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### 3. Route-wide planning policy assessment

#### 3.1 Introduction

- 3.1.1 The Crossrail project has been developed on the basis of three key objectives that specifically address the planning policy objectives of national and regional government. These objectives are:
- To support the development of London as a World City, and its role as the financial centre of Europe and the UK;
  - To support the economic growth of London and its regeneration areas by tackling congestion and the lack of capacity on the existing rail network; and
  - To improve rail access into and within London.
- 3.1.2 The extent to which the Crossrail scheme meets these objectives and the wider objectives set out in national planning policy guidance, and regional planning guidance is set out in sections 3.3 to 3.10 below.
- 3.1.3 Sections 3.11 to 3.25 continue with a description of the town and country planning policy context that is relevant to the assessment of the environmental impacts of Crossrail at the national, regional and local levels.
- 3.1.4 It sets out those locations where there is likely to be a significant conflict with planning policies that regulate the use and development of land.

#### 3.2 Overview of Current Planning Framework

3.2.1 Decisions about the use of land, including the demolition and construction of buildings, are made within a framework of planning policy. The planning policy framework prior to the Planning and Compulsory Purchase Act 2004 (“the 2004 Act”) consisted of four tiers, now reduced to three, as shown in Figure 3.1.

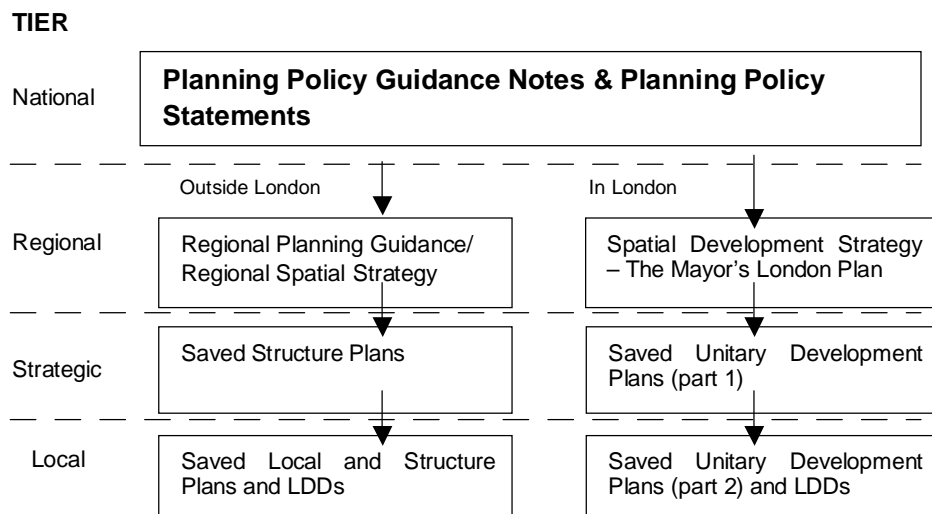


Figure 3.1: The Planning Framework

- 3.2.2 The development plan system is in a state of transition as a result of the new provisions of the 2004 Act. Old development plans (UDPs in London but there are also Structure and Local Plans outside London) are saved for a period of three years from 28 September 2004 unless new Local Development Documents (LDDs) are adopted prior to the end of that period. At the time of the production of this report, the development plan comprises the Regional Spatial Strategy (Spatial Development Strategy in London) and UDPs, Structure and Local Plans.
- 3.2.3 Planning Policy Guidance Notes (PPGs), and the Planning Policy Statements (PPSs) that are superseding them, set out the Government's policies on different aspects of planning. Regional planning bodies and local planning authorities must take their content into account in preparing their Regional Spatial Strategies (RSSs) and Local Development Documents (LDDs) respectively. The guidance can also be a material consideration in determining planning applications and appeals.
- 3.2.4 The main purpose of an RSS and the Spatial Development Strategy (SDS) is to provide a broad development strategy for the regions over a 15 to 20 year period. They identify the scale and distribution of provision for new housing and regional and sub-regional priorities for a wide range of matters including the environment, transport, infrastructure, economic development, minerals and waste treatment and disposal. RPG9 (other than the chapter 9) has been designated as the RSS for the south-east region.
- 3.2.5 LDDs set out the local planning authority's detailed policies and specific proposals for the development and use of land which will guide its day-to-day planning decisions.
- 3.2.6 Together, the Regional Spatial Strategy (Spatial Development Strategy in London) and Development Plan Documents form the development plan for the purposes of Section 54A of the Town and Country Planning Act 1990 and Section 38 of the 2004 Act. Decisions on new developments should be taken in accordance with the provisions of those plans unless there are material considerations that indicate otherwise.
- 3.2.7 Appendix 1 contains a list of the planning policy and other policy documents that have been taken into account in the preparation of this chapter.
- 3.2.8 The following sections summarise the extent to which the project will accord or conflict with planning policy. Policies are set out in order of their relevance and reflect the impacts of the temporary and permanent works required to construct Crossrail.

### **3.3 General Principles of Planning Policy**

- 3.3.1 The recent PPS1 ("Delivering Sustainable Communities"), February 2005, made some significant changes to PPG1, which sets out the Government's previous approach to planning, as anticipated by the draft PPS1 published in 2004. However, the principle of sustainable development is central to both documents. This is defined in PPS1 as follows:

*"Sustainable development is the core principle underpinning planning. At the heart of sustainable development is the simple idea of ensuring a better quality of life for everyone, now and for future generations. A widely used definition was drawn up by the World Commission on Environment and Development in 1987: 'development that meets the needs of the present*

*without compromising the ability of future generations to meet their own needs". (PPS1, para. 3).*

3.3.2 PPS1 encourages the integration of land use and transport planning and contain policy objectives which can be summarised as seeking to:

- ensure that new development is located where everyone can access services or facilities on foot, bicycle or public transport rather than having to rely on access by car, while recognising that this may be more difficult in rural areas;
- encourage patterns of development which reduce the need to travel by private car or reduce the impact of moving freight;
- deliver safe, healthy and attractive places to live;
- consider and take account of the impact of development on the social fabric of communities;
- reduce social inequalities;
- reduce the need to travel and encourage accessible public transport provision to secure more sustainable patterns of transport development;
- manage patterns of urban growth to make the fullest use of public transport; and
- focus development in existing centres and near to major public transport interchanges.

