London Borough of Barking and Dagenham
Local Development Framework

Barking and Dagenham SPD

Biodiversity

How biodiversity can be protected and enhanced in the development process

Supplementary Planning Document

December 2011

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Summary

The Biodiversity Supplementary Planning Document is one of the documents that make up the London Borough of Barking and Dagenham's Local Development Framework. Its purpose is to provide guidance to developers, householders and planners on how biodiversity should be protected and enhanced in the borough in accordance with policies in the Core Strategy and the Borough Wide Development Policies Development Plan Documents and to help make sure laws are not broken. It provides advice on:

- The legislation protecting plants, animals, birds and their habitats
- The relevant Local Development Framework policies
- The biodiversity information required when making a planning application.
- How to integrate biodiversity into buildings and their surroundings so as to improve existing habitats and create new habitats.

Development can have negative impacts on biodiversity, both direct, through the destruction of habitat, and indirect. These impacts can be significant and lead to the decline of biodiversity in the borough. Development can also have positive impacts for biodiversity especially for sites where there is little wildlife by integrating new habitats into buildings and adjacent spaces. The Biodiversity SPD will help ensure development within the borough is sustainable and serves to protect and increase biodiversity for local people to enjoy.

1. Introduction

1.1 Biodiversity is an important consideration in the planning process and must be integrated from an early stage into the design of any development.

The purpose of the Biodiversity SPD is to provide guidance to developers, householders and planners on protecting, creating and improving biodiversity during the development process.

Advice is provided on:

- The legislation protecting plants, animals, birds and their habitats
- The relevant Local Development Framework policies
- The biodiversity information required when making a planning application.
- How to integrate biodiversity into buildings and their surroundings so as to improve existing habitats and create new habitats.

1.2 Permitted development and demolition may not require planning permission but householders and developers still need to ensure they do not harm protected and priority species, such as bats and birds. Advice is given on how developers and householders can comply with the law.

1.3 The SPD specifically supplements policies of the Core Strategy and Borough Wide Development Policies:

- CM1: General principles for development
- CM3: Green Belt and Public Open Spaces
- CR1: Climate Change and Environmental Management
- CR2: Preserving and Enhancing the Natural Environment
- BR3: Greening the Urban Environment
- BP11: Urban Design

It also helps implement the following Core Strategy Strategic Objectives

- SO10: Protecting and Enhancing Biodiversity

1.4 The SPD does not have the same status as the development plan but it is an important material consideration in the determination of planning applications.

1.5 The provisions of this SPD will be implemented primarily through the development management process.

1.6 This document is intended to complement rather than duplicate other planning documents. It should be read in conjunction with the Barking and Dagenham Local Strategic Partnership's Community Plan, and the policies and proposals in the Council's Local Development Framework (LDF).

2. Status of the Biodiversity SPD

2.1 This guidance has been put together in accordance with the framework provided in the Government's Planning Policy Statement 12: Local Spatial Planning (2008). The Statutory Development Plan is the starting point when determining planning application for the development or use of land. The Development Plan consists of the London Plan (July 2011) and the London Borough of Barking and Dagenham's Development Plan Documents (DPDs).

2.2 This SPD provides further detail on the implementation of DPD policy that applicants must follow to ensure they meet the policy requirements.

3. Planning policy framework

3.1 This chapter provides the planning policy context to this SPD. It also outlines legislation and a range of national, regional and local policy documents relevant to protection of biodiversity in our borough. Legislation which specifically protects species and habitats is discussed in Chapter 6.

3.2 Sustainability is a key issue in the borough and this is reflected in the Barking and Dagenham Local Strategic Partnership's Community Plan (2009) and the Council's Local Development Framework and Regeneration Strategy (2008 – 2013). The protection of the natural environment and wildlife and the need to increase access to nature for local people to enjoy are essential components of the council's commitment to sustainability.

3.3 Biodiversity encompasses all plants, animals, fungi and micro-organisms, the genes they contain, and the different habitats of which they are part. Biodiversity provides foods, medicines, materials, ecological services and contributes to cultural values and to leisure.

In 1992 the UK Government signed the International Convention on Biological Diversity (http://www.biodiv.org) making a commitment to "conserve and sustainably use biological diversity for the benefit of present and future generations."

Since 1992 the number of species in the UK and worldwide has continued to decline. Some species have also suffered reductions in

their populations. This is mainly due to the loss of habitat to development and the impact of climate change. International and national initiatives are promoting measures to try to halt and then reverse these declines.

3.4 Development can have negative impacts on biodiversity, both direct, through destruction of habitat, for example through construction, and indirect, for example through increased disturbance or excessive lighting. These impacts can be significant and lead to the decline of biodiversity in the borough.

3.5 Development can also have positive impacts for biodiversity, especially for sites where there is little wildlife. New developments can integrate new habitats into buildings and adjacent spaces that contribute to improving the status of UK Biodiversity Action Plan habitats and species.

National legislation and policy

3.6 The Natural Environment and Rural Communities (NERC) Act 2006 (Section 40) 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."

Local authorities are expected to take measures to protect and enhance biodiversity within their area by ensuring features of nature conservation value (habitats and species) are retained, enhanced or created during and following development and are not harmed. This can be achieved by:

1. Including policies that protect and enhance biodiversity in the Local Development Framework
2. Requiring developers to provide sufficient information on the biodiversity of development sites and take measure to protect and enhance biodiversity.
3. Help ensure legal requirements are met by developers in regard to protected species as defined under the Wildlife and Countryside Act (1981) as amended.

3.7 National policy in Planning Policy Statement (PPS) 1: Delivering Sustainable Development and PPS 9: Biodiversity and Geological Conservation promote sustainable development and the integration of biodiversity into new development.

3.8 PPS 9 sets out planning policies for the protection of biodiversity and geological conservation through the planning system. These policies must be taken into account by local planning authorities in the

preparation of local development documents and may be material to decisions on planning applications. PPS9 states that:

- Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests.

- The aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests. If significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.

Water Development Framework

3.9 Lakes, ponds, rivers and estuaries are essential natural resources that provide important habitats for wildlife. A large proportion of these water bodies in the borough are damaged by pollution (current and historic) from industry and urban runoff and by modification of the original waterways (for example, through placing streams and rivers in culverts).

3.10 The EC Water Framework Directive (2000) establishes a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. Its purpose is to "ensure all aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands meet 'good status' by 2015".

3.11 The Directive requires Member States to establish river basin districts and for each of these a river basin management plan. The Thames River Basin District management plan has been produced by the Environment Agency and covers Barking and Dagenham. Key actions identified by the Environment Agency for improving waterways and water bodies in the borough include the following:

- The Environment Agency will investigate current levels of abstraction in the Upper Roding.
- The Environment Agency will work with partners to re-meander the Mayes Brook through Mayesbrook Park and improve water quality from urban diffuse pollution.
- The Environment Agency will work with partners to restore the Wantz Stream and the Beam through the Dagenham Washlands Flood Storage Area.
- The Environment Agency will investigate methods for improving fish passages through the tidal sluices.

3.12 The Thames River Basin District management plan (Annex J) stresses the importance of ensuring sustainable water management using measures such as planning conditions and section 106 agreements. Sustainable water management measures may include green infrastructure, the use of sustainable urban drainage systems (SUDS)

and good practice in site clearance prior to development. Public bodies are also expected to identify opportunities for improvements and restoration work to maximise any contribution to meeting the Water Framework Directive objectives.

Water for life and livelihoods: River Basin Management Plans - Thames River Basin District can be found on the Environment Agency's web site at: www.environment-agency.gov.uk/wfd

Regional Planning Policy

3.13 The London Plan (July 2011) is the current planning strategy for London and has specific policies regarding biodiversity.

The London Plan requires that development proposals should respect and enhance the natural environment and incorporate greening and planting initiatives. The following policies are relevant to protecting and enhancing biodiversity:

Policy 2.18 Green infrastructure: the network of open and green spaces

Policy 3.6 Children and young people's play and informal recreation facilities

Policy 5.10 Urban greening

Policy 5.11 Green roofs and development site environs

Policy 7.19 Biodiversity and access to nature

Policy 7.20 Geological conservation

Policy 7.21 Trees and woodlands

Policy 7.24 Blue Ribbon Network

Policy 7.28 Restoration of the Blue Ribbon Network

All London Green Grid (incorporating the East London Green Grid)

3.14 A green grid is defined as a multifunctional network of open spaces, wildlife corridors and the links between them, providing benefits for people and wildlife to support sustainable communities.

London Plan Policy 2.18 Green infrastructure: the network of open and green spaces states:

The Mayor will pursue the delivery of green infrastructure by working in partnership with all relevant bodies, including across London's

boundaries, as with the Green Arc Partnerships and Lee Valley Regional Park Authority. The Mayor will publish supplementary guidance on the All London Green Grid to apply the principles of the East London Green Grid to green infrastructure across London.

Policy 2.18 also states:
Development proposals should:

a) incorporate appropriate elements of green infrastructure that are integrated into the wider network
b) encourage the linkage of green infrastructure, including the Blue Ribbon Network, to the wider public realm to improve accessibility for all and develop new links, utilising green chains, street trees, and other components of urban greening (London Plan Policy 5.10).

Policy CM3 of the Core Strategy supports the implementation of the East London Green Grid, which will form part of the emerging All London Green Grid.

Detailed information on Green Grid projects within Barking and Dagenham can be found in the following documents: Area Framework 2 Epping Forest and River Roding; Area Framework 3 Thames Chase, Beam and Ingrebourne; and Area Framework 4 London Riverside. These documents can be downloaded at: www.designforlondon.gov.uk

London Borough of Barking and Dagenham LDF Policy

3.15 LDF policies within the Core Strategy and Borough Wide Development Policies DPDs that are relevant to biodiversity are listed below in Table 3.1.

In summary developers are expected to:

- Retain existing biodiversity on and adjacent to development sites and avoid harm
- Take measures to enhance existing biodiversity
- Create new habitats and opportunities for species

3.16 Developers are expected to consider how the development proposal can help meet habitat protection, enhancement and creation targets set out in the London Biodiversity Action Plan and the Local Biodiversity Action Plan (see pages 14 and 15 for further details).

The complete policies can be found in the Local Development Framework section on the council's web site **www.barking-dagenham.gov.uk**

Table 3.1: Local Development Framework Policies

Core Strategy DPD	
CM1: General principles for development	Natural and built assets including natural resources, air and water quality, biodiversity and habitats, the historic environment, local distinctiveness, and the Borough's network of open spaces should be protected and enhanced.
CM3: Green Belt and Public Open Spaces	The Council will ensure that important areas of public open space are identified and protected from development, that public open space is created and improved in areas of deficiency, and support the implementation of the East London Green Grid, the Blue Ribbon Network and the Barking and Dagenham Landscape Framework Plan.
CR1: Climate Change and Environmental Management	The Council will plan in harmony with landscape and biodiversity.
CR2: Preserving and enhancing the natural environment	The Council will seek to preserve and enhance the Borough's natural environment, including all sites of ecological or geological value (whether or not they have statutory protection) and all protected or priority species. The Council will encourage development that enhances existing sites and habitats of nature conservation value (including strategic wildlife and river corridors) or which provide new ones, in particular where this will help meet the objectives of the Local Biodiversity Action Plan for Barking and Dagenham.
CC3: Achieving community benefits through developer contributions	Developer contributions could be used to provide: • Environmental sustainability measures • Environmental and biodiversity enhancements (including those identified in the Landscape Framework Plan)

Borough Wide Development Policies DPD	
BR3: Greening the urban environment	The Council will expect, where appropriate, all development proposals to demonstrate that the sequential approach set out below to preserving and enhancing the natural environment has been followed: • Retain, enhance or create features of nature conservation value and avoid harm. • Mitigate for impacts to features of nature conservation value. • Where there is no viable alternative, compensate for the loss of features of nature conservation value. Where there are no existing features of nature conservation on a site, development should seek to create nature conservation enhancements to help 'green the urban environment'.
BP11: Urban Design	To naturalise and green the urban environment through an interconnected network of parks, open spaces, tree-lined streets, wildlife corridors, woodlands, pedestrian and cycle routes.

