

# LONDON CITY AIRPORT

## ECOLOGICAL REPORT

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## SUMMARY

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- S1. RPS was instructed by London City Airport in May 2007 to carry out an ecological inspection of the existing airport and immediate surrounding area. The study was undertaken with reference to the Institute of Environmental Assessment's 'Guidelines for Baseline Ecological Assessment' (1997). This report describes the habitats present, suggested mitigation measures and potential ecological enhancements identified for the site.
- S2. The Airport and surrounding area is highly urbanised and dominated by hardstanding. Semi mature trees, hedges and shrub habitat have been identified around the Airport site, which provide ideal habitats for certain species. Recommendations are made for their management. Potential ecological enhancement measures have also been provided within Section 4 to improve the Airport and surrounding area for wildlife and to make the Airport more ecologically friendly, whilst avoiding any increased risk of aircraft bird strikes.

# 1 INTRODUCTION

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- 1.1 This report describes the ecology and nature conservation value of the land at London City Airport and its surroundings. RPS was instructed by London City Airport to carry out an ecological survey on the existing airport and its immediate surroundings.
- 1.2 The purpose of the survey was to identify habitats present and consider their nature conservation value, as well as their potential to support protected or otherwise notable species. This information served to identify ecological enhancement measures that could be incorporated at the Airport.
- 1.3 London City Airport is situated within the Royals Docks area of east London. The Airport is surrounded by both the Royal Albert and King George V Docks. The Airport is bordered to the west by the A112, to the south by Hartmann Road and the Docklands Light Rail (DLR), to the east by Woolwich Manor Way and Albert Island and to the north by the University of East London campus situated along Royal Albert Way. The Airport is dominated by hardstanding in the form of airport buildings, the runway, aircraft parking, the main terminal building and associated car parking. The only habitat present airside is the grassland bordering the runway. Areas of scattered semi mature trees and shrub planting are present around the boundary of the airport.
- 1.4 This report describes the survey methods used (Chapter 2) and the results obtained (Chapter 3). The implications of the results are considered and discussed in Chapter 4.

## 2 METHODOLOGY

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2.1 The study comprised two phases: a desk study and a walkover inspection. This study has been undertaken with reference to the Institute of Environmental Assessment's 'Guidelines for Baseline Ecological Assessment' (1997).

### **Desk Study**

2.2 The purpose of the ongoing desk study is to obtain existing ecological/environmental data for the site and the surrounding area.

2.3 The desk study component comprises consultation with the following statutory and non-statutory nature conservation organisations:

- Natural England;
- Environment Agency
- London Borough of Newham;
- Greenspace Information for Greater London (GIGL);
- London Wildlife Trust;
- London Bat Group; and
- London Bird Group

2.4 Information has been requested for the site itself and a 2 km radius around the site, described as the study area, in line with standard guidelines (IEMA, 1997).

2.5 In addition, reference was made to the London Biodiversity Action Plan (BAP) and websites for Natural England and Multi Agency for Geographic Information for the Countryside (MAGIC).

### **Site Inspection**

2.6 It was necessary to supplement the data gathered from the desk study with a site visit. The inspection provided information to establish the current ecological value of the site and any potential enhancement measures that could be considered as a result of the ecological inspection.

- 2.7 The walkover inspection was carried out on 10<sup>th</sup> May 2007. This covered the entire Airport site. The timing of the inspection was within the recommended period for such surveys, as most plant species are recognisable and present at this time of year. The methodology followed that of a standard Phase 1 Habitat Survey, as described in the Joint Nature Conservation Committee '*Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*' (JNCC, 1990).
- 2.8 During the Phase 1 survey the dominant plant species were recorded and habitats classified according to their vegetation types and are presented in the standard Phase 1 habitat survey format with habitat descriptions and a habitat map. All botanical names follow the nomenclature of Stace (1997).
- 2.9 The potential presence of protected and rare species was considered. Due to the types of habitats present particular attention was paid to identify the presence or potential for bats, reptiles and breeding birds. The presence of invasive species was also noted.

#### *Bats*

- 2.10 Semi mature trees and the buildings on site could provide potential roost sites for bats. Evidence of bat activity was searched for in these suitable locations during the walkover survey.
- 2.11 Evidence of bat activity is usually detected by the following signs:
- bat droppings (these will accumulate under an established roost);
  - insect wings (from feeding);
  - oil (from fur) and urine stains;
  - scratch marks; and bat corpses.

