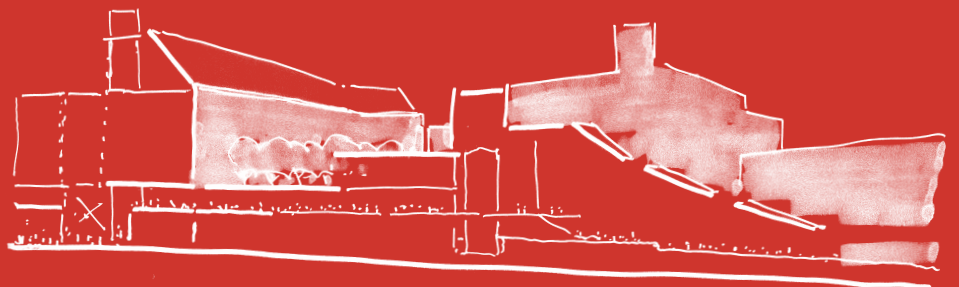


The British Library Extension

January 2022

Preliminary Ecological Assessment



The British Library and SMBL
Developments Ltd

British Library Extension

Preliminary Ecological Assessment
and Site Evaluation

Issue | January 2022

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 249622-90

Ove Arup & Partners Ltd
8 Fitzroy Street
London
W1T 4BJ
United Kingdom
www.arup.com

ARUP

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Executive Summary

The purpose of this report is to provide a Preliminary Ecological Assessment (PEA) and site evaluation for the proposed British Library extension ('Proposed Development') centred at OS grid reference TQ 29922 82990, referred to as 'the site'.

An extended Phase 1 habitat survey and preliminary bat roost assessment of the site was conducted on 25th August 2020. An ecological background data search was also undertaken to obtain information on statutory and non-statutory designated sites and protected species records held by Greenspace Information for Greater London (GiGL). Additional information on statutory designated nature conservation sites was obtained from the government's MAGIC website. This report details the habitats present at the site and considers the potential for them to support protected and/or notable species and assesses the potential impact of the Proposed Development within the site.

There is one statutory designated site within 1km of the site. Camley Street Nature Park, a Local Nature Reserve (LNR), is considered sufficiently isolated from the Proposed Development, that any impacts are considered unlikely. Ten non-statutory designated sites exist within 1km of the site, all Sites of Importance for Nature Conservation (SINCs), which are designated for their mosaic of habitats, the fauna they support and their amenity value. Again, due to their isolation from the site and the type of development specified, it is considered that any impacts are unlikely.

The site predominantly comprises buildings and hard standing with introduced shrub, amenity grassland and other typical landscaped habitats. Part of the site is currently in use as an urban allotment. The 'Story Garden' is a temporary instalment with allotment-style planting in containers and small temporary buildings, which include metal containers, sheds and a main 'office' constructed mainly from wood.

No evidence of bats was recorded during the preliminary bat roost assessment of the library building within the site. No trees within the site supported features suitable for roosting bats.

Five black redstart *Phoenicurus ochruros* surveys were undertaken in 2018 and 2019 to establish the status of this species at the site. Black redstart was not recorded during any of these surveys and is therefore considered not to utilise the site for breeding or foraging at this time.

Common species of birds are likely to breed in vegetated areas of the site and consideration of their presence is required to ensure legislation is complied with during the project. Provided the recommendations for protection of breeding birds are adhered to, it is considered that there will be no negative impacts as a result of the development proposals.

Opportunities exist for ecological enhancement of the site. Ecological mitigation and enhancement proposals will ensure the ecological resilience of the Proposed Development and to ensure the design's compliance with the revised National Planning Policy Framework policies and relevant local planning objectives.

1 Introduction

1.1 Background

Ove Arup & Partners Limited ('Arup') has been appointed by The British Library and SMBL Developments Ltd to conduct an Environmental Impact Assessment (EIA) for the Proposed Development of an extension to the British Library, to a plot directly north of the existing British Library (the 'site') located in the south of the London Borough of Camden (LBC).

As part of the planning process, a PEA was undertaken for the purposes of scoping, to identify ecological constraints associated with the development and recommend opportunities for ecological enhancement within the site. The findings of the PEA are reported here. The Proposed Development site is shown on the Phase 1 map included in Appendix B.

1.2 Site Description

Appendix A shows the location of the Proposed Development which is located within LBC. The 1.66ha site is directly bound to the north by the Francis Crick Institute along Dangor Walk, to the east by St. Pancras International Railway Station on Midland Road, south by the existing British Library building and beyond that Euston Road (the A501) and to the west by residential buildings in Somers Town fronting onto Ossulston Street. Beyond these, Regent High School and St. Pancras Old Church lie to the north, Kings Cross Railway to the east, the British Museum and Great Ormond Street Hospital to the south and Euston Station, University College London and Regents Park to the east. Directly to the south, abutting the site, is the Grade I listed British Library building.

1.3 Proposed Development

The Proposed Development would involve extending the northern aspect of the existing British Library to provide library accommodation; commercial space designed to cater for knowledge quarter uses (including life sciences, cultural, scientific and heritage collections and data sciences); retail space; and the Crossrail 2 works at basement level.

The Proposed Development would provide a gross internal area (GIA) of up to approximately 97,000m². The new library accommodation and the Alan Turing Institute and public circulation, including a public foyer, would be provided at approximately 10,000m² in addition to a replaced BLCC and BL tank farm and other library infrastructure. Approximately 76,000m² (GIA) would be provided for commercial space together with retail. Infrastructure related to Crossrail 2 would be provided at approximately 4,300m² (GIA), plus a shaft descending between basement levels 2-7. With respect to Crossrail 2, the Proposed Development would provide the main civils and structural elements of the Euston St Pancras Station eastern shaft and passenger subway tunnel. There will be adaptations to existing library operational areas, including the loading bay.

The Proposed Development would be ‘car lite’ with five wheelchair-accessible car parking spaces, four operational spaces for maintenance vehicles and a single minibus bay. The BLCC and the Story Garden are located within the Site. In order to facilitate the construction of the Proposed Development, the BLCC would be relocated and a new community garden would be created within the Site.

1.4 Scope of Survey

The purpose of this report is to confirm the ecological baseline for the site.

This report has been prepared with reference to current guidelines for PEA (CIEEM, 2017)¹ and in accordance with BS42020:2013: Biodiversity – Code of Practice for Planning and Development (BSI, 2013)².

This report should also be read in conjunction with the following ecological reports prepared by Ove Arup & Partners Ltd: ‘British Library – Ecology Walkover survey, Arup, (2018)’ and ‘British Library – Black Redstart Survey Report, Arup (2019)’, both are included in Appendix C.

2 Methodology

2.1 Background Data Search

An ecological data search was undertaken in August 2020 for information on statutory and non-statutory designated sites and records of protected and/or notable species held by GiGL within a 1km³ radius. Only records dated from within the last ten years were considered in the baseline review. Records older than ten years are no longer considered to be representative of the status of biodiversity in the local area, due to the changes in habitats over time and resulting changes in species distribution. Additional information on statutory designated nature conservation sites and granted Natural England European Protected Species licence applications was obtained from the government’s MAGIC website⁴.

2.2 Planning Policy Review

A number of planning policies, which relate to ecology and biodiversity, are set out within the following documents and were reviewed:

- National Planning Policy Framework (NPPF) (2021)⁵;

¹ Chartered Institute of Ecology and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Assessment Technical Guidance Series. Available from: <http://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea>; accessed 09 September 2020.

² British Standards Institute (BSI), (2013). ‘BS42020 - Biodiversity Code of Practice for Planning and Development.’ BSI, London.

³ The data search radius was considered sufficient given the urban context of the site.

⁴ Natural England, (2013); ‘Magic’. Available at: <http://magic.defra.gov.uk/>.

⁵ Ministry of Housing, Communities and Local Government, London (2021) *Revised National Planning Policy Framework*. Department for Communities and Local Government, London.

- The London Plan⁶;
- Camden Local Plan⁷; and
- Camden Planning Guidance – Biodiversity⁸.

The revised NPPF states that the planning system should contribute to and enhance the natural and local environment. This should be through minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

The NPPF is implemented at the local level in this instance by the Camden Local Plan. Within this the Council states it will ‘assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a Proposed Development, proportionate to the scale of development proposed’ and consider the ‘...safeguarding of habitats and species.’

Camden Planning Guidance on biodiversity states the following as key points:

- A biologically diverse natural environment has an important role in economic prosperity, health and wellbeing of Camden residents, workers and visitors;
- Councils have a statutory duty to have regard to the purpose of conserving biodiversity, particularly where there are protected species and habitats;
- Biodiversity may be a material consideration whether or not the site or any features (e.g. habitats, species) benefit from any statutory protection;
- Proposals must demonstrate how biodiversity considerations have been incorporated into the development; how the five-point Mitigation Hierarchy has been addressed; and what positive measures for enhancing biodiversity are planned.

Relevant legislation was also reviewed and is outlined in Appendix D.

2.3 Field Surveys

All ecological surveys which have been undertaken at the site are detailed in Table 1. Surveys were undertaken by suitably experienced ecologists following standard methods as described in the Chartered Institute of Ecology and Environmental Management (CIEEM) good practice guidelines⁹.

Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

⁶ The London Plan. Available at: <https://www.london.gov.uk/what-we-do/planning/london-plan>

⁷ Camden Local Plan. Available at:

<https://www.camden.gov.uk/documents/20142/4820180/Local+Plan.pdf/ce6e992a-91f9-3a60-720c-70290fab78a6>

⁸ Camden Planning Guidance – Biodiversity. Available at:

<https://www.camden.gov.uk/documents/20142/4823269/Biodiversity+CPG+March+2018.pdf/daf83dad-d68d-6964-99b4-aef65d639304>

⁹ Available at: <https://cieem.net/>

Full details, including methods and results for the black redstart surveys are provided in Appendix C.

Table 1: Ecological surveys undertaken at the site

Survey Type	Date
Extended Phase 1 habitat survey and preliminary bat roost assessment	25 th August 2020
Black redstart surveys	30 th April 14 th May and 3 rd June 2019
Black redstart surveys	19 th and 25 th June 2018
Site walkover survey	30 th May 2018

2.3.1 Preliminary Ecological Appraisal

A PEA comprising a Phase 1 habitat survey and protected species/preliminary bat roost assessment was undertaken following standard methods as described in the Guidelines for Preliminary Ecological Appraisal¹⁰ and the Phase 1 habitat survey Methodology¹¹.

The survey was conducted by Arup ecologists Tracey McLean and Rob Selwyn on 25th August 2020. Tracey is a Consultant Ecologist with over 15 years of experience in consultancy. Tracey is a Chartered Biologist (CBiol) and a Full Member of CIEEM. Rob is a Consultant Ecologist with over three years' industry experience.

The PEA included:

- mapping of the habitats on site and recording of characteristic plant species, with target notes used to identify particular areas of interest or concern (see Appendix B);
- assessment of features which have the potential to support protected and/or notable species listed under Section 41 of the 2006 Natural Environment and Rural Communities (NERC) Act; and
- recording of non-native invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Weather conditions during the site survey were dry and overcast, with a light wind and a temperature of 20°C.

¹⁰ Chartered Institute of Ecology and Environmental Management (CIEEM) (2017); 'Guidelines for Preliminary Ecological Appraisal.' Available from: <https://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea->

¹¹ JNCC (2010) *Handbook for Phase 1 Habitat Survey*. Joint Nature Conservation Committee, Peterborough.

2.3.2 Preliminary Bat Roost Assessment

The site was evaluated for its suitability to support foraging, commuting and roosting bats, in accordance with good practice guidance¹². A preliminary bat roost assessment of the building within the site was completed by Tracey McLean and Rob Selwyn on 25th August 2020. This involved an external inspection from the ground to look for features that bats could use for entry/exit and roosting, and to search for any field signs of bats. The search covered potential roosting features (PRFs) and areas where bat droppings may collect.

A ground-level tree assessment for bats was also undertaken by Tracey McLean and Rob Selwyn on 25 August 2020. All accessible trees were inspected from ground-level to assess their potential to support roosting bats. Tree-features suitable for bats include:

- loose, flaking or folding bark;
- cracks and fissures in limbs; and
- holes bored by woodpeckers, or any downward facing crevice or hole in the limbs or trunk.

Signs indicating possible use by bats include;

- scratches and staining around an entry point;
- bat droppings in, around or below an entry point;
- squeaking noises;
- flies around an entry point;
- a distinctive smell of bats; and
- smoothing of surfaces around a cavity.

Both surveys were undertaken using binoculars.

Table 2: Classification criteria for bat roosting potential (adapted from good practice guidance¹²)

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

¹² Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists; Good Practice Guidelines (3rd Edn). The Bat Conservation Trust, London.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p> <p>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	<p>A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).</p>	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	<p>A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.</p>	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

2.3.3 Black Redstart Surveys

Five black redstart surveys were undertaken at the site during 2018 and 2019. The full details of these surveys including methodology, survey dates, etc, are set out in the survey reports which are included in Appendix C.

2.4 Limitations

Ideally, all five black redstart surveys would have been conducted within the same calendar year. Site access restrictions prevented this from being possible in this case. The surveys were conducted in June 2018 and April, May and June in 2019. However, all surveys were undertaken at the correct time of year and in suitable

weather conditions and it is considered that the results provide a robust assessment of the site in terms of black redstart presence/absence and that this is not a significant limitation.

No account can be made for the presence or absence of species on any one survey occasion, since they may travel over wide areas and/or have large home ranges. Protected bird species may visit the site at any future time. However, professional judgement and experience allows for the likely presence of these species to be predicted with sufficient certainty so as to not significantly limit the validity of the survey results.

3 Results

3.1 Desk Study

3.1.1 Designated Nature Conservation Sites

3.1.1.1 Statutory Designated Sites

A desk-based search shows that there are no sites with European or National statutory designation and one Local Nature Reserve (LNR) within a 1km radius of the site.

There is one statutory designated nature conservation site within 1km of the site, details of which is included in Table 3 below.

Table 3: Statutory designated sites within 1km of the site

Site name	Reason for designation	Distance and orientation from site
Camley Street Nature Park	This site is an urban wild space containing a range of habitat examples created on former vacant land. The wildlife interest is of high local educational and social value owing to the severe deficiency of wildlife sites in Greater London. The site is primarily an educational resource and a means of increasing local community awareness of the natural environment. There is a field centre building with classroom facilities and an on-site teacher/ecologist.	0.46km north

3.1.1.2 Non-statutory Designated Sites

Sites of Importance for Nature Conservation (SINCs) are recognised by the Greater London Authority and London borough councils as important wildlife sites. There are three tiers of sites:

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

A total of 10 non-statutory designated sites exist within 1km of the site, as detailed in Table 4 below, comprising:

- 2 Sites of Metropolitan Importance for Nature Conservation (SMINC);
- 1 Sites of Borough Importance for Nature Conservation (SBINCs); and
- 7 Sites of Local Importance for Nature Conservation (SLINCs).

Table 4: Non-statutory designated sites within 1km of the site

Site name & SINC Grade	Reason for designation	Distance and orientation from site
London's Canals: Metropolitan	London's canals support a wide range of aquatic flora, amongst which are found a number of locally uncommon species. London's network of canals fulfil an important function in allowing nature into heavily built-up environments.	Closest: 0.5 km north
Camley Street Nature Park: Metropolitan	See details in Table 3.	0.46 km north
St. Pancras Gardens: Borough Grade II	The site contains some fine mature trees particularly London plane <i>Platanus x hispanica</i> , common lime <i>Tilia x europaea</i> and poplar <i>Populus</i> sp. Field madder <i>Sherardia arvensis</i> , an unusual plant for urban London, is present.	0.51 km northwest
Calthorpe Community Garden: Local	The site contains a number of scattered trees, including young beech <i>Fagus sylvatica</i> , ash <i>Fraxinus excelsior</i> , and oak <i>Quercus robur</i> . Next to a small pond is a mosaic of scrub and grassland with scattered silver birches <i>Betula pendula</i> and rowans <i>Sorbus aucuparia</i> with abundance of deadwood, providing habitat for birds and invertebrate species.	0.72 km southeast
St Andrew's Gardens: Local	Mature common lime, beech and London plane trees line the paths and boundaries. Extensive shrubberies include many insect-attracting species such as buddleia <i>Buddleja davidii</i> , lilac <i>Syringa vulgaris</i> and rose <i>Rosa</i> sp. The lawns contain wildflowers, including lesser celandine <i>Ranunculus ficaria</i> and yarrow <i>Achillea millefolium</i> .	0.90 km southeast
St George's Gardens: Local	A site which contains many mature trees, particularly London plane, weeping ash <i>Fraxinus excelsior var. pendula</i> and common lime. There are areas of shrubbery which contain insect-attracting plants, as well as providing nesting cover for birds.	0.62 km southeast
Russell Square: Local	This square is one of the largest in central London and contains many mature trees. These are mostly London planes. Other trees include common lime, beech and oak. A hornbeam <i>Carpinus betulus</i> hedge has recently been planted at the site's boundary.	0.85 km south
Gordon Square: Local	London square with numerous London plane trees as well as common lime, hornbeam, flowering cherry <i>Prunus</i> sp. and purple cherry-plum <i>Prunus cerasifera var. Pissardii</i> . Breeding birds	0.66 km southwest

Site name & SINC Grade	Reason for designation	Distance and orientation from site
	include wren <i>Troglodytes troglodytes</i> , robin <i>Erithacus rubecula</i> , blackbird <i>Turdus merula</i> , blue tit <i>Cyanistes caeruleus</i> , mistle <i>Turdus viscivorus</i> and song thrush <i>Turdus philomelos</i> .	
Coram's Fields: Local	There are numerous mature London plane trees, and a hedge of beech. At the western edge of the site, white mulberry <i>Morus alba</i> and black mulberry <i>M. nigra</i> have been planted, while ground flora is dominated by species characteristic of acid grassland, such as red and sheep fescue <i>Festuca rubra</i> and <i>F. ovina</i> , parsley-piert <i>Aphanes arvensis</i> , field madder and a variety of ruderal plants. Also present is a small pond supporting common amphibians.	0.72 km southeast
Winton Primary School Garden: Local	This small school nature area has recently been refurbished. It contains a pond and dipping platform and is well used by the school for environmental education.	0.75 km southwest

3.1.2 Protected and Notable Species

Table 5 shows the species of potential interest that have been recorded within 1km of the site in the last 10 years.

