Local Biodiversity Action Plan

2010/11 to 2014/15

THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

www.rbkc.gov.uk

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1 Introduction

1.1 Biodiversity

Biodiversity is the current popular term for the richness and diversity of life (Pullin, 2002), an umbrella term used to describe the number, variety and variability of living organisms in a given assemblage (Pearce & Moran, 1994). Therefore, biodiversity encompasses every aspect of life from genetic material to entire ecological processes.

Biodiversity provides essential resources for humans such as food, medicine, fibres for clothing and construction. Biodiversity is responsible for processes in which humans are dependant on; the capture of rainfall, filtering of water, prevention of soil erosion and the maintenance of healthy soil, not to mention providing recreation and aesthetic enjoyment (Díaz, 2002), these are know as ecosystem services.

Biodiversity provides us with a number of goods that have direct economic value, such as food, new pharmaceuticals, genes that improve crops and organisms that perform biological control. Secondly, it is intricately linked to human well-being for aesthetic, ethical, cultural and scientific reasons. Thirdly, it may contribute to the provision of ecological services that are generally not accounted for in economic terms, such as primary and secondary production, the regulation of the hydrological cycle, the maintenance of water quality and soil fertility (Loreau, 2002).

1.2 Why conserve biodiversity?

Biodiversity acts as a crucial mitigating factor, by providing “ecosystem services”, for example, cooling, insulating and pollution-absorbing properties of vegetation, flood control, noise absorption and other ecosystem services. In addition, future generations have the right to intergenerational equity of biological resources. Therefore, we need to ensure biodiversity is an integral part of the urban environment both present and future.

Our natural environment is undergoing rapid and unprecedented changes, particularly related to climate change. These environmental stresses are affecting biodiversity. Humanity is no longer living off nature’s interest, but drawing down its capital. This growing pressure on ecosystems is causing habitat destruction or degradation and permanent loss of productivity, threatening both biodiversity and human well-being (WWF, 2006). Issues that are already cause for concern locally include flooding, drought, heat waves, the heat island effect in London, invasive species and pathogens. These issues are well covered by the national press and of increasing concern to the public. Some are already having an impact on the ecology of the borough, for example, our park and street trees have been severely afflicted with Horse Chestnut Leaf Miner moth in the few years since this disease arrived in the UK.

1.3 Biodiversity within the Borough

Kensington and Chelsea is one of the most densely populated areas in the country, with the least amount of open space per head. The borough covers and area of 1238ha, of which 414ha is open space. For such an urbanised area, the biodiversity resource is remarkably rich.

There are currently 22 Sites of Nature Conservation Importance (SNCI), of which five sites will be of Metropolitan Importance, four Borough Importance I, eight Borough Importance II, and five Local Importance. These designations are based on habitat surveys of the borough, undertaken by London Conservation Services in 1993 and 2002. They are listed in the Unitary Development Plan for protection from development. However, because of development pressures and improved knowledge of these sites there is a need to reassess these current designations. The Local Development Framework process provides us with an opportunity to carry out these revisions. The proposed revisions are likely to result in 24 SNCI, of which five sites will be of metropolitan importance, five Borough Importance I, nine Borough Importance II, and five Local Importance.

Appendix 1 contains site descriptions of the SNCIs. More details on particular habitats and species can be found under individual action plans and a revision of their designations.

Additional sites that lie outside the current borough boundary but are managed by the borough include:

- Little Wormwood Scrubs (8.9ha) is designated as a Site of Nature Conservation Importance (Local). The site lies within the London Borough of Hammersmith and Fulham.
- Gunnersbury Cemetery (8.6ha)
- Hanwell Cemetery (6.3ha) - Site of Nature Conservation Importance (Borough II)

Figure 1 shows the Sites of Nature Conservation Importance and the 10 council managed major sites that are located within or adjacent to the borough boundary.

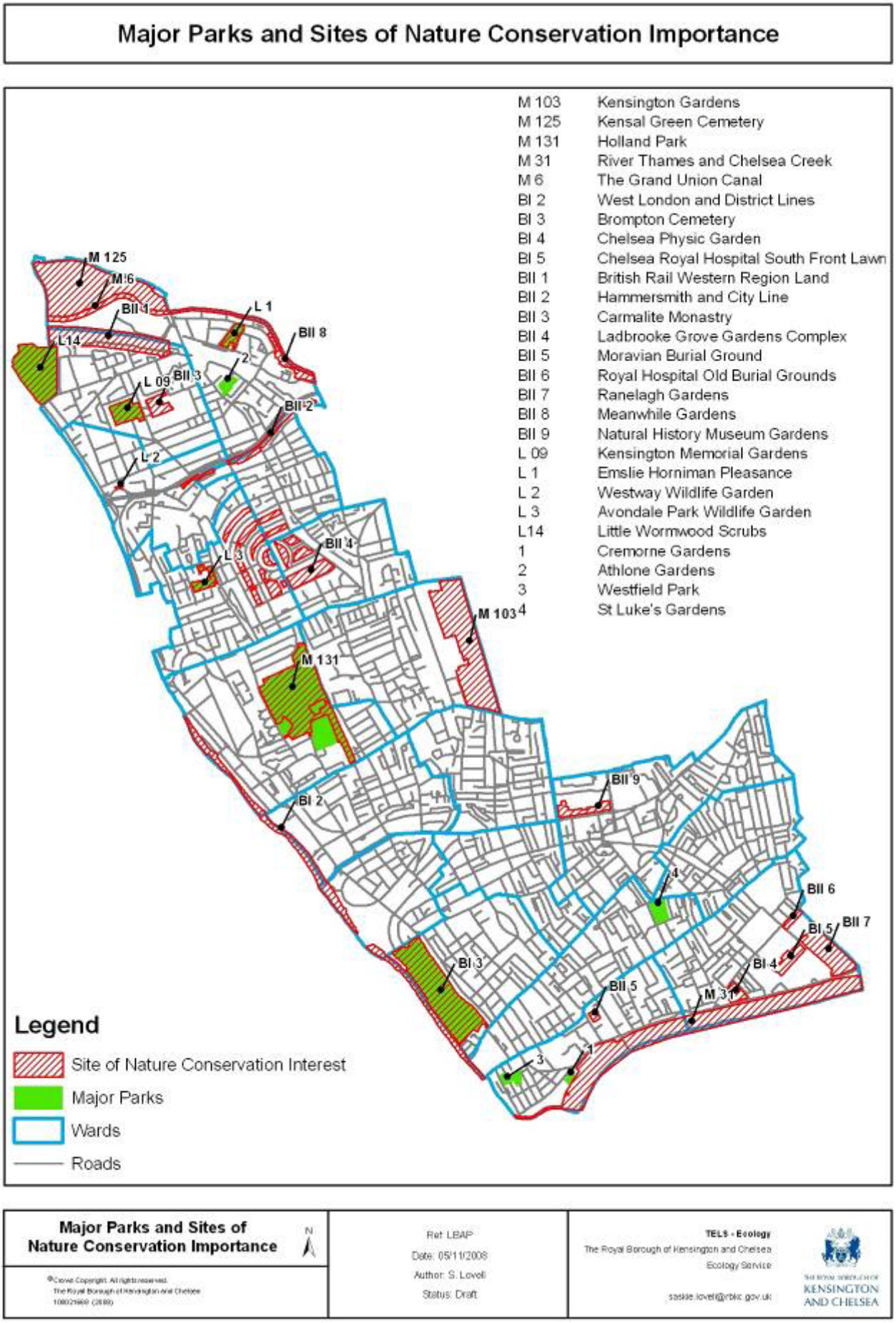


Figure 1: Sites of Nature Conservation Major parks within the Royal Borough

2 Background to Biodiversity Action Plans

2.1 National biodiversity policy

The Convention on Biological Diversity is dedicated to promoting sustainable development and recognises that conserving biological diversity is about people's needs as well as plants, animals, micro-organisms and ecosystems; 150 governments at the 1992 Rio Earth Summit signed the convention.

The objectives of the convention are the conservation of biodiversity, sustainable use and equitable sharing of the benefits. The convention commits signatories to action, and is implemented in the UK Biodiversity Action Plan (BAP).

The UK Biodiversity Action Plan represents a new approach to nature conservation. Key achievements include developing costed, quantifiable targets for actions, establishing effective systems for handling data, promoting public awareness and broadening public involvement, and monitoring progress and broadening the biodiversity constituency.

UK Biodiversity priorities that are addressed through this local plan are:

- To increase the overall populations and natural ranges of native species and the quality and range of wildlife habitats and ecosystems.
- To enhance species, habitats, natural and managed ecosystems those are characteristic of local areas.
- To enhance the biodiversity of natural and semi-natural habitats where this has been lost over recent decades.

2.1.1 England's Biodiversity Strategy

The Department for the Environment, Food and Rural Affairs (DEFRA) produced a biodiversity strategy for England (Working with the grain of nature, 2002) which provides a useful framework for urban areas. The Strategy developed eight indicators to monitor. Some of these are relevant to the Royal Borough of Kensington and Chelsea and can be monitored as part of this action plan:

- Populations of wild birds
- Biological quality of rivers
- Progress with local biodiversity action plans
- Public attitudes to biodiversity

2.1.2 Legislation

The Natural Environment and Rural Communities 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". Biodiversity action plans provide a framework for prioritising conservation actions for biodiversity.

2.1.3 Planning policy

Planning Policy Statement 9 (PPS9) together with its accompanying circular covering statutory requirements and a good practice guide will replace Planning Policy Guidance note 9 (PPG9): Nature Conservation issued in 1994, ensure that the planning system plays its part in delivering Government policy on biodiversity as set out in Working with the grain of nature – the biodiversity strategy for England (DEFRA 2002).

2.1.4 National Indicators

National Indicator 197 aims to measure the performance of Local Authorities for biodiversity by assessing the implementation of positive conservation management of Local Sites. There are more than 36,000 Local Sites in England representing a significant proportion of the country's biodiversity. Local Site systems are operated by Local Sites Partnerships of which Local Authorities should be the lead partner. The implementation of positive conservation management serves as a widely accepted and cost effective proxy for assessing improvements in biodiversity. Monitoring by ecological survey would be burdensome and unlikely to identify improvements in biodiversity during the reporting period. The indicator will assess the performance of Local Authorities concerning Local Sites and consequently their wider performance for biodiversity (in turn contributing to wider environmental quality). This indicator may also have the effect of providing secondary benefits such as by encouraging wider public access to Local Sites and promoting them for educational purposes.

Definition Performance will be calculated as a percentage of all Local Sites in the local authority area where positive conservation management has taken place up to five years prior to the reporting date (31st March). The indicator is assessed by Local Authorities considering whether positive conservation management has been or is being implemented on a Local Site.

2.2 Regional Context

2.2.1 London Biodiversity Partnership

The London Biodiversity Partnership (LBP) is a partnership of public, private and voluntary sector organisations as well as individuals. It was established in 1996 in response to the UK BAP and has produced London's BAP. The Partnership aims to protect and enhance the capital's habitats and species for future generations to benefit from and enjoy.

London's BAP consists of the 28 action plans: 14 habitats and 11 species. As well as its action plan species, London contains a number of nationally rare UK BAP priority species are identified; however, the London's BAP states that:

- All of our habitat action plans are designed to support these species.
- This list is constantly being reviewed and updated.
- Planning decisions must consider these species.

The London BAP contains the following targets (Table 1) to improve the condition and increase the extent of a selected number of habitats found in the capital by 2015. These targets were adopted in 2007, have been incorporated into the Further Alterations to the London Plan (FALP), and constitute London's contribution towards the England Biodiversity Targets.

Table 1: London Biodiversity Partnership habitat targets 2015.

Habitat Type	Target to Improve Condition by 2015	Target to Increase Extent by 2015
Coastal and Floodplain Grazing Marsh	30 hectares	10 hectares
Chalk Grassland	N/A	25 hectares
Acid Grassland	5 hectares	20 hectares
Heathland	N/A	30 hectares
Reedbeds	N/A	10 hectares
Open Landscapes with Ancient Trees	2 hectares	20 hectares
Woodland	N/A	20 hectares (of which 5 hectares is wet woodland)
Meadows and Pastures	5 hectares	20 hectares
Tidal Thames	N/A	1 new salt marsh or mudflat
Rivers and Streams	15 kilometres	N/A
Standing Waters	N/A	Create 33 new ponds per year and 5 new larger water bodies

LBP partner organisations are working to secure delivery of these important targets for London to which this Local Biodiversity Action Plan will contribute. Any habitat creation in Kensington & Chelsea should contribute towards these targets.

2.2.2 London Biodiversity Strategy

As required by the Greater London Authority Act, the Mayor of London produced a biodiversity strategy for the capital in 2002 that requires the London Boroughs to assist with implementation and encourages them to formulate their own action plans (Mayor of London, 2002). The document details the Mayor's vision for protecting and conserving London's natural open spaces. It seeks to ensure that there is no overall loss of wildlife habitats in London and that more open space is created and made accessible, so that all Londoners are within 1km walking distance of a quality natural space (Mayor of London, 2002).

2.3 Local policies, strategies and programmes

A range of local policies and strategies has direct or indirect implications for biodiversity conservation, particularly including:

- **RBKC Environment Strategy** – This strategy contains an ecology and biodiversity theme, which aims to raise awareness of the value of biodiversity in the borough, and enhance and protect habitats and biodiversity. This LBAP provides specific actions that ensure this aim is met.

- **RBKC Climate Change Strategy** – The LBAP provides actions which enhance ecosystem services which are crucial for the mitigation of climate change impacts

- **Community Strategy** (Kensington and Chelsea Partnership) – has a goal of a borough with an environment and amenities which enhance the quality of life of the whole community. This LBAP provides actions that contribute towards meeting the goals of the Community Strategy.

- **RBKC Parks Strategy**– Guides investment over the next 10 years to raise the standard of the boroughs parks. One of the seven objectives of this strategy is to ensure parks are nature friendly and protected against development on or near them.

- **Green Flag –** Managed by the Communities and Local Government, the Green Flag Award is the national standard for parks and green spaces in England and Wales. Parks are assessed against seven criteria, one of which is the conservation and appropriate management of natural features, wildlife and fauna. The Royal Borough is striving to ensure each of the major parks gain Green Flag status.

- **Britain in Bloom** – Managed by the Royal Horticultural Society, Britain in Bloom is one of the largest horticultural campaigns in Europe with the year round aim of creating a more beautiful Britain. The Royal Borough has an excellent history of participation and success in this campaign, which has excellent benefits for biodiversity within the borough.

- **London in Bloom** – Selects participant for the Britain in Bloom competition.

- **Grounds Maintenance Contract** – Runs from January 2008 to December 2020. The contract contains detailed specifications for all grounds maintenance operations in parks.

- **RBKC Unitary Development Policy (UDP)** – is a land use plan the plan covers the whole of the Borough and must contain general 'strategic' policies and detailed policies for the use of land in the area. Provisions are made to identify and protect Sites of Nature Conservation Importance and Green Corridors (LR24), and to encourage the allocation of pockets of land for nature conservation and the planting of native species in landscaping on appropriate development sites (LR27).

- **RBKC Local Development Framework (LDF)** – Through the LDF process environmental stewardship and protection of nature conservation sites is provided for.

- **RBKC Local Implementation Plan (LIP) 2007** - contains policies and proposals for the implementation of the Mayor of London's Transport Strategy. Within this LIP, reference is made to the commitment of the Royal Borough to nature conservation and links the borough's local policies to the Mayor of London's Biodiversity Strategy and the Mayor of London's Transport Strategy.

2.4 What is the Local Biodiversity Action Plan?

The role of Local Biodiversity Action Plans (LBAP) is to translate national and regional targets into effective local action as well as protecting and enhancing locally important species and habitats.

The focus of urban nature conservation is to increase biodiversity, counteract habitat fragmentation by re-creating and enhancing natural ecosystems by integrating biodiversity features into the fabric of the city, which also involves raising awareness and engaging local communities.

The LBAP and other green space strategies must be:

- Responsive to these potential threats
- Proactive where appropriate,
- Flexible enough to adapt to natures responses to environmental change and to incorporate new information
- Comprehensive as possible in identifying opportunities to mitigate problems
- Effective in improving the overall environment as well as conserving our natural heritage
- Deliverable within the specified time scale

The Royal Borough has a responsibility to protect and enhance biodiversity and is a significant area of activity for the borough. The adoption of a Biodiversity Action Plan actively demonstrates the Boroughs commitment in terms of the Natural Environment and Rural Communities Act (2006). In addition, the LBAP strengths the boroughs performance in all areas which will be reflected in the National Indicators Performance Monitoring Scheme.

3 Local Biodiversity Action Plan (LBAP)

3.1 Review of the LBAP 2004 - 2006

The Royal Boroughs first Local Biodiversity Action Plan (LBAP) was adopted in 2004. In general, this LBAP had three stated aims (RBKC, 2004):

- Protecting and enhancing the borough's biodiversity resource
- Raising awareness of the importance of biodiversity
- Monitoring the ecological status of habitats and species

The LBAP process achievements include:

- Raising awareness within the council and borough for active measures to conserve biodiversity.
- Planning and implementing effective habitat creation and management projects.
- Prioritising the nature conservation work of the Ecology Service.
- Building relationships and sharing good practice with biodiversity colleagues in other boroughs, the GLA and wildlife organisations.
- Creating a basis for a biodiversity partnership

The LBAP has given impetus to projects and initiatives that would otherwise not have happened. However, the short-term nature of this plan was felt to be too short for delivery of medium-term objectives and did not make provisions for long-term goals.

3.2 LBAP: 2010/11 - 2014/15

3.2.1 Aims and Objectives

The broad aims and objectives of this Biodiversity Action Plan are:

- To **audit and monitor** the ecological status of habitats and species, by carrying out focused biodiversity surveys and monitoring key indicators for species and habitats.

- To **raise awareness** of the importance of biodiversity, by creating opportunities for local residents and visitors to enjoy and learn about the natural environment and to understand the biodiversity of the borough.

- To **protect and enhance** the borough's biodiversity resource, by improving the quality of the local environment through practical management, habitat creation and protection of important wildlife sites.

3.2.2 Action Plan Structure

Habitat action plans that address the core ecological habitats found within the borough have been developed. Species Action Plans have been written which will complement the habitat action plans but will address species-specific actions. In addition, Survey, Management and Awareness action plans have been included which address biological surveys and management plans within the borough and provides a long-term strategy to provide the relevant biological information to ensure the effective enhancement of local biodiversity.

