



# City University London, Northampton Square Site

Biodiversity Statement

Report for City University London

<b>Author</b>	Sabrina Bremner BSc. Grad CIEEM		
<b>Job No</b>	130176		
	<b>Date</b>	<b>Checked by</b>	<b>Approved by</b>
Initial	14.06.13	John Newton	SY-L
Revision	19/06/13	Sabrina Bremner	/
Revision	11/07/13	Sabrina Bremner	/
Revision	16/07/13	Sabrina Bremner	Ben Kimpton

# Contents

1	City University London– Biodiversity Strategy for Main Campus Redevelopment	4
2	Legislation and Policy Background	5
3	Current Biodiversity Interest	9
4	Biodiversity Strategy	12
5	Annexes	17
	References	18
	Appendix 1: Plant Species of Wildlife Value	20
	Appendix 2: Bird Box Examples	24

**LIABILITY**

The Ecology Consultancy has prepared this report for the sole use of the commissioning party in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party without the prior written permission of The Ecology Consultancy. The content of this report is, at least in part, based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by The Ecology Consultancy, unless otherwise stated in the report.

**COPYRIGHT**

© This report is the copyright of The Ecology Consultancy. Any unauthorised reproduction or usage by any person is prohibited. The Ecology Consultancy is the trading name of Ecology Consultancy Ltd.

# 1 City University London – Biodiversity Strategy for Main Campus Redevelopment

## INTRODUCTION

- 1.1 City University London commissioned The Ecology Consultancy to produce a Biodiversity Strategy to ensure that biodiversity is taken into account with regard to estate management and proposals for the University's Northampton Square site.

## BIODIVERSITY STRATEGY

- 1.2 The aims of this Biodiversity Strategy are to provide the following:
- To provide a "campus-wide" strategy that ties in with UK, London and Local (Islington and Finsbury) policy requirements.
  - To conserve and where possible enhance the biodiversity value of the University campus.
- 1.3 To this end the following are provided within this report:
- A summary of the current estate management proposals;
  - A policy context for the proposals;
  - A synopsis of the previous baseline ecological surveys;
  - An assessment of the potential impacts of the proposals on the baseline: and
  - A mitigation and enhancement strategy for the site.

## ESTATE MANAGEMENT

- 1.4 The estate at City's Northampton Square site comprises the following buildings:
- The Drysdale Building - located on Spencer Street;
  - The Centenary Building -attached to the Drysdale Building, on Spencer Street;
  - The College Building – located on St. John Street adjacent to the University Building;
  - The Tait Building -located on the corner of Spencer Street and Goswell Road;
  - The University Building, incorporating the Student Union and Refectory, located between the Tait Building and The Drysdale Building:
- 1.5 Within the site redevelopment of basements, roof level, and Public Realm Improvements are proposed with the addition of associated landscaping.

## 2 Legislation and Policy Background

### WILDLIFE LEGISLATION

- 2.1 No protected species surveys have been carried out at the site. Overall given the intensely urban nature of the site, its location within an inner London borough and the lack of extensive semi-natural green space, the only protected species likely to be present are birds and bats. The legislation that protects these species and their habitats, and planning and Biodiversity Action Plan policies that apply are as follows:

#### **The Conservation of Habitats and Species Regulations 2010 (as amended)**

- 2.2 The Conservation of Habitats and Species Regulations 2010 (as amended) implement in the UK the EU Habitats Directive 1992. Amongst other things the Regulations protect certain species of animal and plant; these are commonly referred to as European Protected Species and include bats. The Habitat Regulations also place a duty on the government to identify and protect Natura 2000 sites such as Special Protection Areas (SPA) and Special Areas of Conservation (SAC). The nearest such designated sites to City University London is the Lee Valley SPA some 6.1km away.

#### **Wildlife and Countryside Act 1981 (as amended)**

- 2.3 The Wildlife and Countryside Act 1981 (as amended) also provides protection to certain plant and animals but only at the UK level. Amongst those protected are all species of wild bird and their nests. The WCA also provides for the establishment and protection of Sites of Special Scientific Interest (SSSI). The nearest SSSI to City University London is the Hampstead Heath Woods SSSI some 6.4km away.

### PLANNING

#### **National Planning Policy Framework (NPPF)**

- 2.4 The National Planning Policy Framework emphasises the need for sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species. An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species, those listed on Schedule 6 of Natural Environment and Rural Communities Act (NERC, 2006), is also a requirement of planning policy. In determining planning applications, planning authorities have a duty to conserve and enhance biodiversity by ensuring the following:
- That designated sites are protected from adverse harm;
  - There is appropriate mitigation or compensation where significant harm cannot be avoided;

- Opportunities to incorporate biodiversity in and around developments are encouraged;
- Planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats.

### London Plan, 2011

2.5 Within the London Plan (Greater London Authority, 2011) Policy 7.19: 'Biodiversity and Access to Nature' states the requirement for:

*"planning for nature from the beginning of the development process and taking opportunities for positive gains for nature through the layout, design".*

### Islington's Core Strategy

2.6 The Islington Core Strategy (London Borough of Islington, 2011) objectives and policies which are of relevance to the site are included below.