Table 5: Protected and notable species recorded within 1km of the site in the last 10 years

Common name	Latin name	Designation and status*	Number of Occurrences
Birds			
Black redstart	<i>Phoenicurus ochruros</i>	WCA1.1 BAP Priority London BoCC - Red	3
Common (Mealy) redpoll	<i>Acanthis flammea</i>	BAP Priority London Local Spp of Cons Conc	3
Common swift	<i>Apus apus</i>	Local Spp of Cons Conc	11
Common tern	<i>Sterna hirundo</i>	Birds Dir Anx 1 Local Spp of Cons Conc	4
Dunnock	<i>Prunella modularis</i>	BAP Priority London Local Spp of Cons Conc	29
Fieldfare	<i>Turdus pilaris</i>	WCA1.1 BoCC - Red	2
Goldcrest	<i>Regulus regulus</i>	Local Spp of Cons Conc	9
Grey heron	<i>Ardea cinerea</i>	Local Spp of Cons Conc	24

Common name	Latin name	Designation and status*	Number of Occurrences
Grey wagtail	<i>Motacilla cinerea</i>	Local Spp of Cons Conc BoCC - Red	15
Herring gull	<i>Larus argentatus</i>	BAP Priority London Local Spp of Cons Conc BoCC - Red	16
House sparrow	<i>Passer domesticus</i>	NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc BoCC - Red	43
Kestrel	<i>Falco tinnunculus</i>	Local Spp of Cons Conc	21
Kingfisher	<i>Alcedo atthis</i>	Birds Dir Anx 1 WCA1.1 Local Spp of Cons Conc	7
Lesser black-backed gull	<i>Larus fuscus</i>	Local Spp of Cons Conc	9
Lesser redpoll	<i>Acanthis cabaret</i>	NERC Act Section 41 UKBAP BoCC - Red	2
Marsh harrier	<i>Circus aeruginosus</i>	Birds Dir Anx 1 WCA1.1	1
Mute swan	<i>Cygnus olor</i>	Local Spp of Cons Conc	3
Peregrine	<i>Falco peregrinus</i>	Birds Dir Anx 1 WCA1.1 BAP Priority London Local Spp of Cons Conc	Not available - confidential records
Redwing	<i>Turdus iliacus</i>	WCA1.1 BoCC - Red	6
Snipe	<i>Gallinago gallinago</i>	Local Spp of Cons Conc	1
Starling	<i>Sturnus vulgaris</i>	BAP Priority London Local Spp of Cons Conc BoCC - Red	27
Turtle dove	<i>Streptopelia turtur</i>	NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc BoCC - Red	Not available - confidential records
Invertebrates			
August thorn	<i>Ennomos quercinaria</i>	NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc	3
Balsam carpet	<i>Xanthorhoe biriviata</i>	BAP Priority London Local Spp of Cons Conc	1

Common name	Latin name	Designation and status*	Number of Occurrences
Buttoned snout	<i>Hypena rostralis</i>	Local Spp of Cons Conc	2
Jersey tiger	<i>Euplagia quadripunctaria</i>	Hab & Spp Dir Anx 2	2
Rustic	<i>Hoplodrina blanda</i>	NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc	1
White ermine	<i>Spilosoma lubricipeda</i>	NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc	3
Bats			
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Habitat Regs WCA5_9.4b&c Priority species	38
Daubenton's bat	<i>Myotis daubentonii</i>	Habitat Regs WCA5_9.4b&c Priority species	3
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	Habitat Regs WCA5_9.4b&c Priority species	2
Noctule	<i>Nyctalus noctula</i>	Habitat Regs WCA5_9.4b&c Priority species	1
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Habitat Regs WCA5_9.4b&c Priority species	16
Other mammals			
European otter	<i>Lutra lutra</i>	Hab & Spp Dir Anx 2 Hab & Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc	1
Flora			
Basil thyme	<i>Clinopodium acinos</i>	NERC Act Section 41 UKBAP BAP Priority London Local Spp of Cons Conc Red List_GB-VU	1
Bluebell	<i>Hyacinthoides non-scripta</i>	WCA8	7
Burnet rose	<i>Rosa spinosissima</i>	Local Spp of Cons Conc	3
Corn marigold	<i>Glebionis segetum</i>	Red List_GB-VU	8
Daffodil	<i>Narcissus pseudonarcissus</i>	Local Spp of Cons Conc	4

Common name	Latin name	Designation and status*	Number of Occurrences
Early meadow-grass	<i>Poa infirma</i>	Local Spp of Cons Conc Nationally Scarce	2
Ivy broomrape	<i>Orobanche hederæ</i>	Local Spp of Cons Conc	3
Lily-of-the-valley	<i>Convallaria majalis</i>	Local Spp of Cons Conc	2
Little-robin	<i>Geranium purpureum</i>	Local Spp of Cons Conc Nationally Rare Nationally Scarce	5
London-rocket	<i>Sisymbrium irio</i>	Local Spp of Cons Conc	4
Mossy saxifrage	<i>Saxifraga hypnoides</i>	Red List_GB-VU	3
Sea pearlwort	<i>Sagina maritima</i>	Local Spp of Cons Conc	2
Welsh poppy	<i>Meconopsis cambrica</i>	Nationally Scarce	6

*‘WCA5_9.5’: Section 9 under Schedule 5 of The Wildlife and Countryside Act 1981 (as amended); ‘WCA1.1 and 2’: Schedules 1 and 2 of The Wildlife and Countryside Act 1981 (as amended); ‘WCA5_9.4’: Schedule 5 Section 9.4 of the Wildlife & Countryside Act 1981; ‘WCA8’: Schedule 8 of The Wildlife and Countryside Act 1981 (as amended); ‘priority species’: under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act, ‘Habitat Regs’: Conservation of Habitats and Species Regulations; ‘UKBAP’: UK Biodiversity Action Plan species/habitats; BAP Priority London: Biodiversity Action Plan London species; ‘Local Spp of Cons Conc’: Local Species of Conservation Concern; ‘BoCC- Red’: Bird of Conservation Concern – Red List; ‘Bird Dir Anx 1’ - Birds Directive Annex 1 species; ‘Hab & Spp Dir Anx 2 and 4’: Habitats and Species Directive Annex 2 and 4 species; ‘Cons Regs 2010’: The Conservation of Habitats and Species Regulations 2010; ‘Red List_GB-VU’: Red List species ‘vulnerable’; ‘Nationally Rare or Scarce’: plant species occurring in 15 or fewer or 16-100 hectads in Great Britain ‘Nationally Notable A and B’: Nationally important insect species.

3.1.3 Previous Site Surveys

During 2018, an initial walkover survey and high-level ecological assessment of the site was undertaken by Arup ecologists. During this survey, it was considered that the site had the potential to support breeding and/or foraging black redstart. Therefore, black redstart surveys were undertaken in 2018 and 2019. The full details - including methods and results - can be found in the short reports contained in Appendix C.

In summary, no black redstarts were recorded during any of the surveys undertaken in 2018 or 2019 and the site was considered to generally be of low ecological value, with the exception of planted areas which provide opportunities for foraging and nesting common bird species.

3.2 Phase 1 Habitat Survey

3.2.1 Habitats

A Phase 1 habitat map detailing the findings of the habitat survey is included in Appendix B. A full botanical species list is provided in Appendix E. The following

habitats (with their relevant habitat codes) were recorded within the Proposed Development boundary:

- Scattered broad-leaved trees (A3.1);
- Amenity grassland (J1.2);
- Introduced shrub (J1.4);
- Buildings and hard standing (J4); and
- Other (J5) - urban allotment.

The following sections provide an overview of the habitats recorded on the site during the survey. Photographs are provided where appropriate.

3.2.2 Scattered Broadleaved Trees

Three broad-leaved trees were noted within the site boundary. The species were: one weeping beech *Fagus sylvatica pendula* – in the vegetated area to the southwest of the site and two cherry trees *Prunus* sp. - located in the southwest corner of the site alongside Ossulston Street. Small trees and saplings were present in the same vegetated area as the weeping beech, with species including ash and maple *acer* sp.



Photograph 1: weeping beech tree

3.2.3 Amenity Grassland

Two main areas of amenity grassland were present within the site. One lies to the east of the site, close to Midland Road and the other directly north of the existing library. Both grassland areas contained similar species which included: perennial rye-grass *Lolium perenne*, dandelion *Taraxcum* agg, bristly oxtongue *Picris echioides*, Yorkshire fog *Holcus lanata*, yarrow *Achillea millefolium* and common ragwort *Senecio jacobaeae*.



Photograph 2: amenity grassland and introduced shrubs in planters

3.2.4 Introduced Shrub

Several areas of introduced shrub and other ornamental plant species were present within the site (please refer to Phase 1 map in Appendix B for specific locations). Species of introduced shrub included: common box *Buxus sempervirens*, spotted laurel *Aucuba japonica*, fatsia *Fatsia Japonica*, Fortune's spindle *Euonymus fortunei*, snowberry *Symphoricarpos albus* and cotoneaster species. Ornamental planting and climbers included: honeysuckle *Lonicera* sp, ivy *Hedera helix*, clematis *Clematis* sp, Chilean potato vine *solanum crispum*, New Zealand flax *Phormium* sp, lavender *Lavandula angustifolia*, Virginia creeper *Parthenocissus quinquefolia* and common hop *Humulus lupulus*.