The action plan has also been written to encompass National Indicator and Local Development Framework reporting requirements, see Figure 2.

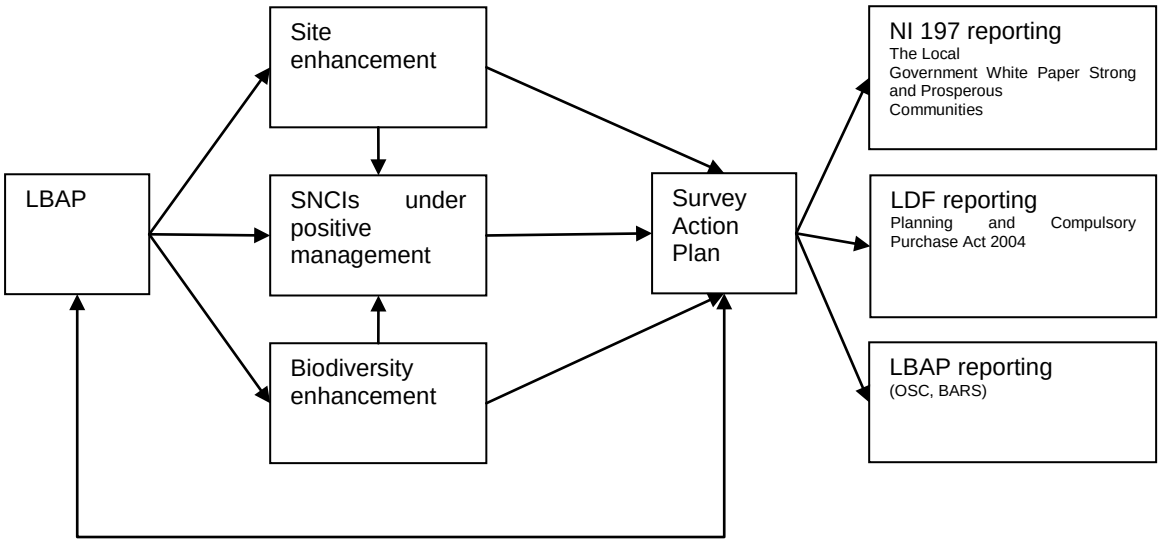


Figure 2: The relation between LBAP processes, biodiversity enhancement and ecological reporting which is relevant across the boroughs business groups.

3.2.3 Targets and Actions

Measurable actions, where appropriate, have been set for each target. The LBAP should be reviewed and adapted every five years; this will ensure the LBAP is sensitive to our developing understanding of the boroughs biodiversity, changes in ecological systems and the effects of climate change, and will enable the LBAP to be adapted to developing scientific knowledge which will guide conservation practice and habitat management.

3.2.4 Survey and Management Action Plan

An action plan has been developed to address some of the fundamental requirements to ensure effective and efficient action to enhance biodiversity. The Survey and Management action plan addresses the actions required to ensure adequate baseline data are collected and monitoring programmes are established. In addition, this action plan provides for the development of management plans for sites that are important for nature conservation within the borough

3.2.5 Environmental Education and Awareness Action Plan

Environmental Education and Awareness action plan establishes action for the development of environmental education and awareness relating to biodiversity

and the ecology with the borough. This action plan will make provision to raise the awareness of local biodiversity and to understand and support conservation efforts.

3.2.6 Habitat Action Plans

Habitat Action Plans are designed to benefit a wide range of plant and animal species in an assemblage. This umbrella approach is designed to enhance habitats to provide opportunities for a variety of species.

3.2.6.1 Identifying Key Habitats

The 2004-06 LBAP covered three key habitats – water, woodlands and grasslands. This provided good coverage of the types of habitats found in the borough. However, this LBAP follows the London and other borough BAPs in including more specific habitats, such as the tidal Thames, cemeteries, parks, wildlife hedges and grasslands, this allows for habitat specific actions to be set.

Action plans for the following habitats have been developed:

- Green Corridors
- Parks, Gardens, City Squares School Grounds and Churchyards and Cemeteries
- Woodland
- Grassland
- Wildlife Hedges
- Tidal Thames
- Freshwater Habitats

3.2.7 Species Action Plans

Species Action Plans are designed to benefit target species or groups. This approach targets local species and provides an opportunity to focus efforts to enhance habitat features or to introduce species into an area.

3.2.7.1 Identifying Key Species

The biological surveys carried out within the borough have confirmed the presence of 36 LBP priority species. This is too many species for individual action plans, therefore key or target species have been identified which are categorised into the following groups (Table 2):

Table 2: LBAP target groups and species

Mammals	Bats (All species) Hedgehogs
Birds	Black Redstart House Sparrow Peregrine
Invertebrates	Stag Beetle Oak hook-tip moth German hairy snail Bees
Vegetation / Fungi	Mistletoe Tiered tooth Fungi Black poplar

These species are diverse and have either been recorded within the borough or recorded locally; therefore, there is scope to carry out specific habitat enhancement to increase species populations.

3.2.8 Who is involved? - Kensington and Chelsea Biodiversity Partnership

The Royal Borough of Kensington and Chelsea have an excellent history of working with voluntary organisations, government agencies and local groups. Many of these organisations play a vital role in protecting and enhancing the local environment and its biodiversity. A wide range of individuals and organisations contributed to the development of the Biodiversity Action Plan, from actively drafting and suggesting actions, to commenting on draft text.

However, there is a need for greater emphasis on partnership to deliver this new tranche of action plans. Specific mechanisms to promote communication and co-ordination with partners are laid out under 'generic actions'. Broadening the partnership to include private sector and voluntary groups, which may not be primarily concerned with the environment, can benefit people and wildlife by increasing awareness, involvement and access.

3.2.9 Annual work programmes

An annual work programme will be drawn up at the beginning of each financial year outlining priorities, timing of works and responsibility. This entails identifying and allocating resources, particularly staff time and funding for projects. At the end of each year, a review of implementation will inform the next year's work programme.

3.2.10 Review and reporting

The Biodiversity Action Reporting System (BARS) is a web-based information system that supports the planning, monitoring and reporting requirements of national and local BAPs (BARS, 2008). From 2005, BARS became the system used for UK BAP reporting and will be used for subsequent reporting rounds (BARS, 2008). BARS enables everyone involved in BAP implementation, including LBAP partnerships and lead partner organisations, to enter action plans and record progress towards targets and actions, in addition members of the public can use the system to learn about BAP activities, action and progress (BARS, 2008).

4 Survey and Management

Currently a number of specialist and non-specialist surveys are undertaken within the borough on a scheduled and *ad hoc* basis. However, no formal action plan exists that addresses the long-term aims and objectives for these surveys. An action plan has been written to address this.

4.1 Biological surveys

All forms of management decisions need to be based on reliable information. Biological surveys are necessary to provide this reliable information to ensure sound wildlife conservation management decisions are made. Biological surveys provide us with the information to enable:

- The assessment of ecological resources within the borough.
- The use of survey information to highlight habitats and species requiring further investigation or surveys that are more detailed.
- Baseline data to be obtained which is used to determine and prioritise conservation actions; it is crucial to understand the biodiversity of an area before developing management strategies.
- The surveillance and monitoring of species and habitats; this is an essential management tool, as changes in species community structure or species distributions can be excellent indicators of environmental change, and are used in nature conservation, planning and sustainability appraisals.
- Biodiversity targets to be set and monitored.
- The wider public to be informed, educated and involved in the ecology of the borough.
- The Royal Borough to be involved in data exchanges, become actively involved and contribute to the national and metropolitan understanding of biodiversity and its trends.

4.2 Data Collection within the Royal Borough

Many different types of surveys have been carried out within the Borough. These can be classified into the following:

- Specialist surveys: Carried out by experienced professional ecologists, or verified by professional ecologists who critically assess methodologies, species / habitat identification, data collation and analysis.
- Non-specialist surveys: Carried out by members of the public and often consist of anecdotal observations. These data are non-verifiable but often provide a good overview of biodiversity and can be used to guide specialist surveys.
- Historical, archival and literary reference.

In addition, surveys can be classified as either quantitative or qualitative.

- Quantitative: Surveys that clearly follow a scientific method using measurable effort. These surveys can then be repeated to identify trends and measure species abundance.
- Qualitative: Surveys that provide an inventory of species and do not ascertain species abundance or sampling effort. These surveys are informative but are not repeatable for comparative purposes.

All the above ecological surveys of habitats and species are currently undertaken in the borough; however, no long-term strategy exists.

The Ecology Service in Holland Park holds survey data. Data is also sent to Greenspace Information for Greater London (GiGL). GiGL is the records centre for the capital and maintains databases of biological and ecological surveillance undertaken by various agencies, conservation bodies and volunteer recorders.

4.3 Site Management within the Royal Borough

Open space management is an essential to maintain and improving the integrity of natural habitats. Without open space management there is a tendency for sites to become degraded or dominated by common and abundant species, which ultimately results in a loss of biodiversity.

Management plans ensure the efficient and effective management of an area and enable generic or site-specific aims and objective to be met. Management Plans exist for the following council managed sites:

- Holland Park
- Kensington Memorial Park
- St Lukes
- Little Wormwood Scrubs

In addition, management plans are being prepared as part of the Green Flag Award initiative for:

- Avondale
- Westfield
- Cremorne Gardens
- Emslie Horniman Pleasance
- Athlone Gardens
- Gunnersbury Cemetery
- Hanwell Cemetery

4.4 ACTION PLAN: Survey and Management

4.4.1 Targets

Target Code	Text	Species / habitats / other	Goal	Date	sites
SM01	To establish baseline data for primary parks and maintain a programme for reporting on biodiversity within the borough	All habitats	9 sites	31/03/2015	Primary parks
SM02	Establish survey programme of important ecological features within the borough.	Mammals, birds, vegetation, reptiles, amphibians, invertebrates	9 sites	31/03/2015	RBKC

4.4.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	sites
S01.01	Carry out quantified bat surveys of all primary parks in RBKC every 7 years to monitor bat species populations	9 sites	01/04/2010	31/03/2011	TELS-Ecology		Primary parks
S01.02	Carry out quantified bird surveys of all primary parks in RBKC every 5 years to identify changes and recognise population trends of RBKC birds	9 sites	01/04/2014	31/03/2015	TELS-Ecology		Primary parks
S01.03	Carry out quantified invertebrate surveys of all primary parks in RBKC every 10 years to understand what species are present in the borough by providing baseline data.	9 sites	01/04/2014	31/03/2015	TELS-Ecology		Primary parks

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	sites
S01.04	Carry out quantified fungi surveys of all primary parks in RBKC every 10 years to understand what species are present in the borough by providing baseline data.	9 sites	01/04/2011	31/03/2012	TELS-Ecology		Primary parks
S01.05	Carry out quantified mammal (excl. bats) surveys of all primary parks in RBKC every 10 years to monitor mammal species and populations	9 sites	01/04/2010	31/03/2011	TELS-Ecology		Primary parks
S01.06	Carry out quantified amphibian surveys of all primary parks in RBKC every 10 years to monitor species and populations	9 sites	01/04/2012	31/03/2013	TELS-Ecology		Primary parks
S01.07	Carry out quantified reptile surveys of all primary parks in RBKC every 10 years to monitor species and populations	9 sites	01/04/2012	31/03/2013	TELS-Ecology		Primary parks
S01.08	Carry out quantified non-vascular surveys of all primary parks in RBKC every 10 years to understand what species are present in the borough by providing baseline data.	9 sites	01/04/2011	31/03/2012	TELS-Ecology		Primary parks
S01/02.01	Ensure all biological records from within RBKC sites are sent to Greenspace Information for Greater London (GIGL). GiGL is the records centre for the capital and maintains databases of biological and ecological surveillance undertaken by various agencies, conservation bodies and volunteer recorders.	100% of records	01/09/2009	ongoing	TELS-Ecology	GiGL	RBKC

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	sites
S01/02.02	Carry out vegetation based habitat surveys of open spaces within RBKC every 10 years to reassess SNCIs, identify new habitats, and asses degraded habitats	100% of open space	01/04/2013	31/03/2014	TELS-Ecology	GLA	RBKC
S02.01	Set up and maintain a database of artificial nest boxes that have been erected on RBKC owned/ managed sites.	100% of records	01/04/2010	ongoing	TELS-Ecology	TELS - Parks, Quadron	RBKC
S02.03	Survey all species rich wildlife hedges within RBKC Parks to establish baseline data and maintain records and monitor the length and species composition of wildlife hedges every 5 years	100% of wildlife hedges	01/04/2010	ongoing	TELS-Ecology	TELS - Parks, Quadron	RBKC

5 Environmental Education and Awareness

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1978).

In order to secure the positive enhancement of biodiversity within the borough, it is essential for the public to be aware of the local importance of biodiversity and to understand and support conservation efforts.

It is wildly recognized that increased knowledge leads to favourable attitudes, which in turn leads to action promoting better environmental quality, as summarized below:

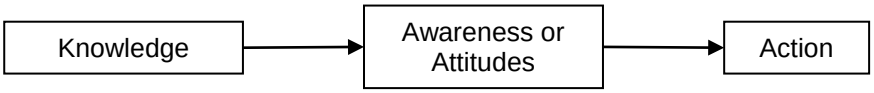


Figure 3: Behavioural change system

5.1 Awareness within the Royal Borough

The Royal Borough of Kensington and Chelsea's ecology service promotes awareness and understanding of biodiversity and the local environment through formal and informal education.

The Ecology Centre, based in Holland Park, is a key resource for local schools and youth groups to study the natural environment. Field study trips and taught workshops are offered throughout the year, based on the varied habitats of the Holland Park wildlife area. The Ecology Centre also runs a scheme of outdoor and creative activities for five to ten year olds in the summer, Easter and half-term holidays and an ongoing programme on informative talks and walks on environment and wildlife topics, open days in the wildlife area, training events and workshops.

5.2 ACTION PLAN: Environmental Education and Awareness

5.2.1 Targets

Target Code	Text	Species / habitats / other	Goal	Date	Sites
A01	To raise awareness of the importance of biodiversity within RBKC	All habitats	11 sites	31/03/2015	RBKC
A02	To provide a comprehensive education service for schools, groups, open space users and residents which aims to raise awareness of the importance of biodiversity.	All habitats	11,000 service users	31/03/2015	RBKC

5.2.2 Actions

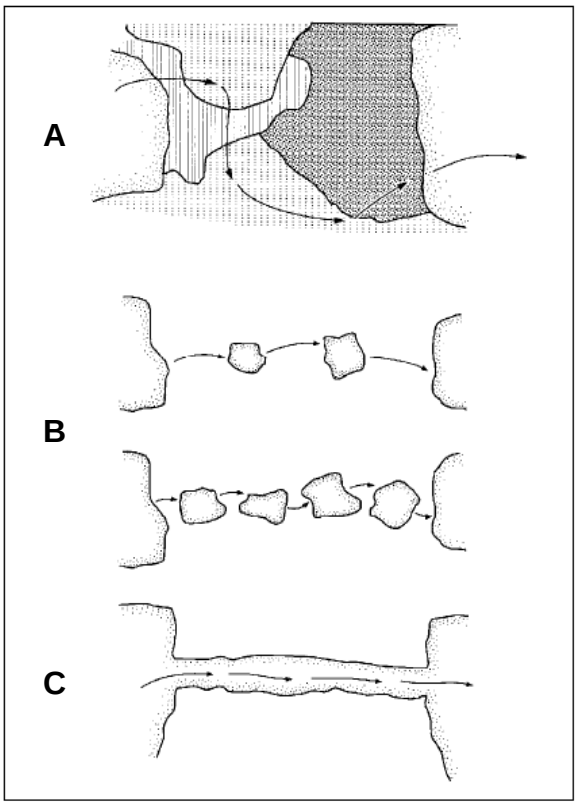
Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
A01.01	Audit the ecological / nature conservation interpretation at all RBKC open spaces	11 sites	01/04/2010	on going	TELS-Ecology	TELS - Parks	Primary parks inc LWS and cemeteries
A01/02.02	Organise an annual events (walks and talks) programme for covering a variety of ecological and conservation topics and across the borough	24 events per year	01/04/2010	on going	TELS-Ecology		RBKC
A01/02.03	Deliver training to RBKC planners, developers and architects to highlight biodiversity importance of the built environment	1 event per year	01/04/2010	ongoing	TELS-Ecology	Living Roofs.org, TELS-Ecology, all partners	RBKC

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
A01/02.04	Expand and diversify the Ecology Education Service to encompass secondary school, adult and higher education students and community groups	11,000 visitors	01/04/2011	on going	TELS-Ecology		RBKC

6 Green Corridors

6.1 Introduction

Green corridors or wildlife corridors allow plants and animals to move between habitats and therefore increase their foraging and breeding areas. Corridors also enable species to colonise new areas, or bring much-needed new blood into small populations that are in danger through inbreeding as a result of being restricted to a fragmented and therefore isolated habitat (Bonner, 1994).



Green corridors are near continuous areas of open space serving as conduits for wildlife. These corridors link more isolated habitats and provide a strategic open space framework. Figure 4 summarises how habitats can be connected:

Figure 4: Landscape connectivity may be achieved in two main ways: by managing the entire landscape mosaic to facilitate movement (A); or by maintaining specific habitats that assists the movement of biodiversity through an inhospitable environment (B), or by green corridors that provide a continuous connection between habitats (C) Figure adapted from Bennett, 2003.

Due to the nature of the urban environment connectivity between habitats can be achieved through a combination of maintaining smaller habitat fragments between larger sites and by maintaining continuous green corridors.

6.2 Current Status

Railway and canal land provides excellent corridors for wildlife within the borough. These habitats have been protected as Sites of Nature Conservation Importance (SNCI) but remain under threat from development.

The railway land areas consist of vegetation, old structures such as bridges and buildings. The vegetated areas are often broken up by areas of hard standing. These areas are often relatively undisturbed due to the security associated with rail side environment and the infrequent management of these areas. The Hammersmith and City and British Rail Western Region Land extend east to west across the north of the borough, and the Metropolitan line, West London, Hammersmith and Fulham and the District run north to south along the western boundary of the Borough.

Both the Thames and the Grand Union Canal are designated as Sites of Metropolitan Importance, which reflects their strategic nature. They are both important wildlife corridors that permit wildlife to move and colonise more widely through the city. The Grand Union Canal (Paddington Arm) extends across the north of the borough.

