey followed standard methodology published by the Joint Nature Conservation Committee (JNCC)[6]. This methodology is a standardised technique for rapidly obtaining baseline ecological information over a large area of land. All habitat types present on site were recorded on a map (Appendix E) and dominant plant species were recorded in

[2] http://magic.defra.gov.uk accessed 03/08/16

[3] http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx accessed 03/08/16

[4] http://jncc.defra.gov.uk/page-5705 accessed 03/08/16

[5] http://www.lbp.org.uk/index.htm accessed 03/08/16

[6] Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey - A Technique for Environmental Audit. Joint Nature Conservation Committee, Peterborough.

accordance with standard nomenclature[7]. Scientific names are only mentioned the first time the species occur in the report.

2.2.3 In accordance with best practice, the standard survey methodology was extended to consider and include all protected / notable fauna and habitats suitable to support them[8]. Any incidental records or evidence of species were target noted and each habitat was evaluated for its potential to support protected or notable species.

2.3 BREEAM Assessment

2.3.1 The BREEAM Design-stage Assessment was undertaken in accordance with the BREEAM: UK New Construction (2014) Ecology and Landscape guidance[1] and has been undertaken by an Ecologist meeting the definition of a 'Suitably Qualified Ecologist' (SQE). Tom Moore of BASEcology has over ten years professional experience as an ecologist, and is a full member of MCIEEM.

2.4 Caveats & Limitations

Desk Study

2.4.1 An absence of desk study records does not necessarily convey an absence of such species in that area, but is often a facet of under-recording. The desk study is designed to give an overview of the species already recorded in the local area, and merely provides indicative data prior to more detailed Phase 2 surveys.

Phase 1 Habitat Survey

2.4.2 The Phase 1 Habitat Survey was carried out on one visit during the month of May. As such, seasonal variations could not be observed and potentially only a selection of all species that occur within the survey area will have been noted. The Phase 1 Habitat Survey, therefore, provides a general assessment of potential nature conservation value. However, it is considered that the combination of biological records from the desk study and the site visit provides an accurate representation of the various species and habitat types present or potentially present within the survey area.

7 Stace, C. (2010) New Flora of the British Isles; Third Edition. Cambridge University Press, Cambridge.
8 Institute of Ecology and Environmental Management (2012). Guidelines for Preliminary Ecological Appraisal; Revised 2nd Edition July 2012.
http://www.ieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_July2012_web.pdf

SECTION 3

RESULTS

3 RESULTS

3.1 Desk Study

Statutory Sites

3.1.1 There were no statutory sites in the search area.

Non-Statutory Sites

3.1.2 Six Sites of Importance for Nature Conservation (SINC) were highlighted within the search area outside of the site boundary. SINCs are recognised by the Greater London Authority and London borough councils as important wildlife sites. There are three tiers of sites as detailed below:

- Sites of Metropolitan Importance;
- Sites of Borough Importance (borough I and borough II); and
- Sites of Local Importance.

3.1.3 A summary of the SINCs noted within the search area is provided in Table 3.1 below.

Table 3.1:Non-statutory sites within 1 km

Site Name	Site Ref & Status	Site Summary	Location
Phoenix Garden	CaL04 (SINC, Local Importance)	The site features an open meadow, rockery, pond and children's play area. There are dense shrubberies with young trees planted within, many native wild flowers that have also been planted, and a pond with diverse vegetation around its edges.	c. 150 m S
Russell Square	CaL11 (SINC, Local Importance)	One of the largest squares in central London it also contains many mature trees. These are mostly London planes (*Platanus x* hispanica), situated chiefly at the perimeter and at its centre. Other trees include common lime (*Tilia* x *europaea*), ash (*Fraxinus excelsior*), horse-chestnut (*Aesculus hippocastanum),* tree- of-heaven (*Ailanthus altissima*), hawthorn (*Crataegus monogyna*) and holly (*Ilex aquilifolium*). A hornbeam (*Carpinus betulus*) hedge has recently been planted at the site's boundary, and there are a number of shrubberies.	c. 500 m NE
Lincoln's Inns Fields	CaL12 (SINC, Local Importance)	The largest of the London squares, laid out by Inigo Jones in the 17th century. It is famous for its many specimens of London plane (*Platanus* x *hispanica*), some of them of great antiquity, possibly being amongst the first planted in this country. Extensive shrubberies line the perimeter. The trees and shrubs provide nest sites for	c. 700 m E

		common birds, including blackbird, song thrush, magpie and blue tit.	
Gordon Square	CaL13 (SINC, Local Importance)	This is a small but very well used and typically urban, London square with numerous London plane (*Platanus* x *hispanica*) trees as well as common lime (*Tilia* x *europaea*), beech (*Fagus sylvatica*), flowering cherry (*Prunus* sp.) and purple cherry-plum (*Prunus cerasifera* var. *Pissardii*). The square's edges have dense shrubberies, of mostly non-native species. Wild flowers planted in the flower beds include primrose (*Primula vulgaris*) and bluebell (*Hyacinthoides non-scripta*). Breeding birds include wren, robin, blackbird, blue tit, mistle and song thrush.	c. 825 m NNW
Coram's Fields	CaL14 (SINC, Local Importance)	This sizeable park is intended for children, and adults are permitted entry only if accompanying a child. Although this site is primarily aimed at providing sports facilities for children, it contains several features which ensure that visiting children and parents have plenty of opportunity for contact with nature. There are numerous mature London plane (*Platanus* x *hispanica*) trees, mostly at the perimeter, and a hedge of beech (*Fagus sylvatica*). At the western edge of the site, white mulberry (*Morus alba*) and black mulberry (*M. nigra*) have been planted. To the east an area is being developed as a wildlife garden.	c. 950 m NE
Victoria Embankment Gardens: Main Garden	WEL03 (SINC, Local Importance)	This is an extremely heavily used public park, which nonetheless provides some opportunity to enjoy common birds. It contains substantial areas of shrubbery with scattered trees, forming a continuous belt of cover almost the whole length of the north-western side. The trees are principally non-native, mainly London plane (*Platanus* x *hispanica*), with occasional horse chestnut (*Aesculus hippocastanum*), tree-of-heaven (*Ailanthus altissima*), Indian bean-tree (*Catalpa bignonioides*) and laburnum (*Laburnum anagyroides),* plus a few holly (*Ilex aqulifolium).* The shrubbery shows great diversity of colour and form, with foliage plants such as elaeagnus (*Elaeagnus umbellata*), castor oil plant (*Ricinus communis*), karo (*Pittosporum crassifolium*), ornamental hazel (*Corylus* sp.) and elders (*Sambucus* spp.), as well as more traditional varieties such as	c. 950 m SSE

		spotted laurel (*Aucuba japonica*), privet (*Ligustrum ovalifolium*) and box (*Buxus sempervirens*). There are small areas of ornamental herbaceous planting under the shrubs along the edge of the lawns; another small area contains a fern collection. Breeding birds include blackbird, dunnock, carrion crow, robin, woodpigeon, blue tit and starling.	

Habitats of Principal Importance, UKBAP and LBAP Priority Habitats

3.1.4 One Habitat of Principal Importance (also listed as UKBAP and London BAP priority habitat) was identified outside of the site boundary and within the search area as detailed in Table 3.2.

Table 3.2: Habitats of Principal Importance, UKBAP and LBAP Priority Habitats within 1 km

Habitat Type	Policy Context*	Location
Deciduous woodland	Sect.41 / UKBAP / LBAP	c. 250 m north north-west within Bedford Square.

* Sect.41 = Habitat of Principal Importance (Section 41, NERC Act, 2006) and UKBAP = UK Biodiversity Action Plan; and LBAP = London Biodiversity Action Plan

Protected and Notable Species

3.1.5 Species records obtained from the data trawl within 1 km of the proposed site, including nationally rare and legally protected flora and fauna, are summarised in the sections and associated tables below and have informed the selection of target species groups for assessment. The full desk study obtained from GiGL is available on request.

Plants

3.1.6 GiGL holds four records of notable plant species within the search area outside of the site boundary. Further details relating to the conservation status, location and date of the most recent records are presented in Table 3.3 below.

Table 3.3: Plant records within 1 km

Common name	Scientific name	Date	Conservation status*	Location**
Chives	*Allium schoenoprasum*	2012	Nationally Scarce	c. 850 m N
Wild cabbage	*Brassica oleracea*	2012	Nationally Scarce	c. 850 m N
Box	*Buxus sempervirens*	2012	Nationally Rare RL_GB-DD (as a native plant in its native habitat; most box is planted)	c. 850 m N

Orpine	*Sedum telephium*	2012	Local Spp of Cons Conc	c. 850 m N

*RLGB.DD = IUCN (2001) – Data deficient; Local Spp of Cons Conc = Local species of conservation concern.

Invertebrates

3.1.7 There are records of two invertebrate species (one butterfly and one moth) within the search area outside of the site boundary. The most recent of these for each species is presented in Table 3.4 below.

Table 3.4: invertebrate records within 1 km

Common name	Scientific name	Date	Conservation status*	Location**
Silver-washed fritillary	*Argynnis paphia*	2014	Local Spp of Cons Conc	c. 850 m N
Jersey tiger	*Euplagia quadripunctaria*	2013	HSD2np	N/A

* HSD2np = Habitats Directive Annex 2 non-priority species, Local Spp of Cons Conc = Local species of conservation concern.

**Where location is omitted the details accompanying the record are not sufficiently precise to pin point the exact location and, therefore, the distance of these from the site.

Herpetofauna

3.1.8 Amphibians: GiGL holds no records of great crested newt (*Triturus cristatus*) or any other notable amphibians within the search area.