Photograph 3: introduced shrubs



Photograph 4 : climbing and ornamental plants

3.2.5 Hardstanding

The site contains extensive areas of hardstanding. These areas include the car park and access road to the east of the site, the building and loading bay area at the southern end and the underlying surface of the Story Garden at the west of the site.



Photograph 5: area of hardstanding at southern end of site

3.2.6 Other - urban allotment area

The majority of the north-western part of the site is currently in use as a temporary community garden/urban allotment resource, known as the ‘Story Garden’. This area includes allotment planting and companion planting in raised beds and containers on top of the underlying hardstanding, with several temporary buildings present and interspersed with ephemeral vegetation and butterfly bush. Photograph 6 and 7 illustrate some of the features of this area.



Photograph 6: planting/underlying hardstanding



Photograph 7: raised beds/allotment planting

3.2.7 Invasive Species

Butterfly bush was present on site with numerous plants present within the Story Garden location. This species is listed under Category 3 of the London Invasive Species Initiative¹³ and as such is described as: ‘Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control/eradicate.’

¹³ Available at: <http://www.londonisi.org.uk/what-and-where/species-of-concern/>. Accessed on: 07.09.20.

3.2.8 Bats

3.2.8.1 Preliminary Bat Roost Assessment

As described in section 2.3.2, the existing building and larger trees within the Proposed Development area were assessed for their potential to support roosting bats. As shown in Photograph 8, the building within the site was determined to have negligible potential to support roosting bats. It was well maintained, well-lit and had no obvious points of entry/exit for bats to access any internal roosting features. In addition, no droppings or other field signs indicating roosting bats were recorded.



Photograph 8: main building within Development Site

Three trees were noted within the site and all were assessed to have negligible potential to support roosting bats. They were small and/or immature did not possess any features which could support roosting bats. The vegetated areas within the site are considered unlikely to provide significant foraging or commuting opportunities for any bats which may roost within the vicinity of the site.

3.2.9 Nesting Birds

The broadleaved scattered trees and ornamental planting within the site provide nesting opportunities for a variety of common bird species. In particular, the vegetated area shown in Photograph 3 and the climbing plants on site offer thick cover for common species found in the locality, such as: dunnock *Prunella modularis*, robin, wren, blackbird and woodpigeon *Columba palumbus*. A list of species recorded as incidental sightings can be found in the 2019 black redstart survey report included in Appendix C.

4 Evaluation and Mitigation Measures

4.1 Development Proposals

The Proposed Development would involve extending the northern aspect of the existing British Library to provide library accommodation; commercial space designed to cater for knowledge quarter uses (including life sciences, cultural, scientific and heritage collections and data sciences); retail space; and the Crossrail 2 works at basement level.

The Proposed Development would provide a gross internal area (GIA) of up to approximately 97,000m². The new library accommodation and the Alan Turing Institute and public circulation, including a public foyer, would be provided at approximately 10,000m² in addition to a replaced BLCC and BL tank farm and other library infrastructure. Approximately 76,000m² (GIA) would be provided for commercial space together with retail. Infrastructure related to Crossrail 2 would be provided at approximately 4,300m² (GIA), plus a shaft descending between basement levels 2-7. With respect to Crossrail 2, the Proposed Development would provide the main civils and structural elements of the Euston St Pancras Station eastern shaft and passenger subway tunnel. There will be adaptations to existing library operational areas, including the loading bay.

The Proposed Development would be 'car lite' with five wheelchair-accessible car parking spaces, four operational spaces for maintenance vehicles and a single minibus bay. The BLCC and the Story Garden are located within the Site. In order to facilitate the construction of the Proposed Development, the BLCC would be relocated and a new community garden would be created within the Site

4.1.1 Designated Nature Conservation Sites

Predicted Effects

There is a lack of ecological connectivity from the Proposed Development to the nearest designated site - Camley Street Nature Park LNR. The LNR is considered to be sufficiently isolated from the Proposed Development due to the lack of connectivity and the urban context of the surrounding area – particularly St Pancras International Station directly to the north - that any potential impacts are considered unlikely.

Furthermore, the Proposed Development is unlikely to result in any indirect impacts on Camley Street Nature Park LNR. The LNR has been created in an area which currently experiences high volumes of traffic and disturbance so it would be unlikely that the Proposed Development would cause additional impacts. The Proposed Development is an extension of an existing building and, on completion, will result in an increase in opportunities for biodiversity at the site through the development of a biodiverse landscaping strategy which will provide a mosaic of habitats of benefit to locally occurring species.

Mitigation Measures

There are no predicted effects which are likely to impact the Camley Street Nature Park LNR, therefore no mitigation measures are required.

4.1.2 Nesting Birds

Predicted Effects

Wild birds, their active nests, and their eggs are protected under the Wildlife and Countryside Act 1981 (as amended) from killing. During the nesting bird season (March to August, inclusive) there is the risk of killing and injuring nesting birds, damaging their nests or eggs, as a result of vegetation clearance.

Mitigation Measures

To avoid committing an offence under the Wildlife and Countryside Act 1981 (as amended), any vegetation clearance will take place outside of the bird nesting period (i.e. outside of March to August inclusive), or failing that, following confirmation by a suitably qualified ecologist that nesting birds are absent from the habitats to be cleared, not more than 24 hours prior to works taking place.

The above could be secured by an appropriately worded planning condition and/or the production of a Construction Management Plan (CMP).

4.1.3 Habitats

Predicted Effects

The habitats on site are generally considered to be of low ecological value. The majority of the site consists of hardstanding and buildings. The vegetated areas provide some ecological value, but this is limited as species consist largely of ornamental and/or non-native species with low value for biodiversity. No protected or notable habitats are present within the site.

Mitigation Measures

Whilst the habitats present on site do not require mitigation measures to be considered, the site does provide common bird species with nesting opportunities (as detailed above) and there are opportunities for the Proposed Development to include landscaping that would increase the overall biodiversity of the site post-construction.

5 Recommendations

5.1 Site Enhancement Opportunities

5.1.1 Landscaping

The landscaping plan for the Proposed Development should compensate for habitat loss associated with the proposals and seek to increase both habitat connectivity across the site and biodiversity as a whole. The following recommendations have the potential to achieve these aims and will be incorporated into the design:

- Creation of biodiverse roof areas with intensive and extensive typologies (including brown roof) to provide habitat for birds and invertebrates within the site. BlackRedstarts.org.uk¹⁴ provides details on creating a green and/or brown roof that will be most suitable for black redstart;
- Creation of green walls¹⁵ and inclusion of climbing plants¹⁶ to add height and structure to landscaping at the site;
- Inclusion of landscaping proposals that include species and features to maximise the biodiversity potential of the site. Inclusion of plant species which are London Priority species and/or of local importance or which support local fauna;
- Creation of water features within the site plans - inclusion of water within landscaping plans can increase biodiversity at a site as well as providing a drinking and bathing resource for birds; and
- Inclusion of plant species types, diversities and structures that require limited irrigation other than rainfall.

5.1.2 Habitat Provisioning

The current British Library site offers limited ecological potential. This project presents opportunities to increase the biodiversity present at the site with regard to black redstart and ecology as a whole. The following habitat enhancement recommendations have the potential to increase biodiversity at the site:

- Inclusion of four integrated black redstart nest boxes¹⁷ located in suitable positions within exterior roof areas; alternatively, open-fronted boxes¹⁸ should be affixed to roof areas;
- Integration of swift boxes/bricks¹⁹ within the façade of the completed extension and inclusion of pied wagtail boxes²⁰ on roof areas. A suitably experienced ecologist should be consulted when determining their locations and numbers;

14 <http://www.blackredstarts.org.uk/pages/greenroof.html>. Accessed on: 18.06.19.

15 <https://www.bioteecture.uk.com/>. Accessed on: 18.06.19.

16 <https://livingroofs.org/green-walls/>. Accessed on: 18.06.19.

17 <https://www.nhbs.com/woodstone-build-in-open-nest-box>. Accessed on: 02.07.19.

18 <https://www.nhbs.com/2hw-schwegler-nest-box>. Accessed on: 02.07.19.

19 [https://www.nhbs.com/4?q=&hPP=60&idx=titles&p=0&fR\[shops.id\]\[0\]=4&fR\[shops.id\]\[1\]=4&hFR\[subjects_equipment.lv11\]\[0\]=Bird%20Boxes](https://www.nhbs.com/4?q=&hPP=60&idx=titles&p=0&fR[shops.id][0]=4&fR[shops.id][1]=4&hFR[subjects_equipment.lv11][0]=Bird%20Boxes) > Integrated%20Bird%20Boxes. Accessed on: 18.06.19.

20 <https://www.nhbs.com/no-19-schwegler-dipper-and-pied-wagtail-nest-box>. Accessed on: 18.06.19.

- Inclusion of bat boxes²¹ within the façades of the new building. A suitably experienced ecologist should be consulted when determining their locations and numbers;

²¹https://www.nhbs.com/search?q=bat%20boxes&hPP=60&idx=titles&p=0&fR%5Bdoc_s%5D%5B0%5D=false&fR%5Bhide%5D%5B0%5D=false&fR%5Blive%5D%5B0%5D=true. Accessed on: 18.06.19.