4. Existing biodiversity in Barking and Dagenham

4.1 The London Borough of Barking and Dagenham features a wide range of habitats that have been influenced by the underlying landscape and by human activities. Industry and housing in the 20th century shaped large parts of the borough. The Ripple Nature Reserve is a good example of how biodiversity can recover and thrive on a brown field site. In the east of the borough, Eastbrookend Country Park has been created on a landfill and quarry site. The mosaic of water, scrub, woodland and grassland provides ideal conditions for wildlife. Along the western boundary of the borough lies the River Roding. Redevelopment of disused industrial land alongside the river should provide the opportunity to significantly improve the river's biodiversity.

The boroughs assets discussed in this chapter are:

- Sites of Importance for Nature Conservation
- Local Nature Reserves
- Priority species and habitats
- London Regional Landscape Framework
- Living Landscapes

Protected species and habitats are discussed in Section 5.

Sites of Importance for Nature Conservation

4.2 A site is listed as a Site of Importance for Nature Conservation (SINC) for the habitats or species that it supports. Sites are classified according to their regional and borough importance as Sites of Metropolitan Importance; Sites of Borough Importance; and Sites of Local Importance. Sites may also be declared as Local Nature Reserves.

A complete list of the SINCs within the borough and their locations is provided below. Details on each site and the reasons for their listing can be found on the council's web site at http://www.lbbd.gov.uk/LeisureArtsAndLibraries/Documents/sites-importance.pdf

All SINCs will be identified in the LDF Proposals Map once it is adopted.

Many Sites of Importance for Nature Conservation in the borough are also important for their heritage. These sites include Barking Abbey Ruins and St Margaret's Churchyard, Barking Park and Loxford Water, St Peter's and St Paul's Churchyard, and Valence House Gardens. The London Inventory of Historic Green Spaces prepared by the London Parks and Gardens Trust provides a comprehensive inventory of historic open green spaces in the Greater London boroughs. The inventory is available at: http://www.londongardenstrust.org/

4.3 **Sites of Metropolitan Importance:** These sites contain habitats or support species that are of particular significance in the London region. They may contain rare species, rare assemblages of species, important populations of species or be significant within an urban environment. There are three Sites of Metropolitan Importance in the borough:

- M031 River Thames and Tidal Tributaries
- M089 The Ripple Nature Reserve (Local Nature Reserve)
- M090 The Chase Nature Reserve (Local Nature Reserve) and Eastbrookend Country Park (Local Nature Reserve)

4.4 **Sites of Borough Importance Grade I and Grade II:** These sites contain habitats or support species that are important in the borough. Damage to any of these sites would be a significant loss to the borough. There are fifteen Sites of Borough Importance in Barking and Dagenham:

- River Roding in Barking
- Furze House Farm
- Dagenham Breach and the lower Beam River
- Beam Valley South and the Wantz Stream
- Mid-Beam Valley and Dagenham East Lake
- Goresbrook and the Ship & Shovel Sewer
- Marks Hedge and Hainault Road Allotments Wood
- Barking Park and Loxford Water
- Mayesbrook and associated watercourses
- Mayesbrook Park Lakes
- Parsloes Park (includes The Squatts Local Nature Reserve)
- White's Farm
- Wantz Lake and Crowlands Golf Course
- Scratton's Farm Ecopark (Local Nature Reserve)
- Romford Line railsides

4.5 **Sites of Local Importance**: These sites provide access to nature for local residents and schools. They are particularly important in areas that are deficient in wildlife sites accessible to the public. There are eight Sites of Local Importance in the borough:

- Barking Abbey Ruins and St Margaret's Churchyard
- Gascoigne Road Pumping Station Rough
- St Chad's Park
- Valence House Gardens
- Reede Road Allotments, Pondfield Park and adjacent railside
- St Peter's and St Paul's Churchyard, Dagenham (Local Nature Reserve)
- Wellgate Community Farm

4.6 **Local Nature Reserves (LNRs)**: Some of the Sites of Importance for Nature Conservation are also classified as Local Nature Reserves. These are declared for their importance to wildlife and people. There are eight Local Nature Reserves in the borough:

- Beam Valley TQ 508 844
- Dagenham Village Churchyard TQ 500 845
- Eastbrookend Country Park TQ 510 860
- Mayesbrook Park, South TQ 463 844
- Parsloes Park Squatts TQ 478 851
- Ripple Nature Reserve TQ 468 824
- Scrattons Ecopark and extension TQ 474 832
- The Chase – Dagenham TQ 515 857

Detailed information about each LNR can be found on Natural England's web site:
http://www.lnr.naturalengland.org.uk/Special/lnr/lnr_search.asp

Priority Species and Habitats

4.7 This section explains what priority species and habitats are and how they have been identified at the national and regional level. Certain species are also protected from harm and / or disturbance by law. Appendix 2 provides a list of protected and priority species that have been recorded in the borough. Information about legally protected species can be found in Chapter 5 and Appendix 5. Appendix 5 provides information on the different levels of protection for different species.

4.8 The UK Biodiversity Action Plan (UK BAP) has identified species and habitats that require specific actions for their protection and to reverse

their decline. A list of these habitats and species can be found at www.ukbap.org.uk

Priority species and habitats are those identified by the UK Biodiversity Partnership to be of conservation concern. The criteria for assessing species are:

- Threatened internationally.
- International responsibility and moderate decline in the UK in the last 25 years.
- Marked decline in the UK in the last 25 years.
- Other important factors, where quantitative data on decline were lacking but there is other evidence of extreme threat.

Terrestrial and freshwater habitats of conservation concern were assessed using the following criteria:

- Habitats the UK has international obligations for.
- Natural and semi-natural habitats at risk, such as those with a high rate of decline or which are rare.
- Habitats important for key species.
- Habitats which are 'functionally critical' i.e. those essential for organisms inhabiting wider ecosystems, may be used in some cases as for support, but is unlikely to be a qualifying criterion on its own.

Marine habitats were assessed using the adapted Review of Marine Nature Conservation criteria.

The 1,150 species and 65 habitats that meet the BAP criteria at the UK level can be found on the Natural England web site:

www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/prioritylist.aspx

4.9 At the regional level the London Biodiversity Partnership has selected those UK BAP species and habitats that occur in the London region and created a London Biodiversity Action Plan. Details can be found at www.lbp.org.uk

The London Biodiversity Partnership and Greater London Authority have identified those species and habitats that should be prioritised for the London region. **The priority habitats for London are**:

- Acid Grassland
- Chalk Grassland
- Heathland
- Reedbeds
- Rivers and Streams

- Standing Waters
- Tidal Thames
- Woodland (including wet woodland)
- Meadows and Pastures
- Built structures
- Parks and Urban Greenspaces (including Churchyards and Cemeteries)
- Private Gardens
- Wastelands
- Coastal and Floodplain Grazing Marsh
- Orchards
- Fen, Marsh and Swamp

Information on London BAP Priority Species can be found on the London Biodiversity Partnership's website:

www.lbp.org.uk/londonpriority.html

The London Plan has established targets for the protection, improvement and expansion of priority habitats to be achieved by 2020. These targets are included in the London Plan.

The targets for priority habitats in London for are shown in Appendix 4.

4.10 At the local level, the London Borough of Barking and Dagenham is responsible for the Local Biodiversity Action Plan which reflects the national and regional Biodiversity Action Plans and incorporates local priorities. The Barking and Dagenham Local Biodiversity Action Plan is available at: http://ukbars.defra.gov.uk/plans/lbap_plans.asp?LBAP=%7BBE6BD2B7%2DF8CA%2D479C%2D8CFF%2D6A8B49F48BE0%7D&CO=

The Local Biodiversity Action Plan 2010 - 2015 selects habitats and species that will be prioritised for action within Barking and Dagenham, based on the priorities provided in the London Biodiversity Action Plan.

Proposals to enhance and create habitat in Barking and Dagenham should consult the Local Biodiversity Action Plan, the London Biodiversity Action Plan and the London Habitat Suitability Maps (available on the Greenspace Information for Greater London website**:** www.gigl.org.uk/Resources/Habitats/tabid/107/Default.aspx) to identify priority habitats and potential locations for different habitat types in the borough.

London Regional Landscape Framework

4.11 The London Regional Landscape Framework (May 2009) has been developed by Natural England and sets out the main landscape character types for London. There are four landscape character types within Barking and Dagenham:

- Essex Plateau – Mosaics of ancient woodland, wood pasture and acid grassland within the former royal hunting 'forests' at Epping Forest and Havering.

- North Thames Terraces – Flat, open grassland, stepping up from the Thames, with narrow sinuous strips of woodland marking the alignment of tributary creeks. Examples include Mayesbrook Park, Romford Line railsides and The Chase.

- Lower Thames Floodplain – A vast, flat riverside zone of grazed saltmarshes grading to reedswamp, mudflats and the wide tidal Thames - the most striking and immediately visible natural element in London. Examples include the Goresbrook, the Ripple Nature Reserve and Barking Creek.

- Roding River Valley – The narrow, sinuous course of the upper Roding where the riverbanks are lined with willows.

The design of large scale habitat creation should consider if it is appropriate to incorporate elements of the landscape character type for the site concerned.

More information about the London Regional Landscape Framework can be found on Natural England's web site: http://www.naturalengland.org.uk/regions/london/ourwork/wildlondon/naturalsignatures/default.aspx

Living Landscapes

4.12 Living Landscapes are areas identified by the Wildlife Trusts as areas to protect for wildlife, enlarge, improve and to join up. Within Barking and Dagenham the Essex Wildlife Trust has identified the Beam Valley as a Living Landscape. The London Borough of Barking and Dagenham is working with the London Borough of Havering and the Environment Agency to improve the Beam Valley for wildlife. More information is available from The Wildlife Trusts web site: http://www.wildlifetrusts.org/

5. Protecting biodiversity in the development process

5.1 This chapter looks at how biodiversity is best protected through the development management process. There are three key elements to this:

I. Providing accurate information with the planning application on the existence of habitats or biodiversity features and the presence of plants, invertebrates, amphibians, reptiles, birds or mammals (including bats) on the proposed development site
II. Where it is known a protected or priority species or habitat is present ensuring assessments are undertaken which show the impact of the proposed development on them.
III. Where such assessments demonstrate that species or habitats will be affected ensuring the development proposal is designed so as to avoid adverse effects where possible and mitigate unavoidable impacts.

Biodiversity needs to be considered at all stages during the development process. Understanding the habitats and species that are present on a development site will help you to:

- Comply with legislation protecting wildlife and habitats.
- Meet the requirements of Borough Wide Development Policy BR3 Greening the urban environment.

Once a development site has been identified the following steps should take place before demolition or site clearance and before the layout of the new development has been designed:

- **Are there any trees on or adjacent to the development site?**

Your topographical survey should show the location of all existing trees and a tree survey and a tree constraints plan should be produced. The design of the development should maximise the number of trees that will be retained. It should also identify suitable locations for tree planting, including significant trees, if space permits. More information is available in the Trees and Development Supplementary Planning Document.

- **Are there any plants, invertebrates, amphibians, reptiles, birds or mammals (including bats) using the development site?**

Most development sites and buildings will be made use of by wildlife and you may need a survey by a qualified ecologist. This survey will identify the different species present and the potential of the site to support species that may have been missed by the survey. Tables 5.1 and 5.2 provide criteria on when surveys of species and habitats are required.

Some species are protected by law from harm (protected species) and some species are priority species as they need extra help to prevent their decline in the UK (priority species). Some species are both protected and priority species. Your ecological survey will need to identify the presence or potential presence of these species on the development site. Further information is provided later in this chapter.

Surveys of species and habitats often need to take place at particular times of year and need to be planned in advance. **Appendix 1** provides a table showing the appropriate times of year to undertake surveys for different species.

- **Are there any habitats or biodiversity features or geological features on or next to the site? Is the site adjacent to a Site of Importance for Nature Conservation (SINC)?**

Most development sites have some habitat, for example grassland, hedges, scrub or water, so you may need a survey by a qualified ecologist. An ecological survey will identify these habitats and assess the impact of development. It will also assess the impact of the development on any adjacent SINC. The layout and design of your development should avoid harm to wildlife and habitats. If this is not possible, harm must be minimised and the harm must be compensated for either on the development site or within the area. Further information is provided later in this chapter.