3.3.3 In particular, paragraph 5 of PPS1 states that planning “*should facilitate and promote sustainable and inclusive patterns of urban and rural development*” by:

- making suitable land available for development in line with economic, social and environmental objectives to improve people’s quality of life;
- contributing to sustainable economic development;
- protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities;
- ensuring high quality development through good and inclusive design, and the efficient use of resources; and
- ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.

3.3.4 Urban regeneration and the re-use of previously developed land are considered by the Government to be important supporting objectives for creating a more sustainable pattern of development. The Government is committed to concentrating higher density development in locations well served by public transport, and to the promotion of the development of previously developed land sites before the consideration of greenfield sites.

3.3.5 The policy objectives earlier set out in PPG1, and now found in PPS1, were developed in the planning policy guidance notes on transport (PPG13) and

town centres (PPG6) and reflected in regional planning guidance (now largely re-designated as Regional Spatial Strategies) and local planning policies. The same pattern can also be seen with regard to development in Draft PPS 6 and PPS 7 (Sustainable Development in Rural Areas).

### **3.4 Transport Policy**

- 3.4.1 The Government's Planning Policy Guidance Note 13: Transport (PPG13) (ODPM 2001) requires local authorities to focus major generators of travel demand in city, town and district centres near to major public transport interchanges, and to ensure that strategies for development are complemented by transport strategies and programmes for investment. The guidance recognises that the availability and use of public transport is important in determining locational policies aimed at reducing the need to travel by car. It urges local authorities to work with public transport providers and operators to bring forward public transport improvements, including rail, which support development policies.
- 3.4.2 The Regional Spatial Strategy (RSS) for the South East of England and the Spatial Development Strategy (SDS) for London play a key role in the co-ordination of transport and land use planning and recognise that there is a need to improve the standard of service, making public transport more efficient, reliable, frequent and accessible, in order to provide an attractive alternative to the car. That part of the RSS which comprises the Regional Transport Strategy for the South East (RTS) (GoSE 2004), as prescribed in SI 2004 No. 2206, seeks to foster an improved and integrated network of public transport, and urges the Regional Assembly to work together with transport delivery agencies to develop rail services with better inter and intra-regional connections. The strategy prioritises Crossrail as a transport project that supports these policy objectives.
- 3.4.3 Crossrail will improve the attractiveness of public transport primarily by reducing current levels of overcrowding on the Underground, particularly in the central area. All Underground lines (except the Northern line) will see a reduction in passengers following the opening of Crossrail, with the largest percentage decreases occurring on the Central, Bakerloo, Metropolitan / Hammersmith & City and Jubilee lines. As a result, overcrowding will be reduced by Crossrail in the morning rush hour over large sections of the Underground network.
- 3.4.4 Crossrail will also have indirect impacts on the frequency and reliability of Network Rail services. By creating a new heavy rail underground line beneath central London, which connects the main line terminal stations at Paddington and Liverpool Street, Crossrail will reduce the need for many passengers to interchange at these stations. This will enable the provision of more frequent and reliable services on existing radial Network Rail lines that serve Berkshire, Buckinghamshire and Essex.
- 3.4.5 After the opening of Crossrail, the number of passengers using other National Rail services will drop and crowding will be reduced. The services that will most benefit will be those using Liverpool Street (Great Eastern), Paddington, Fenchurch Street, Charing Cross and Cannon Street, which will all have fewer boarders and crowding due to the diversion of passengers on to Crossrail services. The number of passengers boarding West Anglia services into Liverpool Street from the Lea Valley will increase following the opening of Crossrail. However, with the provision of additional trains on this route, crowding will also be reduced on these services.

- 3.4.6 Crossrail will also create a range of new direct journey opportunities and improve accessibility across parts of the south east and London, particularly from southeast London and Kent by the provision of a new rail crossing of the River Thames between Custom House and Abbey Wood.
- 3.4.7 The Crossrail journey time savings and relief of overcrowding will cause some people to switch from private cars to rail. CLRLL estimate that London-wide 20,000 people will switch from using car to rail in the morning peak period, with most of this switch taking place in transport corridors served by Crossrail. CLRLL has estimated that this will result in 15,000 fewer car journeys being made within London during the morning peak period
- 3.4.8 In accordance with national planning policy guidance and regional planning guidance, local planning policies support improvements to public transport, including rail, and specifically Crossrail. The individual Borough assessments set out in chapters 4 to 23 of this report show widespread support for public transport improvements and the implementation of Crossrail.
- 3.4.9 During construction, there will be local traffic impacts on the highways network due to the movement of excavated material and construction materials by road, and the temporary closure of highways around some worksites. These impacts are reported in the relevant Borough sections. In accordance with local planning policies, and working with local authorities, construction traffic management strategies will be agreed to minimise disruption on the highways network. In line with the objectives of the Crossrail construction strategy, set out in the Crossrail ES and summarised in this report, excavated material will be removed, wherever reasonably practicable, by rail and water transport, and imported construction materials will be moved by rail. Travel plans for construction workers will also be agreed with local authorities.

### **3.5 Sustaining London's Role in the International Economy**

- 3.5.1 Both the Government and the Mayor for London recognise the importance of the need to invest in London's transport infrastructure, and Crossrail specifically, if London's role in the international economy is to be sustained. The Government's Transport White Paper "The Future of Transport" (DfT 2004) states:

*"Investing in the capacity of London's transport system is vital to maintaining its pre-eminence as a world class capital and business centre. The case for Crossrail is strong and will only strengthen further as demand on the capital's existing transport networks grow." (para. 4.24).*

- 3.5.2 The Mayor's London Plan contains policy to improve the strategic public transport network in London, including cross London rail links to support future development. It identifies Crossrail as a high priority in supporting London's core business area, stating:

*"Crossrail 1 is critical to supporting the growth of the financial and business services sector in central London and in the Isle of Dogs, where there is market demand for additional development capacity. By linking these two areas, Crossrail 1 would create a virtual unified economic and business core in London. Significant intensification of development around key interchanges within the Central Activities Zone and to its east and west are crucially dependent on the delivery of Crossrail 1, which is planned for*

*phased completion from 2012. The scheme will also improve links to Heathrow thereby supporting connections for London's global businesses.” (GLA 2004, para. 3.186)*

- 3.5.3 Crossrail plays an important role in sustaining economic growth because it directly serves the West End, City and the Isle of Dogs, which are the three most productive clusters of the finance and business service sector in London and the UK. Each of these areas is forecast to suffer from severe transport capacity constraints during peak periods.
- 3.5.4 By providing additional capacity in the London rail network, Crossrail will enable more people to travel to, from and across London. Operating 24 trains per hour in the peak periods through central London, Crossrail will have the capacity to carry up to 26,000 passengers /hour in each direction between Paddington and Liverpool Street.
- 3.5.5 Crossrail will increase rail capacity into the City by 20%, and increase capacity into the Isle of Dogs by 50%. The additional capacity on the transport network will remove constraints on future employment growth in central London thereby facilitating growth in employment.