3.1.9 Reptiles: GiGL holds no records of this species group within the search area.

Birds

3.1.10 GiGL holds records of nine different bird species within the search area outside of the site boundary. The most recent of these for each species is presented in Table 3.5 below.

3.1.11 One Schedule 1 bird species was noted within the search radius (as highlighted in bold in Table 3.5 below). As such it is an offence to intentionally or recklessly disturb these species at, on, or near an active nest site.

3.1.12 All birds are protected under the Wildlife and Countryside Act (1981) as amended. Various bird species are also listed as Species of Principal Importance / UKBAP priorities.

Table 3.5: Summary of bird records within 1 km

Common name	Scientific name	Date	Conservation status*	Location**
Swift	*Apus apus*	2010	Bamb, Local Spp of Cons Conc	N/A
Kestrel	*Falco tinnunculus*	2013	BAmb, Bern2, CITESA, CMS_A2, ocal Spp of Cons Conc	c. 525 m N
Swallow	*Hirundo rustica*	2009	BAmb, Bern2, ocal Spp of Cons Conc	c. 575 m N
House sparrow	*Passer domesticus*	2010	BRed, Sect.41, UKBAP, LBAP, Local Spp of Cons Conc	c. 275 m N
Black Redstart	*Phoenicurus ochruros*	2010	BAmb, Bern2, WCA1i, LBAP	c. 200 m NW
Goldcrest	*Regulus regulus*	2010	Bern2, Spp of Cons Conc	c. 550 m SW
Starling	*Sturnus vulgaris*	2007	BD2.2, BRed, UKBAP, Local Spp of Cons Conc	c. 350 m W
Song thrush	*Turdus philomelos*	2006	BD2.2, BRed, UKBAP, LBAP; Local Spp of Cons Conc	c. 775 m N
Mistle thrush	*Turdus viscivorus*	2009	BAmber, Local Spp of Cons Conc	c. 750 m N

*HabReg-Sch2 = The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2); HabDir-A4 = Habitats Directive Annex; 4WCA5/9.5b = Listed on Schedule 5 (Section 9.5b) of the WCA (1981, as amended); WCA5/9.5c = Listed on Schedule 5 (Section 9.5c) of the Wildlife and Countryside Act (1981, as amended); Sect.41 = Species of Principal Importance (Section 41, NERC Act, 2006); UKBAP = = UK Biodiversity Action Plan Priority Species; LBAP = London Biodiversity Action Plan Priority Species, Local Spp of Cons Conc = Local species of conservation concern.
**Where location is omitted the details accompanying the record are not sufficiently precise to pin point the exact location and, therefore, the distance of these from the site.

Mammals

3.1.13 Badger (*Meles meles*): GiGL holds no records of badger within the search area.

3.1.14 GiGL released details of 12 records of three different bat species within the search area. No roosts were highlighted within the search area. Details of the most recent records and distance to the site are detailed in Table 3.6 below.

Table 3.6: Bat records within 2 km search radius

Scientific name	Common name	Date	Designation summary*	Location
Pipistrellus pipistrellus	Common pipistrelle	2013	Bern2, Bern3, CMS_A2, CMS_EUROBATS-A1, FEP7/2, HabRegs2, HSD4, WCA5/9.4b, WCA5/9.4c, WCA5/9.5a, WCA5/9.5b	1 km N
Pipistrellus	Nathusius'	2011	Bern2, CMS_A2,	150 m N

nathusii	pipistrelle		CMS_EUROBATS-A1, HabRegs2, HSD4, WCA5/9.4b, WCA5/9.4c, WCA5/9.5a, WCA5/9.5b	
Pipistrellus pygmaeus	Soprano pipistrelle	2013	Bern2, CMS_A2, CMS_EUROBATS-A1, HabRegs2, HSD4, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c, WCA5/9.5a, WCA5/9.5b	150 m N

*****Bern2 = Bern Convention Appendix 2, CMS_A2 = Convention on Migratory Species, Appendix 2, CMS_EUROBATS-A1 = Convention on Migratory Species, EUROBATS - Annex I, FEP7/2 = Farm Environment Plan Guidance 007- Table 2, HabRegs2 =, The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2), HSD2p = Habitats Directive Annex 2 - priority species, HSD4 = Habitats Directive Annex 4, RLGLB.NT = IUCN (1994) - Lower risk - near threatened, Sect.41, UKBAP = Priority Species, WCA5/9.4b = Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b), WCA5/9.4c = Wildlife and Countryside Act 1981 (Schedule 5), WCA5/9.5a = Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5a), WCA5/9.5b = Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5b)

3.1.15 Dormouse (*Muscardinus avellanarius*): GiGL holds no dormouse records within the search area.

3.1.16 Hedgehog (*Erinaceus europaeus*): GiGL holds no records of hedgehog within the search area.

3.1.17 Otter (*Lutra lutra*) and water vole (*Arvicola amphibius*): GiGL holds no records of either species within the search area.

Non-native invasive plant species

3.1.18 GiGL holds no recent records of Schedule 9 plant species within the search area.

3.2 Phase 1 Habitat Survey

3.2.1 Four habitats were identified during the Phase 1 Habitat Survey. Further details of each habitat and their significance on-site are provided below and presented on the Phase 1 Habitat Map within Appendix E. Alpha-numeric codes below cross-refer to the JNCC Phase 1 Habitat Survey habitat classifications[9].

Broad-leaved scattered trees – A.3.1

3.2.2 Young / semi-mature trees planted for amenity purpose feature along the edge of New Oxford Street and rear of Castlewood House. Three species, field maple (Acer campestre), Italian alder (*Alnus cordata*) and grey alder (*Alnus incana*), occur within the red line boundary. One further species, red Norway maple (*Acer platanoides* 'Deborah'), is found off-site within the zone of influence. All of the scattered trees have a trunk diameter >100 mm although afford no more than limited nesting bird opportunity.

[9] Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 habitat survey - a technique for environmental audit.

3.2.3 **Species No. per scattered trees plot-type: 3** - This habitat supports three species which are native or which are considered to be of value to wildlife on-site.

Introduced shrub – J.1.4

3.2.4 A small raised border of introduced shrub is found at the rear of Castlewood House. The habitat is comprised from low maintenance species such as Japanese laurel (*Aucuba japonica 'Crotonifolia'*), cherry laurel (*Prunus laurocerasus*), and fire thorn (*Pyracantha*). The introduced shrub is considered to afford no more than poor nesting and very limited foraging opportunity for birds due to the small area coverage and limited vegetative structure of this habitat.

3.2.5 **Species No. per introduced shrub plot-type: 0** - This habitat supports no species which are considered to be of value to wildlife.

Species-poor hedge - J.2.1.2

3.2.6 Two heavily managed yew hedgerows are located to the rear of Castlewood House within a small courtyard. The berries provide foraging opportunity for birds although the hedges are considered of insufficient height and width for nesting purposes.

3.2.7 **Species No. per introduced hedge plot-type: 1** - This habitat supports one species which is native or which are considered to be of value to wildlife.

Buildings and hardstanding – J.3.6

3.2.8 Castlewood House is a nine-storey commercial building is constructed from Flemish bond brickwork (an alternating pattern of a stretchers and headers laid side-by-side) with a decorative ground floor façade along New Oxford Street and Earnshaw Street). The building also features a flat roof that cascades, on the front and western side, down towards the eight floor eaves in a terraced fashion. The footprint of the building measures approximately 1267 sqm and is a 'T' shaped design (with the front running parallel along New Oxford Street and the perpendicular rear extending towards Bucknall Street).

3.2.9 The façade of Medius House (a six-storey commercial building) features a stone brick base on the bottom two storeys, with English bond brickwork (alternating brick courses of headers and stretchers laid on top of one another) and decorative stone brick arches between the third and sixth storey. The building features a flat concrete roof, with steeply pitched slate edges and dormer windows overlooking New Oxford Street and Dyott Street. The footprint of the building measures approximately 360 sqm.

3.2.10 The buildings are considered to be of negligible value for roosting bats as the architectural design and condition afford few structural opportunities such as crevices or void spaces suitable for roosting purposes. Furthermore, the location within central London, poor surrounding green infrastructure and high level of disturbance reduce the opportunity for general bat activity such as foraging and commuting within the immediate site environs.

3.2.11 The hardstanding areas surrounding the two buildings are considered to be of negligible biological interest.

3.2.12 **Species No. per buildings and hardstanding plot-type: 0** - This habitat supports no species which are native or which are considered to be of value to wildlife.

SECTION 4

DISCUSSION AND RECOMMENDATIONS

4 DISCUSSION AND RECOMMENDATIONS

4.1 Non-Statutory Sites

4.1.1 There are no direct or indirect impacts from the development that can be foreseen due to the distance of the six non-statutory sites within the search radius, the lack of green infrastructure in-between, and the location of the proposed development within central London. There is no opportunity, therefore, for the proposed development to result in any negative impact on these sites.

4.2 Notable Habitats

4.2.1 There is no opportunity for any negative impact on Habitats of Principal Importance within the search radius due to the limited sensitivity distance of this habitat and from the zone of influence.

4.3 Protected and Notable Species

4.3.1 No protected or notable species were highlighted within the immediate site environs during the desk study or Phase 1 Habitat Survey. Further details supporting the likely absence of each species group are provided below.

Plants

4.3.2 There are no records of protected or notable plant species within the developmental zone of influence, and no habitats were identified during the Phase 1 Survey to indicate the site or immediate environs are capable of supporting such species.

Invertebrates

4.3.3 The developed surrounds of the site are considered of negligible potential for protected or notable invertebrate species.

