



Local Development Framework

FINAL

DETAILED ASSESSMENT

INFRASTRUCTURE DELIVERY PLAN

April 2012

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1 Introduction

Infrastructure planning ensures that physical and non-physical requirements for an area or development can be delivered in a timely manner. The Infrastructure Delivery Plan (IDP) has direct links with both the Local Development Framework (LDF) and the Council's Community Plan (2007-2017).

Future development, as set out in the LDF, will need to be enabled and supported by timely delivered infrastructure.

“Essential community infrastructure”, for the purposes of the LBRuT IDP and CIL project, is defined as **“any physical structure, facility or service, whether privately or publicly funded, that supports or enables growing communities”**. Those covered by this document set out in Table 1 below.

The Community Plan highlights that one of the challenges is the delivery of quality public services with deepening public financial restraints.

The IDP aims to support the production of LDF documents and identifies the future infrastructure and service needs for the borough for the plan period up to 2025/26. More specifically, the IDP:

- Provides an analysis of existing infrastructure provision and identifies how well existing needs are met
- Identifies future infrastructure requirements to support new development and a growing population, housing and employment growth
- Provides an indication of the potential costs and means and sources of funding the required infrastructure, including public funding, developer contribution and other sources
- Provides the basis for setting a well-balanced and reasonable charge for the Community Infrastructure Levy (CIL)

It must be noted that the IDP provides a snap-shot in time and best available information at the time of its production. Needs and demands for infrastructure can change significantly due to unexpected events, such as the opening of a new school may change the demand for school places in a specific area. Thus, this is a living document and will need to be monitored and regularly updated. In addition, the IDP does not provide a definitive or exhaustive list of available funding sources and infrastructure costs as these can also change significantly within a short period of time.

1.1 Background

Changes in the population and in particular any population increases and growth as well as changes in needs and demands will influence what community infrastructure is required in the borough. In addition, new development and population growth will require an appropriate level of additional infrastructure to ensure that existing as well as new communities and businesses have the necessary infrastructure, such as schools, health centres and leisure facilities.

The London Plan Implementation Plan¹, the draft of which was published in January 2012 for public consultation, provides a robust basis for infrastructure planning across London. The purpose of this Plan is to inform developers and all delivery partners who need to understand

¹ The London Plan Implementation Plan 1, published for public consultation, Greater London Authority, January 2012;
<http://www.london.gov.uk/publication/implementation-plan>

the envisaged implementation actions and strategic infrastructure provision in relation to the London Plan, and also to help boroughs in terms of the wider context for their local implementation and infrastructure planning and the preparation for their Community Infrastructure Levy (CIL). The London Plan Implementation Plan has been taken into account during the development of this Infrastructure Delivery Plan, to ensure the London-wide strategic infrastructure needs are fully considered at local level.

Infrastructure and services are not just provided and funded by the Council but also by other agencies (whether public, private, or voluntary) and different tiers of Government as well as different spatial areas and catchments (e.g. local, sub-regional, regional, national). Community infrastructure needs have to be appropriately considered and addressed within the planning process and need to be coordinated with new housing and other development.

In addition to the complexity of service providers in terms of their catchments and funding, it must also be considered that residents from this borough may use facilities and services provided in neighbouring boroughs and vice versa.

Funding for the maintenance of existing and new community infrastructure has always been a particular problem, where existing sources have struggled to pay or provide for the infrastructure required by future residents and businesses.

One way of helping to address this issue is by levying charges on developers. Until now, Local Authorities have been able to agree new essential infrastructure through **S106 agreements or planning obligations**, either as monetary or “in kind” contributions from developers, negotiated as part of the planning approval process. The Council’s adopted Planning Obligations Strategy² sets out how the Council currently calculates developer contributions for the following types of community infrastructure, depending upon the nature and scale of the development: Affordable housing; School places; Community safety; Health; Public Realm, open space and the Thames; and Transport.

The **Community Infrastructure Levy (CIL)** is a new levy that allows councils to raise funds from developers to help provide a wide range of infrastructure needed as a result of development, including transport schemes, environmental improvements and social and community facilities. Provision of affordable housing is currently excluded from CIL and will continue to be funded through S106 planning obligations. In addition, CIL regulations allow the use of CIL to fund revenue and maintenance schemes on top of capital projects. The CIL levy must be supported by a Charging Schedule which sets out the broad types of infrastructure that will be funded through CIL. This IDP, together with a viability study, will form the basis of the CIL charging schedule which will support a future London Borough of Richmond upon Thames CIL. Once this is in place (likely to be in April 2014), this will be the main means for securing infrastructure funding and section 106 agreements will only be used for site specific requirements e.g. a road junction improvement or on site open space, necessary for the development.

1.2 Borough context

The London Borough of Richmond upon Thames is a unique and very attractive outer London borough. Over one third of the borough consists of high quality parks and open spaces (including Richmond Park, Bushy Park and Kew Gardens), which are designated and protected. It is also the only London borough spanning both sides of the Thames, with a river frontage of approximately 35 kilometres. Of key importance is the need to protect the borough’s biodiversity and some of its habitats are of regional and national importance. Richmond upon Thames has the richest historic environment outside central London with

² The LBRuT Planning Obligations Strategy can be found on: http://www.richmond.gov.uk/section_106_planning_obligations.

many listed buildings as well as major tourist and heritage attractions such as Hampton Court Palace, Kew Gardens, Ham House and Strawberry Hill House.

It is a very affluent area, although it contains some pockets of relative disadvantage. There are many densely populated residential areas and important strategic and local town centres. The borough has a strong sense of community and the majority of residents feel that people from different backgrounds get on with each other in their local area. There is a high demand for housing, in particular family housing. House prices in the borough are considerably higher than the London average. Generally, the borough has the fifth highest overall house prices in Greater London. Affordability is a key issue affecting residents in Richmond both in the ability to rent privately or buy property.

The borough has high levels of both in and out commuting; while out-commuters are more likely to use public transport, in-commuters are much more likely to travel to work by car. In addition, Hounslow is the largest supplier of labour to the Borough. A large proportion of the borough's working age residents are employed in managerial, professional and technical jobs. There is a good supply of office premises although the dense nature of the borough limits the availability of potential new developments. The borough has a highly educated population with well over half of the residents holding at least a degree, which is reflected in above average earnings. Although unemployment rose significantly during the recession, it remains relatively low. Richmond is a dynamic economy, creating more jobs and more businesses than the national average since 2001. The largest amount of jobs is in business services, hotels and restaurants, property services/real estate and recreation and culture. Retail is also a large employment sector which has room for growth and is a major contributor to the visitor economy. The local authority maintains several nursery school and nursery units as well as many primary schools, secondary schools and special schools. Provision for children with special needs is made in all mainstream schools. The borough's residents are amongst the healthiest in the country and have a much longer life expectancy than average. Being one of the healthiest places in the country, the borough's residents suffer from far fewer major diseases than elsewhere.

1.3 Legislation

Government legislation and policy requires a much stronger link between plan making and infrastructure delivery. Planning's role in infrastructure planning and delivery is emphasised by Government as follows: *"The planning system helps decide who can build what, where and how. It makes sure that buildings and structures that the country needs (including homes, offices, schools, hospitals, roads, train lines, power stations, water pipes, reservoirs and more) get built in the right place and to the right standards. A good planning system is essential for the economy, environment and society."* ([A plain English guide to the Localism Act](#), CLG 2011, page 14)

The legislation and policies enabling the entirely new approach to developer contributions and to infrastructure planning is discussed below:

The **National Planning Policy Framework (NPPF)**³ 2012 sets out that planning should proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs. In addition, local authorities should work with neighbouring authorities and transport providers to develop strategies for the provision of viable infrastructure necessary to support sustainable development. The NPPF places emphasis on working with other authorities and providers to assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care,

³ National Planning Policy Framework (NPPF), DCLG, March 2012; <http://www.communities.gov.uk/publications/planningandbuilding/nppf>

education, flood risk and coastal change management, and its ability to meet forecast demands; and take account of the need for strategic infrastructure including nationally significant infrastructure within their areas.

The NPPF also states that CIL should support and incentivise new development, particularly by placing control over a meaningful proportion of the funds raised with the neighbourhoods where development takes place.

The **Planning Act 2008**⁴ contains enabling provisions for the Community Infrastructure Levy (CIL). The Act leaves much of the operational detail of CIL to be prescribed through Regulations (April 2010). CIL commenced in April 2010 accordingly, but it is not mandatory for local authorities to adopt it. However, the Government has stated that after a transition period (of four years), all existing S106 tariff arrangements will be required to cease operating. The legislative framework for planning contributions is set out in Section 106 (S106) of the Town and Country Planning Act 1990, which allows a local planning authority to enter into a legally-binding agreement or planning obligation with a landowner in association with the granting of planning permission.

The Planning Act 2008 specifically identifies the following types of infrastructure which CIL may be used to fund:

- (a) roads and other transport facilities,
- (b) flood defences,
- (c) schools and other educational facilities,
- (d) medical facilities,
- (e) sporting and recreational facilities,
- (f) open space, and
- (g) affordable housing.

The above list is inclusive, but not exhaustive. The Government favours a wide definition of community infrastructure and has stated that it will be possible for Local Authorities to collect CIL for types of infrastructure which are not specifically listed.

Whilst the legislative basis for CIL is set out in the Planning Act, the following provides further regulatory context:

- The **Community Infrastructure Levy Regulations 2010**⁵ enables the implementation of CIL, which came into force in April 2010.
- The **Community Infrastructure Levy (Amendment) Regulations 2011**⁶ amended to ensure local authorities have more control over the processes for operating the levy by removing the centrally prescribed arrangements for payment, removing the threshold for in kind payments of land, making minor amendments to close potential loopholes and improve how the levy system works.
- **Community Infrastructure Levy Guidance**: Charge setting and charging schedule procedures⁷ provides the statutory guidance for the process for setting CIL charges and for preparing and testing the CIL charging schedule.

⁴ The Planning Act 2008; <http://www.legislation.gov.uk/ukpga/2008/29/contents>

⁵ The Community Infrastructure Levy Regulations, 2010; <http://www.legislation.gov.uk/ukdsi/2010/9780111492390/contents>

⁶ The Community Infrastructure Levy (Amendment) Regulations, 2011; <http://www.legislation.gov.uk/ukdsi/2011/9780111506301/note>

⁷ The Community Infrastructure Levy Guidance: Charge setting and charging schedule procedures, Department for Communities and Local Government, March 2010; <http://www.communities.gov.uk/documents/planningandbuilding/pdf/1518612.pdf>

- The **Localism Act 2011**⁸ – reforms to CIL to make it more flexible, allowing some of the money to be spent on things other than infrastructure, giving local authorities greater freedom in setting the rate that developers should pay, and requiring some of the money raised to go directly to the neighbourhoods where development takes place.

Government is considering **further CIL reform proposals**⁹, which are anticipated to come into force later in 2012, and cover the following:

- neighbourhood funding: whether to pass a proportion of CIL to other bodies. Where no parish or community council exists, it is proposed that charging authorities retain funds and engage with their communities in determining how to spend those receipts – the consultation sought comments on flexibility, proportion of receipts etc.
- provision of affordable housing – Government is considering whether local authorities should have choice to use levy receipts and planning obligations for affordable housing, or whether affordable housing should be excluded from the regulation that limits pooling of planning obligations.
- other updates to Regulations.

1.4 Methodology

The preparation of an Infrastructure Delivery Plan provides an opportunity to identify the key infrastructure needs and to link them to existing and potential additional funding streams. The main tasks in the production of this Plan were:

- 1) Assess Richmond borough's current provision and current needs for each type of infrastructure (see section 2 for types of infrastructure), by using readily available evidence from within the Council and infrastructure providers such as from their business plans and estates strategies.
- 2) Identify the future requirements and demand for infrastructure for each type, which includes those that stem from the vision for development as set out in the Core Strategy (see section 3.1 below), including geographical location where possible
- 3) Identify where possible, potential means of remedying anticipated shortfalls in infrastructure provision, the scope for joint provision of infrastructure, the cost of new facilities and sources of funding.
- 4) Develop a monitoring framework for reviewing and updating the Infrastructure Delivery Plan.
- 5) Develop an Infrastructure Delivery Schedule – this will be a separate document to the IDP, but using the IDP as the basis. This will include confirmation of costs, phasing, delivery partners, funding sources etc for certain infrastructure types and projects, including their location, where a demand/need for future provision has been identified.

Note that where reference is made to current provision, the date that the evidence was captured in late 2011/early 2012 is stated.

This document can only provide a snapshot in time and it is intended to be a living document that will be updated periodically to reflect changes in infrastructure delivery, new evidence, and organisational changes in infrastructure providers. Whilst this Infrastructure Delivery Plan may highlight some significant shortfalls, it does not set out any priorities for investment; these will be decided as part of the Council's wider spending plans.

⁸ The Localism Act 2011; <http://www.legislation.gov.uk/ukpga/2011/20/contents/enacted/data.htm>

⁹ Community Infrastructure Levy – Detailed proposals and draft regulations for reform, Department for Communities and Local Government, October 2011; <http://www.communities.gov.uk/documents/planningandbuilding/pdf/1997385.pdf>

There may be some gaps in the knowledge of certain types of infrastructures, and these can only be worked up in detail for years 1-5 of a Plan. Longer term requirements for years 6-15 can be included where funding has been agreed (e.g. waste management facilities and flood defences). It is not realistic to have a detailed 15 or 20 year infrastructure programme as many models of service and infrastructure delivery will change a number of times over the period e.g. health, education, fire service, etc.

Stages of the IDP

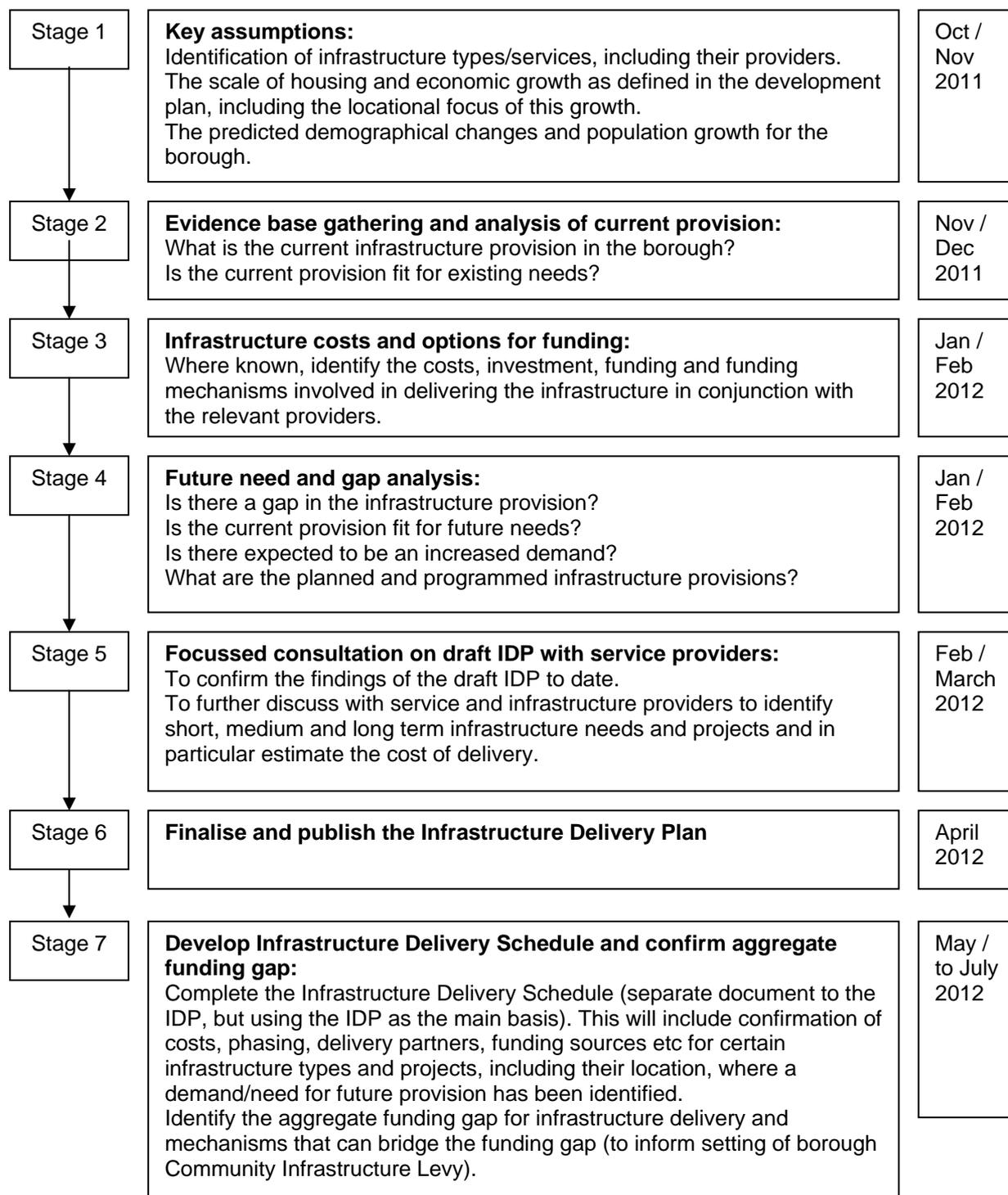


Figure 1: LBRuT – Stages of the IDP

Sustainability Appraisal and Equalities Impact Assessment

The purpose of the Sustainability Appraisal (incorporating Strategic Environmental Assessment) is to ensure that environmental, social and economic considerations are integrated into the plan and policy making progress. The purpose of the Equalities Impact Assessment is to highlight the likely impact of a plan or policy on the target groups and to take action to improve the approaches where appropriate as a result.

It has been concluded that the IDP should not be subject to Sustainability Appraisal and/or Equalities Impact Assessment, because the IDP is an assessment of existing infrastructure and requirements for future infrastructure, and is based on facts and findings from analyses, with no decisions made in relation to future investments and priorities. In addition, the IDP is based upon existing strategies, plans and programmes from the relevant infrastructure providers (including Council and external partners), which have already been subject to Sustainability Appraisal as well as Equalities Impact Assessment, (such as the Council's Local Development Framework, the Council's Local Implementation Plan for transport (LBRuT LIP2), Thames Water's Asset Management Plans, the Environment Agency's flood risk strategies etc).

1.5 Stakeholder Consultation

There is no statutory requirement to consult on the preparation of an Infrastructure Delivery Plan. However, to ensure the Infrastructure Delivery Plan correctly reflects the existing needs and future requirements, including costs and funding where appropriate, focussed consultation has taken place throughout the preparation of the Plan with identified and relevant infrastructure / service providers, involving Council service areas as follows:

Council service areas:

- Education
- Adult and Community Social Services
- Youth services
- Transport & Highways
- Planning Policy
- Parks and Open Spaces
- Property and regeneration
- Housing Services
- Libraries
- Sports Development Team

Relevant non-Council providers have also been consulted in relation to the areas not covered within the Council:

- Mayor of London, GLA
- Neighbouring Authorities, including RB Kingston, LB Hounslow, LB Wandsworth, LB Hammersmith & Fulham, Elmbridge BC, Spelthorne BC, Surrey County Council
- NHS Richmond & NHS London West London Mental Health NHS Trust
- Environment Agency
- Thames Water
- London Ambulance Service
- London Fire Brigade
- Metropolitan Police Service
- National Grid
- Gas and electricity providers
- Mobile Operators Association
- Telecommunications providers

All the above infrastructure / service providers have been specifically invited to comment on the draft version of the IDP in March 2012. All the comments and responses received on the draft IDP were analysed, and where appropriate, changes have been made to the IDP as a result of the consultation responses from the providers

Finally, it is also the intention to regularly update the IDP in light of continuous dialogue with service providers in order to reflect the most up to date information available.