In addition to the canal and rail side corridors, small habitat fragments located between larger sites also serve as wildlife corridors. For example, Kensington Memorial Gardens, Carmelite Monastery and Ladbroke Grove Garden Complex serve as habitats which link larger site such as Hyde Park, Holland Park and Wormwood Scrubs.

6.3 Specific Factors Affecting Green Corridors

- Lack of appropriate management leading to dominance by vigorous invasive species
- Development pressure: loss of habitat through unsympathetic development
- Lack of knowledge: access too many of these sites is difficult and there is a current lack of data on the ecological characteristics of many of these sites in the borough.
- Degradation caused by heavy public use
- Amenity use: There is increasing demand for use of the canal for recreational pursuits including cycling, walking and fishing. Such activities place heavy demand on the land adjacent to the canal edge, with the requirement for close mown grass and wide footpaths.

6.4 Current Action

Green corridors are protected through the planning system under policy LR24 of the UDP: To resist the loss of existing public and private open space which meets leisure and recreation needs.

6.5 Flagship sites

These sites have been selected by the Kensington and Chelsea Biodiversity Partnership as characteristic of canal sides and rail sides in the borough. They will be used for publicity and awareness campaigns.

Key Sites

Grand Union Canal	The Canal is of strategic importance as a green corridor spanning the city. It contains characteristic aquatic flora, fauna and breeding water birds.
Hammersmith and City Line	Some dense and relatively undisturbed vegetation providing a feeding and nesting sites form common birds. The site is one of a few remaining areas in the Borough where ruderal / ephemeral species can thrive and is a valuable east-west wildlife corridor.
West London and District Line	Undisturbed vegetation, dense in places providing a semi natural refuge in built up area. The site forms an important wildlife corridor joining the Grand Union Canal.

6.6 ACTION PLAN: Green Corridors

6.6.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
GC01	Protect and enhance green corridors which are important in terms of nature conservation	All habitats	3 corridors	31/03/2015	RBKC

6.6.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
GC01.01	Meet with London Underground, Network Rail, British Waterways and other relevant bodies to discuss possible improvements to the management of green corridors for the benefit of nature conservation. To improve the management of non RBKC managed green corridor sites	3 corridors	01/04/2010	31/03/2015	TELS-Ecology		RBKC
GC01.02	Ensure LDF has relevant policies to protect green corridors by producing green corridor map (GIS) which shows how ecological features are linked and identifies areas that need protection.	3 corridors	01/04/2010	31/03/2011	RBKC Planning, RBKC PLAT	TELS-Ecology	RBKC

7 Parks, Private Gardens, City Squares and School Grounds

Although not immediately obvious as a wildlife habitat, gardens collectively form the greatest expanse of green space in the borough. Research work carried out by Gaston *et al*, 2004 has highlighted the enormous significance of gardens for wildlife in the UK. Gardens provide habitat for a wide range of species, many of them declining in the countryside, and form an important part of the green infrastructure of the city.

Gardens and school grounds have great potential for engaging the public in biodiversity conservation. Wildlife gardening creates opportunities to raise awareness around environmental sustainability in general, with issues such as pesticide and fertiliser pollution, unsustainable use of resources, quality of life and organic food on the national agenda.

Churchyards and cemeteries are collectively referred to as burial grounds. They offer a quiet sanctuary for both people and wildlife. Churchyards and cemeteries are a significant part of the green space and natural habitat of Kensington and Chelsea, with two of the London's "Magnificent Seven" cemeteries (Brompton and Kensal Green) located in the borough. They provide a diversity of vegetation and habitat types, are relatively undisturbed and offer a sanctuary for both people and wildlife.

Large cemeteries such as Kensal Green and Brompton contain grassland, woodland and scrub habitat, as well as tombstones, monuments and walls that host lichens, ferns and invertebrates.

7.1 Current Status

There are 34 parks managed by the Royal Borough of Kensington and Chelsea, in addition to community gardens and garden squares. Some parks, such as Holland Park, Avondale Park and Meanwhile Gardens have designated wildlife areas. However, even small local parks can provide a refuge for wildlife and opportunities for residents to interact with the natural world.

There are more than 100 garden squares in the borough. Apart from their contribution to the unique character of residential neighbourhoods, they form a significant resource for biodiversity. They often have a beneficially diverse

vegetation structure, and many garden square committees have an interest in wildlife gardening.

The majority of gardens in the borough are in private ownership. On some housing estates gardens exist that are tended either by householders, community gardens associations or by the TMO.

A grounds maintenance contractor maintains borough-managed parks. However, there is scope to improve the biodiversity value of parks with changes to planting and management practices.

Cemeteries in the borough are owned and managed by various agencies including the Royal Parks, religious bodies and the private sector. The majority are closed for new burials and are managed to maintain existing graves, for their religious, historical and landscape value and amenity.

Sites with the borough include:

- Kensal Green Cemetery
- Brompton Cemetery
- Moravian Burial Ground
- Royal Hospital Old Burial Ground Western Synagogue Cemetery
- St Mary Abbots Churchyard
- St Luke's Churchyard (remnant)
- St James Churchyard (remnant)
- St Mary The Boltons
- All Saints, Chelsea Embankment
- Gunnersbury Cemetery
- Hanwell Cemetery

7.2 Specific Factors Affecting the Habitat

7.2.1 Management

Biodiversity is negatively affected by:

- Over tidying and manicuring which creates disturbance and removes useful food and shelter resources
- Pruning and hedge cutting in the bird breeding season which is avoidable and illegal.
- Planting invasive species - exotic aquatic plants are a particular problem
- Excessive enrichment of soil with fertilisers
- Biocides pose a threat up the food chain to species such as birds and hedgehogs, as well as valued invertebrates such as ladybirds.
- Zealous pest control reduces the food available to insectivorous birds such as song thrushes.

Beneficial management practices include:

- Composting, which minimises landfill and builds healthy soils, while compost heaps themselves are valuable habitat
- Managing leaf litter, dead wood and other organic detritus on site rather than cleaning up and sending it to landfill
- Installing and maintaining features such as ponds, log piles and bird tables
- Allowing grass to grow longer in some areas, or planting a naturalistic flowery lawn or wildflower meadow

- Grounds maintenance contract specifications are the key tool for managing parks. These are influenced by cost and skills availability. Output-based specifications such as that in Kensington and Chelsea provide flexibility and opportunities to improve environmental performance.
- Traditional formal mid - 20th century park design is sometimes considered the norm for parks. Alternative approaches are potentially controversial and need to be introduced with sensitivity after consulting park users. There are some inherent tensions between formal horticulture and ecologically sustainable practices. However, there is an increasing trend towards naturalistic and wildlife friendly gardening which raises public awareness of ecologically beneficial options.
- Perceptions of safety and neglect can mean that there is pressure for dense and tall vegetation to be cleared. However, there are alternative ways to design out crime.
- Qualitative benchmarks and awards such as Green Flag and Britain in Bloom look for ecological sustainability and create an impetus for more sympathetic management.
- The North Kensington Environment Project is a regeneration project, which have been greening neglected sites. Biodiversity enhancements include planting a wildflower meadow in Acklam Road and native hedges in Elkstone road.
- The use of pesticides is declining, but has not yet been phased out. They can have complex detrimental impacts on ecosystems. The current maintenance contractor is committed to bring ISO14001 compliance by 2009.

7.2.2 Cemetery Management

- Cemeteries are often a low priority for funding and sympathetic management can be hampered by lack of funds.
- A preference for an orderly appearance in cemeteries, layout may be incompatible with an ecological approach to management.
- While an abundance of plants and animals and a naturalistic management style can contribute to the traditional atmosphere of cemeteries, this should be balanced with the need for safe access. Interpretation boards can help to explain the benefits and prove that a modicum of wildness is not neglect.
- Memorials must be maintained to preserve their heritage value and in a structurally safe condition.
- London is now close to exhausting its supply of burial space. The Home Office consulted on a review of burial law in 2004 and raised the issue of the re-use of graves. This situation presents new fiscal management opportunities but also risks for nature conservation.
- Old burial areas, which are visited less frequently, are often suitable for management that is more naturalistic and can become wildlife reserves.
- Composting and creating log piles are an ecologically sustainable way of managing green waste.

7.2.3 Human impacts

- The trend for converting front gardens to car parking is having a cumulative detrimental effect on the extent and quality of gardens in the city. Apart from the loss of green space, paving over front gardens can break up wildlife

corridors, exacerbate flooding problems and represents a loss of the benefits of vegetation in mitigating pollution and creating an attractive streetscape. North Kensington Environment Forum and the Council recently produced “Front Gardens Matter”, an information booklet promoting attractive and environmentally friendly alternatives to paving.

- Garden makeovers popularised by TV programmes often favour hard landscaping, decking and ornamental water features which come at a cost to natural habitats.
- Similarly, the practice of constantly replacing annual plants in a bedding scheme reduces the number of animal species a garden will support.
- Developments such as conservatories and extensions reduce the acreage of garden while subterranean construction can harm trees and disturb the drainage of the soil, creating problems elsewhere.
- Choice of plants undoubtedly has an impact on wildlife in gardens although the relationships are not always clearly understood. Nectar and fruit bearing plants, whether native or introduced, attract invertebrates, while double-flowered hybrids are relatively sterile. Planting a wide variety of species, and lots of trees and shrubs, is best for wildlife.
- Increasing numbers of park visitors can have negative implications for wildlife, such as the erosion of grass through trampling.
- There is evidence that large populations of scavenger species may be linked to feeding of waterfowl, pigeons and squirrels or dropping of litter.
- Modernisation of sports facilities can change the character of parks. For example, a change to artificial turf pitches removes feeding habitat for blackbirds and thrushes.
- Floodlighting may adversely affect some species, particularly bats.
- Most parks need to fulfil multiple needs, with facilities for sports, dog walking, playgrounds and meeting places. The misperception that “wildlife” is one of these competing needs means that nature can be designated to neglected corners, rather than being the fabric of the park as a whole.
- Public open space, particularly playing fields and grounds of hospitals and estates, is potentially vulnerable to being lost to development. There are limited opportunities to create new green space in Kensington and Chelsea.
- Dogs in parks can have negative impacts on wildlife – their waste is both a public health issue and a cause of soil eutrophication, which reduces botanical diversity. Dogs off lead can disturb ground nesting birds and in some parks dogs cause severe damage to trees by chewing off their bark.

Cemeteries

- Methods of burial can be sources of pollution. The most common types of coffins are made from Medium-density fibreboard (MDF), plastic and embalming fluid contains formaldehyde. The long-term impacts of these chemicals are unstudied.
- More sustainable alternatives such as wicker, bamboo and cardboard coffins and burial shrouds are now available.

7.2.4 Environmental factors

- Predation of birds and small mammals by cats
- Invasive species
- Pollution, such as the deposition of nitrogen oxides (NO_x) from vehicles, which alters soil chemistry
- Climate change

- Overgrowth of bracken, brambles and ivy can threaten the species richness of grassland sites, as well as memorials.

7.3 Current Action

Garden squares are protected in the planning system, for example Policy CD23 of the UDP: *To protect and enhance, and to resist the loss of existing public and private open space which makes, or is capable of making, a contribution to an area's character or appearance; and to resist proposals which would adversely affect its setting.*

The following parks and gardens have been identified, designated and merit strong protection in the UDP and LDF as Sites of Nature Conservation Importance:

Metropolitan Sites

- Holland Park and Kensington Gardens

Sites of borough importance:

- Chelsea Physic Garden, Chelsea Hospital South Front Lawn, the Carmelite Monastery, Ladbroke Grove Garden Complex, Royal Hospital South Grounds and Ranelagh Gardens are sites of borough importance.

Sites of local importance:

- Smaller parks and community gardens such as Emslie Horniman Pleasance, Westway Wildlife garden, Avondale Park, Meanwhile Gardens, Kensington Memorial Park

Tree Preservation Orders can protect trees in private gardens.

7.3.1 Cemeteries: Current Action

Kensal Green Cemetery is a Site of Metropolitan Importance for Nature Conservation, Brompton Cemetery is a site of Borough grade I importance and the Moravian Burial Ground and Royal Hospital Old Burial Ground are sites of Borough grade 2 importance. In addition, smaller, undesignated sites such as the Western Synagogue Cemetery in Fulham Road and the remnants of St Luke's Churchyard have existing nature conservation value, and potential for enhancement.

Brompton and Kensal Green are areas of Metropolitan Open Land with protection in the planning system. The Unitary Development Plan includes a policy (CD16) "to promote opportunities for the appreciation of Brompton and Kensal Green Cemeteries whilst protecting their special character", and recognises their value as nature reserves and botanic gardens. They are also listed on English Heritage's Register of Parks and Gardens of Special Historic Interest.

The Kensington and Chelsea cemetery in Hanwell is a borough grade II SNCI for Ealing, managed by the council.

Friends groups are active in Kensal Green and Brompton Cemeteries. Brompton cemetery is managed by the Royal Parks Agency and is subject to a management plan with a mowing regime designed to maximise grassland species richness in suitable areas.

7.4 Flagship sites

These sites have been selected by the Kensington and Chelsea Biodiversity Partnership and will be used for publicity and awareness campaigns.

Sites	
Holland Park	Holland Park comprises one of the larger areas of semi-natural habitat within central London and is important for its populations of mammals (including bats), birds and breeding amphibians The site includes large areas of woodland, an uncommon habitat in inner London.
Natural History Museum – Wildlife Garden	The wildlife garden includes a number of created habitats that are a valuable awareness-raising tool seen by for visitors from all over the world. A nationally notable species of clearwing moth and a large population of a leaf-mining moth are present. The garden has developed significantly since 1993.
Brompton Cemetery	The site includes moderately diverse grassland containing at least three London notable species and which supports a diverse invertebrate assemblage.
Kensal Green Cemetery	A large area of relict, unploughed and largely unsprayed grassland containing distinctive plants and fungi with diversity enhanced by vegetated tombs/ mausoleums. Nine London notable plant species were recorded and a diverse mammal fauna has been reported.
Species	
Wall ferns *Aspleniaceae* spp.	These ferns are usually associated with shady damp corners.
Lichens e.g. *Xanthoria parietina*	Often growing on the headstones and monuments of churchyards and cemeteries: They are highly sensitive to air pollution and can be used for educational projects.

7.5 ACTION PLAN: Parks, Gardens, City Squares and School Grounds

7.5.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
P01	To protect and enhance biodiversity within RBKC parks, gardens and cemeteries whilst respecting their primary purpose.	All habitats	34 sites	31/03/2015	RBKC

7.5.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
P01.01	Achieve green flag status in all primary RBKC managed parks to ensure green standards are maintained	9 sites	01/04/2010	31/03/2014	TELS-Parks	TELS-Ecology	Major parks
P01.02	Update current and proposed SNCI designations To ensure new sites receive protection.	24 sites	01/04/2010	31/03/2011	TELS-Ecology	RBKC Planning, GLA,	All SNCI inc LWS
P01.03	Collate management information for all SNCI. To understand the land management of SNCI sites and to report positively in terms in NI 197	24 sites	01/04/2010	31/03/2010	TELS-Ecology	TELS - Parks	All SNCI inc LWS

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
P01.04	Ensure all primary parks and cemeteries have site-specific management plans or management statements. To increase opportunities for biodiversity and provide essential habitats and food for species and to report positively in terms in NI 197	30 sites	01/04/2010	31/03/2015	TELS-Ecology	TELS - Parks	All SNCI and primary parks inc LWS and cemeteries
P01.05	Ensure the 80% of SNCI are under positive management. To ensure correct management is being followed and to report positively in terms in NI 197	18 sites	01/04/2010	31/03/2013	TELS-Ecology	TELS - Parks, Quadron	All SNCI inc LWS

8 Woodland

Trees and woodlands are among the most valued habitats in London, perhaps because the city was built on the site of ancient forests. Woodlands have enormous ecological and cultural significance, and for many people represent the ultimate sanctuary from the pollution and stress of urban life. Trees and woodlands are the green lungs of the city and benefit us in many ways, from filtering air pollution, cooling the urban heat island, absorbing noise and gusty winds and creating shade, to ornamenting the landscape.

Ecologically, woodlands support high levels of biodiversity because they are structurally complex, with niches providing food and shelter for many different species. The vertical dimension of trees greatly increases biomass and surface area and therefore increases the amount of biodiversity packed into a given area.

8.1 Current Status

The 2002 Borough Ecological Survey identified approximately 11ha of woodland. Outside of Holland Park, woodlands exist on a smaller but important scale. The two main cemeteries within the borough boundaries, Kensal Green and Brompton, both have significant groups of trees and hedges as do the boroughs own cemeteries at Gunnersbury and Hanwell. Some rare trees such as the native Black Poplar have been recorded in the borough.

8.2 Specific Factors Affecting the Habitat/Species

8.2.1 Management

- In principle, woodland represents climax vegetation and requires no intervention to maintain its character.
- Traditional management techniques, such as coppicing and low-intensity grazing are often beneficial to biodiversity, since they create structural diversity with a greater range of ecological niches.
- Management for amenity, such as in parks, must balance ecological value with priorities for safety and access.

- The most significant area of woodland in the borough, Holland Park, has a five-year ecological management plan with the objective of maintaining and enhancing the structural and species diversity of the habitat. Various landowners and agencies manage smaller areas of woodland and scrub elsewhere in the borough.
- Woodland and scrub areas can be perceived as dangerous, and management of semi-natural habitats can be misunderstood by the public and land managers, leading to unnecessary interventions such as clearance of the shrub layer.
- Effective management requires suitable expertise and resources.

8.2.2 Human impacts

- Woodlands, particularly scrub and secondary woodlands that have developed naturally on unused land, are frequently under threat of clearance to make way for development.
- Overuse by people and their pets can cause damage such as trampling, soil eutrophication, litter and vandalism. Conversely, underused woodlands are prone to fly tipping.

8.2.3 Environmental factors

- Encroachment of invasive non-native species.
- Damage from high populations of animals e.g. squirrels.
- Climate change is likely to have a significant, but unpredictable effect on trees – summer droughts and mild, wet winters with more violent storms are anticipated.
- Dutch elm disease is prevalent, creating stands of spindly suckering elms and dead young trees.
- Recently arrived pathogens such as *Cameraria ohridella* (Horse Chestnut leaf miner) and an upsurge in bleeding canker and oak dieback are likely to change the composition of woodlands as certain species succumb to multiple stresses, including a changing climate.

8.3 Current Action

Many woodlands areas occur within Sites of Nature Conservation Importance (SNCI) and are therefore protected through the development control process.

