CAPITA

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Midland Crescent

Ecological Impact Assessment

August 2014

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Quality Management

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Title	Ecological Impact Assessment		
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Date	August 2014		
Prepared by 1	Katie May, GradCIEEM	Signature (for file)	
Checked and Authorised by	Nick Ellis, MCIEEM, CEnv	Signature (for file)	

Contents

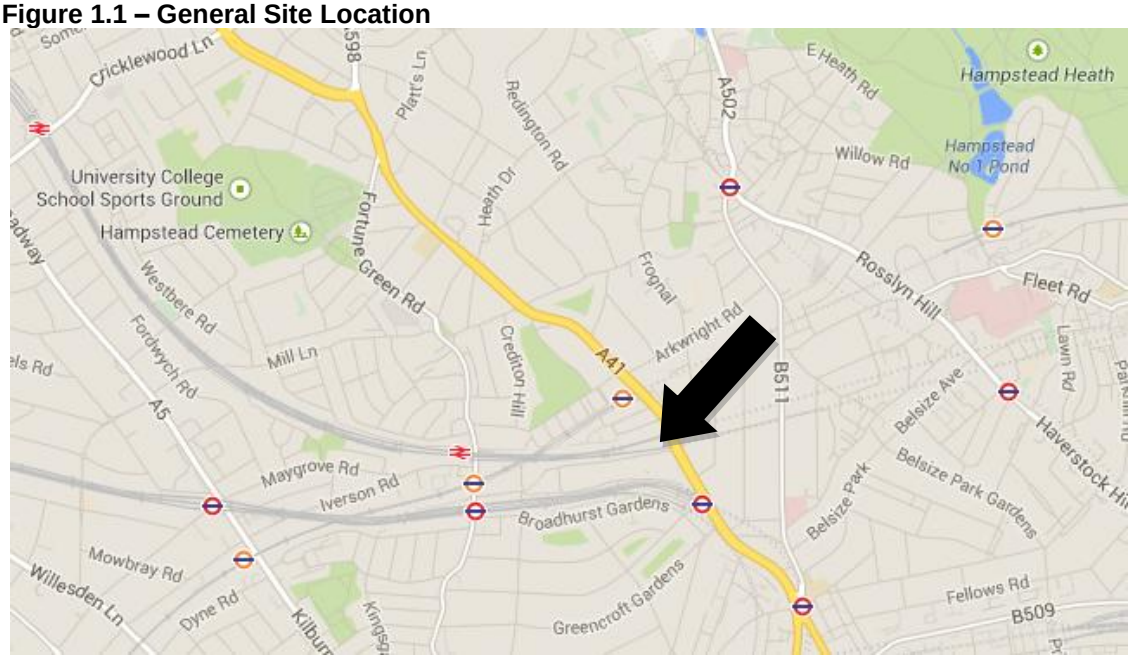
Appendices

1. Introduction

1.1 Capita was commissioned by Stadium Capital Holdings to undertake an ecological appraisal of a parcel of land located off Finchley Road in the London Borough of Camden at central Ordnance Survey Grid Reference TQ 261 848. From herein this parcel will be referred to as 'the site'.

1.2 The general location of the site is provided *Figure 1.1* below

Figure 1.1 – General Site Location



Source: Contains Ordnance Survey data © Crown copyright database right 2014.

THE SITE

1.3 The site is a broadly triangular area of land situated where the North London Line of the London Overground rail network diverges in two before entering tunnels beneath Finchley Road (A41) at the site's eastern extent. The rail lines form the northern and southern boundaries of the site with Finchley Road (A41) forming the eastern boundary.

1.4 The rail network at this location is busy with West Hampstead station located to the west of the site and both east and west-bound lines travelling past the site.

1.5 The site is situated within a highly urbanised area in North London. Finchley Road is a busy high street and there are large commercial premises (including a supermarket, DIY store, leisure centre complex and associated car park) to the south of the site. Residential roads, variably lined with street trees, are located to the north of the site and beyond the immediate commercial areas.

1.6 There is a parcel of broad-leaved woodland to the north of the site which forms part of the designated West Hampstead Railsides, Medley Orchard and Westbere Copse Site of Interest for Nature Conservation (SINC).

1.7 The habitats on site consist primarily of dense scrub dominated by 'butterfly-bush' (*Buddleja davidii*). There are also small areas of hardstanding, two small structures and areas of rank grassland.

PROPOSED DEVELOPMENT

1.8 It is proposed that the vegetation on site is cleared to allow the construction of a multi storey mixed-use residential and commercial property with areas of soft landscaping along the northern site boundary. A plan of the proposed development is shown as *Appendix A*.

AIMS

1.9 The aims of the ecological appraisal are to:

- identify the ecological habitats present on site and assess their potential for protected species to be present, through the completion of an extended Phase 1 habitat survey, see *Appendix B: Phase 1 Habitat Survey Plan CS075624_ECO_001* with photographs and target notes in *Appendix C*.
- provide recommendations for further protected and notable species surveys, as necessary;
- identify significant features for retention and protection, where possible;
- identify features for enhancement, where possible; and
- provide outline recommendations for mitigation and / or compensation as necessary.

2. Methodology

2.1 To allow for an accurate assessment of the potential ecological impacts which may be caused by any development works, sufficient information on the current ecological status of the site is required. The information gathered is used to inform the design process and identify appropriate avoidance, mitigation and compensation measures to be implemented in a timely manner.

BASELINE INFORMATION

2.2 Baseline information for this ecological appraisal was collected from the following sources:

- Greenspace Information for Greater London (GiGL) for information on designated sites and protected species records within a 1 km radius of the site;
- National Biodiversity Network Gateway[1] for information on protected sites, species and habitats;
- historical ecological reports of the site written by Capita; and
- Google Maps[2] was utilised to analyse aerial photography of the site and surrounding areas.

2.3 Relevant information on national and local planning legislation was obtained from the following sources (and is included in *Appendix D*):

- Biodiversity 2020: A strategy for England's wildlife and ecosystem services;
- Local Biodiversity Action Plan (LBAP);
- London Plan; and
- Camden Core Strategy 2010 - 2025.

[1]NBN Gateway accessed at: http://data.nbn.org.uk/
[2] Google maps accessed at www.maps.google.co.uk

Extended Phase 1 Habitat Survey

2.5 Phase 1 habitat survey methodology[3], as approved by Natural England (NE), was used to survey the site with signs of protected or notable species being sought by direct observation or by assessment of habitat suitability. The extended Phase 1 habitat survey and report has been undertaken and prepared by a member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

2.6 The survey specifically provided information on:

- the habitat types present (see *Appendix B: Phase 1 Habitat Survey Plan CS075624_ECO_001*) and character and suitability for supporting protected species;
- features of nature conservation interest e.g. locally rare plants; signs of protected species; and
- features of ecological interest were recorded as target notes and supported with photographs as appropriate (*see Appendix C).*

Limitations

2.7 Ecological surveys are limited by factors which influence the presence of plants and animals, such as the time of year, weather and seasonal variations. The Phase 1 habitat survey does not therefore produce an exhaustive list of plants and animals present on the site and the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. The prevailing habitats and botanical value of the site were however evident and have provided sufficient information for the purposes of this assessment.

2.8 Access was restricted to the western extent of the site as it is currently National Rail land. An assessment of the habitats present and this area's nature conservation value was achieved through remote observations from adjacent off-site areas which confirmed comparable features to those viewed directly on site.

[3] Joint Nature Conservation Committee (revised reprint 2010) Handbook for Phase 1 habitat survey – A technique for environmental audit.

3. Baseline Situation

3.1 Obtaining a detailed ecological baseline of the site and surrounding areas is essential in order to:

i. determine the presence and distribution of important and protected habitats and / or species which could be negatively affected by any development proposals; and

ii. identify ecological features on site that could be retained and / or enhanced in order to promote the conservation status, distribution and abundance of protected species, on site and in the surrounding areas.

3.2 Natural and semi-natural habitats generally support the greatest diversity of wildlife, particularly those protected by international or national legislation. A summary table of relevant wildlife legislation can be found in *Appendix D.*

Desk Study

3.3 GiGL was contacted for information on designated sites and protected / notable species within a 1 km radius of the site. The locations and information on the designated sites are detailed in *Appendix E*. Summary information relevant to the Site are provided below.

Internationally and Nationally Designated Sites

3.4 There are no international or nationally designated sites within the 1 km study area of the Site.

Locally Designated Sites

3.5 Locally designated sites include Sites of Interest for Nature Conservation (SINC). SINCs are sites considered particularly important for nature conservation within the local borough, although not afforded statutory protection they comprise a material consideration when planning applications are being determined.

3.6 In Greater London SINC sites are split into grades and categorised as being of Metropolitan, Borough (grades I or II) or Local Importance, in accordance with set criteria.