Herpetofauna

4.3.4 Reptiles: The developed site surrounds are considered of negligible value for this species group.

4.3.5 Amphibians: The habitat conditions surrounding the site are considered of negligible potential for GCN.

Birds

4.3.6 Nine bird species, including one that is listed as Schedule 1, were highlighted during the desk study. Although these records are likely to represent only a small part of the bird assemblage within the search radius, the immediate site environs are considered to afford no more than very low potential for nesting, foraging and commuting purposes.

4.3.7 The surrounding habitat conditions are considered sub-optimal for this species group due to the limited availability of vegetation, the architectural design and present condition (restricting nesting opportunities on / within structural features), the poor surrounding infrastructure and the high level of light and noise disturbance.

4.3.8 The impact of the proposed developmental in terms of disturbance and potential habitat loss / fragmentation is, therefore, considered negligible.

Mammals

4.3.9 Badger: The habitat conditions surrounding the site are considered of negligible potential for badger.

4.3.10 Bats: Few bat records were highlighted during the desk study. Although this is likely to be an under representation of this species group within the search radius, the immediate surrounds are considered no more than sub-optimal for bats.

4.3.11 A separate Preliminary Roost Assessment (PRA) survey and report[10] has been carried out and prepared for the proposed planning application alongside the Phase 1 Habitat Survey. The buildings on-site are generally considered structurally unsuitable for roosting purposes, and the surrounds of very low potential for foraging activity. None of the trees within the immediate zone of influence are considered of sufficient structural interest to warrant further survey work, and therefore, these have not been considered any further for this species group.

4.3.12 Dormouse: The habitat conditions surrounding the site are considered entirely unsuitable for dormouse.

4.3.13 Hedgehog: There are no records to indicate nearby presence, and the developed site surrounds are considered of negligible value for hedgehog.

4.3.14 Otter and water vole: The immediate site environs are considered of negligible potential for both otter and water vole. The River Thames affords habitat opportunity for otter although this is considered far beyond the developmental zone of influence.

Non-native invasive plants

4.3.15 No further action is considered necessary as no schedule 9 plant species were noted during the Phase 1.

[10] BASEcology (October, 2016) Preliminary Roost Assessment: Castlewood W1A, New Oxford Street, Camden, London. Prepared for CBRE:UK.

SECTION 5

BREEAM: UK New Construction (2014)

5 BREEAM: UK New Construciton (2014)

5.1 Introduction

5.1.1 BRE's Environmental Assessment Method (BREEAM) is used to assess the environmental performance of both new and existing buildings. It is regarded as the measure of best practice in environmental design. BREEAM assesses the performance of buildings in the following areas:

- Management: overall management policy, commissioning site management and procedural issues;
- Health and well-being: indoor and external issues affecting health and well-being;
- Energy use: operational energy and carbon dioxide (CO2) issues;
- Transport: transport-related CO2 and location-related factors;
- Water: consumption and water efficiency;
- Materials: environmental implication of building materials, including life-cycle impacts;
- Waste: sustainable management (and reuse where feasible) of construction and operational waste and waste through future maintenance and repairs associated with the building structure;
- Land use: greenfield and brownfield sites;
- Ecology: ecological value conservation and enhancement of the site;
- Pollution: air and water pollution issues; and
- Innovation: where the building meets the exemplary performance levels of a particular issue.

5.1.2 Developers and designers are encouraged to consider these issues at the earliest opportunity to maximise their chances of achieving a high BREEAM rating.

5.1.3 Credits are awarded in each area according to performance. A set of environmental weightings then enables the credits to be added together to produce a single overall score. The scheme is then rated on a scale of UNCLASSIFIED (<30%), PASS (>30%), GOOD (>45%), VERY GOOD (>55%) or EXCELLENT (>70%), OUTSTANDING (>85%) and a certificate awarded that can be used for promotional purposes.

5.1.4 The following assesses the credits under the section entitled ‘Landuse and ecology’. The credits LE 03 – LE 05, relate to ecological conservation of the existing habitats and ecological enhancement of the built scheme.

Table 3.6: Category summary table

Issue ID	Issue name	Credits	Credits summary*
LE 01	Site selection	2	Recognition of the reuse of previously developed and contaminated land where appropriate remediation has taken place.
LE 02	Ecological value of site and protection	2	Recognition of the use of sites of ‘low ecological value’, and the protection of

	of ecological features		existing features prior to and during site operations.
LE 03	Minimising impact on existing site ecology	2	Recognition of steps taken to avoid impacts on existing site ecology.
LE 04	Enhancing site ecology	2	Recognition of steps taken to enhance site ecology through the advice of a suitably qualified ecologist.
LE 05	Long term impact on biodiversity	2	The production of a long-term landscape and habitat management plan to encourage measures that improve the sites long-term biodiversity.

5.1.5 The existing site layout is shown on the Phase 1 Habitat Survey map (Appendix E) and the proposed development on Drawing A_PL_P_100 (Appendix B).

5.2 LE 01 Site selection

5.2.1 The aim of the credit is to encourage the use of previously occupied or contaminated land and avoid land which has not been previously disturbed. This issue is split into two parts:

- Previously occupied land (1 credits)
- Contaminated land (1 credit)

5.2.2 One credit is available where at least 75% of the proposed development's footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.

5.2.3 A credit is also available where a contaminated land professional's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. In such circumstances, the site investigation, risk assessment and appraisal have identified the following: 1) the degree of contamination; 2) the contaminant sources / types; and 3) The options for remediating sources of contamination which present an unacceptable risk.

5.2.4 The site is made up of two distinct buildings (Medius House, 63-69 New Oxford Street; and Castlewood House, 77 - 91 New Oxford Street) surrounded by hardstanding areas. One credit in total can be awarded as the percentage of previously occupied land is 100%, which exceeds the 75% threshold. Contaminated land is outside the scope of this report.

Evidence required

5.2.5 Interim design stage: One or more of the appropriate evidence types listed in The BREEAM evidential requirements section can be used to demonstrate compliance with these criteria.

5.2.6 Final post construction phase: As per interim design stage.

Recommended credits for LE 01: 1 out of 2*

**Contaminated land is outside the scope of this report*

5.3 LE 02 Ecological value of site and protection of ecological features

5.3.1 The aim of the credit is to encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works. This issue is split into two parts:

- Ecological value of site (1 credit)
- Protection of ecological features (1 credit)

5.3.2 One credit is available where land within the assessment zone is defined as 'land of low ecological value' using either:

- The BREEAM checklist for defining land of low ecological value (see Checklists and tables); or,
- A suitably qualified ecologist (SQE) who has identified the land as being of 'low ecological value' within an ecological assessment report, based on a site survey.

5.3.3 Another credit is available where existing features of ecological value within the assessment zone and site boundary area are adequately protected from damage during clearance, site preparation and construction activities in line with BS42020: 2013. In all cases, the principal contractor is required to construct ecological protection recommended by the SQE, prior to any preliminary site construction or preparation works (e.g. clearing of the site or erection of temporary site facilities).

Ecological value of site

5.3.4 The BREEAM checklist for defining land of low ecological value was completed by an SQE and is presented below in Table 3.7. While 'yes' can be answered to Q1 and Q5 of the BREEAM checklist, the 2016 Phase 1 Habitat Survey and Preliminary [Bat] Roost Assessment found the site to be of low ecological importance.

5.3.5 This was based upon the percentage of land occupied by commercial buildings and hardstanding (the former of which were found to afford no opportunity to roosting bats), the low ecological value of the scattered trees (based on species, age, condition and stature which afford limited nesting and foraging opportunity for birds but no potential roost features for bats), and the absence of designated sites and notable habitats within the search radii (as detailed within Section 3.1). One credit can therefore be awarded as the assessment zone is defined as 'land of low ecological value'.

Table 3.7: BREEAM checklist for defining land of low ecological value

ID	Question	Answer
Q1	Has the Planning Authority required that an ecological survey or statement be prepared?	Yes
Q2	Is the development within 2 km of a Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site?	No
Q3	Is the development within 500 m of a Site of Special Scientific Interest (SSSI)?	No

Q4	Are any of the following habitats present on, or within 100m of the construction zone? 1. Broad-leaved woodland* 2. Watercourses (rivers, streams or canals)** 3. Wetlands (ponds, lakes, marshland, fenland, reed bed) 4. Flower-rich meadow/grassland 5. Heathland (habitat/plants that thrive on acidic soils, such as heather and gorse)	No
Q5	Are any of the following features present within or on the boundary of the construction zone? 1. Trees more than 10 years old 2. Mature hedgerow (field hedgerows over 1m tall and 0.5m wide)*** 3. Existing buildings (occupied or derelict) with either pitched tile, slate or shingle roofs, lofts, wall hanging tiles, weatherboarding or dense climbing plants, soffits and cellars, basements, ice houses etc.	Yes

* The Countryside Survey defines woodland as 'having over 25% canopy cover of trees and shrubs, over a metre high'. Broadleaved woodland should be taken to mean broadleaved, mixed and Yew woodland.

** The Countryside Survey defines the broad habitats of rivers and streams as running watercourses ranging from small headwater streams to large rivers. This broad habitat along with wetlands, includes the open water itself and the vegetation along the water's edge.

*** The Countryside Survey defines a hedge as 'a line of woody vegetation that has been subject to management so that trees no longer take their natural shape'.

https://www.countrysidesurvey.org.uk/

Protection of ecological features

5.3.6 A second credit is achievable providing the protection measures listed below are adopted alongside those relating to tree protection (as detailed in the arboricultural impact assessment[11]).