### **3.6 Improving International and Inter-Regional Transport Connections**

- 3.6.1 The Regional Transport Strategy for the South East and the London Plan aim to improve and develop more sustainable transport connections to the region's airports and international rail stations, in recognition of the gateway function to Europe and the rest of the world. The London Plan recognises that:

*“As a world gateway city, London will be dependent upon excellent global communications extending well beyond the plan period. London is a world transport hub and one that needs substantial improvement. This requires significant airport and port capacity, located to serve spatial and economic priorities, and stronger public transport linkages to them.” (GLA 2004, para. 1.4).*
- 3.6.2 Crossrail will improve international connections by providing a new direct, high capacity rail link with Heathrow from central and east London. Operating every 15 minutes throughout most of the day, the service will provide a significant increase in capacity to the airport. The journey time from the Isle of Dogs to Heathrow Central will be around 40 minutes, compared to a current journey time of over one hour.
- 3.6.3 Crossrail will also connect with services to Luton, Gatwick and Stansted airports from new stations at Farringdon and Liverpool Street. In addition, the platform capacity released at Liverpool Street as a result of Crossrail will help other operators increase train frequencies to and from Stansted Airport. Crossrail will also provide interchange with Eurostar international services at Stratford.
- 3.6.4 The Regional Transport Strategy for the South East also aims to develop rail links that improve inter- and intra-regional connectivity, which is essential to regional economies. It prioritises investment in international and inter-regional movement corridors. Crossrail is identified in the strategy as a priority scheme in supporting the upgrade of the Great Western Main Line and in improving public transport to Heathrow Airport.

- 3.6.5 The Regional Transport Strategy for the East of England similarly recognises the importance of links between London and its region, particularly in the south of the region where large numbers commute into London to work. It identifies Crossrail as a priority scheme to relieve congestion on the rail network and improve access to all to jobs and services.

### **3.7 Accommodating Growth in London**

- 3.7.1 The Mayor's London Plan forecasts, on the basis of current trends, a population increase of 800,000 people and an increase of 636,000 jobs over the period from 2001 to 2016. Adopting a policy of sustainable development, the Plan proposes that this growth should not be addressed by planned dispersal but should be absorbed within a more compact city, without encroaching on London's open spaces and Green Belt. An underlying objective to achieving this sustainable growth is the integration of development with public transport capacity. The Plan requires London Boroughs to consider proposals for development in terms of existing and proposed transport capacity, and to ensure that where adequate capacity does not exist that development is appropriately phased (London Plan, Policy 3C.2). In line with the objectives and transport proposals contained in the Mayor's transport strategy, the Plan sets out a spatial framework for growth.
- 3.7.2 Research which supports the London Plan forecasts that up to 48% of employment growth can be accommodated within central London. The London Plan sees improved public transport capacity as fundamental to accommodating this growth. Crossrail is identified as the Mayor's highest priority public transport scheme, highlighting the substantial increase in capacity that Crossrail can deliver and its role in uniting the Central Activities Zone with the Isle of Dogs. The Plan considers that significant development opportunities around key interchanges within central London are crucially dependent on the implementation of Crossrail. Paddington, Tottenham Court Road and Farringdon/Smithfield are all areas served by Crossrail and identified in the London Plan for development.
- 3.7.3 The second largest growth area identified in the London Plan is East London. The Plan forecasts that beyond the City and the Isle of Dogs, the East London sub region could accommodate a further 56,000 jobs and an additional 104,000 homes in the period to 2016. The Plan recognises that the East London sub region needs further significant improvements in transport accessibility, which Crossrail can help to deliver. Areas identified for development, which will be supported by increased public transport and improved accessibility with Crossrail, are Whitechapel, the Isle of Dogs, Stratford, Royal Docks and Ilford. Whilst not directly served by Crossrail, development opportunities at Belvedere and Erith are also likely to benefit from connections to Crossrail at Abbey Wood.
- 3.7.4 It is anticipated that the West London sub region will also accommodate significant employment growth of 86,000 and 45,000 additional homes. Crossrail is identified as part of the planned transport investment to accommodate this level of growth, and will support development opportunities around Heathrow and at Hayes/West Drayton/Southall.
- 3.7.5 Crossrail will also assist in sustaining and developing the West End and London's network of town centres. The London Plan seeks to promote the strategic importance of town centres in accommodating economic growth,



recognising that they are inherently sustainable locations, accessible by public transport, and with the capacity to meet a range of needs. The West End, one of two designated International Centres in London, will be served by Crossrail and, as a result, 390,000 more people will live within a 60 minute journey time of the area.

3.7.6 In addition, many Metropolitan and Major Centres designated in the London Plan, including Ealing Broadway, Ilford and Romford (Metropolitan Centres) and Southall and Stratford (Major Centres), together with District and Local Centres, will be directly served by Crossrail. Crossrail will improve accessibility to these centres assisting the policy objectives of the London Plan, and Borough UDPs to enhance the accessibility of town centres, particularly by public transport, and to capitalise on opportunities for higher density development. Figure 3.2 shows the Crossrail route and sub regional growth areas.