2.7 Statement Objectives 1:

*"16. protecting and enhancing biodiversity in the borough and increasing access to nature".*

2.8 Policy CS10- Sustainable Design: The council will seek to minimise the Borough's contributions to climate change, and ensure that the borough develops in a way which improves quality of life by:

*"...D. Requiring all development to demonstrate that it protects existing site ecology and makes the fullest contribution to enhancing biodiversity, both through on-site measures and by contribution to local biodiversity improvements.*

*E. Requiring all development to demonstrate it is designed to be adapted to climate change, particularly through design which minimises overheating and incorporates sustainable urban drainage systems (SUDS)...*

2.9 Policy CS15- Open space and green infrastructure:

*"...D. Protecting and enhancing biodiversity across the borough and addressing deficiencies in access to nature....Other key habitats, and priority species within them, will also be protected and enhanced including: built environment.....Access to nature will be increased,*

*including by improving the biodiversity value of the parks and gardens... Further ways of increasing access to nature, along with other priorities for the protection and enhancement of habitats will be set out in the Biodiversity Action Plan.*

*E. Supporting local food production through the protection of existing food growing sites....*

*F. Maximising opportunities to 'green' the borough through planting, green roofs, and green corridors to encourage and connect green spaces across the borough, identifying streets, sites and strategic development areas where greening measures could happen. These opportunities will be identified through the Climate Change Adaptation Strategy, and the Biodiversity Action Plan, before being brought together with other opportunities in an Open Space and Green Infrastructure Strategy.*

*G. Maximising the contribution of new and existing open spaces to broader sustainability objectives including SUDS, climate change adaptation and biodiversity. These opportunities will be set out in the aforementioned Open Space and Green Infrastructure Strategy.”*

### **Finsbury Local Plan (Islington Borough Council, in progress)**

- 2.10 The Finsbury Local Plan is in consultation currently. Within the Chapter 7 relating to Northampton Square, Goswell Road and Spencer Street the Plan indicates that development proposals should...*“Create open space within the main site, including green space.”*

## **BIODIVERSITY ACTION PLANS**

### **UK Biodiversity Action Plan (UKBAP)**

- 2.11 The NERC Act 2006 states that *“every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”*, otherwise known as the Biodiversity Duty. Under Section 41 of the Act, the Secretary of State must publish a list of the living organisms and types of habitat which in the Secretary of State’s opinion are *“Species of Principal Importance for the purpose of conserving Biodiversity”* (SPIBS). This list is based on priority species recognised by the UK Biodiversity Action Plan (UKBAP), and in addition to the Annex II species listed under The Conservation of Habitats and Species Regulations 2010 (as amended).

2.12 The UK BAP is a national framework providing details of the UK biological resources and plans for their conservation. It aims to protect, promote and enhance UK biodiversity. The following species for which there are UK BAP Species Action Plans are of relevance to the site: bats, house sparrow *Passer domesticus* and starling *Sturnus vulgaris*.

2.13 This framework has also been adopted at the local level in the following London and Islington BAPs.

### London BAP

2.14 This provides a strategic framework for conserving London's natural open spaces and diversity of wildlife, and is delivered through the London Biodiversity Partnership (LBP). The LBP coordinate biodiversity conservation across London, setting targets and actions for priority habitats and species in the London Biodiversity Action Plan. London BAP species of relevance to the site are bats, starling and house sparrow.

### Islington BAP

2.15 The London Borough of Islington BAP (London Borough of Islington, 2010) supports the London targets and assists with their delivery locally. The Islington BAP targets the following habitats and species that may be of relevance to the site: Built Environment Habitat Action Plan (HAP) and Species Actions Plans (SAPs) for bats, common swifts, house sparrow, and urban bees (several species). Policy 6 of the Islington BAP states:

*"The Council will ensure the public realm and the built environments positively contribute to biodiversity, through urban greening and the consideration of biodiversity in infrastructure projects."*

### Islington Tree Strategy

2.16 The Tree Policy for Islington (London Borough of Islington, 2011), states in Policy 11 that in processing planning applications there is an aim for the retention of trees of high amenity/environmental value.

2.17 Policy 10 that all site works must be carried out in accordance with British Standards (2012) - to BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction*.

## 3 Current Biodiversity Interest

### Overview

- 3.1 The site is dominated by buildings and hardstanding. There are several street trees (some of which lie outwith the ownership of the University) and some small areas of predominantly ornamental planting outside/above building entrances. The majority of plant species noted were non-native and not of known wildlife value. Species included Spanish dagger *Yucca gloriosa*, spindle *Euonymus* sp., coral-bells *Heuchera* sp. and lavender *Lavandula angustifolium*.

### Baseline Design Documents and Ecological Surveys

- 3.2 The following documents have been reviewed in preparation of the Biodiversity Strategy:
- Streetbook Surgery Notes (produced by London Borough of Islington, 2013).
  - City University London: Planning Brief: ([http://www.islington.gov.uk/services/planning/plan\\_brief\\_major/pol\\_planbrief/Pages/city\\_university.aspx](http://www.islington.gov.uk/services/planning/plan_brief_major/pol_planbrief/Pages/city_university.aspx)) (City University London, 2009).
  - Public Consultation Boards: *Investing in Our Community* (City University London)
  - City University London: The biodiversity evidence-base produced by The Environmental Research Group (ERG, 2012).