5.3.7 Although scattered semi-mature trees and introduced shrub to the rear of Castlewood House are of no significant ecological value and use by breeding / foraging birds is considered low, it cannot be completely ruled out. As per the design layout (Drawing A_PL_P_100, Appendix B) two trees are to be removed (1 x grey alder and 1 x Italian alder) and two are to be retained (2 x field maple).

5.3.8 It is advised as a precaution for clearance of those trees and introduced shrub earmarked for removal to be undertaken outside of the bird nesting season (March-August inclusive) to avoid any potential disturbance to birds which could otherwise cause delays to site works.

5.3.9 Alternatively, the vegetation can be checked by a trained ornithologist within the bird nesting season to confirm presence of absence of birds. However this option carries the low risk of encountering nesting birds which could result in delays to works on site. If a nest is encountered, a 4 m exclusion zone would need to be set up around it until the young have permanently left the nest.

[11] Sharon Hosegood Associates (2016) Arboricultural Impact Assessment Report: Castlewood W1A, New Oxford Street, London, W1A. Unpublished.

Evidence required

5.3.10 Interim design stage: One or more of the appropriate evidence types listed in The BREEAM evidential requirements section can be used to demonstrate compliance with these criteria. BREEAM checklist for defining land of low ecological value can be used where applicable if an SQE is not employed.

5.3.11 Final post construction phase: As per interim design stage.

Recommended credits for LE 02: 2 out of 2

5.4 LE 03 Minimising impact on exisiting site ecology

5.4.1 The aim of the credit is to minimise the impact of a building development on existing site ecology.

5.4.2 Two credits are available where a change in ecological value of the site is equal to or greater than zero plant species, i.e. no negative change, using the methods outlined in either of the following:

- Determine the following information and input this data in to the BREEAM LE 03 / LE 04 calculator:
  - The broad habitat type(s) that define the landscape of the assessed site in its existing pre-developed state and proposed state (see Table 56); and,
  - Area (sqm) of the existing and proposed broad habitat types.
- Where an SQE has been appointed and, based on their site survey, they confirm the following and either the assessor or ecologist inputs this data in to the BREEAM LE 03 / LE 04 calculator:
  - The broad habitat types that define the landscape of the assessed site in its existing pre-developed state and proposed state;
  - Area (sqm) of the existing and proposed broad habitat plot types; and,
  - Average total taxon (plant species) richness within each habitat type.

5.4.3 Another credit is also available where the change in ecological value of the site is less than zero but equal to or greater than minus nine plant species i.e. a minimal change.

5.4.4 The average number of species present at the site is calculated by multiplying the area of the different plot types described in Section 3.2 by the numbers of species recorded for those plot types, adding the values together and then dividing by the area of the site. The procedure is repeated with the development proposals in order to determine the change of ecological value.

5.4.5 The tables below show the 'ecological value' before and after the development. The habitat definitions broadly follow BREEAM definitions where applicable otherwise species number before development is calculated from species recorded during the Phase 1 survey (Section 3.2) and Table 57

"Inclusive analysis of Average Total Taxon Richness by broad habitat in 'Fields and Other Main Land Cover Parcels plots' in Great Britain" in the BREEAM new Construction Technical Manual. After development, species number is calculated from broad habitat types as inferred by the design layout (Drawing A_PL_P_100, Appendix B).

Table 5.1: Ecological value of the site before development

Plot Type	Area of Plot Type (m^2)		Species No.		Species x Area of Plot Type
Scattered trees	1*	x	3	=	3
Introduced shrub	40	x	0	=	0
Species-poor hedge	30	x	1	=	30
Buildings and hardstandings	2951	x	0	=	0

(1) Total Site Area = **3022**	(2) Total ∑ Species x Area = **33**
Species per Plot Type Before Development: Total ∑ Species x Area of Plot Type / Total Site Area = (2) / (1) = **0.01**	

*Rounded up to the nearest metre.

Table 5.2: Ecological value of the site after development

Plot Type	Area of Plot Type (m^2)		Species No.		Species x Area of Plot Type
Scattered trees	1*	x	3	=	3
Grassland	10	x	5	=	50
Buildings and hardstandings	2983	x	0	=	0

(1) Total Site Area = **3022**	(2) Total ∑ Species x Area = **53**
Species per Plot Type After Development: Total ∑ Species x Area of Plot Type / Total Site Area = (2) / (1) = **0.02**	

*Rounded up to the nearest metre.

5.4.6 The change in species number (B-A) is 0.01 and therefore 2 out of a possible 2 credits can be awarded providing the landscape plan is updated accordingly to incorporate a third tree species (in addition to the two trees of different species that are being retained) and five grass species into the raised planters on-site.

Evidence required

5.4.7 Interim design stage: One or more of the appropriate evidence types listed in The BREEAM evidential requirements section can be used to demonstrate compliance with these criteria. Also, where relevant, a completed copy of the BREEAM LE 03 / LE 04 calculator and documentary evidence supporting the data used to complete the Calculator tool.

5.4.8 Final post construction phase: A completed copy of the BREEAM LE 03 / LE 04 calculator (where relevant). For large mixed use / multi-building developments, where the whole site has not been completed and ecological enhancements have not yet been added, or where features are being added at a later date in an appropriate planting season: evidence from the client or principal contractor confirming planting will be completed within 18 months from completion of the development. Also, documentary evidence supporting the data used to complete the Calculator tool.

Recommended credits for LE 03: 2 out of 2

5.5 LE 04 Enhancing site ecology

5.5.1 The aim of the credit is to encourage actions taken to enhance the ecological value of the site as a result of development. This issue is split into three parts:

- Ecologist's report and recommendations (1 credit)
- Increase in ecological value (1 credit)
- Simple buildings specific (1 credit)

5.5.2 One credit is available based on the ecologists report and recommendations, namely: 1) an SQE has been appointed by the client or their project representative by the end of the Preparation and Brief stage (RIBA Stage 1 or equivalent) to advise on enhancing the ecology of the site at an early stage; 2) SQE has provided an Ecology Report with appropriate recommendations for the enhancement of the site's ecology at Concept Design stage (RIBA Stage 2 or equivalent). The report is based on a site visit / survey by the SQE (see also CN3.1); and 3) an early stage advice and recommendations of the Ecology Report for the enhancement of site ecology have been, or will be, implemented in the final design and build.

5.5.3 Another credit can be awarded if criteria of the first credit are met along with the following: 1) the recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build, and the SQE confirms that this will result in an increase in ecological value of the site, with an increase of six plant species or greater (refer also to Compliance note CN3.5 for alternative means of compliance); and 2) the increase in plant species has been calculated using the BREEAM LE 03 / LE 04 calculator, using actual plant species numbers.

5.5.4 Alternative to the credit awarded for an increase in ecological value, one credit is available for simple buildings where the project team has sought recommendations from recognised 'local' ecological expertise and generic guidance in the form of published guidance documents, information leaflets to

inform the adoption of locally relevant ecological measures that enhance the ecological value of the site. These measures may include:

- Planting of native species or those with a known attraction or benefit to local wildlife;
- Adoption of horticultural good practice (e.g. no or low use of residual pesticides); and,
- Installation of bird, bat and/or insect boxes at appropriate locations on the site.

5.5.5 Only native floral species or those with a known attraction or benefit to local wildlife can be considered for the purpose of enhancing the ecological value of the site.

5.5.6 The survey and report was completed by a 'SQE', Tom Moore of BASEcology. Appropriate recommendations for enhancing the ecology of the site have been identified below. If the project team can make a commitment to implementing these recommendations, the first credit would be achieved.

Recommendations for ecological protection

5.5.7 Clearance of the introduced shrub / scattered trees around the rear of Castlewood House should take place outside the bird nesting season (March - August inclusive) unless a survey by a trained ornithologist is first carried out to confirm absence.

Recommendations for ecological enhancement

- A brown roof is created for black redstart (*Phoenicurus ochruros*). It is recommended a substrate material based on a mix of aggregate, such as crushed brick or expanded clay pellets (Leca), and topsoil or peat free compost is laid down on a flat section of roof. This should be overlaid with rock and / or stone chippings and contoured in height from zero up to 50 cm for the largest hibernacula. In designing hibernacula a central mound area of sand or soil is compacted to form a sandcastle effect that is angled at 30 degrees with the broadest area south facing. The mound is then covered with boulders around 10 – 15 cm in size that are loosely placed to allow entry by invertebrates into the central area.
- The following invertebrate and bird boxes (or suitable alternative approved by an SQE) to be added to the buildings: 1 x Schwegler insect–Combi box, 2 x Schwegler 16s swift box, 2 x Schwegler brick box Type 25, and 2 x Schwegler open fronted box 2HW.
- New woody vegetation should not be subject to any maintenance during the bird breeding season (March to July inclusive). Where maintenance of berry bearing species is required, management should be delayed until late winter, so that birds may take the berries.
- External lighting should be directed so that it does not illuminate areas of planting.

5.5.8 A second credit is available where:

- The criteria of the first credit are met;
- The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build, and the SQE confirms that this will result in an increase in ecological value of the site, with an increase of six plant species or greater; and,
- The increase in plant species has been calculated using the BREEAM LE 03/LE 04 calculator, using actual plant species numbers.

5.5.9 Only one credit can be awarded at present, as the change in species is less than six species (as detailed in LE03). There is potential, however, to award two credits in the future if the proposed grassland sward is replaced with a species-rich sward mix and/or a green roof is incorporated on the landscape plan as recommended in LE05. The proposed locations of the brown roof and invertebrate and bird nest boxes also need to be shown on the landscape plan.

Evidence required

5.5.10 Interim design stage: One or more of the appropriate evidence types listed in The BREEAM evidential requirements section can be used to demonstrate compliance with these criteria. Also, a completed copy of the BREEAM LE 03 / LE 04 calculator and documentary evidence supporting the data used to complete the Calculator tool.