Appendix A

Site Location Plan

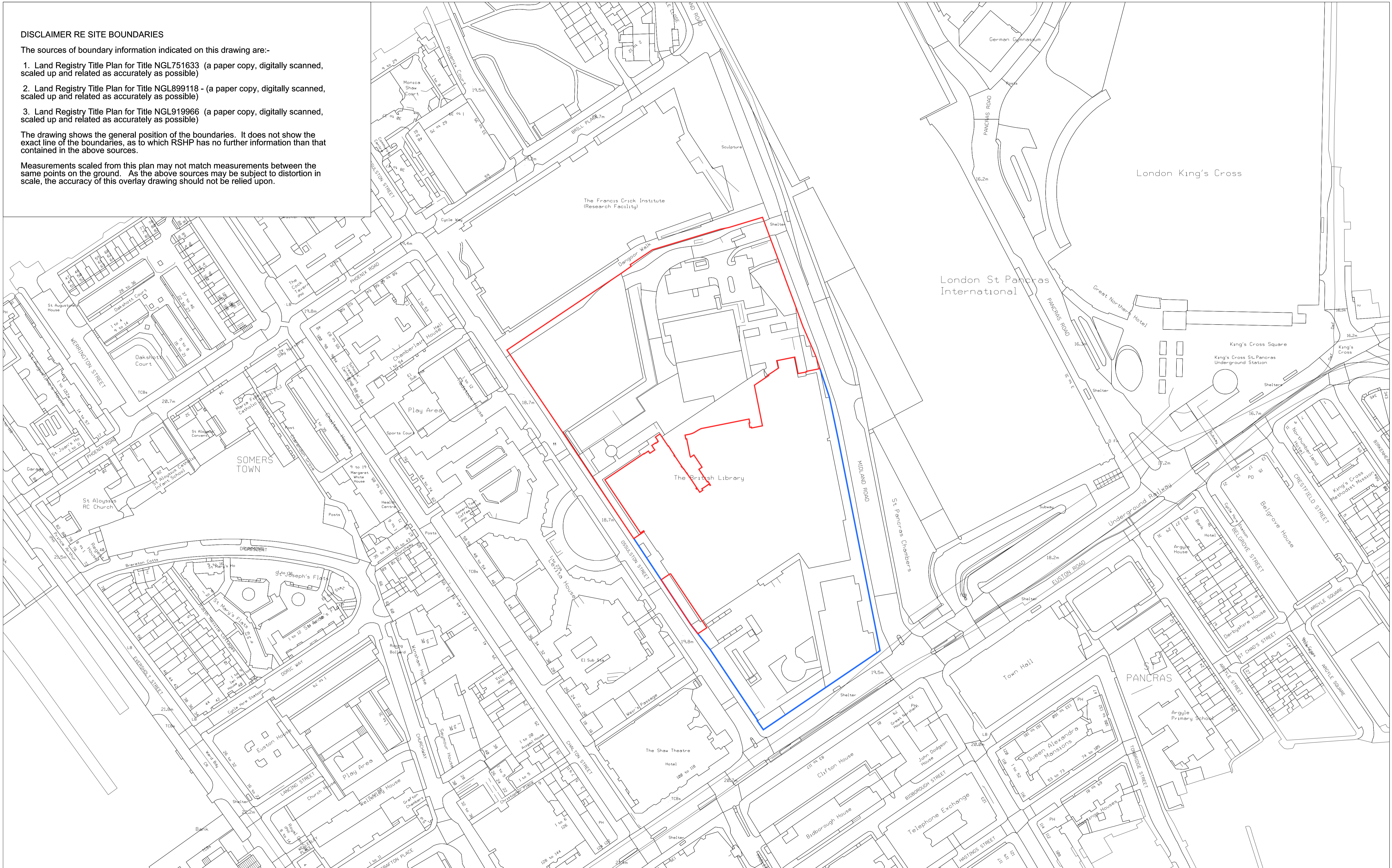
DISCLAIMER RE SITE BOUNDARIES

The sources of boundary information indicated on this drawing are:-

1. Land Registry Title Plan for Title NGL751633 (a paper copy, digitally scanned, scaled up and related as accurately as possible)
2. Land Registry Title Plan for Title NGL899118 - (a paper copy, digitally scanned, scaled up and related as accurately as possible)
3. Land Registry Title Plan for Title NGL919966 (a paper copy, digitally scanned, scaled up and related as accurately as possible)

The drawing shows the general position of the boundaries. It does not show the exact line of the boundaries, as to which RSHP has no further information than that contained in the above sources.

Measurements scaled from this plan may not match measurements between the same points on the ground. As the above sources may be subject to distortion in scale, the accuracy of this overlay drawing should not be relied upon.



Revision	Date	Description
P01	02-07-2021	Preliminary Issue
P02	15-07-2021	Preliminary Issue
P03	30-07-2021	Preliminary Issue
P04	12-08-2021	Preliminary Issue
P05	31-08-2021	Preliminary Issue

DRAFT

Legend KEY

- INDICATIVE OWNERSHIP BOUNDARY FOR REMAINDER OF BRITISH LIBRARY SITE
- APPLICATION BOUNDARY WITHIN BRITISH LIBRARY SITE
Note: The Application Boundary line illustrated is a composite outline that represents the largest extent across multiple levels, including B1, LG, UG and L01.

Drawing Purpose
FOR PLANNING APPLICATION

Drawn by	Checked by	Authorised by
RSHP	RSHP	RSHP

Do not scale from drawing. The author of this drawing takes no responsibility for any dimensions obtained by measuring or scaling from this drawing and no reliance may be placed on such dimensions. If no dimension is given, it is the responsibility of the recipient to ascertain the dimension specifically from the author or by site measurement. The sizing of all structural and service elements must always be checked against the relevant engineers' drawings. No reliance should be placed upon sizing information shown on this drawing.

This drawing has been prepared at a preliminary stage of the design. It is indicative and illustrative only and has not been developed in detail. Further development of the design and clarification of design assumptions will result in changes and RSHP do not undertake any responsibility that this drawing will represent the final construction.

Project
BRITISH LIBRARY

Contact
Rogers Stirk Harbour + Partners
The Leadenhall Building
122 Leadenhall Street
London
EC3V 4AB

tel: 020 7385 1235
fax: 020 7385 8409
email: J11010@rsh-p.com
www.rsh-p.com

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BL ESTATE & SITE PLAN
APPLICATION BOUNDARY

Scale @ A1	Drawing Number	Drawing Date	Revision Date	Revision
1:1000	RSHP-P-0003-P-00	02-07-2021	31-08-2021	P05

Appendix B

Phase 1 Map

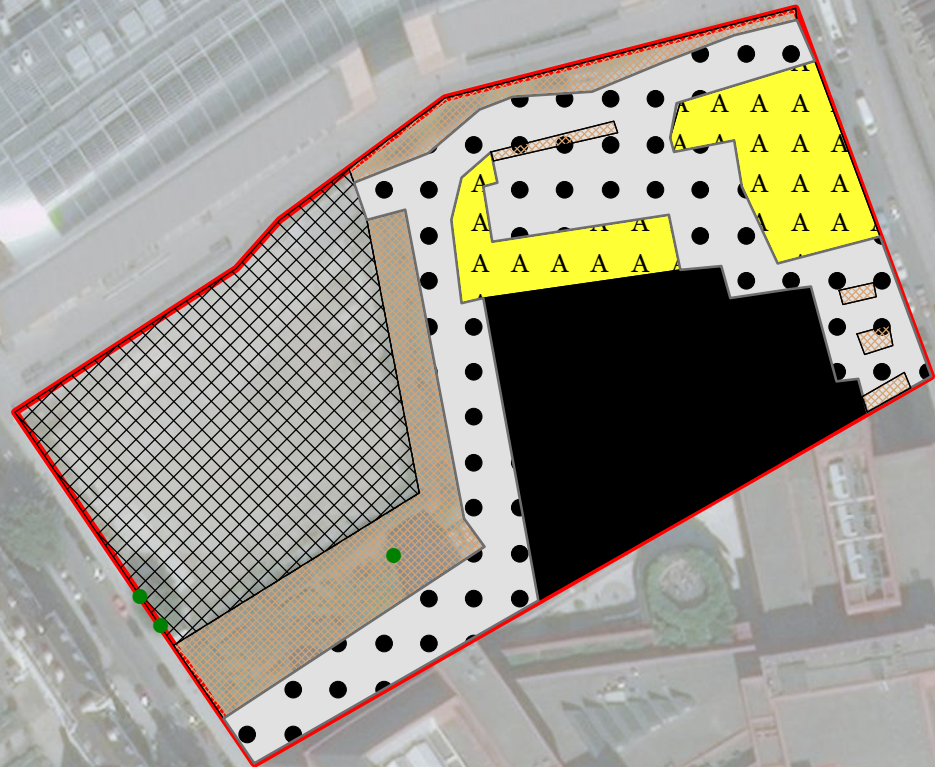
B1



British Library Phase 1 habitat map

Legend

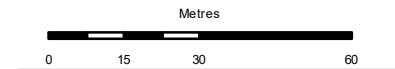
- A3.1 - Broadleaved parkland/scattered trees
- J1.2 - Cultivated/disturbed land - amenity grassland
- J1.4 - Introduced shrub
- J3.6 - Buildings
- J4 - Bare ground
- J5 - Other habitat
- Redline Boundary



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P1	14-09-20	MM	RM	EP
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Revision	Date	By	Chkd	Appd



Not to scale

1:1,500

Job No 249622	Drawing Status Issue
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Drawing No 001	Revision P1
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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix C

Previous Ecology Reports

C1

13 Fitzroy Street
London
W1T 4BQ
United Kingdom
www.arup.com

t +44 20 7636 1531
d +44 20 7753370

Project title	British Library	Job number	249622-06
cc	Angela Crowther Lisa Ashari Thomas Power	File reference	BL.TM.249622
Prepared by	Tracey McLean	Date	12 June 2018
Subject	Ecology Walkover Survey and Black Redstart Survey		

1 Introduction

This file note relates to the proposed new extension to the British Library, 96 Euston Road, London. An Environmental Impact Assessment (EIA) will be undertaken as part of the planning process for this project. The EIA includes a requirement for the assessment of the ecological baseline at the site. This file note summarises the results of an ecological walkover survey of the site, undertaken on 30th May 2018 and two Black Redstart surveys undertaken in June 2018. It provides an initial assessment regarding the existing ecological receptors at the site and includes a list of recommendations which should be taken into account as the project progresses. The building design will incorporate ecological enhancements as designs are developed and will reflect the content of the wider EIA as part of the planning process.

