

# London Borough of Richmond upon Thames Local Flood Risk Management Strategy

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Habitats Regulations Assessment

July 2014



| <b>REVISION SCHEDULE</b> |             |                |                    |                           |                           |
|--------------------------|-------------|----------------|--------------------|---------------------------|---------------------------|
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## 1 INTRODUCTION

### 1.1 Background

This document forms the Habitats Regulations Assessment (HRA) of the Local Flood Risk Management Strategy ('the Strategy') for the London Borough of Richmond upon Thames ('Richmond Borough').

It is a requirement of the EU 'Habitats Directive' 1992 (hereafter referred to as the Habitats Directive)<sup>1</sup> and the Conservation of Habitats and Species Regulations 2010 (Box 1) that 'land use plans' are subject to an 'Appropriate Assessment' (AA) if it is likely that they will lead to significant [adverse] effects on a Natura 2000 site (Special Areas of Conservation (SACs), and Special Protection Areas (SPAs)). As a matter of UK Government policy Ramsar sites<sup>2</sup>, candidate Special Areas of Conservation (cSAC) and proposed Special Protection Areas (pSPA) are given equivalent status. These protected sites are collectively referred to as 'European sites' in this report.

#### Box 1: The legislative basis for Appropriate Assessment

##### EU 'Habitats Directive' 1992

*"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives."*

Article 6 (3)

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

*"A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site or a European Offshore Marine Site (either alone or in combination with other plans or projects) ... must make an appropriate assessment of the implications for the site in view of that sites conservation objectives ... The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site ..."*

The Habitats Directive applies the precautionary principle to protected areas; plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This is in contrast to the Strategic Environmental Assessment (SEA) Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; it simply says that the assessment findings (as documented in the 'environmental report') should be 'taken into account' during preparation of the plan or programme. In the case of the Habitats Directive, potentially damaging plans and projects may be permitted only if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation will be necessary to ensure the overall integrity of the Natura 2000 network of protected sites.

As assessment of plans has developed, the term Habitats Regulations Assessment (HRA) has come into currency for describing the overall assessment process (including screening to determine whether significant adverse effects are likely or not) and this term is used below when necessary to distinguish the process from the 'Appropriate Assessment' stage itself.

<sup>1</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

<sup>2</sup> Wetlands of International Importance designated under the Ramsar Convention 1979

## 1.2 Scope of HRA

The scope of the HRA includes all European sites within Richmond Borough (the coverage of this 'land use plan') and additionally any European sites outside the Borough that are designated for features that could potentially be significantly affected by measures or policies within the land use plan. Within the context of this HRA, the majority of these lie within the South West London area.

Richmond Council, as the Lead Local Flood Authority (LLFA), is given provisions under the Flood Risk Regulations 2009 ('the Regulations') and the Flood and Water Management Act 2010 ('the Act') to coordinate and manage the risk of flooding from 'local' sources of flooding, within Richmond Borough; these include:

- Surface runoff – surface water prior to entry into water courses;
- Groundwater – subterranean water in contact with substrates; and
- Water courses – other than those on the Environment Agency's statutory map of main rivers (therefore including ditches, ponds, lakes and streams).

Flooding from main rivers and sewers are the responsibility of the Environment Agency and water companies respectively.

The Strategy, a requirement of the Act, sets out how the local sources of flooding will be managed over future years. Therefore any European sites that could be affected by strategies, policies or measures arising through this Strategy should be subject to HRA. This will include any sites that are affected by water levels or pollution and which could lie within the catchment, or downstream of, local flooding events in Richmond Borough.

Additionally, Richmond Borough forms part of the Greater London Flood Risk Area and as the LLFA Richmond Council is required, under the Regulations, to contribute to the preparation of a Flood Risk Management Plan outlining significant flood risk, receptors and consequences across the Flood Risk Area. The Strategy has been prepared to meet the requirements of the Regulations as well as the Act.

The following European sites lie within London:

- Richmond Park SAC in the London Borough of Richmond;
- Wimbledon Common SAC in the London Boroughs of Merton and Wandsworth;
- Epping Forest SAC in the London Borough of Waltham Forest;
- Lee Valley SPA/Ramsar site in the London Borough of Waltham Forest; and
- South West London Waterbodies SPA/Ramsar site, a small part of which lies within the London Borough of Hounslow.

The location of these European sites are shown in Figure 1 in Appendix A and described in Appendix B.