Trees can also be protected on an individual basis or in defined groups or areas through the application of a Tree Preservation Order (TPO). At present, many trees within the borough are protected by this system.

The most significant woodland in the borough, in Holland Park, is subject to a 5-year ecological management plan. Management is supervised by the Ecology Service.

The Ecology Service also runs an extensive programme of outdoor education which educates about and utilises the woodland habitat.

8.4 Flagship species and sites

These plants, animals and sites have been selected by the Kensington and Chelsea Biodiversity Partnership as characteristic of woodland within the borough. They will be used for publicity and awareness campaigns.

Sites

Holland Park	Holland Park comprises one of the larger areas of semi-natural habitat within central London and is important for its populations of mammals (including bats), birds and breeding amphibians The site includes large areas of woodland, an uncommon habitat in inner London.

Species

Stag beetle (*Lucanus cervus)*	Most often seen on warm summer evenings, the male has distinctive stag-like “antlers”
Bats (*Chiroptera*)	Many species of bats roost in trees e.g. Noctule
Owls Barn Owl (*Tyto alba*) Short-eared Owl (*Asio flammeus)* Tawny Owl (*Strix aluco)* Long-eared Owl (*Asio otus)* Little Owl (*Athene noctua*).	There are five species of British owls, most of which are usually nocturnal. Two are already species of conservation concern. (Barn Owl (*Tyto alba*) and Short-eared Owl (*Asio flammeus)*), two others are poorly monitored, nocturnal and in decline (Tawny Owl (*Strix aluco)* and Long-eared Owl (*Asio otus)*) and the fifth is susceptible to changes in agricultural practices (Little Owl (*Athene noctua)*).
Great Spotted Woodpecker (*Dendrocopos major)*	A popular bird, heard drumming in the trees as it looks for insects
Fungi	Fungi play a vital role in nature. Many are saprotrophs, living on dead organic matter such as leaf litter and have an important role in re-cycling. Others form symbiotic associations with trees and other plants (mycorrhizal fungi) which extend the plant root system assisting in the uptake of water and nutrients. It has also been estimated that over 1000 species of insects and other creatures in the UK alone are dependent on fungi for food and shelter.

8.5 ACTION PLAN: Woodland

8.5.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
W01	To protect, by ensuring no net loss, the borough's woodlands	Woodland	6.6 ha	31/03/2015	RBKC
W02	To enhance the borough's woodlands through positive management and planting of 0.2 ha	Woodland	6.8 ha	31/03/2015	RBKC

8.5.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
W01.01	Provide ongoing input to the planning department to ensure woodlands are not lost and are protected through the relevant processes.	6.6 ha	01/04/2010	on going	TELS-Ecology	RBKC Planning	RBKC
W02.01	Control or remove invasive tree species (e.g. elder, sycamore) and pest shrub or weed species (Japanese Knotweed, Cherry Laurel) within woodlands, according to site management plans	11 sites	01/04/2010	on going	TELS-Parks	TELS-Ecology	Primary parks inc LWS and cemeteries
W02.02	Plant 0.2ha of woodland using native trees	0.2ha	01/04/2010	31/03/2015	TELS-Ecology	RBKC Planning	RBKC
W02.03	Use of pigs to manage encroached woodland	1 ha	01/04/2010	31/03/2012	TELS-Ecology	TELS-Parks	Holland Park

9 Grassland

9.1 Unimproved and Semi-natural Grassland

This category includes all grasslands with a largely semi-natural character that have not been treated with herbicides or artificial fertilisers. It includes enclosed and managed grassland such as hay meadows and pastures, a range of grasslands that are covered with water periodically, permanently moist or even waterlogged grassland and unmanaged grassland. Unimproved neutral grasslands are rare. These grasslands are colourful because they contain a high proportion of broad-leaved flowering species, such as Cowslip (*Primula veris*) and Common Knapweed (*Centaurea nigra*), relative to grasses. Some characteristic species, such as Adder's-tongue (*Ophioglossum vulgatum*) are now very rare.

9.2 Improved Grassland (Agricultural land, amenity grassland, grass verges)

This type of grassland includes land that is regularly treated with slurry, artificial fertiliser and/or herbicides, often following reseeding. This produces a species-poor grassland that is usually dominated by Perennial Rye Grass (*Lolium perenne*), and sometimes Clover (*Trifolium* spp.). Improved agricultural grassland is generally very poor for wildlife. Plant diversity on such habitats is often poor because fertiliser use stimulates the growth of competitive grasses and a small number of common broad-leaved plants, such as Common Ragwort (*Senecio jacobaea*) and Dock (*Rumex* spp.), at the expense of other plant species.

Some areas of improved grassland are managed for recreation and amenity, for example sports pitches, playing fields, public parks, and golf courses. Amenity grassland maintenance normally involves intensive management of a limited number of grass species by frequent cutting, fertiliser application, herbicide use, watering and drainage. It is generally dominated by Perennial Rye Grass, but other grasses are used for special purposes. Intensively managed amenity grassland is of little biodiversity value because of the limited variety in plant species and

structure. However, there is potential to improve the biodiversity of many of these sites without losing their amenity value.

Other improved grassland habitats include grass verges, which are found alongside roads, railways, canals and rivers. These habitats vary in wildlife interest. In some cases, these habitats support important plants and animals and provide corridors, which help species move from place to place. Such habitats are becoming increasingly valuable for wildlife, as other grassland habitats are lost.
Amenity

9.3 Current Status

The 2002 Borough Ecological Survey identified approximately 100ha of grassland, the majority of which is amenity grassland.

9.4 Specific Factors Affecting the Habitat

- Existing habitats are threatened due to development pressures.
- Over-management of improved grassland, mainly regular mowing and the application of fertilisers and pesticides, has reduced the biodiversity value of sites.
- Mechanical cutting of grasslands is detrimental to most species.

9.5 Current Action

Many grassland areas occur within Sites of Nature Conservation Importance (SNCI) and are therefore protected through the development control process.

The most significant grassland site managed by the council is Little Wormwood Scrubs, other significant sites included Royal Hospital Old Burial Ground, Brompton and Kensal Green Cemetery.

9.6 Flagship species and sites

The Kensington and Chelsea Biodiversity Partnership have selected these plants and animals as characteristic of grasslands within the borough. They will be used for publicity and awareness campaigns.

Sites

Brompton Cemetery	The site includes moderately diverse grassland containing at least three London notable species and which supports a diverse invertebrate assemblage.
Little Wormwood Scrubs	The site includes extensive areas of semi improved neutral grassland.
Kensal Green Cemetery	A large area of relict, unploughed and largely unsprayed grassland containing distinctive plants and fungi with diversity enhanced by vegetated tombs / mausoleums. A total 9 London notable plant species were recorded and a diverse mammal fauna has been reported.

9.7 ACTION PLAN: Grassland

9.7.1 Targets

Target Code	Text	Species / habitats / other	Goal	Date	Sites
G01	Secure positive management of grasslands	grassland	32ha	31/03/2015	RBKC
G02	To protect the borough's grasslands	grassland	32ha	31/03/2015	RBKC
G03	Create wildflower meadows	grassland	1ha	01/01/2016	RBKC

9.7.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
G01/02.01	Ensure no net loss of neutral and semi improved grassland areas	32ha	01/04/2010	ongoing	TELS-Ecology	TELS - Parks, Quadron	RBKC
G02.02	Ensure a no loss policy of acid grassland. To maintain this habitat within RBKC and extend the are of acid grassland by 0.1ha	2.4 ha	01/04/2010	ongoing	TELS-Ecology	RBKC Planning	RBKC, Avondale Park
G03 / Bi01	Create wildflower meadows in local parks to enhance foraging habitats for house sparrows	1ha	01/04/2010	31/03/2015	TELS-Ecology	TELS - Parks, Quadron	RBKC

10 Wildlife Hedges

Mixed hedgerows are important wildlife habitats, providing food, nesting sites and shelter for birds, small mammals and invertebrates. A hedgerow also provides safe corridors for small mammals to travel from one area to another, and song-posts and viewpoints for birds to perch on.

10.1 Current Status

Native and non-native hedges cover approximate 10km within the borough. However, we have little understanding of proportion of this length that accounts for wildlife hedges.

A wildlife hedge was planted in Holland Park in 2006. In addition, the Natural History Wildlife Garden has an excellent wildlife hedge.

10.2 Specific Factors Affecting the Habitat

- In many areas, hedges no longer act as boundaries and have consequently been removed.
- Hedgerow management plays a crucial row in hedgerow maintenance and with the Progressive loss of knowledge in tradition management methods has resulted in poor management which causes:
  - Neglected hedgerows open up as trees grow.
  - Excessive bad cutting can lead to poor hedges and eventual destruction of the hedge.

10.3 Current Action

Many hedges within the borough are designated as Sites of Nature Conservation Importance (SNCI) and are therefore protected through the development control process. Some of these sites have wildlife hedges such as:

- Natural History Wildlife Garden
- Holland Park
- Westway Wildlife Garden

10.4 Flagship species and sites

The Kensington and Chelsea Biodiversity Partnership have selected the following sites within the borough and will use the sites for publicity and awareness campaigns.

Site	
Holland Park	A recently planted species rich wildlife hedge.
Natural History Wildlife Hedge	An excellent example of a wildlife hedge, which is maintained using traditional laying methods.

10.5 ACTION PLAN: Wildlife Hedges

10.5.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
H01	To protect, enhance and extend the borough's wildlife hedges by ensuring that every hedgerow within RBKC, which can be managed for nature conservation without affecting its value as a boundary feature.	wildlife hedges	2km	31/03/2015	KMP, Avondale, Powis Square, Holland park

10.5.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
H01.02	Maintain wildlife hedges by traditional non-mechanical means. To reduce impact on biodiversity and ensure are well formed	1km	01/04/2011	ongoing	TELS - Parks, Quadron	TELS-Ecology	KMP, Avondale, Powis Square, Holland park, Westfield, LWS
H01.03	Gap up all existing species rich hedges on council land. To develop more wildlife hedges	1km	01/04/2011	ongoing	TELS - Parks, Quadron	TELS-Ecology	KMP, Avondale, Powis Square, Holland park, Westfield, LWS
H01.04	Ensure a no net loss of wildlife hedges and extend the length of wildlife hedges within the borough by 1km. To maintain wildlife hedges within RBKC	2 km	01/04/2010	ongoing	TELS-Ecology	RBKC Planning, TELS - Parks, Quadron	KMP, Avondale, Powis Square, Holland park, Westfield, LWS

11 Tidal Thames

The Thames, London's most famous natural feature, is home to many fish and birds, creating a wildlife corridor running right across the capital.

11.1 Current Status

The course of the Thames forms one of London's richest wildlife habitats, supporting diverse assemblages of birds, fish and invertebrates.

The stretch of the Thames from the mouth of Chelsea Creek to Kensington Borough Wharf includes areas of extensive inter-tidal mud, while mud and shingle are exposed at low tide between Kensington Borough Wharf and Battersea Bridge where there is also a small sand beach. These features, along with the muddy channel of Chelsea Creek, are particularly valuable for birds, with black-headed gull, grey wagtail, heron and mallard reported in the annual borough bird survey.

A surprising variety of plants and invertebrates are supported on the vertical flood defence walls of the river and these provide a food source for birds and fish.

Since the 1960s, there have been dramatic improvements in water quality in the Thames, resulting in recovery of biodiversity. Today, the tidal Thames supports a diverse flora and rich populations of invertebrates, fish and aquatic birds. Since 1957, ever-increasing numbers of fish have been recorded and the river supports a commercial and recreational fishery.

11.1.1 Key Habitat Types

- Artificial Structures - Redundant infrequently disturbed structures such as old moorings exposed at high tide, providing roost sites for wildfowl and invertebrate habitats.
- Flood Walls - Vertical walls of timber, brick and concrete that support a wide diversity of plants and invertebrates.

- Gravel Foreshore – Inter-tidal substrate comprising gravel and sands.
- Mudflats – Inter-tidal substrate comprising mud and sands. Priority habitat under the UK BAP.
- Tidal Creeks - Tidal areas at the mouths of tributary rivers acting as mini estuaries and providing refuge for fish, e.g. Chelsea Creek

11.2 Specific Factors Affecting the Habitat

11.2.1 Human Impacts

- The Lots Road power station has planning permission for redevelopment to mixed residential and commercial use. The discharge of warm water from the power station previously made Chelsea Creek a rich feeding ground for fish and birds and prevented it from silting up. The closure of the power station has already had an impact on the ecology of the creek and the river.
- During periods of heavy rain London's combined sewer overflows into the Thames, reducing available oxygen and at times causing fish kills.
- Increased use of the river for recreation and transport is welcome, but it also increases the potential for disturbance of wildlife habitats
- Public awareness of the ecological and wildlife importance of the river is low, and there is relatively little scientific data available on the habitats and species of this complex ecosystem.
- Maintenance dredging to maintain navigation access can result in the loss of species, while the significant redistribution of sediment results in changes to flows in the river.

11.2.2 Environmental factors

During the summer months, the tidal Thames experiences low freshwater flows because of upstream abstraction. Saline tidal waters penetrate further upstream into the upper freshwater river, bringing with them marine animals but also estuarine silts. Silts deposited on areas of gravel can change the habitat and lead to a reduction in invertebrate diversity.

The physical hydrodynamic character of the Thames is influenced by interference from factors such a flood defence walls and encroachments. Flow changes have resulted in accelerated patterns of erosion and deposition, leading to loss of inter-tidal vegetation, and siltation of gravel foreshores.

11.3 Current Action

The tidal Thames and Creeks within London have been designated as a Site of Metropolitan Importance for Nature Conservation as well as Metropolitan Open Space.

The UDP includes a policy (LR18): to encourage the increased use of the River Thames for leisure and recreation purposes. However, this is balanced against "the need to protect its nature conservation value". Policy LR20 requires that "existing means of access to the foreshore are safeguarded and supplemented where appropriate".

No single organisation oversees the management and regulation of the tidal Thames. The Thames Estuary Project was formed in 1993 to provide a focus for the range of organisations, individuals and activities linked to the Thames.

In addition to the Statutory Bodies (including Natural England (NE), the Port of London Authority, the Environment Agency (EA), DEFRA, the GLA and London boroughs), many voluntary and non-statutory bodies provide advice and undertake management.

11.4 Flagship species and sites

The Kensington and Chelsea Biodiversity Partnership have selected the following site within the borough and it will be used for publicity and awareness campaigns.

Sites

Chelsea Creek	Includes areas of extensive inter-tidal mud, while mud and shingle are exposed at low tide between Kensington Borough Wharf and Battersea Bridge where there is also a small sand beach. These features and the muddy channel of Chelsea Creek are particularly valuable for birds, with large numbers of black-headed gull, grey wagtail, heron and mallard

11.5 ACTION PLANS: Tidal Thames

11.5.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
TT01	Enhance and protect habitats on and surrounding the River Thames	tidal Thames	1 site	31/03/2015	Tidal Thames

11.5.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
TT01.01	Formalise Chelsea creek management plan. So it is effective and implemented as soon as possible	1 site	01/04/2010	31/03/2012	RBKC Planning	TELS-Ecology	Tidal Thames
TT01.02	Investigate options to carryout ecological enhancement of the jetties, piers and walls along the tidal Thames section.	1 report	01/04/2010	31/03/2015	RBKC Planning	Environment Agency, ZSL	Tidal Thames

12 Freshwater

Freshwater habitats include both flowing and standing waters. The UK has a great variety of running waters, from fast-flowing upland rivers, to chalk streams in the southeast and slow-flowing rivers of eastern England. Standing waters are similarly diverse, ranging from small mountain corrie lochs to lowland ponds, large lakes and reservoirs.

The diversity of habitats within and around fresh waters supports a wide variety of species. Furthermore, freshwater habitats can provide valuable green corridors for wildlife in an often intensively developed urban or agricultural landscape.

12.1 Current Status

There are several ponds across the Borough. However, no figures exist as to the exact number or status of these ponds.

The length of canal within the borough is approximately 2km.

12.2 Specific Factors Affecting the Habitat

- Climatic changes: Low average rainfall leads to drought conditions, reduced water levels and the lowering of the water table.
- Eutrophication: due to man's actions i.e. food thrown for ducks, accumulation of leaf litter leading to the growth of more vigorous species, crowding out other species.
- Pollution: other than plant nutrients, including fly tipping and littering and run-off from adjacent roads, buildings and sites.
- Lack of appropriate management: leading to loss of wetlands and reed beds as the sites dry out and scrub and woodland develop.
- Keeping of ornamental fish; leading to a reduction of the quality of the habitat for other species.

- The spread of invasive and non-native species: such as Canada Geese, alien crayfish species, Red-eared Terrapins, Parrots Feather and Floating Pennywort.
- Degradation: caused by waterfowl and amenity use.
- Development: loss of habitat through unsympathetic canal side development.
- Disturbance: caused by dogs and amenity uses.

12.3 Current Action

The Grand Union Canal is a Site of Conservation Importance (Metropolitan) and therefore protected by the development control process.

Many of the species associated with these freshwater habitats may be offered legal protection under The Wildlife & Countryside Act 1981 (as amended) e.g. Great Crested Newts

12.4 Flagship species and sites

The Kensington and Chelsea Biodiversity Partnership have selected the following sites within the Royal Borough and will use them for publicity and awareness campaigns.

Sites

Grand Union Canal	The Canal is of strategic importance as a green corridor spanning the city. It contains characteristic aquatic flora, fauna and breeding water birds.
Natural History Wildlife Pond	The ponds are particularly important for invertebrates, bird and mammal populations in this part of the Borough which is otherwise densely urbanised.

12.5 ACTION PLAN: Freshwater Habitats

12.5.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
FW01	Enhance and protect existing freshwater habitats located within RBKC sites for biodiversity	Freshwater	3 ha	31/03/2015	Avondale, Emsile, Holland Park, Grand Union Canal

12.5.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
FW01.01	Audit RBKC managed wildlife ponds, identify and carry out improvements that can be made such as the use of rafts / nesting sites or the development of marginal habitats. Ensure no net loss of freshwater habitats.	3 ha	01/04/2010	31/03/2011	TELS-Ecology	Pond Conservation, GiGL, RBKC PLAT,	Avondale, Emsile, Holland Park, Grand Union Canal

13 Mammals

13.1 Bats

Bats (*Chiroptera*) are nocturnal mammals that fly. They are rarely seen, with brief appearances at dusk around water and woodland feeding sites. The local bat species only insects and they may consume them in considerable numbers. Therefore, habitats rich in invertebrate life are excellent for bats. Bats rely on buildings for their roosts in the urban environment. These are important for breeding in the summer and for winter hibernation. Therefore, in contrast to many of the other action plans, the urban environment and its buildings are an important factor, as is education and improving understanding about bats and their habits.