2 Ecology Walkover Survey

Methodology

An ecological walkover survey was undertaken at the British Library site by Arup Ecologists Tracey McLean and Rob Selwyn on 30th May 2018. This survey included an external inspection of the building from ground level, a visual assessment of roof areas (where safe to do so) and an appraisal of the vegetated parts of the site. It also included a walkover of the currently vacant land to the north of the main library building.

The objectives of the survey were to assess the existing habitats and structures at the site and their potential to support protected and/or notable species of flora and/or fauna. The results of the survey were then reviewed to identify appropriate recommendations for the protection and enhancement of the site's ecology.

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Results of Site Survey

The site largely comprised the existing library building and associated infrastructure. There were also several areas consisting of planted vegetation within the site, including a green wall structure and roof and terrace planting on some of the lower levels.

It was concluded that habitats at the site are likely to support several species of common birds, with the presence of both nesting and foraging opportunities noted. Although no formal bird survey was conducted, incidental bird records were made and are included in Table 1 below. It was considered that there are opportunities for breeding birds to nest on the building's roof and associated structures and within the planted/vegetated areas of the site. A disused nest was noted in the green wall, on the frame structure used to support climbing plants in this area.

The building also possessed some features (ledge areas and more complex structures such as external stairs/plant structures) on the roof which could provide nesting opportunities for black redstart *Phoenicurus ochruros* and that surrounding habitats could support foraging individuals of the same species.

London is one of the few remaining strongholds in the UK for black redstart and this species is likely to be under-recorded. It is known to breed in at least at least 17 London Boroughs, including Camden. Black redstart is a Schedule 1 species under the Wildlife and Countryside Act (1981) which offers the species increased protection during the breeding season (see Legislation below). Black redstart surveys were recommended to ascertain the presence or absence of this species at the site, results from these surveys are reported in section 3.

The external and roof areas of the building were assessed (as far as was safe to do so) for the potential presence of roosting bats in line with Bat Conservation Trust (BCT) Best Practice Guidelines (2016).¹ Given the age of the building, the type of building structure and the limited presence of nearby foraging and commuting habitats, it was considered to have 'negligible' potential for roosting bats. Under the BCT guidelines, 'Negligible Potential' is defined as: 'no features that could be used by bats'. The vegetated areas within the site are considered unlikely to provide significant foraging or commuting opportunities for bats which may roost within the vicinity.

Limited naturally occurring flora was recorded at the site with most species being noted in the vacant plot of land to the north of the main site. Species noted here are common across similar habitats in the UK and included: herb Robert *Geranium robertianum*, hedge mustard *Sisymbrium officinale*, common cleavers *Galium aparine*, common ragwort *Senecio jacobaea*, white clover *Trifolium repens*, Yorkshire fog *Holcus lanatus*, bramble *Rubus fruticosus* agg., wood avens *Geum urbanum* and ribbed melilot *Melilotus officinalis*. Some of the species included in the current landscape planting at the site are of known value to common invertebrates. These plant species include: lavender *Lavandula*, honeysuckle *Lonicera*, ivy *Hedera*, thyme *Thymus*, common hop *Humulus* and jasmine *Jasminum*.

The site was assessed as generally being of limited ecological value, offering the potential to increase the biodiversity at the site upon project completion. An increase in biodiversity could be achieved through the implementation of ecological enhancements, including those listed under 'Recommendations' below.

¹ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.) The Bat Conservation Trust, London.

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Recommendations

The ecological recommendations for the site are as follows:

- Undertake black redstart surveys – these are season-specific and would need to be undertaken during mid-April to late June;
- Adhere to legislation relating to breeding birds – undertake demolition works and vegetation clearance work, which could potentially harm or disturb breeding birds, during the non-breeding season (September to February). If this is not possible, any structures (built or vegetated) which could support nesting birds would first be required to undergo an inspection by a qualified ecologist, usually 24 hours maximum before work is due to take place, to ensure no breeding birds are present;
- Integrate swift *Apus apus* boxes/bricks within the façade of the completed building and include pied wagtail *Motacilla alba* boxes on roof areas where possible. A suitably experienced ecologist should be consulted when determining their locations and numbers;
- Include a green or brown roof if feasible, creating further accessible habitat for birds and invertebrates;
- Seek advice from a suitably qualified ecologist on the final planting proposals to ensure that landscaping features maximise ecological value in terms of species type, diversity and structure and require limited irrigation other than rainfall.

Relevant Legislation

All wild birds in the UK are protected under the Wildlife Countryside Act (WCA) 1981(as amended). Even common species like pigeons and blackbirds are protected. Some rarer species and those that are vulnerable to disturbance or persecution receive further protection, for example by being listed under Schedule 1 of this Act, for example, black redstart.

It is an offence to intentionally or recklessly:

- Kill, injure or take a wild bird;
- Take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built (or at any time for a nest habitually used by any bird listed in Schedule 1A of the WCA 1981);
- Obstruct or prevent any wild bird from using its nest;
- Take or destroy an egg of any wild bird;
- Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young;
- Disturb the dependent young of any wild bird listed on Schedule 1; and
- Harass any wild bird listed on Schedule 1A.

It is also an offence to possess or control alive or dead wild bird, an egg of a wild bird (or any such derivatives), or to knowingly cause or permit any of the above acts to be carried out.

Table 1: Incidental bird records obtained during walkover survey

Common Name	Scientific Name
Blackbird	<i>Turdus merula</i>
Carrion crow	<i>Corvus corone</i>

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Feral pigeon	<i>Columba livia domestica</i>
Pied wagtail	<i>Motacilla alba</i>
Common swift	<i>Apus apus</i>
Woodpigeon	<i>Columba palumbus</i>
Wren	<i>Troglodytes troglodytes</i>
Magpie	<i>Pica pica</i>

3 Black redstart surveys

Introduction

As stated above, during the initial ecology assessment, it was considered possible that the site provided some potential for the presence of black redstart. In particular, some aspects of the roof infrastructure, including ledges and tall structures (which this species prefers to sing from), was thought to have the potential to attract black redstart. In addition, the small areas of green roof and the cleared part of the site (land to the north) would provide some foraging opportunities for this species.

Methodology

Best practice survey methodology for black redstart is described by Gilbert et al (1998)². It was not possible to apply the recommended survey effort in this case due to the timing of the project and the survey window for this species. However, it was still considered necessary to undertake an assessment for this species, albeit limited. Two surveys were undertaken on the 19th and 25th of June.

June is considered to be a suitable time of the year to look for the presence of this species due to the following factors:

- Adults are likely to be actively feeding juveniles;
- Adults frequently build a new nest for a second brood; and
- Males are likely to be singing to attract a mate for a second brood.

These behaviours are conducive to black redstart being detected at a site because these behaviours increase the likelihood that birds are seen and/or heard. The two survey visits were conducted in ideal weather conditions (dry, calm, good visibility) and during the recommended time period – the two hours prior to sunset.

Two ecologists conducted surveys from the roof of the British Library. This is an ideal vantage point for observing this species as males prefer high song posts, frequently choosing to sing from a rooftop, gutter or chimney stack. Surveyors used binoculars to scan for birds and listened for any calls or song.

² Gilbert G, Gibbons D W and Evans J, (1998) Bird Monitoring Methods, RSPB, Sandy.

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Results

No black redstarts were seen or heard during either of these two surveys. Common species, similar to those recorded previously at the site were recorded, with pied wagtail and magpie interacting most regularly with the British Library roof area. No additional species beyond those listed in Table 1 were observed during either survey.

Conclusions

Whilst it was not possible to carry out black redstart surveys in full, those that were undertaken were done so in-line with best practice methodology. Given this, it is considered unlikely that this species would breed within the site. However, it is possible that black redstarts may utilise the site for foraging and it is hoped that the site will be enhanced further for this species through the recommendations made above.

DOCUMENT CHECKING (not mandatory for File Note)

	Prepared by	Checked by	Approved by
Name	Tracey McLean	Austin Brown	
Signature			

British Library
British Library Ecology
Black Redstart Survey Report

Draft 1 | 17 June 2019

This report takes into account the particular instructions and requirements of our client.