In addition, Windsor Forest & Great Park SAC lies 6km to the west of London and Wormley Hoddesdonpark Woods SAC lies 4.5km north of London. These are the two closest European sites outside London. The Thames Estuary & Marshes SPA/Ramsar site lies 14km east (downstream) of London and is hydrologically connected to London via the River Thames.

For the purposes of this assessment, Windsor Forest & Great Park SAC, Epping Forest SAC, Lee Valley SPA and Wormley Hoddesdonpark Woods SAC are all scoped out of this analysis as they are geographically remote from Richmond Borough (most being in North London on the far side of the River Thames) and hydrologically disconnected from the Borough. Those sites are therefore not discussed further.

Richmond Park SAC is also scoped out of assessment (despite being located within Richmond Borough) since it is internationally designated solely for its population of stag beetle. The persistence

of the stag beetle population is primarily dependent on the Park retaining an adequate supply of standing and partially buried dead wood (in which stag beetles spend most of their life cycle as larvae) and this would not be affected by local flood risk management.

The Thames Estuary & Marshes SPA/Ramsar site is also scoped out of assessment because it is geographically remote from Richmond Borough (lying almost 50km to the east) and because flood risk management associated with the River Thames lies outside the remit of the Strategy (being an Environment Agency responsibility), despite the proximity of Richmond Borough to the River Thames.

The South West London Waterbodies SPA/Ramsar site is also scoped out of assessment because these waterbodies consist of a series of sealed reservoirs (such as Wraysbury Reservoir or Staines Reservoirs) or flooded former gravel pits (such as Wraysbury Pits). The reservoirs are separated hydrologically from any influence due to local flood risk management. While the flooded gravel pits could potentially be affected by anything that changed the water table or affected groundwater the nearest gravel pit component of the SPA/Ramsar site is Thorpe No.1 Gravel Pit in Spelthorne 14km to the west of Richmond Borough. It is not feasible that any flood risk management activities in the Borough would affect the water table so remotely.

This document therefore focusses on the potential for impacts on Wimbledon Common SAC which lies almost adjacent to the boundary of Richmond Borough and does have moderate hydrological sensitivity being internationally designated partly for its areas of wet heathland which are associated with a high local water table on the Common.

### **1.3 This Report**

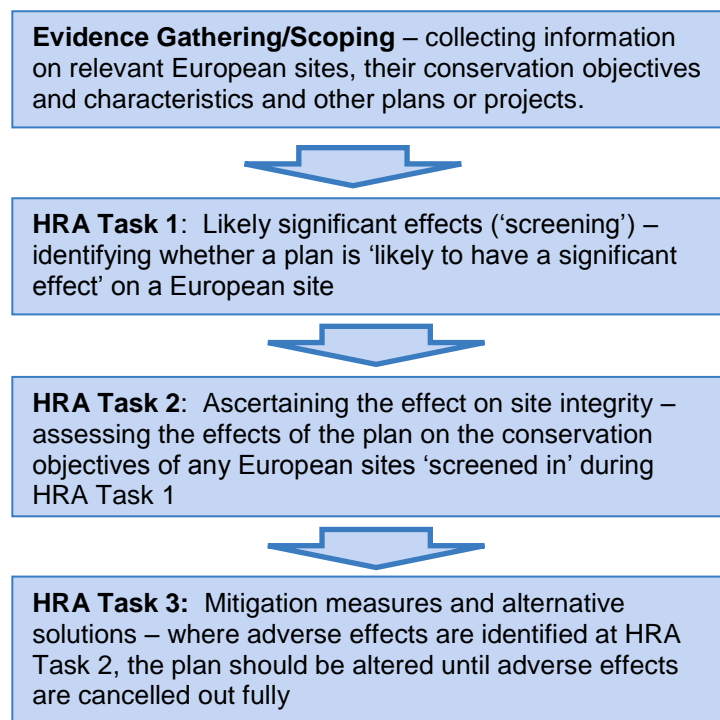
Section 2 of this report explains the process by which the HRA has been carried out. Section 3 presents an assessment of the Strategy Action Plan Objectives and Measures in respect of European sites. The key findings are summarised in Section 4: Conclusions. The details of the European sites considered within this report are provided in Appendix B.