5.5.11 Final post construction phase: As per interim design stage. For large mixed use or multi-building developments, where the whole site has not been completed and ecological enhancements have not yet been added, or where features are being added at a later date in an appropriate planting season: evidence from the client or principal contractor confirming any planting will be completed within 18 months from completion of the development.

Recommended credits for LE 04: 1 out of 2

5.6 LE 05: Long-term impact on bio-diversity

5.6.1 The aim of the credit is to minimise the long-term impact of the development on the site and the surrounding area's biodiversity.

5.6.2 Two credits are available where the following criteria is met:

- An SQE is appointed prior to commencement of activities on site and they confirm that all relevant EU, local and national regulations or legislation requirements relating to the protection and enhancement of ecology have been complied with during the design and construction process;
- Where a landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion in accordance with BS 42020:20131 Section 11.1. This is to be handed over to the building owner/occupants for use by the grounds maintenance staff.

- Where additional measures to improve the assessed site's long-term biodiversity are adopted, according to Table 58.

5.6.3 Where the criteria listed above are met, one credit can be awarded where two additional measures are incorporated into the proposed development, and two credits where this is increased to four. Where the SQE confirms that some of the additional measures listed in Table 58 are not applicable to the assessed development, the credits can be awarded as follows:

Table 5.1: Additional measures to assess

Credits	Applicable additional measures				
	All	4	3	2	1
	No. of additional measures to assess				
1	2	2	2	N/A	N/A
2	4	4	3	2	1

Additional Measures

1. The principal contractor nominates a Biodiversity Champion with the authority to influence site activities and ensure that detrimental impacts on-site biodiversity are minimised in line with the recommendations of a Suitably Qualified Ecologist.
2. The principal contractor trains the site workforce on how to protect site ecology during the project. Specific training must be carried out for the entire site workforce to ensure they are aware of how to avoid damaging site ecology during operations on-site. Training should be based on the findings and recommendations for protection of ecological features highlighted within a report prepared by a Suitably Qualified Ecologist.
3. The principal contractor records actions taken to protect biodiversity and monitor their effectiveness throughout key stages of construction. The requirement commits the contractor to make such records available where publicly requested.
4. Where a new ecologically valuable habitat, appropriate to the local area, is created. This includes habitat that supports nationally, regionally or locally important biodiversity, and/or which is nationally, regionally or locally important itself; including any UK Biodiversity Action Plan (UK BAP) priority habitats, Local Biodiversity Action Plan (LBAP) habitats, those protected within statutory sites (e.g. SSSIs), or those within non-statutory sites identified in local plans. Local biodiversity expertise should be sought during the Preparation and Brief (RIBA Stage 1 or equivalent) to help identify species of local biodiversity importance on-site and ensure that the proposals support local priorities.
5. Where flora and/or fauna habitats exist on site, the contractor programmes site works to minimize disturbance to wildlife. For example, site preparation, ground works, and landscaping have been, or will be, scheduled at an appropriate time of year to minimize disturbance to wildlife. Timing of works may have a significant impact on, for example, breeding birds, flowering plants,

seed germination, amphibians etc. Actions such as phased clearance of vegetation may help to mitigate ecological impacts. This additional requirement will be achieved where a clear plan has been produced detailing how activities will be timed to avoid any impact on site biodiversity in line with the recommendations of a SQE.

5.6.5 The client is able to meet criteria 1 - 3 as well as additional measures 1, 2, 3 and 5 above.

5.6.6 The first criteria is met by appointing a SQE from BASEcology for this report and future issues and for implementing the provisions of this report to ensure compliance.

5.6.7 The second criteria for a landscape and habitat management plan would be best practice, and would be needed to ensure that the implementation of the landscape planting is successfully maintained. The scope of the management plan would be to identify all habitats and landscape areas requiring management, the setting of objectives for each area, and prescriptions for management to ensure that the objectives are met. The management plan would cover at least the first five years after project completion (Appendix D).

5.6.8 Additional measures 1 to 3 can be met by appointing a Biodiversity Champion within the contractor organisation, which is often the Site Manager. The Biodiversity Champion will include biodiversity protection in the site induction for all workers. Records of biodiversity actions will be kept by the Site Manager, such as daily inspections of protection fencing, and provision of regular reports such as within project review meetings.

5.6.9 Additional measure 4 could be met by incorporating a green roof (preferably in close proximity to the brown roof recommended in LE04). The height of the roof will be a limiting factor for some species, although there is empirical evidence of bees found at 23 stories high[12] and butterflies at 20 storeys[13]. Connectivity to other habitats may also be a limiting factor, although a research study based in London found habitat quality was more important than connectivity[14]. It is therefore recommended in such instance a substrate-based green roof (using a species-rich wildflower mix with at least 20 species rather than sedum) is preferred over a non-substrate pre-grown mat to enhance localised bio-diversity.

5.6.10 Additional measure 5 will be met by timing clearance of the introduced shrub vegetation along the rear of Castelwood House to take place outside of the bird nesting season (March - August inclusive). In addition the project team

[12] Grant, G., Engleback L. and Nicholson, B. (2003) Green Roofs – their existing status and potential for conserving biodiversity in urban areas. English Nature research report 498.

[13] Johnston, J., and Newton, J. (1993) Building Green: A guide to using plants on roofs, walls and pavements. London Ecology Unit.

[14] Kadas, G. (2006) Rare invertebrates colonizing green roofs in London Urban Habitats Vol 4. www.urbanhabitats.org Summarised in Kadas, G. and Dedge, D. Can Green Roofs provide habitat for invertebrates in an urban environment? www.livingroofs.org/NewFiles/laymansguide2.pdf

will ensure that all work is carried out in accordance with the mitigation and enhancement measures set out in this report, and in line with any specialist advice subsequently issued in the full planning application by the project architects or landscape architects in terms of timings of planting, seeding etc.

5.6.11 It is recommended that 2 out of 2 credits are achievable subject to the client team committing to the management plan and implementation of the additional measures.

Evidence required

5.6.12 Interim design stage: One or more of the appropriate evidence types listed in The BREEAM evidential requirements section can be used to demonstrate compliance with these criteria.

5.6.13 Final post construction phase: One or more of the appropriate evidence types listed in The BREEAM evidential requirements section can be used to demonstrate compliance with these criteria.

Recommended credits for LE 05: 2 out of 2

5.7 Total Recommended Awarded

5.7.1 A summary of the total achieved credits and the credits available subject to the design team accepting the ecologist's recommendations is provided below.

Table 5.2: Recommended credit summary

Issue ID	Issue name	Credits available	Credits awarded*
LE 01	Site selection	2	1
LE 02	Ecological value of site and protection of ecological features	2	2
LE 03	Minimising impact on existing site ecology	2	2
LE 04	Enhancing site ecology	2	1
LE 05	Long term impact on biodiversity	2	2
Total		10	8

*Subject to design team accepting ecologist's recommendations

APPENDIX A

LEGISLATION AND POLICY CONTEXT

LEGISLATION AND POLICY CONTEXT

Introduction

The following Appendix sets out details of legislation within the UK and how this legislation applies to particular species groups such as bats. The key pieces of international and national legislation are detailed beneath.

International and national legislation

EC Habitats Directive

In 1992 the then European Community adopted Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the Habitats Directive. The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring member states to introduce protection for these habitats and species of European importance. The mechanism for protection is through the designation of Special Areas of Conservation (SACs), both for habitats and for certain species listed within Annex II. There are a number of species listed within Annex II of the Habitats Directive that are present within the UK; these include four lower plant species, nine higher plant species, six species of molluscs, six species of arthropods, eight species of fish, two species of amphibian, and nine species of mammal.

The Bern Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) came into force in 1982. The principal aims of the Convention are to ensure the conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix 3. To this end the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) was adopted in Bonn, Germany in 1979 and came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention), concluding multilateral agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix 2 of the Convention), and by undertaking co-operative research activities.

Convention on Biological Diversity

The Convention on Biological Diversity (Biodiversity Convention or CBD) was adopted at the Earth Summit in Rio de Janeiro, and entered into force in December 1993. It was the first treaty to provide a legal framework for biodiversity conservation. Contracting Parties are required to create and enforce national strategies and action plans to conserve, protect and enhance biological diversity.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the principle mechanism for the legislative protection of wildlife in Great Britain. However it does not extend to Northern Ireland, the Channel Islands or the Isle of Man. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (the 'Bern Convention') and the European Union Directives on the Conservation of Wild Birds (79/409/EEC) and Natural Habitats and Wild Fauna and Flora (92/43/FFC) are implemented in Great Britain.