2 Infrastructure

2.1 Definition of infrastructure for the London Borough of Richmond

Further to the introduction and context provided in Section 1 above, new developments and the growing population will require the appropriate infrastructure in order to maintain and improve the borough's affluence and success. The timely delivery of infrastructure is integral to meeting the needs of existing and future residents, communities and businesses.

Social and community infrastructure ensures that the large residential communities in the borough and adjoining boroughs as well as workers are well provided for in terms of child care provision, education and training, health and adult social care as well as community services, which covers leisure centres, sports facilities, community centres and libraries. Affordable housing in the borough is also considered to be an important element for meeting community needs.

Emergency services, which include the police, ambulance and fire services, are essential for the safety and security of residential areas, businesses and town centres as well as other infrastructure in the borough.

Green infrastructure, such as play areas, allotments and in particular the borough's parks and open spaces and riverside spaces, are highly valued in this borough and essential types of infrastructure. Green infrastructure provides much needed and loved open spaces for residents, visitors and workers, it improves biodiversity and air quality and significantly contributes to the quality of life in the borough.

Utilities and physical infrastructure such as energy, water, waste management and disposal as well as telecommunications and flood defences are considered to be essential elements for allowing existing / new communities and businesses to thrive. Transport infrastructure, including public transport, roads and highways, cycle and pedestrian facilities as well as car parking ensure that the borough is accessible for residents, visitors and businesses.

Investment into the borough's heritage assets is a cross-cutting issue which affects green, physical, transport and social infrastructure.

To conclude, "essential" community infrastructure in the context of the IDP generally means the facilities and services that are key to the functioning of the borough as a high-quality place to live, work and visit. Infrastructure in this context does not just include infrastructure and services provided by the Council or other public bodies, but also by private bodies. In addition, social enterprises and the voluntary sector will also play a bigger role in funding or resourcing some of the infrastructure and services in the future.

Therefore, "essential community infrastructure", for the purposes of the LBRuT IDP and CIL project, is defined as ***"any physical structure, facility or service, whether privately or publicly funded, that supports or enables growing communities"***.

2.2 Types of infrastructure and service providers

The range of infrastructure assessed in the Council's IDP is wide ranging. However, for the purposes of this document the Council has identified the following **sectors and types** of “essential community infrastructure” (Table 1) that will be required to support or enable new development as well as a growing population within the London Borough of Richmond upon Thames.

The following list is in **no order of priority or relevance** and includes those elements of infrastructure recommended in best practice guidance by the Planning Advisory Service:

INFRASTRUCTURE SECTORS	INFRASTRUCTURE TYPES	SERVICE PROVIDERS
Social and community infrastructure	Nurseries and Early years	LBRuT, private nurseries, representatives on Early Years and Childcare Provider Forum
	Primary education	LBRuT, free/independent schools
	Secondary education	LBRuT, free/independent schools, neighbouring authorities
	Special education needs	LBRuT, free/independent schools, neighbouring authorities
	Further/higher/adult education	RUTC, RACC, neighbouring authorities
	Health care (including Hospitals and GPs)	NHS London, NHS Richmond, Hounslow and Richmond Community Healthcare, South West London & St George's Mental Health NHS Trust
	Adult social care	LBRuT, Richmond Carers Centre
	Sport facilities	LBRuT, Sport England
	Leisure facilities (sports halls and indoor)	LBRuT, private providers
	Community centres	LBRuT, voluntary sector
	Youth centres	LBRuT
	Libraries	LBRuT
	Affordable housing	Registered Providers (RPs)
	Arts and Culture	LBRuT, private providers
Emergency services	Police	Metropolitan Police Service
	Ambulance	London Ambulance Service
	Fire service	London Fire Brigade
Green infrastructure	Parks, open spaces, trees and woodlands	LBRuT, Royal Parks, Crown Estate, private bodies
	Allotments	LBRuT
	Cemeteries and crematoria	LBRuT
	Play facilities	LBRuT
	Rivers	Port of London Authority, Environment Agency
Utilities and physical infrastructure	Electricity	National Grid, energy companies
	Gas	Energy companies
	Low and zero carbon energy infrastructure	Energy companies
	Water resources and supply	Thames Water
	Surface and foul water	Thames Water

	infrastructure and waste water treatment	
	Flood risk and flood defence infrastructure	Environment Agency
	Waste management and disposal	LBRuT, private providers
	Telecommunications	BT (and others)
Transport infrastructure	Roads and highways	LBRuT, Transport for London
	Overground and underground railways	National rail services, Transport for London
	Buses	Transport for London
	Cycle facilities	LBRuT, Transport for London
	Pedestrian facilities, including towpath	LBRuT
	River transport (along and across the Thames)	Private providers
	Car parking	LBRuT
	Travel choice	LBRuT, Transport for London
	Community Transport	LBRuT
	Taxis	Private providers
Heritage assets and civic spaces	Historic buildings, spaces and areas	LBRuT, English Heritage, National Trust, private bodies

Table 1: “Essential” community infrastructure types and service providers (as of Nov 2011)

Demand for infrastructure is not always uniform across the borough and some infrastructure facilities only serve localised catchments whereas others (e.g. hospitals) have catchments that extend across more than one borough. This needs to be taken into account when assessing and considering overall community infrastructure needs and identifying areas of surplus or deficiency.

3 Future changes affecting infrastructure in the borough

In order to understand the future requirements for infrastructure it is essential to assess the impacts of demographic change (including changes in population and age), anticipated levels of development (in particular housing and employment) as well as any impacts of climate change (i.e. rise in temperatures, sea levels etc), in the context of current infrastructure deficits and surpluses.

The assessment of future changes that could affect the infrastructure needs and requirements identifies the impact of both residential and commercial development on the projected demand for relevant infrastructure items. The IDP is for a 15-year period and therefore the local impacts of climate change need to be taken account of when maintaining or upgrading existing or planning new infrastructure.

3.1 The vision for development

The Core Strategy, adopted in 2009, set out the spatial vision for the borough. It focuses on reinforcing the role of Richmond, Twickenham, Teddington, Whitton and East Sheen centres, and a pattern of urban villages. The outstanding natural and historic environment and range of biodiversity will be protected and enhanced. It seeks to provide the facilities, education, business and employment opportunities and infrastructure to meet the needs of the community.

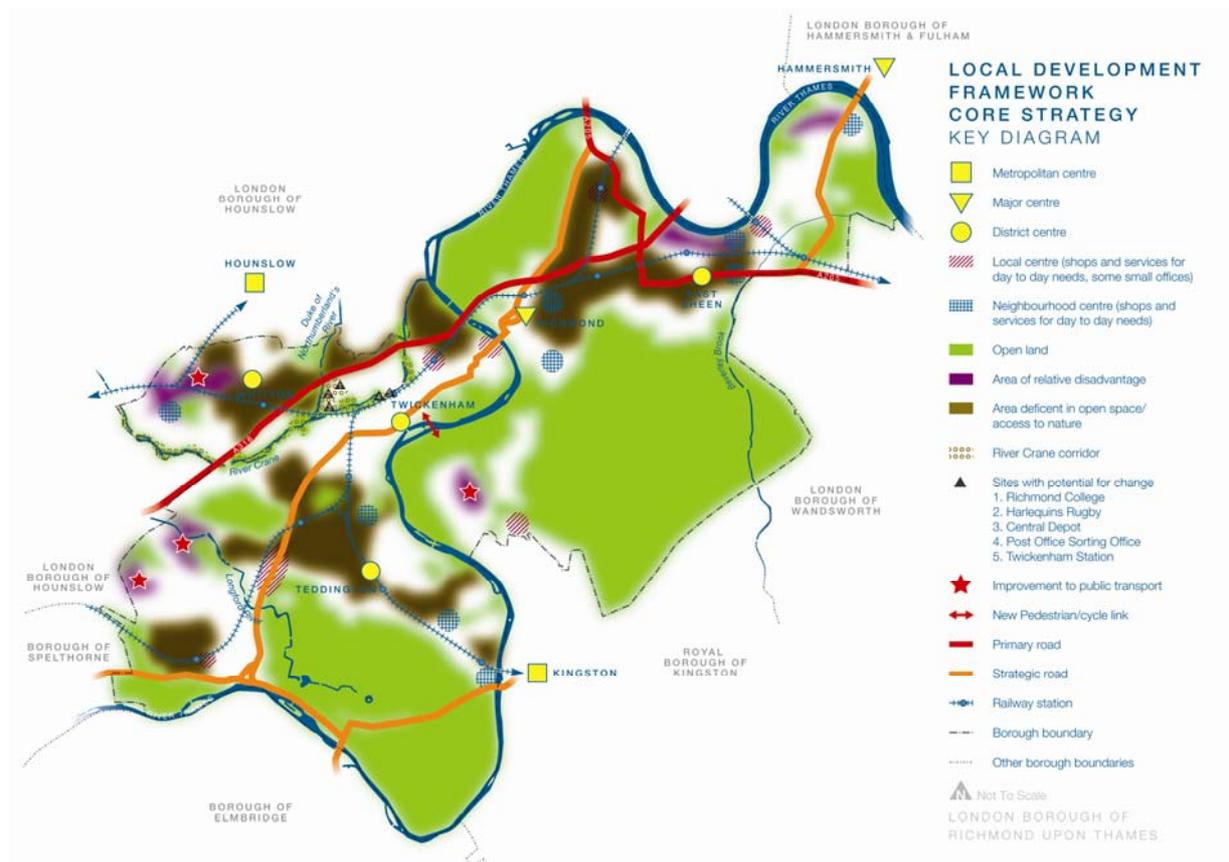


Figure 2: LBRuT Local Development Framework Core Strategy – Key Diagram

Since the Core Strategy, the Council has continued to recognise the strategic economic priorities for the borough as focusing on enhancing the competitiveness of our town local centres and promoting growth opportunities for /small businesses. To maintain and improve opportunities for economic development requires a high quality environment which is attractive for business and visitors, through having thriving town centres, and opportunities for recreation, arts and culture. The high quality historic environment, riverside corridors and open spaces are the distinctive factors that make the borough attractive.

Whilst the borough has a relatively affluent population and is a very attractive place to live, work and visit, there are parts of it that nevertheless require revitalising. It is recognised that some of those parts would benefit significantly from intervention by the Council, partner organisations and private sector landowners and businesses, particularly in terms of the potential delivery of new physical development, be it new buildings, new public space, improved street scene or improved connectivity (or indeed any combination of these things), in a way that uplifts an area in terms of its appearance, the services and functions available within it. The Council has embarked on an Uplift Strategy¹⁰. The vision of the proposed programme is to create visual improvements to promote a positive atmosphere for retail and social development, including the evening economy, improve open areas and civic spaces which could importantly generate an attraction for investment. The specific areas identified as being in most need of uplift are Hampton North, Mortlake, Whitton, Ham, and Barnes.

The Council has already embarked on extensive consultation with local communities. The All in One¹¹ consultation asked all residents about their priorities for improvement in their local

¹⁰ <http://www.richmond.gov.uk/uplift.htm>

¹¹ http://www.richmond.gov.uk/all_in_one.htm

areas. Overall the responses identified the things that most need improving as traffic and/or levels of congestion, condition of pavements, shopping in your local high street, provision of parking and condition of roads. The priorities in each area are being taken forward as Village Plans¹².

3.2 Housing and employment growth

The Core Strategy seeks to ensure that future changes in and near to Twickenham bring about overall improvements to the town. It seeks to retain employment land to provide a choice of employment opportunities; therefore there may be commercial development in the centres or smaller scale redevelopment dispersed across the borough. The Core Strategy (paragraph 6.1.14) set out future estimated increases in residential units, retail and employment floorspace as:

Area (+ wards)	Residential* (net. inc in units, larger sites plus an allowance for small sites to nearest 100)	Employment** (net inc. in jobs to 2021)	Centre	Retail*** (net inc in sq m)
Richmond Ham, Petersham & Richmond Riverside	700-1,100	3,000	Richmond	8,000
Twickenham Twickenham Riverside St Margarets & N. Twickenham S. Twickenham W.Twickenham	700-1,100	2,500	Twickenham	400
Teddington + Hampton Hampton North Hampton Fulwell & Hampton Hill Teddington Hampton Wick	700-800	1,600	Teddington	300
East Sheen East Sheen Mortlake + Barnes Common Barnes	300	100	East Sheen	1,500
Whitton Whitton Heathfield	400	50	Whitton	600

Table 2: Future estimated increases in residential units, retail and employment floorspace to 2017/18, by area*; Source: Core Strategy

* Residential based on Local Housing Availability Assessment, large sites over 10 units gross only, there will be approx 1,700 units on smaller sites, locations not yet known.

**Employment based on Roger Tym London Employment sites employment capacity forecast tables for GLA and subject to testing of site availability at Site Allocations stage.

*** Retail based on Retail Study of capacity and subject to testing of site availability at Site Allocations stage.

These indicative estimates illustrate the pattern for growth. Since the Core Strategy, the London Plan 2011 has reduced the annual housing target for the borough from 270 to **245 homes per annum**. The London Plan continues to classify the borough as 'restrictive transfer' which seeks to retain employment land. The Council's Development Management Plan, adopted in 2011, sets out strong policies to maintain the protection for our valued building and natural environment while providing for the needs of residents and businesses.

¹² http://www.richmond.gov.uk/all_in_one.htm

In the short to medium term, there are some areas within the borough which are expected to see the highest delivery of new housing, due to some large sites, which either already have planning permission or may come forward through future planning permissions. These areas are at the northern gateway to Twickenham, around Lower Richmond Road and the Stag Brewery Site. In Twickenham, sites at Twickenham Stadium/RFU, Air Sea House, the Twickenham Sorting Office, Greggs Bakery and Twickenham Station may all come forward for development, and the Council is progressing the Twickenham Town Centre Area Action Plan¹³ to take a comprehensive approach. Around Lower Richmond Road will remain a mixed use area as it is one of our locally strategic employment sites, however there will be an increase in residential units with sites at 293 Lower Richmond Road and International Mail Express already under construction, along with other potential future sites in the area. The Stag Brewery is expected to close at the end of 2014, and a Planning Brief has been prepared, which envisages the creation of a new heart for Mortlake around a mix of uses, which will include a significant number of new homes.

Outside of these areas and our town centres, limited infill or change of use is expected to be small scale and incremental, to fit with the existing density and character.

The borough's location in outer London and bordering Surrey has implications for the pattern of growth. It is important to plan for a strong local economy with new employment generating development based on principles of reducing the need to travel, and the borough's role in leisure and tourism.

3.3 Demographic change (population projections)

The service, health, care and well-being needs of the local population inform the strategic direction of service commissioning and delivery and infrastructure requirements.

The Richmond upon Thames Joint Strategic Needs Assessment (JSNA) is carried out jointly by the Council and NHS Richmond to improve health and social care provision for the Borough's residents. The JSNA is made up of a number of needs assessments for different groups of the population.

Population – Current estimates

The borough has seen a growth in population since the last Census and is now estimated by ONS to be 190,900 persons, 51% female and 49% male¹⁴. The population has increased by 1.04% since last year (0.92% for London and 0.79% for England & Wales since last year).

Population – Current projections

Population projections produced by the GLA estimate the population of Richmond upon Thames in 2010 to be slightly lower at around 188,515¹⁵. The latest produced are the 2010-Round Population Projections (revised): [Population Projections to 2031](#) for London Boroughs by single year of age and gender using the Strategic Housing and Land Availability Assessment (SHLAA) housing data and 2008 CLG household projections.

Population age structure

Richmond has a higher proportion of people aged over 85+ than the rest of London. The average age of a Londoner is 37 compared to 40 for the UK as a whole. The median age

¹³ http://www.richmond.gov.uk/twickenham_area_action_plan.htm

¹⁴ Office of National Statistics (ONS) 2010 Mid Year Estimates

¹⁵ GLA 2010 Round Demographic Projections – SHLAA

(where half the population is older and half younger) of Richmond residents' is older than London in general and more in line with the rest of the UK at 38. Half of Londoners are 34 or younger while the equivalent age for the UK is 39.

Population by quinary age 2010

	males	females	persons
0-4	7,100	6,600	13,700
5-9	6,000	5,700	11,700
10-14	5,500	5,300	10,800
15-19	4,600	4,500	9,100
20-24	4,400	4,500	9,000
25-29	6,000	6,300	12,300
30-34	7,500	8,100	15,700
35-39	9,000	9,200	18,200
40-44	9,100	8,600	17,600
45-49	7,900	7,700	15,600
50-54	6,000	6,000	12,100
55-59	5,100	5,300	10,400
60-64	5,000	5,400	10,400
65-69	3,400	3,700	7,100
70-74	2,400	2,900	5,300
75-79	1,900	2,500	4,400
80-84	1,400	2,100	3,500
85+	1,300	2,800	4,100
TOTAL	93,600	97,400	190,900
Median	38.1	39.1	38.6

Table 3: Population by quinary age 2010

In Richmond upon Thames the proportion of working age people (16-64) in mid-2010 was 67.3% compared to 68.9% in the London region and 64.7% in England.

The ONS population projections suggest a rise in the total population of Richmond upon Thames to 189,000 by 2011 and to 198,000 in 2016.

Between mid-2000 and mid-2010, the borough had an overall rising population with 10 out of the 10 years seeing an increase.

Population by age group

Richmond upon Thames has a bigger proportion of Pensionable Aged people than the London region and also a bigger proportion of those aged 0-15 years.

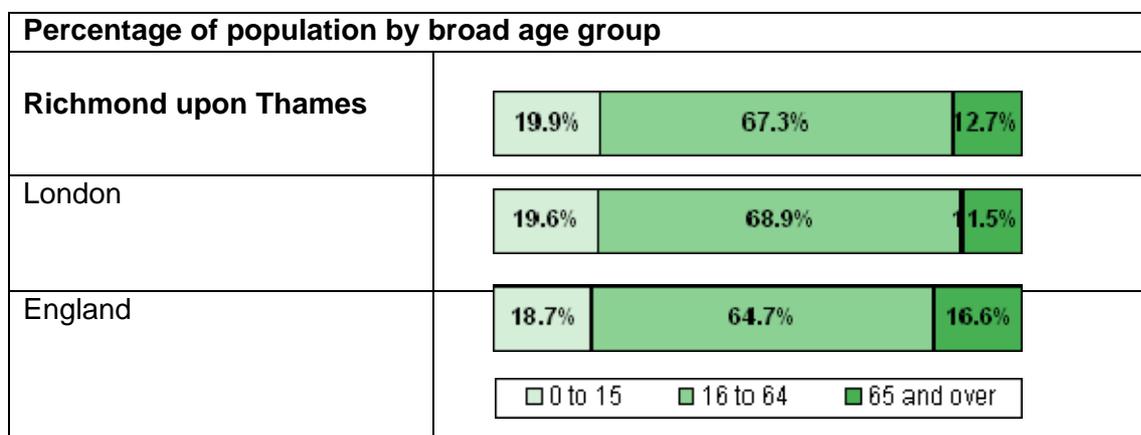


Table 4: Percentage of population by broad age group

In the borough the Pension+ age range comprised 12.7% of the population compared with 16.6% for England & Wales.

The 30-44 age range comprised 27.6% of the population compared with 20.6% for England.