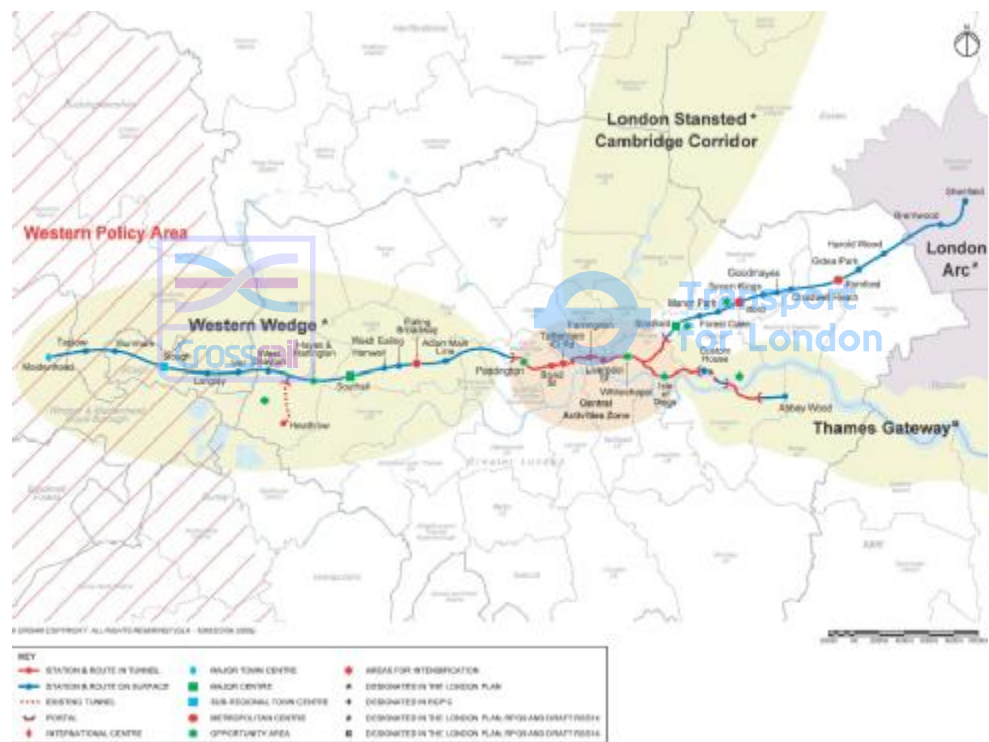


Figure 3.2: Sub Regional Growth Areas on the Crossrail route

### 3.8 Improving Transport Infrastructure within and to the Thames Gateway

3.8.1 The Thames Gateway is a national and regional priority for regeneration and growth. The Government has set out its commitment to providing for growth in the Thames Gateway in the Sustainable Communities Plan and has produced an interim strategy and assessment of potential development capacity, pending production of the Regional Spatial Strategy for the South East.

3.8.2 The Government's plan for the Thames Gateway is that it will develop a strong, polycentric spatial structure with strategic clusters of employment, including the Isle of Dogs, Stratford and Ebbsfleet. It is estimated that 120,000 to 180,000 new jobs could be created between 2001 and 2016, and

that there is sufficient land available to reach and exceed the upper end of this range. With funding support, the Government also envisages that targets for 120,000 new homes can be met.

3.8.3 However, the Government recognises that substantial improvements to the transport system, including improved rail links, are required to realise the scale of growth required in order to serve the volume of travel through the Thames Gateway that growth will bring. In addition, improved access is seen as essential to creating new communities and attracting significant private investment. The coherence of the sub region will depend on good connections to London and cross-river links in order to widen job and investment opportunities.

3.8.4 A joint statement “Growth and Regeneration in the Gateway” produced by the East of England Regional Assembly, the Greater London Authority and the South East of England Regional Assembly (ODPM 2004), as a precursor to the emerging Regional Spatial Strategies, considers that improvements to the transport system are crucial:

*“A transport system that is already liable to congestion and delay in several areas will need to accommodate major growth in population and employment and to handle the increasing flows of people and goods moving through the Gateway between the UK and the continent. The continuous strengthening of transport infrastructure is critical to the success of the Gateway, a key driver for change.”*

3.8.5 Along with the Channel Tunnel Rail Link and related domestic services, the Thames Gateway Bridge, and a Lower Thames Crossing, the Statement identifies Crossrail as one of four strategic transport projects that will make the biggest contribution to the achievement of growth in the Thames Gateway. It will achieve this by delivering significant improvements in capacity and providing links with central and west London.

### **3.9 Improving Strategic Rail Links within and to the Western Policy Area**

3.9.1 RSS for the South East identifies the Western Policy Area, covering an area to the west and south of London, as one of the most prosperous areas in the UK, with proximity to London and Heathrow Airport sustaining its growth. That part of the RSS comprising the Regional Transport Strategy for the South East aims to improve strategic rail links within and to the Western Policy Area to maintain the economic success of the sub region. The focus of the spatial strategy for this sub region is to concentrate future development in existing urban centres. The transport strategy supports this aim by identifying regional ‘hubs and spokes’ where investment in public transport will be prioritised in order to support economic development. Crossrail is identified in the strategy as a priority scheme and will support these objectives by upgrading the Great Western Main Line and improving connections between London and the regional hub of Slough.

### **3.10 Management of Commuter Flows between South Essex and London**

3.10.1 There are strong connections between London and south Essex and consequently high levels of commuting. The draft Regional Spatial Strategy for the East of England highlights the problems of pressures on the rail routes into London and the need for improved infrastructure. Crossrail is identified in the strategy as a priority scheme that meets objectives to improve access to jobs and services and addresses problems of congestion.

Crossrail will assist in delivering these improvements on the Great Eastern Line through congestion relief at Liverpool Street and the provision of additional trains on this route.

### **3.11 Historic Environment**

3.11.1 PPG15 contains Government guidance for the identification and protection of historic buildings, conservation areas and other elements of the historic environment. The guidance sets a framework for planning to reconcile the need for economic growth with the need to protect the historic environment. It recognises that the historic environment is by its nature irreplaceable, but that in practice it cannot be preserved unchanged. The guidance calls for the identification of what is special in the historic environment and the capacity for change, and for an assessment of the impact of development on the historic environment to be taken fully into account along with other considerations.

3.11.2 The guidance sets out general criteria for assessing applications that seek to alter or demolish listed buildings or parts of listed buildings (paragraphs 3.5 and 3.19), and those which involve the demolition of buildings in conservation areas (paragraphs 4.25 to 4.29 which apply broadly the same criteria as for the demolition of listed buildings). Relevant considerations are:

- the importance of the building, its intrinsic architectural and historic interest and rarity;
- the particular physical features of the building which justify its listed status;
- the building's setting and its contribution to the local scene; and
- the extent to which the proposed works would bring substantial benefits for the community, including its contribution to economic regeneration (PPG15, para. 3.5).

3.11.3 In addition to the above, paragraph 3.19 of PPG 15 sets out the criteria for the demolition of all or part of a listed building. Relevant considerations are 3.19 (i) to (iii), the third category of which is primarily applicable to Crossrail:

- the condition of the building, the cost of repairing and maintaining it in relation to its importance and to the value derived from its continued use;
- the adequacy of efforts made to retain the building in use; and
- the merits of alternative proposals for the site.