#### *Birds*

- 2.12 Bird species seen or heard during the course of the survey were recorded. Habitat that was deemed suitable to support breeding birds was recorded.

#### *Reptiles*

- 2.13 Natural and artificial objects such as large stones, pieces of metal and rubble were lifted where they were found during the survey in order to search for reptiles that shelter under such objects.
- 2.14 All reptiles are ectothermic (cold-blooded) and although activity is dependent upon weather and temperature they are usually fully active from spring to autumn i.e. between April and September. The timing of the survey was ideal for recording the presence of reptiles.
- 2.15 Habitat suitability for reptiles was assessed during the survey.

*Invasive weeds*

- 2.16 Invasive weeds were searched for during the survey. British legislation applies to a number of species that are listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended by the *Countryside and Rights of Way Act 2000*). This makes it an offence to plant or otherwise cause listed species to grow in the wild.

## 3 EXISTING CONDITIONS

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### Desk Study

- 3.1 The desk study exercise will be undertaken over the forthcoming weeks. However, it is known that the King George V Dock immediately surrounding the Airport is designated as a Site of Borough Importance for Nature Conservation (SBINC). The Dock is also part of the Green Corridor Network of Newham due to its association with the River Thames and tidal creeks which area situated 500m to the south of the Airport and is designated as a Site of Metropolitan Importance for Nature Conservation (SMINC).
- 3.2 Anecdotal evidence was provided by Airport staff of four dead sea bass recorded in the King George V Dock in 2003. The Environment Agency was called out to investigate the matter. The hot summer was thought to have raised water temperatures causing eutrophication effects due to the algal blooms present over the water surface.
- 3.3 Consultation responses are still awaited from the statutory and non statutory organisations.

### Site Inspection

#### Habitat Descriptions

- 3.4 The ecological walkover survey results are provided below for the Airport. A list of plant species recorded is provided in Appendix A (nomenclature follows Stace, 1997). This section of the report should be read in conjunction with Figures 1a and 1b.

#### *Scattered Parkland/Individual Trees*

- 3.5 Semi mature London plane trees are present amongst the shrub planting running along the front of the Jet Centre car park. No ground flora is present. Juvenile trees are also present amount the shrub planting running along the south of the Jet Centre including copper beech, field maple, rowan and ash. Juvenile trees are present within the amenity hedge planting in the main terminal forecourt area including cherry and sycamore. Two juvenile silver birch trees are also present amongst the shrub planting outside of City Aviation House.

- 3.6 The nature conservation value of the young trees is negligible at present, although as they mature will provide a greater resource for wildlife on site. The semi-mature trees of native species are the trees of greatest value within this habitat as they offer great maturity to a highly urbanised environment and provide suitable nesting habitat for birds. None of the trees showed obvious holes, cracks and significant amounts of deadwood, which are good habitat features for invertebrates and roosting bats.

#### ***Species Poor Intact Hedge***

- 3.7 Species poor intact hedges are those hedges that are entire and do not contain a diversity of native woody/forb species. Well maintained privet and laurel hedges are present within the main terminal forecourt area. Juvenile sycamore and cherry trees are present within the well maintained hedges.
- 3.8 These hedges are of limited ecological value due to its well-maintained nature, but may provide a food source and some cover for nesting birds and small mammals in this highly urbanised environment.

#### ***Species Poor Semi-improved Grassland***

- 3.9 Large linear strips of poor semi-improved grassland dominate the surroundings of the airport runway. The grassland is frequently mown, but during the ecological walkover the sward was of a reasonable length. Species noted include perennial rye-grass, cock's-foot, ribwort plantain, vetch, yarrow, curled leafed dock, herb Robert, fescue, black medick, cow parsley and broad-leaved dock.
- 3.10 Small to medium sized birds such as skylark, carrion crow and starlings were observed within the runway grassland. This grassland provides foraging and cover for birds and small mammals.

#### ***Short Perennial/Ephemeral***

- 3.11 There is a small section of short perennial/ephemeral habitat to the south west of the Airport, left unplanted from the DLR landscape planting scheme. This habitat consists of shallow stony soil with scattered plant species such as black medick, willowherb and mugwort, typical of derelict urban sites. This bare ground coverage currently offers limited value for any protected species.