Accurate information and planning applications

5.2 This chapter explains when ecological surveys are required so that accurate information is submitted with the planning application. All developments, regardless of their location, are also expected to consider how biodiversity can be enhanced or improved on the development site (further information on this aspect is provided in Chapter 7).

Applicants should ensure that any ecological surveys are incorporated into the early stages of the project. Accurate ecological information provided with the planning application will help prevent delays during the planning process.

Failure to submit accurate, up to date environmental information with a planning application can result in refusal to validate the planning application or refusal when considered against policy.

Pre-application discussions with planning staff will help applicants assess if surveys of wildlife and habitats are needed to support the planning application. Information about **the pre-application process** can be found on the council's web site: www.barking-dagenham.gov.uk

5.3 Figure 5.1, below, provides a simplified guide to the steps developers need to take to ensure they meet with the requirements to protect and enhance biodiversity on and adjacent to development sites.

Figure 5.1: Checklist for planning applications

Pre-application stage

1. Identification of site for proposed development

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2. Assess the biodiversity value of the site and its surroundings:

   - Does the site or adjacent land have a nature conservation designation?
   - Are legally protected species present?
   - Are Biodiversity Action Plan (priority) species or habitats present?

You may need to provide a survey and assessment.

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3. If the development will have a negative impact on species and / or habitats present on the site, can an alternative site be found?

   If an alternative site cannot be found, can the development be redesigned to avoid harm to species and habitats?

   If harm cannot be avoided, you must set out how harm will be minimised and compensated for.

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4. If trees are present on or adjacent to the site you will need to provide:

   - A topographical survey
   - A tree survey (including information on any trees protected by Tree Preservation Orders)
   - A tree constraint plan

   Consult the Trees and Development SPD fur further information.

Application stage

5. The Local Planning Authority will consider if the information submitted by the developer is adequate and accurate. Additional information and / or surveys may be required.

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6. If European protected species, such as bats or great crested newts, are present the Local Planning Authority must apply the three tests set out in the Habitats Regulations:

    - No satisfactory alternative to the development
    - Impacts are not detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range
    - The development is in the interests of public health or safety, or other imperative reasons for overriding public interest, including those of social, economic and environmental benefit.

    A licence from Natural England may also be required.

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7. An Aboricultural Implications Assessment and an Aboricultural Method Statement may be required for trees present on and adjacent to the site. Consult the Trees and Development SPD for further information.

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8. The planning application will be determined in accordance with the Development Plan (the Barking and Dagenham Local Development Framework and the London Plan).

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9. If planning permission is granted conditions may be attached requiring further mitigation, enhancements for biodiversity, tree planting and / or compensation for unavoidable loss.

Post application stage

10. Where a licence from Natural England is required ensure this has been obtained before work commences.

11. Ensure that landscaping and biodiversity conditions are met. If an Ecological Management Plan is required ensure this is provided and any monitoring requirements are met.

Demolition

5.4 Proposals that involve demolition of buildings should refer to Table 5.1 to determine if any species surveys are required. In general the majority of buildings will require:

1) A bat survey
2) A survey for nesting birds

before demolition can be permitted.

Please note that the council's Building Control team must be notified in writing of any proposed demolition of a building or part of a building at least 6 weeks before work commences.

Further information is available on the council's web site www.barking-dagenham.gov.uk or from the Building Control Team (contact details are provided in the **Contacts** section).

Survey and Assessment requirements for Protected and Priority species

5.5 The London Borough of Barking and Dagenham has a duty to consider the conservation of biodiversity when determining a planning application; this includes having regard to the safeguarding of species that are legally protected under the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Badgers Act 1992.

Where a proposed development is likely to affect Protected and / or Priority species, the applicant must submit a Protected and / or Priority Species Survey and Assessment.

Any development proposals shown in Table 5.1 must submit a Protected and Priority Species Survey and Assessment with the planning application. Exceptions to when a survey and assessment may not be required are explained in the table.

Appendix 2 provides a list of those protected species and priority species likely to be found in the London Borough of Barking and Dagenham. An explanation of what is meant by protected and priority species is provided below.

Protected Species

5.6 Protected Species are those plants and animals protected by law. The degree of protection depends on the relevant legislation, as explained below. Detailed information on protected species can be found in Appendix 5.

Natural England's protected species standing advice provides guidance on deciding if there is a 'reasonable likelihood' of protected species being present. It also provides advice on survey and mitigation requirements. The advice can be found at: http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx

Priority Species

5.9 Priority species and habitats are those identified by the UK Biodiversity Partnership to be of conservation concern. They are selected for priority action in biodiversity action planning, at the national, regional and /or local level. Local planning authorities are required to ensure these species are protected from the adverse effects of development. Planning permission will not be granted for development that would result in harm to these species or their habitats unless the need for, and the benefits of, the development clearly outweigh that harm.

Appendix 2 provides a list of species that have priority status and are likely to be found in Barking and Dagenham. The complete lists for

priority species in London are provided by the London Biodiversity Partnership and can be accessed here: www.lbp.org.uk/londonpriority.html

Survey requirements for Protected and Priority Species

5.10 To ensure that the survey is accurate the following guidelines should be followed:

I. The survey should be undertaken and prepared by competent persons with suitable qualifications and experience (such as a member of the Institute of Ecology and Environmental Management) using nationally recognised survey guidelines/methods where available.

II. Surveys must be undertaken at the appropriate time of day and month of year for the species being surveyed and may be required to take place over an extended period of time. **Appendix 1** provides guidance on the optimal survey times for protected and priority species.

Further information on appropriate survey methods can be found on the Institute of Ecology and Environmental Management web site at www.ieem.net

III. The survey should be informed by the results of a search for ecological data from Greenspace Information for Greater London (GiGL), the capital's environmental records centre.

Note that publically available data obtained from the National Biodiversity Network (NBN) Gateway does not provide sufficient detail and cannot be considered as a substitute for a data search by GiGL.

IV. The survey must be to an appropriate level of scope and detail and must:

- Record which species are present and identify their numbers (may be approximate);
- Map their distribution and use of the area, site, structure or feature (e.g. for feeding, shelter, breeding).

5. A copy of any ecological data submitted as part of a planning application will be given by the planning authority to Greenspace Information for Greater London, the capital's environmental records centre. See Section 5.19 for more information.

Assessment requirements for Protected and Priority Species

5.11 The assessment must identify and describe potential development impacts likely to harm protected and / or priority species, and/or their habitats, identified by the survey (these should include both direct and indirect effects both during construction and after development).

Where harm is likely, evidence must be submitted to show how:

- Alternatives designs or locations have been considered;
- Adverse effects will be avoided wherever possible;
- Unavoidable impacts will be mitigated or reduced;
- Impacts that cannot be avoided or mitigated will be compensated.

5.12 The information provided in response to the above requirements are consistent with those required for an application to Natural England for a European Protected Species License. Further detailed information can be found on Natural England's web site at www.naturalengland.org.uk/ourwork/regulation/wildlife/default.aspx

A protected species survey and assessment may form part of a wider Ecological Assessment and/or part of an Environmental Impact Assessment.

Table 5.1: Protected and Priority Species:
Criteria and indicative thresholds for when a survey and assessment will be required

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	Species Likely To Be Affected And For Which A Survey Will Be Required														
	Bats	Barn owl	Breeding Birds	Wintering Birds	Gt. crested newt	Water Vole	Badger	Reptiles	Amphibians	Plants	Invertebrates	Harvest mouse	Stag beetle	Brown hare	Other BAP species
Proposed development which includes the modification conversion, demolition or removal of buildings and structures (especially roof voids) involving the following:															
• All agricultural buildings (e.g. farmhouses and barns), whatever their condition, particularly of traditional brick or stone construction and/or with exposed wooden beams greater than 20cm thick. The only exception is modern agricultural buildings of prefabricated construction with steel/sheet materials.	✓	✓	✓												
• Roofs of any type, or demolition of a built structure, regardless of location, except for those either	✓		✓												

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	Species Likely To Be Affected And For Which A Survey Will Be Required														
	Bats	Barn owl	Breeding Birds	Wintering Birds	Gt. crested newt	Water Vole	Badger	Reptiles	Amphibians	Plants	Invertebrates	Harvest mouse	Stag beetle	Brown hare	Other BAP species
of prefabricated construction with steel/sheet materials (such as modern warehouses) or flat roof structures with no roof voids, soffit or barge boards.															
• All unused industrial chimneys, which are unlined and of brick or stone construction;	✓														
• All tunnels, culverts, mines, kilns, ice-houses, adits, military fortifications, air raid shelters, cellars and similar underground ducts and structures;	✓														
• All bridge structures, aqueducts and viaducts (especially over water and wet ground).	✓														
• Green Roofs			✓	✓						✓	✓				

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	**Species Likely To Be Affected And For Which A Survey Will Be Required**														
	Bats	Barn owl	Breeding Birds	Wintering Birds	Gt. crested newt	Water Vole	Badger	Reptiles	Amphibians	Plants	Invertebrates	Harvest mouse	Stag beetle	Brown hare	Other BAP species
Proposals involving lighting of churches and listed buildings or flood lighting of green space within 50m of woodland, water, field hedgerows or lines of trees.	✓		✓												
Proposals affecting woodland, or field hedgerows and/or lines of trees with connectivity to woodland or water bodies.	✓		✓				✓	✓		✓					
Proposals affecting established grassland (i.e. not ploughed or seeded for 5 or more years) or 'roughland' (i.e. grassland partially covered with scrub or trees), *excluding* residential gardens and grassland managed intensively for sports or amenity use and *including* roadside verges			✓	✓				✓		✓	✓	✓		✓	

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	**Species Likely To Be Affected And For Which A Survey Will Be Required**														
	Bats	Barn owl	Breeding Birds	Wintering Birds	Gt. crested newt	Water Vole	Badger	Reptiles	Amphibians	Plants	Invertebrates	Harvest mouse	Stag beetle	Brown hare	Other BAP species
Proposed tree work (felling or lopping) and/or development affecting: • old and veteran trees that are older than 100 years; • trees with obvious holes, cracks or cavities, • trees with substantial ivy cover; • trees with a girth greater than 50cm at chest height;	✓ ✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓ ✓												
Proposals affecting gravel pits or quarries and natural cliff faces and rock outcrops with crevices or caves	✓		✓					✓							✓
Proposals within 250m* of a pond (excluding small garden ponds). Does not apply to householder applications. Where known records for great crested newt occur this should be 500m.			✓		✓										✓

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	**Species Likely To Be Affected And For Which A Survey Will Be Required**														
	Bats	Barn owl	Breeding Birds	Wintering Birds	Gt. crested newt	Water Vole	Badger	Reptiles	Amphibians	Plants	Invertebrates	Harvest mouse	Stag beetle	Brown hare	Other BAP species
Proposals affecting or within 200m* of rivers, streams, canals, lakes or other aquatic habitats such as fenland, marshland or reedbed. Does not apply to householder applications.	✓		✓	✓	✓	✓			✓	✓		✓			
Proposals affecting 'derelict' land (brownfield sites), allotments and railway land.			✓	✓	✓		✓	✓	✓		✓	✓			
Proposals affecting bare ground and/or sparsely vegetated sites, wherever they are located			✓	✓											
Proposed development affecting any buildings, structures, feature or locations where protected and / or priority species are known to be present .**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Distances may be amended to suit local circumstance on the advice of the Local Planning Authority or the local Natural England team or the Barking and Dagenham Wildlife Partnership.

* *Confirmed as present by either a data search (for instance via Greenspace Information for Greater London, the capital's environmental records centre) or as notified to the developer by the local planning authority and/or by Natural England, the Environment Agency or other nature conservation organisation.

Exceptions for when a full species survey and assessment may not be required

5.13 A full Protected or Priority Species Survey and Assessment may not be required when:

1. Following consultation by the applicant at the pre-application stage where the LPA has stated in writing that no protected or priority species surveys and assessments are required.

2. It is clear that no protected or priority species are present despite the guidance in the above table indicating that they are likely and the applicant is able to provide evidence with the planning application to demonstrate that such species are absent (e.g. this might be in the form of a letter or brief report from a suitably qualified and experienced person, or a relevant local nature conservation organisation).

3. It is clear that the development proposal will not affect any protected or priority species present, then only limited information needs to be submitted. This information should, however:

(a) demonstrate that there will be no significant effect on any protected or priority species present and

(b) include a statement acknowledging that the applicant is aware that it is a criminal offence to disturb or harm protected species should they subsequently be found or disturbed.