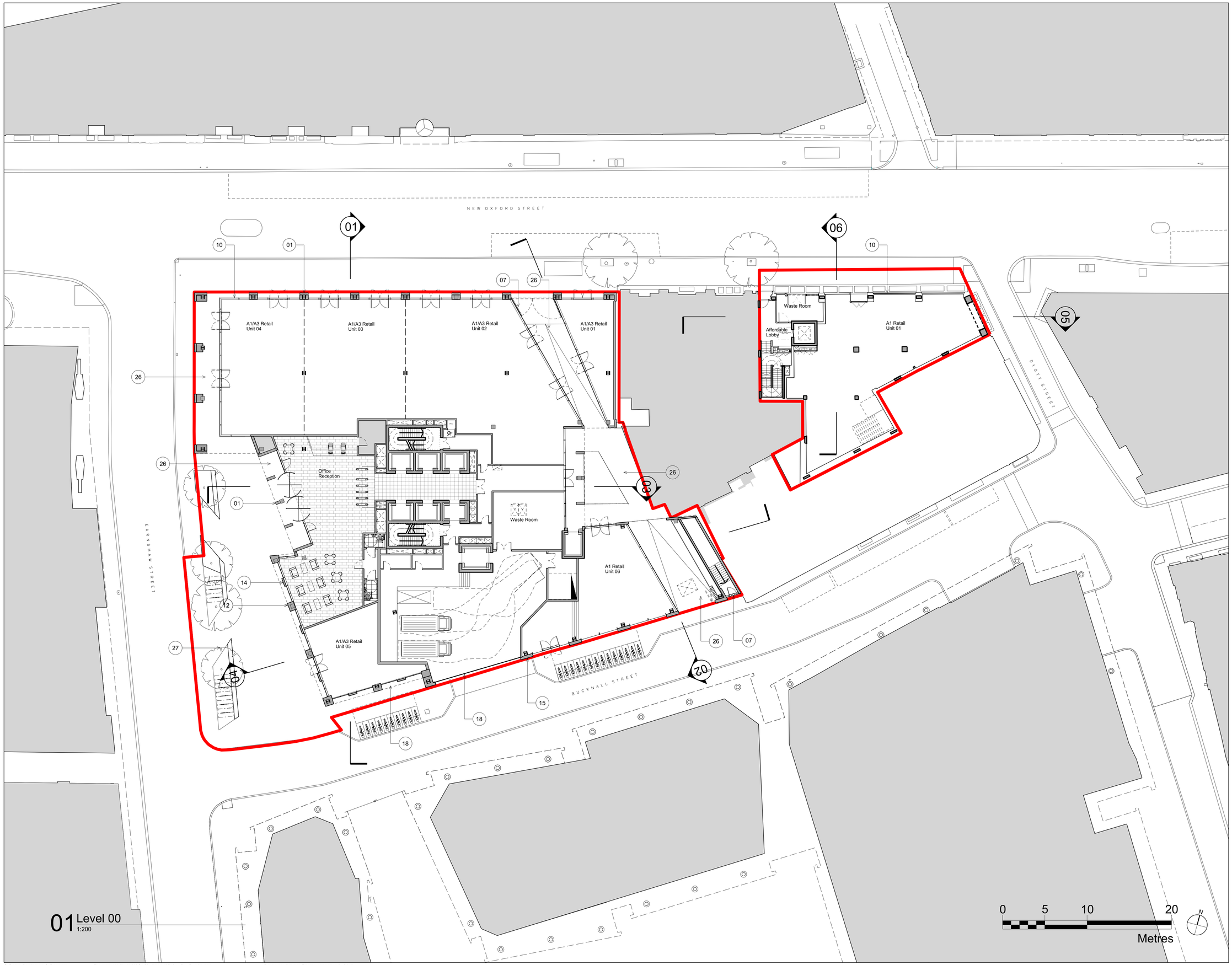
Conservation of Habitats and Species Regulations 2010, as amended

In the UK the Council Directive 92/43/EEC has been transposed into national laws by means of the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended), and the Regulations (Northern Ireland) 1995 (as amended). The Regulations came into force on 30 October 1994, and have been amended several times. Subsequently the Conservation of Habitats and Species Regulations 2010 was created which consolidates all the various amendments made to the 1994 Regulations in respect of England and Wales and is commonly known as the 'the Habitats Regulations'. In Scotland the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the 1994 Regulations. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

The Regulations contain five Parts and four Schedules, and provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

APPENDIX B

PROPOSED SITE PLAN - Drawing A_PL_P_100



01 Level 00
1:200

Disclaimer

Do not scale from this drawing.
Check all dimensions on site before fabrication or setting out.

Notes

Key

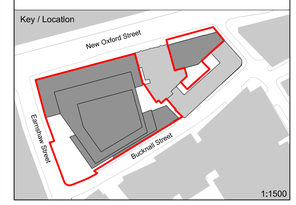
01 Precast masonry element. Pale colour
02 Double glazed unit with aluminium frame
03 Bronze coloured aluminium window frame
04 Bronze coloured aluminium spandrel
05 Precast masonry panel with cast in relief. Pale colour
06 Granite plinth
07 Decorative metalwork screening panel
08 Decorative metalwork balustrade
09 Decorative metalwork panel
10 Retail glazing
11 Retail signage zone
12 Handcut Brick. Dark Grey colour
13 Precast lintel
14 Handcut Brick textured panel. Dark grey colour
15 Handcut Brick. Varied warm colour pallette
16 Vaulted soffit
17 Dark grey aluminium vertical louvres with concealed framing and close spacing for ventilation.
18 Loading bay door. Bronze colour aluminium vertical louvres
19 Red brick to match existing
20 Buff brick to match existing
21 Double glazed windows to match existing style
22 Precast masonry element. Colour to match existing
23 Glass balustrade
24 Metal spandrel. Dark grey colour
25 Concrete pavlors
26 Fine grain landscape finish (TBC)
27 Large grain landscape finish (TBC)

Rev	Notes	Date	Dwn	Iss

Consultants

Structural Engineer:	Davies Maguire & Whitby
M&E Engineer:	GDM Partnership
Cost Consultant:	Currie & Brown
Planning Consultant:	Gerald Eve

Key / Location



Robin Partington & Partners

Castlewood
85 New Oxford Street
London
WC1A 1DG
+44 20 7419 3500
mail@rpplondon.com
www.rpplondon.com

Client
Royal London Asset Management

Project
Castlewood House, London, W1A

Drawing Title
General Arrangement
Proposed Plan
Ground Level

Scale	Drawn By	Issued By
1:200 @ A1	RPP	RPP

PLANNING

Project No.	Drawing No.	Revision
15023	A_PL_P_100	00

Date Last Saved: Friday, January 13, 2017

File Name: Y:\15023\CAD_Sheets\PL\A_PL_P_100.dgn
Date Last Saved: Friday, January 13, 2017

APPENDIX C

TARGET NOTES

TARGET NOTES

TN	Target note	Photograph
1	Castlewood House - commercial building w/ Flemish bond brickwork and decorative ground floor façade along New Oxford Street and Earnshaw Street. Flat cascading roof in terraced fashion. No signs of bird nests.	
2	Medius House – commercial building w/ stone brick base on bottom two storeys. English bond brickwork above and decorative stone brick arches. Flat concrete roof w/ steeply pitched slate edges and dormer windows overlooking New Oxford Street and Dyott Street. No signs of bird nests.	
3	Small courtyard behind Castlewood House. Two low yew hedges along northern and eastern edges w/ ornamental shrubs opposite. Young Italian alder and recreational seating in middle. No signs of birds nests in vegetation.	

APPENDIX D

LANDSCAPE AND HABITAT MANAGEMENT PLAN

LANDSCAPE AND HABITAT MANAGEMENT PLAN

Mitigation and Programme Of Works

Brown Roof

Substrate material should be added to a flat section of roof in order to create suitable habitat for black redstart (*Phoenicurus ochruros*). The substrate should be based on a mix of aggregate, such as crushed brick or expanded clay pellets (Leca), and topsoil or peat free compost. This should then be overlaid with rock and / or stone chippings.

A central mound area of sand or soil is compacted to form a sandcastle effect that is angled at 30 degrees with the broadest area south facing. The mound is then covered with boulders around 10 – 15 cm in size that are loosely placed to allow entry by invertebrates into the central area. Providing such features for invertebrates to colonise on a brown roof will in turn provide an abundant food source for black redstart.

Most materials used in the implementation of a brown roof can be up to 100% recycled. With the careful selection of products, it is possible to reach this percentage. Suppliers and manufacturers should also be able to provide certification to substantiate this. However if this is not possible, a minimum of 40% recycled products should be used.

Vegetation can be introduced onto the brown roof although it can also be left to colonize naturally. However, it is important that the majority of a brown roof designed specifically for black redstarts should consist of bare or sparsely vegetated areas. If the roof is to be seeded or plug planted this should be done with species typical of drought stressed and nutrient poor conditions.

Suggested plant species include:

- Perforate St John's wort (*Hypericum perforatum*);
- Yellow-wort (*Blackstonia perfoliata*);
- Common centuary (*Centaurium erythraea*);
- Kidney vetch (*Anthyllis vulneraria*);
- Common bird's-foot-trefoil (*Lotus corniculatus*);
- Black medick (*Medicago lupulina*);
- Dove's-foot crane's-bill (*Geranium molle*);
- Common eyebright (*Euphrasia nemorosa*);
- Betony (*Stachys officinalis*);
- Devil's–bit scabious (*Succisa pratensis*);
- Ribwort Plantain (*Plantago lanceolata*); and,
- Selfheal (*Prunella vulgaris)*.

Once established a brown roof created for black redstarts will need very little, if any maintenance. The low nutrient status and drought conditions will keep any vegetation that does establish sparse and low growing.

If sedum matting is to be used it should only cover a small amount of the total roof area and should be planted into the aggregate mix to encourage colonization by other plant species. The use of wildflower turf is preferred as an alternative to sedum matting.

Grass Seeding

Endeavour to select ground that is not highly fertile and does not have a problem with perennial weeds. Good preparation is essential to success so aim to control weeds and produce a good quality seedbed before sowing.

To prepare a seedbed first remove weeds using repeated cultivation or a herbicide (where necessary). Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll, or tread, to produce a firm surface.

Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed but firm in with a roll, or by treading, to give good soil / seed contact.

Tree Planting

Trees will be supplied and installed by the contractors in the locations specified on a planting plan prepared by the landscape architect which will contain a suggested planting list and numbers of plants required for each area.

It is not anticipated any ecological input will be required at this stage - the site contractors should liaise with the landscape architect who will provide on site support if required.