3.11.4 Whilst these are material considerations, subjective claims for the architectural merits of proposed replacement buildings should not in themselves be held to justify the demolition of any listed building. There may very exceptionally be cases where the proposed works would bring substantial benefits for the community which have to be weighed against the arguments in favour of preservation. Even here, it will often be feasible to incorporate listed buildings within new development, and this option should be carefully considered.

3.11.5 In a number of locations, works required to construct Crossrail require the alteration of listed buildings. An assessment of these alterations against the criteria contained in PPG15 paragraphs 3.12 to 3.15 have been undertaken.

In accordance with PPG15, the assessment has had regard to the sensitivity of listed buildings to the impact of alterations. The assessment concludes that, generally, the impacts are concentrated in parts of the buildings which are not of the highest significance, or where previous alterations have compromised what was originally built.

- 3.11.6 Works to construct Crossrail involve the total demolition of a listed building in one location (94 Dean Street), and the substantial demolition of a listed building in one other location (8 to 10 Southampton Row). A full assessment of these demolitions against the criteria contained in PPG15 has been undertaken. In accordance with PPG15 the assessment has provided clear and convincing evidence that preservation of the affected buildings in some form is not possible or suitable, and that Crossrail will produce substantial transport benefits for the community that would decisively outweigh the loss resulting from demolition.
- 3.11.7 Works to construct Crossrail also involve a number of demolitions of buildings in conservation areas. Again, an assessment of these demolitions against the criteria contained in PPG15 has been undertaken. In accordance with PPG15, the assessment considers that the contribution the building makes to the character or appearance of a conservation area, and also takes into account the contribution the building makes to the historic interest of an area. The assessment concludes that a number of buildings will be lost which currently make a positive contribution to the character of conservation areas, particularly those associated with station construction works at Farringdon, Tottenham Court Road and Liverpool Street.
- 3.11.8 Replacement development is not included in the powers being sought through the Bill. The assessment of impacts arising from the demolition of listed buildings and buildings in conservation areas assumes no replacement development, although it is very likely that replacement development will come forward at these sites. The impacts of this replacement development, including those on the setting of listed buildings, will be fully assessed when planning applications for replacement developments are submitted for determination by the relevant local planning authorities. This process is described further in Section 1 of this report.
- 3.11.9 PPG 15 at paragraphs 4.38 to 4.40 contains guidance on trees in conservation areas and states that “trees are valued features of our towns and countryside and make an important contribution to the character of the local environment”. It is estimated that 81 individual trees in conservation areas will need to be removed as a result of the proposed works, although over half of these are judged to be of limited value. A further five tree clusters in conservation areas will be partially affected, and an additional seven trees in conservation areas are at risk from the proposed works. Three trees with tree preservation orders (outside of conservation areas) require removal or are at risk from the works. A replanting programme will be initiated in consultation with relevant local authorities.
- 3.11.10 The London Plan, saved UDP and saved local plans on the route contain detailed policies for the conservation and enhancement of the historic environment. These policies are not materially different to policies at the national level.

### **3.12 Rural Areas, Green Belts and Metropolitan Open Land**

- 3.12.1 PPS7 (Sustainable Development in Rural Areas, 2004) sets out the Government’s planning policy guidance on rural areas, including country

towns and villages and the wider, largely undeveloped countryside up to the fringes of larger urban areas. One of the key objectives of the Government for rural areas is to promote sustainable patterns of development. This includes focusing development in or next to existing towns and villages, preventing urban sprawl, and the discouragement of the development of 'greenfield' land.

3.12.2 PPG2 (Green Belts) sets out the Government's planning policy guidance on the purpose and objectives of Green Belt policy, the definition and protection of Green Belt, and contains a presumption against inappropriate development within Green Belts. See also paragraph 26 of PPS7. The fundamental aim of Green Belts is to prevent urban sprawl and the most important attribute of Green Belts is their openness (PPG 2, para. 1.4). There are five purposes of including land in Green Belts (para.1.5):

- “• to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns from merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.”

3.12.3 The guidance considers that new buildings within the Green Belt are inappropriate unless they are required for agricultural use, essential facilities for outdoor sport and recreation, limited extensions to existing buildings, infill development and some forms of mineral extraction. All forms of other development that cause harm to the Green Belt are deemed to be inappropriate development. Such development will only be permitted where very special circumstances can be demonstrated. Where large-scale infrastructure is proposed in the Green Belt (whether it is appropriate or not), it should as far as possible contribute to the objectives for the use of land in the Green Belt (PPG 2, para. 3.13).

3.12.4 The design of Crossrail has sought to minimise its impact on rural areas and the Green Belt. For example, a detailed site search was undertaken to identify a location for the maintenance depot on a brownfield site. However, whilst there are no buildings proposed within the Green Belt, there are a small number of locations where rail infrastructure will have an impact on the openness of the Green Belt. These impacts are unavoidable, and include the construction of overhead line equipment on the Great Western Main Line, bridge replacement works east of Iver station, and the construction of a dive-under (a rail underpass) to the west of the depot at Romford. The impact on the Green Belt at Romford and other locations in the Borough assessments in chapters 4 to 23 of this report.

3.12.5 The London Plan sets out policies for the protection of Metropolitan Open Land (MOL). MOL is identified as being strategically important open space within the urban structure. It has the same level of protection as Green Belt. There are a very limited number of locations where Crossrail will have an impact on the openness of MOL including at Mile End Park and Hyde Park where shafts are proposed to serve the tunnelled section of the line. Every effort has been made to reduce the impact of the structures on the openness of MOL through their location, design and landscaping.

3.12.6 Green Belt and MOL policies are also set out at the local planning level but these are not materially different to the national and London-wide policies.

### **3.13 Other Protected Open Space**

3.13.1 PPG17 sets out the Government's policies for the protection and management of open spaces, sport and recreation.

3.13.2 The Government recognises that open spaces, sport and recreation all underpin people's quality of life and deliver broader Government objectives including support for an urban renaissance by contributing to attractive environments, the promotion of health and well-being, and the promotion of social inclusion. Accordingly, the guidance states that existing open space, sports and recreational buildings and land should not be built on unless they are shown to be surplus to requirements.

3.13.3 The design of the Crossrail project has sought to minimise the impact on open spaces, sport and recreation. However, some impacts during construction will be unavoidable and include the temporary loss of the artificial sports pitches at Stepney Green to accommodate a worksite. Post construction, sites that are no longer required will be reinstated to their former open space use in consultation with local authorities. There will be a permanent loss of playing fields arising from the construction of the rail underpass to the west of the depot at Romford Depot.