3.7 There are seven SINCs within the 1 km study area as detailed in *Table 3.1* below.

3.8 The site itself was historically included within the 'West Hampstead Railsides, Medley Orchard and Westbere Copse' SINC designation. The site has since been de-scheduled following a Planning Inspector's examination into the Camden Core Strategy and Development Policies Development Plan Document[4] which concluded that:

> *"the integrity of much of the site as a wildlife reserve seems to me to be fragile in view of the maintenance requirements of Network Rail that require frequent cutting back of vegetation", and "..unless the Proposals Map, and Core Strategy Map 7, are amended to delete the open space designation, the plans would be unsound"*

Table 3.1 - SINCs within the 1 km of the Site

Site name & reference	Geographical Status	Approx. distance from Site	Reason for selection
West Hampstead Railsides, Medley Orchard and Westbere Copse (CaBI06)	SBI Grade I	0.02 km	Wooded railside habitats which includes a small nature reserve and an old orchard. This 'site' comprises a number of discrete areas.
Frognal Court Wood (CaBII03)	SBI Grade II	0.10 km	Small wood
Broadhurst Gardens Meadow (CaBII02)	SBI Grade II	0.50 km	Meadow Habitat with scattered trees and scrub vegetation.
Green Triangle (CaBII08)	SBI Grade II	0.60 km	Community organic garden
Hampstead Parish Churchyard (CaBI08)	SBI Grade I	0.70 km	Churchyard habitat comprising of vegetated walls, tombstones, scattered trees and grassland.
Frognal Lane Gardens (CaL07)	SLI	0.75 km	Private communal garden comprising of scattered trees, grassland, a pond and planted shrubbery.
160 Mill Lane Community Garden (CaL03)	SLI	0.90 km	Small Community garden comprising of scattered trees, scrub, grassland and a pond.

Source: GiGL

SBI – Site of Borough Importance for Nature Conservation; **SLI** – Site of Local Importance for Nature Conservation.

[4] Douglas Machin (31 August 2010) *Joint Report on the Examination into: The Camden Core Strategy the Development Policies*

SIGNIFICANT SPECIES OF FLORA AND FAUNA

3.9 Legislation relating to protected species potentially present within the site is provided in *Appendix D*.

3.10 GiGL provided records of rare and protected species recorded within the study area, dating between 1999 and 2012, species records of relevance to the Site have been summarised and presented within *Table* 3.2 below.

Table 3.2: Protected and Notable Species within the Study Area of the Site

Scientific name	Common name	Species Status	Distance recorded from Site	Date
Mammals				
Erinaceus europaeus	West European Hedgehog	LBAP, NERC SPI	603 m NW	2000
Pipistrellus pipistrellus	Common Pipistrelle	LBAP, CHSR2, WCA5	157 m W	2007
Birds				
Passer domesticus	House Sparrow	LBAP, NERC SPI, BoCC (Red)	159 m E	2000
Turdus philomelos	Song Thrush	LBAP, BoCC (Red)	666 m S	1999
Prunella modularis	Dunnock	LBAP, BoCC (Amber)	569 m SW	2010
Reptiles and Amphibians				
Bufo bufo	Common Toad	LBAP, NERC SPI, WCA5*	992 m W	2002
Rana temporaria	Common Frog	WCA5*	159 m NE	1999
Invertebrates				
Lucanus cervus	Stag Beetle	LBAP, NERC SPI, WCA5*	515 m E	1999
Plants				
Chamaemelum nobile	Chamomile	LBAP, NERC SPI	523 m S	2003

Source: GiGL,
LBAP – London Biodiversity Action Plan; **NERC SPI** – Natural Environment and Rural Communities Act 2006 Section 41 Species of Principal Importance; **CHSR2** – Conservation of Habitats and Species Regulations 2012, Schedule 2; **WCA5** – Wildlife and Countryside Act 1981 (as amended), Schedule 5 * denotes partial protection; **BoCC** – Birds of Conservation Concern followed by listing in parenthesis[5]

[5] Eaton et al (2009) *Birds of Conservation Concern 3 The population status of birds in the United Kingdom, Channel Islands and Isle of Man.* British Birds 102, pp. 296-341.

4. Survey Information

4.1 An extended Phase 1 habitat survey of the site was undertaken on 14 August 2014. The results of the survey are illustrated in the Phase 1 habitat map in *Appendix B* with the accompanying target notes and photographs in *Appendix C*.

Habitat Types & Potential For Protected / Notable Species

4.2 The following section details the habitats recorded on site and their potential to support protected and / or notable species.

4.3 It should be noted that it is understood that the site is subject to regular clearance operations as required by National Rail for operational reasons. Clearing the vegetation regularly limits the habitats present to varying stages of grassland and scrub development meaning the habitats present are liable to change rapidly as habitat succession occurs.

Scrub & Sapling Trees

4.4 The site is dominated by dense scrub habitat which is composed primarily of butterfly-bush (*Buddleja davidii*) and bramble (*Rubus fruticosus agg*.) (see Target Notes 2 and 4) . The area immediately after the wooden hoarding on the eastern end of the site has been kept largely clear of vegetation (likely as this is the access point) although scattered butterfly bush plants were present.

4.5 The dense scrub is likely to support an assemblage of common invertebrate species and provide foraging and nesting opportunities for breeding bird species. This habitat also has a low potential to be utilised by foraging / commuting bat species although this potential is limited by the isolated nature of the site.

4.6 There are stands of sapling broad-leaved trees across the site, interspersed within the scrub. Species present include sycamore (*Acer pseudoplatanus*) and ash (*Fraxinus excelsior*). These trees have a limited potential to support nesting birds. Whilst all individual trees could not be surveyed it is considered that given their young age and size they do not offer suitable roosting habitat for bat species.

Buildings & Other Structures

4.7 There are two small built structures on site (see *Appendix C*: Target notes 3 and 7). The first building (TN3) is a small brick build with very limited potential to support breeding birds or roosting bats due to its sound nature and flat felt roof. The second building (TN7) could not be accessed on this survey but has been viewed on previous and is considered to have limited potential as it is of metal construction.

4.8 On the north east boundary of the site there is a neighbouring building with an area of roofing felt attached to the wall with wooden cladding (see Target Note 5). The folds and gaps evident offer low potential to support roosting bat species, namely crevice dwelling bats such as pipistrelle species.

4.9 There are two sets of stone steps on site with the lower set flanked by stone walls (see Target Note 6). They are considered to have negligible potential to support protected species.

HARDSTANDING

4.10 At the eastern extant of the site there are small areas of hardstanding supporting sinage boards (see Target Note 1) This area also contains bollards, rubble and scattered debris e.g. fencing, litter, steel pillars. The rubble and debris appears to have been in situ for some time, as indicated by the vegetation growth on top.

4.11 These areas are considered to have low potential to support common invertebrate species and foraging birds.

GRASSLAND

4.12 There are small patches of rank semi-improved species poor grassland at the eastern extant of the site. Previous surveys have also identified grassland patches further west, in the land owned by the National Rail, however as this area of the site could not be entered on the most recent survey and was instead viewed from the roadside it is not clear whether these patches remain or have been subject to scrub encroachment.

4.13 The grassland offers low potential to support common invertebrates and foraging / nesting birds.

4.14 Due to the isolated nature and highly urban situation of the site it is considered that there is negligible potential for the site to support basking or foraging reptiles or for there to be badger activity.

5. Nature Conservation Evaluation

5.1 Overall the site is considered to be of limited ecological value due its small size and the isolated nature of the site within a highly urbanised area.

5.2 Regular vegetation clearances on site also limit the value of the site as they prevent the natural habitat succession into broad-leaved woodland. The dominance of the invasive butterfly bush scrub limits the plant diversity and further lowers the ecological value.

5.3 The site does however still have the potential to support assemblages of common invertebrates and foraging / nesting bird species and a low potential to support foraging bat species. In addition, given the sites urban situation the contribution of the habitats on site to the local ecology is raised.

5.4 The adjacent SINC is afforded raised ecological value by virtue of its designation, i.e. at a local (Borough) level in the context of all constituent parts. No direct impacts will occur as part of the proposed development as the designated site is separated from the Site by an active rail line. Indirect impacts through shading are considered to be low to negligible due to the intrinsically shaded nature of the extant woodland habitat and the limited shading reaching the woodland as a result of the proposed scheme (see *Appendix F* for impact assessment and shade modelling).

6. Potential Impacts

6.1 The proposed development of the site would involve the clearance of grassland and scrub habitats to allow the construction of a multi storey building. Some areas of vegetation around the periphery of the site may be retained / incorporation into the planned soft estate if considered desirable.

6.2 The habitats on site are considered to be of low ecological value however vegetation clearance on site will still result in short-term losses of foraging and nesting / refuge habitats impacting common breeding birds and invertebrate species. There will also be a loss in potential foraging habitat for bat species.

6.3 The proposed building has the potential to have a shading effect on the neighbouring woodland SINC. This is discussed in further detail within *Appendix F.*

7. Mitigation, Compensation and Enhancement

7.1 The extent of the proposed development precludes the retention of the majority of the vegetation currently present on the site.