	Population by bespoke broad age band, mid-2010						
	0-15 %	16-19 %	20-24 %	25-29 %	30-44 %	45- pension %	Pension + %
Richmond upon Thames	19.9	3.8	4.7	6.4	27.0	25.4	12.7
London	19.6	4.3	7.1	9.5	26.4	21.6	11.5
England	18.7	5.1	6.9	6.9	20.6	25.3	16.5

Source: Mid-Year Estimates, Office for National Statistics

Table 5: Population by bespoke broad age band, mid-2010

Year	Male	Female	Persons
2001	85,000	89,100	174,100
2002	85,600	89,900	175,500
2003	85,800	90,400	176,200
2004	86,300	91,100	177,400
2005	87,400	92,400	179,800
2006	88,800	94,000	182,700
2007	89,100	94,500	183,600
2008	89,700	95,200	184,900
2009	90,500	96,000	186,500
2010	90,900	96,600	187,500
2011	91,300	97,200	188,500
2012	91,600	97,700	189,300
2013	91,900	98,100	190,100
2014	92,300	98,600	190,900
2015	92,600	99,100	191,600
2016	92,900	99,500	192,400
2017	93,000	99,700	192,700
2018	93,000	99,900	193,000
2019	93,100	100,100	193,200
2020	93,200	100,300	193,500
2021	93,200	100,500	193,700
2022	93,200	100,600	193,800
2023	93,200	100,700	193,800
2024	93,100	100,800	193,900
2025	93,100	100,900	193,900
2026	93,000	101,000	194,000
2027	92,900	101,000	194,000
2028	92,800	101,100	194,000
2029	92,700	101,200	193,900
2030	92,600	101,300	193,900
2031	92,600	101,300	193,900

Table 6: GLA 2010 Round SHLAA Population Projections – Richmond upon Thames

Components of change

The turnover of population in an area due to migration flows of people into and out of the area can have a significant impact on public services, for example the numbers of children joining new schools during the year, the number of new registrations with General Practitioners and the registering of households for council tax. Between Mid-2000 and Mid-2009 Richmond upon Thames had an increase in population of 16.1 thousand, an increase of 9.3%. This compares with an increase for the London region of 7.1%. The working age population of Richmond upon Thames changed by 9.4 thousand, the pension age population changed by 1.5 thousand and the population of 0-15 year olds changed by 5.1 thousand.

	Change in population, mid-2000 to mid-2009			
	All persons	0-15 years	Working Age	Pension Age
	%	%	%	%
Richmond upon Thames	9.3	16.0	8.3	5.4
London	7.1	2.4	9.8	1.6
England	5.2	-2.8	6.1	11.2

Source: Mid-Year Estimates, Office for National Statistics

Table 7: Change in population, mid-2000 to mid-2009

The projected number of households in Richmond upon Thames is expected to grow from 79,000 in 2006 to 88,000 by 2016.

Ethnicity

In 2007, 158,300 (87.9 %) residents of the borough were white and 22,000 were non-white. In London 69% were white. The greatest number of non-white people were Asian or Asian British (5.3 %) compared to London with a proportion of 13.3%.

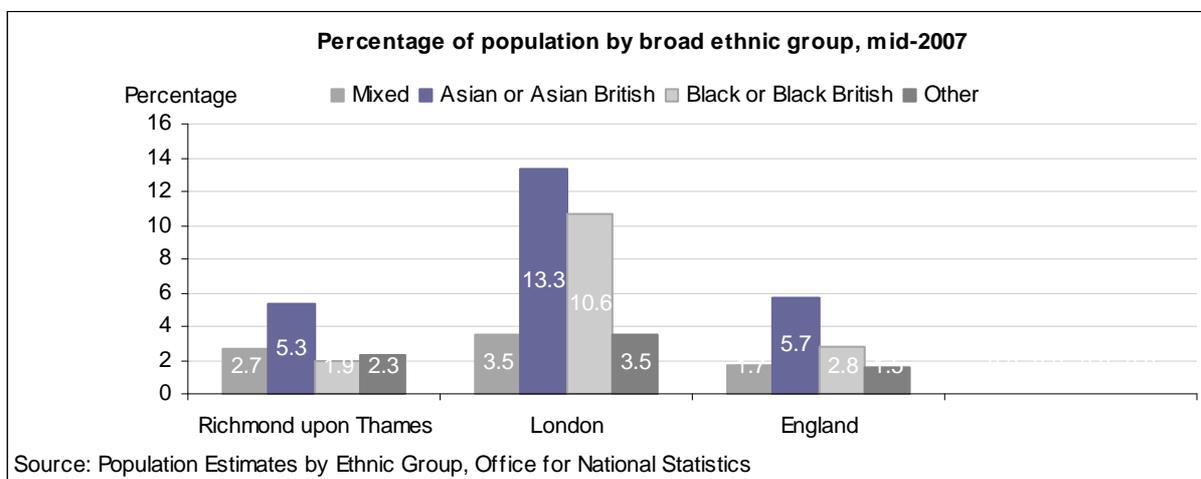


Figure 3: Percentage of population by broad ethnic group, mid-2007

Population change by broad ethnic group

In this borough the population change for all people was an increase of 5,800, with the largest change contributed by Asian or Asian British people with an increase of 2,000. In London the broad ethnic group which contributed the largest change in population was Asian or Asian British people with an increase of 94,500 thousand.

	Population change by broad ethnic group, mid-2003 to mid-2007					
	All Groups	White	Mixed	Asian or Asian British	Black or Black British	Other
	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands
Richmond upon Thames	5.8	1.8	0.8	2.0	1.2	0.4
London	192.8	44.2	24.2	94.5	-2.8	32.4
England	1225.8	218.8	150.4	464.0	184.8	207.8

Source: Population Estimates by Ethnic Group, Office for National Statistics

Table 8: Population change by broad ethnic group, mid-2003 to mid-2007

Risks and uncertainties in relation to population data and projections

If all the Council schools become academies, such detailed information about the school population may no longer be required and this would lead to a gap in knowledge.

National, regional or local priorities may influence what the Council measures and monitors, e.g. a recent child measurement programme indicated a rise in obesity.

3.4 Climate change

Climate change is likely to have a significant impact on the way the Council and its partners operate and develop in the future. This borough has been affected by a range of weather events including fluvial and surface flooding, heatwaves, gales and heavy rain, which have affected a variety of services of both the Council and its partner organisations. The United Kingdom Climate Projections (UKCP09)¹⁶ predict that the intensity and frequency of extreme weather such as heavy rain, heat waves and drought will increase. As such, it is imperative for infrastructure and public service providers to assess the impacts of climate change on their infrastructure and take actions to adapt and improve resilience to climate change and weather extremes. It is essential that the predicted changes in the climate are planned for when considering maintenance or upgrade of existing or provision of new required infrastructure.

As part of the development of the Council's Local Climate Impacts Profile (LCLIP), the UK Climate Projections for the London region as well as the impacts on this borough have been analysed. Broadly speaking this can be characterised as warmer wetter winters, hotter drier summers, sea level rise and more severe weather, which includes more extreme heavy downpours and more frequent extreme high temperatures.

Changes in temperature and precipitation will increase pressure on various forms of infrastructure, for example sewers during high precipitation events, transport in terms of overheating on public transport and stations, increased pressure on open spaces and biodiversity, increased demand for water during drier periods, upgrade of flood defences to cope with sea level rise and more extreme downpours. This borough is particularly susceptible to climate change due to the type and density of land uses and the potential risks of flooding. The likely impacts are as follows:

Higher temperatures and heatwaves:

- Impacts on health: increase in heat stress to the old, poor and vulnerable communities and people, which will in turn lead to an increased demand for public places and buildings that provide adequate shade or cooled areas.

¹⁶ UKCIP, 2009: <http://ukclimateprojections.defra.gov.uk/>

- Impacts on open spaces: increased demand on recreational needs and open space requirements as warmer climate would provide greater potential for outdoor living.
- Impacts on living and working space environment: increased demand for cooling and ventilation for thermal comfort; upgrade of existing buildings to cope with predicted changes in climate.
- Impacts on the built environment: increased risk of subsidence (in clay soils).
- Changes in biodiversity: increase in pests and changes in abundance of species

Precipitation:

- The higher risk of flooding as a result of the increase in precipitation during the winter, particularly the risk of surface water flooding but also fluvial flooding.
- The predicted drier summers are likely to impact significantly on water resources and water quality as London is already amongst the driest capital cities in the world with water shortages happening on a regular basis. Demand for water will therefore increase during the summer at the same time as supply declines due to lower rainfall.
- The increasing risk of drier summers: evaporative cooling benefit from vegetation will lessen; grassy areas such as playing fields and public parks will be particularly prone to drying out; higher water demands for irrigation; green areas may lose their cooling potential and contribution to offset higher temperatures.
- Changes in rainfall patterns and the predicted wetter winters may increase damp, condensation and mould problems.
- Predicted changes in weather patterns (hotter, drier summers and wetter winters) will also influence our natural environment and biodiversity.
- Subsidence and heave of clay-based soils can lead to damage to properties, infrastructure and other assets above and below ground, and can be further exacerbated by tree roots sucking moisture out of the soil.

The Borough intends to provide infrastructure to mitigate and adapt to the effects of climate change. Core Strategy Policies CP1 and CP2 require the construction of sustainable development, including requirements for environmental ratings such as Code for Sustainable Homes, and the reduction of carbon dioxide emissions in existing as well as in new development. CP3 requires the development to be designed to take account of the impacts of climate change over the lifetime of the development, including flood risk, water conservation and drainage, need for cooling and risk of subsidence. Policies contained within the Development Management Plan (DM SD 1 to DM SD 10) expand on the strategic policies and aim to mitigate and adapt to climate change through various ways and measures, such as sustainable construction, energy efficiency, use of renewable energy, retrofitting, need for cooling, living roofs as well as protecting water resources and making provision for water and sewerage.

4 Infrastructure assessment

4.1 Social and community infrastructure

4.1.1 Early Years Education

(last updated January 2012)

Current provision

All childcare supporting children from birth until the age of 5 follows the Early Years Foundation Stage Framework. As part of the EYFSE, there are private daycare nurseries from approximately 3 months old, pre-school education is provided for children from the age of 3 in private and voluntary nurseries and pre-schools, independent schools and by the Local Authority who has one nursery school and sixteen primary schools with nursery units for this age group.

Children's centres are a partnership between the Council, schools, the Primary Care Trust, Richmond Housing Partnership, the Metropolitan Police, the voluntary and community sector, Jobcentre Plus, the private sector and local families. They offer a range of services and facilities including early years provision. There are five in the borough: Ham Children's Centre, Heathfield Children's Centre, Mortlake Hall and Castelnau Community Centre, Norman Jackson Children's Centre (Hampton Hill), and Welcare (Twickenham). In January 2012, the Council is opening a new children's centre at the former Tangle Hall building for the Hampton North area, following an £80,000 refurbishment since it was closed as a day care unit for elderly people.

The Nursery Education Grant funds Early Years Education hours for three and four year olds for up to 15 hours a week, for between 33 and 38 weeks per year (or none at all); it's the parent's/carer's (grandparent or foster carer) decision. To be eligible a child must attend a maintained nursery school or class, a private nursery registered with Ofsted, a private or voluntary playgroup registered with Ofsted, an independent school registered with the Department for Education and Skills, or an accredited childminder registered with Ofsted

Demand for places at maintained nurseries is high.

Future requirements

Demand is likely to remain high for pre-school and nursery places with the number per year of live births in the borough (see section on Primary Education), however with a number of providers to respond to needs there is no assessment of a gap in provision.

Costs

Whilst the assessment above has not identified any specific requirements in relation to the provision for early years education, it can be assumed that there is a cost attached to the maintenance and upgrade of existing facilities and provision of additional capacity that may be required, although this may be met through public or private sector provision. No detailed information on costs was available to the team producing this IDP. However, should further details and information in relation to costs or any other specific projects become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.2 Primary Education

(last updated February 2012)

Current provision

There are 40 primary phase schools (six infant, six junior and 28 all through primary) in the borough. 25 of these are community schools, nine are Church of England and six are Catholic. Of the 33 infant and primary schools (admitting pupils at reception) 17 are on the Middlesex side of the Thames and 16 are on the Surrey side.

Future requirements

The Council has a duty under section 14 of the Education Act 1996 to ensure that sufficient schools are available for their area for providing primary education. The Council's overarching ten year education strategy 'Choice and diversity: putting policy into practice', approved in December 2010, outlines plans for key educational priorities, including the provision of sufficient numbers of high-quality primary school places.

Between 2000 and 2007, the number per year of live births in the borough rose by 21%, from 2,384 to 2,884, and has since (by the end of 2010) risen by a further 4.5%, to 2,992. Richmond Borough's primary schools have been top of the national Key Stage 2 league tables throughout that period. As a result, since the 2004/2005 school year, when there was a considerable amount of spare capacity, demand for places in reception has increased by almost 500 children; with a large leap in numbers in 2007/2008, and which, further exacerbated by the economic downturn, has increased in all subsequent years.

The number of applications for reception class places in the borough's primary schools for 2010/2011 entry increased by almost 23% to 2,325 from the 2006/2007 figure of 1,896. Demand has been, and continues to be, highest in three areas: Richmond/East Sheen; St Margarets/Central and East Twickenham; and Teddington. However, demand has increased in all areas of the borough, with the results that the 'cut-off' distances have shrunk considerably for schools which use 'home to school distance' as the main oversubscription criterion, and those what were traditionally less popular schools are now over-subscribed.

Between 2000 and 2013, an extra 21 forms of entry, providing a total of 4,410 places, have been provided on a permanent basis within the borough.

In the medium- to long-term, it is possible that there will be a need to consider additional provision in the East Sheen, Ham/Petersham, Hampton/Hampton Hill, Heathfield/Whitton and Richmond areas. Feasibility of options for expansion will need to be undertaken. If demand were to be exacerbated by variable factors – e.g. continuing economic difficulties altering the proportion of children in private school, large 'pupil yields' from housing developments at Twickenham Station, the Royal Mail site, Stag Brewery, etc., and further improvements in standards across the borough's primary and secondary schools – then the projections of pupil numbers could be higher than anticipated.

Free Schools are non-profit making, independent, state-funded schools. It is possible that the Secretary of State will approve one or more free school proposals that were submitted to him in February 2012, with a view to being implemented in September 2013. It would be imprudent of the Council to diminish its own planning for providing additional school places on the presumption that any such submissions will be approved, given that there has so far been considerable competition for free school funding. However, all of these plans are annually reviewed in the light of changes in birth and admissions data, and the establishment of any free schools would also need to be taken into account.

The proposals for the Clifden Site in Twickenham (see more detail in Section 4.1.3 Secondary Education) also consider a one-form Catholic voluntary-aided primary school that could be established in September 2013, but a decision on the proposals is not expected until May 2012.

There are 23 private schools within the borough, catering, between them, for all age groups, and in addition some Borough pupils attend private schools outside the Borough. The percentage of borough-resident children educated privately varies over time and is sensitive to factors such as the economic climate and the performance and popularity of state-funded schools, and is therefore a factor influencing demand for state-funded schools within the borough.

Costs

Capital projects are being taken forward with an initial overall budget identified of £15 - £17m. It is anticipated that the balance of the existing funding from the Primary School Expansion Capital Programme, that currently includes 2011/12 government grants, together with revenue funding agreed at the 24 February 2011 Cabinet, and predicted/estimated government grants for the next four years, estimated at £12m, should cover the costs of the schemes. However, proposed new development will create an increased demand for school places that may not have been anticipated.

4.1.3 Secondary Education

(last updated February 2012)

Current provision

There are eight secondary schools in the borough. The Council is encouraging schools within the borough to convert to academy status, within the framework offered by the recent broadening of the Government's academies programme. Academies are publicly funded independent local schools. They are all-ability schools which aim to raise standards by innovative approaches to management, governance, teaching and the curriculum. Three secondary schools in the borough became 'traditional', sponsored academies on 1 September 2010.

Future requirements

The Council has a duty under section 14 of the Education Act 1996 to ensure that sufficient schools are available for their area for providing secondary education. The Council's overarching ten year education strategy 'Choice and diversity: putting policy into practice', approved in December 2010, outlines plans for key educational priorities, including the provision of sufficient numbers of high-quality secondary school places. The Education 'White Paper' stated that the Council "will undertake feasibility for one, possibly two, additional secondary schools (including one Roman Catholic) in the borough".

The Council has agreed to purchase the freehold of a site in Clifden Road, Twickenham with a view to refurbishment/redevelopment for school purposes. The Diocese of Westminster has published formal, statutory proposals to establish a one-form entry primary school and a five-form entry secondary school on the site in September 2013. Alongside the statutory consultation being conducted by the Diocese, the Council is also consulting on options for the site before it makes final decisions on the use of the site – expected to be taken in May 2012.

The five non-academy secondary schools in the borough have all recently consulted upon converting to academy status and are expected to make decisions one way or the other in the

coming months, possibly with a view to converting in August 2012, subject to ratification by the Secretary of State for Education.

There are four proposals in development for free schools to be established within the borough in September 2013, two of which would include secondary-phase provision. The Secretary of State recently stated that he would like to see free schools established London “in areas such as Kingston, Sutton and Richmond, where there is said to be a shortage of places” and, if both secondary-phase proposals were to be approved, 222 additional places would be provided.

Despite the 25% increase in live births per year between 2000 and 2010, there has traditionally been, and still is, considerable spare capacity in the secondary school provision within the borough, with, as at October 2011, 209 spare places in Year 7 across the borough. Unlike at primary level, where almost all the state-maintained schools in the borough are highly successful and therefore very popular, at secondary level it may take longer than had previously been envisaged for the positive changes at the three academies to translate into oversubscription. For that and other reasons (including the possible establishment of free schools; and the establishment of a eight-form entry secondary school in north Kingston in 2015, which would free up 100+ places at Grey Court and Christ’s for Richmond Borough children), it is probable that the increased demand in the primary sector will not lead to capacity being exceeded until beyond 2016 at the earliest, if at all.

It is also the case that the first batches of families whose children would miss out if the academies became oversubscribed would be those living furthest away, i.e. well outside the borough, so there would be a degree of cushioning – probably a further 100+ places – for in-borough residents. In addition, the proposed establishment by the Diocese of Westminster of a Catholic secondary school in 2013 would release some places at the eight schools, most notably at Christ’s, which has traditionally admitted a number of Catholic children under its ‘Foundation’ category.

Although demand is expected to increase towards capacity by 2016, it is not forecast to exceed it at that point. At this stage, it is difficult to envisage when, if at all, demand will exceed capacity. As the educational landscape is fast changing, particularly in regard to free schools, many possible developments could take place over the next few years and it is therefore difficult to forecast demand for secondary school places as accurately as is the case at primary level.

There are 23 private schools within the borough, catering, between them, for all age groups, and in addition some Borough pupils attend private schools outside the Borough. The percentage of borough-resident children educated privately varies over time and is sensitive to factors such as the economic climate and the performance and popularity of state-funded schools, and is therefore a factor influencing demand for state-funded schools within the borough.

Costs

Revenue funding already forms part of the current budget available for feasibility studies to continue for secondary school priorities. The costs of schools’ due diligence and legal work in preparation for conversion to academy status will be met through Department for Education grants of £25,000 per school. The Council’s Cabinet approved a revised overall capital programme for the Council in February 2012, identifying the need for up to £40m new investment for sixth form, secondary and SEN places over the five year programme 2012/13 to 2016/17. However, proposed new development will create an increased demand for school places that may not have been anticipated.