### Streetbook Surgery Notes

- 3.3 A meeting was attended by the London Borough of Islington (planning, building control, highways, maintenance etc), the University Team, East Architects and Turley Associates on the 29<sup>th</sup> January 2013. The objectives were to discuss the site appraisal and needs for the proposals. Reference is made to the potential use of Sustainable Urban Drainage Systems (SUDS) and the promotion of biodiversity.

### City University London: Planning Brief (2009)

- 3.4 This brief was prepared to ensure any future development at the site are well-designed, sustainable and in keeping with local character. It additionally provides guidance on encouraging biodiversity by including planting for invertebrates, birds and mammals.

### Public Consultation Boards

- 3.5 This document provides a summary of the key projects; further detail of the two projects is detailed in the Annex at the end of this report.

### City University London: The biodiversity evidence-base produced by The Environmental Research Group (ERG) at UEL.

- 3.6 ERG carried out a scoping survey of the current and potential biodiversity interest of the City University London Northampton Square campus in early 2013. This assessment also included additional areas along Myddleton Street, Goswell Place and Sebastian Street beyond the site boundary, and University ownership.
- 3.7 In summary, the report observed that the majority of the site was composed of buildings and hard landscaping, with small areas of vegetation, including street trees beyond the site boundary and University ownership, but whose canopies lie within the site.
- 3.8 The report recommendations included the addition of planters supporting native plant species, green roofs, growing climbing plants on existing and new trees, providing nest boxes and feeding stations for birds.
- 3.9 The Local Biodiversity Action Plan Species targeted within the ERG report included house sparrow, swifts *Apus apus*, and urban bees.

### Potential impacts from development

- 3.10 The site is a mosaic of buildings and hardstanding with small areas of planting that are predominantly recent and of ornamental value only. As such the site is of low ecological value only, however there is some potential for the site to support protected species.
- 3.11 The site is likely to support low numbers of commuting and foraging bats, and potentially roosting bats; and low numbers of widespread bird species, both nesting and foraging. Bats and birds are legally protected therefore surveys and/or mitigation measures may be required prior to commencement of works.
- 3.12 In addition, widespread invertebrate species are also likely to be found in planting areas, and in small, isolated and undisturbed pockets of the site where ruderal and ephemeral vegetation has self-seeded.

### Protected Species Surveys and Mitigation

- 3.13 **Bats:** Any buildings that will be demolished or altered as a result of the proposed redevelopment should first be assessed for their likelihood to support bat roosts. Such an assessment can be carried out at any time of year, and would involve an external and internal inspection. It should be noted, however, that if the assessments cannot rule out the presence of bat roosts, more specific emergence and activity surveys will

be required, which must be carried between May and August prior to any works on buildings commencing.

- 3.14 In the event that roosting bats are found further surveys and a European Protected Species Mitigation licence may be required, which may impose significant timing and methodological restrictions on works.
- 3.15 **Breeding birds:** The site contains some vegetation and buildings with potential to support nesting and foraging birds. Where the scope of works requires vegetation clearance (cutting to 150mm above ground) and building alterations/demolition, it is recommended that this clearance is carried out outside of the main bird nesting season (March to August, inclusive) to avoid any potential offences relating to nesting birds (Newton *et al.*, 2004).
- 3.16 Where this is not possible, a search for any nesting birds prior to vegetation clearance and building alterations/demolition must be undertaken by an experienced ecologist prior to works commencing. If any nests are found, the nests are to be protected until such time as an ecologist confirms that the young have fledged. Checks would be required up to 48 hours prior to clearance taking place. In the event that a nest is found, it would be cordoned off to an appropriate exclusion area for the species concerned and works may then proceed up to, but not within, this cordon. If any nesting birds are found at any time during clearance works when the ecologist is not present, work must stop immediately and an ecologist consulted for advice immediately on how to proceed. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended).
- 3.17 Protection of trees: Trees adjacent to the site should be protected in accordance with British Standards (2012) - *to BS 5837: 2012 Trees in Relation to Design, Demolition and Construction*.

## 4 Biodiversity Strategy

### Biodiversity Strategy objectives

4.1 The objectives of the Biodiversity Strategy for the entire University are as follows:

- To identify "Good Practice" measures that can be adopted and implemented by the University; that are commercially focussed, practical and flexible, with specific reference to the Main Entrance and Tait Regeneration projects;
- To consider enhancing the green infrastructure of the site by incorporating green walls, green roofs, rain gardens and other habitat features within the existing and any new development;
- To consider the installation of bird and bat boxes where appropriate;
- To consider the establishment of invertebrate walls where appropriate;
- To use native species or species of high biodiversity value where appropriate to do so; and,
- To provide information on any green infrastructure features to enhance student, staff and public understanding of biodiversity in an urban context.

### Habitat enhancement

4.2 The promotion of biodiversity is desirable, therefore, any proposed planting should comprise a large number of species of known wildlife value - combining native and non-native shrubs, herbaceous perennials, bulbs, and grasses. Such planting should be structured to provide dense cover for birds and invertebrates. Planting of edible plant crops such as perennial herbs should also be included in plans to tie in with the University's growing initiatives, and the Finsbury Local Plan aims to create local greenspaces.