### ***Hardstanding/Buildings***

- 3.12 The Airport and surrounding area is highly urbanised, dominated by the airport buildings, main terminal and associated car parking, aircraft parking space and runway. The buildings/warehouses on-site were assessed for their potential for roosting bats.
- 3.13 The lack of roof spaces, modern and intact construction of the buildings and warehouses provided no suitable roosting opportunities for bats, no nesting birds were observed utilising the structures such as starlings during the site walkover.

### ***Tall Ruderals***

- 3.14 Ruderal weeds such as butterfly bush are present along the south eastern corner of the site, around the operational and disused warehouses. Tall ruderals are also present along the car parks situated south of the Fire Station.

### ***Introduced Shrub***

- 3.15 Introduced shrub vegetation is that which is dominated by shrub species that are not locally native, and includes formal shrub beds.
- 3.16 Linear areas of introduced shrub are present along the southern boundary i.e. outside of the Jet Centre and main terminal building and along the DLR, mainly comprising exotic species. These areas consist of well maintained mainly exotic species, ornamental planting.
- 3.17 The areas of introduced shrub are of limited ecological value as they are generally small and not inter-linked, but may provide food and some cover for nesting birds and small mammals, especially once they mature in this highly urbanised environment, particularly the shrubs present to the southwest boundary.

### ***Standing Water***

- 3.18 The Airport is surrounded by both the Royal Albert and King George V Docks.

### **Protected Species**

- 3.19 Due to the highly urbanised nature of the Airport and the surrounding area, the ecological walkover identified limited areas of habitats that could potentially support protected species.

### **Bats**

- 3.20 All species of bat and their roosts are protected under the *Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)* and *The Conservation (Natural Habitats, &c.) Regulations 1994*.
- 3.21 The majority of the Airport buildings, including City Aviation House, are modern in construction and material makeup, fully intact and flat roofed. The material makeups of these buildings make them unsuitable for bats as they provide no roosting opportunities. One bricked building does exist airside but again is fully intact with a flat topped roof with lack of soffit boards and eaves. Occupied and disused warehouses exist to the south east of the site boundary, which are again unsuitable for bats due to their material makeup, exposed nature and lack of roof spaces.
- 3.22 The majority of the trees on site are juvenile but semi mature trees along the site boundary to the south west. At present these trees offer limited opportunities for roosting bats due to their lack of cracks, splits and holes. No evidence of roosting bats was recorded during the site walkover.

### **Birds**

- 3.23 Bird activity was recorded on site during the site walkover survey in May 2007. The birds recorded on site were:

Blackbird	Swift
Feral pigeon	Starling
Blue tit	House sparrow
Black headed gull	Common gull
Skylark	Cormorant
Carrion crow	

- 3.24 All species of wild bird and their nests are protected under the *Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)*. Skylark is also a UK Biodiversity Action Plan species due to its declining numbers and habitat fragmentation.

- 3.25 Although a number of areas were identified as having potential for nesting common bird species, including semi to mature trees and the areas of dense scrub, no evidence of birds nesting was observed during the walkover survey. Due to the modern building construction and sparse vegetation cover, none of the buildings or habitats recorded on site were deemed suitable for black redstarts.
- 3.26 The Airport has a bird scaring system in place and follows a frequent mowing regime during the grass growing season in order to maintain a fairly closely cropped sward to deter breeding and foraging birds and minimise the risk of bird strikes. However, skylarks were heard singing and observed within the species poor semi-improved grassland that borders the airport runway. Starlings and carrion crow were also observed foraging within the runway grassland.
- 3.27 Several cormorants were observed fishing within the King George V Dock on the day of the survey. A pair of coots were observed nesting in one of the concrete dolphin blocks within the King George V Dock, nearest block to the terminal building.

### ***Reptiles***

- 3.28 Slow-worm, (*Anguis fragilis*), common or viviparous lizard (*Lacerta vivipara*), adder (*Vipera berus*) and grass snake (*Natrix natrix*) are protected by the *Wildlife and Countryside Act 1981*(as amended by the *Countryside and Rights of Way Act 2000*) by part of *Section 9(1)* and all of *Section 9(5)*. This means that they are protected against intentional or reckless killing and injuring (but not 'taking') and against sale and transporting for sale.
- 3.29 The well maintained grassland habitat and vast areas of hardstanding provided unsuitable habitat for reptiles on site. No reptiles were recorded during the walkover survey.

### ***Invasive weeds***

- 3.30 No invasive weeds were recorded within the site boundary at the time of the walkover survey.