## 2 METHODOLOGY

### 2.1 The Process of HRA

The HRA has been carried out in the continuing absence of formal Government guidance. Communities & Local Government (CLG) released a consultation paper on AA of Plans in 2006<sup>3</sup>. As yet, no further formal guidance has emerged although informal guidance documents exist, produced by RSPB and for internal use by Natural England. Figure 2 below outlines the stages of HRA according to current draft CLG guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the plan until no significant adverse effects remain.

**Figure 2: Four-Stage Approach to Habitat Regulations Assessment**



### 2.2 HRA Task One: Likely Significant Effects (Screening)

The first stage of any Habitat Regulations Assessment is a Likely Significant Effect (LSE) or screening test - essentially a high level risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required, and on which aspects any AA will need to be focussed. The essential question is: *"Is the [plan] (or any part of the [plan]), either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?"*

This stage of the HRA process is the focus of this report.

### 2.3 Confirming Other Plans and Projects that may act 'In Combination'

It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the European site(s) in question.

<sup>3</sup> CLG (2006) Planning for the Protection of European Sites, Consultation Paper

It is clearly neither practical nor necessary to assess the ‘in combination’ effects of the Strategy within the context of all other plans and projects within London. In practice therefore, in combination assessment is of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. For the purposes of this assessment, it has been determined that, due to the nature of the identified impacts, the key other plans and projects relate to the additional housing, and commercial/industrial allocations proposed for local authorities within South West London (the catchment area) over the lifetime of the Strategy (2014 – 2020).

**Table 2.1: London Borough Housing Targets from Local Plans**

| London Borough       | Housing to be delivered                 |
|----------------------|---|
| Merton               | 4,800 from 2011-2026 <sup>4</sup>       |
| Richmond upon Thames | 1,500-3,300 from 2017-2027 <sup>5</sup> |
| Kingston upon Thames | 5,625 from 2012-2026 <sup>6</sup>       |
| Croydon              | 13,300 from 2011 - 2021 <sup>7</sup>    |
| Wandsworth           | 3,750 from 2017-2021 <sup>8</sup>       |
| Sutton               | 5,175 from 2009-2023 <sup>9</sup>       |

<sup>4</sup> Merton's Core Planning Strategy. Adopted July 2011

<sup>5</sup> Richmond Core Strategy. Adopted April 2009

<sup>6</sup> Kingston upon Thames Core Strategy. Adopted April 2012

<sup>7</sup> Croydon Local Plan. Adopted April 2013

<sup>8</sup> Wandsworth Core Strategy. Adopted October 2010

<sup>9</sup> Sutton Core Planning Strategy. Adopted December 2009



### 3 SCREENING OF THE STRATEGY OBJECTIVES AND MEASURES

#### 3.1 Introduction

All objectives and measures contained within the Strategy and the associated Action Plan were screened for potential conflicts with European sites. All of the objectives and measures could be 'screened out' as there was no potential for any of these to result in a likely significant effect on the hydrology of Wimbledon Common SAC. Table 3.1 highlights the objectives/measures and the HRA screening appraisal.

**Table 3.1: HRA Screening of the London Borough of Richmond upon Thames' Strategy Objectives and Measures (as outlined in the Strategy and the accompanying Action Plan)**

| Strategy Objective   | Measures  | HRA Screening outcome   |
|--|---|---|
| 1. Encourage direct involvement in decision making through the establishment of and maintaining partnerships with key organisations, including the Environment Agency and Thames Water | <ul style="list-style-type: none"> <li>Clarify roles and responsibilities of all risk management authorities and key stakeholders involved in dealing with flood risk in Richmond Borough</li> <li>Lead and maintain the Richmond Council Flood Group and work together to understand and manage local flood risk issues</li> <li>Establish and continue collaborative working relationships with neighbouring LLFA officers to manage cross-boundary flood risks, particularly with South West London boroughs</li> <li>Establish effective data and information sharing agreements, particularly with all other risk management authorities, including the Environment Agency and Thames Water</li> </ul>   | No likely significant effects on European sites. Positive in that it encourages a clear understanding of flood risk issues and coordinated working. |
| 2. Improve our knowledge and understanding of the interactions between different sources of flooding in Richmond Borough   | <ul style="list-style-type: none"> <li>Collate and review information on ordinary watercourses</li> <li>Develop a comprehensive flood investigation protocol, including a process map for reporting flood incidents, and agree thresholds for formal investigation to ensure that flood events are investigated where the Council deems it necessary and appropriate</li> <li>Where necessary undertake studies with the support of key stakeholders to investigate potential flood risk interactions, and ensure additional modelling will be undertaken to fully assess the joint probability of fluvial and tidal floods</li> <li>Compile and maintain a register of key structures and features that could affect flood risk in the Borough, including their significance, condition and ownership</li> <li>Identify, and where necessary designate, privately owned structures or features to ensure they are protected and encourage their owners to maintain these assets</li> </ul> | No likely significant effects on European sites. Positive in that it encourages a clear understanding of flood risk issues and coordinated working. |