In some situations, it may be appropriate for an applicant to provide a Protected and Priority Species Survey and Assessment for only one or a few of the species shown in Table 5.1 above e.g. those that are likely to be affected by a particular activity. Applicants should make clear which species are included in the assessment and which are not and why the exceptions apply.

Survey and Assessment requirements for Sites of Importance for Nature Conservation, priority habitats and geological conservation

5.14 Where a proposed development is likely to affect a

- A Site of Importance for Nature Conservation (SINC) or
- Priority habitats or biodiversity features listed in **Table5.2** or
- Geological features listed in **Table 5.3**

the applicant must submit **an Ecological or Geological Survey** (as appropriate) with the application. Exceptions to when a survey and assessment may not be required are also explained in these tables.

Chapter 4 provides detailed information on the Sites of Importance for Nature Conservation and priority habitats in Barking and Dagenham.

An ecological/geological survey and assessment may form part of a wider Environmental Impact Assessment.

Survey requirements for Sites of Importance for Nature Conservation, priority habitats and geological conservation

5.15 To ensure that the survey is accurate the following guidelines should be followed:

1. The **Survey** should be undertaken and prepared by competent persons with suitable qualifications and experience (such as a member of the Institute of Ecology and Environmental Management) and must be carried out at an appropriate time and month of year, in suitable weather conditions and using nationally recognised survey guidelines/methods where available.

   Further information on appropriate survey methods can be found on the Institute of Ecology and Environmental Management web site at www.ieem.net

2. The survey should be informed by the results of a search for ecological or geological data from Greenspace Information for Greater London, the capital's environmental records centre.

   Note that publically available data obtained from the National Biodiversity Network (NBN) Gateway does not provide sufficient detail and cannot be considered as a substitute for a data search by GiGL.

   Additional information may be available from the London Wildlife Trust, and Local RIGS Groups.

Information on internationally and nationally designated sites can be found at: www.natureonthemap.org.uk

Information on locally listed Sites of Importance for Nature Conservation sites can be found on the council's web site at: www.barking-dagenham.gov.uk

3. The survey must be to an appropriate level of scope and detail and must:

   - Record which habitats and features are present on, and where appropriate, around the site.
   - Identify the extent/area/length/population size present.
   - Map their distribution on site and/or in the surrounding area shown on an appropriate scale plan.

4. A copy of any ecological data submitted as part of a planning application will be given by the planning authority to Greenspace Information for Greater London, the capital's environmental records centre. See Section 5.19 for more information.

Assessment requirements for Sites of Importance for Nature Conservation, priority habitats and geological conservation

5.16 The assessment should identify and describe potential development impacts likely to harm any Sites of importance for Nature Conservation, priority habitats, other listed biodiversity features or geological features

This should include both direct and indirect effects both during construction and after development. Where harm is likely, evidence must be submitted to show:

- How alternatives designs or locations have been considered.
- How adverse effects will be avoided wherever possible.
- How unavoidable impacts will be mitigated or reduced.
- How impacts that cannot be avoided or mitigated will be compensated.

The assessment should give an indication of likely change in the extent of the habitat on the site after development e.g. whether there will be a net loss or gain. If a net loss of priority habitat is anticipated, then it must be recreated elsewhere in the borough.

Table 5.2: Local Requirement for SINCs and Priority Habitats: Criteria for when a habitat survey and assessment is required

1. Designated sites (as shown on the LDF Proposals Map and listed in Chapter 2) Regionally and locally listed sites: Site of Importance for Nature Conservation (SINC) Local Nature Reserve (LNR)
2. Priority habitats (Habitats of Principal Importance for Biodiversity relevant to Barking and Dagenham under S.41 of the NERC Act 2006) • Arable Field Margins • Coastal saltmarsh • Hedgerows • Intertidal mud flats • Lowland dry acid grassland • Lowland meadows • Lowland mixed deciduous woodland • Open Mosaic Habitats on Previously Developed Land • Reedbeds • Rivers and streams • Standing open water and canals (lakes, reservoirs, ponds, aquifer fed fluctuating water bodies) • Traditional Orchards • Wet woodland
3. Other biodiversity features (as identified by the Barking and Dagenham Wildlife Partnership - see paragraph 84 ODPM Circular 06/2005). The features listed below may provide habitat for priority species and may require survey. • Secondary Woodland and Mature/Veteran Trees • Disused tunnels (*e.g.* roosts for bats) • Tree lines providing sheltered feeding habitat for bats • Previously developed land with biodiversity interest • Urban green space (parks, allotments, cemeteries, churchyards flower-rich road verges and railway embankments) • Sites identified as Wildlife Corridors

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

Exceptions for when a full biodiversity site survey and assessment may not be required

5.17 Regional and Local Sites and Priority Habitats and Species: A survey and assessment will not be required where the applicant is able to provide copies of pre-application correspondence with the council's ecologist or ecological advisor and/or other competent parties (e.g. Natural England, London or Essex Wildlife Trust), showing that they are satisfied that the proposed development will not affect any regional or local sites listed for their local nature conservation importance or any other priority habitats or listed features.

Table 5.3: Local Requirement for Designated Geodiversity Sites and Features: Criteria for when a survey and assessment is required

1. Designated Sites (as shown on the LDF Proposals Map)
Regionally and locally listed sites:
In August 2010 there were no designated geodiversity sites in Barking and Dagenham. Up to date information can be obtained from the London Borough of Barking and Dagenham.

2, Geological conservation features (Based on the Earth Science Conservation Classification)

Exposure or Extensive Sites

- Active quarries and pits
- Disused quarries and pits
- River and stream sections
- Extensive buried interest
- Road, rail and canal cuttings

Integrity Site

- Static (fossil) geomorphological
- Active process geomorphological

Finite Site

- Finite mineral, fossil or other geological
- Mine dumps
- Finite underground mines and tunnels
- Finite buried interest

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

Exceptions When a Full Survey and Assessment May Not Be Required

5.18 Regional and Local Sites: A survey and report will not be required where the applicant is able to provide copies of pre-application correspondence with appropriate local geological experts (such as the Local RIGS Group) that they are satisfied that the proposed development will not affect any regional or local sites listed for their geological importance.

Survey data

5.19 A copy of any ecological and geological data submitted as part of a planning application will be given by the planning authority to Greenspace Information for Greater London (GiGL), the capital's environmental records centre The applicant should inform the person / organisation undertaking survey work in relation to a planning application that this data will be made available to the public as a result of its transfer to GiGL. The purpose of this data exchange is to increase the knowledge, protection and enhancement of biodiversity in the borough.

To meet this requirement a table of data should be provided with the following minimum information, as an appendix to any ecological or survey reports:

- Grid Reference
- Date
- Species
- Observer (the person who made the record)
- Location name
- Abundance (if recorded)

A standard data entry form in Excel format showing the required and all optional fields can be downloaded from the GiGL web site at: www.gigl.org.uk/Resources/Downloads/tabid/60/Default.aspx

Unless stated, all data will be managed and made available in accordance with GiGL's accessing data policy (which includes putting it on the National Biodiversity Network). Further information is available on GiGL's web site.

Invasive species

5.20 Animals and plants that have been introduced to an area where they do not normally occur may become invasive. Species local to the area may be unable to compete and as a result the introduced species may rapidly take over.

Where a site is to be redeveloped the presence of any invasive species should be identified at an early stage and measures put in place to prevent the spread of this species during and after construction. Please note that it is an offence under section 14(2) of the Wildlife and Countryside act 1981 to "plant or otherwise cause to grow in the wild" any plant listed in Schedule nine, Part II to the Act.

The Environment Agency provides advice on the measures that can be taken to control invasive species. Where it is intended to use herbicides or pesticides close to water, an application must be made to the Environment Agency.

The plant species of main concern that are likely to be found on development sites in Barking and Dagenham are:

- Japanese knotweed
- Himalayan balsam
- Giant Hogweed

5.21 Japanese knotweed: Legislation places a duty of care on landowners to actively control and eradicate Japanese Knotweed. All parts of the plant and any soil contaminated with it are classified as controlled waste and are required legally to be removed and disposed of by a licensed waste control operator. The Environment agency provides further information on the management of Japanese Knotweed.

5.22 Developers should also ensure the following species are not introduced to any water bodies, including garden ponds on or adjacent to the development site:

Curly waterweed (Elodea crispa)
Pennywort
New Zealand pigmyweed
Water-primrose
Parrot's feather
Water fern

These species are commonly for sale in garden centres and gardeners should avoid purchasing them. Plants, animals and water from garden ponds should not be transferred to other ponds or water bodies. This will help prevent the further spread of these species between gardens and reduce further colonisation of natural habitats by invasive non-native plants.

6. Enhancing biodiversity and habitat creation

6.1 All development proposals are required by Borough Wide Development Policy BR3 Greening the urban environment to enhance and create features of nature conservation wherever possible. Planning applications should include information on measures that will enhance, restore and / or create new habitats and improve the built environment for wildlife. This is in addition to any measures for protecting existing wildlife and habitats.

The applicant should include measures to ensure there is a net gain for biodiversity following completion of the development. The assessment of species and habitats described in Chapter 4 may include recommendations that can contribute to this net gain.

A net gain for biodiversity will usually result from protecting existing biodiversity AND

- Increasing the area of existing habitat(s) and /or
- Creating new habitat(s) and /or
- Implementing specific measures that will benefit particular species.

Simply increasing the number of plant species on the development site will not usually be considered sufficient to count as a net gain.

Where it is not feasible for biodiversity improvements to be provided on the development site, a Section 106 agreement may be required for the enhancement and / or management of biodiversity of a SINC or a park within the local area. Section 106 agreements can also be used for river restoration works.

If the development site is also within an area deficient in access to nature, the Section 106 agreement may require a contribution to the creation and / or enhancement of biodiversity within the local area. This may be achieved through the provision of, for example, wildlife corridors or biodiversity improvements to local amenity spaces or through biodiversity improvements to priority sites identified in Improving Londoners' Access to Nature (February 2008), as listed below:

St Chad's Park
Wantz Lake & Crowlands Open Space
Parsloes Park south
Valence House Gardens
Central Park (Dagenham)
Barking Abbey Ruins & St Margaret's Churchyard
Woodrush Way lake
Barking Creek west of River road

Appendix 6 provides a map showing areas deficient in access to nature within Barking and Dagenham.

Enhancement and creation of biodiversity features / habitats

6.2 In addition, all development proposals, (excluding householder applications) are expected to include measures that will enhance, restore or create features or habitats used by protected and / or priority species. The assessment should also give an indication of how species numbers are likely to change, if at all, after development e.g. whether there will be a net loss or gain.

The applicant should include measures to ensure there is a net gain for biodiversity following completion of the development, including enhancements that provide people with an opportunity to enjoy and appreciate wildlife and the natural environment by, for example, the provision of nest-boxes or landscaping with plants that attract birds and butterflies.

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Ecological Management Plans

6.3 Developers may be required to provide an Ecological Management Plan (EMP) for the development site. This will usually apply to strategic developments or where a development site is close to a SINC.

An EMP should include:

1. Details of surveys undertaken and the results of these surveys.
2. Measures to protect species and habitats during site preparation, construction and occupation.
3. Measures to increase the ecological value of the site once the development is complete, to ensure a net gain for biodiversity.
4. Measures to ensure the biodiversity value of the site is maintained for the long term (5 years +) after development is complete. This should include a monitoring program.

The developer and / or site manager must ensure the EMP is handed over and explained to any maintenance company or staff responsible for maintaining landscaping and / or gardens and buildings.

A simplified version should also be provided for householders and other occupiers, explaining how biodiversity is being protected and encouraged on the site.

Guidelines for enhancing biodiversity

6.4 Biodiversity can be enhanced by:

- Better management of habitats that already exist
- Creating linkages between habitats on and next to the site so that wildlife can move between habitats.
- Creating new habitats such as woodland, hedges, ponds and wildflower meadows that will benefit wildlife.
- Restoring habitats, such as watercourses, that have been degraded or neglected by previous development.
- Naturalisation of culverted watercourses.
- Ensuring that landscape schemes, including ornamental landscaping, benefit wildlife.
- Integrating nesting and roosting opportunities for bats and birds into built structures.