7.2 The current development proposal includes the provision of 'green roof' spaces, a feature which should be retained in any future changes to the proposal. To maximise the ecological benefits of green roofs a wide range of plant species should be used to make it biodiverse (see *Appendix G* for species recommendations). The provision of biodiverse green roofs will largely replace lost refuge and foraging habitats for birds, bats and invertebrates.

7.3 The following measures are recommended to further retain and enhance the sites ecological value and promote species diversity which is especially valuable given the sites urban context:

- installation of artificial refuge features, such as bird, bat and insect boxes. These can be incorporated within the new building or installed in appropriate places on the building or within the landscaped areas post construction;
- considerate landscaping design around the periphery of the development including the planting of shade tolerant native scrub species to replace lost nesting bird and invertebrate habitats;
- provision of a 'loggery' to provide dead wood habitat for invertebrate species, in particular stag beetles which have been recorded in the area. These can take the form of partially buried timbers in partially shaded areas at ground level; and
- minimise external lighting and use low level directional lighting where possible to minimise light spillage, particularly along the northern boundary where it may affect the adjacent SINC[6].

7.4 It is considered that the proposed development will not only create an aesthetically pleasing green eco-building, benefiting the potential occupants, but if the above recommendations are included then the scheme could also provide ecological enhancements to the existing site condition.

SAFEGUARDS RELATING TO ADJACENT SINC

7.5 The location and massing of the proposed building will introduce an element of shading to a small part of the adjacent designated open space. Shading impacts pertaining to the new building on the adjacent SINC are discussed in detail within *Appendix F.*

[6] Guidance can be found in the document: Artificial lighting and wildlife, interim guidance. Produced by the BCT and can be found at http://www.bats.org.uk/pages/bats_and_lighting.html (accessed August 2014)

7.6 It is concluded that shading impacts are likely to result in a negligible change to the SINC's floral and faunal diversity and its nature conservation contribution at a Borough level accordingly. It is recommended that appropriate local management prescriptions are devised and implemented within the SINC with the involvement of the local community where possible to provide enhancements to this component of the wider West Hampstead Railsides, Medley Orchard and Westbere Copse SINC.

7.7 Suggested management opportunities include:

- localised thinning / coppicing of trees, shrubs, ivy and bramble;
- plant, species of local provenance, to improve the habitat for invertebrate and bird species through enhancement of habitat and plant species diversity;
- installation and maintenance of wildlife refugia: and
- control of Japanese knotweed and scrub development.

SPECIES-SPECIFIC RECOMMENDATIONS

7.8 It is important that detrimental impacts to species and habitats are minimised and that legislation is upheld with regard to protected species which have been identified as potentially being on site (see *Appendix D*).

7.9 A detailed construction environmental management plan (CEMP) is to be prepared prior to the commencement of works at the Site. The CEMP is to include general protection measures, legal provisions and responsibilities as well as specific recommendations to manage the residual risk identified within this report (see *Table 7.1*).

Table 7.1 Specific recommendations to be included in CEMP

Receptor	Potential	Precautionary measures to be adopted
Protected species	Negligible to moderate	As a precaution, if protected species are discovered on Site during site preparation and construction, all works are to cease, and a suitably qualified ecologist will need to be contacted before any further works continue.
Breeding birds	Moderate	To avoid any risk of disturbing nesting birds if present on Site, it is recommended that works involving vegetation clearance (including lopping, trimming or felling of trees) are scheduled to avoid the bird breeding season, (generally agreed to occur between March and August inclusive – dependent on seasonal conditions). If it is not possible to clear vegetation outside of the bird breeding season, it is recommended that all vegetation required for removal is checked by an ecologist for active nests no more than 72 hours prior to vegetation clearance. If active nests are identified, no works may be undertaken in the vicinity of the nest until the birds have fledged. The active nests must be cordoned off to the specified area required for the species of bird concerned. Works may then proceed up to, but not within, this cordon.
Bats	Low	Due to the open roofing felt cladding present on the neighbouring building, offering suitable folds / crevices to support roosting bats, it is recommended that this area is checked and dismantled carefully by hand in the presence of a suitably qualified ecologist as a precautionary measure. In the unlikely event of bats being discovered within the Site during proposed works, all works must cease and Natural England contacted for further advice.

Source: Capita

8. Conclusion

8.1 The site is considered to have low ecological value due to the dominance of dense scrub vegetation, presence of hardstanding and its small and isolated nature. The scrub habitats on site are typical of railside locations with dominant stands of butterfly bush, bramble and sycamore sapling.

8.2 The site provides potential habitats for;

- common bird species – nesting, foraging and refuge;
- common invertebrate species – foraging and refuge; and
- bats – foraging and commuting.

8.3 It is considered that if the mitigation and compensation measures, as set out in *Section 7* above, are adhered to then the proposed works are highly unlikely to result in a significant ecological impact.

8.4 Furthermore there is the potential within the proposed scheme for the site to include measures which would enhance the sites ecological contribution at a local level. These measures include:

- installation of biodiverse green roofs;
- provision of artificial invertebrate, bird and bat nest / roost boxes; and
- contribution to the management of the adjacent woodland SINC.

Appendix A – Plan of Proposed Development

ROSEMONT ROAD

ROSEMONT EMBANKMENT

FINCHLEY ROAD

BLACKBURN ROAD

CZWG

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N

Key

- Plant Space
- Student Apartments
- Student Circulation
- Student Services
- Residential Apartments
- Residential Circulation
- Residential Services
- Commercial/ Community
- Commercial Community Circulation
- Commercial/ Community Services
- Green Areas

Rev: D01 **Date:** 29.07.14 **Drn:** BMF **Chk:** BM
Initial issue.

Do not scale off this drawing
Report all errors and omissions to the Architect
Dimensions to be checked on site

SHEET INFORMATION:
Plotted by : B.MARTINEZ
Plot date : 30 July 2014 17:58:30

Client:
Stadium Capital Holdings

Project:
Midland Crescent

Title:
First Floor
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Drawing status:
For Information

CZWG

Scale @ A1
1:200

Drawing No: 2004-00-DR-0111

Rev: D01

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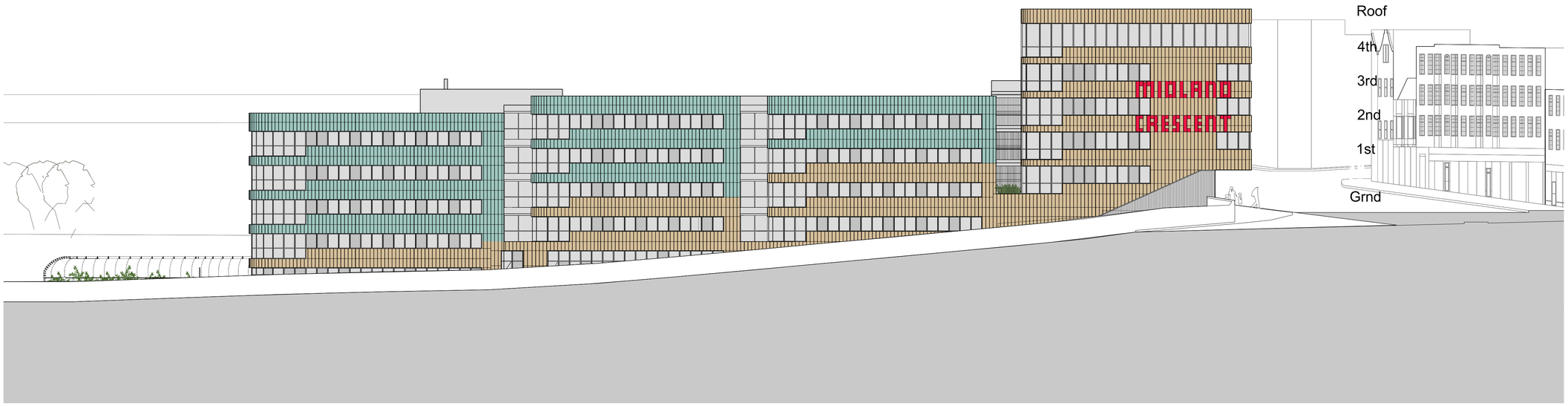

South Elevation Blackburn Road

Rev: D01 **Date:** 29.07.14 **Drn:** BMF **Chk:** BM
Initial Issue.