3.13.4 The London Plan and individual saved UDPs contain policies to protect open space. These policies are not materially different to the national policy objectives although local policies do seek to identify areas of open space deficiency.

### **3.14 Water Environment**

3.14.1 PPG25 sets out Government guidance on how flood risk should be considered in all stages of the planning and development process in order to reduce future damage to property and loss of life.

3.14.2 The guidance sets out a number of ways in which local planning authorities should address the problems of flooding, including:

- recognising that the susceptibility of land to flooding is a material planning consideration;
- giving appropriate weight to information on flood risk and how it might be affected by climate change in preparing development plans and considering individual proposals for development;
- consulting the Environment Agency, which has the lead role in providing advice on flood issues at a strategic level and in relation to planning applications, and other relevant organisations;
- applying the precautionary principle to decision-making so that risk is avoided where possible and managed elsewhere;
- recognising that flood plains and washlands have a natural role as a form of flood defence as well as providing important wildlife habitats and adding to landscape value; and
- recognising that engineered flood reduction measures may not always be the appropriate solution, since they can have economic and environmental costs and impacts on the natural and built environment,

need maintenance and replacement and cannot eliminate all risk of flooding.

- 3.14.3 The development of Crossrail will involve works that either are in floodplains or involve works in rivers or docks. These have been assessed in accordance with guidance contained in PPG25 and discussions have taken place with the Environment Agency. This assessment has concluded that the only works that cause concern in relation to the guidance in PPG25 are those associated with the construction of Gidea Park sidings over the River Ravensbourne in culvert, and the construction of the Crossrail station at the Isle of Dogs which will result in a small temporary and permanent loss of flood storage capacity.
- 3.14.4 The London Plan establishes the Blue Ribbon Network, a spatial policy for London's waterways, water spaces and the land adjoining them. The Blue Ribbon Network is concerned with the protection and enhancement of the waterways and water bodies for nature conservation, public realm, heritage, sport, leisure and education. The Blue Ribbon Network forms part of London's open space network. Proposals for development into the water space will only be considered appropriate where it serves a water dependent purpose or is a truly exceptional case which adds to London's World City status (London Plan, Policy 4C.3).
- 3.14.5 The development of Crossrail will have an impact on a number of water spaces including at West India North Dock, Blackwall Basin and Poplar Dock in the London Docklands as well as the River Lea and City Mill River at Pudding Mill Lane near Stratford. Most of these impacts are for the duration of construction only, although the Isle of Dogs station will have a permanent impact on the open water environment at West India Dock. However, in accordance with the London Plan Blue Ribbon Network policy, it is considered that these works can be justified on the basis that the provision of a Crossrail station at the Isle of Dogs will sustain and enhance London's role as a World City.

### **3.15 Nature Conservation**

- 3.15.1 The Government sets out a commitment and an approach to planning for the conservation of wildlife diversity in PPG9. The Office of the Deputy Prime Minister (ODPM) carried out consultation at the end of 2004 on a draft of a new Planning Policy Statement 9 on Biodiversity and Geological Conservation. The intention is that this PPS together with a new Circular and good practice guidance should, in due course, replace PPG9. However, the draft does not alter the general principles referred to below.
- 3.15.2 PPG9 includes guidance on nature conservation sites that have been designated under statutes and international conventions, which include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Special Protection Areas (SPAs) and Ramsar sites. The works required to construct Crossrail do not affect any statutory nature conservation sites and as such this guidance is not relevant.
- 3.15.3 However, PPG9 recognises that valuable ecological resources are not confined to statutory nature conservation sites. It recognises the importance of sites of local nature conservation, which often afford local communities their only contact with nature, especially in urban areas, and can contribute to a wider biodiversity network. To this end, local planning authorities are encouraged to identify and provide for the protection of local nature conservation sites.

- 3.15.4 In some locations, works required to construct Crossrail do affect sites that have been identified by planning authorities as having nature conservation importance. However, in line with guidance contained in PPG9 a commitment to mitigation will be made with local authorities to protect nature conservation interests during construction works where possible, or to mitigate through compensation.
- 3.15.5 PPG9 sets out the legislative framework for the protection of all wild birds, badgers, bats and other protected species. The presence of a protected species is a material consideration when a local planning authority is considering a development proposal. Survey work and an assessment of the likely significant impacts of Crossrail has concluded that whilst protected species may be encountered in a number of locations, following mitigation, Romford depot is the only location where a significant impact is predicted. This is addressed in detail in Chapter 10.
- 3.15.6 The Development Plan, in the form of the London Plan, saved UDPs and saved local plans, contains policies to protect and enhance biodiversity and nature conservation. Whilst these policies are not materially different to the policies contained in PPG9 the London Plan also requires London Boroughs to give strong protection to Sites of Metropolitan Importance (SMIs) (London Plan, Policy 3D.12). SMIs are identified by the GLA as the best nature conservation sites in London. The Sites of Metropolitan Importance at Hyde Park, the River Thames and its Tidal Tributaries, Little Britain (West Drayton stabling) and Carp Ponds and Broad Dock (Stockley Flyover) are directly affected by the scheme. Significant impacts are predicted at Carp Ponds and Broad Dock.

### **3.16 Archaeology**

- 3.16.1 PPG16 sets out the Government's policy on archaeological remains and how they should be preserved or recorded. PPG16 states that archaeological remains are a finite resource and are vulnerable to damage, and highlights the need for appropriate management. PPG16 also contains guidance on Scheduled Ancient Monuments (SAMs). No SAMs are affected by Crossrail works.
- 3.16.2 The guidance contains a presumption in favour of the preservation of nationally important remains.
- 3.16.3 The London Plan, saved UDP and saved local plans contain detailed policies for the preservation of archaeological remains. These policies are not materially different to policies at the national level.
- 3.16.4 An evaluation has been undertaken of the likely impact of Crossrail on archaeological remains. The Sites and Monuments Record, which provides information about the locations where archaeological remains are known to exist, has been reviewed and expert advice has been sought from English Heritage. This evaluation suggests that there are unlikely to be any archaeological remains of national importance that will be significantly affected by Crossrail works.
- 3.16.5 In accordance with guidance contained in PPG16, arrangements will be made for field evaluations as required during the construction period after and where remains are found, arrangements will be made to excavate and preserve the remains by record.