| Strategy Objective  | Measures  | HRA Screening outcome   |
|---|---|---|
| <p>3. Encourage residents, businesses and local landowners to take action and contribute to the management and reduction of flood risk</p>                          | <ul style="list-style-type: none"> <li>• Develop strong and targeted communications to improve awareness and explain the level of risk affecting the residents and businesses of the Borough by providing a clear overview of the different types of flooding affecting the Borough</li> <li>• Enable and empower all partners, businesses and residents to respond effectively to flooding events by providing information and guidance through engagement activities (such as consultations, workshops etc) and highlight which actions they should be taking to manage flood risk</li> <li>• Work with the Environment Agency to understand the uptake of the flood warning service and encourage all other residents and businesses that are at risk of flooding to register for this service</li> <li>• Integrate updated and improved flood risk modelling, in particular in relation to surface water flood risks, into future flood emergency plans and procedures</li> </ul> | <p>No likely significant effects on European sites; measures to prevent increased flood risk would not affect water supply to water-dependent European sites.</p>       |
| <p>4. Target resources where they have the greatest effect by adopting a risk-based approach</p>  | <ul style="list-style-type: none"> <li>• Avoid building within flood affected areas, ensure new developments are designed to minimise and reduce flood risk and consider developing planning policies or guidance for areas that are susceptible to surface water flooding , taking account of future legislation and guidance on Sustainable Drainage Systems</li> <li>• Continue a pro-active approach to the management of the Council's assets, and target known problem areas e.g. gully clearing, ditches, leaf clearing</li> <li>• Develop an action plan and a robust approach for prioritising spending on schemes that are designed to reduce flood risk and improve the cost/benefit ratio</li> </ul>  | <p>No likely significant effects on European sites; measures are related to flood risk assets and forecasting and will not affect water tables in Wimbledon Common.</p> |
| <p>5. Contribute to wider social, economic and environmental outcomes by encouraging sustainable multi-benefit solutions for the management of local flood risk</p> | <ul style="list-style-type: none"> <li>• Ensure that flood risk management schemes and works in the Borough enhance and improve biodiversity, water quality and the natural environment where possible and take account of the likely effects of climate change</li> <li>• Ensure that flood risk management schemes and works in the borough have wider benefits which bring about positive social development</li> <li>• Ensure that flood risk management schemes bring about economic benefits</li> </ul>   | <p>No likely significant effects on European sites. Positive in that it encourages a clear understanding of flood risk issues and coordinated working.</p>              |

### 3.2 Other plans and projects

This section discusses other plans and projects that may operate in combination with the Strategy.

Water Company Water Resources Management Plans could theoretically lead to an in combination effect on European sites sensitive to changes in hydrology, if such plans included strategies that would reduce water availability to such European sites, and if there were any mechanism by which the Strategy could contribute to this 'in combination'. However, the Strategy does not include any strategic objectives that would be likely to lead to such effects, and the groundwater resources beneath Wimbledon Common are not abstracted for Public Water Supply.

Development of new housing under local authority Core Strategies and Local Plans has the potential to increase water demand and increase pressure on water treatment facilities. However, such spatial strategies are subject (through any need for mitigation identified through their own HRA assessments) to timely provision of infrastructure capacity, such as water resource availability and sewerage treatment works. Hydrological changes and water quality reductions would be avoided through regulatory frameworks implemented by the Environment Agency, working with water companies as necessary to ensure approaches to achieve favourable status of European sites. Coupled with the fact that the Strategy does not contain any measures that would be likely to lead to any effects on hydrological processes or water quality that would affect European sites, there is no likelihood of in combination effects of the Strategy alongside local authority strategic plans of this type.