Do not scale off this drawing
Report all errors and omissions to the Architect
Dimensions to be checked on site

SHEET INFORMATION:

Plotted by : B.MARTINEZ
Plot date : 29 July 2014 17:28:29

Client:
Stadium Capital Holdings

Project:
Midland Crescent

Title:
South Elevation Blackburn Road
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Drawing status:
For Information

CZWG

Scale @ A1
1:200

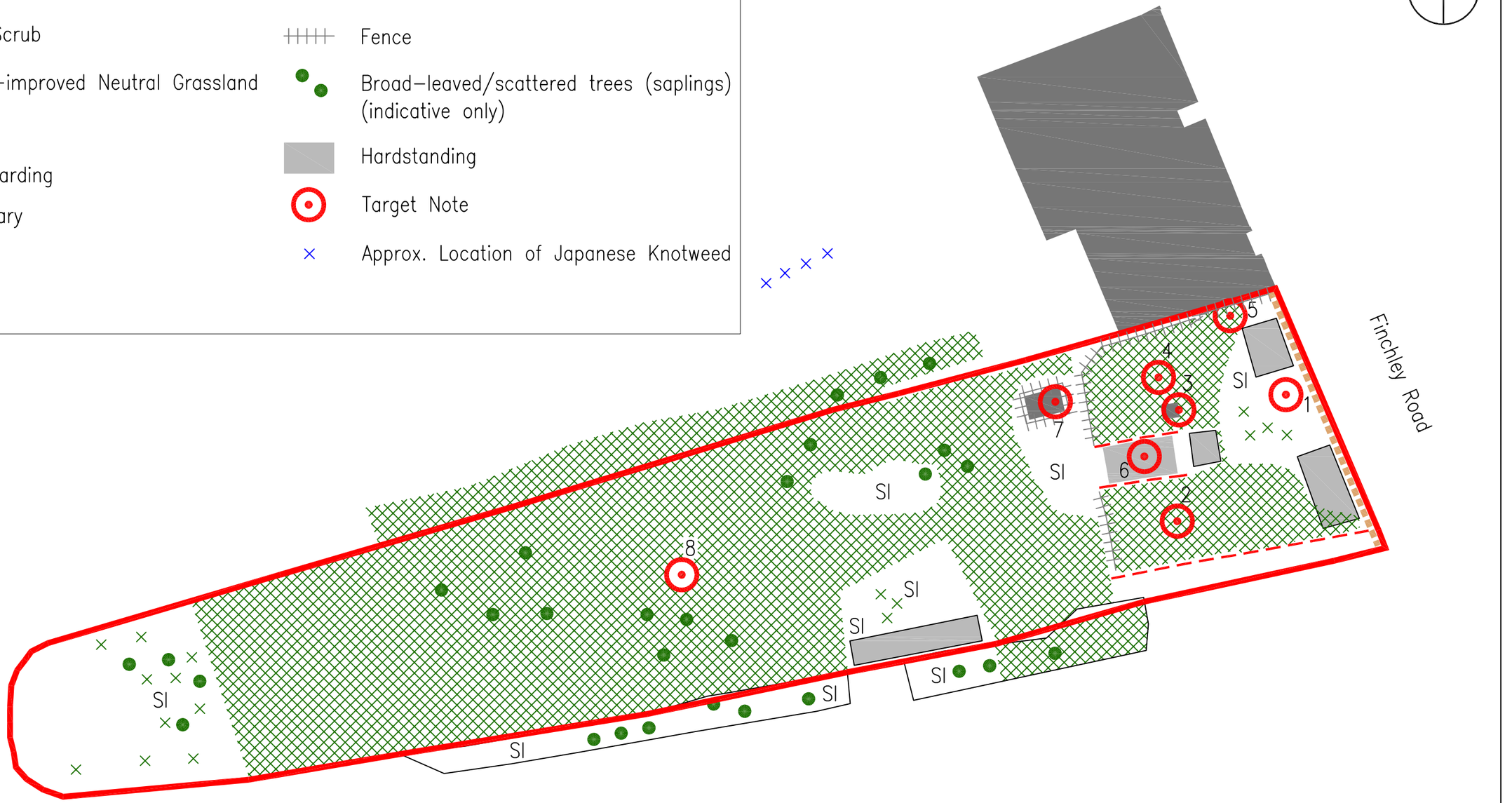
Drawing No: 2004-00-DR-0605

Rev: D01

Appendix B - Phase 1 Habitat Survey Plan

Key

- Dense/continuous Scrub
- Scattered Scrub
- SI Poor Semi-improved Neutral Grassland
- Buildings
- Wooden Hoarding
- Site Boundary
- Wall
- Fence
- Broad-leaved/scattered trees (saplings) (indicative only)
- Hardstanding
- Target Note
- Approx. Location of Japanese Knotweed



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REV		DR	CH	PA	DATE

MIDLAND CRESCENT

FIGURE 1:
PHASE 1 HABITAT SURVEY

CAPITA

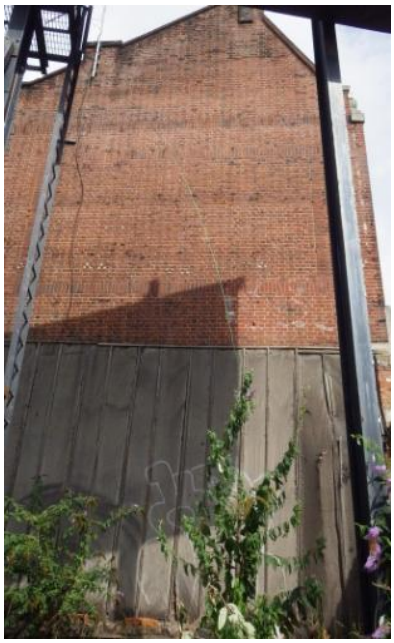
DRAWN BY	CHECKED BY	PASSED BY	DATE	SCALES @ A3 SIZE	ISSUE STATUS	DRAWING NUMBER	REV.
JW	KM	NE	AUG 14	N.T.S.	Preliminary	CS075624_ECO_001	

Appendix C – Site Photographs & Target Notes

The following table presents photographs highlighting several areas and habitats within the site. To be read in conjunction with Phase 1 habitat plan CS075624_ECO_001;

Date of visit: 14 August 2014 **Surveyor: Katie May, GradCIEEM**		
Target Note Reference	**Comment**	**Photograph**
1	Area of hardstanding, adjacent to wooden boarding, with bollards, metal debris and signage posts. Becoming overgrown with stands of butterfly bush.	
2	Area of dense butterfly bush vegetation. Roof of a small structure (see target note 3) is visible. Areas of semi improved (poor) grassland are visible at the front of the photo.	

3	Small structure with limited potential to support roosting and nesting bird and bat species.	
4	Area of low dense bramble scrub along site boundary with buildings to north. Area of semi-improved grassland with debris can be seen in forefront of photograph.	

5	Side of building adjacent to the north of the site with roofing felt on outside of building offering low potential for roosting bats.	
6	Two sets of stone steps flanked by walls along lower part. Becoming overgrown with vegetation.	

7	Small fenced structure surrounded by rank grassland and dense scrub. (Access to this structure was not possible on the survey of 14 August 2014 but its continuing presence was confirmed) .	
8	View over the site from the south eastern boundary looking west.	

Appendix D – Summary of Relevant legislation & Planning Policy

Species	Legislation	Offences	Licensing procedures
Bats *European protected species*	Conservation of Habitats and Species Regulations 2010 (as amended) - Reg 41	Deliberately[1] capture, injure or kill a bat; deliberate disturbance[2] of bats; or damage or destroy a breeding site or resting place used by a bat. [The protection of bat roosts is considered to apply regardless of whether bats are present.]	A Natural England (NE) development licence is required in England to permit any works that could potentially commit an offence. The licence application involves a detailed submission to NE of baseline survey information, reasoned statements, method statements, mitigation and monitoring. The licence, including collection of the survey data and writing of all the supporting information can take from three to six months to complete. Upon submission, NE allows 30 working days to review the application and make a decision. Please be aware that not all applications are granted and delays can be likely. Please note surveys for this species group are seasonally constrained. Mitigation can also be seasonally constrained.
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	A licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
[1] Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing [2] Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (I) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong. Lower levels of disturbance not covered by the Conservation of Habitats and Species Regulations 2010 (as amended) remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.			
Birds	Wildlife and Countryside Act 1981 (as amended) S.1	Intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; intentionally take or destroy the nest or eggs of any wild bird. [Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover).] Intentionally or recklessly disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young;	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety.

Species	Legislation	Offences	Licensing procedures
		intentionally or recklessly disturb dependent young of such a species.	
Rabbits, foxes and other wild mammals	Wild Mammals (Protection) Act 1996	Intentionally inflict unnecessary suffering to any wild mammal.	Natural England provides guidance in relation to rabbits (TIN003, Rabbits- management options for preventing damage, July 2007) and foxes (which are also protected under the Wildlife and Countryside Act 1981 from live baits and decoys, see TAN43 April 2005 and TAN08 April 2005) as well as other wild mammals; see Natural England's website for the list of 'Regulatory Guidance, Best Practice and Information'. Lawful and humane pest control of these species is permitted.

Designation	Legislation	Protection	Guidance
Site of Importance for Nature Conservation (SINC) including Site of Metropolitan Importance (SMI), Site of Local Importance (SLI) and Site of Borough Importance (grade I and II)	There is no statutory designation for SINCs.	SINCs are given protection through policies in the Local Development Plan.	Development proposals that would potentially affect a SINC would need to provide a detailed justification for the work, an assessment of likely impacts, together with proposals for mitigation, enhancement, compensation and restoration of habitats to be lost or damaged.