### Proposed Landscaping-based Enhancements

4.3 Current enhancements proposed are based on the Public Realm Plan (East Architecture, and Public Consultation Boards provided by Turley Associates):

- The Main Entrance – Two green roof areas on the Atrium Lantern Space; lecture space light with raised planters and seating adjacent to the Drysdale Building on Spencer Street; Drysdale Courtyard contemplative garden and planter seats between the Drysdale Buildings and the Students Union, and a new feature tree *Ginkgo biloba*, a new tree pit and planters near the corner of the Tait Building, for wayfinding.

- The Tait Building - Ashby Street: New planters along existing podium of the Tait Building. Food Production - Planters from the Edible Islington site, located within courtyard between the Health Centre, Myddleton Building and Goswell Place Building, are to be moved. A number of potential sites for relocation are being appraised of which the internal roof courtyard of the Tait Building, the Ashby street podium and Drysdale garden are three options.
- 4.4 The following options have been prepared as a guide for methods to enhance the biodiversity value of the entire site:
- 4.5 **Vegetation planting schemes of value to wildlife:** The use of plants of known value to wildlife is recommended in the planting schemes throughout the site. The adoption of a high component of native planting would tie in with the aims to increase biodiversity and to plan for nature, within the NPPF and London Plans. At least ten species of biodiversity value (see below and Appendix 2 for suggestions) could be used in a well-structured scheme that includes trees, shrubs, climbers, herbaceous perennials and bulbs etc. Suitable native trees and shrubs providing nectar and berries which could be used include hawthorn *Crataegus monogyna*, crab apple *Malus sylvestris* and wild plum *Prunus domestica*.
- 4.6 **Selection of appropriate planting:** Shade and drought tolerant, native plants should feature strongly in any planting scheme throughout the site, particularly in regard to proposals for Spencer Street and at the Main Entrance which are shaded either by surrounding building or trees, and no water sources are immediately available. Semi-mature, slow growing perennial plants should be favoured over annual plants, and mature specimens which will require high nutrient and water levels. Appropriate tree species and specimens should be selected to ensure there is maximum potential for their growth.
- 4.7 New planters will be placed along existing podium of the Tait Building, on Ashby Street. These planters will be deep and south facing; so the range of plant species that could be utilised here will be greater as sunlight and moisture will be more readily available. Plants including hardy herbs, shrubs, sub-shrubs, herbaceous perennials and bulbs should be included.
- 4.8 Sunlight is likely to be restricted in the courtyard of the Tait Building, where it is proposed the vegetable beds will be relocated. Water availability will also need consideration. Fruit and vegetable crops will typically require good levels of sunlight, nutrient rich growing medium and water. The selection of crops and design of growing beds will be critical prior to planting.

- 4.9 **Sustainable Horticulture Practices:** It is important that biodiversity is incorporated into the landscape maintenance contract for the whole of the site e.g. by favouring nectar rich species in landscaping and by managing vegetation to minimise disturbance to wildlife. These issues should be developed as part of the site maintenance programme, in consultation with on-site staff.
- 4.10 Manual weeding should be carried out annually to ensure that invasive and unwanted species such as butterfly bush *Buddleja davidii*, thistles *Cirsium* spp., docks *Rumex* spp. and field bindweed *Convolvulus arvensis* are removed. This is particularly important whilst the landscape planting is establishing, but once established less invasive annual species could be left periodically to increase the biodiversity of the site.
- 4.11 Organic matter (decomposed municipal waste, well rotted manure, etc.) should be incorporated into the soil to increase nutrient levels. This will also improve the soil structure and its ability to retain plant nutrients over a longer period. Where fertilizers are used they should be organic.
- 4.12 Drainage must be provided to the planters/raised beds. Newly planted areas should be mulched with a thick layer of shredded bark or woodchip to conserve moisture, suppress weed growth, provide cover for soil dwelling invertebrates and foraging for birds and a growing medium for fungi. Management should ensure this mulch is replenished.
- 4.13 To ensure sustainable horticultural practices are carried out, an Integrated Pest Management (IPM) system should be employed. This would include carrying out annual monitoring of pest and disease levels to identify problematic species such as brown tailed moth and canker. This approach encourages preventative, cultural methods primarily, followed by the use of beneficial insects and applying biological control alongside standard chemical use. Any chemicals would be used as a last resort, and should be non-residual.
- 4.14 **Maintenance for longevity of planting:** Where horticultural stock that requires hard pruning is used i.e. willow *Salix* sp., dogwood *Cornus* sp., hazel *Corylus* sp. ash *Fraxinus* sp., poplar *Populus* sp. etc. small sections should be cut to the ground (coppiced) on an alternating basis e.g. every five years, to ensure that a good proportion of flowering/fruited growth is present in any given season.
- 4.15 Works should be carried out in the late winter when disturbance to wildlife and removal of flowering or fruited material providing valuable forage will be minimal. The

arising could be used to create habitat piles in remaining areas of tree/shrub planting or other undisturbed areas of the site.