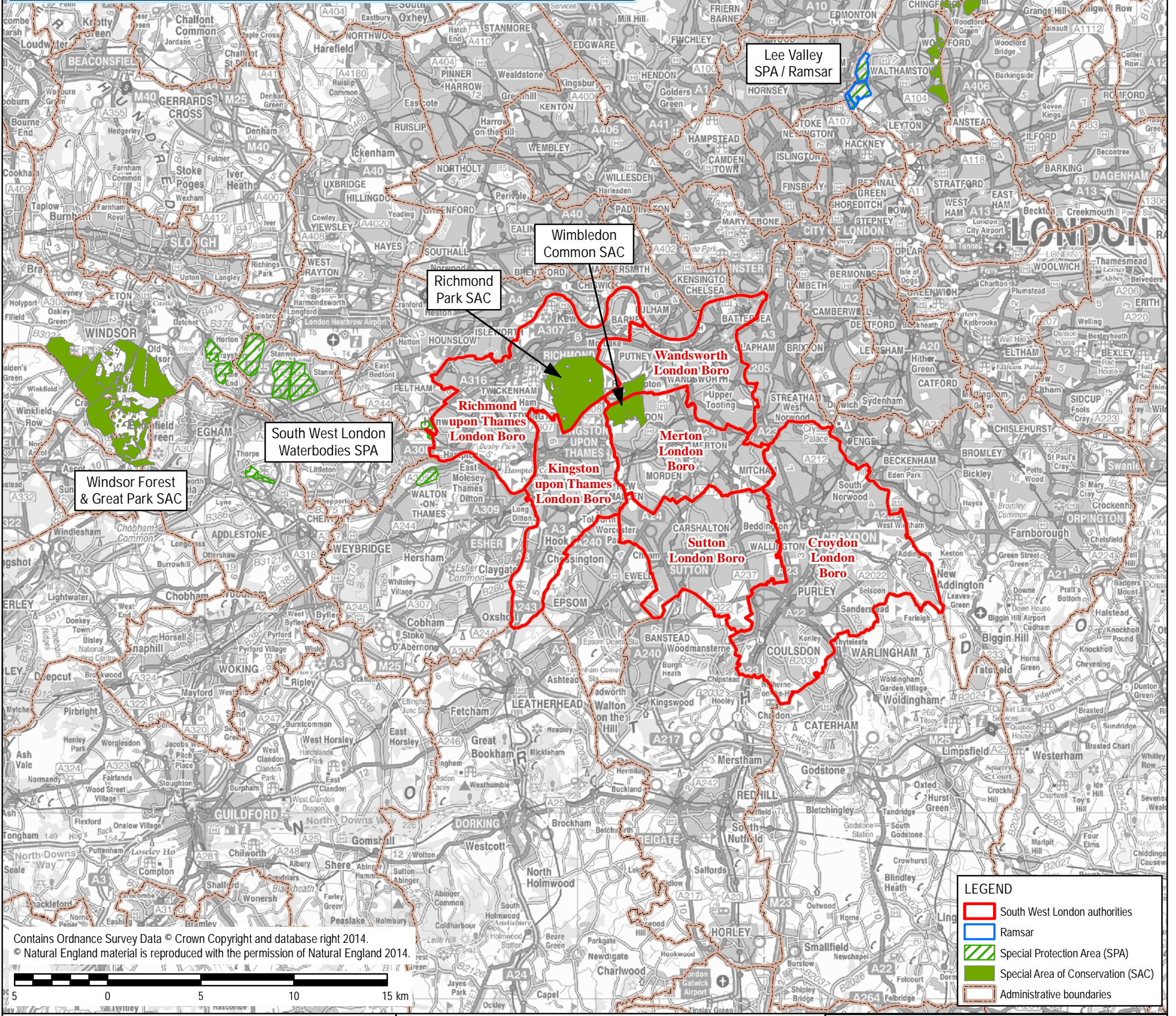
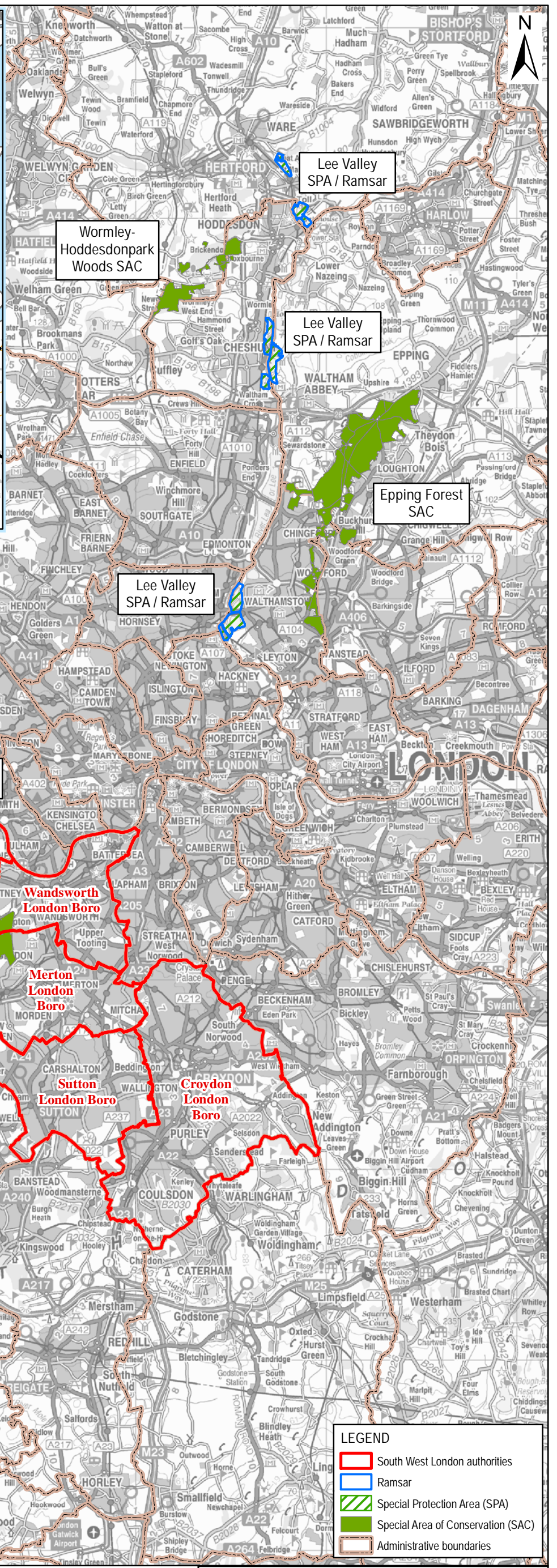