Further guidance on providing naturalised habitats for biodiversity in landscape schemes can be found in the following documents:

- A Natural Estate - guidance on providing green space enhancements within existing and new housing estates to encourage biodiversity (Neighbourhood Greens, 2007) http://www.neighbourhoodsgreen.org.uk/default.aspx?page=193
- Design for Biodiversity: http://www.d4b.org.uk/

- Biodiversity By Design: A Guide for Sustainable Communities www.tcpa.org.uk/data/files/bd_biodiversity.pdf

- Biodiversity and the Built Environment: A report by the UK-GBC Task Group www.ukgbc.org

6.5 New development provides significant opportunities for habitat creation within landscaping schemes and designing buildings to increase their value for wildlife. The following guidelines provide an indication of how developers can ensure the proposed development provides benefits for wildlife:

Habitat creation

- The London Biodiversity Action Plan has identified priority habitats for London. Targets for the improvement and expansion of these habitats are included in the London Plan. Developers should consider how their landscape proposals can contribute to meeting these targets. See Appendix 4 for more details.

- London Habitat Suitability Maps, developed by Greenspace Information for Greater London (GiGL) for the London Biodiversity

Partnership, identify optimum and suitable sites for creating and restoring priority habitats. Indicative maps are available on GiGL's website at:
www.gigl.org.uk/Resources/Habitats/tabid/107/Default.aspx

Detailed information will be supplied by GiGL as part of the data search services they provide. These maps can be used to help identify the most suitable type of habitat for a particular site.

- In cases where the site is not covered by the London Habitat Suitability Maps large-scale habitat creation should reflect the landscape character of the area, as identified in Natural England's *London's Natural Signatures* project:. Visit the Natural England web site for detailed information.

  There are four landscape character types within Barking and Dagenham. Further information can be found in Section 4.11 and by following the relevant link below:

  - Essex Plateau – http://www.naturalengland.org.uk/Images/12-essex_tcm6-14419.pdf
  - North Thames Terraces – http://www.naturalengland.org.uk/Images/14-north-thames_tcm6-14421.pdf
  - Lower Thames Floodplain – http://www.naturalengland.org.uk/Images/19-lower-thames_tcm6-14426.pdf
  - Roding River Valley – http://www.naturalengland.org.uk/Images/13-roding_tcm6-14420.pdf

Landscaping

- Incorporate existing natural features such as trees, hedges, scrub, tall grass and ponds, into the landscape scheme for the site.

- Include a green buffer, at least 8m in depth and planted for biodiversity, between the development site and any adjacent open spaces, parks, allotments, wildlife corridors, green or blue infrastructure (for tidal waterways the buffer should be at least 16m) and SINCs.

- For development sites within 250m of a SINC, wildlife corridor or green / blue infrastructure, only use native plant species of local provenance in landscape schemes. Appendix 3 provides maps showing the location of SINCs in the borough and the 250m zone around each one. Flora Local provides information on the selection and sourcing of native plants: www.floralocale.org

- For development sites that are not within 250m of a SINC, wildlife corridor or green / blue infrastructure, at least 50 per cent of plants used for landscaping should be native and of local provenance. However, all non- native plants, grasses, shrubs and trees used in landscape schemes should be valuable for native wildlife. This can be achieved for example by selecting species that provide one or more of the following:

    - Nectar for invertebrates
    - Fruits and / or seeds for birds
    - Nesting cover for birds

  Natural England provide a database with a wide selection of plants that are beneficial for native wildlife:
  www.plantpress.com/wildlife/home.php

- Development proposals that affect sites with heritage value should also consider the historical context in landscape schemes.

- Development should seek, where feasible, to restore and enhance any watercourses on and adjacent to the development site. The naturalisation of culverted water courses should be investigated and measures to enhance the natural habitats alongside watercourses considered. Measures may include the removal of invasive species and planting of suitable native species.

- Incorporate naturalistic Sustainable Drainage Systems (SuDS) where appropriate. These can provide additional wildlife habitat whilst also contributing to the flood management scheme for the development.
  For further information see: www.ciria.org.uk/suds/ and
  http://sudsnet.abertay.ac.uk/

- Create wildlife friendly boundaries to the site and between private gardens by planting hedges. Where hedges are not possible use wildlife friendly fencing - this has a 150mm gap between the fence and the ground (except in areas where exclusion of predators from sensitive habitats is required) and does not have any spikes along the top or bottom of the fence

- Create natural habitats such as woodland, hedges, ponds, wildflower meadows, areas of long grass and log piles.

- Leave rough grassland areas with appropriate mowing regimes as wildlife corridors.

- Look for opportunities to link habitats and wildlife corridors within the development site to habitats and wildlife corridors adjacent or near to the site.

- On residential developments, create a Show Home wildlife garden to promote wildlife gardening to prospective home owners.

- Avoid the use of peat for any purpose, including soil improvement and soil preparation for tree or shrub planting.

- Avoid the use of herbicides and pesticides and put in place a management regime that does not use chemicals.

- Avoid the use of plants that require intensive ongoing maintenance to limit their invasiveness.

- Include management to prevent the spread of invasive species that are a problem across London (see Section 5.20 for further information).

Adapting buildings for bats and birds

- New buildings are designed to reduce CO2 emissions during occupation and as a result are impenetrable to birds and bats that rely on built structures for nesting and roost sites. This can directly contribute to the decline of certain species.

- Developers should initially consider how to incorporate nesting and roosting opportunities for birds and bats into the structure of the building or roof space. Where this is not feasible the attachment of nest boxes and bat roost boxes to the external walls of new buildings should be considered.

- Developers should refer to Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build (Publ. by RIBA, March 2010) for detailed information and to relevant sources such as the RSPB and the London's Swifts web site at www.londons-swifts.org.uk/Nestboxes&Attraction.htm

- Artificial lighting, including floodlighting, should avoid spill on to habitats, wildlife corridors (such as hedges and water ways), trees and buildings that may support bat roosts or nesting birds.

7. Green Roofs and living walls

Green roofs

7.1 Green roofs can provide significant benefits for wildlife, as well as reducing water runoff and insulating buildings. By providing low-nutrient, well drained habitats, green roofs can benefit important species, such as rare invertebrates and various bird species, including Black Redstarts.

Further information about green and brown roofs can be found in:

1. The LDF's Green roofs Planning Advice Note 1
2. The Environment Agency's Green Roof Toolkit: www.environment-agency.gov.uk/business/sectors/91967.aspx
3. The Living Roofs web site: www.livingroofs.org

7.2 In general where a green roof is required as a condition for granting planning permission it should be designed to primarily benefit biodiversity. Developers are expected to provide:

- The ecological rationale for the selection of the plant species.
- A landscape plan and cross-section of the roof to show how the green roof has been designed.
- A long term maintenance plan to ensure the success of the green roof.

7.3 There are two main types of green roofs:

- **Intensive roofs** where public access is allowed (to residents for example) and the green roof is in effect a roof garden. On an intensive roof the developer should aim to cover **at least 70 per cent** of the roof area in soil, vegetation and water features. This will reduce water run-off from the roof and ensure the roof's effectiveness in the drainage strategy for the development.

  Developers should make use of the guidelines in S**ection 6.4 Guidelines for enhancing biodiversity** to ensure that the landscaping and the plants selected benefit wildlife.

- **Extensive roofs** are roofs where access is restricted to maintenance staff and are less costly to create than intensive roofs. These roofs can be green or brown roofs. A brown roof is one where uncontaminated soils and spoil from the development site are used in the brown roof substrate to help recreate brownfield habitat that previously exisited on the site. Both types of roof can be left to colonise naturally rather than being planted.

Extensive green roofs

7.4 In general extensive green roofs can be installed on a variety of roofs, both flat and sloping. For slopes greater than 9.5 degrees or 17 per cent (2:12 slope) additional structures to prevent slippage of materials will be needed. For slopes greater than 30 degrees or 58 per cent (7:12 slope) specialised media and retention devices will be required. The impact of increased slope on the distribution of water within the planting media should be taken into account in the species used on different sections of the roof.

There are specific design requirements for extensive roofs to ensure that benefits for wildlife are maximised:

Expertise

It is advisable for an ecologist to be present during the installation of an extensive roof as roofing contractors often do not have the required expertise to install the biodiverse elements of the green roof.

Substrate

The depth of the substrate should be between 75mm and 150mm. A single substrate can be used but a variety of substrates will provide greater benefits for biodiversity. Existing substrates on the development site that are uncontaminated and that will otherwise be lost as a result of development can be used on the biodiverse roof.

The substrate should not be flat across the entire roof but should vary in height with mounds provided for burrowing insects.

There should be

- Areas of sand for burrowing invertebrates.
- Areas of bare shingle.
- A series of individual logs and log piles.

Plants

The species list for the green roof needs to be precise. The species selected should follow the guidelines in Section 6.4 Guidelines for enhancing biodiversity, in particular with regard to the use of native species.

Species should be prioritised on the basis of:

i) Native species that already occur on or within 250m of the development site.

ii) Species identified in the Environment Agency Green Roofs Toolkit as being of biodiversity value. The wildflower species should be made up of:

- at least 10 species of high ecological value
- at least 10 species of medium ecological value
- at least 10 species of standard ecological value

This list can be found at: http://www.environment-agency.gov.uk/static/documents/Business/vegetation_2101196.pdf

Living walls

7.5 Living walls protect buildings from weathering and temperature fluctuations and can also benefit wildlife. Research carried out by Oxford University and commissioned by English Heritage found that ivy (Hedera helix) protects underlying walls by reducing temperature extremes.

A living wall can be created by:

- Growing self-clinging climbing plants, such as ivy, up walls.
- Providing a wooden or metal trellis attached to the wall for plants to climb up.
- Growing plants in a specially designed hydroponic system attached to the wall.

The first two options use soil at ground level to support the plants and need irrigation as part of the usual landscape management for the site. Buildings can reduce the amount of water available in the soil and this should be taken into account in the maintenance plan.

The third option is more complex and needs to be designed so that the plant pockets can be irrigated and the plants provided with plant food at suitable intervals.

The plants chosen for a living wall should be beneficial for biodiversity by offering one or more of the following:

1. Roosting and nesting sites for birds – generally the thicker the climber, the more opportunities for roosting and nesting will be provided.
2. Nectar sources for insects - plants that flower early or late in the season, such as Hedera helix (ivy) are particularly valuable.
3. Fruit for birds and insects.
4. Hibernation sites for insects such as butterflies and lacewings.

Further information on designing living walls can be found in Planting Green Roofs and Living Walls by Nigel Dunnett and Noël Kingsbury (Publ.2004, Timber Press).

8. Green infrastructure

8.1 Green infrastructure is the network of functional green space which supports natural and ecological processes and is integral to the health and quality of life of communities. It includes*:

- Parks and Gardens – urban parks, Country and Regional Parks, formal gardens
- Amenity Greenspace – informal recreation spaces, housing green spaces, domestic gardens, village greens, urban commons, other incidental space, green roofs
- Natural and semi-natural urban greenspaces - woodland and scrub, grassland (e.g. downland and meadow), heath or moor, wetlands, open and running water, wastelands and disturbed ground), bare rock habitats (e.g. cliffs and quarries)
- Green corridors – rivers and canals including their banks, road and rail corridors, cycling routes, pedestrian paths, and rights of way
- Other - allotments, community gardens, city farms, cemeteries and Churchyards,

* From Green Infrastructure Guidance (Natural England 2008)

8.2 Natural England's Natural Development project has been set up to demonstrate how both large and small scale development can incorporate green infrastructure. Natural Development is based on four key elements:

- Natural signature: Distinctive landscapes with more wildlife and ecological connections, shaped by people's needs.
- Natural resilience: The greening of towns and cities which contribute to climate change adaptation through flood management and urban cooling.
- Natural Health Service: Accessible natural green spaces close to where people live and work, providing opportunities for healthy living.
- Natural Connections: Children play in wildlife rich spaces and adults are involved in environmental activities, reinforcing a sense of place and ownership.

More information about the Natural Development project can be found on Natural England's web site:
www.naturalengland.org.uk/naturaldevelopment

8.3 New development can provide the opportunity to enhance and increase green infrastructure on a large and / or small scale. Green infrastructure may include elements of a Sustainable Urban Drainage

System such as swales, ponds and green roofs. Tree planting schemes (including street trees), cycle and pedestrian paths, and food growing projects for residents can all contribute to green infrastructure.