- 4.16 **Provision of bird nesting opportunities:** The inclusion of bird nesting boxes for species including house sparrow, black redstart, and starling could be erected on the site buildings. Woodcrete bird boxes (Schwegler, 2010) are recommended as they include a broad range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. Bird boxes should be placed apart from one another, ideally on different building facades.
- 4.17 Where no suitable buildings are present, alternatives can be sought with other structures. Lamp posts and telegraph poles are ideal locations for swift *Apus apus* nest boxes as they provide high points with uninterrupted drops below. A pole or tower colony could be fitted to any redundant lamp posts - the minimum height for such a colony is seven metres.
- 4.18 Any concentration of birds may present an attractive target for anti-social behaviour. Nest places should therefore be sited as high as possible and at sites which are either unattractive to vandals or else secure. Examples models of bird boxes are included in Appendix 2.
- 4.19 **Biodiverse Green Roofs:** The green roof areas proposed on the Drysdale and Student Union buildings have not yet been specified.
- 4.20 Any proposals for green roofs should include a specification of proven ecological value for foraging birds and invertebrates as pioneered by the Green Roof Consultancy <http://greenroofconsultancy.com>. Such areas are typified by substrates of varying type and depth, include dead wood habitat and open areas of vegetation, are low maintenance and are attractive to people as well as wildlife. They also provide opportunities for natural colonisation by plants and invertebrates. Such roofs are preferable to standard stonecrop *Sedum* spp. roofs which deliver fewer biodiversity services as they are typically less species-rich and have a shallower substrate depth<sup>1</sup>. The London Borough of Islington's preferred specification is a biodiversity-based extensive green roof with a substrate (growing medium) depth of 80-150mm.

---

<sup>1</sup> Please note that the UK's *Green Roof Code of Best Practice* (GRO, 2011) advocates a minimum depth of 80mm for extensive green roofs.

4.21 The creation of biodiverse green roofs may also assist in delivering objectives of Policy 5.11 Green Roofs and Development Site Environs of the London Plan (GLA, 2011) and London's Built Structures BAP (London Biodiversity Partnership, 2011) and potentially support other such as the black redstart *Phoenicurus ochruros* and house sparrow *Passer domesticus* Species Action Plans.

#### Further opportunities for enhancement

4.22 Further opportunities at the site could include the following complementary enhancements:

- Climbers could be planted along the edges of fences and/or walls where they will provide a green façade of potential value to foraging birds and insects. Living walls would improve the campus environment through their visual interest, contribute to the building's energy balance and encourage biodiversity. They are simply external walls covered in climbing plants supported on a suitable structure, attached 5-10m from the wall so as to create a gap between the wall and building. Recommended plant species include ivy *Hedera helix*, clematis *Clematis* spp., honeysuckle *Lonicera* spp., wisteria *Wisteria* spp, passion-flower *Passiflora* spp, and jasmine *Jasminum* spp., since many of these plants are attractive and night-scented therefore supporting a high insect diversity.
- A combination of nesting bird boxes, bat roosting boxes and invertebrate boxes and/or invertebrate walls could be erected in proximity to planted areas to provide a varied mosaic of habitats.
- Planters, biodiverse roofs and living walls could be watered by the diversion of rainwater downpipes. Sustainable Urban Drainage Systems (SUDS) should be incorporated into hard landscaping to utilise rainwater for irrigation of the planting areas.

4.23 Such measures would comply with the aims of policies CS10 and CS15 of the the Islington Core Strategy.

## 5 Annexes

- 5.1 More detail on the development proposals for the two areas - Main Entrance and Tait Regeneration is provided here:

### **The Main Entrance Project**

- 5.2 The intention is for the new entrance to look out from the site, whilst also enclosing a distinct place. The selection of public realm materials such as seating and planters will reflect the colours of the University buildings.
- 5.3 Unification of the footway on Spencer Street that is owned in part by the University and by the Council is proposed. Two green roof areas are proposed on the Atrium Lantern Space, lecture space light with raised planters and seating adjacent to the Drysdale Building on Spencer Street; Drysdale Courtyard contemplative garden and planter seats between the Drysdale Buildings and the Students Union, and a new feature tree, new tree pit and planters near the corner of the Tait Building, for wayfinding.

### **The Tait Building Regeneration Project**

- 5.4 Along Ashby Street new planters will be placed along the existing podium of the Tait Building. On tree on Goswell Road may also be relocated.
- 5.5 Additionally, an option for Food Production - Planters from the Edible Islington site, located within courtyard between the Health Centre, Myddleton Building and Goswell Place Building, could be moved. Their new location is under review.

# References

City University London (undated) Public Consultation Boards: Investing in Our Community.

City University London (2009). City University London: Draft Planning Brief. Consultation report. On-line. Available from:  
[http://www.islington.gov.uk/publicrecords/library/Environmental-protection/Publicity/Public-consultation/2011-2012/\(2012-03-03\)-city\\_university\\_planning\\_brief\\_consultation\\_report\\_2009.pdf](http://www.islington.gov.uk/publicrecords/library/Environmental-protection/Publicity/Public-consultation/2011-2012/(2012-03-03)-city_university_planning_brief_consultation_report_2009.pdf) [Accessed 29/05/13]

ERG (2012). City University London: The biodiversity evidence-base produced by The Environmental Research Group (ERG) at UEL. Unpublished report for City University London

Greater London Authority. (2008). *Living Roofs and Walls – Technical Report: Supporting London Plan Policy*. GLA, London [on-line]. Available from  
<http://www.london.gov.uk/mayor/strategies/sds/docs/living-roofs.pdf> [Accessed:11.06.13].