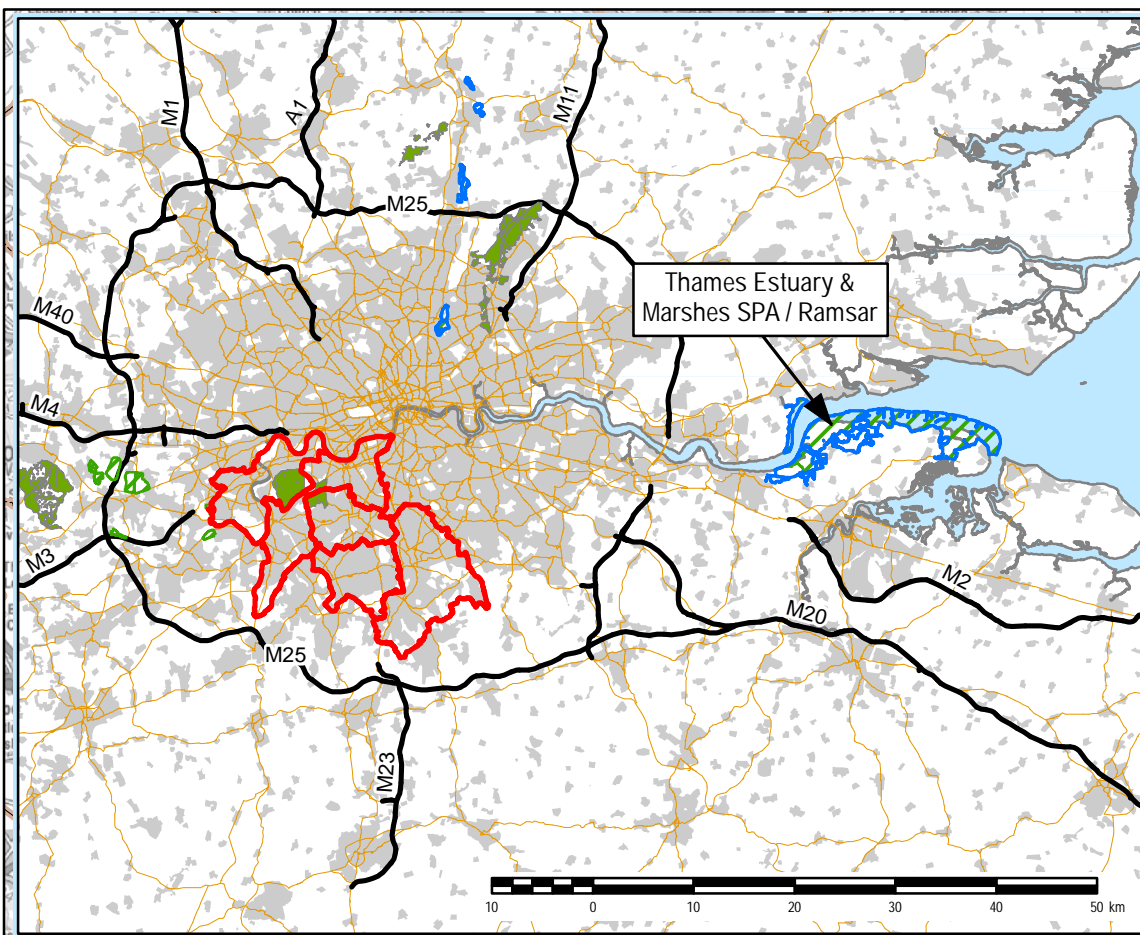
## 4 CONCLUSIONS