4.1.4 Special Needs Education

(last updated February 2012)

Current provision

The Council is committed to improving the educational outcomes of children with special educational needs (SEN) and this is a key priority in the Children and Young People's Plan. It actively supports schools so that the majority of pupils' needs can be met within mainstream settings. To further this aim the authority is increasing the number of provisions within mainstream schools designated for children with statements of special educational needs and several building projects for SEN provision have been delivered in 2011/12. The borough also maintains two special schools that provide more specialist support if it is required – Clarendon School, Hampton (for pupils aged 7-16 who have moderate learning difficulties) and Strathmore School, Petersham (for pupils aged between 7-19 who have severe, profound and multiple learning difficulties).

Future requirements

None identified.

Costs

None were specifically identified in relation to special needs education, although undoubtedly there are costs associated with maintaining provision, in particular to improve buildings at the special schools. The Council's Cabinet approved a revised overall capital programme for the Council in February 2012, identifying the need for up to £40m new investment for sixth form, secondary and SEN places over the five year programme 2012/13 to 2016/17. Specific information on costs for maintaining existing facilities are unknown to the team producing this IDP. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.5 Further/Higher/Adult Education

(last updated February 2012)

Current provision

The secondary schools and academies in the borough do not currently offer post-16 provision.

Richmond Adult Community College has a site in Twickenham at the Clifden Centre and at Parkshot in Richmond. It provides further education, adult learning, vocational and skills training, approximately 1300 courses in 14 (out of 15) of the Sector Subject Areas that define the further education sector. These courses, range in level from basic skills to postgraduate. The College has recently been remodelled in order to provide suitable teaching areas for the needs of the changing curriculum, see future changes below.

Richmond upon Thames College in Egerton Road has approximately 4,000 full-time students aged 16-19 years old and offers these students a wide range of courses and subjects. It also offers a range of adult courses, many leading to professional qualifications, and a number of higher education courses, some in partnership with Kingston University.

St Mary's University College provide high-quality academic and professional higher education within a collegial ethos inspired and sustained by Christian values to just under 4,000 students. The main campus is on Waldegrave Road in Twickenham; St Mary's Hall, a hall of

residence, is located in central Twickenham (behind the Police Station); Another hall of residence is located at 16 Strawberry Hill Road; and the University College's main sports fields are on the Teddington Lock site opposite the Lensbury Club in Broom Road, Teddington. It is a top-performing sports higher education institution. The last five years has continued to see major capital investment including new residential accommodation and classroom refurbishments.

Kingston University is also close to the borough, with one of the student halls of residence located at Hampton Wick.

Future requirements

In July 2011 Richmond Adult Community College announced the decision to sell and transfer the ownership of the Clifden site in Twickenham into Council ownership for educational use as a school (see Secondary Education section). With the proceeds from the sale of the site the college plans to re-invest the funding in developing a state of the art extended Richmond site at Parkshot incorporating a major refurbishment of the old Parkshot building, an expansion of the Richmond Business School, a new build Richmond Art School and up-to-date facilities for Learners with Learning Difficulties and Disabilities. This will ensure that the College has buildings and facilities that are efficient to run and meet the changing needs and high expectations of adult learners. Over the next 3 years the Parkshot site will be extended and redeveloped to provide high quality space for all of the College's provision as the College decants off the Clifden site in Twickenham by 2014.

St Mary's University College has a further £4 million over the next four years to be invested in a range of planned maintenance and refurbishment projects across the campus.

The Council has committed to promoting sixth forms in the borough's secondary schools as part of its strategy to further increase choice and quality in local education for residents. Under Sections 15ZA and 18A of the Education Act 1996 (as inserted by the ASCL Act 2009), the Council has a duty to secure sufficient suitable education and training opportunities to meet the reasonable needs of all young people in the borough.

An online survey of school and college students, parents and other local people in March-May 2011 showed strong demand for sixth forms to be established in the secondary schools and academies within the borough: 87% of the 1,325 respondents indicated that they would like to see school sixth forms in the borough, whilst 10% indicated that they would not.

Since then, the borough's Sixth Forms Forum – consisting of: the principals of the eight schools and academies; the principals of the two further education colleges; senior elected members; and senior officers – has considered both an overarching feasibility report into the establishment of sixth forms and a more detailed report into the accommodation that would be required. As a result, the Forum has approved in-principle the proposal to establish sixth forms in the borough in September 2013.

Work to develop a viable and sustainable curriculum model is ongoing, and statutory proposals to establish the sixth forms were published in March 2012.

Costs

Funding for improvements to Richmond Adult Community College and St Mary's University College has been identified as above. The Council's Cabinet approved a revised overall capital programme for the Council in February 2012, identifying the need for up to £40m new investment for sixth form, secondary and SEN places over the five year programme 2012/13 to 2016/17. The capital costs of providing accommodation for sixth forms at Christ's, Grey

Court, Orleans Park, Teddington and Waldegrave is estimated at £25million. Further specific information on costs of projects are unknown to the team producing this IDP. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.6 Health care (including Hospitals and GPs)

(last updated December 2011)

Current provision

In April 2011 NHS Richmond came together with the other four Primary Care Trusts (PCTs) in South West London (NHS Croydon, NHS Kingston, NHS Sutton and Merton, and NHS Wandsworth) to form [NHS South West London](#). The individual PCTs remain as statutory organisations, but NHS South West London now operates as one management team, sharing resources, roles and functions.

The nearest Hospitals for acute Accident & Emergency are outside of the borough – in particular West Middlesex University Hospital at Isleworth and Kingston Hospital.

Community-based services to the population are provided over a number of different sites. One of these sites is the Teddington Memorial Hospital, based in central Teddington. Its services include a walk-in centre for minor ailments, consultant and GP-led outpatient services, a diabetes centre, diagnostics and community care. There are clinics in Teddington, Hampton, Twickenham, Ham and East Sheen, with over 30 GP practices across the borough. A total of 183,154 people were registered with GPs in the borough in April 2010 (for the Richmond & Twickenham PCT, Attribution dataset GP registered populations 2010, published February 2011). All NHS practices currently offer appointments during extended hours' sessions, providing patients with a range of early morning, evening and/or Saturday appointments.

A new state-of-the-art health and social care centre in Whitton will bring GPs, social services, mental health and other primary care services together under one roof, offering an integrated service for local residents. The centre is expected to open in the spring of 2012.

The 2009 refresh of the Joint Strategic Needs Assessment¹⁷ set out a needs assessment for a Richmond and Barnes polysystem – to coordinate services and pathways of care on a 'hub and spoke' basis in a given geographical locality.

The 2009 refresh of the Joint Strategic Needs Assessment stated that the availability of NHS dentistry was fairly evenly spread across the borough. The need for a new dental practice was identified to increase availability of NHS dentistry and work towards improving and promoting good oral health in the Whitton area. The new practice is located in central Whitton and will relocate to the purpose built Whitton Health Centre, once open. The practice itself opened in July and is currently working from its own premises, and has seen an influx of new patients from the surrounding areas.

Through the NHS there are also 58 contracts with local optometrists, 22 of which provide services from fixed premises and 34 provide domiciliary services, plus pharmacies across the borough.

[Hounslow and Richmond Community Healthcare](#) (HRCH) are the NHS organisation responsible for providing community healthcare to the 425,000 adults and children living in

¹⁷ <http://www.richmond.gov.uk/jsna.htm> A JSNA is the vehicle through which local authorities and PCTs describe the health, care and well being needs of local populations to inform the strategic direction of service commissioning and delivery.

the boroughs of Hounslow and Richmond. They have a distinct role in enabling people to stay healthy and active in their communities and in preventing them from spending unnecessary time in hospital. This is part of an integrated health and social care system and can make significant improvements for patients but by working in partnership with primary care, social care, education, acute hospitals and with commissioners we can together go further, providing joined up, higher quality, personalised and efficient services that lead to better outcomes for patients. Richmond estate is in the process of transfer to HRCH NHS Trust.

The main provider of adult and children's mental health services is [South West London and St George's NHS Mental Health Trust](#). A range of services are provided across sites, including Barnes Hospital, Richmond Royal Hospital, the Maddison Centre in Teddington, and the Kingston Lane Hostel in Teddington, with other outreach teams and services. The tiered model of care is designed to provide a single point of access, for adults and older people enabling an early assessment and initial consultation from a full range of qualified mental health professionals, and ensuring that service users are referred to the most appropriate service. The emphasis in each tier will be to provide discrete, personalised packages of care, provided by the right team, in the right setting at the right time.

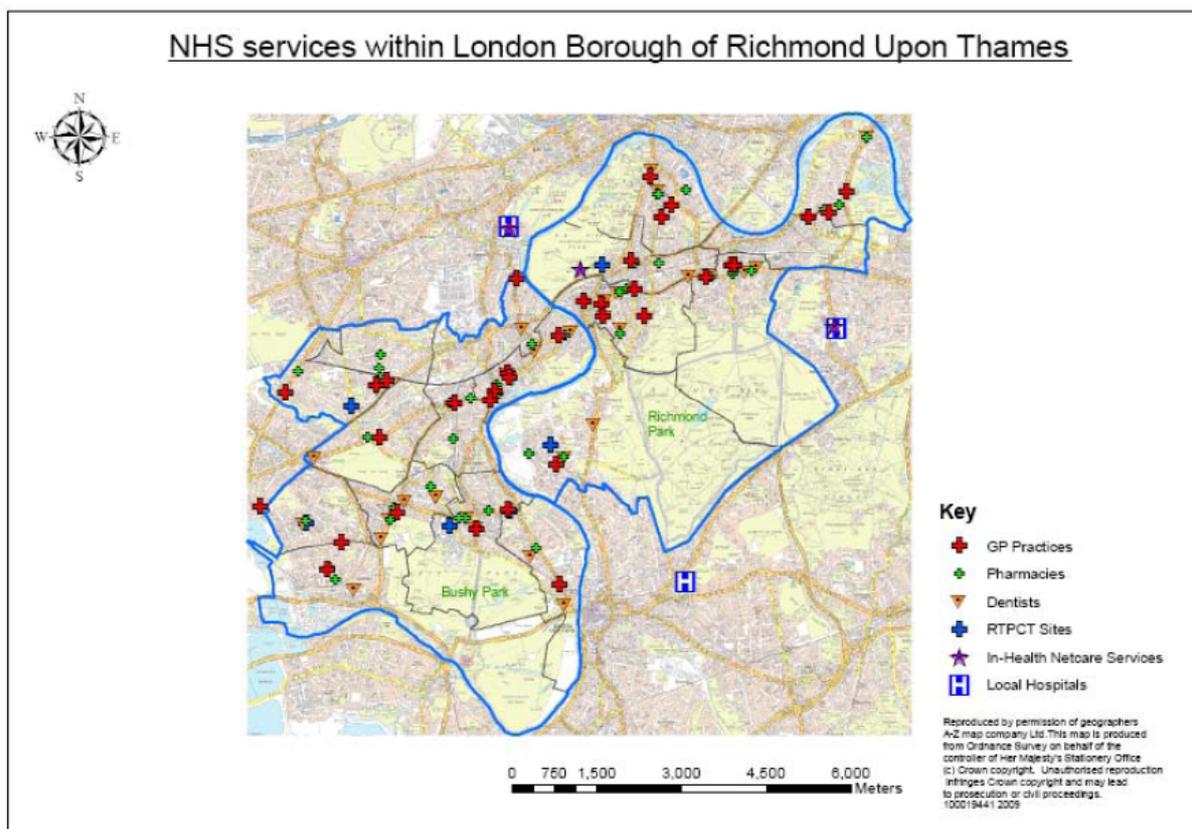


Figure 4: NHS services within borough, Source: Joint Strategic Needs Assessment 2009 Refresh

Future requirements

A review of health services¹⁸ in South West London is underway. Doctors, from hospitals and general practices, alongside patient representatives, are leading six clinical working groups to look at the following areas: planned care; urgent, unscheduled and emergency care; maternity and newborn care; children's services; long-term conditions ; and end of life care. Key issues discussed so far include:

¹⁸ <http://www.southwestlondon.nhs.uk/haveyoursay/bsbv/Pages/default.aspx>

- Increasing the number of urgent care centres, providing urgent medical advice in cases that are not life-threatening, linked to A&E departments
- Improving urgent care in the community
- Improving care for very sick children by locating longer-stay hospital beds in specialist children's units in fewer hospitals
- Increasing the number of operations that are done as day surgery
- Having a small number of inpatient planned surgery units.

The review will continue to influence future models of care to ensure services are improved for patients, while being more efficient and getting better value for money for local people.

In Twickenham local GP practices have expressed a requirement for new facilities. The St John's Health Centre in Twickenham, shared by the HRCH Trust and GPs, does not have optimal room co-locations and is undersized. The Council is also aware that additional capacity for surgeries is being sought in the East Sheen area. Ongoing changes in premises and operational legislation could affect whether existing premises need improvements or in some cases could result in the need to seek new premises, for example single handed GPs may be affected. All GPs and other primary medical services must register with the Care Quality Commission (CQC) during 2012/13 and comply with the essential standards, which cover quality and safety.

The Government has outlined the role of clinical commissioning groups (formerly termed 'GP consortia') who will gradually take on commissioning functions from PCTs and manage the bulk of the NHS budget. Richmond & Twickenham GP Consortium have been appointed as the local clinical commissioning group¹⁹ to work together with other NHS colleagues and local authorities to help manage local budgets and purchase services for patients, with a view to becoming statutory bodies as Primary Care Trusts are phased out. They will be reviewing capacity and local service options for future delivery, which could include the purchase of medical services from the private sector.

A Clinical Commissioning Strategy Plan for 2012/13 to 2014/15 is under preparation. The Richmond Clinical Commissioning Group is committed to promoting health and preventing illness and to providing the right care for everyone in Richmond – the right care, at the right time, in the right place, in the right way, and at the right cost. The strategic goals include the launch of Whitton Health & Social Care Centre in 2012, offering local health care services which will feature physio, podiatry, children's services, mental health services and public health initiatives including health improvement, sexual health and smoking cessation. There will be other services as well, including 2 GP practices and a dentist.

South West London and St George's NHS Mental Health Trust Annual Plan²⁰ includes the objective of a continuing reduction in the number of beds provided by the organisation with further moves towards community based services, enabling more service users to be supported closer to home, and the generation of capital receipts through the sales of trust property. The medium term Estates Strategy is to consolidate in-patient services from five main sites down to two or three. The two principal in-patient sites would be Springfield Hospital and Tolworth Hospital.

Costs

These are challenging times for the health sector to maintain existing facilities and increase flexibility and choice to patients. Proposed new development will create an increased demand for health services that may not have been anticipated, which in places could create the need

¹⁹ <http://www.southwestlondon.nhs.uk/About/clinicalcommissioninggroups/Pages/default.aspx>

²⁰ http://www.swlstg-tr.nhs.uk/publications/annual_trust_plan/

for additional capacity. Specific information on costs of projects is unknown to the team producing this IDP. Costs could be identified by using the HUDU model²¹, which uses the numbers of proposed housing units, and the likely resulting population and calculates what health care floorspace is required, and what the costs, both capital and revenue, will be before mainstream NHS funding catches up. Further details and information in relation to costs can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.7 Adult Social Care

(last updated January 2012)

Current provision

There are various means of support, including for those staying at home. The main infrastructure considered below focuses on housing options (see also section 4.1.13 on Affordable Housing) and centres providing day care. Adult services include those run by the Council and those run by voluntary groups.

Providers of retirement housing range from large mainstream housing associations, such as Richmond Housing Partnership (RHP), to small voluntary organisations. The Council no longer provides retirement housing but administers the Supporting People Programme, which helps to meet some of the costs of housing related support.

Extra Care Housing supports independent living for as long as possible and still gives the security and privacy of having their own front door. There are two schemes in Richmond providing self-contained flats designed to meet the needs of older people. There are facilities that residents can share if they want to and a Scheme Manager and fully trained care staff are based on site, or on call, 24 hours a day to provide extra care and support. One scheme in Twickenham, Sandown Court, has 26 self contained flats, and the other scheme is in Hampton, Dean Road, which has 41 self contained units, a mix of 1 and 2 bedrooms, of which some are for sale.

There are many different types of residential homes and nursing homes in Richmond providing for different types of care. These are not owned by the council but are independently run by a variety of private and not-for-profit organisations.

The Council also directly manages a number of services for adults with a learning disability – residential homes/supported living homes/residential respite/shared lives service, as well as community support service, supported employment service and small businesses. In December 2011 in all over 150 adults with a learning disability receive a service from the Council managed services with a gross budget of £4.256m. At a snapshot in March 2009 there were 73 individuals (18% of the total number of 403 service users) placed outside of the borough with a large proportion at a distance of 25 miles or more from the borough boundary (estimated at 65% of the total placed outside of the borough).

The Council reviewed adult social care services in 2010/11 covering self directed support contributions, fair access to care services eligibility criteria and changes to day services for older people. For new service users since April 2011, people assessed with moderate needs will no longer be eligible to receive social care services and support and will receive general information and advice signposting to services elsewhere in the community e.g. luncheon clubs, hot meals, community alarms, befriending and handy person schemes and help with shopping; only those with substantial and critical needs will be eligible. The day service part of

²¹ http://www.healthyrbandevelopment.nhs.uk/pages/hudu_model/hudu_model.html

this review led to the closure of services at two day centres – in Twickenham and Tangle Hall.

The Council runs the [Woodville Centre at Ham](#) (centre of excellence in dementia care) and [Sheen Lane](#) which provide intensive day care services with support, and the [Access Project Specialist Day Centre](#) a specialist day centre in Whitton.

[Homelink](#) is a nurse-led day respite centre in Twickenham, run by St. Augustine's Community Care Trust, offering places for one day a week (which enables their carer to have a day's respite) although there is a waiting list which is on average 6 months long.

There are also Day Centres, Luncheon Clubs and friendship groups around the borough run by local community or voluntary organisations. They provide a range of activities, a chance to socialise and meet friends and a meal for older people, who do not have specialist needs.

[Age UK Richmond upon Thames](#) (an independent charity) operate social centres at Twickenham Day Centre, Barnes Green Centre, Whitton and at the Dean Road Extra Care Scheme in Hampton, for activity and social venues for people over 50 years of age and offer many activities subsidised to make them affordable. The charity also provides a telephone helpline, welfare benefits advice and a handyperson service, and runs an outreach programme.

Other centres offering activities include the [Greenwood Centre](#) in Hampton Hill, the [Avenue Club](#) in Kew, [Linden Hall](#) in Hampton, and [Elleray Hall](#) in Teddington.

[Richmond Carers Day Centre](#) is located in Twickenham operating appointments, a drop in service at set times and a support telephone line. It offers training and events. NHS South West London Richmond Borough Team has allocated £281,000 for carers' breaks funding to support carers with a health condition to take a break for 2011/12 (up to £350 for individuals, up to £500 for a couple if both are carers).

Future requirements

The main aim of the Council's Older Persons Accommodation Review²² was to look at existing means of maintaining independent living for older people and in the light of analysis of local data, trends and best practice to develop options and recommendations regarding services, the changing nature of sheltered housing and the options available for re-aligning supported accommodation and services to better promote independent living. The review highlighted a number of issues including: the importance of housing and support services to allow older people to maintain independent living, the relative popularity of sheltered housing within the borough, the need to re-develop existing sheltered and residential care schemes into extra care housing, the lack of private sheltered accommodation available in the borough and the need to modernise a small number of sheltered bedsit style accommodation.