### **3.17 Excavated Material and Waste Management**



- 3.17.1 PPG10 sets out Government policy on planning for waste, which is relevant to the management strategy for the excavated material generated during the construction of the tunnels and stations, and waste generated during the construction and demolition arising at station, shaft and portal sites.
- 3.17.2 The London Plan sets out the strategic planning policies for the disposal of waste generated in London. It seeks to minimise the amount of waste generated, increase the re-use and recycling of waste and reduce landfill disposal. Specifically, policy 4A.2 of the London Plan seeks to ensure that the principles of Best Practicable Environmental Option (BPEO), which are a key part of PPG10, are applied. These principles have been applied in considering options for the management, transport and disposal of excavated material and construction and demolition waste.
- 3.17.3 In accordance with PPG10 and the London Plan, the excavated material and other waste arising from the construction of Crossrail will be managed on the basis of a waste hierarchy which seeks to minimise the generation of excavated materials and construction and demolition waste.
- 3.17.4 The project has sought to reduce the amount of waste that will be produced, within the constraints of the project specification, by minimising the number of buildings that are demolished along the route in order to accommodate construction. The project will aim to re-use and recycle excavated materials and construction and demolition waste wherever possible.
- 3.17.5 A considerable proportion of the excavated material will be clean London Clay. It is proposed that opportunities for beneficial use for this material will be found at the time of construction, preferably within the Greater London area, in order to minimise transportation time, distance and environmental impacts. Any excavated materials and construction and demolition waste that does require disposal will be removed to licensed sites.
- 3.17.6 Management of the generated materials arising from the construction of Crossrail will also have regard to the proximity principle contained in PPG10, which requires waste to be managed as near to the place of production as possible. Sites for re-use, recycling and landfill will be located as close to the point of waste generation as possible. In practice, this will involve much of the material being managed in either the east or the southeast regions of England.
- 3.17.7 In December 2004 a Draft Planning Policy Statement 10, Planning for Sustainable Waste Management, was issued for consultation. The draft PPS will eventually replace PPG 10. The aim of the document is to provide guidance on what is required at regional and local levels to ensure that decisions are made at the most appropriate level and that sufficient opportunities for sustainable waste management are delivered.
- 3.17.8 The draft PPS 10 reflects DEFRA's review of the decision-making principles set out in Waste Strategy 2000. These views are set out in a series of consultation papers published in December 2004. Moving waste up the waste hierarchy remains a key objective of Government waste policy in order to reduce the environmental impact of waste. It is therefore included in the draft PPS 10 as a key objective.
- 3.17.9 DEFRA has also examined the role of BPEO in decision making. It has concluded that many of the objectives and principles of the BPEO process (such as consultation, option appraisal, environmental impacts and cost effectiveness) can be achieved under the plan-led system. The draft PPS 10 promotes a plan-led approach to decision making to replace BPEO.

- 3.17.10 In the event that the draft PPS10 is adopted as the Crossrail proposals unfold, the key principles of managing the excavated materials are such that the objectives of the Draft Guidance are not prejudiced.

### **3.18 Contaminated Land**

- 3.18.1 PPG23 sets out the Government policies for dealing with, amongst other things, development on contaminated land.

- 3.18.2 The Government's policies for contaminated land are to:

- identify and remove unacceptable risks to human health;
- seek to bring damaged land back into beneficial use; and
- seek to ensure that the cost burdens faced by individuals, companies and society as a whole are proportionate, manageable and economically sustainable (Planning Policy Statement 23, para. 18).

- 3.18.3 Paragraph 20 of PPS23 states that it remains the responsibility of the landowner/developer to identify land affected by contamination and to ensure that remediation is undertaken to secure a safe development. Detailed advice on how to deal with development on land affected by contamination is set out in Annex 2 to PPS23.

- 3.18.4 The construction of Crossrail involves activities on a number of sites that are known or are suspected to be contaminated. These sites have the potential to pose a significant risk to human health as well as ground or surface water resources. Where assessment work has concluded that there is a significant impact, this is set out in the individual route window assessment. Crossrail is committed to a programme of mitigation through remediation prior to commencement of construction or by adopting special working practices to mitigate all adverse significant impacts.

### **3.19 Noise**

- 3.19.1 PPG24 sets out the Government's guidance to local authorities on the use of their planning powers to minimise the adverse impact of noise. It establishes that noise is a material consideration in determining planning applications, and requires that new noise generating development should be located away from noise-sensitive land uses wherever possible. Annex 3 of PPG24 contains references to specific noise regulations for noise generated from railways.

- 3.19.2 The London Plan, saved UDP and saved local plans on the route contain detailed policies to minimise and control the adverse impact of noise. These policies are not materially different to policies at the national level. The Borough assessments examine local planning policies for noise and determine whether there is a conflict with policy as a result of the residual impacts identified in the Crossrail ES.

- 3.19.3 The construction of Crossrail will generate noise and vibration that is likely to have a significant environmental impact in a number of locations. In locations where such impacts occur, appropriate mitigation measures will be put in place, in line with the guidance. These measures are set out in detail in the Crossrail ES. The operation of Crossrail will result in very limited noise impacts. No vibration impacts will occur.

## 3.20 Air Quality

- 3.20.1 The EU has set a number of objectives for ambient air quality throughout Europe. In the United Kingdom these have been transposed into legislation and implemented in England by the Air Quality Limit Values Regulations 2003.
- 3.20.2 The Government has published the Air Quality Strategy for England, Scotland, Wales and Northern Ireland in January 2000 and an addendum in February 2003 ("the AQS"). Together these documents provide a comprehensive strategic framework within which air quality policy will be taken forward.
- 3.20.3 In the AQS the Government has set health-based objectives for nine main air pollutants and deadlines for achieving them. The pollutants covered are benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, ozone, particulates (PM10), sulphur dioxide and polycyclic aromatic hydrocarbons (PAHs). Objectives for seven of the nine pollutants have been prescribed in regulations for the purposes of local air quality management (LAQM).
- 3.20.4 Part IV of the Environment Act 1995 requires local authorities to review and assess the current, and likely future, air quality in their areas. Where a local authority considers that one or more of the air quality objectives, as prescribed in regulations, is unlikely to be met by the required date, it must declare an air quality management area (AQMA), covering the area where the problem is expected. It must then draw up an action plan setting out the measures it intends to take in pursuit of the air quality objectives in the area.
- 3.20.5 PPS23 Annex 1 Appendix 1G explains that air quality is capable of being relevant to a development control decisions. It explains that the impact of development upon ambient air quality is likely to be particularly important:
- where the development is proposed inside, or adjacent to, an air quality management area (AQMA) designated under Part IV of the Environment Act 1995;
  - where the development could in itself result in the designation of an AQMA; and
  - where to grant planning permission would conflict with, or render unworkable, elements of a LA's air quality action plan.
- 3.20.6 PPS23 also explains in Annex 1 Appendix 1G that it is not the case that all planning applications for developments inside or adjacent to AQMAs should be refused if the developments would result in a deterioration of local air quality. Such an approach could sterilise development, particularly where authorities have designated their entire areas as AQMAs.
- 3.20.7 The Greater London Authority Act 1999 provides for the Mayor of London to prepare and publish an air quality strategy for the capital. The Mayor's AQS for London was published in September 2002. In London local authorities are required to have regard to the London AQS when carrying out their LAQM duties.
- 3.20.8 The Mayor's AQS for London identifies road traffic as the main cause of the pollutants of concern in London. The policy promote din the Mayor's AQS is to reduce road traffic growth and for the increase in travel demand to be accommodated on greatly expanded and improved public transport services.