8.4 For strategic development sites a Green Infrastructure Strategy setting out the key principles for green infrastructure on the site will be required. This may be part of a Concept Statement or development brief that will influence the site planning and design and help ensure green infrastructure is incorporated from the early stages of the project. Concept statements can also be used as the basis for the Design and Access Statement.

More information is available from Natural England's web site at: http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/greeninfrastructure/default.aspx

8.5 The East London Green Grid, part of the All London Green Grid, sets out the regional strategy for green infrastructure in Barking and Dagenham.

Detailed information can be found in the following documents: Area Framework 2 Epping Forest and River Roding; Area Framework 3 Thames Chase, Beam and Ingrebourne; and Area Framework 4 London Riverside. These documents can be downloaded at: www.designforlondon.gov.uk

9. Permitted development

9.1 Changes that you can make to your house without needing a planning application are called Permitted Development. These include certain house extensions and garden buildings.

Permitted development rights may have been removed or restricted under an Article 4 direction and in Conservation Areas. Further information about permitted development rights is available from planning staff and on the council's web site www.barking-dagenham.gov.uk

Certain works within 8 metres of a watercourse (16 metres if tidal) will require a Flood Defence Consent.

9.2 Although planning permission is not required for permitted development (with the exceptions described above), the possible presence of protected species must still be established. For example, the internal alterations required for a loft conversion or the chemical treatment of timber do not require planning permission but will have a serious impact on any bat roosts or birds nesting in the roof space.

Householders are advised that built structures and trees need to be checked by a suitably qualified person to ensure that bats, or bat roosts, and nesting birds are not present prior to any work that may affect these species. Advice is available from the council's planning department and ranger services as well as from organisations such as the RSPB and the Bat Conservation Trust.

9.3 Birds: Nesting birds, their eggs and fledglings are legally protected from disturbance under the Wildlife and Countryside Act 1981 (as amended). To comply with this Act work should be delayed until the nesting season is finished, if it is found nesting birds are present. Exceptions apply to pest species.

Bats: It is an offence to intentionally or recklessly damage, destroy or disturb access to any structure or place that a bat uses for shelter or protection. If it is likely the proposed activity will result in an offence being committed, a Natural England license is required (contact details are provided in the **Contacts** section).

The presence of bats or bat roosts is not always obvious and it is recommended that you consult a qualified bat surveyor. The Bat Conservation Trust and the Institute of Ecology and Environmental Management can provide lists of suitable consultants (contact details are provided in the **Contacts** section).

If bats or nesting birds are discovered once the works have started, the work must cease and Natural England should be contacted immediately for advice. This advice must be followed. In either case the

planning department of the local authority must also be informed. Further advice is available from local conservation organisations and Natural England.

Natural England have produced Bats in houses: guidance for householders which is available at: http://www.naturalengland.org.uk/Images/negb1_tcm6-3753.pdf

9.4 The Residential Extensions and Alterations' Supplementary Planning Document provides more information on permitted development and can be found on the council's web site: www.barking-dagenham.gov.uk The Planning Portal has step by step guides to permitted development and this can be found at: http://www.planningportal.gov.uk/permission/commonprojects/

If you are unsure if your proposals are permitted development, please contact the council's Development Planning department for advice (contact details for the council's Contact Centre are provided in the **Contacts** section

Glossary of terms

Term	Definition
Avoidance	Measures taken to avoid adverse impacts of change, such as locating a development away from areas of ecological interest.
Biodiversity (or Biological Diversity)	All plants, animals, fungi and micro-organisms, the genes they contain, and the different habitats of which they are part in a particular area or region.
Biodiversity Action Plan	A Biodiversity Action Plan sets out the targets and actions for the protection, improvement and expansion of priority habitats and species at the local, regional or national level.
Blue infrastructure	Blue infrastructure encompasses waterways and water bodies, including rivers, streams, ponds and lakes. Its functions include the transport of water, biodiversity and amenity.
Blue Ribbon Network	The network of London's waterways and water spaces and land alongside them. It includes the Thames, the canal network, the other tributaries, rivers and streams within London and London's open water spaces such as docks, reservoirs and lakes. It includes culverted (or covered over) parts of rivers, canals or streams.
Brownfield land	Land and premises that have previously been used or developed and are not currently in full use, although it may be partially occupied or utilised. It may also be vacant, derelict or contaminated. Brownfield land may support a large number of species and / or rare species and can contribute significantly to biodiversity.
Compensation	Measures to offset or make up for losses caused as a result of development or other change, including residual adverse effects which cannot or may not be entirely mitigated.
Designated Sites	Collective term for specific sites, capable of being identified on a map, recognised for their nature conservation value which is usually described in a written citation.
Developers brief	A document that outlines detailed planning requirements for the development of a site. It is subject to public consultation prior to publication.
Development Plan	The Statutory Document Plan comprises the Regional Spatial Strategy and the Development Plan Documents contained in the Local Development Framework.

Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
Enhancement	Measures to increase the quality, quantity, net value or importance of biodiversity or geological interest.
Geodiversity	The variety of rocks, fossils, minerals, landforms and soils along with the natural processes that shape the landscape.
Green infrastructure	The sub-regional network of protected sites, nature reserves, greenspaces and greenway linkages. The linkages include river corridors and flood plains, migration routes and features of the landscape which are important as wildlife corridors. Green infrastructure should provide for multi-functional uses i.e. wildlife, recreational and cultural experience, as well as delivering ecological services such as flood protection and microclimate control. It should also operate at all spatial scales from urban centres through to open countryside.
Green roof	The term to describe both intensive ornamental roof gardens and extensive roofs with more naturalistic plantings or self-established vegetation which can provide a habitat for biodiversity.
Greenspace	Generally used to refer to public open space which is normally vegetated rather than hard surfaced. Greenspace occurs in a number of forms including urban parks and gardens and country parks, and has value and potential for biodiversity and geological conservation.
Habitat	The place in which a particular plant or animal lives. Often used in the wider sense referring to major assemblages of plants and animals found together. The place or type of site where an organism or population naturally occurs.
Listed sites	Collective term for specific sites, capable of being identified on a map, recognised for their nature conservation value which is usually described in a written citation.
Major development	A major development is defined as: • For dwellings: where 10 or more dwellings are to be constructed or if the number is not given, the area is more than 0.5 hectares. • For all other uses: where the floor space will be 1000sq metres or more, or the site is 1 hectare or more.

Mitigation	Measures undertaken to limit or reduce adverse effects resulting from development or other change taking place including modifications, deletions or additions to the design of the development, adaptation of methods or timing or adjustments in the nature, scale or location of the project.
Nature conservation	The protection, preservation, management or enhancement and the improvement of understanding and appreciation of flora, fauna and geological and geomorphological features.
Priority species	Priority species and habitats are those identified by the UK Biodiversity Partnership to be of conservation concern
Protected species	Certain plant and animal species are protected to various degrees by law, particularly the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010.
Restoration	The re-establishment of a damaged or degraded system or habitat to a close approximation of its pre-degraded condition.
Strategic development	Developments referable to the Mayor in accordance with the Town and Country Planning (Mayor of London) Order 2008. Examples include: more than 150 houses, flats, or houses and flats; 15,000+sq m of commercial space; buildings 25+m high adjacent to the River Thames; or developments which would increase the height of a building in any location by more than 15m.

References

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Communities and Local Government (2006)	Planning for Biodiversity and Geological Conservation: A Guide to Good Practice
Communities and Local Government (2005)	Planning Policy Statement 1: Delivering Sustainable Development
Communities and Local Government (2005)	Planning Policy Statement 9: Biodiversity and Geological Conservation
DEFRA (2008)	England Biodiversity Strategy Climate Change Adaptation Principles - Conserving biodiversity in a changing climate
DEFRA (2007)	Guidance for Local authorities on Implementing the Biodiversity Duty
Design for London (2007)	East London Green Grid Area Frameworks 2 (Epping Forest and River Roding), 3 (Thames Chase, Beam and Ingrebourne) and 4 (London Riverside)
Environment Agency (2009)	Water for life and livelihoods: River Basin Management Plan Thames River Basin District http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/thames/Intro.aspx
Greater London Authority and London Borough of Barking and Dagenham, (December 2004)	Sites of Importance for Nature Conservation in Barking and Dagenham
Greater London Authority (February 2008)	Improving Londoners' Access to Nature London Plan (Consolidated with Alterations since 2004) Implementation Report
Institute of Ecology and Environmental Management	Sources of Survey Methods: www.ieem.net/surveymethods.asp
London Biodiversity Partnership (2010)	London Biodiversity Action Plan: www.lbp.org.uk
London Borough of Barking and Dagenham (2010 – 2015)	The Local Biodiversity Action Plan for Barking and Dagenham

London Borough of Barking and Dagenham (July 2010)	London Borough of Barking and Dagenham Local Development Framework Core Strategy Development Plan Document
London Borough of Barking and Dagenham (March 2011)	London Borough of Barking and Dagenham Local Development Framework Borough Wide Development Policies Development Plan Document
London Borough of Barking and Dagenham	Regeneration strategy 2008 – 2013
London Borough of Barking and Dagenham (December 2010)	London Borough of Barking and Dagenham Local Development Framework Site Specific Allocations Development Plan Document
London Borough of Barking and Dagenham (2010)	Trees and Development Supplementary Planning guidance
London Borough of Barking and Dagenham (2007)	Urban Design Framework Supplementary Planning Document
London Development Agency	Design for Biodiversity
London Ecology Unit (1992)	Nature Conservation in Barking and Dagenham Ecology Handbook 20
Mayor of London (2008)	East London Green Grid Framework London Plan (Consolidated with Alterations since 2004) Supplementary Planning Guidance
Mayor of London (2008)	The London Plan Spatial Development Strategy for Greater London (consolidated with Alterations since 2004)
Mayor of London (July 2011)	The London Plan Spatial Development Strategy for Greater London
Natural England (2009)	Green Infrastructure Guidance
Natural England	Local Nature Reserves: www.lnr.naturalengland.org.uk/Special/lnr/lnr_search.asp
Natural England (May 2009)	London Regional Landscape Framework
Natural England	Nature on the map: www.natureonthemap.org.uk
Natural England (2008)	UK list of priority habitats and species www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/prioritylist.aspx
Natural England	Wildlife licences: www.naturalengland.org.uk/ourwork/regulation/wildlife/licences/default.aspx
Neighbourhood Greens (2007)	A Natural Estate
Nigel Dunnett and Noël Kingsbury (2004)	Planting Green Roofs and Living Walls (Timber Press)

Office of Public Service Information	Statutory Instruments 2010 No. 490 Wildlife Countryside The Conservation of Habitats and Species Regulations 2010
Office of Public Service Information	Protection of Badgers Act 1992
Office of Public Service Information	Wildlife and Countryside Act 1981
Planning Portal	Householders Guide: http://www.planningportal.gov.uk/permission/house
Royal Institute of British Architects (March 2010)	Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build
Royal Society for the Protection of Birds (March 2010)	Birds need buildings too
Town and Country Planning Association (2004)	Biodiversity by Design: A Guide for Sustainable Communities
Town and Country Planning Association (2009)	Biodiversity positive: Eco-towns biodiversity worksheet
UK Biodiversity Partnership	UK biodiversity Action Plan: www.ukbap.org.uk
UK Green Building Council (March 2009)	Biodiversity and the Built Environment A report by the UK-GBC Task Group

Contacts

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Web site: www.ieem.net
Commercial Directory Search (Find an Expert):
www.ieem.net/ieemdirectory.asp

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Appendix 1: Ecological Survey Seasons

Key: Optimal Survey Time: ■ **Extending into:** ■

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Badgers		■	■	■	■	■	■	■	■	■	■	■
Bats (Hibernation Roosts)	■	■	■								■	■
Bats (Summer Roosts)				■	■	■	■	■	■			
Bats (Foraging/ Commuting)				■	■	■	■	■	■	■		
Birds (Breeding)			■	■	■	■	■	■				
BIRDS (Over Wintering)	■	■									■	■
Dormice	■				■	■	■	■	■		■	■
Great–Crested Newts		■ AQUATIC	■ AQUATIC	■ AQUATIC	■ AQUATIC	TERRESTRIAL	TERRESTRIAL	TERRESTRIAL	TERRESTRIAL	■ TERRESTRIAL		
Invertebrates				■	■	■	■	■	■			
Natterjack Toads				■	■							
Otters	■	■	■	■	■	■	■	■	■	■	■	■
Reptiles				■	■	■	■		■			
Water Voles		■	■	■	■	■	■	■	■	■		
White-Clawed Crayfish							■	■	■			
Habitats/Vegetation				■	■	■	■	■	■			

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

Points to note regarding surveys are as follows:

- For certain species and habitats surveys can be carried out at any time of year, but for other species, particular times of year are required to give the most reliable results, as indicated in the above table.