At least eight species are known to be breeding in Greater London (London Bat Group 2008).

- Daubenton's bat (*Myotis daubentoni*)
- Serotine (*Eptesicus serotinus*)
- Noctule (*Nyctalus noctula*)
- Leisler's bat (*Nyctalus leisleri*)
- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Nathusius's pipistrelle (*Pipistrellus nathusii*)
- Brown long-eared bat (*Plecotus auritus*)

The two pipistrelles are by far the most common and still occur in all London Boroughs. The noctule and Daubenton’s bats are regularly recorded and widespread (London Bat Group 2008).

Recent research has indicated that noctules and serotines are continuing to decline, whilst common and soprano pipistrelle numbers appear to be increasing (Briggs *et al* 2007). Daubenton’s bats appear to be doing less well in London than in the UK as a whole, and may in fact be declining (Briggs *et al* 2007).

13.2 Hedgehogs

The Hedgehog (Erinaceus europaeus)is the only spiny British mammal. They are active at night and usually rest in a nest of leaves during the day.

Hedgehogs favour woodland edges, hedgerows and suburban habitats where there is plenty of food for them and sufficient cover. They eat invertebrates, including beetles, worms, caterpillars, slugs and almost anything they can catch, but little plant material.

Hedgehogs can survive well in both gardens and public green space if these are accessible at ground level, and most importantly well connected to other suitable gardens and green open spaces. Hedgehogs have a large range and may travel up to 3km to forage.

13.3 Current Status

13.3.1 Bats

In 1996, the Council commissioned a bat survey by the London Bat Group to establish which species are present in Kensington and Chelsea. A number of recommendations for action were suggested, which can be further developed in this action plan. To date, a number of educational events have been organised, including bat walks and talks. In addition, a number of bat nest boxes have been erected in Holland Park and some additional ad hoc bat surveys have been carried out.

Four species have been recorded in Kensington and Chelsea to date:

- Noctule
- Long-eared bat
- Soprano pipistrelle
- Common pipistrelle

13.3.2 Hedgehogs

In 1996, the Council commissioned a mammal, however no hedgehogs were recorded. However, Greenspace Information for Greater London (GiGL) has four records of hedgehogs within the borough at the following locations:

- Holland Park
- Kensal Green Cemetery
- Within 100m of Carmelite Monastery

13.3.3 Specific Factors Affecting Bats

- Loss of Roosts: Bats use trees, buildings and bridges for roosts, and they may use different locations for roosts throughout the year for hibernation and a maternity roost. These sites include buildings (mainly their roof spaces), trees, bridges and various underground structures, such as cellars and tunnels. There is much ignorance about bats and their use of buildings for roosts. Very few people are aware of their legal protection and many people may even be surprised at their presence in a central London borough. Consequently, it is an important aim to educate people about their presence and their habitats locally.

- Feeding Habitats: Bats rely on habitats that are rich in insect life. Ponds, marshes, woodlands and grasslands can provide these feeding grounds. Any loss of these habitats will have an impact on the bat population.

- Flight Paths: Green corridors, for example the Grand Union Canal, the River Thames, and the borough's overland railway lines are often important flight paths for bats, allowing them to fly between roosts and feeding areas. Changes in these corridors or other parts of the urban landscape, such as the introduction of new street lighting, may cause disturbance to bats.

13.3.4 Specific Factors Affecting Hedgehogs

- Predation by foxes

- Strimmers can cause serious wounds to the sleeping or hibernating animals.

- Slug Pellets: These are poisonous to hedgehogs, as are slugs and snails which have ingested pellets

- Garden Ponds/Swimming Pools without ramps or gentle slopes to enable accesses cause hedgehog mortality.

- Loss of habitat and hibernation sites. The removal of leaves and log piles has reduced available hibernation and nesting sites for hedgehogs.

13.4 Current Action

All species of bat are protected in the UK on Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended by the Countryside and Rights of Way Act, 2000), and on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations, 1994. The latter, further implements European legislation protecting bats. Bats are also protected from cruel ill-treatment by the Wild Mammals (Protection) Act, 1996.

The UK is a signatory to the Agreement on the Conservation of Bats in Europe, which came into force in 1994, set up through the Bonn Convention on the Conservation of Migratory Species of Wild Animals, 1979. While this is not strictly a legal instrument, as a signatory the UK is obliged to abide by such agreements.

The London Bat Group co-ordinates a network of licensed bat wardens, working in liaison with English Nature to safeguard bat roosts, particularly in houses.

The place of bats in London life is promoted regionally, locally and London-wide by organisations such as the London Bat Group, London Wildlife Trust, the Wildfowl and Wetlands Trust at Barnes, and Local Authorities through a programme of guided walks, illustrated talks, training and articles. The Bat Conservation Trust, English Nature and the London Bat Group have produced various publications, including a series of specifically targeted leaflets aimed at promoting best practice in relation to bats within the building, pest control and arboriculture professions. Within this action plan, actions are included to work with partners to raise awareness within the borough.

Hedgehogs are partially protected under the Wildlife & Countryside Act and may not be trapped without a licence from Natural England, the Countryside Council for Wales or Scottish Natural Heritage. The hedgehog is now included in the new UK List of Priority Species and Habitats.

13.5 ACTION PLAN: Mammals

13.5.1 Target

Target Code	Text	Species / habitats / other	Goal	Date	Sites
Ma01	To protect and enhance the borough's mammals by improving the quality of the local environment through practical management and habitat creation and introduction (where appropriate)	bats, woodland, built environment,	11 sites	31/03/2015	All SNCI and primary parks inc LWS and cemeteries

13.5.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
Ma01.01	Erect and maintain bat boxes in RBKC open spaces where bats are present. To provide further roost site within RBKC	11 sites	01/04/2012	31/03/2013	TELS-Ecology	BCT	Primary parks inc LWS and cemeteries
Ma01.02	Monitor success of bat boxes	11 sites	01/04/2013	ongoing	TELS-Ecology	BCT	Primary parks inc LWS and cemeteries
Ma01.03	Investigate and implement hedgehog introduction where appropriate	4 sites	01/04/2013	31/03/2014	TELS-Ecology	BCT	Holland Park, LWS and cemeteries

14 Birds

Birds occupy a wide range of ecological positions. Some birds are generalists, others are highly specialised in their habitat or food requirements.

The British Trust for Ornithology (BTO) Breeding Bird Survey (Risely *et al* 2008) has reported that in England, trends were produced for 96 species, of which 28 decreased significantly and 42 increased significantly 1994–2007. We need to work towards ensuring that native species do not continue to fall in to decline and therefore the following bird species have been chosen for targeted action within the borough.

14.1 Current Status and affecting factors

14.1.1 House Sparrow

The House Sparrow is a small brown and grey bird approximately 14 – 16cm in size. The male bird has a distinctive black face and bib, grey crown and chestnut brown neck. Nesting in cracks or eaves of buildings, they can often be heard as they noisily chirrup and chatter.

This can have negative affects on the wildlife of the built environment. For example, one of the possible reasons for the decline of the house sparrow population is the loss of insects due to pollution. Light pollution is also a problem as increased lighting can have an adverse impact on wildlife, especially the bat.

Once among the most common birds in Britain, the Sparrow is now giving conservationists a real cause for concern. There are currently between six and seven million pairs of Sparrow in Britain, compared to just over twelve million pairs in the 1970's. The problem is particularly evident in London where numbers have fallen by 59% between 1994 and 2000. Current research is being carried out by the British Trust for Ornithology and the Royal Society for the Protection of Birds (RSPB) to identify the reasons for this decline. However, it is thought that the sharp decline is a result of:

- Lack of food for chicks e.g. aphids and other insects
- Reduction of nest sites through renovation of old buildings
- Effect of predation by crows, magpies, grey squirrels and cats
- Changes in agriculture
- The impact of lead free petrol on aphids (reducing numbers)
- Removal of 'weeds' such as Docks and Chickweed that Sparrows like to eat.

14.1.2 Black red start

This attractive robin-sized bird of the Thrush family, with characteristic red brown coloured tail is one the rarest British breeding birds. London represents the British stronghold for this species, which became more common after World War II, when it occupied bombsites. Now occupying "brownfield" sites such as derelict land, old factories and rooftops, Black Redstarts need nesting cavities and insect-rich habitat. The loss of this type of habitat, which is by its very nature always temporary, is a major factor in the decline of this species.

The Black Redstart is a rarer British breeding bird than the Osprey or Golden Eagle. With fewer than 100 pairs nesting in Britain, London is the most important

locality for this species in Britain. Their population in the capital makes up between 10% and 30% of the national breeding population.

14.1.3 Peregrine

They are the fastest animals in the world – believed to achieve speeds approaching 124mph. They hunt other birds at great speeds, often rising above their prey and swooping down for a kill.

In the UK, the peregrine is afforded full protection as a Schedule 1 breeding species under the Wildlife and Countryside Act and as a species requiring special conservation measures in Annex I of the European Union Directive on the Conservation of Wild Birds. This kind of protection for the Peregrine is a result of its numbers falling dramatically during the middle of the 20th century, mainly due to poisoning from organochlorine pesticides such as DDT. Numbers have since recovered to around 2000 pairs in the UK.

Despite this, the Peregrine is subject to continued illegal persecution due to egg collecting, falconry or to prevent perceived losses of game birds or racing pigeons. Although the risk of persecution is lower in urban areas, it is still an important factor when dealing with potential nest sites. Recently, Peregrines have started to colonise urban areas, roosting and nesting in a variety of manmade structures.

14.2 Current Action

Species may be offered legal protection under The Wildlife & Countryside Act 1981 (as amended) e.g. Peregrine (schedule 1).

14.3 ACTION PLAN: Birds

14.3.1 Targets

Target Code	Text	Species / habitats / other	Goal	Date	Sites
Bi01	To protect and enhance the borough's birds by improving the quality of the local environment through practical management and habitat creation	all habitats, House Sparrow	10 sites	31/03/2015	RBKC
Bi02	Investigate potential nesting sites for black red start and peregrines	Built environment	10 sites	31/03/2015	RBKC

14.3.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
Bi01.03	Monitor successes of bird boxes to gain an understanding of the success of the box types	11 sites	01/04/2010	31/03/2015	TELS-Ecology	TELS - Parks	Primary parks inc LWS and cemeteries
Bi01.05	Provide birdseed for the primary parks.	11 sites	01/04/2010	31/03/2015	TELS-Ecology		Primary parks inc LWS and cemeteries
Bi01.06	Establish a bird feeding programme across major parks	11 sites	01/04/2010	31/03/2015	TELS-Ecology	TELS - Parks	Primary parks inc LWS and cemeteries
Bi01.07	Erect 300 new bird boxes (variety of boxes) across the 11 primary parks	11 sites	01/04/2010	31/03/2015	TELS-Ecology	TELS - Parks	Primary parks inc LWS and cemeteries

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
Bi01.08	Enhance any potential nesting habitats for House sparrow	11 sites	01/04/2010	31/03/2015	TELS-Ecology		Primary parks inc LWS and cemeteries
Bi02.01	Identify any potential nesting habitats for black red start. To identify if the is scope to invest in improving nesting sites	1 report	01/04/2010	31/03/2011	TELS-Ecology	GiGL, RBKC PLAT, Living Roofs	RBKC
Bi02.02	Identify any potential buildings suitable for peregrine nesting sites. To identify if the is scope to invest in improving nesting sites	1 report	01/04/2011	31/03/2012	TELS-Ecology	GiGL, RBKC PLAT	RBKC

15 Invertebrates

Invertebrates are the most abundant and successful terrestrial animals. With about one million known species, invertebrates make up at least 95% of all species, the bulk of them being insects (Myers *et al* 2000). Invertebrates occupy almost every terrestrial and freshwater habitat from the poles to the equator. They are important in all ecosystems in terms of species numbers and biomass, and play vital roles in processes such as pollination, soil formation and fertility, plant productivity, organic decomposition, and the regulation of populations of other organisms through predation and parasitism (Daily *et al* 1997).

15.1 Current Status

15.1.1 Stag Beetle (*Lucanus cervus*)

The Stag beetle is Britain's largest terrestrial (ground-living) beetle, between 5 and 8cm in length.

The stag beetle requires dead wood to complete its lifecycle. The eggs are laid underground by logs, or stumps of dead trees, and the larva (or grub) will spend up to seven years inside slowly growing in size. A wide range of woods are used, especially oak, but also ash, elm, sycamore, lime, hornbeam, apple and cherry.

Its distribution has contracted in the last 40 years, although it is still locally common in a number of ‘hotspots’ such as the New Forest, the Thames Valley, around north-east Essex and London. It is believed that the destruction of its key habitat – dead wood – through the ‘tidying-up’ of woodlands and parks is the prime reason for its decline, although in urban areas the impacts of traffic, feet, cats and other predators will also be significant.

Stag Beetles have been recorded at 10 localities across the borough.

15.1.2 Oak hook-tip moth (*Watsonalla binaria*)

The Oak 'hook-tip' moths get their name from the shape of the tips of the forewings, and this species is one of the smaller members of the group.

Occurring in oak woodland and parkland, it is reasonably common in the southern half of Britain. However due to restricted oak habitats in London the months distributed is limited.

Oak hook-top moths have been recorded In Brompton Cemetery and Holland Park.

15.1.3 Bees

There are 267 bee species found in Britain of which most are solitary bees. All bees, whether social or solitary, feed on pollen and nectar. Some bees are adapted to reach nectar contained in deep-throated flowers, and are therefore highly specialised. Bees are important pollinators of flowers and provide an essential ecosystem service.

Bumblebees are social bees and live in colonies. Britain & Ireland have 25 native species of bumblebee; three species have already become nationally extinct. Five are now designated UKBAP species, in recognition of their precarious situation and two more are scheduled for inclusion. Fifteen species have undergone major range contractions. Therefore, several species face extinction unless action is taken. Solitary bees unlike honeybees and bumblebees, they do not live in colonies.

Thirteen bee species have been recorded within the Royal Borough; however, it is likely that other species exist.

15.1.4 German hairy snail (*Pseudotrichia (Perforatella) rubiginosa*)

The German hairy snail is a species of aquatic snail that grows hairs through its shell to allow it to sweat off moisture so that the slime it produces becomes stickier. This allows the mollusc to adhere better to the plants upon which it feeds.

The snail occurs in many places throughout Europe. In England, it is found along the River Thames. The German hairy snail is thought to have come to Britain during the last Ice Age when Britain was still connected to mainland Europe.

Currently there are no aquatic mollusc records for the borough as no formal surveys have been carried out. However, the following tidal Thames habitats are likely to be suitable environments for the species.

- Chelsea creek
- Embankment adjacent to Cemorne Gardens

15.2 Specific Factors Affecting Invertebrates

Aquatic Invertebrates:

- Water quality in park lakes and ponds
- Lack of aquatic vegetation in the Borough's wetland habitats
- Eutrophication of public water bodies through waterfowl faeces and decomposing uneaten duck food
- Predation by non-native species e.g. terrapins and goldfish.

Terrestrial Invertebrates:

- Reduction in amount of dead and decaying wood, through removal of tree stumps etc.
- Reduction of wildflower meadows and wildlife hedges.
- General loss of habitat to urban development (backland, railsides etc.)
- Direct human impact – accidental and intentional
- Predation, by e.g. cats

15.3 Current Action

The Stag beetle is protected under schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The Oak Hook-tip moth, Stag beetle and several native bee species are designated as UK Biodiversity Action Plan priority species.

The German hairy snail is listed as vulnerable in the IUCN redlist since 1991.

In addition, many current and potential sites are designated as Sites of Nature Conservation Importance and therefore protected is provided through the development control process.

15.4 ACTION PLAN: Invertebrates

15.4.1 Targets

Target Code	Text	Species / habitats / other	Goal	Date	Sites
In01	Increase pollinator populations within RBKC	all habitats	11 sites	31/03/2015	Holland park
In02	Maintain or increase epigaeic invertebrate populations within the borough	all habitats, stag beetles	11 sites	31/03/2015	major parks
In03	Maintain or increase the oak hook-tip moth	woodland	1 site	31/03/2015	Holland park
In04	Investigate establishing a suitable habitat for the German Hairy Snail	tidal Thames	1 site	31/03/2015	Cremorne Gardens

15.4.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
In01.01	Erect 50 new invertebrate boxes across 10 RBKC managed sites	50 invertebrate boxes	01/04/2013	31/03/2014	TELS-Ecology		Primary parks inc LWS and cemeteries
In01.02	Establish and maintain an apiary in Holland park and Gunnersbury cemetery to increase pollinator numbers in the local area.	2 sites	01/04/2010	31/03/2011	TELS-Ecology		Holland park, Gunnersbury cemetery

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
In02.01	Investigate the establishment of loggeries in primary parks to provide habitats for invertebrates inc the stag beetle.	11 loggeries	01/04/2010	31/03/2014	TELS-Ecology	GiGL, RBKC PLAT	Primary parks inc LWS and cemeteries
In03.01	Maintain an oak woodland to provide a habitat for the Oak hook-tip moth	2 site	01/04/2010	ongoing	TELS-Parks	TELS-Ecology	Holland park, LWS
In04.01	Investigate the establishment of willow species which overhang the mud flats to establish a habitat for the German hairy snail	1 site	01/04/2011	31/03/2012	TELS-Ecology		Cremorne Gardens

16 Plants and Fungi

A number of vegetation-based habitats are provided for within the habitats action plans. However, some specific species require targeted action plans in order to ensure their populations do not decline. Therefore, the following species have been identified as focal species:

- Black poplar
- Mistletoe
- Tiered tooth fungi

16.1 Current Status and affecting factors

16.1.1 Black Poplar (*Populus nigra*)

A thousand years ago, the native Black Poplar (*Populus nigra*) thrived across the lowland floodplains of the English countryside. Its huge, often steeply leaning bulk was almost as common as oak. However, since the start of the 19th century its natural habitat has been steadily destroyed by housing and farming. The great tree has been quietly vanishing from our landscape.

Now it is Britain's rarest native timber tree. In 1993, environmental scientists predicted that the species would be extinct within twenty years. However, focused conservation efforts are ensuring this does not happen.