## 4 RECOMMENDATIONS

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- 4.1 The Airport and immediate surrounding areas are of relatively low ecological value. This is to be expected for an intensively managed facility that, by necessity, discourages breeding and foraging birds and other animals that could endanger or disrupt flight paths and other essential airport operations.
- 4.2 The Airport and surrounding area is highly urbanised, dominated by the airport buildings, main terminal and associated car parking and road network, aircraft parking space and runway. The only habitat present airside is the grassland bordering the runway. Areas of scattered semi mature trees and shrub planting are present around the boundary of the airport.
- 4.3 Semi mature trees of ecological value do exist along the south western boundary within the main terminal car park and adjacent to the Jet Centre and should be retained where possible. This habitat also provides good nesting and foraging areas for small birds and small mammals within a sparsely vegetated environment.
- 4.4 In order to ensure safe aircraft operations at the airport, certain ecological enhancement measures, which may be deemed ecologically desirable in other settings are incompatible with the operations of the Airport.

### ***Enhancement***

- 4.5 No landscape enhancements are being planned at this time as the Interim Application, does not seek permission for any building works or land-use alteration.

## 5 CONCLUSIONS

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- 5.1 This report describes the habitats present and the presence of and potential for protected species at London City Airport and the surrounding area. The Airport is dominated by hardstanding in the form of airport buildings, the runway, aircraft parking, the main terminal building, associated car parking and road network. The only habitat present airside is the grassland bordering the runway. Areas of scattered semi mature trees and shrub planting are present around the boundary of the airport.
- 5.2 The Airport is highly urbanised and will remain so as part of the proposed application. However, habitats of some ecological value do exist along the site boundary. There are trees and good vegetation cover to the south west of the site adjacent to the Jet Centre and within the main terminal car park. This habitat provides good nesting and foraging areas for small birds and small mammals in a highly sparsely vegetated environment.
- 5.3 Semi mature trees have been identified on the Airport site. Recommendations are made for their management.
- 5.4 Future ecological enhancement measures have also been recommended to enhance the site for wildlife and make the Airport more ecologically friendly. However, these enhancement measures will need to be consistent with the maintenance of continued safety of the airport operations and associated flight paths. These are not a consideration at this time, since no physical works are proposed as part of the Interim Application.
- 5.5 In summary, the proposed scheme will have no measurable adverse impacts of ecology and nature conservation.

## REFERENCES

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Institute of Environmental Assessment (1995). Guidelines for Baseline Ecological Assessment

Joint Nature Conservation Committee (1990). Handbook for Phase1 habitat survey: A Technique for Environmental Audit

Stace, C. (1997) New Flora of the British Isles. 2<sup>nd</sup> Edition. Cambridge University Press