Greater London Authority (2011). The London Plan: Spatial Development Strategy for Greater London [On-line] Available from:  
<http://www.london.gov.uk/sites/default/files/LP2011%20Chapter%207.pdf> [Accessed 30/05/13]

Green Roof Organisation (2011). *Green Roof Code of Best Practice for the UK 2011* [on-line]. Available from <http://www.nfrco.co.uk/upload/GRO%20CODE%202011.pdf> [Accessed: 11.06.13].

HMSO. (1994). *Biodiversity – the UK Action Plan* (Cm 2428) HMSO, London.

IEEM (Institute of Ecology and Environmental Management) (2006) Guidelines for Ecological Impact Assessment in the United Kingdom (version 7 July 2006). [On-line] Available from <http://www.ieem.org.uk/ecia/index.html> [Accessed 02/06/13]

JNCC. (2010). *UK Biodiversity Action Plan: New List of Priority Species and Habitats*. [On-line]. Available from <http://www.ukbap.org.uk/NewPriorityList.aspx> [Accessed 02/06/13]

London Borough of Islington (2013). Streetbook Surgery Notes, unpublished.

London Borough of Islington (2011). Islington's Core Strategy. [On-line] Available from:  
[http://www.islington.gov.uk/publicrecords/library/Environmental-protection/Quality-and-performance/Reporting/2011-2012/\(2012-03-03\)-Core-Strategy-February-2011.pdf](http://www.islington.gov.uk/publicrecords/library/Environmental-protection/Quality-and-performance/Reporting/2011-2012/(2012-03-03)-Core-Strategy-February-2011.pdf) [Accessed 30/05/13]

London Borough of Islington (2011). Tree Policy for Islington. On-line, available from:  
[http://www.treetree.co.uk/treetree\\_downloads/LBI\\_TreePolicy2011.pdf](http://www.treetree.co.uk/treetree_downloads/LBI_TreePolicy2011.pdf) [Accessed 02/06/13]

London Borough of Islington (2011). Spaces for wildlife, places for people: Islington's Biodiversity Strategy 2010-2013. On-line, available from:  
[http://www.islington.gov.uk/publicrecords/library/Environmental-protection/Business-planning/Plans/2011-2012/\(2011-05-13\)-Biodiversity-Action-Plan-2011.pdf](http://www.islington.gov.uk/publicrecords/library/Environmental-protection/Business-planning/Plans/2011-2012/(2011-05-13)-Biodiversity-Action-Plan-2011.pdf) [Accessed 30/05/13]

London Borough of Islington (in progress) Finsbury Local Plan: (Area Action Plan for Bunhill and Clerkenwell) [On-line] Available from: [http://www.islington.gov.uk/services/planning/planningpol/local\\_dev\\_frame/pol\\_bcaap/Pages/default.aspx](http://www.islington.gov.uk/services/planning/planningpol/local_dev_frame/pol_bcaap/Pages/default.aspx) [Accessed 30/05/13]

London Borough of Islington: Green roofs and walls: Good practice guide 1. On-line, available from: [http://www.islington.gov.uk/publicrecords/library/Planning-and-building-control/Publicity/Public-consultation/2012-2013/\(2012-12-20\)-Good-Practice-Guide-1-Green-roofs-and-walls.pdf](http://www.islington.gov.uk/publicrecords/library/Planning-and-building-control/Publicity/Public-consultation/2012-2013/(2012-12-20)-Good-Practice-Guide-1-Green-roofs-and-walls.pdf)[Accessed 02/06/13]

MAGIC (2011). *Multi-Agency Geographic Information for the Countryside*. [On-line]. Available from: <http://www.magic.gov.uk/MagicMap.aspx> [Accessed 30/05/13]

Newton, J. Nicholson, B. Saunders, R. (2004). *Working With Wildlife: A Resource and Training Pack for the Construction Industry*. CIRIA London. Table 6.1 - Guidance on the optimal timing for carrying out specialist surveys and mitigation.

Schwegler. (2011). *Bird and Nature Conservation Products*. No.65. [On-line]. Available from <http://www.schwegler-nature.com/Main/index.htm> [Accessed 02/06/13]

## Appendix 1: Plant Species of Wildlife Value

## ORNAMENTAL AND NATIVE SPECIES OF WILDLIFE VALUE

The list below gives some easily sourced plants which are of proven value to wildlife. It includes a number of ornamental species which are not native and can be used in combination with native species in more formal situations. In informal landscapes the emphasis should be on the use of native species. Different horticultural varieties of the following species are commonly available, but where possible standard stock is advised, especially for native species. Single flowering plants should be chosen over double flowering ('flore pleno') varieties. With exception of \* (biennials) and \*\* (annuals) all species are perennial. E = Exotic, N = Native.