Current factors causing loss or decline:

- Loss of both natural river systems and unstable floodplain sediments results in an absence of suitable habitat for natural regeneration.
- The lack of native male trees in close proximity to native females means there is very little opportunity for fertilisation.
- The presence of large numbers of hybrid trees means that seed from female trees is very likely to be hybridised.
- There are high losses of trees from natural factors such as old age, drought and wind blow; the trees are often large isolated specimens.
- Removal of fallen trees that would otherwise survive *in situ* or regenerate from the stump.
- The widely dispersed population makes site based conservation more difficult.

- Widely available and commercially preferable hybrids have been planted in preference to native stock for the last 150 years.

16.1.2 Mistletoe (*Viscus album)*

Mistletoe (*Viscus album*) is a rare plant in London. It has cultural and historical links with the city, particularly with medicinal use in addition to its popularity during the Christmas season. The plant is a parasite of deciduous trees, particularly fruit trees, and may be found in parks and gardens. Its parasitic nature causes no real harm to trees and it is a very slow growing plant. Currently there is only one private garden site with mistletoe present in Kensington and Chelsea.

Mistletoe requires a host tree for its establishment. It most commonly grows on orchard trees such as apples, but also hawthorn, maple, willow and hybrid poplar. There are a number of potential sites for establishment of this plant. Chelsea Physic Garden and Holland Park could be the initial sites for the trial, which may then be extended to the cemeteries and other parks.

Mistletoe is poorly understood as a plant, particularly as it is parasitic. This may have previously led to the practice of removing it from trees. The success of this action plan will require an improvement of the understanding of the plant and its relationship with trees. The mistletoe provides berries that are important to particular insects and can be very beneficial to wildlife.

The seasonal popularity of mistletoe at Christmas may place any established colonies under threat. Careful monitoring of these plants will be required.

16.1.3 Tiered tooth fungi (*Hericium cirrhatum*)

The Tiered tooth fungus grows mainly on wounds of old living trees and the ends of felled trunks. It normally grows high up on the host tree, which is usually beech (ash, oak, birch, sycamore or elm may also be used). Fruiting bodies appear in late summer to autumn. It is a local fungus in the UK and is restricted to woodland with a continuous presence of mature trees. In Greater London, the species is mainly restricted to older beech woods and has been recorded in Holland Park.

16.2 Current Action

Black Poplar and mistletoe are listed as least concern on the IUCN redlist whereas the tiered tooth fungus is listed as vulnerable.

All three species are designated as UK Biodiversity Action Plan priority species.

In addition, many current and potential sites are designated as Sites of Nature Conservation Importance and therefore protected is provided through the development control process.

16.3 ACTION PLAN: Plants and Fungi

16.3.1 Targets

Target Code	Text	Species / habitats / other	Goal	Date	Sites
VF01	Protect existing mistletoe colonies	woodland	2 sites	31/03/2015	Private sites
VF02	Introduce mistletoe to 11 primary parks	mistletoe	11 sites	31/03/2015	Major parks
VF03	Investigate potential planting sites for Black poplar	Black poplar	11 sites	31/03/2015	Major parks
VF04	Maintain habitats for the Tiered tooth Fungi	woodland	11 sites	31/03/2015	Major parks

16.3.2 Actions

Action Code	Text (action and why)	Goal (numeric target of what)	Start date	End date	lead partner	contributing partners	Sites
VF01.01	Establish whether existing mistletoe colonies are still present within RBKC and ensure they are protected by Tree Preservation Orders	2 sites	01/04/2010	31/03/2011	TELS-Ecology	TELS-Parks	Private sites
VF02.01	Introduce mistletoe to lime and poplar trees at 11 sites	11 sites	01/04/2011	31/12/20013	TELS-Ecology	TELS-Parks	primary parks
VF03.01	Investigate potential planting sites for Black poplar To identify if the is scope to invest in increasing black poplar populations	11 sites	01/04/2011	31/12/20013	TELS-Ecology	TELS-Parks	primary parks
VF04.01	Maintain populations of Beech and retain felled Beech wood on site where appropriate to provide habitats for the Tiered tooth Fungi.	5 sites	01/04/2010	ongoing	TELS-Ecology	TELS-Parks	primary parks

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Appendix 1 – Revision of Sites of Nature Conservation Interest

Revision of Sites of Nature Conservation Importance

June 2009

www.rbkc.gov.uk

THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA

Introduction

Biodiversity acts as a crucial mitigating factor, by providing “ecosystem services”, for example, cooling, insulating and pollution-absorbing properties of vegetation, flood control, noise absorption and other ecosystem services. In addition, future generations have the right to intergenerational equity of biological resources. Therefore, we need to ensure biodiversity is an integral part of the urban environment both present and future.

Our natural environment is undergoing rapid and unprecedented changes, particularly related to climate change. These environmental stresses are affecting biodiversity. Humanity is no longer living off nature’s interest, but drawing down its capital. This growing pressure on ecosystems is causing habitat destruction or degradation and permanent loss of productivity, threatening both biodiversity and human well-being (WWF, 2006). Issues that are already cause for concern locally include flooding, drought, heat waves, the heat island effect in London, invasive species and pathogens. These issues are well covered by the national press and of increasing concern to the public. Some are already having an impact on the ecology of the borough, for example, our park and street trees have been severely afflicted with Horse Chestnut Leaf Miner moth in the few years since this disease arrived in the UK.

London Biodiversity Strategy

As required by the Greater London Authority Act, the Mayor of London produced a biodiversity strategy for the capital in 2002 that requires the London Boroughs to assist with implementation. The document details the Mayor's vision for protecting and conserving London's natural open spaces. It seeks to ensure that there is no overall loss of wildlife habitats in London and that more open space is created and made accessible, so that all Londoners are within 1km walking distance of a quality natural space (Mayor of London, 2002).

The focus of urban nature conservation is to increase biodiversity, counteract habitat fragmentation by re-creating and enhancing natural ecosystems by integrating biodiversity features into the fabric of the city, which also involves raising awareness and engaging local communities.

Biodiversity in the RBKC

Kensington and Chelsea is one of the most densely populated areas in the country, with the least open space per head. For such an urbanised area, the biodiversity resource is remarkably rich. RBKC has a responsibility to protect and enhance biodiversity and is a significant area of activity for the borough.

There are currently 22 Sites of Nature Conservation Importance (SNCIs), of which 5 sites will be of Metropolitan Importance, 4 Borough Importance 1, 8 Borough Importance II, and 5 Local Importance. These designations are based on habitat surveys of the borough, undertaken by London Conservation Services in 1993 and 2002. They are listed in the Unitary Development Plan for protection from development. However, because of development pressures and improved knowledge of these sites there is a need to reassess these current designations. The Local Development Framework process provides us with an opportunity to carryout these revisions. The proposed revisions will result in 24 SNCI, of which 5 sites will be of metropolitan importance, 5 Borough Importance 1, 9 Borough Importance II, and 5 Local Importance.

Sites of Nature Conservation Importance (Summary)

Site	Code	Current RBKC Designation (Figure 1)	Proposed Change (Figure 2)	Evidence
Grand Union Canal	M6	Metropolitan		
The River Thames (including Chelsea Creek)	M31	Metropolitan		
Kensington Gardens	M103	Metropolitan		
Kensal Green Cemetery	M125	Metropolitan		
Holland Park	M131	Metropolitan		
Kensal Green Gas Works (BI1)	BI 1	Borough I	Down grade to Local Importance (L 7)	Ecological survey 2002
Brompton Cemetery	BI 3	Borough I		
West London & District Lines	BI 2	Borough I		
Chelsea Physic Garden	BI 4	Borough I		
British Rail Western Region Land	BII 1	Borough II	Adjustment of site boundary	Ecological Survey 2002, site assessment
Metropolitan Line	BII 2	Borough II	Rename and adjust boundary: Hammersmith and City.	Ecological survey 2002
Carmelite Monastery	BII 3	Borough II		
Ladbroke Grove Garden Complex	BII 4	Borough II		
Moravian Burial Ground	BII 5	Borough II		
Royal Hospital Old Burial Grounds	BII 6	Borough II		
Ranelgh Gardens	BII 7	Borough II		
Kings College	BII 8	Borough II	Down grade to Local Importance (L 8)	Ecological Survey 2002
Emslie Horniman Pleasance	L1	Local		
Westway Wildlife Garden	L2	Local		
Avondale Park Wildlife Garden	L3	Local		
Natural History Museum Gardens	L4	Local	Borough II (BII 10)	Ecological survey 2002
Meanwhile Gardens	L6	Local	Borough II (BII 9)	Ecological survey 2002
Chelsea Hospital South Front Lawns		PROPOSED	Borough I (BI 5)	Ecological survey 2002
Kensington Memorial Gardens		PROPOSED	Local (L 9)	Ecological survey 2002

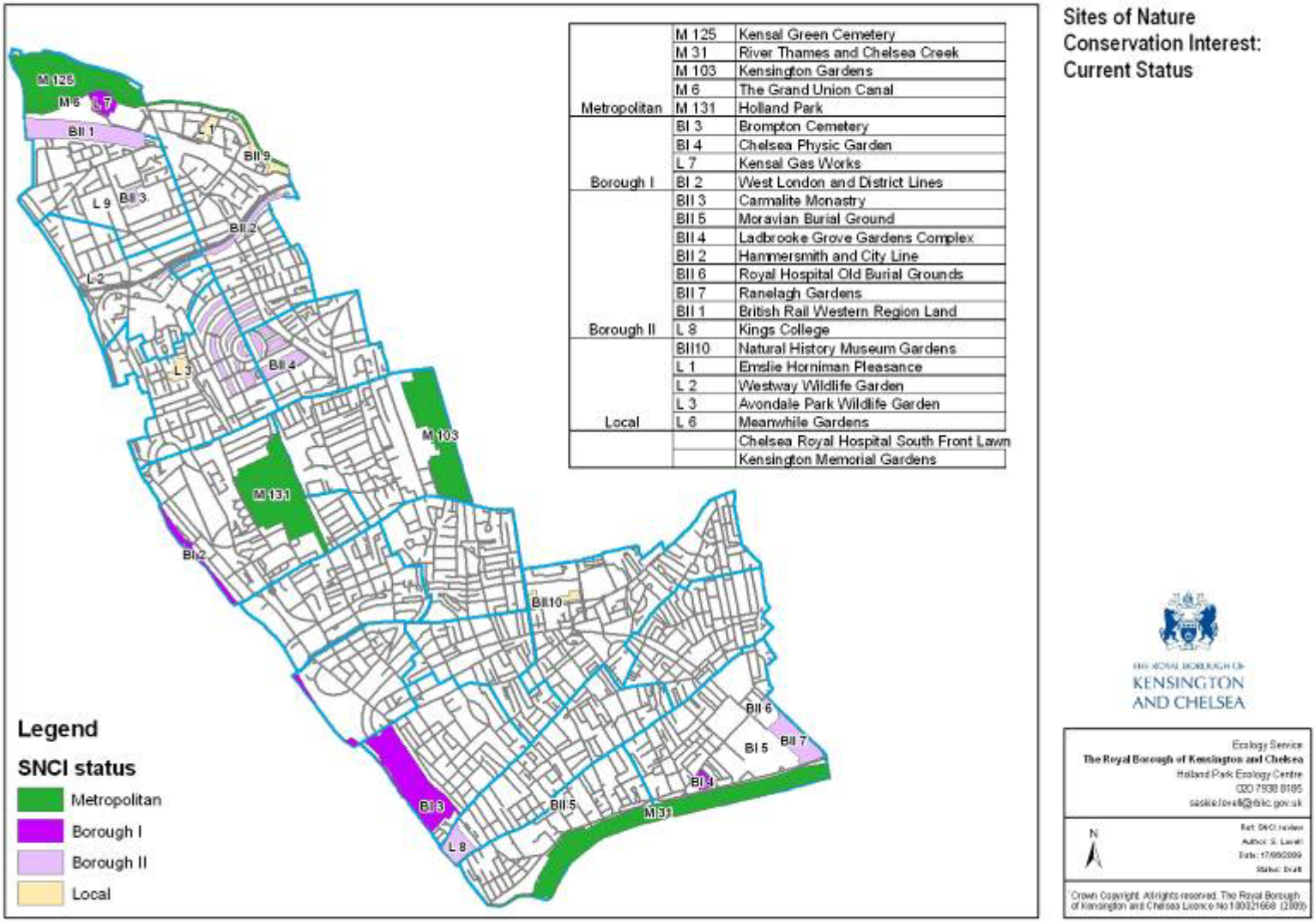

Figure 5: Current SNCI status

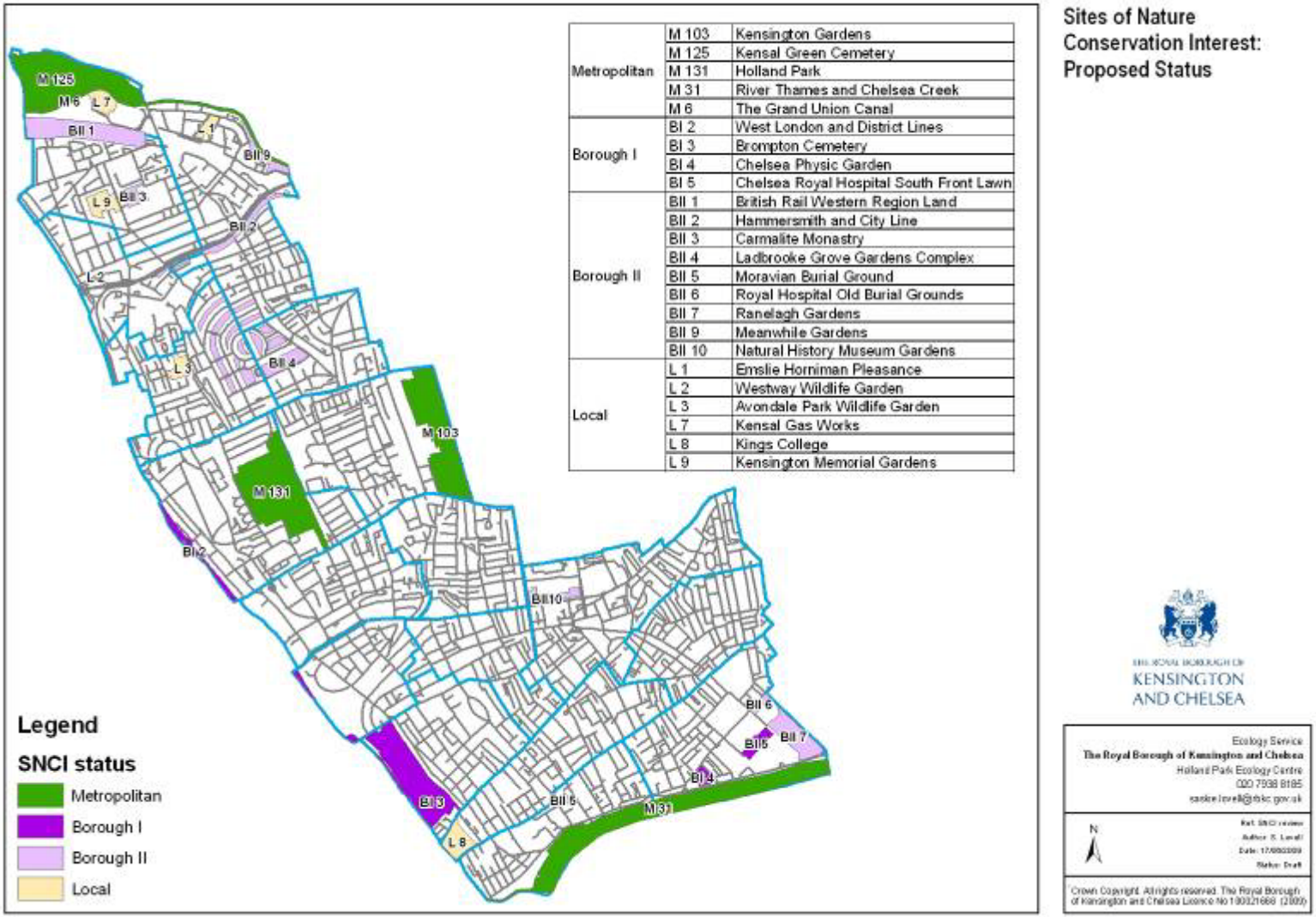

Figure 6: Proposed changes to SNCI status

Descriptions for existing Sites of Nature Conservation Importance

See Appendix 2 for Ecological Survey Report

Sites of Metropolitan Importance (SMI)

The Grand Union Canal (M6)

The Canal is of strategic importance as a green corridor spanning the city. It contains characteristic aquatic flora, fauna and breeding water birds.

The Paddington Branch is a part of the Grand Union and Regent's Canal SMI that runs through the Borough for approximately 2.0km, following the transfer of a 1.1km stretch from Westminster City Council due to boundary reorganisations in 1994.

A towpath provides public access along the entire southern length of the canal. The vegetation in the Kensal Green section comprised semi-improved grassland to the north and rough land, tall herb and bracken dominated vegetation to the south. The vegetation of the newly acquired section from Ladbroke Grove to the Westminster City Council boundary is predominantly amenity grassland but includes small amounts of quite diverse wetland vegetation. Wet marginal vegetation included hard rush, yellow iris, hemlock water dropwort, great water dock, angelica, reed sweet-grass and lesser pond sedge (*Carex acutiformis*). The canal walls are constructed from a variety of materials with brick sections supporting most diverse vegetation including skullcap, common alder, trifid bur-marigold and marsh woundwort (*Stachys palustris*), gypsywort, pelitory of the wall.

Recommendations: Continue as Metropolitan designation.

The River Thames (including Chelsea Creek) (M31)

This SMI has been designated primarily for its brackish and freshwater flora, wildfowl, waders, fish and invertebrates and for its strategic importance as a natural landscape feature.

The course of the Thames within Kensington and Chelsea forms part of one of London's richest wildlife habitats supporting diverse assemblages of birds, fish and invertebrates. The Borough bird survey carried out in 2001 reported 28 species present along the Thames, 18 of which were breeding or probably breeding. This list includes common tern, greylag goose, pintail, tufted duck, dunnock and probably inner London's largest colony of house martins (that nest in the streets immediately north of Chelsea Creek).

The stretch of the Thames from the mouth of Chelsea Creek to Kensington Borough Wharf includes areas of extensive inter-tidal mud, while mud and shingle are exposed at low tide between Kensington Borough Wharf and Battersea Bridge where there is also a small sand beach. These features and the muddy channel of Chelsea Creek are particularly valuable for birds, with large numbers of black-headed gull, grey wagtail, heron and mallard reported in the current survey.