- Surveys conducted outside of optimal times provided in the above table may be unreliable. For certain species (*e.g.* Great Crested Newt) surveys over the winter period are unlikely to yield any useful information. Similarly negative results gained outside the optimal period should not be interpreted as absence of a species and further survey work may be required during the optimal survey season. This is especially important where existing surveys and records show the species has been found previously on site or in the surrounding area.

- Species surveys are also very weather dependent so it may be necessary to delay a survey or to carry out more than one survey if the weather is not suitable, e.g. heavy rain is not good for surveying for water voles, as it washes away their droppings. Likewise bat surveys carried out in wet or cold weather may not yield accurate results.

- Absence of evidence of a species does not necessarily mean that the species is not there, nor that its habitat is not protected (e.g. a bat roost is protected whether any bats are present or not).

- Greenspace Information for Greater London, the capital's environmental records centre, may have useful existing information and records.

- Competent ecologists should carry out any surveys. Where surveys involve disturbance, capture or handling of a protected species, then only a licensed person (as issued by Natural England) can undertake such surveys. Surveys should follow published national or local methodologies. Further details may be found on the following web sites:

  IEEM
  www.ieem.net

  Natural England:
  www.naturalengland.org.uk/publications

Appendix 2: Protected and priority species likely to be found in Barking and Dagenham

The complete species lists for London for all Vertebrates; Invertebrates; Plants; and Fungi are available from the London Biodiversity Partnership and can be accessed at: http://www.lbp.org.uk/

Protected and Priority species likely to be found in Barking and Dagenham

*The following list should be taken as indicative and should not be relied upon as evidence that a particular species is present or absent in the borough

	Protected Species	**UK BAP Priority Species**	**London BAP Priority Species**
Reptiles			
Adder	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Common lizard	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Grass snake	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Slow worm	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Amphibians			
Common frog	Schedule 5 Wildlife and Countryside Act		**Y**
Common toad	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Great Crested Newt	European protected species and Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Smooth newt	Schedule 5 Wildlife and Countryside Act		

Fish			
Atlantic salmon	European protected species	**Y**	
Eel		**Y**	
River lamprey	European protected species	**Y**	
Sea lamprey	European protected species	**Y**	
Smelt		**Y**	
Twaite shad	European protected species and Schedule 5 Wildlife and Countryside Act	**Y**	
Sea/Brown trout		**Y**	
Bullhead	European protected species	**Y**	
Flounder		**Y**	
Mammals			
Brown hare		**Y**	**Y**
Brown long-eared bat	European protected species and Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Common pipistrelle	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Daubenton's bat	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Harvest mouse		**Y**	**Y**
Hedgehog	Schedule 6 Wildlife and Countryside Act	**Y**	**Y**
Leisler's bat	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Nathusius' pipistrelle	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Natterer's bat	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Noctule bat	European protected species and Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Serotine bat	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Soprano pipistrelle	European protected species and Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Water vole	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**

Whiskered/Brandt's bats	European protected species and Schedule 5 Wildlife and Countryside Act		**Y**
Badger	Schedule 6 Wildlife and Countryside Act and the Protection of Badgers Act		
Common shrew	Schedule 6 Wildlife and Countryside Act		
Pygmy shrew	Schedule 6 Wildlife and Countryside Act		
Water shrew	Schedule 6 Wildlife and Countryside Act		
Birds	All wild birds (except certain listed pest species and sporting birds) are protected under the Wildlife and Countryside Act 1981 (as amended). Species on Schedule 1 receive additional protection.		
Black redstart	Schedule 1 Wildlife and Countryside Act		**Y**
Bullfinch		**Y**	**Y**
Corn bunting		**Y**	**Y**
Cuckoo		**Y**	**Y**
Dunnock		**Y**	**Y**
Grasshopper warbler		**Y**	**Y**
Grey partridge		**Y**	**Y**
Hawfinch		**Y**	**Y**
Herring gull		**Y**	**Y**
House sparrow		**Y**	**Y**
Lapwing		**Y**	**Y**
Lesser redpoll		**Y**	**Y**
Lesser spotted woodpecker		**Y**	**Y**
Linnet		**Y**	**Y**
Marsh tit		**Y**	**Y**
Marsh warbler	Schedule 1 Wildlife and Countryside Act	**Y**	**Y**
Peregrine	Schedule 1 Wildlife and Countryside Act		**Y**
Reed bunting		**Y**	**Y**
Sand martin			**Y**
Skylark		**Y**	**Y**
Song thrush		**Y**	**Y**
Spotted flycatcher		**Y**	**Y**
Starling		**Y**	**Y**
Swift			**Y**
Tree pipit		**Y**	**Y**
Tree sparrow		**Y**	**Y**
Turtle dove		**Y**	**Y**
Wood warbler		**Y**	**Y**

Yellow wagtail		**Y**	**Y**
Yellowhammer		**Y**	**Y**
Avocet	Schedule 1 Wildlife and Countryside Act		
Barn owl	Schedule 1 Wildlife and Countryside Act		
Bearded tit	Schedule 1 Wildlife and Countryside Act		
Cetti's warbler	Schedule 1 Wildlife and Countryside Act		
Common tern	European protected species		
Firecrest	Schedule 1 Wildlife and Countryside Act		
Garganey	Schedule 1 Wildlife and Countryside Act		
Hobby	Schedule 1 Wildlife and Countryside Act		
Kingfisher	Schedule 1 Wildlife and Countryside Act		
Little ringed plover	Schedule 1 Wildlife and Countryside Act		
Pintail	Schedule 1 Wildlife and Countryside Act		
Invertebrates			
Butterflies			
Dingy skipper *(Erynnis tages)*		**Y**	**Y**
Small heath *(Coenonympha pamphilus)*		**Y**	**Y**
Wall (*Lasiommata megera*)		**Y**	**Y**
Macro-moths			
Buff ermine *(Spilosoma luteum)*		**Y**	**Y**
Cinnabar (*Tyria jacobaeae*)		**Y**	**Y**
Garden tiger (Arctia caja)		**Y**	**Y**
Ghost moth (*Hepialus humuli*)		**Y**	**Y**
Lackey (*Malacosoma Neustria*)		**Y**	**Y**
Latticed heath (Chiasmia clathrata)		**Y**	**Y**
Mouse moth		**Y**	**Y**

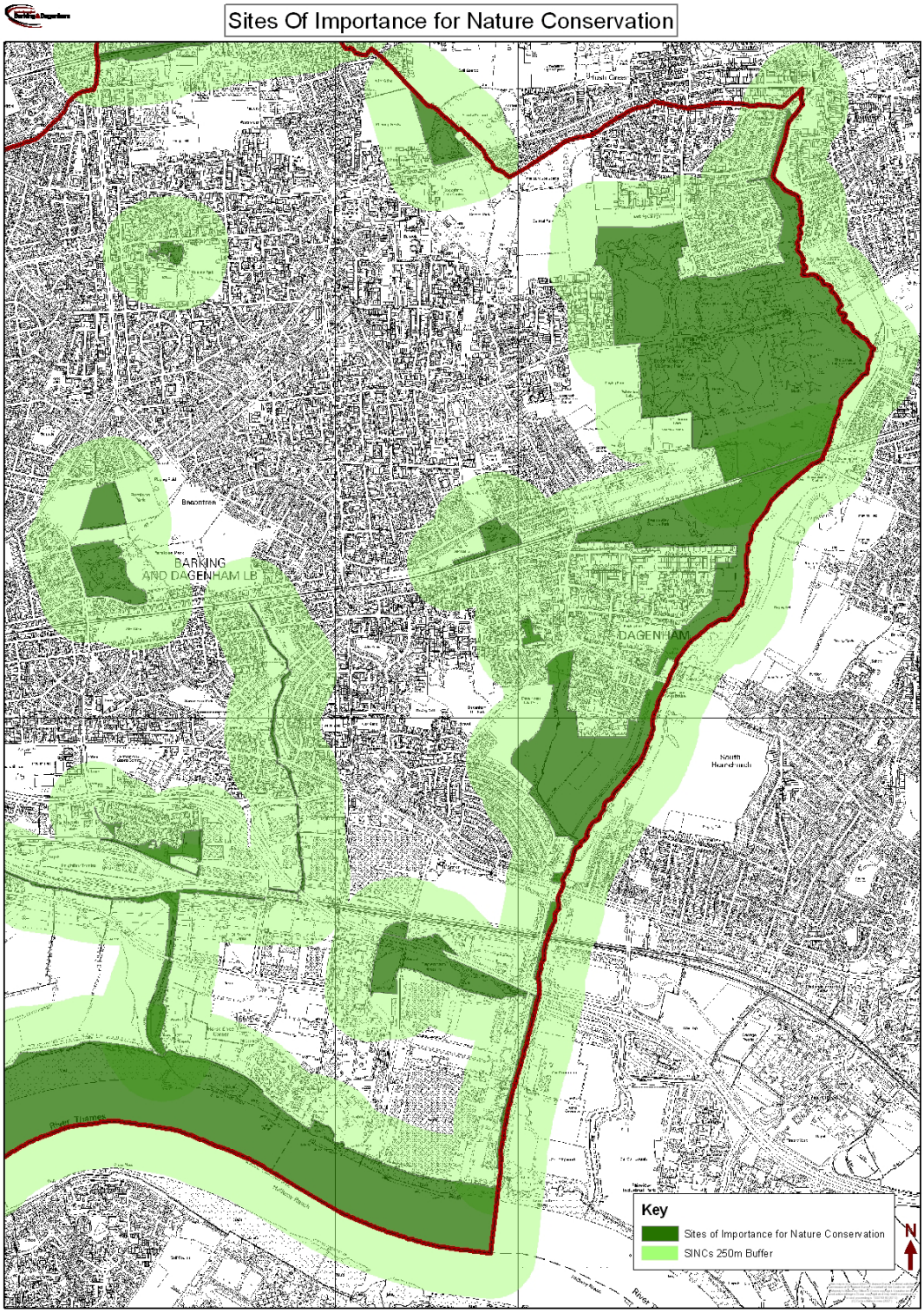
(*Amphipyra tragopoginis*)			
Mullein wave (*Scopula marginepunctata*)		**Y**	**Y**
Shaded broad-bar (*Scotopteryx chenopodiata*)		**Y**	**Y**
Small square-spot (*Diarsia rubi*)		**Y**	**Y**
White ermine (*Spilosoma lubricipeda*)		**Y**	**Y**
Dragonflies and Damselflies			
Scarce emerald damselfly (*Lestes dryas*)		**Y**	**Y**
Beetles			
Harpalus (Harpalus) froelichii		**Y**	
Ophonus melletii		**Y**	
Ophonus puncticollis		**Y**	
Stag Beetle (*Lucanus cervus*)	Schedule 5 Wildlife and Countryside Act	**Y**	**Y**
Bees, Ants and Wasps			
Brown-banded carder bee (*Bombus (Thoracombus) humilis*)		**Y**	**Y**
Five-banded tailed digger wasp (*Cerceris quinquefasciata*)		**Y**	**Y**
True flies			
Phoenix fly (a picture-winged fly*) Dorycera graminum*		**Y**	**Y**
Plants			
Juniper (*Juniperus communis*)		**Y**	**Y**
Borrer's saltmarsh-grass (*Puccinellia fasciculate*)		**Y**	**Y**
Cornflower (*Centaurea cyanus*)		**Y**	

Divided sedge (*Carex divisa*)		**Y**	**Y**
Field Wormwood (*Artemisia campestris*)		**Y**	
Mistletoe (*Viscum album*)			**Y**
Black poplar (*Populus nigra betulifolia*)			**Y**