### 4.1 Conclusions and Recommendations

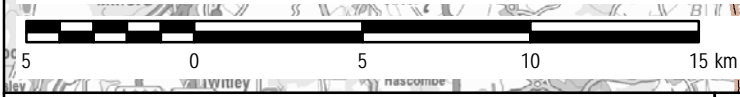
The Strategy for the London Borough of Richmond upon Thames has been screened out as having no likely effects on any European sites. The Strategic Objectives within the document all promote measures to avoid or reduce flooding events that arise on land not normally subject to natural flooding. The only European site adjacent to the Borough that has some hydrological sensitivity is Wimbledon Common SAC, and the Strategy is not concerned with affecting the water table, or surface water features, within that site.

The document promotes collaboration between relevant organisations for management of flood risk, and the coordinated approach outlined means that the potential for any unforeseen effects of flood management on European sites is negligible, either alone or in combination with other plans and projects.

## APPENDIX A – EUROPEAN SITES MAP



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**LEGEND**

- South West London authorities
- Ramsar
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Administrative boundaries

Project Title/Drawing Title  
**SOUTH WEST LONDON LFRMS**  
**EUROPEAN SITES**

|  |                         |                           |
|--|-------------------------|---------------------------|
| Client<br><b>SOUTH WEST LONDON AUTHORITIES</b> |                         |                           |
| Drawn<br>TG                                    | Checked<br>JR           | Approved<br>JR            |
| Date<br>16/05/2014                             | Scale @ A3<br>1:225,000 | Purpose of Issue<br>DRAFT |
| Drawing Number<br><b>FIGURE 1</b>              |                         | Rev                       |

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## APPENDIX B – EUROPEAN SITES DESCRIPTION

### Richmond Park SAC

Richmond Park has a large number of ancient trees with decaying timber. It is at the heart of the south London centre of distribution for stag beetle *Lucanus cervus*, and is a site of national importance for the conservation of the fauna of invertebrates associated with the decaying timber of ancient trees.

#### *Features of European Interest*<sup>10</sup>

The site is designated as a SAC for its:

- Stag beetle

### Wimbledon Common SAC

Wimbledon Common has a large number of old trees and much fallen decaying timber. It is at the heart of the south London centre of distribution for stag beetle *Lucanus cervus*, and a relatively large number of records were received from this site during a recent nationwide survey for the species. The site supports a number of other scarce invertebrate species associated with decaying timber.

#### *Features of European Interest*

The site is designated as a SAC for its:

- Wet heathland
- Dry heathland
- Stag beetle

### South West London Waterbodies SPA/Ramsar site

The South-West London Water Bodies SPA comprises a series of embanked water supply reservoirs and former gravel pits that support a range of man-made and semi-natural open water habitats. The reservoirs and gravel pits function as important feeding and roosting sites for wintering wildfowl, in particular Gadwall *Anas strepera* and Shoveler *Anas clypeata*, both of which occur in numbers of European importance.