### TREE

Cherry *Prunus* spp., *P. avium* (wild cherry) N or *P. cerasifera* (cherry plum) E  
Ash *Fraxinus excelsior* N  
Apple *Malus* spp., *M. domestica* (edible apple), *M. sylvestris* (crab apple) N  
Pear *Pyrus* spp., *P. communis* (edible pear) or *P. calleryana* (callery pear) E  
Small-leaved lime *Tilia cordata* N  
Silver birch *Betula pendula* N  
Lacebarks *Hoheria* spp., *H. glabrata*, *H. lyallii* E  
Tulip tree *Liriodendron tulipifera* E  
Beech *Fagus sylvatica* N

NB: many of the shrub species below will form small trees when mature.

### LARGE SHRUBS

Shrubby Veronica *Hebe* spp. E - tolerant of dry conditions.  
Hawthorn *Crataegus monogyna* N  
Blackthorn *Prunus spinosa* N NB: can become invasive in small landscaped areas.  
Rose *Rosa canina* (dog rose) *R. arvensis* (field rose) *R. pimpinellifolia* (burnet rose) N  
*Rosa rugosa* (Japanese rose) E  
Elder *Sambucus nigra* N  
California lilac *Ceanothus* spp., *C. arborea* E  
Wild privet *Ligustrum vulgare* N  
Common holly *Ilex aquifolium* N  
Barberry *Berberis* spp. *B. darwinii*, *B. thunbergii*, *B. x stenophylla* E  
Daisy Bush *Olearia* spp., *O. x hastii*, *O. macrodonta* and *O. traversii* E  
Firethorn *Pyracantha coccinea* E  
Hazel *Corylus avellana* N *C. maxima* E  
Viburnum *Viburnum* spp., *V. lantana* (wayfaring tree) N, *V. opulus* (guelder rose) N, *V. tinus* (laurustinus) E Note: *V. lantana* can become invasive in more open habitats such as chalk grassland.  
Butterfly bush *Buddleja* spp., *B. davidii*, *B. alternifolia*, *B. globosa* E - tolerant of dry conditions.  
Note: *B. davidii* can become invasive in more open habitats and around infrastructure.

Dogwood *Cornus sanguinea* N  
 Broom *Cytisus scoparius* N  
 Mexican orange bush *Choisya ternata* E  
 Portuguese Laurel *Prunus lusitanica* E  
 Flowering currant *Ribes sanguineum* E  
 Cherry laurel *Prunus laurocerasus* E  
 Escallonia *Escallonia macrantha* E cultivar 'Langleyensis' is a hardier version  
 Hardy Fuchsia *Fuchsia magellanica* E  
 Buckthorn *Rhamnus cathartica* N  
 Tutsan *Hypericum androsaemum* N

Note: some of these species can be trained (along with climbers) to create 'living' or 'green walls'.

### HERBACEOUS PERENNIALS AND SMALL SHRUBS

Tree mallow *Lavatera* spp. *L. arborea* N, or *L. olblio*, *L. thuringiaca* E  
 Ice plant *Sedum spectabile* E – tolerant of dry conditions  
 Lavender *Lavandula* spp., *L. angustifolia*, *L. x intermedia* E - tolerant of dry conditions.  
 Globe thistle *Echinopsis ritro* E  
 Michaelmas Daisy *Aster novi-belgii* E  
 Teasel *Dipsacus fullonum*\* N - tolerant of dry conditions.  
 Sunflowers *Helianthus annuus*\*\* E  
 Red valerian *Centranthus rubra* E  
 Hemp agrimony *Eupatoria cannabinum* N  
 Common knapweed *Centaurea nigra* N  
 Black-eyed susan *Rudbeckia* spp., *R. hirta*\*\* or *R. fulgida* E  
 Rosemary *Rosmarinus officinalis* E – tolerant of dry conditions  
 Rock rose *Cistus* spp. E  
 Shrubby cinquefoil *Potentilla fruticosa* N  
 Oregon grape *Mahonia aquifolium* E - particularly tolerant of dry shade  
 Wild thyme *Thymus drucei* - tolerant of dry conditions  
 Foxglove *Digitalis purpurea* - particularly tolerant of shade  
 Bugle *Ajuga reptans* - particularly tolerant of shade  
 Wood avens *Geum urbanum* - particularly tolerant of dry shade  
 Lamb's ears *Stachys olympica* and *S. lanata* - tolerant of dry conditions  
 Primrose *Primula vulgaris* - particularly tolerant of dry shade

### CLIMBERS

Star jasmine *Trachelospermum jasminoides* E  
 Jasmine *Jasminum* spp., *J. officinale* (summer jasmine) *J. nodiflorum* (winter jasmine) E  
 Ivy *Hedera helix* N  
 Climbing Hydrangea *Hydrangea anomala* ssp. *petiolaris* E  
 Honeysuckle *Lonicera* spp. *L. periclymenum* N or *L. japonica*, *L. fragrantissima*, *L. standishii* E

Clematis *Clematis* spp., *C. vitalba* N or *C. armandii*, *C. alpina*, *C. montana*, *C. tangutica* E

Hop *Humulus lupulus* N

Firethorn *Pyracantha atalantioides* E

Nasturtium *Tropaeolum majus*\*\* E

## BULBS

English bluebell *Hyacinthoides non-scripta* - particularly tolerant of dry shade. Note: Spanish bluebell *Hyacinthoides hispanica* is not recommended as it can escape from gardens and out-compete and hybridise with the UK native species.