Recommendation: Continue as Metropolitan designation.

Kensington Gardens (M103)

The SMI has an essential role as a major breathing space in central London that supports an abundance of commoner wildlife. More specific to Kensington Gardens and Palace Grounds are areas of acid grassland and interesting fungi.

Kensington Gardens forms part of the larger Hyde Park and Kensington Gardens SMI, the majority of which falls within the boundaries of Westminster City Council. That part which is currently within Royal Borough of Kensington and Chelsea includes the formal lawns to the east of Kensington Palace and a strip of what is effectively a continuation of Hyde Park.

An additional area, Perks Field, a private recreation ground for Kensington Palace is adjacent to the existing SMI and is proposed for inclusion with the existing site. Visually and from a wildlife perspective, Perks Field functions as the rest of the SMI with and includes some noteworthy wildlife as discussed below. There is currently no public access to the field.

Despite the large area of grassland and good scattered trees, the site appears poor for mammals. The Borough Fox Survey reported that the site was too open and disturbed for fox earths to be present but provided an ideal feeding place. No small mammals have been reported in recent years, hedgehogs being locally extinct and the grass generally cut too short to provide any form of cover. The only mammal seen during the survey was the grey squirrel, which was abundant and very tame.

32 bird species have been recorded at the site (23 of which were breeding or probably breeding). This list includes uncommon birds for inner London such as greater spotted woodpecker, sparrowhawk and redpoll. The good bird populations are a reflection of the whole SMI, including Hyde Park to the east.

Recommendation: Continue as Metropolitan designation.

Kensal Green Cemetery (M125)

A large area of relict, unploughed and largely unsprayed grassland containing distinctive plants and fungi with diversity enhanced by vegetated tombs/mausoleums. A total 9 London notable plant species were recorded and a diverse mammal fauna has been reported.

A large cemetery run by a private company and one of the original cemeteries set up in the 19th century to help overcome the problems of London's overcrowded parish graveyards. One third of the cemetery site extends westwards into Hammersmith and Fulham, the whole site has been designated an SMI.

The majority of the site comprises semi-improved neutral grassland between and over the graves. The cemetery lies on London clay and the resultant neutral grassland community includes a number of species favouring heavy, moisture retentive soils such as greater burnet (*Sanguisorba officinalis*) a London notable and indictor of ancient pasture, meadowsweet (*Filipendula ulmaria*) and creeping jenny (*Lysimachia nummularia*). The grassland is extremely rank and competition

may be adversely affecting some species. While current management to cut and presumably rake off the trimmings is appropriate cutting may be too early for the great burnet to seed and raking insufficiently vigorous to counteract soil enrichment. The route of a
mown grass path currently includes most of the best colony of great burnet and should be realigned.

The gravestones and tombs support further notable species - wild basil (*Clinopodium vulgare*), found infrequently on limestone gravestones and lesser hawkbit (*Leontodon saxatilis*) occurs occasionally. A varied assemblage of ferns occurred on the chapel area's tombs and mausoleums including maidenhair spleenwort (*Asplenium trichomanes*), wall rue (*Asplenium ruta-muraria*) and black spleenwort (*Asplenium adiantum-nigrum*), again all London notable species

Scrub and woodland occurred along both the northern and southern boundaries of the site, in both areas dominated by ash, horse chestnut and evergreen oak. A large number of the uncommon fungus *Leccinum duriusculum* can be found under the poplars to the west of Cambridge Avenue and it is expected that other areas of the site could hold good fungal populations.

The site abounded with invertebrate activity with many narrow bordered five spot burnet moths, field grasshopper, small white, meadow brown, speckled wood, large skipper, large white, yellow meadow ant and common blue damselfly. The 1993 Ecological Survey recorded 18 breeding butterfly species at the site.

Kensal Green Cemetery has the highest mammal species diversity in the Borough with the following species recorded; fox; weasel, brown rat, grey squirrel, hedgehog, bank vole, field vole, wood mouse. The 1994 Bat Survey surprisingly only found one pipistrelle. In January 1994, 50 bat boxes were installed within the cemetery which may have led to an increase in bat numbers since the 1994 survey.

Thirty species of bird 21 breeding or probably breeding have been recorded. Stock dove, great spotted woodpecker, lesser whitethroat, willow warbler are of particular note.

Recommendation: Continue as Metropolitan designation.

Holland Park (M131)

Holland Park comprises one of the larger areas of semi-natural habitat within central London and is important for its populations of mammals (including bats), birds and breeding amphibians The site includes large areas of woodland, an uncommon habitat in inner London. .

Holland Park contains a complex mosaic of habitats that have in recent years been managed with ecology in mind. There is an Ecology Centre within the park which oversees environmental education and provides a base for ecological management of the park.

Holland Park's current habitats originate from the creation of a woodland park on open pasture in the 18th and 19th centuries. Following a long period of neglect, the park was acquired by London County Council in the 1950's and later transferred to

Royal Borough of Kensington and Chelsea, who introduced more ecologically based management in the 1980's.

The current woodland habitats comprise a number of enclosures of varying character. During a period of neglect much the woodland park succeeded to an elm/sycamore dominated woodland. Dutch elm and sooty bark disease greatly reduced both species possibly creating a more open, ecologically interesting woodland structure. Elsewhere there are areas dominated by beech (*Fagus sylvatica*) or Turkey (*Quercus cerris*) and pedunculate oak (*Q robur*). The shrub layer generally comprises suckering elm, young sycamore and holly (*Ilex aquifolium*). The holly can become very dense in places and the shrub layer is shading out all ground-flora in a number of enclosures. Further commonly found species included bramble, elder and dog rose (*Rosa canina*). The ground-flora is very variable, depending on level of disturbance and level of shade cast by canopy and/or shrub layer. Widespread species include bluebell (*Hyacinthoides non-scripta*), nettle, ivy (*Hedera helix*), wood avens (*Geum urbanum*), red campion (*Silene dioica*), lords and ladies (*Arum maculatum*). More localised species include male fern and probably introduced foxglove (*Digitalis purpurea*), lily of the valley (*Convallaria majalis*) and sowbread (*Cyclamen hederifolium*). The woodland park reportedly supports an excellent assemblage of over 300 species of fungi.

Around the remains of Holland House, there are formal gardens with planted shrubbery and amenity lawns and further expanses of amenity grassland towards the south of the site and near the site entrances.

The current survey recorded 12 bird species, a variety of invertebrates (field grasshoppers, speckled wood, small white, common darter and blue tailed damselfly). The Borough Bird Survey 2001 recorded 34 species, 27 breeding or possibly breeding. This included species uncommon in central London such as sparrowhawk, great spotted woodpecker and tawny owl. The Park also supports large numbers of breeding blue tits, great tits and wrens as well as smaller numbers of song and mistle thrush, blackcap, chiffchaff, goldcrest, long tailed tit and coal tit.

The Borough Bat survey indicated that Holland Park is an extremely important site for bats with brown long eared bats and pipistrelles seen feeding in the park. The Borough Mammal survey 1997 highlights that a number of mammals are present within the park, including hedgehogs (indicated by droppings), domestic rabbits, foxes (the Fox Survey estimates four resident families), grey squirrel and wood mice. Additionally, there have been reports of brown rat and a feral ferret.

Recommendation: Continue as Metropolitan designation.

Sites of Borough Grade I Importance

Kensal Green Gas Works (BI 1)

The site has been cleared and planning consent exists. The site is yet to be developed however as the time of the Habitats 2002 survey only a small amount of ruderal vegetation at the sites edges was present at the time of survey. Habitat creation is understood to be included in the development plan and vegetation

remaining along the eastern edge of the site has the potential to act as a wildlife corridor, linking up the Grand Union Canal with the Paddington mainline railway.

Recommendation: Downgrade designation to Local status due to site clearance (L 7).

Brompton Cemetery (BI 3)

The site includes moderately diverse grassland containing at least three London notable species and which supports a diverse invertebrate assemblage.

A large cemetery established in 1840 on pasture along the Borough's western boundary. The majority of the site comprises semi-improved neutral grassland dominated by false oat with much red fescue, Yorkshire fog and rough meadow grass. Herbs include lady's bedstraw, birds foot trefoil, meadow vetchling, black knapweed, smooth tare, broadleaved everlasting pea and ox-eye daisy. The London notables grey sedge, sheep's fescue (*Festuca ovina*) and dark mullien (*Verbascum nigrum*) are also present. Patches of acid grassland contain red fescue, sheep's sorrel, mouse eared hawkweed and the aforementioned sheep's fescue. Associated invertebrates included field grasshoppers, small white, meadow brown, cinnabar moth caterpillars and red tailed bumblebee. Within the grassland are many vegetated tombstones and the wall separating Brompton Cemetery from the West London and District Railway supports male and harts tongue fern. There are many fine mature trees including, false acacia, evergreen oak, Turkey oak, weeping ash, Scott's pine, horse chestnut, London plane, common lime and yew.

Mammal surveys report the presence of a number of species and emphasise the value of the site for bat. Seven feeding pipistrelles were noted with higher counts expected with more intensive survey. The Fox Survey indicated a resident population of two or three families and additional feeding visitors. The 1997 Mammal Survey also recorded 2 house mice, 2 wood mice and 20+ grey squirrels.

Recommendation: Continuing use as Borough I designation

The West London and District Lines (BI 2)

Undisturbed vegetation, dense in places providing a semi natural refuge in built up area. The site forms an important wildlife corridor joining the Grand Union Canal.

The West London and District Line runs north-south along the Borough boundary with Hammersmith and Fulham with much of the trackside area actually falling within the neighbouring borough. The part of the site within Hammersmith and Fulham has been designated as a site of Borough Grade I importance. All the rail side land was surveyed either from moving trains, stations or bridges as no direct access was possible.

The majority of the tracksides comprise a complex of abandoned sidings overgrown with roughland and patches of semi-improved neutral grassland with a ruderal/ephemeral community nearer the track bed. Some areas of roughland have progressed to semi-mature sycamore woodland. There is a large area of semi improved neutral grassland to the south of Cromwell Road. The value of an extensive area of roughland, tall herb and sycamore woodland to the west of West

Brompton Station is enhanced by adjoining habitat, including wetland areas in Hammersmith and Fulham.

The Borough Fox Survey indicated that the area is suitable for foxes providing undisturbed breeding habitat and a corridor to feeding areas including the adjacent Brompton Cemetery. Although there are no other specific surveys cover the fauna of the site, the mixture of habitats including bramble and other berrying species are likely to provide a good food source and protection for birds and small mammals.

Recommendation: Continuing use as Borough I designation

Chelsea Physic Garden (BI 4)

The site supports large breeding populations of common toads, common frogs and smooth newts and acts as a resting point along River Thames corridor for passing birds. It is a historic open space in densely built up area. The site is noted for its lichen assemblage.

The Physic Garden has been in continuous use as an apothecary's garden or botanic garden since 1673. The site comprises numerous planted beds surrounded by amenity grass or gravel paths. There are a number of fine mature trees including black mulberry and England's largest outdoor olive tree.

The site supports a diverse self-established flora including henbane (*Hyoscyamus niger*), thorn-apple (*Datura stramonium*), deadly nightshade (*Atropa belladonna*), lady's mantle (*Alchemilla vulgaris*), small impatiens (*Impatiens parviflora*) and perfoliate alexanders (*Smyrnium perfoliatum*) – all London notables. From the survey of nearby sites, it is clear that some of these are spreading beyond the Physic Gardens boundaries, the site acting as a source of exotic escapee plants for the local area. This explains the higher than expected incidence of deadly nightshade found within a 1-2 km radius of the gardens. This site may also be the source of the perfoliate alexanders which has previously been reported from the nearby Ranelagh Gardens.

There is a good sized pond to the south of the site has been richly planted with native species such as bogbean, galingale, reed sweet grass, lesser reedmace (*Typha angustifolia*), water horsetail (*Equisetum fluviatile*), purple loosestrife, water mint and water lilies. The pond supports a very large colony of common toads with over 100 individuals counted leading to a conservative population estimate of 200+ adults. A smaller number of common frogs and approximately 30 adult smooth newts were also recorded.

Long tailed tits breed in the garden, one of the closest sites to central London as do coal tit, blue tit, great tit, wren, dunnock, robin, greenfinch and blackbird. Sparrowhawks and green woodpeckers are particularly interesting visitors.

Recommendation: Continuing use as Borough I designation

Sites of Borough Grade II Importance

British Rail Western Region Land (BII 1)

This site was originally in two sections. Most of the eastern section has been lost to buildings erected under the Westway and along Acklam Road and much of the section to the west has been developed for the Eurostar depot although good sections of scrubby roughland vegetation remain to the edges of the tracks. The remaining wildlife importance of the site has been recognised in its designation as a Green Corridor linking Little Wormwood Scrubs Park, the Grand Union Canal, Kensal Green Cemetery and the remains of the Kensal Green Gasworks site.

In the 2002 Ecological Survey this site was recommended to be de-designated. However, this is not agreed with as by de-designating the site there will be no formal protection of the features which contribute to its importance as a wildlife corridor. In addition, a site visit was carried by RBKCs ecologist in October 2008, it was observed that the roughland vegetation was of high value and contained a diverse number of plant species; furthermore the site is relatively undisturbed and provides a refuge for species.

It is therefore proposed that the site boundary be reduce to afford protection to the roughland vegetation.

Recommendation: adjustment of site boundary.

Metropolitan Line (BII 2)

Some dense and relatively undisturbed vegetation providing a feeding and nesting sites form common birds. The site is one of a few remaining areas in the Borough where ruderal/ephemeral species can thrive and is a valuable east-west wildlife corridor.

This rail side site is situated between Westbourne Park and Ladbroke Grove Stations and comprises and areas of sycamore dominated woodland with occasional birch and elder. Nearer the rail lines there is a thin strip of ruderal vegetation with much michaelmas daisy (*Aster sp*), Canadian fleabane (*Conyza canadensis*), ragwort sp (*Senecio sp*), mugwort, fat hen (*Chenopodium album*), common toadflax (*Linaria vulgaris*), evening primrose (*Oenothera biennis*) etc. There are also patches of false oat dominated grassland. Bramble scrub containing occasional berrying firethorn (*Pyracantha sp*) and elder and smothered in Russian vine (*Fallopia baldschuanica*) occurs near Ladbroke Grove Station and is a foraging area for common birds.

The fauna of the site is presently un-recorded but one would expect it to provide some refuge for foxes and a number of bird species. Much of the track runs above ground level, which may limit access for some species, but it is still likely to function as a wildlife corridor in some respects.

Recommendation: Rename and adjust boundary; Hammersmith and City.

Carmelite Monastery (BII 3)

The site includes habitats rare in Kensington and Chelsea, particularly allotments and an orchard. The site is relatively undisturbed and unchanged over time producing a mature garden of value to a number of plant and animal species.

Private walled monastery gardens, the original seven metre high walls having been erected in mid 19th century. The grounds comprise of amenity lawns divided by gravel paths and planted shrubberies with many fine mature trees. There are in addition an old orchard and blocks of allotment gardens, the latter containing the London notable dark mullein and a number of formerly planted, self established species such as soapwort (*Saponaria officinalis*), marigold (*Calendula officinalis*). The presence of butcher's broom (*Ruscus aculeatus*) provides a historical link with vernacular plant uses as it was originally planted here to supply berries for use as hatpin ends. A recently constructed pond with a natural profile has been planted with marsh marigold (*Caltha palustris*), white water lily, hard rush, yellow iris, purple loosestrife and yellow water lily (*Nuphar lutea*).

Foxes and several bird species including greater spotted woodpecker, green woodpecker and kestrel were reported and bats have also been observed. The low intensity management the recently constructed pond may be expected to attract amphibians. Fuller amphibian and bat surveys are recommended to more fully determine the wildlife value of this site.

Recommendation: Continuing Borough II designation.

Ladbroke Grove Garden Squares Complex (BII 4)

A large area of relatively undisturbed open space which is particularly important for mammals.

This site consists of 16 garden squares, all in private communal ownership with no public access. They are considered as one site due to their close proximity that allows movement of animals between them.

Most of the squares comprise amenity lawns surrounded by densely planted shrubberies. There are also smaller areas of scattered trees, mainly non-native hedging, flower beds and gravel path surfacing. The mature trees, some dating back to the original mid 19th century layout are an important resource for wildlife as well as an asset to the surrounding built environment. London plane and common lime dominate but there is a wide variety of planted ornamental species including birch, ash, black mulberry, false acacia, honey locust, crab apple (*Malus sylvestris*), dawn redwood (*Metasequoia glyptostroboides*), Caucasian wingnut (*Pterocarya fraxinifolia*), Pedunculate oak, Turkey oak and Norway maple (*Acer platanoides*). The larger squares are quite rich in plant species as they included secluded, less intensively managed corners.

Fungi were reported from a number of the gardens, particularly Stanley Gardens South where a dying ash was providing an excellent habitat for a number of different species.

Mammal surveys indicate that the Gardens are a particularly important corridor for foxes. Grey squirrels were frequently seen. Common garden birds were frequent, seven species recorded during the survey and some of the flowering plants provided valuable nectar for invertebrates such as red admiral and small white.

Recommendation: Continuing Borough II designation.

Moravian Burial Ground (BII 5)

The site includes an area of moderately diverse acid grassland and supports a large population of the London notable grey sedge

This small square includes regularly mown acid grassland dominated by red fescue with clumps of mouse eared hawkweed, occasional heath bedstraw (*Galium saxatile*) and frequent sheep's sorrel. The site boundaries are marked by a privet hedge with rows of mature London plane trees to the south, west and east beneath which there is tall herb and abundant grey sedge. The site is bounded by an old wall supporting much pelitory of the wall, ivy leaved toadflax (*Cymbalaria muralis*), male and harts tongue fern.

The sheltered nature of the site is likely to make it attractive to common birds and butterflies although no official surveys have been reported.

Recommendation: Continuing Borough II designation.

Royal Hospital Old Burial Ground (BII 6)

This site includes old grassland and vegetated tombstones with three London notable species.