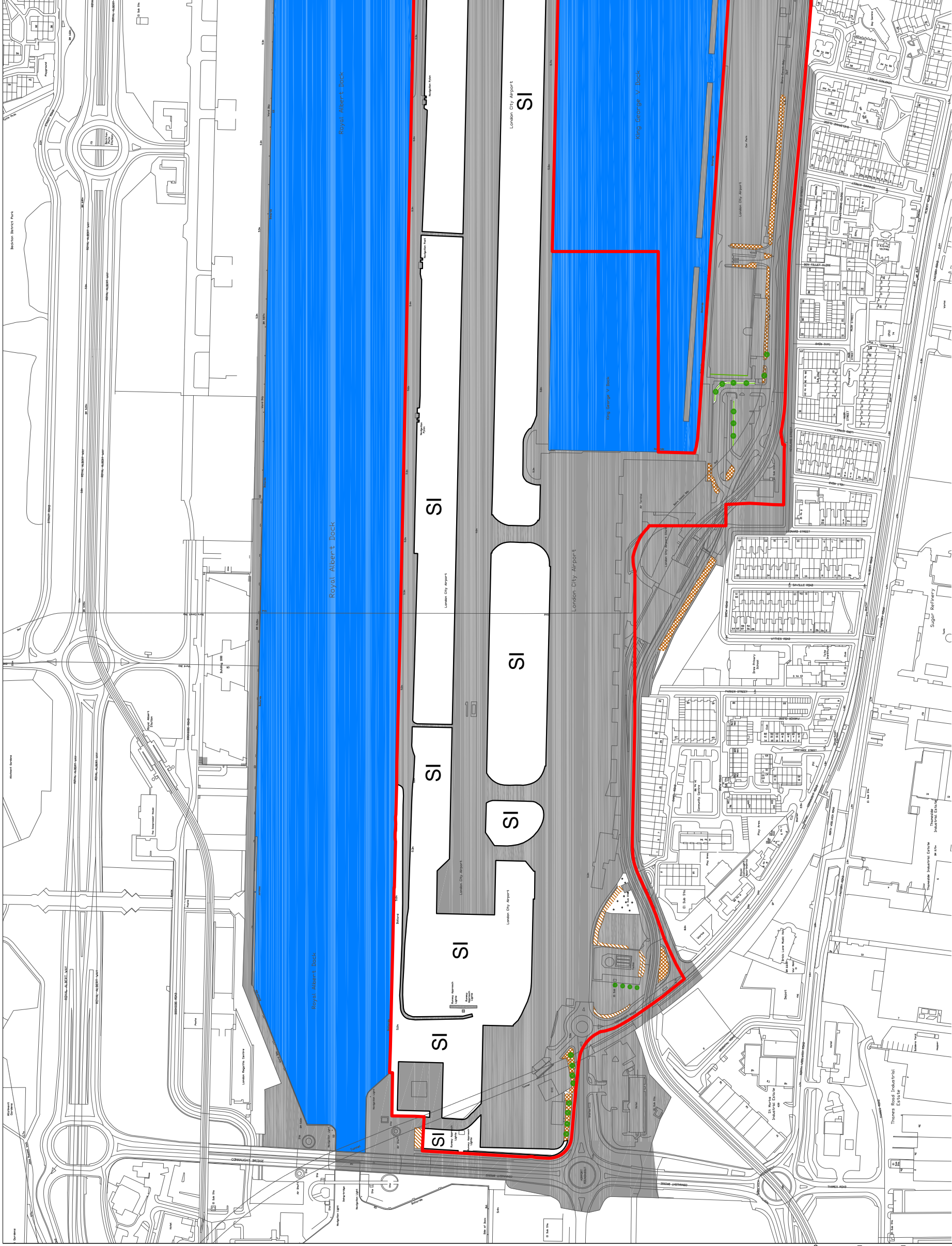
The Conservation (Natural Habitats &c.) Regulations 1994

The Countryside and Rights of Way Act 2000










The Wildlife and Countryside Act 1981 (as amended)









**Legend**

-  Site Boundary
-  Hardstanding / Building
-  Standing Water
-  Species-poor Semi-improved Grassland
-  Tall Ruderals
-  Introduced Shrub
-  Parkland Broad-leaved Trees
-  Short Perennial / Ephemeral
-  Intact Species-poor Hedge



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Project: London City Airport