- 3.20.9 The Crossrail project will have a minor impact on local air pollution during both construction and operational phases within designated AQMAs. However, the magnitude of these impacts will not be sufficient to impede the development and implementation of AQAPs. Moreover, the project as a whole will assist local authorities in implementing AQAPs by providing an alternative to the private vehicle.
- 3.20.10 Local impacts are reported in the relevant route window sections. The mitigation measures described in the Crossrail ES will be help to ensure that no dust nuisance arises during the construction phase.

### **3.21 Climate Change**

- 3.21.1 The Government's policy on climate change is set out in the UK's Climate Change Programme, published in November 2000. A review of that programme was begun by DEFRA on 15 September 2004. A summary of the main elements of the programme is given in Appendix 1C. Under the Kyoto Protocol agreed in 1997, the UK has an international, legally binding target to reduce its greenhouse gas emissions. The Government also has a domestic goal to cut carbon dioxide emissions by 20% below 1990 levels by 2010. PPS23 Annex 1 explains that the planning system has a key role to play, primarily by influencing development patterns and reducing the need to travel.
- 3.21.2 PPS23 Annex 1 Appendix 1C explains that Transport 2000, the 10 year plan for transport published by the Government in July 2000, forms part of its climate change programme and identifies the need to increase investment in transport.
- 3.21.3 The Government's policy on climate change is set out in the UK's Climate Change Programme, published in November 2000. A review of that programme was begun by Defra on 15 September 2004. A summary of the main elements of the Programme is given in Appendix 1C. Under the Kyoto Protocol, agreed in 1997, the UK has an international, legally binding, target to reduce its greenhouse gas. The Government also has a domestic goal to cut carbon dioxide (CO<sub>2</sub>) emissions by 20% below 1990 levels by 2010. PPS23 Annex 1 explains that the planning system has a key role to play primarily by influencing development patterns and reducing the need to travel.
- 3.21.4 PPS23 Annex 1 Appendix 1C explains that Transport 2010, the 10-year plan for transport, published by the Government in July 2000, forms part of the its climate change programme and identifies the need to increase investment in transport.
- 3.21.5 Analysis of how Crossrail will affect emissions of CO<sub>2</sub> during both construction and operation has been carried out and is reported in the Crossrail ES.

### **3.22 Housing**

- 3.22.1 The London Plan, saved UDPs and saved local plans contain planning policies to resist the demolition of existing residential properties without replacement.
- 3.22.2 Although routing and detailed design has sought to minimise the direct impact on residential property, there will be loss of residential units in some locations. It is anticipated that, in accordance with local planning policies,

replacement development would be required to include residential use to mitigate against this loss.

- 3.22.3 Works to construct the ventilation shaft at Eleanor Street will require the relocation of a travellers' site. Whilst this loss potentially conflicts with policy 3A.11 of the London Plan (GLA 2004) and Policy HSG22 of the Tower Hamlets saved UDP (adopted 1998) to protect existing sites for travellers, it is anticipated that, through compensation payable to the London Borough of Tower Hamlets, permanent re-provision of the travellers' site could be secured.

### **3.23 Industrial and Commercial Land**

- 3.23.1 The London Plan, saved UDPs and saved local plans contain policies to manage and protect existing industrial and other commercial land. The London Plan has established a strategic reservoir of industrial capacity known as Strategic Employment Land. Such land will be managed and promoted by the Mayor and the Boroughs and will only release such land for other uses in the light of strategic and local assessment of industrial demand (GLA 2004, Policy 3B.5).
- 3.23.2 The construction of Crossrail will result in the loss of industrial and commercial land including designated Strategic Employment Land at Stockley in west London and Pudding Mill Lane near Stratford. Some of this land will be required permanently to accommodate Crossrail infrastructure.

### **3.24 Town Centres**

- 3.24.1 Chapter 4 of the Crossrail ES explains the overall improvement to the accessibility of London's network of town centres that will result from the construction of Crossrail.
- 3.24.2 PPG6, the London Plan, saved UDPs and saved local plans seek to protect and enhance the vitality and viability of town centres and seek to protect retail uses in identified street frontages. The construction of Crossrail will result in the loss of protected retail frontages in a small number of locations, including losses to protected retail frontage on Oxford Street in central London. It is anticipated that, in accordance with local planning policies, replacement development would be required to include retail use to mitigate against this loss where this can be accommodated alongside frontage required for the Crossrail ticket halls.

### **3.25 Culture and Entertainment**

- 3.25.1 Government guidance set out in PPG6 recognises the importance of the leisure and evening economy to the vitality and viability of town and city centres. This is also reflected in the revised draft which was the subject of consultation in 2003.
- 3.25.2 The London Plan states that London's role as a World City is supported by a number of internationally important cultural institutions including museums, galleries and theatres. Policy TACE 6 of the City of Westminster pre-inquiry UDP (August 2002) sets out detailed policies for tourism, arts, cultural and entertainment uses, including policy to protect theatres.
- 3.25.3 The construction of Crossrail will result in the demolition and loss of the Astoria venue on Charing Cross Road to construct the Crossrail Tottenham Court Road station and upgraded London Underground station. The Astoria has been used as a theatre but is currently used as a nightclub and live

music venue. It is anticipated that, in accordance with local planning policies, any replacement development which came forward could be required to include theatre use to mitigate against this loss.