Squill species *Scilla* spp. N/E.

Snowdrop *Galanthus nivalis* N

Winter aconite *Eranthis hyemalis* E

Grape hyacinth *Muscari neglectum* E

Glory-of-the-snows *Chinodoxa* spp. E

Crocus species *Crocus* spp. *C. nudiflorus* (autumn crocus), *C. tommasinianus* (early crocus), *C. vernus* (spring crocus) E

Wild Daffodil *Narcissus pseudonarcissus* N

Onion species *Alliums* spp. *A. ursinum* (ransoms) N or *A. giganteum* (giant onion) E

Note: *A. triquetrum* (three cornered leek) can become invasive.

Wood anemone *Anemone nemorosa* N - particularly tolerant of dry shade

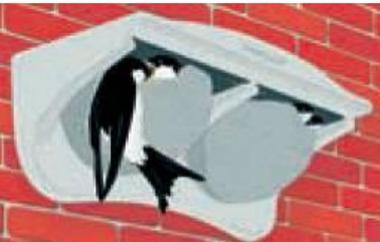
Lesser celandine *Ranunculus ficaria* N

## Appendix 2: Bird Box Examples

Examples of suitable nesting boxes that can be used at City University

Example	Type	Target Species	Location
	<p><b>Nest Box 1B</b></p> <p>Hole-fronted</p> <ul style="list-style-type: none"> <li>• 26mm entrance hole</li> <li>• 32mm entrance hole</li> </ul>	<p><b>Multi-purpose,</b> including; great-, blue-, marsh-, coal and crested tit, redstart, nuthatch, collared and pied flycatcher, wryneck, tree and house sparrows, bats.</p>	<p>Suitable trees/shrubs across the site. Alternatively wall with climbers. Attached to a tree trunk or hung from branches.</p>
	<p><b>Deep Nest Box 1N</b></p> <p>Hole-fronted</p> <ul style="list-style-type: none"> <li>• 30x50mm entrance hole (2 holes).</li> </ul>	<p><b>Multi-purpose,</b> including redstart, black redstart, pied wagtail, spotted flycatcher, robin and wren. Occasionally used by tits and house and tree sparrow.</p>	<p>Suitable trees/shrubs across the Site. Attached to a tree trunk or hung from branches. Higher use by robins if placed 1-1.5m above ground preferably in moist/shady area.</p>
	<p><b>Nest Box 2H</b></p> <p>Open-fronted</p> <p>120mm opening</p>	<p><b>Black redstart,</b> but also used by pied wagtail, spotted flycatcher, occasionally robin and wren.</p>	<p>Could be placed in close proximity to any biodiverse green roofs or wasteland habitat. Attached to outside walls, structures, building facade etc. Not to be hung on trees/shrubs due to potential predators.</p>

(©copyright Schwegler. Bird and Nature Conservation Products. <http://www.schwegler-nature.com/Main/index.htm>)

Example	Target Species	Location
 <p>(Double)</p>  <p>(Terrace)</p>	<p><b>House martin</b></p> <ul style="list-style-type: none"> <li>• Single Nest No. 9A</li> <li>• Double Nest No. 9B</li> </ul> <p>Terrace Nest No.11</p>	<p>Under eave/bridge or attached to vertical structure in a sheltered location. Unobstructed access required, minimum of 2m above ground level, preferably 5m.</p>
 <p>(No.17 single)</p>  <p>(No.17 triple)</p>	<p><b>Swift</b></p> <ul style="list-style-type: none"> <li>• Box No. 17 single cavity</li> <li>• Box No. 17 triple cavity</li> <li>• Box No.16</li> <li>• Cavity Panel</li> </ul> <p>Brick box type 25</p>	<p>Building facade (using fixing bracket) or built into new structures, preferable under shelter of eaves or vertical overhangs. All require minimum of 5m uninterrupted vertical space below nest. No.17 can be installed into external wall to maximum depth of 17cm.</p>
	<p><b>House sparrow</b></p> <p>Sparrow Terrace 1SP</p>	<p>In an elevated position on a strong structure or post/platform within dense shrub/tree planting.</p>

(©copyright Schwegler. Bird and Nature Conservation Products. <http://www.schwegler-nature.com/Main/index.htm>)



## Ecology Consultancy

**Experience and quality that makes a difference.**

London - Beckett House, 72 Borough High Street, London SE1 1XF T. 020 7378 1914 W. [www.ecologyconsultancy.co.uk](http://www.ecologyconsultancy.co.uk)

■ Sussex - The Old Granary, Upper Stoneham, Lewes, E Sussex BN8 5RH T. 01273 471369

■ Norfolk - Thorpe House, 79 Thorpe Road, Norwich, NR1 1UA T. 01603 628408

■ Scotland - Suite 10, 3 Coates Place, Edinburgh EH3 7AA T. 0131 225 8610