#### *Features of European Interest*

The site is designated as a SPA/Ramsar site for its wintering:

- Gadwall
- Shoveler

### Windsor Forest & Great Park SAC

Windsor represents old acidophilous oak woods in the south-eastern part of its UK range. It has the largest number of veteran oaks *Quercus* spp. in Britain (and probably in Europe), a consequence of its management as wood-pasture. It is of importance for its range and diversity of saproxylic invertebrates, including many rare species (e.g. the beetle *Lacon querceus*), some known in the UK only from this site, and has recently been recognised as having rich fungal assemblages. Windsor Forest and Great Park has been identified as of potential international importance for its saproxylic invertebrate fauna by the Council of Europe.

Violet click beetle *Limoniscus violaceus* was first recorded at Windsor Forest in 1937. The site is thought to support the largest of the known populations of this species in the UK. There is a large population of ancient

<sup>10</sup> Features of European Interest are the features for which a European site is selected. They include habitats listed on Annex 1 of the Habitats Directive, species listed on Annex II of the EC Habitats Directive and populations of bird species for which a site is designated under the EC Birds Directive.

trees on the site, which, combined with the historical continuity of woodland cover, has resulted in Windsor Forest being listed as the most important site in the UK for fauna associated with decaying timber on ancient trees. The site was also identified as of potential international importance for its saproxylic invertebrate fauna by the Council of Europe

#### *Features of European Interest*

The site is designated as a SAC for its:

- Oak and beech forest
- Violet click beetle (*Limoniscus violaceus*)

#### **Wormley Hoddesdonpark Woods SAC**

Wormley Hoddesdonpark Woods in south-east England has large stands of almost pure hornbeam *Carpinus betulus* (former coppice), with sessile oak *Quercus petraea* standards. Areas dominated by bluebell *Hyacinthoides non-scripta* do occur, but elsewhere there are stands of great wood-rush *Luzula sylvatica* with carpets of the mosses *Dicranum majus* and *Leucobryum glaucum*. Locally, a bryophyte community more typical of continental Europe occurs, including the mosses *Dicranum montanum*, *D. flagellare* and *D. tauricum*.

#### *Features of European Interest*

The site is designated as a SAC for its:

- Oak and hornbeam forest

#### **Lee Valley SPA/Ramsar site**

The Lee Valley SPA is located to the north-east of London, where a series of wetlands and reservoirs occupy about 20 km of the valley. The site comprises embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that support a range of man-made, semi-natural and valley bottom habitats. These wetland habitats support wintering wildfowl, in particular Gadwall *Anas strepera* and Shoveler *Anas clypeata*, which occur in numbers of European importance. Areas of reedbed within the site also support significant numbers of wintering Bittern *Botaurus stellaris*.

#### *Features of European Interest*

The site is designated as an SPA/Ramsar site for its:

- Wintering bittern, gadwall and shoveler

#### **Thames Estuary & Marshes SPA/Ramsar site**

The Thames Estuary and Marshes SPA is located on the south side of the Thames Estuary in southern England. The marshes extend for about 15 km along the south side of the estuary and also include intertidal areas on the north side of the estuary. To the south of the river, much of the area is brackish grazing marsh, although some of this has been converted to arable use. At Cliffe, there are flooded clay and chalk pits, some of which have been infilled with dredgings. Outside the sea wall, there is a small extent of saltmarsh and broad intertidal mud-flats. The estuary and adjacent grazing marsh areas support an important assemblage of wintering waterbirds including grebes, geese, ducks and waders. The site is also important in spring and autumn migration periods.

#### *Features of European Interest*

The site is designated as an SPA/Ramsar site for its:

- Over-wintering bird assemblage, particularly avocet, hen harrier and ringed plover; and
- Its population of nationally scarce marshland plants and invertebrates



## Epping Forest SAC

Epping Forest represents Atlantic acidophilous beech forests in the north-eastern part of the habitat's UK range. Although the epiphytes at this site have declined, largely as a result of air pollution, it remains important for a range of rare species, including the moss *Zygodon forsteri*. The long history of pollarding, and resultant large number of veteran trees, ensures that the site is also rich in fungi and dead-wood invertebrates. Epping Forest is a large woodland area in which records of stag beetle *Lucanus cervus* are widespread and frequent; the site straddles the Essex and east London population centres. Epping Forest is a very important site for fauna associated with decaying timber, and supports many Red Data Book and Nationally Scarce invertebrate species.

### *Features of European Interest*

The site is designated as a SAC for its:

- Beech forest
- Wet and dry heathland
- Stag beetle