Planning Policy Document	Guidance
DEFRA - Biodiversity 2020: A strategy for England's wildlife and ecosystem services	England's current biodiversity strategy setting out high level and comprehensive action required in order to halt biodiversity loss in line with signed international and EU agreements and commitments. The paper sets out the "*strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea. It builds on the successful work that has gone before, but also seeks to deliver a real step change….. shifting the emphasis from piecemeal conservation action towards a more integrated landscape scale approach…….The mission for this strategy, for the next decade, is to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people*" with focused delivery "through action in four areas: 1. *a more integrated large-scale approach to conservation on land and at sea* 2. *putting people at the heart of biodiversity policy* 3. *reducing environmental pressures* 4. *improving our knowledge* The four priority areas are broadly aligned to the strategic goals of the Convention on Biological Diversity Strategic Plan 2011-2020, adjusted to fit the priorities in England".

Natural Environment & Rural Communities Act 2006 S.40 (which superseded S.74 of the Countryside & Rights of Way Act 2000).	S.40 of the NERC Act 2006 sets out the duty for public authorities to conserve biodiversity in England and Wales. Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretaries of State for England, in consultation with NE and are referred to in S.41 of the NERC Act. The list of habitats and species was updated in 2008: England: http://www.ukbap-reporting.org.uk/news/details.asp?x=45 The habitats and species listed are not necessarily of higher biodiversity value, but they may be in decline. Habitat Action Plans and Species Action Plans are written for them or are in preparation, to guide their conservation. Ecological impact assessments should include an assessment of the likely impacts to these habitats and species.
National Planning Policy Framework (NPPF)	The central message of the NPPF is a *"presumption in favor of sustainable development"* (paragraph14) within plan-making and decision-taking. This presumption runs throughout all aspects of the NPPF, however, the following statements are particularly pertinent to planning decisions in the context of nature conservation at the subject Site: *"The planning system should contribute to and enhance the natural and local environment by...minimising impacts on biodiversity and providing net gains in biodiversity where possible"* (paragraph 109); *"If significant harm* [from a proposed development] *cannot be avoided, adequately mitigated, or, as a last resort, compensated for..planning permission should be refused"* and *"opportunities to incorporate biodiversity in and around developments should be encouraged" (*paragraph 118); *"Planning decisions should ensure that..adequate site investigation information, prepared by a competent person, is presented"* (paragraph 121); and *"* [planning] *decisions should limit the impact of light pollution from artificial light on..nature conservation"* (paragraph 125)
Greater London Authority July 2011 - The London Plan **Spatial Development Strategy for Greater London**	Mayor of London's strategy to continue to grow the economic strength of the capital, whilst maintaining it as a desirable place to live in combination with tackling the current social and environmental issues including ensuring the protection and growth of green space and biodiversity within the city and combat climate change. The Plan's main environmental / ecological strategies include; *Policy 7.18 Protecting Local Open Space and Addressing Local Deficiency;* • *The loss of local protected open spaces must be resisted unless equivalent or better quality provision is made within the local catchment area. Replacement of one type of open space with another is unacceptable unless an up-to-date needs assessment shows that this would be appropriate.* *Policy 7.19 Biodiversity and access to nature;* • *...proactive approach to the protection, enhancement, creation, promotion and management of biodiversity - This means planning for nature from the beginning of the development process and taking opportunities for positive gains for nature through the layout, design and materials of development proposals and appropriate biodiversity action plans.* • *Any proposals promoted or brought forward by the London Plan will not adversely affect the integrity of any European site of nature conservation importance (to include special areas of conservation(SACs), special protection areas (SPAs), Ramsar, proposed and candidate sites)either alone or in combination with other plans and projects.* • *Development proposals should: a) wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity, b) prioritise assisting in achieving targets in biodiversity action plans (BAPs).....and/or improve access to nature in areas deficient in accessible wildlife sites, and c) not adversely affect the integrity of European sites, and be resisted where they have significant adverse impact on European or nationally designated sites or on the population or conservation status of a protected species, or a priority species or habitat identified in a UK, London or appropriate regional BAP or borough BAP.....* • *When considering proposals that would affect directly, indirectly or cumulatively a site of recognised nature conservation interest, the following hierarchy will apply: 1) avoid adverse impact to the biodiversity interest, 2) minimize impact and seek mitigation, 3) only in exceptional cases where the benefits of the proposal clearly outweigh the biodiversity impacts, seek appropriate compensation. Policy 7.21*

	Policy 7.21 Trees and woodlands; • *Trees and woodlands should be protected, maintained, and enhanced, following the guidance of the London Tree and Woodland Framework (or any successor strategy).* • *Existing trees of value should be retained and any loss as the result of development should be replaced.....Wherever appropriate, the planting of additional trees should be included in new developments, particularly large-canopied species.* *Policy 7.28 Restoration of the Blue Ribbon Network;* • *Development proposals should restore and enhance the Blue Ribbon Network by: a) taking opportunities to open culverts and naturalise river channels b) increasing habitat value; development which reduces biodiversity should be refused, c) preventing development and structures into the water space unless it serves a water related purpose, d) protecting the value of the foreshore of the Thames and tidal rivers, e) resisting the impounding of rivers, f) protecting the open character of the Blue Ribbon Network.*
Camden Core Strategy 2010 **Policy CS15 – Protecting & improving our parks & open spaces and encouraging biodiversity**	Policy CS15 sets out the LBC's position with particular regard to the protection of sites designated in the Camden and London Biodiversity Plans. Provisions of particular relevance to the scheme are set out below in reference to proposed impacts on the adjacent site of nature conservation importance SBI Grade I: *"i) working with The Royal Parks, the London Wildlife Trust, friends of parks groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden"* *"l) protecting...nature conservation designations of sites"*

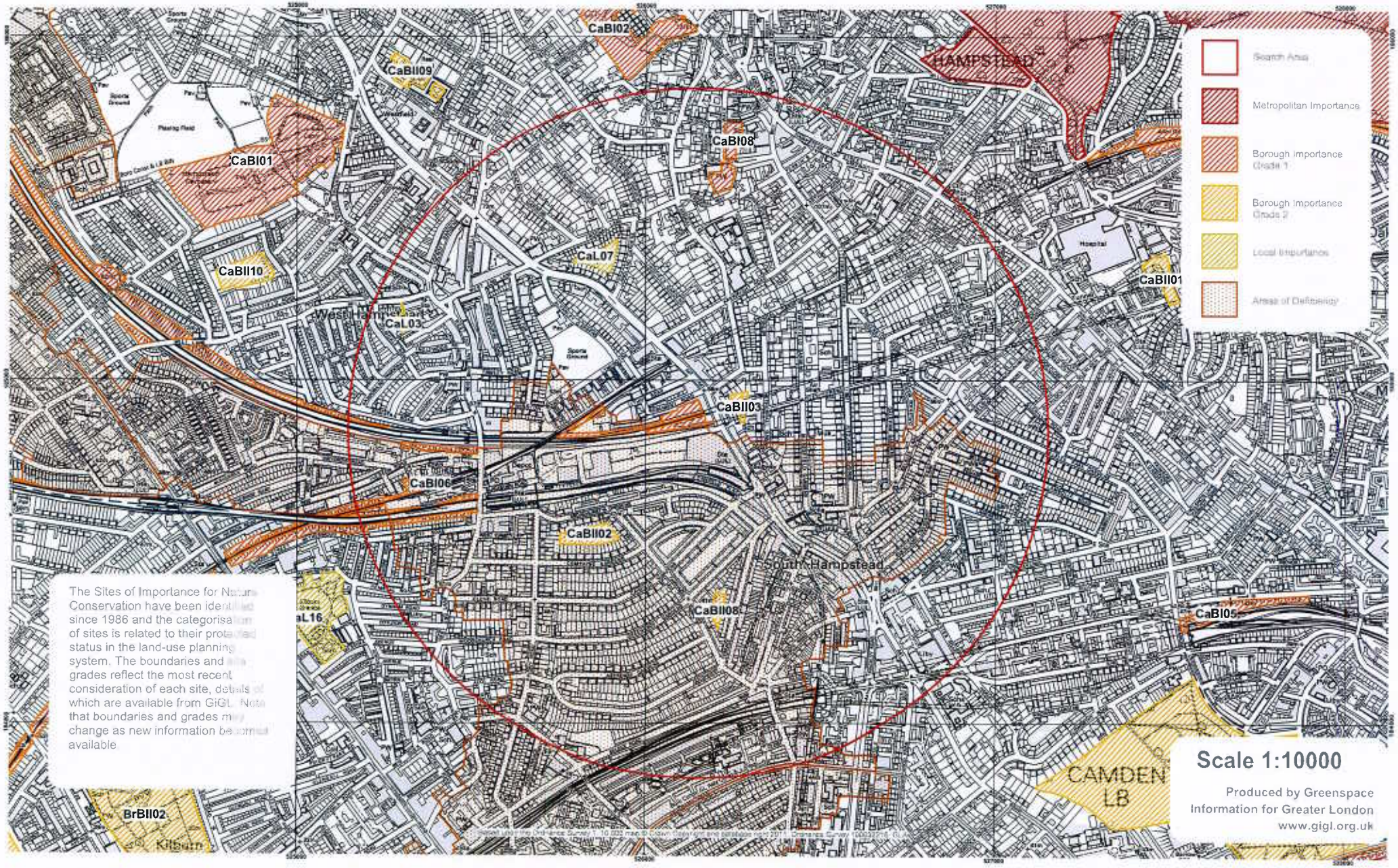
Appendix E - Statutory and Non-statutory Site Maps

Sites of Importance for Nature Conservation

Ecological Data Search (12/471) for Capita Symonds

Midland Crescent, London Borough of Camden, 22 October 2012

GiGL



The Sites of Importance for Nature Conservation have been identified since 1986 and the categorisation of sites is related to their protected status in the land-use planning system. The boundaries and site grades reflect the most recent consideration of each site, details of which are available from GiGL. Note that boundaries and grades may change as new information becomes available.