In November 2010, the Cabinet agreed a new strategic direction for the Council in which it will look to commission services through the most effective sources to meet the needs of residents of the borough. Within the service area of Adult & Community Services, a programme of work to look at future delivery mechanisms for residential homes/supported living homes/residential respite/shared lives services, community support service, supported employment service and small business is underway.

The number of people with learning disabilities is expected to rise by 10% by 2025 in line with expected population increases generally, according to the Council's Learning Disability

²² http://www.richmond.gov.uk/older_peoples_supported_accommodation_review_1.pdf

Commissioning Strategy 2010-2013²³. The total number of people with a learning disability is therefore estimated at 3,223 in 2025, with 741 with a moderate or severe learning disability. To increase housing choices a need for more supported living options in the borough has been identified.

During August and September 2011 the Council carried out a consultation with the voluntary sector and other stakeholders to identify the local priorities and outcomes in relation to Adult Services Commissioning. Support for Carers was one of areas identified within this process and the results of this consultation along with various other consultations (e.g. Carers Conference feedback) will now inform the services that will be commissioned. The Council and NHS Richmond value the contribution carers make in supporting the most vulnerable in our community and are committed to working with them and partner agencies to commission services which support and enable them to continue caring and have a life of their own outside caring. The key messages from the consultation relating to priorities for Carers included:

- Carers need access to good information and advice
- Respite and short breaks are vital services and therefore viewed as a top priority
- Young Carers need more support that is tailored to their needs
- Weekends and evenings are a gap in service provision for support to Carers
- 1-1 support and support groups for Carers are excellent and should continue
- Counselling and Emotional support were highlighted as very important
- Employment support, leisure and learning opportunities were identified as important services.

A draft list of services has now been drawn up based on the consultation results as well as priorities identified within the Carers Strategy. The Council and NHS Richmond will now undertake further research with organisations supporting Carers and Carers themselves in order to finalise the detail of what will be bought. It is anticipated that these services will be in place by June 2012.

A clear priority that has been identified as part of the adults commissioning is the need for more borough wide and accessible services, using different models of service delivery that better meet the changing needs of clients. This may mean that providers use other borough infrastructure resources from which to deliver services e.g. community buildings, cafes, libraries etc.

The Council's move towards commissioning is expected to be implemented by 2013.

Costs

Costs have been identified for the provision of ACS related services, agreed in November 2011. These are borne largely from a transfer from the Council's existing corporate grants budget, NHS partnership funding, and other funding streams related to the same service areas such as the Barnes Green Day Centre contract.

Improvements to housing options and care services may require funding where sources are limited, but provision can come from a range of public and private sources.

Through the cross borough Mansell Project, the borough has secured external grant funding of £500,000 to potentially develop 4 units for LD clients who also have behaviours that challenge services.

The future of some currently grant-aided projects run by voluntary groups may be uncertain, as some priorities have changed, and many services will be procured through a contracting

²³ http://www.richmond.gov.uk/ld_strategy_-_final_version_-_jan10__3_.pdf

arrangement. Age UK Richmond upon Thames receive most of their funding for services from charitable trusts, grants, contracts with the local authority and individual donations, however they are aiming to become increasingly self-sufficient to fund core services from their own revenue so that in the future funding will enable provision of new services²⁴.

Specific information on costs of other projects is unknown to the team producing this IDP. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.8 Sport facilities

(last updated January 2012)

The following table sets out the standards for access to sports provision:

Activity	Standard	Status	Notes
Organised outdoor pitch sports – football, rugby, cricket, hockey, tennis, bowls, netball	One multiple pitch location either side of borough +	Open Spaces Strategy standard	Quantitative standard + Accessibility standard
	Facilities* within 1.2 km catchment	Local standard – 1.2 km is 20 min walk	
Organised outdoor sports requiring specialised facilities – athletics, golf, water sports	Athletics – one National standard facility per Borough. Each Borough secondary school/community sports facility to have a range of athletics facilities	Local standard, investment in one high class facility with Borough-wide catchment, additionally facilities at each school/community sports would allow for wider participation at all levels	Quantitative + accessibility standards
	Golf – publicly accessible facilities within 1.2 km catchment	Local Standard	Accessibility standard
	Water sports – a range of facilities where possible along Thames	Aim to maximise the number and range of facilities.	All facilities based on Thames and adjoining water bodies.

Table 9: Applied standards for access to sports provision; Source: Borough's Open Space, Sport and Recreation Needs Assessment (2008), page 27/28

Current provision

According to the London Borough of Richmond upon Thames Open Space, Sport and Recreation Needs Assessment (2008)²⁵, there are various types of facilities: Council owned and run facilities, land or facilities owned by others such as the Royal Parks, which are

²⁴ Age UK Richmond Upon Thames, Annual Review 2010-11, Improving later life

<http://www.ageuk.org.uk/BrandPartnerGlobal/richmonduponthamesVPP/Documents/Annual-Review-2011.pdf>

²⁵ LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008,

http://www.richmond.gov.uk/needs_assessmentfinalupdate08.pdf

publicly available free or at low cost, private facilities which are available to non-members at concessionary rates, Council owned facilities exclusively let to one club and completely private facilities. Educational facilities may be public or private, with or without dual or shared use. Where public money has been given to private clubs (such as from the Lottery or Sports England) there is often a requirement to open up the club to a wider group.

Different sports and activities have different traditions of provision, for example there are few public rugby pitches but a number of rugby clubs in the borough where members are welcome at relatively low cost, whereas for football most facilities are public, and clubs do not generally own their own grounds.

Note that for most categories, the availability of public or private facilities where there is a level of public access have been compared to the standard, but where there is a shortfall the availability of alternative provision is considered – this could be private or dual use, more details are given below under each category.

Football: There are 24 adult football, 31 junior and 7-a-side grass football pitches managed by the Council and a further 30 football pitches including junior pitches at educational establishments. There are 2 pitches in Bushy Park (Royal Parks Agency) and 4 in Marble Hill Park (English Heritage), all available for public use. Two Council owned sport grounds are leased to Hampton & Richmond Borough Football Club (in Hampton) and Kew & Ham Association Football Club (Ham). There are approximately 10 football pitches at private schools and 20 football pitches used by voluntary or private clubs. Football and 5 a side is also played or practised on several public artificial turf pitches – in particular at Whitton Sport & Fitness Centre (Lincoln Field) a floodlit artificial “3G” pitch, primarily designed for football, opening in 2010.

In recent years there has been significant investment in upgrading parks sports pavilions, e.g. North Sheen Recreation Ground, Lincoln Field and Barn Elms – however, there are still a number of parks sites where pavilions remain in a poor condition.

Rugby: There are 5 Council rugby pitches, 6 within educational establishments, 4 in Richmond Park, 2 in Bushy Park and 2 in Marble Hill Park. In addition, there are approximately 6+ private school rugby pitches. The Rugby Football Union (RFU) is based at Twickenham and so is the Harlequins Rugby Football Club.

Cricket: The Council has 23 cricket pitches and 4 clubs with licence / lease arrangements on Council land. There are 7 pitches at state schools and approx 5 at private schools. Bushy Park has 4 cricket pitches, Marble Hill Park 1 cricket pitch, including artificial wicket and 2 practice nets. There are 12 cricket pitches owned by voluntary clubs e.g. NPL, Barnes Cricket Club.

The condition of parks sports pavilions is variable with some very good facilities, but some are in need of further investment.

Hockey: There are several Council/school artificial turf pitches, which include one floodlit and one non-floodlit pitch at Teddington Sports Centre, one floodlit pitch at Hampton Sports & Fitness Centre and another floodlit pitch at Shene Sports & Fitness Centre. Orleans Park School has one non-floodlit pitch and the Lensbury / St Mary’s College also has a non-floodlit pitch, though planning permission has recently been granted for the installation of floodlights.

There is 1 artificial turf pitch at Harrodian School. Nearby out of borough hockey pitches are the Quintin Hogg ground in Chiswick, the Dukes Meadow Pitch in Grove Park and Tiffin Girls School in North Kingston.

Tennis: The Council manages 50 hard courts and 8 grass courts, 6 of which are disused. Two voluntary clubs lease their courts from the Council. There are approximately 70 voluntary/commercial courts and approximately 25 tennis courts at state schools, with a further estimated 25 courts in the private educational sector. Multi-purpose facilities can often include tennis. The only indoor provision is a 3 court hall at St Mary's College. Only a small number of Council and club courts are floodlit.

Bowls: There are 4 Council and 1 disused facilities as well as 7 private outdoor and 2 indoor clubs. Most clubs are below capacity and have vacancies for members. The 4 Parks bowls facilities were all upgraded in 2011.

Netball: Multi-purpose floodlit courts are available at Whitton Sports & Fitness Centre (though are temporarily closed during the school rebuild); Non-floodlit courts are at Teddington Sports Centre and Orleans Park Sports Centre. Floodlit multi-use games areas are provided at Stanley Junior School and at Oldfield Centre. Netball courts are marked on some parks tennis courts, e.g. Old Deer Park, Kneller Gardens. Most schools have their own provision of courts.

Athletics: There are two main athletics facilities at Barn Elms (Barnes) and St Mary's College (Strawberry Hill), which is floodlit. All of the secondary and some of the primary schools have some athletics facilities.

Golf: There are public or pay and play facilities at Richmond Park (2 x 18 hole) and Amida Golf (9 hole). There is also 9 hole pitch and putt course at Palewell. Private clubs are at Richmond, Royal Mid-Surrey (2 x 18 hole), Fulwell, Hampton Court Palace and Strawberry Hill (9 hole); also private are the golf academy at Amida and golf court at Lensbury Club.

Royal Park's have recently received planning consent for the upgrading of the Richmond Park complex to include a new driving range and clubhouse.

Water sports: There are a variety of water sports facilities beside the River Thames and on the Thames Young Mariners lake at Ham, which is run mainly for education and youth groups. There are 10 sailing clubs, 3 motor yacht clubs, 3 canoe clubs and 8 rowing clubs/boathouses. Hampton/Lady Eleanor Holles and St Pauls independent schools have their own boathouses. These clubs are all flourishing with popular junior sections and high levels of club membership.

Future requirements

Football: The large number of football pitches means that there are no areas of the borough outside the 1.2 km catchment. Demand is likely to rise with an increasing younger population and the increased interest in women's and girls football. As there appears to be adequate provision for football in quantitative terms, with the option of bringing under-used areas back into use, e.g. Murray Park and Buckingham Field, the main need is for improvements to existing facilities in some areas, e.g. better pavilions, floodlighting (mainly for training areas), and additional artificial surfaces. The need for a further "3G" floodlit artificial turf pitch has been identified with a priority being the Richmond / Ham area.

Rugby: Areas outside the 1.2 km catchment are parts of Mortlake/Sheen, West Twickenham, Hampton and Whitton. At the moment demand for rugby is high, particularly for younger age groups. Mini and junior rugby is already well developed both by voluntary clubs and in the schools. A number of clubs provide curriculum time coaching for schools. Demand is likely to rise with an increasing younger population. Surveys show a desire from clubs to upgrade existing facilities such as pavilions and floodlit facilities in places to allow for evening training.

Cricket: Most of the borough falls within the 1.2 km catchment of a cricket pitch. There has been a strong increase in junior cricket, including girls cricket, throughout the borough and this is likely to feed through to a general increase in participation. However, at the moment there does not appear to be a need for additional cricket facilities in the borough, although this could change over time. The need is for improvements to the quality of existing pitches and to ancillary facilities such as pavilions, particularly those in some parks. There is a need to provide better quality indoor net facilities within sports centres / sports halls.

Tennis: There is a good distribution of both public and private facilities across the borough with nowhere outside the 1.2 km catchment, but there are no club facilities in Hampton Hill/ Hampton. There are high levels of usage of Council facilities during peak summer months. Clubs are at capacity and generally require more court time. Demand is likely to rise slightly with an increasing younger population and the Council's emphasis on youth as a priority age group for sports promotion. Lack of floodlighting at many venues severely limits use in winter. There appears to be however adequate provision for tennis in quantitative terms, with the option of bringing other areas back into use e.g. Barn Elms, should the demand rise. The main need is for improvements to existing courts and associated facilities, including floodlighting.

Bowls: There are a few areas of the borough outside the 1.2 km catchment if the voluntary clubs are also included. Past trends indicate that overall demand is not likely to increase and could decline further. However, as the proportion of older people in the population grows, existing facilities should be retained and invested in as well as promoted to ensure that they are retained as viable clubs; no new facilities are required at present.

Netball: There are high levels of use of floodlit facilities, with clear evidence of unmet demand. Demand is likely to continue to rise with an increasing younger population and the Council's emphasis on youth as a priority age group for sports promotion. However, due to the large number of schools offering netball, facilities are widespread and there are no areas of the borough outside the 1.2 km catchment.

There is demand to further develop a club in the east of the borough and it is suggested that a floodlit centre should be developed in Richmond / Sheen, with a possible site being Old Deer Park.

Athletics: Demand is likely to continue to rise with an increasing younger population and the Council's support for the development of athletics in general. St Mary's is a nationally recognised performance centre, where the needs of local performance athletes will be provided for. Barn Elms should be retained as a recreational non-competitive facility.

Golf: There are high levels of demand for public facilities. Most of the borough is within the 1.2 km catchment of a publicly accessible golf club. The borough provides for the South West London sector, but players from this borough generally also travel to facilities in Surrey, making the catchment areas of golf clubs quite large. It is considered that there are sufficient golf facilities in the borough, and that priority should be given to improving existing facilities where necessary and encouraging wider access, particularly clubs developing their junior sections and linking with schools.

Water sports: Demand is likely to continue to rise with an increasing younger population. There may be pressure particularly for development on riverside sites, so there is a need to ensure protection for these activities, which have to be based close to the waterside. Most clubs need on site facilities for the loading and unloading of boats, when they are taken for competitions elsewhere, and there is a need for some clubs to upgrade ancillary facilities including improving access to the water.

Hockey: There is likely to be a future demand for access to artificial turf pitches, particularly where floodlit, for hockey as demand already exceeds supply. Compared to other pitch sports there are relatively few hockey pitches, so parts of the borough are outside the 1.2 km catchment, although out of borough facilities help to make up the shortfall.

Costs

Whilst the need for future provision has been identified, such as a further “3G” floodlit artificial turf pitch in the Richmond / Ham area, a floodlit centre in Richmond / Sheen etc., these new requirements have to date not been costed yet. In addition, the need for improvements to the quality of existing pitches, courts and ancillary facilities such as pavilions, particularly those in some parks, as well as the incorporation of floodlighting, has also been identified. All these elements have significant costs attached to them.

However, information on costs for providing new and maintaining existing facilities are unknown to the team producing this IDP. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule, which can include both land costs and construction/fit-out costs. There will also be an opportunity within this Schedule to clarify whether any figures include recurrent costs of providing ongoing services.

4.1.9 Leisure facilities (sports halls and indoor)

(last updated January 2012)

An assessment of sports halls and indoor as well as outdoor leisure facilities has been carried out as part of the Open Space, Sport and Recreation Needs Assessment (2008)²⁶. This assessment identified the following:

Current provision

Sports halls and fitness centres: The Council's Sport & Fitness Service directly manages 5 dual use sports & fitness centres at Whitton, Teddington, Sheen, Hampton and Orleans Park. All 5 contain sports halls and dance studios and 3 have fitness suites. Whitton Sport & Fitness Centre is currently being rebuilt as part of improvements to Twickenham Academy and minor improvements are being made to Hampton Sport & Fitness Centre, based at Hampton Academy. Of the 8 secondary schools in the borough, all have sports halls with the exception of Waldegrave School. The commercial sector provision of sport & fitness in Richmond has been a major growth area in the last 15 years. The primary area of provision is in health and fitness and there are now 11 commercially operated health & fitness clubs based in the borough. It is estimated that there are over 32,000 members of commercial sports, health and fitness clubs in Richmond.

Most health and fitness clubs have vacancies for membership and there is some evidence of members moving to low cost gyms out of borough and a trend to overall falls in fitness club membership levels.

Pools: The two main public indoor pools are in Teddington and Richmond (Pools on the Park) where there is also an outdoor pool. Hampton outdoor pool is run by a charity and open to the public. 13 pools are attached to schools, 7 indoor and 6 outdoor. 7 of these are state schools and 6 private. There are 3 indoor pools attached to private clubs. There are hydrotherapy pools at Teddington Pools and Fitness Centre and Strathmore School. Other

²⁶ LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008,
http://www.richmond.gov.uk/needs_assessmentfinalupdate08.pdf

nearby public swimming pools are the Kingfisher (Kingston), Isleworth, Putney, Feltham and Brentford Fountain pools, which are within reach of some borough residents.

Specialist Indoor Facilities: There are a number of specialist centres in the borough catering for individual sports including Richmond Gymnastics Centre, Busen Martial Arts & Fitness Centre, Anglo'-Japanese Judo Club. Busen Martial Arts Centre is currently under threat of redevelopment. Volleyball has been identified as a sport where there is demand for but no current provision of a specialist centre.

Future requirements

Sports halls and fitness centres: Existing Council sports halls are well used with some demand for further sports hall and ancillary hall capacity. It is assumed that demand will continue to grow with a growing population. With the projected growth in population, there should be approximately 6 public facilities in the borough, using the standard of 1 public sports centre per 30,000 population, whereas there are only 5 centres currently provided. This would suggest a shortfall of one public sport centre in the borough; there is also a geographical gap in provision in the Ham and Petersham area and Grey Court School is therefore seen as the priority for further dual use sports hall provision. Providing a new sports hall to serve Waldegrave School is a priority and potentially this could double up as a specialist centre, e.g. Volleyball, in community time.

Pools: Demand in the borough is for competitive swimming and training, lessons and casual swimming. There is unsatisfied demand for pool time for club and competitive training, public swimming time, casual swimming and a very high demand for children's swimming lessons. With a rising younger population, demand is likely to rise. Compared to a standard of 1 indoor pool per 60,000 population, with a population of 176,000 projected to rise to 180,000 by 2026, and 2 public indoor pools, there is an under provision of 1 indoor pool in the borough.

Possible locations for further provision are either Ham, where St Richard's School have been successful in being shortlisted for provision of a 25 metre Olympic Legacy pool, or Pools on the Park where proposals are being developed for the installation of a retractable roof on the outdoor pool.

Specialist Indoor Provision: The need to provide for the needs of specialist indoor sports has been identified.

- Retention of facilities for Busen Martial Arts & Fitness Centre
- Volleyball centre (possibly at Waldegrave School)
- Boxing (extension to Twickenham Brunswick Club for Young People).

Costs

Due to the geographical gap in provision of indoor sports facilities in the Ham and Petersham area, the Grey Court School is seen as a priority for further dual use sports hall provision. In addition, providing a new sports hall to serve Waldegrave School is also a priority, and this could also potentially double up as a specialist centre, e.g. Volleyball, in community time. Furthermore, there is an under provision of 1 indoor pool in the borough.

Therefore, whilst the need for future facilities has been clearly identified, these new requirements have to date not been costed yet. As information on costs for providing new and maintaining existing facilities are unknown to the team producing this IDP, there will be an opportunity to include specific costs and further information in the Council's subsequent Infrastructure Delivery Schedule should relevant information become available by then. This Schedule can include both land costs and construction/fit-out costs, and it can be clarified whether any figures include recurrent costs of providing ongoing services.