Invertebrate & Bird Boxes

As per the recommendations specified in LE04, the following invertebrate and bird boxes (or suitable alternative approved by an SQE) are to be added to the surrounds of the respective buildings to enhance the ecological value of the site:

- 1 x Schwegler insect–Combi box;
- 2 x Schwegler 16s swift box;
- 2 x Schwegler brick box Type 25; and,
- 2 x Schwegler open fronted box 2HW.

Monitoring and Management Programme

On completion of the works monitoring will be required for certain aspects, and on-going management tasks will be required in order to maintain the habitats created. The monitoring and management activities are summarised in Table C.1 below and more detail is given below this. This plan will detail an initial five-year period and will then be reviewed.

Table C.1 Summary of Monitoring and Management

Personnel	Action	Frequency	Outputs
Year 1			
Planting contractor or landscape architect	Monitoring of landscape planting, actions per visit and annual actions (see detail below).	Every 3 months.	Prune damaged trees annually.
Landscape contractor	Grassland mowing regime. Cut to 70 mm.	Cut 3 times per year, avoiding mid June-mid August.	None.
	Monitor condition of invertebrate & bird boxes.	Once, after August.	Repair and replace if necessary.
	Monitor condition of brown roof	Once, after August.	None.
Years 2, 3, 4 & 5 - Same actions and frequencies as above apart from:			
Landscape contractor	Grassland mowing regime. Cut to 70 mm.	Cut twice per year, avoiding mid June-mid August	None.
	Brown roof management	Once	Reduce height of vegetation if necessary to 150 mm outside of the nesting bird season (March to July inclusive).
Landscape architect / ecologist	Review of this ecology and landscape management plan.	At end of five-year monitoring and management period.	Amend and re-issue plan detailing any new actions if necessary.

Monitoring and Maintenance of Tree Planting

The planting will be monitored, either by the planting contractor or the landscape architect every three months. During each visit the person appointed shall ensure the following:

- The planting shall be maintained 95% clear of weed growth;
- All planting is wind firm;
- The security and fitting of all shrub guards and where necessary adjust or replace; and,
- All planted areas free from all kinds of litter.

Grassland Seeded Areas

The seeded grassland areas will be cut three times per year in the first two years after seeding. The sward in the seeded area will be cut to 70 mm. This cutting regime will favour the establishment of a relatively diverse sward, which would be also suitable for invertebrates. There will be no cuts between mid-June and mid-August, to allow most plant species to produce flowers and seeds. Cutting during excessively wet periods will be avoided.

Once the sward is established, it will be mown to 70 mm twice a year (years 3 - 5), avoiding cuts between June and August. This will prevent the sward from becoming too long and increase plant species diversity.

Invertebrate & Bird Boxes

Invertebrate, and bird boxes will be inspected annually. Any boxes showing signs of damage or decay should be replaced on a like-for-like basis and in the same location. Replacement should be undertaken after August and before February.

Ongoing tasks

Following the initial five-year monitoring and management period a small number of on-going maintenance tasks will be required to be implemented into the future as described above. These tasks are:

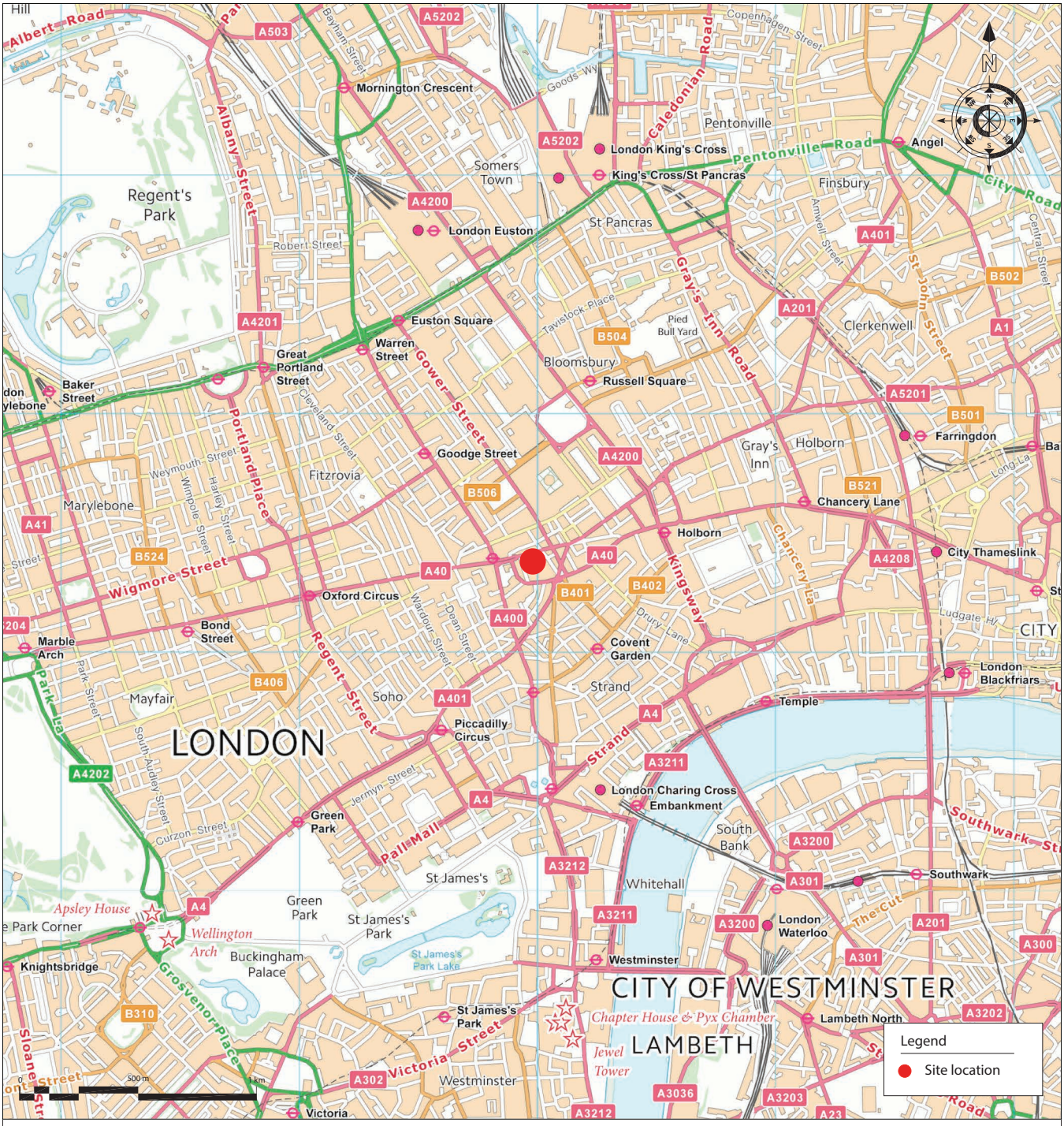
- Mowing regime for grassland areas; and,
- Invertebrate and bird box maintenance

Management Plan Review

Following the initial five year monitoring period, this plan should be reviewed by the landscape architect / ecologist, and updated with any additional actions added.