The site comprises and old, disused graveyard. Semi-improved neutral grassland is dominated by creeping bent, perennial rye grass, rough meadow grass, cock's-foot and Yorkshire fog and includes common herbs such as yarrow (*Achillea millefolium*), creeping cinquefoil and creeping buttercup (*Ranunculus repens*). Areas of more acid grassland contain typical herbs such as autumn hawkbit (*Leontodon autumnalis*), common cats ear (*Hypochaeris radicata*), mouse eared hawkweed and occasional red fescue. The London notable grey sedge is abundant around the northern edges of the site. Four fern species found on the tombstones, male fern, harts tongue fern, maidenhair spleenwort and black spleenwort – the last two being London notables. There are some good specimen trees including purple beech and Indian bean tree (*Catalpa bignonioides*).

Mammal surveys of the site indicate that foxes use the area for feeding. Shrew species and hedgehogs were reported up to 1995 but in 1997 only wood and house mice were found. Grey squirrels were abundant.

Recommendation: Continuing Borough II designation.

Ranelagh Gardens (BII 7)

A large area of mature habitat adjacent to a major wildlife corridor. The site includes areas of woodland, a rare habitat in inner London and two London notable plant species - deadly nightshade and perfoliate alexanders (probably colonised from the nearby Chelsea Physic Garden).

A large semi-formal park within the grounds of Chelsea Hospital. The site has been profiled into gently sloping embankments and hollows with blocks of planted trees and shrubbery. Where the trees form a continuous canopy they have been classified as non-native broadleaved woodland comprising a wide variety of tree species including London plane, beech, hornbeam (*Carpinus betulus*), sweet chestnut (*Castanea sativa*), birch, false acacia, common lime (*Tilia x vulgaris*), and weeping willow (*Salix x sepulcralis*). Blocks of amenity shrubbery, particularly in

more secluded areas provide valuable nesting and foraging areas for common birds. Eight species were noted during the current survey, while green and greater spotted woodpeckers were reported. A full bird survey is likely to record more species. The site also includes infrequently mown grassy slopes dominated by cock's-foot and Yorkshire fog that may support common butterflies such as speckled wood.

As for the Chelsea Hospital Old Burial Ground, shrew species and hedgehogs were reported up to 1995 but during 1997 mammal survey, only wood mice, house mice and abundant grey squirrels were found. The site contains the densest concentration of fox earths in the Borough due to the suitability of the terrain and availability of food. The fox survey also reported possible signs of Muntjac deer which would be a very surprising find if corroborated, given the central location of the site and the lack of mammalian wildlife corridors leading to it.

Recommendation: Continuing Borough II designation.

Kings College (BII 8)

The site has been converted into luxury apartments and houses. There are some communal areas for the residents although it is not known whether the planting scheme is of benefit to wildlife. To the east of the site, a permissive path will be opened up creating a shortcut between Kings Road and Fulham Road. This path will retain a thin strip of the current vegetation where it exists and new planting elsewhere.

Recommendation: Downgrade designation to Local status due to the redevelopment of the site (L 8)

Sites of Local Importance

Emslie Horniman Pleasance (L 1)

A relatively large open space in densely built up area that provides a partial link between the Grand Union Canal and Western Mainline Railway green corridors. There are further opportunities to enhance the site for nature conservation.

Recommendation: Continuing as Local designation

Westway Wildlife Garden (L 2)

Wildlife garden used for education and local recreation which demonstrates a number of different habitat types and provides a valuable refuge for urban wildlife. The site lies within an area of deficiency.

Recommendation: Continuing as Local designation

Avondale Wildlife Garden (L 3)

A neglected wildlife garden retaining a diverse planted native flora that could feasibly be restored.

The site boundaries comprise field maple (Acer campestre), dog rose, blackthorn (originally planted as a hedge) and buddleia scrub with thistles and nettles and a line of planted crack willows to the south. There is a sown meadow area in centre

of the site with Timothy (Phleum pratense), Yorkshire fog, red fescue and perennial rye grass with abundant meadow cranesbill, frequent birds foot trefoil, lady's bedstraw, black knapweed and occasional field scabious (Knautia arvensis). The 1995 Amphibian and Reptile Survey found four male common frogs and 49 clumps of frogs spawn, apparently naturally colonised. Unfortunately this habitat has been lost and the pond dried up. The Fox Survey suggested that the site may be good for foraging but too disturbed by frequent dog walkers for earth building. The 1997 Mammal Survey recorded the presence of grey squirrels only.

Recommendation: Continuing as Local designation

Natural History Museum Gardens (L 4)

Major habitats; Planted shrubbery, amenity grassland, scattered trees, basic grassland, semi-improved neutral grassland, heathland, standing water, native hedge, scrub.

Justification for designation; The wildlife garden includes a number of created habitats that are a valuable awareness-raising tool seen by for visitors from all over the world. A nationally notable species of clearwing moth and a large population of a leaf-mining moth are present. The garden has developed significantly since 1993 and its designation has therefore been upgraded.

Description; The gardens surrounding the front sections of the Natural History Museum are split into two sections. That to the east is more formal and used for public displays and recreation while to the west, a wildlife garden has been created. The wildlife garden contains an amazing variety of habitats given its size and location and acts like an outdoor extension to the Museum. It comprises nine different habitats; urban, chalk grassland, ponds, meadows, oak woodland, acid, hedgerow, reedbed and wet meadow/fen. The range of habitats and the great variety of planted native species is likely to attract a good range of invertebrates and support breeding and foraging birds. Mammal surveys reported the presence of low numbers of wood and house mice, grey squirrels and foxes.

The ponds are particularly important for invertebrates, bird and mammal populations in this part of the Borough which is otherwise densely urbanised. The site appears very suitable for amphibians and if they are not already present introduction could be considered.

Data Sources; Borough Ecological Survey 1993, Mammal Borough Survey (Excluding Bats) 1997, Borough Fox Survey 1998, Borough Ecological Survey 2002.

Recommendation: Change of designation from Local to Borough II (BII 10)

Meanwhile Gardens (L 6)

Major habitats; Amenity grassland, planted shrubbery, standing water, wet marginal vegetation, native broad-leaved woodland, scrub, semi-improved neutral grassland.

Justification for designation; A maturing wildlife garden forming a valuable ecological refuge and providing important opportunities for contact with nature in a particularly dense urban area. The varied habitats including open water and wet

marginal vegetation habitats, both uncommon in the Borough, add value to the Grand Union Canal SMI and green corridor.

Description; The majority of the site comprises a maturing wildlife garden with a wide range of habitats including native woodland, scrub, semi-improved neutral grassland and wildlife ponds. The larger pond towards the centre of the site supports diverse wet marginal vegetation including trifid bur-marigold, water plantain, water dock, water mint, mater forget me knot, yellow iris, brooklime (Veronica beccabunga), arrowhead (Sagittaria sagittifolia) and various ornamental reed species. School parties use the site and pond dippers have caught toads and newts in the past and an amphibian survey of the site is recommended. The intimate mix of habitats and diverse planting provides ideal breeding and foraging for a range of common birds and invertebrates and foxes that visit from nearby gardens.

The site is used as a training facility for horticultural students and includes a skateboard park and children's nursery, strengthening links between the community and the natural environment.

The eastern end of the site comprises amenity grassland and scattered trees

Data Sources; Borough Ecological Survey 1994 Update, Borough Ecological Survey 2002.

Recommendation: Change of designation from Local to Borough II (BII 9)

Chelsea Hospital South Front Lawns

Major Habitats; Amenity grassland, scattered trees, planted shrubbery, semi-improved neutral grassland.

Justification for Designation; An old lawn with good flora including the nationally scarce clustered clover (Trifolium glomeratum).

Description; Chelsea Hospital was designed by Sir Christopher Wren and was completed in 1692. It lies in the southeast corner of the Borough by the banks of the Thames. The part of the Hospital proposed as a Borough Grade I site is the south Front Lawn comprising three terraces sloping southwards towards the Thames. The main botanical interest is found on the slopes between lawn terraces where the species assemblage includes characteristic species of acid and neutral grassland - perennial rye grass, creeping bent, red fescue and smaller cats tail (*Phleum bertolonii*) with red clover (*Trifolium pratense*) creeping cinquefoil (*Potentilla repens*), mouse eared hawkweed, birds foot trefoil, lady's bedstraw and a good population of the nationally scarce clustered clover (*Trifolium glomeratum*). The Flora of London (Burton, 1983) includes five records for this plant within greater London, the nearest known site to Chelsea Hospital being Kew Green.

The lawns are surrounded by planted shrubbery and there is a tennis court to the south of the site. Tree species include three fine old black mulberry trees, mature London plane, birch, beech and false acacia. Gravel paths surround the lawns and cut a cross pattern through the site

This site was not surveyed in the 1993 Borough Ecological Survey and consequently has been omitted from subsequent mammal and bird surveys. The 1997 Mammal Survey did cover the nearby sites Ranelagh Gardens and Hospital

Burial Ground where wood mice, house mice, grey squirrel and foxes were reported. It is not expected that this site harbours any additional important mammal or bird species.

Data Sources; Borough Ecological Survey 1993, Mammal Borough Survey (Excluding Bats) 1997, Borough Ecological Survey 2002..

Recommendation: Proposed Borough I designation (BI 5)

Kensington Memorial Gardens

Amenity grassland, planted shrubbery, scattered trees, native hedge, semi-improved neutral grassland. Close to an area of deficiency.

Justification for designation; an extensive area of open space in a built up area including good native hedges and with potential for habitat re-creation.

Description; Public Park towards the north of the Borough with formal planted shrubbery, tennis courts, children's play area and a large expanse of amenity grassland. A small patch of more mixed un-mown grass behind tennis courts contains cock's-foot, timothy, Yorkshire fog, perennial rye-grass, false oat, wall barley (*Hordeum murinum*) and red fescue with abundant yarrow and ribwort plantain (*Plantago lanceolata*) in an undisturbed sunny spot.

The hedges surrounding the main park on its northern and western sides are planted with native species including field maple, hawthorn and blackthorn.

Habitat creation, particularly wild flower and scrub planting could be considered on the amenity grassland towards the site boundaries.

Data Sources; Borough Ecological Survey 1993, Borough Ecological Survey 2002.

Recommendation: Proposed Local designation (L 9)

Recommendations not pursued

Holland Park School

The following recommendation was made through the Ecological Survey 2002:

Proposed new site of Local Importance as the site comprises of dense and mature planting adjacent to Holland Park and contains some locally uncommon plants including meadow buttercup, scarlet pimpernel and the London notable field madder.

This recommendation is not being pursued at this stage as the site is ear marked for development.

Sunbeam Garden

The following recommendation was made through the Ecological Survey 2002:

Proposed new site of Local Importance as the site comprises of good acid grassland herbs occur in sword including the London notable sand spurry. Small site but some potential for habitat re-creation and interpretation in built up area.

This recommendation is not being pursued as the site has been landscaped and re-turfed.

Strategic recommendations to protect and enhance Sites of Nature Conservation Interest.

- Ecological enhancement measures should be assessed and incorporated into developments.
- Sites located within or adjacent to SNCI's or green corridors must incorporate ecological design features which aim to generate a net biodiversity gain in terms of the ecological features existing on or surrounding the site.
- Management plans for ecological features must be a integral part of development documentation.

Appendix 2 - Glossary of Terms

This glossary defines the main terms used throughout this Biodiversity Action Plan

Amenity Grassland: Grassland that improves the quality of an area by contributing to the physical or material comfort of users such as places to picnic, walk, engage in leisure pursuits etc, as well as increasing the attractiveness or value of a location.

Baseline: A defined condition for a site, habitat or species against which any future changes in the condition of the site, habitat or species can be monitored, and the significance of this change in conservation terms, assessed, so that management can be altered to maintain or enhance the site, habitat or species.

Baseline Survey: A survey of a site, habitats or species to establish baseline conditions.

Biocides: A chemical agent which destroys biological organisms e.g. pesticide.

Biodiversity: Biodiversity or biological diversity is the variety of life in all its different forms, which includes the myriad of plant and animal species and the range of habitats in which they live.

Biodiversity Action Plan: A Biodiversity Action Plan (BAP) is an evolving strategy and delivery mechanism for the conservation of biological diversity and the sustainable use of biological resources. It is a plan that sets objectives and actions for the conservation of biodiversity, with measurable targets.

Brackish: Slightly salty conditions, as found in a river estuary.

Bryophyte: A major group of plants that includes mosses and liverworts.

Climax vegetation: Vegetation that establishes itself on a given site for given climatic conditions in the absence of anthropic action after a long time (it is the asymptotic or quasi-equilibrium state of the local ecosystem).

Community: An identifiable and distinct grouping of organisms occurring together in a particular area that interacts with each other and with their shared environment.

Conservation: The protection, management and enhancement of the environment to sustain and improve the diversity of wildlife in an area.

Distribution: The geographical range of a taxon or group: the pattern or arrangement of the members of a population or group.

Ecology: The study of living things in relation to their environment.

Ecosystem: A community of interdependent organisms and the environment in which they live and interact.

Ecosystem Services: Ecological or ecosystem processes or functions which have value to individuals or to society.

Ephemeral species: A short lived species.

Eutrophication: The over-enrichment of an aquatic habitat with inorganic nutrients, such as phosphates and nitrates, which typically occurs from sewage discharge or fertilizer run-off, resulting in an imbalance in the ecosystem.

Fauna: It is the term used to describe all the animal life of a particular area or period.

Flagship Species: They are special plants and animals that are associated with good management of a particular habitat as well as being characteristic of that habitat. It is also a species perceived favourably by the public for reasons of aesthetics or other value, used to promote and publicise habitat conservation.

Flora: It is the term used to describe all the plant life of a particular area or period.

Genetic: Relating to genes i.e. the hereditary material

Green Corridor: A linear sequence of connected green spaces, allowing migration of species between areas. They often consist of railway embankments and cuttings, roadside verges, canals, parks and playing fields and rivers.

Habitat: It is the natural environment where a particular animal or plant lives. The term is often used in the wider sense, referring to major assemblages of plants and animals found together, such as woodlands, wetlands or grasslands.

Habitat Action Plan (HAP): A targeted programme of management measures aimed at maintaining, enhancing or restoring a specific habitat. Habitat Action Plan has identified a number of conservation objectives and specifies actions for targeting the habitat and detail responsibilities for achieving those objectives.

Habitat Creation: Specific management to create a habitat where it has not occurred before.

Habitat Heterogeneity: A variety of conditions with a habitat type.

Intergenerational Equity: A core proposition is that future generations have a right to an inheritance (capital bequest) sufficient to allow them to generate a level of well-being no less than that of the current generation. Fairness in the treatment of different members of the same generation

Invertebrates: Animals that do not have a backbone or spinal column e.g. insects

Local Development Frameworks (LDF): Replace Structure Plans and Local Plans, as a result of the Planning and Compulsory Purchase Act 2004, which came into force in September 2004. This has resulted in major changes to the planning system.

Management: The maintenance of a site in order to conserve and enhance its habitats and range of species, using various tools and techniques such as mowing.

Monitoring: A process of repeated observations to record, test and control one or more elements within the environment such as the population of a species. Monitoring provides information concerning the present status and past trends in environmental parameters. Monitoring the priority habitats and species contained within a BAP will allow the assessment of how successful the BAP is in protecting and enhancing biodiversity.

Native Species: A species that occurs and belongs naturally to an area that has not been introduced by man.

Non-native Species: A species that does not occur or belong naturally to an area, but has become established and generates successfully in the new environment e.g. Japanese Knotweed

Parasitic: An organism that grows, feeds, and is sheltered on or in a different organism while contributing nothing to the survival of its host.

Pesticide: Any chemical or biological agent that kills plant or animal pests: herbicides, insecticides, fungicides, rodenticides, etc are all pesticides.

Plant Communities: A group of plants living and interacting with one another in a specific region under relatively similar environmental conditions.

Protected Species: Certain plant and animal species such as bats are protected to various degrees in law, particularly under the Wildlife and Countryside Act 1981 (as amended).

Quantitative: Surveys that clearly follow a scientific method using measurable effort. These surveys can then be repeated to identify trends and measure species abundance.

Qualitative: Surveys that provide an inventory of species and do not ascertain species abundance or sampling effort. These surveys are informative but are not repeatable for comparative purposes.

Range: The geographic region in which a plant or animal normally lives or grows.

Red Data Book Species: These species are endangered, rare or vulnerable to extinction globally, nationally or locally, and are contained within catalogues that are published by the International Union for the Conservation of Nature (IUCN).

Re-colonization: The return and establishment of a species to a place where it used to occur, but has since disappeared. For example, clearing scrub encroaching on grassland habitat will allow the natural recolonization of grassland species.

Re-introduction: The release and establishment of a species to an area within its natural range and environment where its previous population has been lost or become locally extinct.

Ruderal species: A species that is first to colonise disturbed lands (manmade or natural disturbance). Ruderal species typically dominate the disturbed area for a few years, and then gradually lose the competition to other native species.

Run-off: The build up of water occurring at ground surface level at times when rainfall cannot be absorbed by the soil, which particularly occurs in urban areas where the ground is covered by concrete and other non-permeable materials.

Salinity: The content of salt in a solution.

Scrub: Low growing woody species, which usually occur as a transitional stage in the succession from grassland to woodland.

Site of Nature Conservation Importance (SNCI):

- Sites that is important in a Borough perspective. Damage to these sites would mean a significant loss to the Borough.
- Site of Local Importance for Nature Conservation: Sites that are or may be of particular value to the local community. Local sites are particularly important in areas otherwise deficient in nearby wildlife sites.
- Site of Metropolitan Importance for Nature Conservation: Those sites which contain the best examples of London's habitats, sites with rare species, rare assemblages of species, or which are of particular significance within large areas of otherwise built-up London, which are afforded the highest priority for protection.

Soil eutrophication: The over-enrichment of the soil with inorganic nutrients, such as phosphates and nitrates which results in an ecosystem imbalance.

Species: A group of living organisms capable of interbreeding.

Species Action Plan (SAP): A targeted programme of measures and actions aimed at maintaining and enhancing a specific species. Species Action Plan's identify a number of conservation objectives and specify actions for targeting the species to stabilise and improve its status as well as detail the responsibilities for achieving those objectives, based upon knowledge of its ecological and other requirements.

Survey: To examine the attributes and condition of a site, area or region usually in terms of the quality and presence of the habitats and species.

Sustainable Development: To use natural resources in a sustainable manner so development can meet the needs of the present without compromising the ability and needs of future generations. Biodiversity and sustainable development are inextricably linked, as the wealth of species and habitats are an indicator of our environment and general well-being.

Taxa: A defined group of organisms.

Tidal: Relating to or affected by tides. The tidal section of a river is that part which is subject to a twice-daily fluctuation in level, in response to the changing tide.