4.1.10 Community Centres

(last updated December 2011)

Current provision

There are a wide range of different types of community centres across the borough, from which are run many different activities and spaces available to hire. These centres include:

- [Old Sorting Office](#), Barnes – community arts centre run by a charitable trust
- [Landmark Arts Centre](#), Teddington – community arts centre run by an independent charity
- [Greenwood Centre](#) in Hampton Hill - home of the Hampton & Hampton Hill Voluntary Care Group, an independent registered local charity
- Whitehouse Community Centre, Hampton – run by a registered charity
- [Cambrian Community Centre](#), Richmond – run by a registered charity
- Crane Community Centre in Twickenham
- [Etna Community Centre](#) in Twickenham
- Castelnu Community Centre – base for [Castelnu Centre Project](#) charity

Similar provision may also be available from some of the arts and culture facilities in the borough (see also section 4.1.14) and a number of religious groups. Some provide activities for specialist groups such as older people (see also section 4.1.7 on Adult Social Care) and young people (see also section 4.1.11 on Youth Centres).

The Council also has a range of halls available for hire, including rooms at [York House](#) in Twickenham; [Sheen Lane Centre](#), [Bullen Hall](#) in Hampton Wick and [Murray Park Hall](#) in Whitton.

Future requirements

There is a general move to encourage provision through flexible, multi-purpose centres where there can be co-location and dual use of similar facilities and activities for community use.

The Localism Act requires local authorities to maintain a list of assets of community value which have been nominated by the local community. When listed assets come up for sale or change of ownership, the Act then gives community groups the time to develop a bid and raise the money to bid to buy the asset when it comes on the open market. This will help local communities keep much-loved sites in public use and part of local life. This is expected to come into effect in 2012.

Costs

There may be funding requirements where sources are limited although as can be seen in the existing provision there is a significant input from the voluntary sector. Specific information on costs of projects is unknown to the team producing this IDP. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.11 Youth Centres

(last updated January 2012)

Current provision

Youth Service in Richmond upon Thames provides a diverse range of youth programmes, positive activities and youth support for young people age 13-19 (and up to 24 years old with learning disabilities and difficulties) from these main locations:

- Castelnau Community Project – commissioned youth programmes via Castelnau Community Group as a provider, Barnes
- Ham and Petersham Youth Centre, Ham
- Hampton Youth Project, Hampton.
- Duke of Edinburgh's Award, Ham and Petersham Youth Centre, Ham
- Heatham House Youth Centre, Twickenham
- Powerstation, Mortlake

In addition to the above youth facilities, the following youth services are also provided:

- Youth Cafe Bus – mobile provision outreaching across various locations within the Borough subject to needs
- Outreach and detached work in Whitton and Heathfield with plans to develop a designated youth facility within this area

A variety of specific youth support services and projects delivered in house by the Youth Service and other partners are hosted within the above designated youth facilities such as:

- KISS (sexual health service)
- Education Other than in Schools (including delivery of personalised tutoring and PSHE group work)
- Treatment room for delivery of substance misuse treatment and needle exchange services
- Community/Youth cafes in Heatham House and Hampton
- Crofters provision for disabled young people from Heatham House and Powerstation
- Off the Record in Twickenham

Youth facilities are well used by the local community and other partners from voluntary sector to deliver services to young people and local community.

Future requirements

Youth Services are aligned to the quindrat model of working and have a dedicated youth provision within each quindrat and play a significant contribution to the delivery of Preventative and Protective services.

Capital investment is needed to improve some of the existing facilities including:

- Ham and Petersham Youth Centre - ideally re-provision of the facility within this locality or further modernisation is aspired
- Heatham House Youth Centre – investment in terms of DDA compliance subject to financial viability and conservation restrictions. Further investment improving the existing facilities or re-provision of the facility within this locality is aspired.
- Hampton Youth Project – internal modernisation of the facility including extension of the facility through building a mezzanine floor is aspired
- As there is no dedicated youth facility within Whitton and Heathfield, a designated facility is currently being sought within this area, ideally with a sole use by the Youth Service or designed well within a multi-use of a community facility. A number of options are currently being explored.

Costs

Specific information on the capital investment identified above is unknown to the team producing this IDP. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.12 Libraries

(last updated December 2011)

Current provision

Richmond upon Thames has libraries on 12 sites: Richmond Lending Little Green, Richmond Reference Old Town Hall and Local Studies Old Town Hall, Twickenham Garfield Road, East Sheen, Teddington, Whitton, Hampton Rosehill, Castelnau, Ham, Kew, Heathfield Library Access Point, Hampton Hill and Hampton Wick.

Future requirements

The Council's Library Strategy 2011-2014 Connecting Communities²⁷ recognises the value and importance of the library service. Its vision is for libraries to be the focal points of communities, promoting reading and supporting learning. At the core of the strategy is a commitment to retaining all 12 public libraries in all existing communities in the borough and to enhancing their role as community facilities. By 2014 it aims to have delivered:

- significant building improvements to Whitton Library to improve access and the internal layout, having explored options to co-locate other public services in the re-designed library building;
- made significant progress in co-locating community libraries with other public services in order to improve their locations and opening hours with a particular focus on the co-location of Kew Library and Ham Library; and
- developed plans for an integrated library in Richmond, bringing together Richmond Lending Library and the library services at the Old Town Hall into a modern all-purpose library building in the heart of the town.

The strategy also sets out to have franchised community library buildings to voluntary sector or community groups to manage. This would involve local communities and the library service working together to extend opening hours and enhance the range of public and community services operated from the library building in line with local needs and requirements.

Costs

The Strategy was agreed by the Council in July 2011, with the use of the £750,000 capital receipt from the sale of Heathfield Library to implement the new library strategy and delivery model. This will include:

- Building improvements to Whitton Library £ 300,000
- RFID self-service technology (phase 2) £ 210,000
- Internal improvements to Kew Library and Ham Library £ 100,000
- Heathfield Library Access Point £ 60,000
- Upgrades to IT networks £ 80,000

Costs for developing an integrated library in Richmond have not yet been identified.

²⁷ http://www.richmond.gov.uk/2125_library_strategyweb.pdf

4.1.13 Affordable Housing

(last updated March 2012)

Current provision

The Borough has one of the highest average house prices in the UK. Fewer than 12% of homes in the borough are in the social rented sector, the fourth lowest in London. The borough undertook a Large Scale Voluntary Transfer in 2000 with Richmond Housing Partnership (RHP) now forming the largest housing association in the borough with around 6000 units. Richmond upon Thames Churches Housing Trust also has significant stock at just under 2000 units. Other housing associations include London and Quadrant and Thames Valley, and a large number of other associations with fewer than 200 units each.

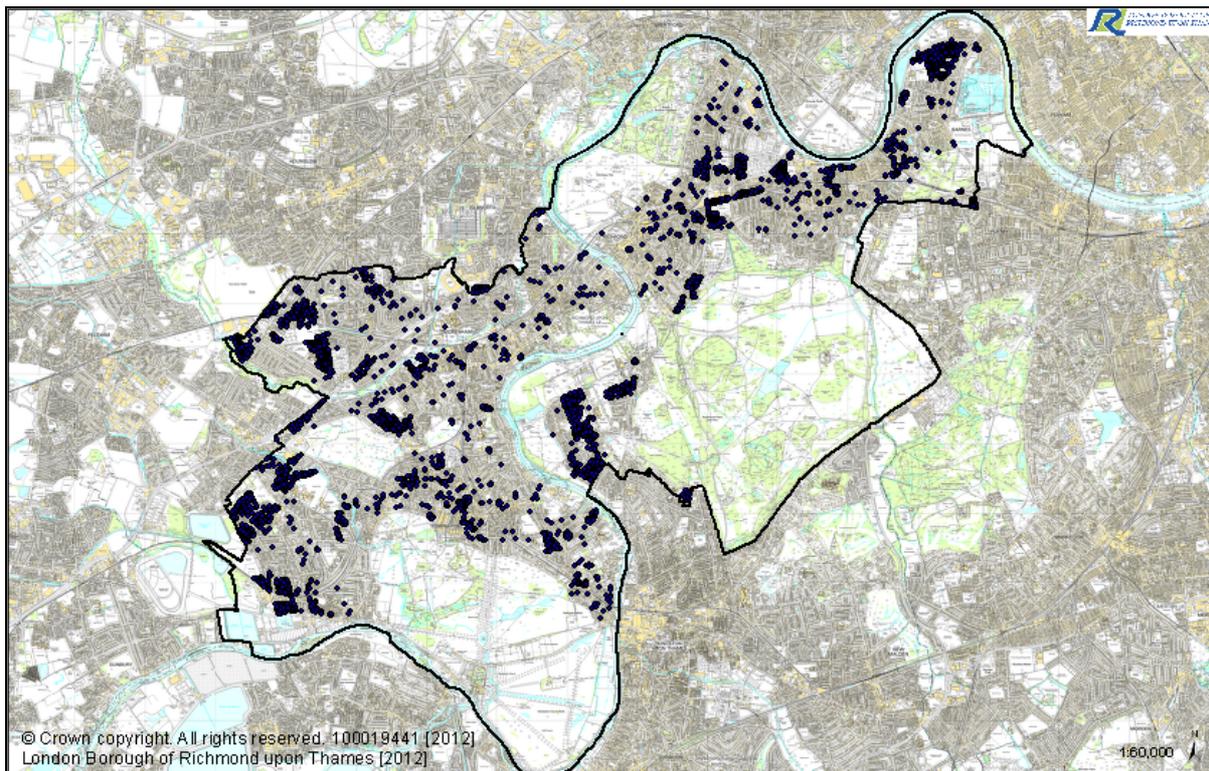


Figure 5: Location of Registered Provider properties across the borough; Source: Borough Investment Plan for the London Borough of Richmond upon Thames, 2010

Future requirements

The ability to provide sufficient affordable housing in the borough continues to be a challenge. The 2006 Local Housing Assessment estimated a shortfall of affordable housing in the borough of 2,723 units per annum. The research found the need in the borough was to predominantly develop social rented homes as intermediate housing was unaffordable to the majority of residents in housing need. There is also a need for family sized accommodation in the borough. Another indicator of demand is the Richmond Housing Register. As at 1st October 2011 there were 5,381 households on the Register, the majority of whom were applying for an assured tenancy in a housing association property, although this number can fluctuate and may not capture some groups such as key workers with higher incomes. Some households on the housing register face issues such as affordability in buying or renting at market levels, overcrowding and poor housing conditions’.

Housing and planning colleagues work closely together, with registered providers and the Homes & Communities Agency (HCA), to maximise affordable housing and there is a commitment to maximise resources for schemes that are of a high quality of design and meet the needs of the most vulnerable, as set out in the Council's Borough Investment Plan²⁸. Although new affordable housing delivery will never solve these issues in this Borough given the lack of availability of land and low numbers of units, it is a vital part of addressing future needs and the majority of new affordable homes in Richmond are provided by securing affordable housing on private sector led sites through the planning process and a section 106 agreement. Other measures are also undertaken such as the non-new build affordable homes provided in the borough through a Purchase & Repair scheme, and an extensions programme to tackle overcrowding, which assist with improving the stock of affordable housing.

Costs

The current affordable housing funding regime has reduced the overall funding available from the HCA. Affordable housing on sites secured through a S106 agreement are likely to only attract funding from the HCA if a strong financial case can be made or additional provision can be secured. Capital funding for the provision of new housing for people with learning disabilities or other specific needs (see also section 4.1.7 on Adult Social Care) can require a higher grant than general needs housing. Registered providers are expected to optimise their use of all resources including borrowings and recycled capital grant.

The Council's financial strategy currently has provision for a Housing Capital Programme until 2014/15. This is to assist in the development of affordable housing which meet the needs of Borough residents. Support from this funding may be available to help ensure schemes remain viable, particularly to ensure that larger family rented units remain affordable. Although no specific costs have been identified to address the shortfall, it is clear that these funding options by themselves cannot make a significant impact on the scale of the need, particularly if land acquisition costs are included. Even with the resources identified, delivery averages well under 140 per annum, significantly less than is required to meet demand. Continued funding for the Affordable Housing Programme is also not guaranteed. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.1.14 Arts and Culture

(last updated December 2011)

Current provision

The Cultural Partnership Plan 2009-13²⁹ sets out the vision for a borough where cultural activity encourages participation, brings enjoyment, sparks creativity, contributes to health and wellbeing, transforms public spaces, attracts visitors, stimulates the local economy and brings communities together.

A broad and inclusive definition of culture has been used in the Cultural Partnership Plan, to include:

- the performing and visual arts, crafts and fashion
- museums and archives
- libraries, literature and creative writing
- the built heritage, architecture and archaeology
- sports events, facilities and development

²⁸ http://www.richmond.gov.uk/housing_development.htm

²⁹ www.richmond.gov.uk/cultural_partnership.htm

- parks, open spaces, allotments, the river and riverside
- children's play, playgrounds and play activities
- tourism, visitor attractions, markets and festivals
- the leisure and creative industries.

There are a number of galleries, museums, theatres, arts venues and cinemas across the borough which provide for cultural activity. These include:

- Galleries: Orleans House Gallery and the Stables Gallery, Twickenham and the Riverside Gallery, Richmond
- Museums: Twickenham Museum, Museum of Richmond, and Twickenham World Rugby Museum
- Theatres: Richmond Theatre, Orange Tree Theatre, Mary Wallace Theatre, Twickenham, Hampton Hill Playhouse and Normansfield Theatre, Teddington
- Community Arts Centres: Old Sorting Office, Barnes and the Landmark Arts Centre, Teddington
- Cinemas: Odeon and Curzon in Richmond

There is also an overlap with the heritage assets set out in section 4.6.

Future requirements

The Cultural Partnership Plan highlights that funding of culture was, unsurprisingly, seen as a major issue to be addressed particularly in the current economic downturn. The need to increase the number of volunteers in the sector was also identified, as was the need to empower and skill local people to deliver cultural opportunities within their own communities.

Costs

The Cultural Partnership Plan: Delivery Plan for 2009-10 identified a range of funding sources including Council resources, Arts Council funding, other funding streams and some private sector sponsorship. No specific costs have been identified by the team producing this IDP in relation to the provision of arts and culture facilities in the borough. Should further details and information in relation to costs become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule.

4.2 Emergency services

Introduction

The Council, through the Borough Contingencies Unit, works to mitigate the effects of any major incident that might affect the borough.

Response to any major incident is coordinated according to the London Emergency Services Liaison Panel's (LESLP) Major Incident Procedures Manual³⁰. In line with this Manual, the rescue of people will most frequently be the prime function required of the emergency services. Responsibility for the rescue of survivors lies with the London Fire Brigade. The care and transportation of casualties to hospital is the responsibility of the London Ambulance Service. Police will ease these operations by co-ordinating the emergency services, local authorities and other agencies. The Council makes provisions for the care and comfort of those affected while maintaining normal services. These provisions range from rest centres

30 Major Incident Procedure Manual, London Emergency Services Liaison Panel, Seventh Edition, 2007;
http://www.leslp.gov.uk/docs/Major_incident_procedure_manual_7th_ed.pdf

for displaced persons to emergency feeding and trauma support. The Council maintains an emergency control centre and engages in regular training and exercises.

Further general information and advice on emergency planning and welfare of people during and after an emergency can be found on the Council's website:

http://www.richmond.gov.uk/emergency_planning.htm

According to the LESLP Manual³¹, **local authorities** have a statutory duty to have arrangements in place to respond effectively to an emergency. This will include:

- providing support for the emergency services;
- providing support and care for the local and wider community;
- using resources to mitigate the effects of an emergency; and
- leading the recovery stage.

During a major incident local authorities will maintain their normal day-to-day services to the local community. All local authorities employ emergency planning officers who are able to plan for and coordinate the local authority response to such events.

Local authorities have pre-identified 24-hour contact numbers to initiate responses. It is in the later stages of a major incident (the recovery period and return to normality) that the local authority's involvement may be prolonged and extensive. The services and staff the local authority may be able to provide are based upon a wide range of skills and resources drawn from its day-to-day operations such as technical and engineering advice; building control; highways services; and public health and environmental issues. In addition, local authorities may also be required to provide reception centres; re-house and accommodate needs; transport; social services; psychosocial support; helplines; and welfare and financial needs.

4.2.1 Police

(last updated January 2012)

Current provision

There are three police stations in the borough at Richmond, Twickenham (open 24 hours a day) and Teddington. Ten custody cells are currently operational at Richmond and Teddington police stations, and there are four cells at Twickenham police station used for contingency purposes. There are also seventeen Safer Neighbourhood Teams operating across the borough.

Until January 2012, the Metropolitan Police Authority (MPA) was responsible for the Metropolitan Police estate and recognised the vital role the buildings play in supporting the delivery of effective and efficient policing for communities. It was recognised that much of the property owned by the MPA is old and outdated, expensive to maintain and not used particularly efficiently. From January 2012, the MPA has been replaced by the Mayor's Office for Policing and Crime and will be responsible for priorities and performance.

There are no residential units owned by the MPA in the borough.

Future requirements

³¹ Major Incident Procedure Manual, London Emergency Services Liaison Panel, Seventh Edition, 2007;
http://www.leslp.gov.uk/docs/Major_incident_procedure_manual_7th_ed.pdf

The Metropolitan Police Estate's Asset Management Plan for Richmond upon Thames (November 2007) highlights that the borough continues to face a number of policing challenges including:

- policing major sporting and cultural events taking place at Twickenham Stadium, Hampton Court, Kew Gardens and Marble Hill
- due to the popularity of the licensed premises and entertainment on the river frontage, policing there often needs increasing, especially during the summer.

The Plan, detailing the changes and developments planned over the next three years, outlined the need to:

- find permanent bases, easily accessible to their wards, for some safer neighbourhood teams
- improve provision of custody cells, with a view to developing specialised custody facilities grouping between 20-40 cells in one location in an accessible location, which could be shared with a neighbouring borough
- develop a single Patrol Base facility with key support facilities e.g. lockers, briefing rooms, vehicles, with fast access to all parts of the borough, possibly accommodated at Twickenham police station
- provide a better environment for the public through front counter facilities that are accessible and create a sense of reassurance for the local community, with dedicated space for reception, enforcement and victim-focused functions; identified the need for a new front counter facility to replace the existing in Richmond police station
- seek suitable office accommodation in Twickenham town centre for back-office areas grouping command, management and support functions.

In 2011, planning permission was granted for a new Metropolitan Police regional training centre at Sovereign Gate, Kew Road, Richmond. This will be one of five locations across London providing training facilities, alongside accommodation for three local Safer Neighbourhood Teams and the potential for a future front counter facility.

The latest MPA/MPS Estate Strategy 2010-2014³² sets out a vision for continually improving and optimising the use of the estate. It highlights the key challenges facing the estate are:

- responding to the speed of change and the increasingly dynamic nature of policing
- having the right buildings, of the right size, in the right place
- being able to accommodate new policing operations at short notice
- accommodating new functions into existing buildings without disrupting current operations
- working with a range of other public sector partners
- working within increasingly difficult financial constraints and ensuring the MPS is making the best use of its assets.

The emerging Twickenham Town Centre Area Action Plan identifies Twickenham police station as a potential site in the retail core (see Proposal Site TW8) for development of a mix of retail, office and residential, in the event of satisfactory relocation of police facilities. The draft Plan recognises that at present the MPA have no plans to relocate, but outlines that the Council will work closely with the Police Authority to ensure appropriate police services are maintained throughout the plan period and, in the event of changes to service delivery, work in partnership to bring forward an appropriate development.