Scale 1:10000

Produced by Greenspace Information for Greater London
www.gigl.org.uk

Appendix F – Shading Assessment

CAPITA

Commercial in Confidence

Midland Crescent

Shading Assessment

August 2014

We | Listen Create Deliver

Quality Management

Job No	CS075624		
Project	Midland Crescent		
Location	Land at Midland Crescent, London Borough of Camden		
Title	Shading Assessment		
Document Ref	ECO_02	**Issue / Revision**	
File reference	F:\ZENV\!Projects\CS075624_Midland_Crescent\B.Work_Tasks\4 Report\Appendix\Shading_Assessment.docx		
Date	18 August 2014		
Prepared by	Nick Ellis MSc BSc (Hons) CEnv MCIEEM	Signature (for file)	
Checked by	Roger Cooper MA(Hons) MALD CMLI CEnv MSEE	Signature (for file)	

Contents

Appendices

1. Introduction

1.1 This report has been compiled to assess the impacts of the proposed development on the area of mixed broad-leaved woodland located approximately 12 m to the north of the Site.

1.2 As set out in the main body of this report, the woodland forms a component part of a wider designated nature conservation area known as the 'West Hampstead Railsides, Medley Orchard and Westbere Copse'. The site has been designated by LBC as a Site of Borough Importance Grade I (see *Appendix B* for the designated site citation).

1.3 The designated site is listed as 7.94 Ha in size and formed of several disparate parts adjacent to the local rail corridors. The area of concern forms a coherent woodland block of around 0.4 Ha in size i.e. 5% of the total designated site.

1.4 In order to assess the potential impacts of the proposed development on the adjacent south-facing bank located to the rear of mixed residential and commercial properties to the south of Rosemont Gardens, the following data sources were reviewed:

- aerial photography, and planimeter;
- results of a site walkover undertaken on 06 April 2011;
- CZWG sunlight and shadow study compiled on August 2014.

1.5 Relevant planning policies are referenced where necessary.

2. Local Planning Policy Considerations

2.1 Policy CS15 of Camden Core Strategy 2010 regarding the perceived detrimental impacts to designated site is of particular relevance to the proposed scheme.

2.2 The full text of Policy CS15 is provided as *Appendix A*.

2.3 Paragraph (a) of Policy CS15 deals with London Borough of Camden's policy on the protection of open spaces which include designated nature conservation sites. Following explanatory text in paragraph 15.6 of the Camden Core Strategy 2010 states:

"We [London Borough of Camden] will only allow development on sites adjacent to an open space that respects the size, form and use of that open space and does not cause harm to its wholeness, appearance or setting."

2.4 Further sub-policies within CS15 are of less or no relevance to the London Borough of Camden's reason for refusal, these are summarised in *Table 2.1* for ease of reference.

Table 2.1 Camden Core Strategy 2010, Policy CS15 summary

Sub-policy reference	Sub-policy summarised text	
a	The Council will protect and improve Camden's parks and open spaces	This is dealt within this assessment.
b	The Council will tackle deficiencies and under-provision and meet increased demand for open space	Not relevant to this assessment.
c	Secure from developments that created an additional demand for open space, where opportunities arise	Not relevant to this assessment.
d	The Council will designate existing nature conservation sites	The site in question is already designated, this is not relevant.
e	Protection of other green areas with nature conservation value, including gardens, where possible	The designated site is protected through planning policy and as such this policy is not relevant.
f	Seeking to improve opportunities to experience nature	Not relevant to reason for refusal 3 as site is privately owned with no public access.
g	Expecting provision of new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls	This is delivered by the proposed development and through management recommendations at the designated site – see text.
h	Identify habitat corridors and securing biodiversity improvements along gaps in habitat corridors	Not relevant to this assessment.
i	Working with various groups to protect and improve open spaces and nature conservation in Camden	Not relevant to this assessment.
j	Protecting trees and promoting the provision of new trees and vegetation, including street trees	No tree loss is anticipated, however, management, opportunities within the designated site may enhance longevity and biodiversity at the site.
k to u	Sub-policies dealing with the preservation and enhancement of Hampstead Heath and Regent's Canal and surrounding areas.	Not relevant to this site.

3. Baseline situation and impact assessment

3.1 To address potential impacts the nature and context of the extant designated site is set out below.

EXISTING SITE CONDITIONS

3.2 The adjacent Site of Nature Conservation Importance (SNCI) referred to as the 'West Hampstead Railsides, Medley Orchard and Westbere Copse' is located approximately 12 metres to the north of the application site.

3.3 The designated site is 7.94 hectares in size and formed of several disparate parts adjacent to local rail corridors offering a variety of natural and semi-natural habitats with associated floral and faunal assemblages. The SNCI is of recognised ecological value by virtue of its designation by the London Borough of Camden at Borough level in the context of all constituent parts. The full SNCI citation is provided as *Appendix B*.

3.4 The part of the SNCI situated to the north of the proposed development site comprises a coherent woodland block of approximately 0.4 hectares[1] in size forming approximately 5% of the total SNCI.

3.5 The area inspected during the site walkover comprises land between the rear of properties to the south of Rosemont Gardens and the rail track, henceforth described as 'the embankment'. This area is steeply sloping in places with an overall height differential of some 10 metres falling away to the rail track to the south.

3.6 Buildings to the north of this area comprise a mixture of two and three storey residential and commercial properties, a number of which have associated basements; of these few have direct access to the embankment.

3.7 The embankment area forms a modest woodland block dominated by mature and semi-mature broad-leaved trees. The diversity of trees within this fairly small area is relatively high and of uniform age particularly within the northern section of the

[1] Measured using planimeter tool - http://www.freemaptools.com/area-calculator.htm

embankment. There is evidence of localised management throughout the woodland including the recent cutting of the shrub layer at the foot of the embankment (largely comprising bramble Rubus fruticosus agg.) to create an informal footpath with associated timber seating (*Plate 3.1*).

Plate 3.1 Footpath & surrounding dense scrub adjacent to railway line

Source: Capita 2011

3.8 The field layer presents a relatively diverse floral assemblage within more open areas within occasional openings / glades, the origin of which appears mixed with occasional non-native bluebell Hyacinthoides sp and primrose Primula sp scattered amongst locally abundant green alkanet (Pentaglottis sempervirens), garlic mustard (Alliaria petiolata), white deadnettle (Lamium album) etc. Ground flora within this largely shaded embankment is dominated by sprawling ivy (Hedera helix sp.) to the north and bramble (Rubus fruticosus agg) to the south adjacent to the railway track with occasional stands of Japanese knotweed (Fallopia japonica). Vascular plants encountered are typical of shaded and disturbed woodland habitats, although successional shrub habitats, dominant in areas, have constrained plant diversity to a

greater or lesser extent.

3.9 Trees throughout the site are exhibiting variable levels of environmental stress with tall, suppressed growth observed (see *Plate 3.2*).

Plate 3.2 Closely-spaced broad-leaved trees exhibiting suppressed growth

Source: Capita 2011

POTENTIAL EFFECTS

3.10 No direct impacts will occur as part of the proposed development as the designated site is separated from the proposed development site by an active rail line (London Overground, North London Line). This assessment deals with indirect impacts of the proposed development only.

3.11 In order to assess the potential indirect impacts of the proposed development on the adjacent south-facing bank located to the rear of mixed residential and commercial properties to the south of Rosemont Gardens, the following information was reviewed:

i online aerial photography;
ii results of a site walkover of the adjacent designated site undertaken on 06 April 2011;
iii CZWG sunlight and shadow study compiled on 12 June 2013 (provided as *Appendix C*).

3.12 Review of sunlight and shade models, provided as *Appendix C*, illustrate that the proposed building will present maximum shading during the winter months with the eastern portion of the embankment (less than 0.1 ha or 25% of the embankment; and approximately 1.3% of entire SNCI) shaded during almost the entire day during the winter solstice with the exception of the late afternoon, when sunlight is not restricted by the proposed development. Late March presents a shortening of the proposed building's shadow which becomes more limited in both extent and duration in its influence across the designated site to the south eastern portion of the embankment (approximately 0.02 ha or 5%; and approximately 0.3% of entire SNCI). Shading by the mid-summer solstice, is restricted to the proposed development area and to the adjacent railway line to the north and does not extend across any of the designated area of the embankment.