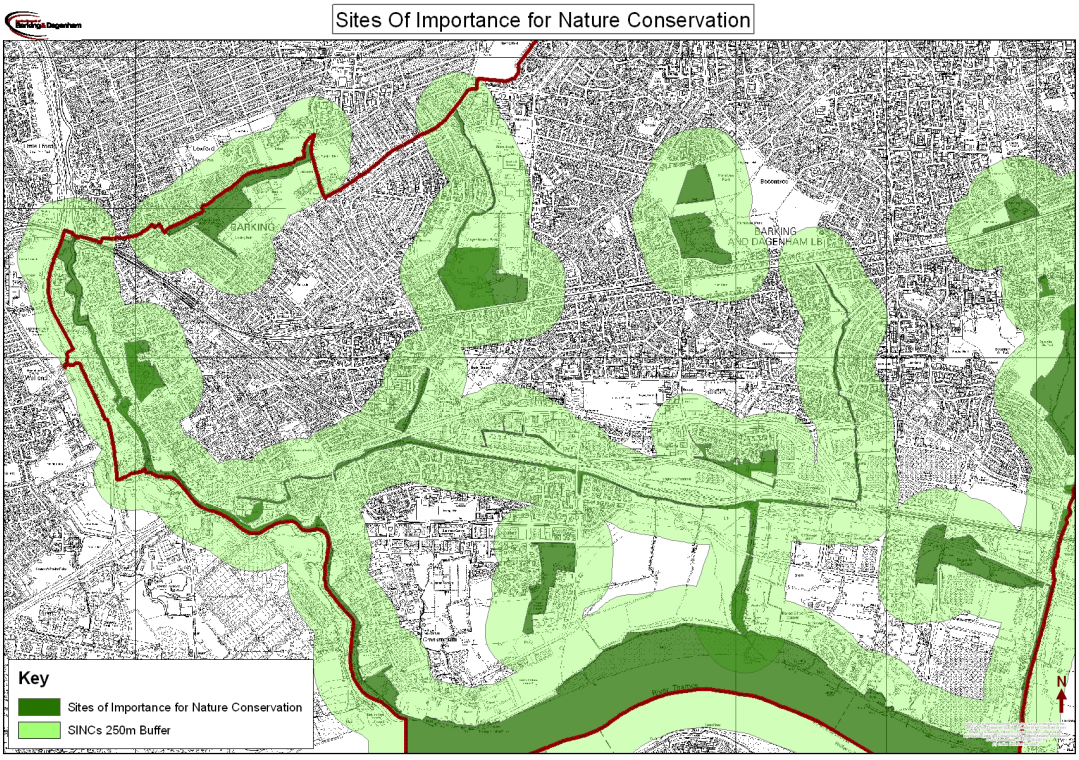
Appendix 3: Location of Sites of Importance for Nature Conservation and 250m buffers

A high resolution map is available online at: www/barking-dagenham.gov.uk

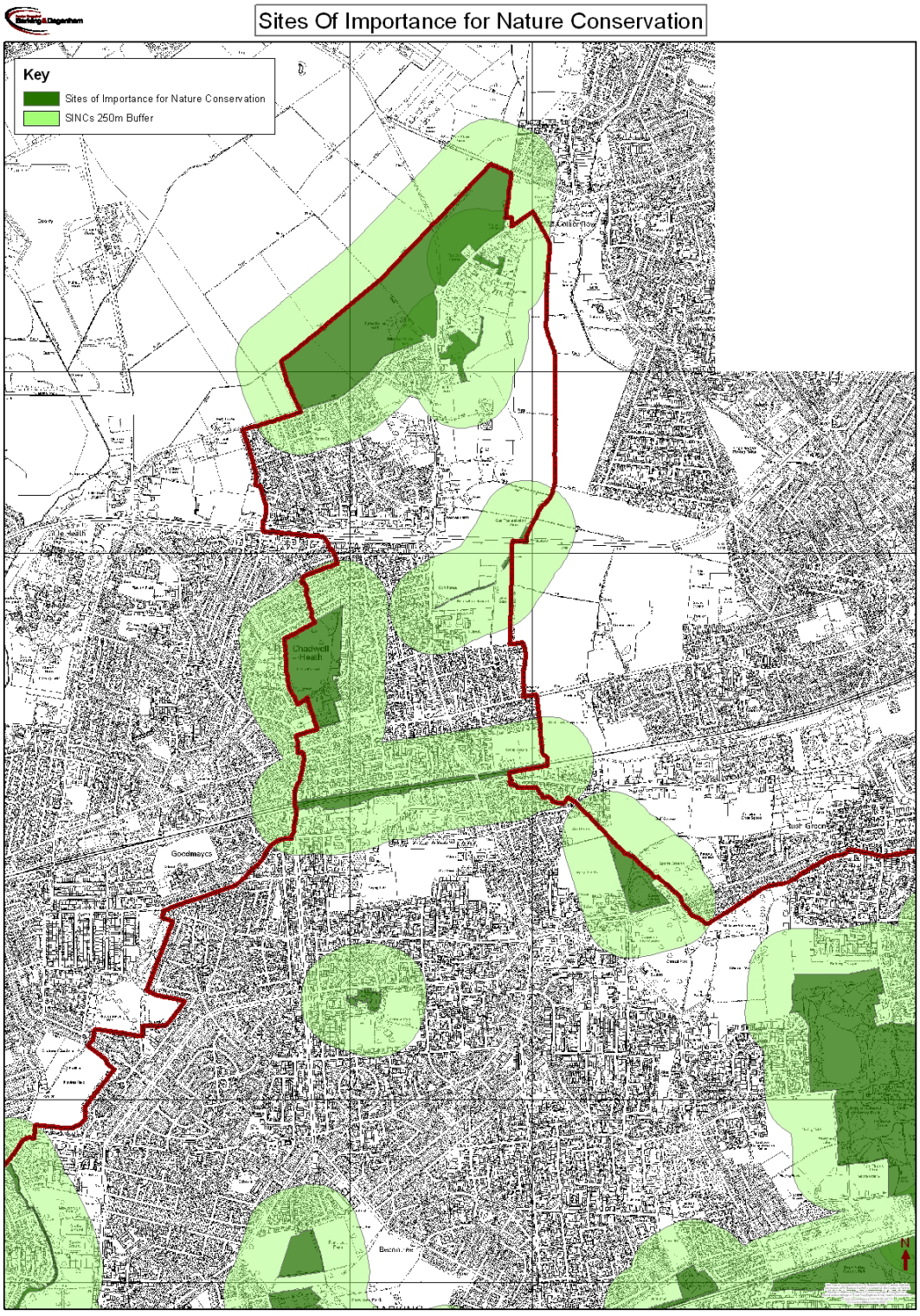
Map 1



Map 2


Sites Of Importance for Nature Conservation
BARKING
BARKING AND DAGENHAM LB
Key
Sites of Importance for Nature Conservation
SINCs 250m Buffer
N

Map 3


Sites Of Importance for Nature Conservation
Key
Sites of Importance for Nature Conservation
SINCs 250m Buffer
N

Appendix 4: London Regional Habitat Targets for 2020

Table 4.1 London Regional BAP Habitat Targets for 2020 (Based on Table 7.3 in the London Plan)

Habitat type	Maintain Current Net Extent (ha unless stated) – 2008 figures*	Target to enhance by 2020 (ha unless stated) – from 2008 baseline	Target to increase by 2020 (ha unless stated) – from 2008 baseline
Coastal and floodplain grazing marsh	850	200	50
Chalk grassland	350	30	10
Acid grassland	1466	40	10
Heathland	45	20	5
Reedbeds	131	20	16
Woodland	4909	500	20
Orchards	18	13	5
Meadows and pastures	685	40	20
Tidal Thames	2300[1]	2km[2]	
Rivers and streams[3]	614km	100km[4]	25km[5]
Standing water6 (large and small sites + 2 ha combined)	599	7 >2ha sites 20<2ha sites	250 ponds<2ha
Standing Water[6] – Small sites < 2ha	411	20	250 ponds
Fen, marsh and swamp	109	10	-
Open Mosaic habitats on previously developed land[7]	185 (conserved and/or created)		

* Figures derived from 2008 GiGL baseline habitat data for London which includes data for all London Boroughs and the City with the exception of LB Bromley. Figures to be updated in September 2009 to incorporate London Borough Bromley data.

Notes

1. 2300 ha includes habitat features found with the tidal Thames including mudflats, saltmarsh and reedbeds

2. Target for enhancement relates primarily to small interventions along river walls. Enhancement and restoration targets for other habitat types found within the tidal Thames are dealt with separately in the table.

3. Defined as main river by the Environment Agency – includes larger streams and rivers but can include smaller watercourses of local significance.

4. Enhancement includes interventions such as control of invasive species, removal of toe-boarding, etc

5. Increase involves fullscale restoration resulting from de-culverting or reprofiling of the river channel

6. Includes canals

7. Formerly wastelands. The new title reflects UK BAP priority habitat nomenclature. The target for the former wastelands habitat differs from the others as it remains the Mayor's target, not that of the London Biodiversity Partnership and does not seek to protect the whole of the existing habitat resource. 185ha is the area of wasteland habitat estimated within the framework of strategic importance for biodiversity set out in paragraph 7.60. This target should be used to inform the redevelopment of brownfield land so that important elements of wasteland habitat are incorporated in development proposals as well as recreating the characteristics of the habitat within the design of new development and public spaces, for example on green roofs (policy 5.11) Source: GLA 2011

Appendix 5: Protected species

European Protected Species

Certain species are defined as **European Protected Species** and are protected by the Conservation of Habitats and Species Regulations 2010, which transposes the European Union's Habitats Directive into UK law. It is an offence to kill, deliberately disturb, take or destroy the eggs, damage or destroy the breeding site or nesting place, or keep, transport, sell or exchange any of these species.

In Barking and Dagenham the most common European Protected Species likely to be found are:

- Bats (all species) and their roosts
- Great crested newt and its aquatic and terrestrial habitats

When considering a planning application that affects a European protected Species the local planning authority must determine if:

- There is no satisfactory alternative to the development.
- Impacts are not detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.
- The development is in the interests of public health or safety, or for other imperative reasons of overriding public interest, including those of social, economic and environmental benefit.

The local planning authority can only fulfil its duty if adequate ecological information is made available by the applicant. Survey and assessment requirements are discussed below.

If the ecological survey and assessment show that the proposed activity is considered reasonably likely to result in an offence being committed, a Natural England licence is required. Further information on Natural England licences and requirements for appropriate assessment and mitigation can be found on the Natural England web site: www.naturalengland.org.uk

Nationally protected species (Wildlife and Countryside Act 1981 (as amended))

The Wildlife and Countryside Act 1981 (as amended) provides different levels of protection to native plant and animal species in England and Wales. Species protected by this legislation are listed on Schedules that are reviewed every five years.

Species protected under the Wildlife and Countryside Act 1981 (as amended) include:

- All wild birds (except certain listed pest species and sporting birds): It is an offence to intentionally kill, injure, take, damage or destroy birds, their chicks, eggs or nests.

- Schedule 1 birds and their nests receive additional protection: Protection from intentional or reckless disturbance at or near the nest. Species include barn owl, kingfisher, black redstart and peregrine falcon.

- Bats (all species) – intentional or reckless disturbance in a place used for shelter and protection. Intentional or reckless obstruction of a place used for shelter or protection.

- Great crested newts – intentional or reckless disturbance in a place used for shelter and protection. Intentional or reckless obstruction of a place used for shelter or protection.

- Dormouse - intentional or reckless disturbance in a place used for shelter and protection.

- Badger – may not be taken or killed by certain methods. (Badgers (and their setts) are also protected under the Protection of Badgers Act 1992).

- Water vole – intentionally kill, injure or take water voles. Intentional or reckless disturbance whilst occupying a structure or place for shelter or protection. Intentional or reckless damage, destruction or obstruction of access to places of shelter.

- Adder, common lizard, grass snake, slow worms – protected from intentional killing, injuring and sale.

Certain plant species are also protected by this legislation, including all species listed in Schedule 8 of the Act.

Appendix 6: Areas deficient in access to nature in the London Borough of Barking and Dagenham