Costs

³² <http://www.mpa.gov.uk/work/estate/>

The MPA/MPS Estate Strategy 2010-2014 states there is an ongoing capital programme of new building development to replace the older and unsuitable buildings in the estate. A matrix, which prioritises new capital projects against the Policing London Business Plan's priorities, has been developed. No specific costs have been identified by the team producing this IDP in relation to the provision of police facilities in the borough. Clarification will be sought from the service provider to identify whether there are any specific projects with related costs in this borough, which can then be included in the Council's subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect both land costs and construction/fit-out costs, and it can be clarified whether the figures include recurrent costs of providing ongoing services.

4.2.2 Ambulance

(last updated January 2012)

Introduction

The London Ambulance Service (LAS) is the largest emergency ambulance service in the world to provide healthcare that is free to patients at the time they receive it. The LAS is the only NHS trust that covers the whole of London. Their main role is to respond to emergency 999 calls, providing medical care to patients across the capital, 24 hours a day, and 365 days a year. Other services include providing pre-arranged patient transport and finding hospital beds.

The 999 service the LAS provide to Londoners is purchased by the capital's 32 Primary Care Trusts (PCTs) that manage health services in local areas. Their performance is monitored by NHS London, the capital's strategic health authority, and the LAS is responsible to the Department of Health.

Current provision

The LAS has more than 5,000 staff, based at ambulance stations and support offices across London. Their emergency response service is split into three operational areas across London – east, south and west, whereby this borough falls into the west area. There are a total of 70 ambulance stations across London which, for management purposes, sit within 26 local operational areas, known as complexes. Each complex is overseen by an ambulance operations manager, supported by a team of duty station officers, a training officer and team leaders.

The LAS operates the following Ambulance Stations in Richmond borough:

- Richmond: 73 Kings Road, Surrey TW10 6EG
- Twickenham: South Road, Twickenham, Middlesex TW2 5NT

Future requirements

The LAS Strategic Plan³³ sets the direction for the LAS NHS Trust and outlines how it will be implemented in the wider context of developments in the NHS in the fields of emergency, urgent and out of hours care. It describes what the LAS will strive to deliver for its patients, the public of London and other key stakeholders for the period 2006/07 to 2012/13, culminating when the Olympics come to London.

³³ London Ambulance Service NHS Trust, Strategic Plan, 2006/07- 2012/13;

http://www.londonambulance.nhs.uk/talking_with_us/freedom_of_information/classes_of_information/what_are_our_priorities_and_ho.aspx

This Strategic Plan identifies that there may be opportunities for co-location with Primary Care Trust (or successor organisations) facilities when new builds are considered. There are considerable service benefits associated with co-location, with the potential for new models of care. However, the LAS needs ideally to locate its vehicles in areas with easy access to main roads and as close as possible to areas of high demand and therefore, needs to work more closely with Primary Care Trusts so that when any new builds are planned, even before decisions have been made about where to locate facilities, the locational needs of LAS are taken into account.

It is assumed that the LAS has no specific development requirements for their service in this borough.

Costs

No costs have been identified as a result of the above assessment. Clarification will be sought from the service provider to identify whether there are any specific projects with related costs in this borough, which can then be included in the Council's subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect both land costs and construction/fit-out costs, and it can be clarified whether the figures include recurrent costs of providing ongoing services.

4.2.3 Fire service

(last updated April 2012)

Introduction

The London Fire and Emergency Planning Authority (LFEPA – the Authority) runs the London Fire Brigade (LFB). The LFB has moved from being a largely responsive service to a service that wants to prevent fires and other emergencies³⁴.

Current provision

The LFB has 113 fire stations, which are operated 24 hours a day, 365 days a year. LFB deploys 169 fire engines and a further 102 specialist operational vehicles to provide an efficient and effective response to the wide ranging risks facing London.

There are two fire stations in the borough: Twickenham and Richmond (see figure and table below). However, the LFB plans and locates its fire stations and fire engines to ensure London-wide cover. Borough boundaries are not used for emergency (999) response purposes and the areas covered by fire stations are not, therefore, consistent with borough boundaries. A fire engine located in one borough can and will be mobilised to incidents in an adjoining borough or anywhere in London.

³⁴ London Fire Brigade, How We Are Making Your Borough Safer, London Borough of Richmond, 2009/2012; <http://www.london-fire.gov.uk/Documents/Richmond0912.pdf>



Figure 6: Twickenham and Richmond fire station; Source: LFB, How we are making your borough safer, 2009/2012

The LFB Asset Management Plan 2011³⁵ states the following information about the borough's fire stations:

Station	Site area in sqm	Year opened	Current vehicles on station	Condition	Fitness for purpose	Potential development value	Other comment or uses
Twickenham	2536	1959	3	A	G	N/A	Command Unit, Borough Commander
Richmond	2436	1963	1	R	G	A	N/A

Table 10: Estate Analysis, Twickenham and Richmond; Source: LFB Asset Management Plan 2011

Future requirements

The following table derives from the LFB Asset Management Plan 2011 and has been compiled from an assessment of three interlinked pressures on investment – property condition improvement, operational fitness for purpose improvement and potential release of latent asset value. A stations listing is determined principally by its condition score, however the actual decision to the timing of works will depend on the various factors described.

Station	Year opened	Fitness for Purpose score out of 100	Condition score out of 100	Overall score	Site value	Type of project	Delivery
Twickenham	1959	87	68	155	Medium	Refurbishment	Capital Programme
Richmond	1963	80	50	130	Medium	Refurbishment	Capital Programme

³⁵ London Fire Bridge, Asset Management Plan 2011 – Delivering property improvement & management; [http://www.london-fire.gov.uk/Documents/FEP1831_\(Appendix\).pdf](http://www.london-fire.gov.uk/Documents/FEP1831_(Appendix).pdf)

Table 11: Priorities for fire station improvement, Twickenham and Richmond; Source: LFB Asset Management Plan 2011

Service standards are linked to response times, not to developments and housing numbers. It will be assumed that the Fire Service has no specific development requirements for their service in this borough.

Costs

Whilst it has been identified that both Twickenham and Richmond station are in need of refurbishment, no further information or details on costs are available to the team producing this IDP. It is however assumed that the refurbishment projects will be delivered by the London Fire Brigade's Capital Programme. The LFEPA, in their response to the draft IDP, however stated that it is possible that there will be insufficient funding for this, and consideration should be given to the provision of funding for these LFEPA community facilities. There will be an opportunity to include detailed costs in the Council's subsequent Infrastructure Delivery Schedule should further information become available.

4.3 Green infrastructure

4.3.1 Parks, open spaces, trees and woodlands

(last updated December 2011)

The following table sets out the standards for access to informal recreation and nature conservation:

Activity	Standard	Status	Notes
Informal recreation	All population to be within 400m from a local park	UDP/Open Spaces Strategy standards	Accessibility standards
	All population to be within 1.2 km from a District Park with Staffing	UDP/Open Spaces Strategy standard	
	All population to be within 1.2 km of a Strategic walking route	Local standard – 1.2 km is 20 min walk	
Nature conservation	All population to be within 500m of a wildlife site	GLA/UDP/Open Spaces Strategy standard	Accessibility standard

Table 12: Applied standards for access to informal recreation and nature conservation; Source: Borough's Open Space, Sport and Recreation Needs Assessment (2008), page 27/28

Current provision

The London Borough of Richmond upon Thames Open Space, Sport and Recreation Needs Assessment (2008)³⁶ carried out an assessment of existing provision (qualitative and quantitative) as well as future needs for specific activities based on consultation with sports clubs and other interested bodies. It covers indoor and outdoor sport, formal and informal recreational activities.

The borough has over 2,000 ha of open space; about one quarter of this is managed by the Council. Richmond Park (1,000 ha) and Bushy Park (450 ha) are the largest and second

³⁶ LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008, http://www.richmond.gov.uk/needs_assessmentfinalupdate08.pdf

largest open spaces in London; the Old Deer Park (147 ha) and the River Thames towpath (27 km) provide a regional recreational function. Overall, the borough is very well provided with public open space in relation to its population, having 13 ha per 1000 compared to the Sport England's recommended 2.48 ha (6 acres) per 1000.

Parks and Open Spaces: Publicly accessible land is owned by the Council (commons, parks and towpaths), the Royal Parks Agency (for Richmond and Bushy Parks), the Crown (Old Deer Park) and English Heritage (Marble Hill Park). In addition there is limited public access to Historic Royal Palaces land at Hampton Court Park and Hampton Court and to National Trust land at Ham. There are other private facilities which can be entered on payment including the Barnes Wildlife and Wetland Centre and Kew Gardens. There is some community use of public and private educational facilities.

Council owned and managed open spaces	Number of sites	Total Area
<i>Parks and open spaces</i>	146	517 ha

Table 13: Council owned and managed open spaces

Open land not owned by the Council			
Land Owner	Number of sites	Names	Total Area (ha)
Royal Parks	2	Bushy Park, Richmond Park	417.22 (ha) 973.56 (ha)
Historic Royal Palaces	2	Hampton Court Home Park	
English Heritage	1	Marble Hill	26.6 (ha)
Richmond Housing Partnership	Various		48 ha
National Trust	1	East Sheen Common	20.1 (ha) Council managed
Church Commissioners	1	Barnes Common	30 hectares Council managed
Crown Estates	5	Old Deer Park, Kew Green, Richmond Green, riverside at Hampton, Westerly Ware	120.4 (ha) Council managed

Table 14: Open land not owned by the Council

With a resident population of 190,900 (ONS 2010 Mid Year Estimates), this provides almost 12 ha per 1,000 population, comparing extremely favourably to the traditional 2.43 hectares per 1,000 population (NPFA '6 acre standard'). This shows that this borough is not deficient in open space on a borough-wide basis.

The borough's strategic walking routes are the Thames Path National Trail, the Capital Ring and the London Loop. Two other promoted walking routes are the River Crane Walk and the Beverly Brook Walk.

Trees and woodlands: The Council is responsible for the management of more than 16,000 street trees and trees in parks and open spaces. The Council is committed to planting new trees, and strives to ensure that the visual amenity of the street scene in the borough is assured for future generations. As identified in the Council Owned Tree Management Policies (January 2008)³⁷, over the past 4 years, the council has planted in excess of 2500 trees in

³⁷ LBRuT, Council Owned Tree Management Policies, adopted in January 2008;

http://www.richmond.gov.uk/tree_strategy_for_pruning_and_planting.pdf

streets, parks and public open spaces. The “Adopt a Tree” scheme, which was launched in 2005, has assisted with a highly encouraging survival rate of these new trees. This investment in trees, coupled with the success of the scheme, has led to an increased number of new planting requests from members of the public.

Future requirements

Parks and Open Spaces: The Borough’s open spaces are well used by residents and visitors alike for informal recreation. Demand is more likely to increase than decrease, from local residents and from visitors from inner London boroughs, particularly as London’s population grows. Nationally and locally walking is the most popular leisure activity, and promotion of the area for tourism and walking is also likely to increase demand.

There are few areas now, which are outside the 400 m catchment for local parks, and most of these are within easy reach of a District Park. If the River Crane Park and Kneller Gardens are treated together as a District Park there are few areas outside the 1.2 km catchment for a District Park. There are few areas outside the 500 m catchment for sites of nature interest. Most of the borough is within 1.2 km of at least one of the three strategic walking routes.

Apart from in the areas of deficiency, where there is no alternative open space, it is considered that no new open space is required, but that the emphasis should be on the protection and enhancement of existing open space, including areas of nature importance. Similarly the existing walking routes should be protected and enhanced

Trees and woodlands: The Council maintains an up to date database of possible locations for new trees. There is an annual programme for tree planting, whereby every year potential sites for new trees are inspected and assessed for their suitability for new trees, considering factors such as services, sight lines, space for future growth etc.

Costs

Whilst the assessment above has not identified any specific requirements in relation to the provision of new parks, open spaces, trees and woodlands, it can be assumed that there is a significant cost attached to the maintenance and upgrade of existing facilities. No detailed information on costs was available to the team producing this IDP. However, should further details and information in relation to costs or any other specific projects become available, these can be included in the Council’s subsequent Infrastructure Delivery Schedule, where it can be clarified which costs relate to upgrade or ongoing maintenance works.

4.3.2 Allotments

(last updated December 2011)

The following table sets out the standards for allotments:

Activity	Standard	Status	Notes
Allotments	All population to be within 1.2 km of an allotment site, where there is a waiting list of 10 or less	Local standard 1.2 km is 20 min walk, allows for varying demand	

Table 15: Applied standards for allotments; Source: Borough’s Open Space, Sport and Recreation Needs Assessment (2008), page 27/28

Current provision

According to the LBRuT Allotment Strategy 2010 - 2015 “A Growing Community” (2010)³⁸ as well as the Open Space, Sport and Recreation Needs Assessment (2008)³⁹, there are 24 allotment sites (27 ha) in the borough, of which nine are statutory allotments. The allotment sites are occupied by over 2000 plot holders. A full list of allotment sites can be found in Appendix 1 of the Allotment Strategy. All apart from 3 sites are on Council owned land; the remainder are on Crown land. The sites range in size from as few as 8 plots to as many as 387 plots. In general, there is an imbalance of supply (East – West) in favour of the west side of the borough. There is also one privately managed allotment site in the borough, which is the Royal Paddocks allotments.

Future requirements

According to the Allotment Strategy⁴⁰, there is currently a high demand for allotments in the borough, with all sites operating with a waiting list. Demand for allotments can be variable over time, but in the last few years demand has continually increased. The Open Space, Sport and Recreation Needs Assessment (2008) identifies an unmet demand for allotments in most areas, with a specific shortfall in Kew and Whitton, and there will be no provision in Teddington in 5 years time due to loss of temporary allotments. The Allotment Strategy outlines that it is difficult to accurately measure the current unmet demand for allotments. The Strategy sets out objectives and recommendations on the management of the waiting list system for the allotments with the aim to properly assess the demand and monitor the variations in this demand over the next 5 years. Finally, the Allotment Strategy concludes that no changes will be made to the provision of allotment sites at this time as it is not felt that it is necessary to consider the expansion onto new sites beyond existing site boundaries. However, once the Strategy is in operation there will be a review which will re-consider this position at that time. Therefore, the current main purpose is to address the issues around the management of existing sites.

Costs

Whilst the assessment above has not identified any requirements in relation to the provision of new allotments, it can be assumed that there is a cost attached to the maintenance and management of existing facilities. No detailed information on costs was available to the team producing this IDP. However, should further details and information in relation to costs or any other specific projects become available, these can be included in the Council’s subsequent Infrastructure Delivery Schedule, where it can be clarified which costs relate to upgrade or ongoing maintenance works.

4.3.3 Cemeteries and Crematoria

(last updated December 2011)

Current provision

It must be noted that there is no statutory duty for Councils to provide burial space. In addition, there was a change in legislation relating to London to permit the re-use of graves in certain specified circumstances (under the London Local Authorities Act 2007), which gives burial authorities the power to disturb human remains in a grave where burial rights had been extinguished, and where the intention was to increase the space for interments in the grave.

38 LBRuT Allotment Strategy 2010 - 2015 – “A Growing Community”, adopted January 2010;
http://www.richmond.gov.uk/allotment_strategy_2010-2015.pdf

39 LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008,
http://www.richmond.gov.uk/needs_assessmentfinalupdate08.pdf

40 LBRuT Allotment Strategy 2010 - 2015 – “A Growing Community”, adopted January 2010;
http://www.richmond.gov.uk/allotment_strategy_2010-2015.pdf

In the borough there is the following current provision⁴¹:

Council owned and managed cemeteries (open)	Number of sites	Total Area
<i>Cemeteries (open)</i>	6	38 ha

Table 16: Council owned and managed cemeteries (open)

The 6 active and Council owned/managed cemeteries are: East Sheen, Hampton, Old Mortlake Burial Ground, Richmond, Teddington, and Twickenham. Other local Cemeteries include Mortlake and North Sheen, managed by Hammersmith & Fulham, and the Borough Cemetery (Powdermill Lane – managed by London Borough of Hounslow). There are a number of closed cemeteries in the borough, some are beside churches, and others are independent. Maintenance is generally low key; some function as a local park e.g. Holly Road Garden of Rest. Most have public access and as with active cemeteries act as a type of open space both to walk through and look into.

With regard to Crematoria, none are managed by the Council. There are two local crematoria which are the Mortlake Crematorium and the South West Middlesex Crematorium' however these are situated just outside the borough. Residents of Richmond area accepted at both.

Future requirements

At the moment there is spare capacity in crematoria facilities for borough residents and borough-wide there is sufficient burial space for 50 years, although there is less provision on the Surrey side of the borough.

The GLA carried out an Audit of London Burial Provision in March 2011⁴². This audit highlights that LB Hounslow has two sites in Richmond. Both have virgin land available, and Borough Cemetery has 8.9 ha in reserve. There is a Muslim section in Borough Cemetery, but its use is restricted to Hounslow residents only. In addition, LB Hammersmith & Fulham also has two cemeteries in Richmond. Both had land available in 1995, and still have as yet unused space. North Sheen has a Muslim section and Mortlake a section dedicated for the use of the Roman Catholic community. Both sections have an estimated 15-20 years' space remaining. Both Barnes Common Cemetery owned by LB Richmond upon Thames and Mortlake Roman Catholic Cemetery, owned by the Roman Catholic Diocese were full in 1995. Ostensibly, Richmond borough is capable of meeting its burial demand for the next twenty years. However, it should be noted that some of the provision lies in cemeteries where use is restricted to residents from outside the borough.

Costs

The above assessment has identified that there is sufficient provision of cemeteries or crematoria in the borough for this Plan's period of 15 years. As such, no costs have been identified.

4.3.4 Play facilities

(last updated February 2012)

The following table sets out the standards for play provision:

Activity	Standard	Status	Notes
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⁴¹ LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008,

http://www.richmond.gov.uk/needs_assessmentfinalupdate08.pdf

⁴² Audit of London Burial Provision; A report for the Greater London Authority by Julie Rugg and Nicholas Pleace, Cemetery Research Group, University of York; March 2011; <http://www.london.gov.uk/publication/audit-london-burial-provision>

Children's play	All population to be within 400m of an equipped playground	UDP/Open Spaces Strategy standard	Accessibility standard
Playing fields	6 acres per thousand population	NPFA standard for overall quantity	Quantitative standard used to assess overall provision regardless of type of sport

Table 17: Applied standards for play provision; Source: Borough's Open Space, Sport and Recreation Needs Assessment (2008), page 27/28

Current provision

According to the LBRuT Open Space, Sport and Recreation Needs Assessment (2008)⁴³, there are 45 children's play areas in the borough; 42 are owned by the Council and 3 by the Royal Parks Agency, plus one owned by a private landowner; all are open to the public.

The LBRuT Play Strategy Review (2011-2014)⁴⁴ carried out a play survey during May/June 2011. In addition, information contained within this Play Strategy Review is also based on the previous Play Strategy (2007-2011)⁴⁵, in which a basic audit and mapping of local play space provision was carried out. The results show that in general, there is good access to open space, with a few small pockets where this is not the case. In addition, there is good provision of fixed playgrounds in most areas, following substantial recent investment. This provides for the 0 to 8 age range primarily. Most are physically accessible and include some dual use/inclusive play equipment. The age range of the playgrounds is somewhat limited – mainly to under 8s. More provision is needed to expand to the older age range. There is limited provision of adventurous – risky play and provision of accessible play equipment could be improved.

In addition, during the play survey it was identified that all children regardless of age wanted spaces to run and play sport, as well as somewhere to shelter when it rained. Younger children preferred traditional play equipment with friendly supervision, whereas older children requested items for seating and shelter with less emphasis on play equipment. Adults felt that the age group least well catered for are the 12-18s and that teenagers need free play and recreation facilities as much as the younger age range. The adults were keen to see more adventurous equipment such as climbing walls and skate parks, as well as natural play areas incorporating den building, trees to climb and natural features such as boulders and mounds. They felt that there were enough parks and play areas, but that they would be used more if they offered more challenge.