3.13 If left unmitigated the changes in variables potentially affect plant growth including seed germination conditions and the general availability of light for photosynthesis. Impacts on the diversity of the adjacent woodland may result in a small, localised simplification of the embankment's field layer particularly within the south east quarter.

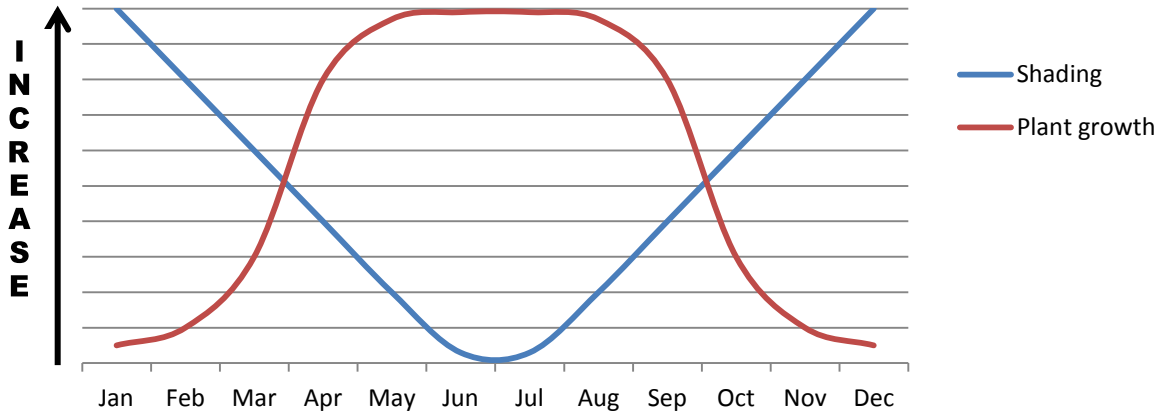
3.14 Notwithstanding this, the nature of the designated site, and recorded flora recorded within it, is naturally adapted to shaded woodland environments and is highly unlikely to be significantly impacted by the development of the adjacent plot of land. Similar plant assemblages are referred to within the SNCI citation itself supporting the accepted low sensitivity of such plant groups to shading stating that:

"Ground flora is generally shade tolerant, for example cow parsley (Anthriscus sylvestris), nettle (Urtica dioica), ivy (Hedera helix) and bramble."

3.15 Augmented shading of the embankment imposed by the development is at its greatest during the winter months in which native vascular plants and regenerative material (seeds, rhizomes etc) are generally dormant. Shading increasingly diminishes during the spring months permitting a return to growing conditions on the embankment close to those in the absence of the proposed development.

3.16 A simple schematic graph (*Figure 3.1*) illustrates the inverse relationship between shading and plant growth on the south eastern portion of SNCI which is subject to the greatest shading post-development. As is demonstrated, plant growth is at its greatest when shading is lowest.

Figure 3.1 Schematic graph demonstrating relationship between shading and plant growth on the embankment



MITIGATION

3.17 In order to address this minor negative impact, it is recommended that local management prescriptions are devised and implemented within this woodland. Management opportunities include localised thinning / coppicing of trees, shrubs and bramble; the installation and maintenance of wildlife refugia; and the control of Japanese knotweed and scrub development. A well devised management plan is highly likely to result in biodiversity enhancements at this part of the SNCI through improvements to habitat structural diversity, greater insolation to the field layer during the main growing season (spring and summer) and resultant improvements to local flora and fauna.

3.18 Adoption of suggested habitat management practices suggested across the embankment follow well established principles for which successful examples can be found throughout the United Kingdom.

3.19 By far the most relevant example of the success of this approach was observed on a micro scale on the embankment itself on 06 April 2011. Where limited clearance had been undertaken within dense bramble stands to permit pedestrian access and resting areas (see *Plate 3.1*), the ground flora, although still establishing, was notably more diverse including green alkanet, garlic mustard and white deadnettle.

3.20 Ex situ parts of the SNCI include the Westbere Copse which is also designated as a Local Nature Reserve (LNR). Woodland plant assemblages here are reported to be more diverse and management prescriptions include the removal of self sown saplings for without which the rational concludes “woodland areas would also become over-shaded, resulting in flora loss”[2].

[2] Lawrence & Root (2012) *Westbere Copse Local Nature Reserve Management Plan 2012-2017 – commissioned by London Borough of Camden*

CONCLUSION

3.21 In conclusion, the proposed development is highly unlikely to impose significant impacts on the adjacent SNCI due to the restricted spatial and temporal extent of the effect. It is therefore considered to permit the maintenance of principles set out by London Borough of Camden's Core Strategy (2010) Policy CS15 pertaining to its wholeness, appearance or setting.

3.22 The loss / diminished functionality of aerial connectivity currently available at the SNCI is highly unlikely to change as a result of the proposed development. Movement beyond the SNCI is restricted through the truncation of the embankment by Finchley Road to the east and Rosemont Road to the north.

3.23 Active management of the part of the designated site located to the north of the proposed development, and a contribution towards nature new wildlife installations within, is highly likely to result in an overall enhancement to woodland habitats contributing to Borough and Greater London biodiversity objectives and policies including Policy CS15 of Camden Core Strategy 2010.

3.24 The balance of small adverse potential impact on part of the site from increased shading compared to the benefits to biodiversity accruing across the whole of this part of the designated area that would arise from the management interventions associated with the proposed development clearly favours approval especially when considered alongside the status quo of a likely decline in ground flora overtime as the dominance of aggressive species (ivy, bramble etc.) and associated shading increases.

Appendix A – Camden Core Strategy 2010 Policy CS15

CS POLICY

CS15 – Protecting and improving our parks and open spaces and encouraging biodiversity

The Council will protect and improve Camden's parks and open spaces. We will:

a) protect open spaces designated in the open space schedule as shown on the Proposals Map, including our Metropolitan Open Land, and other suitable land of 400sqm or more on large estates with the potential to be used as open space;

b) tackle deficiencies and under-provision and meet increased demand for open space by:

- providing additional open space at King's Cross;
- securing additional on-site public open space in the growth areas of Euston, West Hampstead Interchange, Holborn and Tottenham Court Road, and other parts of Central London. Where the provision of on-site public open space is not practical on a particular site in these areas, the Council will require a contribution to the provision of additional public open space on identified sites in the vicinity. If it can be demonstrated to the Council's satisfaction that no such suitable sites are available, we will require improvements to other open spaces in the area;
- securing improvements to publicly accessible open land on the Council's housing estates; and
- securing other opportunities for additional public open space.

CS15 – Protecting and improving our parks and open spaces and encouraging biodiversity *(continued)*

c) secure from developments that create an additional demand for open space, where opportunities arise, improvements to open spaces, including to:
   - the facilities provided, such as play and sports facilities;
   - access arrangements; and
   - the connections between spaces.

The Council will protect and improve sites of nature conservation and biodiversity, in particular habitats and biodiversity identified in the Camden and London Biodiversity Plans in the borough by:

d) designating existing nature conservation sites;

e) protecting other green areas with nature conservation value, including gardens, where possible;

f) seeking to improve opportunities to experience nature, in particular in South and West Hampstead, Kentish Town and central London, where such opportunities are lacking;

g) expecting the provision of new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls;

h) identifying habitat corridors and securing biodiversity improvements along gaps in habitat corridors;

i) working with The Royal Parks, the London Wildlife Trust, friends of parks groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden;

j) protecting trees and promoting the provision of new trees and vegetation, including additional street trees.

The Council will preserve and enhance the historic, open space and nature conservation importance of Hampstead Heath and its surrounding area by:

k) working with the City of London, English Heritage and Natural England to manage and improve the Heath and its surrounding areas;

l) protecting the Metropolitan Open Land, public and private open space and the nature conservation designations of sites;

m) seeking to extend the public open space when possible and appropriate;

n) taking into account the impact on the Heath when considering relevant planning applications;

o) protecting views from Hampstead Heath and views across the Heath and its surrounding area;

p) improving the biodiversity of, and habitats in, Hampstead Heath and its surrounding area, where opportunities arise.

The Council will preserve and enhance the Regent's Canal by:

q) balancing the differing demands on the Canal, its towpath and adjoining land;

r) implementing opportunities to make the Canal a safer place;

s) applying the guidance in the Regent's Canal Conservation Area Management Strategy;

t) implementing opportunities to provide additional nature conservation areas and improve the role of the Canal and its adjoining land as a habitat corridor (green chain);

u) working with British Waterways, Natural England, other land owners/developers, users and the local community to improve the Canal and towpath.