APPENDIX E

FIGURES



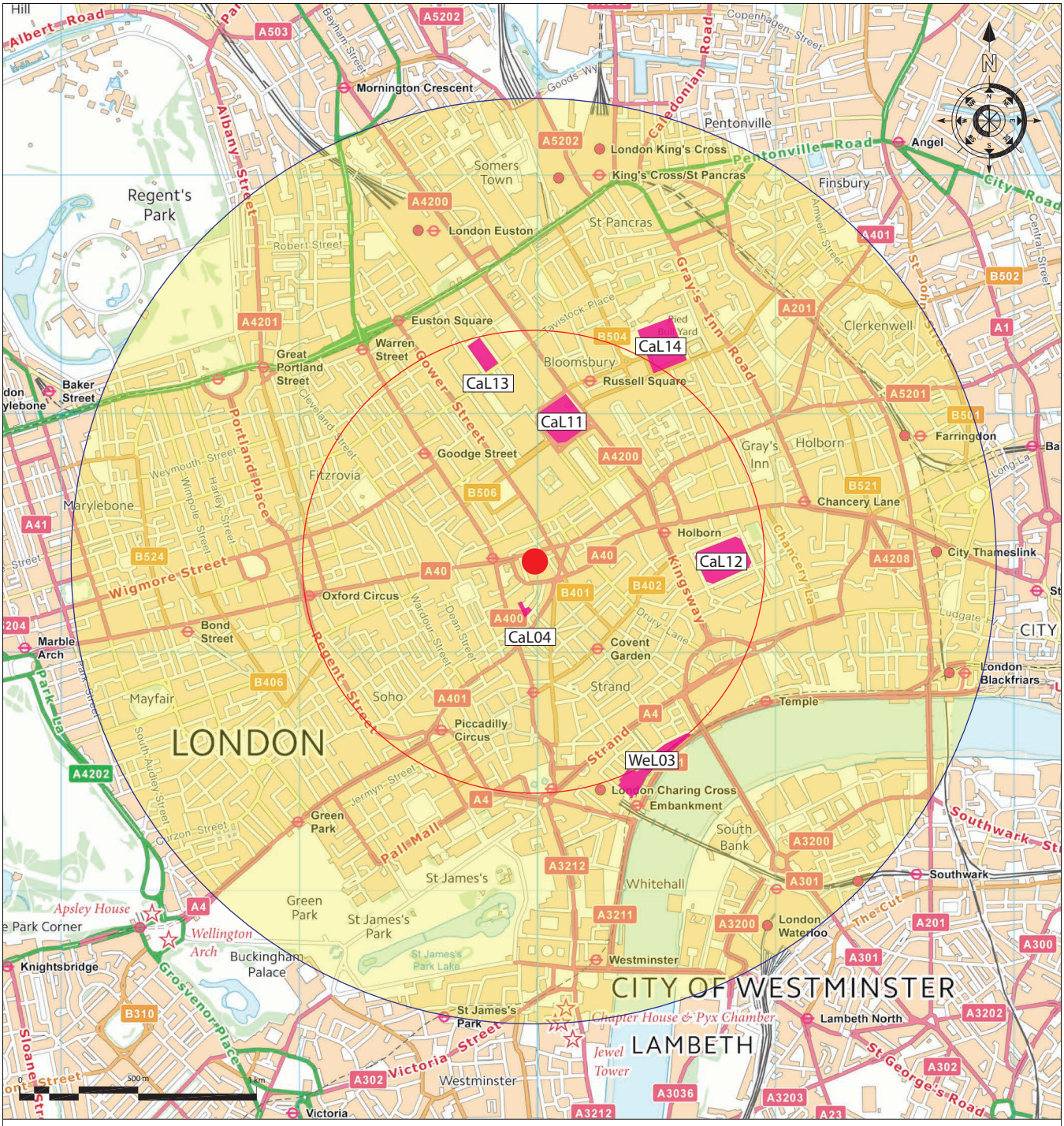
201614 Castlewood W1A

Location Plan

January 2017

1:250000@A4

basecology



Legend

- Site location
- Search radius (1 km)
- Search radius (2 km)
- SINC

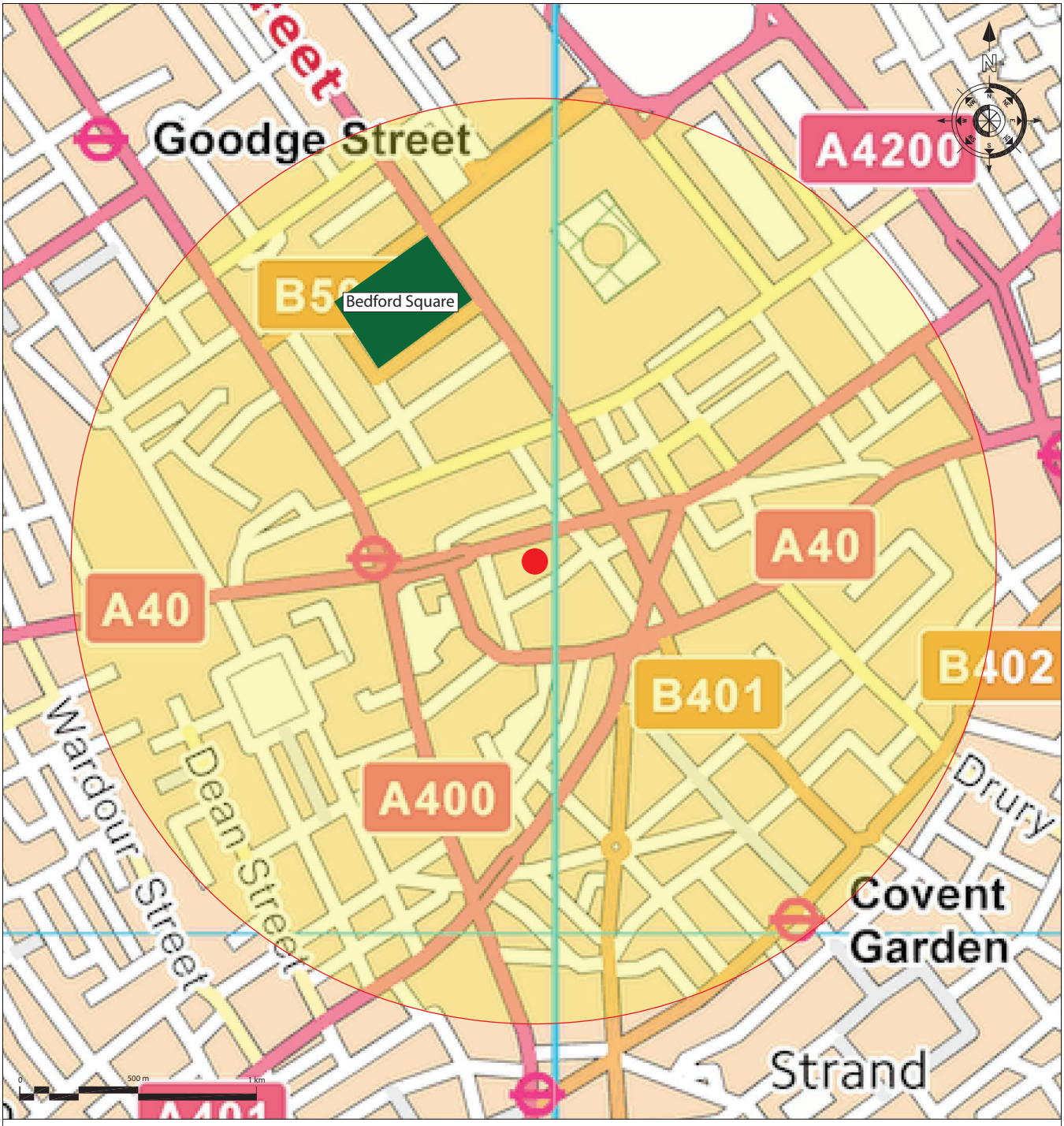
basecology

201614 Castlewood W1A

Statutory and Non-statutory Designated Sites

January 2017

1:250000@A4



Legend

- Site location
- Search radius (500 m)
- Deciduous woodland

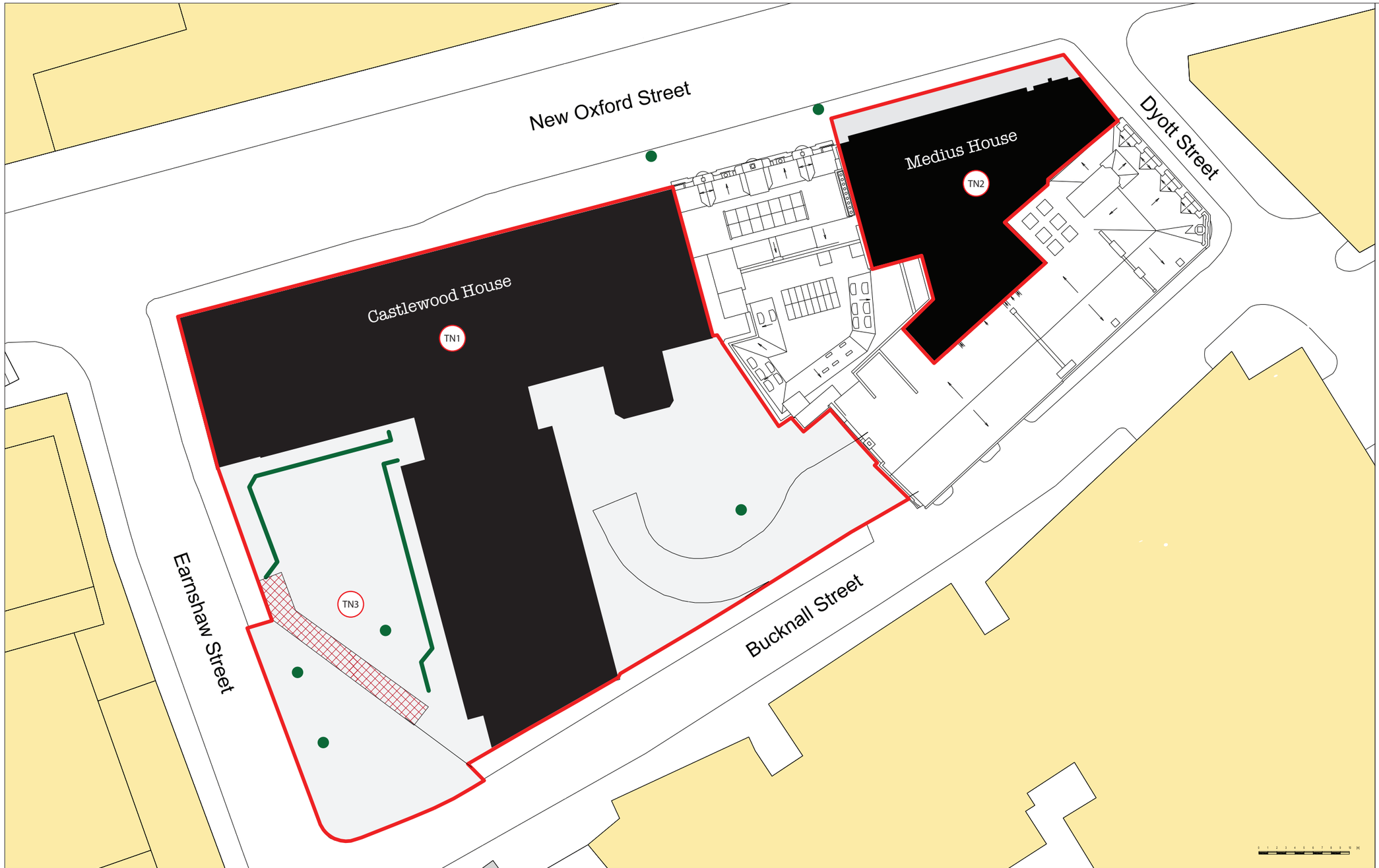
basecology

201614 Castlewood W1A

UKBAP, London BAP and Habitats of Principle Importance

January 2017

1:250000@A4



basecology

201614 Castlewood W1A

Phase 1 Habitat Survey

January 2017

1:500 @A3