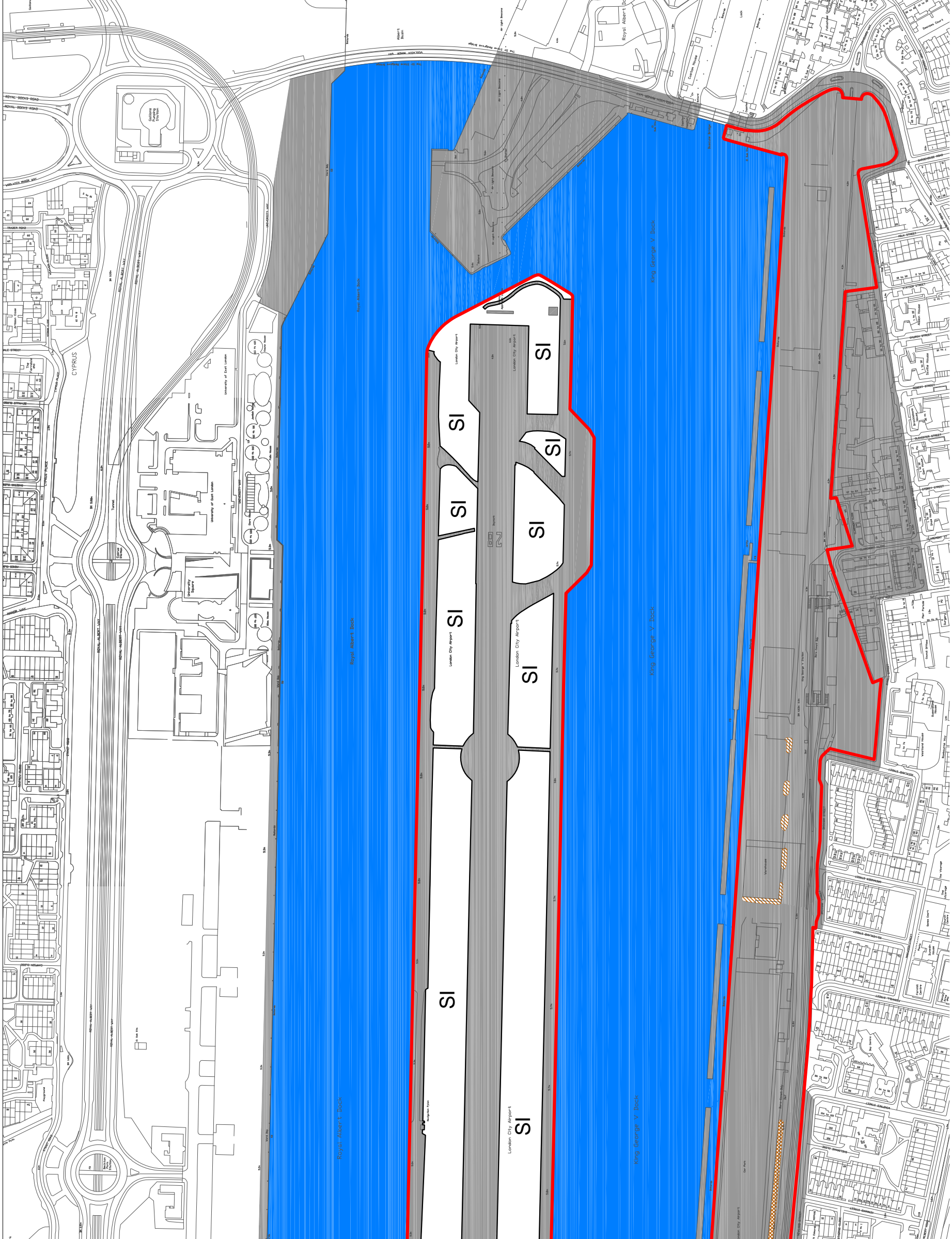
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- Legend**
- Site Boundary
  - Hardstanding / Building
  - Standing Water
  - SI
  - Tall Ruderals
  - Introduced Shrub
  - Parkland Broad-leaved Trees
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Figure Number: **1b** Rev: **0**



## Appendix A

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### List of Plant Species Recorded

## APPENDIX A: INDICATIVE SPECIES LIST

Latin Name	Common Name
<i>Acer campestre</i>	Field maple
<i>Acer pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Anthriscus sylvestris</i>	Cow parsley
<i>Artemisia vulgaris</i>	Mugwort
<i>Betula pendula</i>	Silver birch
<i>Buddleja davidii</i>	Butterfly-bush
<i>Cerastium fontanum</i>	Common mouse-ear
<i>Chamerion angustifolium</i>	Rosebay willowherb
<i>Dipascus fullonum</i>	Teasel
<i>Fagus sylvatica purpurea</i>	Copper beech
<i>Festuca sp.</i>	Fescue
<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot crane's-bill
<i>Geranium robertianum</i>	Herb Robert
<i>Glechoma hederacea</i>	Ground-ivy
<i>Hypochaeris radicata</i>	Common cat's ear
<i>Lavandula sp.</i>	Lavender
<i>Leucanthemum vulgare</i>	Oxeye daisy
<i>Ligustrum ovifolium</i>	Garden privet
<i>Lolium perenne</i>	Perennial rye-grass
<i>Malva sylvestris</i>	Common mallow
<i>Medicago lupulina</i>	Black medick
<i>Papaver sp.</i>	Poppy
<i>Picris echioides</i>	Bristly oxtongue
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Platanus x hispanica</i>	London plane
<i>Poa annua</i>	Annual meadow-grass
<i>Prunus sp.</i>	Laurel
<i>Prunus sp.</i>	Cherry
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rubus obtusifolius</i>	Broad-leaved dock
<i>Rumex crispus</i>	Curled leafed dock
<i>Sorbus aucuparia</i>	Rowan
<i>Stellaria sp.</i>	Stitchwort
<i>Trifolium pratense</i>	Red Clover
<i>Vicia sp.</i>	Vetchling sp