Appendix B – SNCI Citation

CaBI06 West Hampstead Railsides, Medley Orchard and Westbere Copse

Grade:
Borough I

Grid ref:
TQ 249 845

Area (ha):
7.94

Borough(s):
Camden

Site first notified:
01/01/1993

Boundary last changed:
15/08/2004

Citation last edited:
10/11/2005

Habitat:
Scattered trees, Secondary woodland, Scrub, Orchard, Semi-improved neutral grassland, Tall herbs

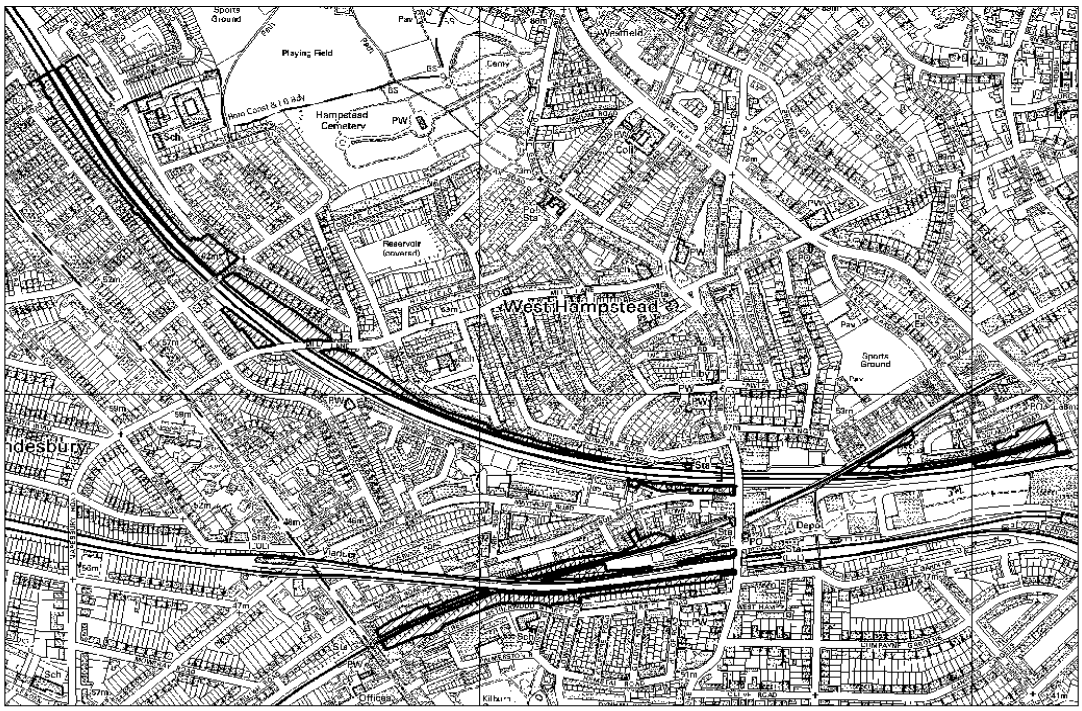
This site is composed of a number of sections of railside, an old orchard at Medley Gardens, and Westbere Copse in West Hampstead.

Land near Brondesbury is covered in a complex of scrub and secondary woodland, mostly sycamore (*Acer pseudoplatanus*) and wild cherry (*Prunus avium*). More open areas support false oat-grass (*Arrhenatherum elatius*), rosebay willowherb (*Chamerion angustifolium*), Michaelmas-daisy (*Aster* sp.) and bramble (*Rubus fruticosus* agg.). Much of the length aside the Thameslink line is densely covered in secondary woodland, bramble (*Rubus fruticosus agg*.), scrub and tall herb communities.

A small part of this stretch is Westbere Copse, which is managed as a nature reserve. The majority of Westbere Copse is woodland composed of sycamore (*Acer pseudoplatanus*), oak (*Quercus* sp.), ash (*Fraxinus excelsior*) and aspen (*Populus tremula*). There is an understorey of snowberry (*Symphoricarpos rivularis*), elder (*Sambucus nig*ra), elm (*Ulmus* sp.), blackthorn (*Prunus spinosa*) and hawthorn (*Crataegus monogyna*). Ground flora is generally shade tolerant, for example cow parsley (*Anthriscus sylvestris*), nettle (*Urtica dioica*), ivy (*Hedera helix*) and bramble. In areas with less shade these are joined by common toadflax (*Linaria vulgaris*), Canadian goldenrod (*Solidago canadensis*) and Michaelmas-daisy (*Aster* sp.). The London notable species common broomrape (*Orobanche minor*) has been recorded here. Common birds include blue tit, great tit, robin, blackbird, wren and dunnock.

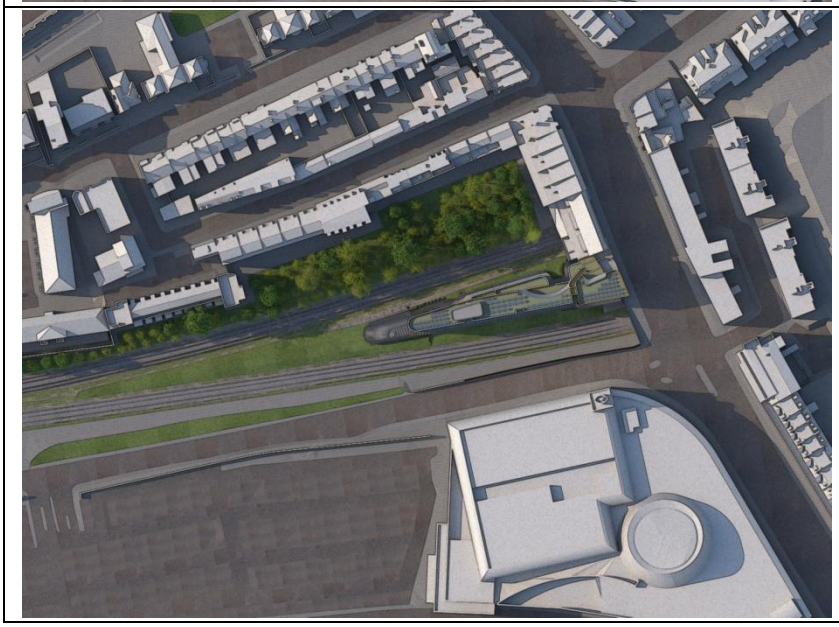
The Medley Orchard is an old orchard, immediately adjacent to the railway behind the gardens of Medley Road. Old orchards are a rare habitat in London, and the fruit trees can support important communities of invertebrates. Medley Orchard is now largely secondary woodland of ash, but a few old fruit trees survive. It is owned by the Council.

There is free public access to the northern half of Westbere Copse. The southern part of the reserve is not open to the general public other than on workdays, which are held on the second Sunday of each month. There is no public access to railsides or to the Medley Orchard.



Appendix C – Sunlight / Daylight Models

	**March 20** **09:00 hrs**
	**March 20** **12:00 hrs**
	**March 20** **15:30 hrs**

	**June 21** **08:00 hrs**
	**June 21** **12:00 hrs**
	**June 21** **15:30 hrs**

	**December 21** **10:00 hrs**
	**December 21** **12:00 hrs**
	**December 21** **15:30 hrs**

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Appendix G – Biodiverse Green Roof Species Recommendations

Table G.1: Emorsgate EM6 seed mix

Wild Flowers		
%	**Scientific Name**	**Common name**
0.5	*Achillea millefolium*	Yarrow
1.5	*Anthyllis vulneraria*	Kidney Vetch
1.0	*Centaurea nigra*	Common Knapweed
1.8	*Centaurea scabiosa*	Greater Knapweed
0.4	*Clinopodium vulgare*	Wild Basil
1.0	*Daucus carota*	Wild Carrot
0.5	*Filipendula vulgaris*	Dropwort
1.0	*Galium verum*	Lady's Bedstraw
1.5	*Knautia arvensis*	Field Scabious
0.5	*Leontodon hispidus*	Rough Hawkbit
1.5	*Leucanthemum vulgare*	Oxeye Daisy
0.5	*Lotus corniculatus*	Birdsfoot Trefoil
0.5	*Origanum vulgare*	Wild Marjoram
0.5	*Pimpinella saxifraga*	Burnet-saxifrage
0.3	*Plantago media*	Hoary Plantain
1.5	*Primula veris*	Cowslip
1.0	*Prunella vulgaris*	Selfheal
1.5	*Ranunculus acris*	Meadow Buttercup
0.5	*Reseda lutea*	Wild Mignonette
2.0	*Sanguisorba minor ssp. minor*	Salad Burnet
0.5	*Scabiosa columbaria*	Small Scabious
Grasses		
0.4	*Briza media*	Quaking Grass
32	*Cynosurus cristatus*	Crested Dogstail
22	*Festuca ovina*	Sheep's Fescue
16	*Festuca rubra*	Slender Creeping Red Fescue
1.0	*Koeleria macrantha*	Crested Hair-grass
6.6	*Phleum bertolonii*	Smaller Cat's-Tail
2	*Trisetum flavescens*	Yellow Oat-grass

Source: Emorsgate Seeds (http://wildseed.co.uk)

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