It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number
249622

Ove Arup & Partners Ltd
13 Fitzroy Street
London
W1T 4BQ
United Kingdom
www.arup.com

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Document verification

Job title		British Library Ecology		Job number	
				249622	
Document title		Black Redstart Survey Report		File reference	
Document ref					
Revision	Date	Filename	BL.BlackRedstart.Report.docx		
Draft 1	17 Jun 2019	Description	First draft		
			Prepared by	Checked by	Approved by
		Name	Tracey McLean	Austin Brown	Neil Harwood
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
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			Prepared by	Checked by	Approved by
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4	Conclusions	6
5	Recommendations	7

1 Introduction

This report has been produced as part of the ecological assessment of the British Library, 96 Euston Road, London, NW1 2DB. An Environmental Impact Assessment (EIA) will be undertaken as part of the planning process for a proposed extension to the existing library building. The EIA includes a requirement for the assessment of the ecological baseline at the site. A walkover survey was conducted on May 30th, 2018¹ to assess the habitats present and to consider the potential for the site to support protected species.

The 2018 walkover survey identified the site as having the potential to support breeding and/or foraging black redstart *Phoenicurus ochruros*. In particular, some of the structures present on the roof area of the main building were considered suitable for nesting black redstart and a small green roof and brownfield habitat ('Land to the North') were noted as providing potential foraging areas. In addition, black redstart has previously been recorded in the vicinity of the site, notably in the King's Cross area².

London is one of the few remaining strongholds in the UK for black redstart and is likely to be under-recorded. It is known to breed in at least at least 17 London Boroughs, including Camden. Black redstart is a Schedule 1 species under the Wildlife and Countryside Act (1981) which provides the species with increased protection during the breeding season (see 1.1 below).

Two black redstart surveys were conducted at the site during June 2018. This report includes the details of the 2018 surveys and the further three surveys which were undertaken in May and June 2019. The total of five survey visits is in-line with best practice methodology and provides robust data about the status of this species within the site. This report also includes a list of recommendations regarding opportunities to enhance the site for black redstart and ecology as a whole which should be taken into account as the project progresses. The building and landscaping designs will incorporate ecological enhancements as plans are developed and will reflect the content of the wider EIA as part of the planning process.

1.1 Legislation

All wild birds in the UK are protected under the Wildlife Countryside Act (WCA) 1981(as amended). This also includes common species like pigeons. Some rarer species and those which are vulnerable to disturbance and/or persecution receive further protection, by being listed under Schedule 1 of this Act, for example, black redstart.

It is an offence to intentionally or recklessly:

- Kill, injure or take a wild bird;

¹ Arup (2018), British Library: Walkover Survey and Black Redstart Survey File Note.

² <http://www.blackredstarts.org.uk/pages/london.html>. Accessed on: 11.06.19.

- Take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built (or at any time for a nest habitually used by any bird listed in Schedule 1A of the WCA 1981);
- Obstruct or prevent any wild bird from using its nest;
- Take or destroy an egg of any wild bird;
- Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young;
- Disturb the dependent young of any wild bird listed on Schedule 1; and
- Harass any wild bird listed on Schedule 1A.

It is also an offence to possess or control alive or dead wild bird, an egg of a wild bird (or any such derivatives), or to knowingly cause or permit any of the above acts to be carried out.

2 Methodology

As described above, during the initial walkover assessment, it was considered possible that the site provided some potential for the presence of black redstart. In particular, some aspects of the roof configuration, including ledges and tall structures (which this species prefers to sing from), was considered to have the potential to attract black redstart and potentially be used for nesting. In addition, the small green roof and the undeveloped area of the site ('Land to the North') could provide foraging opportunities for this species and the surrounding habitats in the vicinity of the site could support foraging individuals of the same species. Please refer to Photograph 1 and 2 below, which illustrate these features.



Photograph 1: showing green roof and 'Land to North' Photograph 2: showing complex roof structures

Best practice survey methodology for black redstart is described in full by Gilbert et al (1998)³. In summary, the methodology states that five surveys should be undertaken between mid-April and the end of June either early in the morning (in the hours after sunrise) or evening (hours before sunset). Any records of black redstart should be noted on maps with activity described. The combined survey results can then be analysed to decide if breeding is confirmed, probable or possible.

Due to site access restrictions, it was not possible to apply the full recommended survey effort in 2018. However, two surveys were undertaken on the 19th and 25th of June 2018 to provide a limited assessment of the site for this species. In 2019, three further surveys were conducted at the site in May and June to complete the recommended survey effort and to provide robust results about the status of black redstart at the site. The details of all surveys, including weather conditions, are shown in Table 1 below.

Two Arup ecologists experienced in bird identification conducted surveys from the main roof area of the British Library. This is an ideal vantage point for observing black redstart as males prefer high song posts, frequently choosing to sing from a rooftop, gutter or chimney stack. It also provided views over the potential foraging areas. Surveyors used binoculars to scan for bird activity and listened for any calls or singing. Any records were noted on large-scale paper maps of the site.

³ Gilbert G, Gibbons D W and Evans J, (1998) Bird Monitoring Methods, RSPB, Sandy.

Table 1: Survey details and weather conditions

Date	Time	Weather Conditions
19.06.18	19:20-21:20	Dry, cloud: 5/8, temp: 21°C, wind: 9mph, WSW.
25.06.18	19:20-21:21	Dry, cloud: 2/8, temp: 26°C, wind: 6mph, NE.
30.04.19	18:20-20:20	Dry, cloud: 3/8, temp: 15°C, wind: 7mph, W.
14.05.19	18:40-20:43	Dry, cloud: 2/8, temp: 16°C, wind: 12mph, W.
03.06.19	06:30-08:30	Dry, cloud: 3/8, temp: 12°C, wind: 10mph, E.

Mid-May to the end of June is considered to be an ideal time to assess sites for the presence of this species due to the following factors:

- Adults are likely to be actively feeding juveniles;
- Adults frequently build a new nest for a second brood; and
- Males are likely to be singing to attract a mate for a second brood.

These behaviours are conducive to black redstart being detected at a site because they increase the likelihood that birds are seen and/or heard with birds generally being more obvious at these times. All survey visits were conducted in ideal weather conditions (dry, calm, good visibility) and during the recommended time period – four surveys in the two hours prior to sunset, one survey in the hours after sunrise.

2.1 Limitations

Ideally, all five surveys would have been conducted within the same calendar year. Site access restrictions prevented this from being possible in this case. However, all surveys were undertaken at the correct times of year and in suitable weather conditions and it is considered that the results provide a robust assessment of the site in terms of black redstart presence/absence within the area surveyed and that this is not a significant limitation.

No account can be made for the presence or absence of species on any one survey occasion, since they may travel over wide areas and/or have large home ranges. Protected bird species may visit the site at any future time. However, professional judgement and experience allows for the likely presence of these species to be predicted with sufficient certainty so as to not significantly limit the validity of the survey results.

3 Results

No black redstarts were seen or heard during any of the surveys. A total of ten common bird species were noted, with pied wagtail *Motacilla alba*, blackbird *Turdus merula*, woodpigeon *Columba palumbus*, feral pigeon *Columba livia domestica* and magpie *Pica pica* interacting most frequently with the roof area and within vegetated areas of the site. Birds flying over the site and not interacting with it in any significant way were not recorded. Swift *Apus apus* was noted as frequently foraging over the site and was, therefore, recorded as it is likely that insects attracted by vegetation at the site were a foraging resource for this species. Table 2, below, lists all bird species recorded at the site during surveys.

Whilst a full breeding bird survey was not conducted for any species other than black redstart, proof of breeding was confirmed within the site for the following species: blackbird (adults seen feeding juveniles), woodpigeon (juveniles foraging at site on three surveys), pied wagtail (juvenile calling for food) and dunnock (juvenile being fed by adult within site).

Table 2: All bird species recorded during site surveys

Common Name	Scientific Name
Blackbird	<i>Turdus merula</i>
Carrion crow	<i>Corvus corone</i>
Common swift (foraging overhead)	<i>Apus apus</i>
Dunnock	<i>Prunella modularis</i>
Feral pigeon	<i>Columba livia domestica</i>
Goldfinch	<i>Carduelis carduelis</i>
Magpie	<i>Pica pica</i>
Pied wagtail	<i>Motacilla alba</i>
Woodpigeon	<i>Columba palumbus</i>
Wren	<i>Troglodytes troglodytes</i>

4 Conclusions

Given that the recommended survey effort was applied, at the correct time of year and during favourable weather conditions, it can be concluded that black redstart does not currently breed at the site. In addition, no evidence of foraging by this species was recorded.

Habitats at the site support several species of common birds, with the presence of both nesting and foraging opportunities noted. Although no formal bird survey was conducted (other than for black redstart), incidental bird records were made and are included in Table 2. It was considered that there are opportunities for breeding birds to nest on the building's roof and associated structures and within the planted/vegetated areas of the site. Evidence of four species confirmed to be breeding at the site in 2019 was obtained, as described above.

With respect to breeding birds, legislation described in 1.1 must be adhered to. In this case, any vegetation clearance work and/or demolition works, which could potentially harm or disturb breeding birds, should be carried out during the non-breeding season (September to February inclusive).

If this is not possible, any features (built or vegetated) which could support nesting birds would first be required to undergo an inspection by a qualified ecologist, no more than 24 hours before work is due to take place, to ensure no breeding birds are present. If breeding birds are located, an exclusion zone will need to be implemented to ensure no disturbance occurs, until the young are independent and have left the immediate area. This could be for a period of several weeks, depending upon the species.

The site has been previously assessed as generally being of limited ecological value, offering the potential to increase the biodiversity at the site upon project completion. An increase in biodiversity could be achieved through the implementation of a number of ecological enhancements, including those listed under 'Recommendations' below.

5 Recommendations

The current British Library site offers limited ecological potential. This project presents opportunities to increase the biodiversity present at the site with regard to black redstart and ecology as a whole. The following ecological recommendations have the potential to increase biodiversity:

- Inclusion of four integrated black redstart nest boxes⁴ located in suitable positions within exterior roof areas, alternatively, open-fronted boxes⁵ should be affixed to roof areas;
- Integration of swift boxes/bricks⁶ within the façade of the completed building and inclusion of pied wagtail boxes⁷ on roof areas. A suitably experienced ecologist should be consulted when determining their locations and numbers;
- Inclusion of bat boxes⁸ within the façades of the new building. A suitably experienced ecologist should be consulted when determining their locations and numbers;
- Creation of a green or brown roof, providing further habitat for birds and invertebrates within the site. BlackRedstarts.org.uk⁹ provides details on creating a green and/or brown roof that will be most suitable for black redstart;
- Creation of green walls¹⁰ and inclusion of climbing plants¹¹ to add height and structure to landscaping at the site;
- Inclusion of landscaping proposals that include species and features to maximise the biodiversity potential of the site. Inclusion of plant species which are London Priority species and/or of local importance or which support local fauna;
- Creation of water features within the site plans - inclusion of water within landscaping plans can increase biodiversity at a site as well as providing a drinking and bathing resource for birds; and
- Inclusion of plant species types, diversities and structures that require limited irrigation other than rainfall.

⁴ <https://www.nhbs.com/woodstone-build-in-open-nest-box>. Accessed on: 02.07.19.

⁵ <https://www.nhbs.com/2hw-schwegler-nest-box>. Accessed on: 02.07.19.

⁶ [https://www.nhbs.com/4?q=&hPP=60&idx=titles&p=0&fR\[shops.id\]\[0\]=4&fR\[shops.id\]\[1\]=4&fR\[subjects_equipment.lv11\]\[0\]=Bird%20Boxes > Integrated%20Bird%20Boxes](https://www.nhbs.com/4?q=&hPP=60&idx=titles&p=0&fR[shops.id][0]=4&fR[shops.id][1]=4&fR[subjects_equipment.lv11][0]=Bird%20Boxes%20>Integrated%20Bird%20Boxes). Accessed on: 18.06.19.

⁷ <https://www.nhbs.com/no-19-schwegler-dipper-and-pied-wagtail-nest-box>. Accessed on: 18.06.19.

⁸ https://www.nhbs.com/search?q=bat%20boxes&hPP=60&idx=titles&p=0&fR%5Bdoc_s%5D%5B0%5D=false&fR%5Bhide%5D%5B0%5D=false&fR%5Blive%5D%5B0%5D=true. Accessed on: 18.06.19.

⁹ <http://www.blackredstarts.org.uk/pages/greenroof.html>. Accessed on: 18.06.19.

¹⁰ <https://www.biotope.uk.com/>. Accessed on: 18.06.19.

¹¹ <https://livingroofs.org/green-walls/>. Accessed on: 18.06.19.

Appendix D

Legislation

D1

The interpretations of the survey findings and the subsequent recommendations have been produced in accordance with reference to the relevant legislation and best practice guidelines. Legislation relating to ecological resources that are relevant to the site and the recommendations subsequently provided include:

- Wildlife and Countryside Act 1981 (as amended) (WCA) – this legislation comprises the primary 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 details of the Wildlife and Countryside Act in relation to Sites of Special Scientific Interest (SSSI) and threatened species;
- The Conservation of Habitats and Species Regulations 2017 – these regulations provide protection for European Protected Species and their habitats, such as bats; and
- Natural Environment and Rural Communities (NERC) Act 2006 – the NERC Act puts an obligation on public authorities to have regard for the conservation of species and habitats of principal importance for the purpose of conserving biodiversity. The following sections list the legislation concerning the species identified and those considered as likely to be present on site:

Habitats and Species of Principal Importance

Habitats and species of principal importance in England are listed under the provisions of Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. These include all the habitats and species in England that were identified as requiring action in the now succeeded UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

Section 40 of the NERC Act 2006 places a general duty on all public authorities to conserve and enhance biodiversity.

Invasive species

For the purpose of this report, an “invasive species” has been defined as a plant which is listed on Schedule 9 Part II of the Wildlife and Countryside Act 1981 (as amended).

It is an offence to ‘plant or otherwise cause to grow in the wild’ any plant listed in Schedule 9, Part II under section 14(2) of The Wildlife and Countryside Act 1981 (as amended).

The Countryside and Rights of Way Act 2000 (as amended) introduced stricter enforcement on offences (such as moving contaminated soil and plant material from one place to another) under The Wildlife and Countryside Act 1981.

Although there is no obligation under the Wildlife and Countryside Act 1981 (as amended) to remove or treat species listed under Schedule 9, it is against the law to cause these species to spread into the wild.

Birds

All wild birds, their nests and their eggs are afforded legal protection through provisions in the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000.

- It is an offence, with certain exceptions, to intentionally:
- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird; and
- Have in one's possession or control any wild bird (dead or alive), part of a wild bird or egg of a wild bird which has been taken in contravention of the Act, the Protection of Birds Act 1954 or the law of any EU Member State (which implements the EU Birds Directive 1979).

In addition to the above listed offences, it is also illegal to intentionally or recklessly disturb any wild bird listed on Schedule 1 of the Act while it is nest building or is in, on or near a nest with eggs or young; or to disturb the dependent young of such a species.

For certain species which are listed on Schedule 1 of the Act, such as black redstart, consent from Natural England would be required to cause disturbance to a nesting individual or to disturb its dependent young.

Appendix E

Botanical Species List

E1

Common Name	Scientific Name
Alder	<i>Alnus glutinosa</i>
Annual meadow-grass	<i>Poa annua</i>
Ash	<i>Fraxinus excelsior</i>
Autumn hawkbit	<i>Leontodon autumnalis</i>
Barberry	<i>Berberis sp.</i>
Bamboo	<i>Bambuseae sp.</i>
Beech - weeping	<i>Fagus sylvatica 'Pendula'</i>
Black nightshade	<i>Solanum nigrum</i>
Box	<i>Buxus sempervirens</i>
Bramble	<i>Rubus fruticosus agg</i>
Bristly oxtongue	<i>Picris echioides</i>
Bronze fennel	<i>Foeniculum vulgare 'Purpureum'</i>
Butterfly-bush	<i>Buddleja sp.</i>
Canadian fleabane	<i>Erigeron canadensis</i>
Cherry	<i>Prunus sp.</i>
Chilean potato vine	<i>Solanum crispum</i>
Common chickweed	<i>Stellaria media</i>
Common dandelion	<i>Taraxcum agg</i>
Common hop	<i>Humulus lupulus</i>
Common mallow	<i>Malva neglecta</i>
Common nettle	<i>Urtica dioica</i>
Common ragwort	<i>Senecio jacobaea</i>
Common sow-thistle	<i>Sonchus arvensis</i>
Common stork's bill	<i>Erodium cicutarium</i>
Cotoneaster	<i>Cotoneaster sp.</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping yellow woodsorrel	<i>Oxalis corniculata</i>
Daisy	<i>Bellis perennis</i>
Dog rose	<i>Rosa canina</i>
Dogwood	<i>Cornus sanguinea</i>
Elder	<i>Sambucus nigra</i>
Fatsia	<i>Fatsia japonica</i>
Field bindweed	<i>Convolvulus arvensis</i>
Fortune's spindle	<i>Euonymus fortunei</i>
Great mullein	<i>Verbascum thapsus</i>
Groundsel	<i>Senecio vulgaris</i>
Honeysuckle	<i>Lonicera sp.</i>
Hydrangea	<i>Hydrangea sp.</i>
Ivy	<i>Hedera helix</i>
Jasmine	<i>Jasminum sp.</i>

Common Name	Scientific Name
Lavender	<i>Lavandula angustifolia</i>
Lilac	<i>Syringa vulgaris</i>
Maple	<i>Acer sp.</i>
Mexican aster	<i>Cosmos sp.</i>
Mexican orange blossom	<i>Choisya ternata</i>
Mugwort	<i>Artemisia vulgaris</i>
New Zealand flax	<i>Phormium sp.</i>
New Zealand Pittosporum	<i>Pittosporum sp.</i>
Palm	<i>Chamaerops sp.</i>
Perennial rye-grass	<i>Lolium perenne</i>
Rose of Sharon	<i>Hypericum sp.</i>
Rowan	<i>Sorbus aucuparia</i>
Snowberry	<i>Symphoricarpos albus</i>
Spotted laurel	<i>Aucuba japonica</i>
Sycamore	<i>Acer pseudoplatanus</i>
Traveller's-joy	<i>Clematis vitalba</i>
Virginia creeper	<i>Parthenicissus quinquefolia</i>
White clover	<i>Trifolium repens</i>
White dead-nettle	<i>Lamium album</i>
Willow	<i>Salix sp.</i>
Wood avens	<i>Geum urbanum</i>
Yarrow	<i>Achillea millefolium</i>
Yorkshire-fog	<i>Holcus lanata</i>
Yucca	<i>Yucca sp.</i>