There has been an intensive programme of Council investment in children's play facilities, which brought the majority of the playgrounds up to Local Equipped Area for Play (LEAP) standard. Many actions as set out in the Play Strategy have already been implemented. In general, most facilities are well-used, particularly where there has been recent investment. Therefore, overall the borough is fairly well provided with good quality children's play facilities and there are only very few residential areas which are more than 400m from a play facility.

Future requirements

⁴³ LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008,

http://www.richmond.gov.uk/needs_assessmentfinalupdatemar08.pdf

⁴⁴ LBRuT Play Strategy, 2011-2014; http://www.richmond.gov.uk/2384_play_strategy_2011.pdf;

⁴⁵ LBRuT Play Strategy, 2007-2011; <http://cabnet.richmond.gov.uk/documents/s13673/Appendix%202.pdf>

A combination of a slightly rising child population over the next ten years and policy emphasis on the promotion of children's play means that demand for children's play facilities is likely to increase slightly. Some of the areas at a distance from play facilities are close to other open areas such as the Royal Parks or other open spaces where, with funding, play facilities could be installed. There also might be opportunities to secure dual use of school playing facilities in areas of particular deficiency. Even where a full scale play ground is not possible incidental open spaces could be designed as "pocket parks" or "door step" play areas.

The Play Strategy identified that whilst there is good provision for younger children (from 0 to 8), there is a need to find a way to provide safe play sites with minimal formal supervision, but some form of safety net for the middle ages – 8 to 15, when children should be able to go start going out to play with friends. Provision for older children and young people also needs improvement. They need some places where they can be safe and welcome. Furthermore, basic accessibility needs to be improved for children with special needs; accessible toilet facilities and parking are important. The ability to pay for some facilities – sports clubs, adventure playground provision, and youth club subs etc is a barrier to access for many children, particularly from low income families. Children living in areas of relative disadvantage are less likely to be able to afford paid for play facilities and are unlikely to travel to other areas for free play opportunities. Children from ethnic minorities may face additional barriers to play based on language and cultural difference.

With regard to new residential development, unless they are very close to existing play facilities, it will be necessary to make some provision for children's play on the site as part of any large development or alternatively fund the installation of play equipment on a nearby suitable site, possibly through Section 106 obligations. Whilst designated playgrounds provide for a proportion of children's play and social needs there needs to be greater emphasis given to all public areas. The needs of children should be given a high priority when planning any new developments within the borough; this may include enhancing existing public spaces to ensure they are more welcoming for children to use. In order to do this creative landscaping and the addition of seating can provide the catalyst for children and young people to make greater use an open space, without the need for prescriptive playground equipment. This would make public spaces more welcoming to the whole community not just children and young people and would enhance inter-generational play and social interactions.

Costs

The above assessment has identified that overall the borough is fairly well provided with good quality children's play facilities, particularly in the light of the Council's recent significant investments into the borough's play facilities. However, there are significant costs attached to the maintenance and upgrade of existing facilities. No detailed information on costs in relation to this aspect was available to the team producing this IDP.

In addition, in relation to new developments, it will need to be assessed on a case-by-case basis whether it will require new play provision to meet the needs arising from the development (i.e. developments yielding ten or more children). Alternatively, where provision cannot be met on-site or developments yielding less than 10 children, the Council currently seeks an equivalent financial contribution under Section 106 to fund provision off-site (e.g. for new provision and maintenance of existing facilities).

As it is difficult to estimate the costs in relation to play facilities, it can be assumed that significant costs are attached to both the maintenance/upgrade of existing as well as the provision of new facilities, particularly to meet the needs of new developments. Should further details and information in relation to costs or any other specific projects become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule, where it can be clarified which costs relate to new facilities, upgrade or ongoing maintenance works.

4.3.5 Rivers

(last updated December 2011)

Current provision

The River Thames meanders for 34 km through a landscape of historic and royal parks, heritage sites, a variety of wildlife habitats, residential and employment areas through this borough. This borough it is the only London borough that is bisected by the Thames and therefore has one of the longest river frontages and recreational areas along the Thames (on both banks) in London. The 27 km towpath along the River Thames provides a regional recreational function. In general, the River Thames, its towpath and the recreational areas along the river are well used by local communities, residents, workers as well as by visitors.

In addition, there are also tributaries of the River Thames that run through this borough, which include the River Crane, the Duke of Northumberland River and the Beverley Brook. The River Crane and Duke of Northumberland River are situated on the west bank of the River Thames, and both have been heavily constrained and modified by urban development over the centuries. The Beverley Brook is situated on the east bank of the River Thames. Its waterway corridor is less well defined and once again urban development has encroached into the natural floodplain of the Beverley Brook over the years.

This borough is recognised as having exceptional open spaces along the River Thames, such as Bushy Park, Hampton Court and Kew Gardens. The iconic River Thames contributes significantly to the historic, cultural and natural significance of this borough. The Thames Path and towpaths provide routes and connections along the riverside, stimulating access and recreation. There are also a number of routes to the Thames through the open space network, such as through Richmond Park. The Council works in close partnership with the Thames Landscape Strategy to enhance the River Thames and its distinctive destinations and riverside recreational areas.

The responsibility for the maintenance of the River Thames, River Crane and Beverley Brook lies with the Environment Agency, with the exception of the tidal River Thames (downstream from Teddington Lock), which is under the responsibility of the Port of London Authority. The Port of London Authority ensures the navigational safety along the tidal Thames to benefit all users of the river, and is responsible for works licences and moorings. In addition, they promote the use of the river for freight and passenger transport, including sports on the river, as well as safeguard its unique marine environment. The Environment Agency is the navigational authority for the River Thames upstream of Teddington Lock. In addition, the Environment Agency is responsible for protecting the rivers and managing the risk of flooding from these rivers. Under the Water Resources Act 1991, they have powers and responsibilities to maintain and improve these rivers and watercourses in order to ensure the efficient passage of flood flow and to manage water levels. These powers allow (rather than oblige) them to carry out either maintenance or construction of new works on rivers; they can construct and maintain defences against flooding, issue flood warnings and manage water levels. There are byelaws for the River Thames (16 metres), Crane (8 metres) and Beverley Brook (8 metres), which are enforced by the Environment Agency.

Finally, it is also worth noting that the borough's rivers have poor ecological status/potential under the Water Framework Directive, which is predominantly as a result of the poor biology. There are four designated river water bodies that extend across the borders of Richmond upon Thames. The figure below identifies the current and predicted ecological status of these.

Water course	2009 Classification Status	2015 Prediction
Beverley Brook (Motspur Park to Thames)	Poor	Moderate
River Thames (Egham-Teddington)	Poor	Poor
Port Lane Brook	Moderate	Moderate
River Crane (incl. part of Yeading Brook)	Poor	Poor

Figure 7: Ecological status of rivers within Richmond upon Thames; Source: Environment Agency

Future requirements

Whilst the maintenance and responsibility for the rivers lies with either the Environment Agency or the Port of London Authority, there is some scope to improve the network along and to the River Thames and its towpath. In addition, within this borough there is also considerable scope for network improvements along the River Crane corridor, particularly to the west to east connection along the Crane. Access to, along and across the borough's rivers are vital for ensuring the recreational areas and open spaces along the rivers can be used to the maximum potential. The Council has strong policies on the protection and enhancement of the borough's rivers, e.g. the emerging Twickenham Area Action Plan includes the intention to reinforce and make the most of both the River Thames and River crane corridors up and downstream.

In addition, there is currently no established link from Twickenham to Ham (apart from Hammertons Ferry). There is a commitment in the Council's Core Strategy (Policy CP 5.c) to investigate the possibility of a footbridge across the Thames between Ham and Twickenham for pedestrians and cyclists, but to date no funding has been secured even for a feasibility study (also see section below on Transport infrastructure).

Another potential link across the River Thames, for which the Council is not aware that it is either feasible or funding available, would be a link from Kew across the River Thames to Syon Park; a bridge for pedestrians and cyclists at this point could link major recreational and open areas within the boroughs of Richmond and Hounslow (also see section below on Transport infrastructure).

Finally, a programme of measures to improve the ecological status of the borough's rivers is being developed and lead by the Environment Agency. This will include a series of measures to address urban diffuse pollution in parts of London.

Costs

No costs have been identified as a result of the above assessment. Clarification will be sought from the service providers to identify whether there are any specific projects with related costs in this borough, which can then be included in the Council's subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect recurrent costs of providing ongoing services as well as upgrade works to existing services.

4.4 Utilities and physical infrastructure

4.4.1 Electricity

(last updated December 2011)

Introduction

National Grid operates the national electricity transmission network across Great Britain and owns and maintains the network in England and Wales, providing electricity supplies from generating stations to local distribution companies.

National Grid, as the holder of a licence to transmit electricity under the Electricity Act 1989, has a statutory duty to develop and maintain an efficient, co-ordinated and economical transmission system of electricity and to facilitate competition in the supply and generation of electricity.

National Grid does not distribute electricity to individual premises, but their role in the wholesale market is key to ensuring a reliable and quality supply to all. Separate regional companies own and operate the electricity distribution networks that comprise overhead lines and cables. It is the role of these local distribution companies to distribute electricity to homes and businesses. To facilitate competition in the supply and generation of electricity, National Grid must offer a connection to any proposed generator, major industry or distribution network operator who wishes to generate electricity or requires a high voltage electricity supply.

Current provision

National Grid's high voltage electricity overhead transmission lines / underground cables within Richmond's administrative area that form an essential part of the electricity transmission network in England and Wales include the following:

- 275kV underground cable running from Laleham substation in Spelthorne to Ealing substation in Ealing
- 275kV underground cable running from Willesden substation in Ealing to Wimbledon substation in Merton

National Grid has provided information in relation to electricity transmission assets via the following internet link:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/GasElectricNW>

Future requirements

Often proposals for new electricity projects involve transmission reinforcements remote from the generating site, such as new overhead lines or new development at substations. If there are significant demand increases across a local distribution electricity network area then the local network distribution operator may seek reinforcements at an existing substation or a new grid supply point. In addition, National Grid may undertake development works at its existing substations to meet changing patterns of generation and supply.

It is therefore assumed that because the development proposals within the Richmond area are generally of minor nature when compared against other major developments within London, they will not have a significant effect or impact upon the electricity transmission infrastructure. It is unlikely that any extra growth will create capacity issues given the scale of these electricity transmission networks. The existing networks should be able to cope with additional demands.

Costs

No costs have been identified as a result of the above assessment. Clarification will be sought from the service provider to identify whether there are any specific projects with related costs in this borough, which can then be included in the Council's subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect both land costs and construction/fit-

out costs, and it can be clarified whether the figures include recurrent costs of providing ongoing services.

4.4.2 Gas

(last updated December 2011)

Introduction

National Grid owns and operates the high pressure gas transmission system in England, Scotland and Wales that consists of approximately 4,300 miles of pipelines and 26 compressor stations connecting to 8 distribution networks. National Grid has a duty to develop and maintain an efficient co-ordinated and economical transmission system for the conveyance of gas and respond to requests for new gas supplies in certain circumstances.

National Grid also owns and operates approximately 82,000 miles of lower-pressure distribution gas mains in the north west of England, the west Midlands, east of England and north London – almost half of Britain's gas distribution network, delivering gas to around 11 million homes, offices and factories. National Grid does not supply gas, but provides the networks through which it flows. Reinforcements and developments of their local distribution network generally are as a result of overall demand growth in a region rather than site specific developments. A competitive market operates for the connection of new developments.

Current provision

National Grid has no gas transmission assets located within the administrative area of Richmond.

Southern Gas Networks owns and operates the local gas distribution network in Richmond's administrative area.

Future requirements

New gas transmission infrastructure developments (pipelines and associated installations) are periodically required to meet increases in demand and changes in patterns of supply. Developments to the network are as a result of specific connection requests e.g. power stations, and requests for additional capacity on our network from gas shippers. Generally network developments to provide supplies to the local gas distribution network are as a result of overall demand growth in a region rather than site specific developments.

It is therefore assumed that because the development proposals within the Richmond area are general of minor nature when compared against other major developments within London, they will not have a significant effect or impact upon the gas transmission infrastructure. It is unlikely that any extra growth will create capacity issues given the scale of these gas transmission networks. The existing networks should be able to cope with additional demands.

Costs

No costs have been identified as a result of the above assessment. Clarification will be sought from the service provider to identify whether there are any specific projects with related costs in this borough, which can then be included in the Council's subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect both land costs and construction/fit-out costs, and it can be clarified whether the figures include recurrent costs of providing ongoing services.

4.4.3 Low and zero carbon energy infrastructure

(last updated December 2011)

Introduction

Low and zero carbon energy infrastructure includes for example Combined Heat and Power (CHP), renewable energy, biomass etc. It does not include infrastructure associated with the conventional transmission of gas and electricity.

Current provision

The Council is unaware of any larger low and zero carbon energy infrastructure types within the borough, with the exception of small scale renewable energy technologies (e.g. solar thermal panels, photovoltaics panels, air-/ground source heat pumps etc) and small scale low-carbon technologies, such as site-/building CHP plants.

Future requirements

Renewable energy will make an increasing contribution to the energy supply in the future. In this borough, it is thought that renewable energy will particularly comprise of building- and site-specific installations such as photovoltaic panels or ground- and air source heat pump systems. These systems will require connection to the electricity infrastructure network to enable “feed in” of surplus electricity to the grid.

While the Council strongly supports energy supply from sustainable energy sources and supports decentralised energy systems, there are currently no Council plans to develop a decentralised energy system or larger scale renewable energy technology anywhere in the borough. However, opportunities for decentralised heating and cooling networks at the development and area-wide level and larger scale heat transmission networks will be explored by the Council in the future. The Mayor of London has set a target for London to generate 25% of its heat and power requirements through the use of decentralised energy systems by 2025. In order to achieve this target, the Mayor is currently providing Heat Maps for individual London boroughs. This is currently being carried out for Richmond and it is expected that Richmond’s Heat Map and accompanying Energy Report, which will identify opportunities for decentralised energy, will be available later this year.

No specific future requirements have been identified in this regard, however, major developments and proposals on larger sites that will be identified in the Council’s Site Allocations DPD, must prioritise connection to existing or planned decentralised energy networks where feasible, in line with development management policies.

Costs

As the information on low-/zero carbon infrastructure as well as decentralised energy is very limited at the moment, it is difficult to estimate the costs for the provision of new facilities. However, in general, significant costs are associated with new energy infrastructure facilities and in particular decentralised energy, which could require a large amount of capital works.

Therefore, should further details and information in relation to costs (including specific projects) become available, these can be included in the Council’s subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect both land costs and construction/fit-out costs.

4.4.4 Water resources and supply

(last updated April 2012)

Introduction

Thames Water Utilities Ltd is the statutory water undertaker for the borough. Under the Water Industry Act Thames Water has a duty to develop and maintain an efficient and economical system of water supply within its area.

Thames Water has a legal duty to provide a secure supply of safe and clean water to their customers and every five years they are required to produce a Water Resources Management Plan (WRMP), which sets out how demand for water is balanced against the available supply over the next 25 years.

Thames Water Utilities Ltd has recently published their revised Water Resources Management Plan⁴⁶, which covers the period 2010-2035. This Plan was publicly consulted upon from 12 December 2011 to 31 January 2012. A Statement of Response was produced following the representations received, which is available on Thames Water's website. In March 2012, the amended Water Resources Management Plan was sent to the Secretary of State, who will consider this document and decide whether or not to approve it.

In addition, Thames Water produces regularly Five-Year Asset Management Plans (AMP), e.g. AMP4 (covering the period from April 2005 to March 2010) and AMP5⁴⁷, which is the current plan that runs from April 2010 to March 2015. The AMPs set out Thames Water's investment programmes and spending allowances based on a five year cycle. It is submitted to, and reviewed by Ofwat, to set price limits for the next 5 years; this process is known as the Price Review (PR). (The next Price Review is PR14 and it will cover the period 2015/16 to 2019/20). The figure below outlines the interrelationships between Thames Water's different plans and programmes.

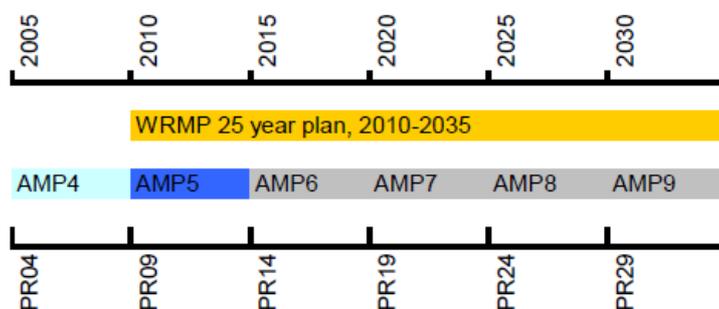


Figure 8: Illustration of the interrelationship between the WRMP, AMP and the PR; Source: Draft Final Water Resources Management Plan, December 2011

Current provision

Thames Water's supply area covers around 8,000 square km, whereby the London Borough of Richmond upon Thames falls within the "London Water Resource Zone". This zone is classified as being 'water-stressed'.

⁴⁶ Thames Water Utilities Ltd, Draft Final Water Resources Management Plan; December 2011;

<http://www.thameswater.co.uk/cps/rde/xchg/corp/hs.xsl/5392.htm>

⁴⁷ Thames Water Utilities Ltd, Thames Water Business Plan – Our Plans for Water 2010-2015;

<http://www.thameswater.co.uk/cps/rde/xchg/corp/hs.xsl/10051.htm>

London's principal source of water is the Lower River Thames upstream of Teddington Weir. The Lower Thames Operating Agreement (LTOA) in combination with Thames Water's abstraction licences help to determine how much water can be abstracted from the Lower Thames. The average consumption in Richmond upon Thames in 2010-11 was 167 litres per person per day, which is significantly higher compared to the national average (see figure below).

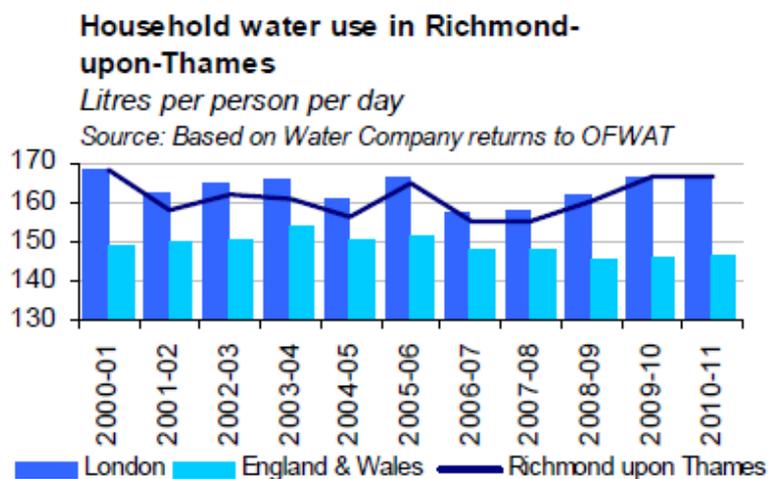


Figure 9: Household water use in Richmond upon Thames in litres per person per day; Source: Environment Agency

Thames Water's Hampton Water Treatment Works (WTW) is located within this borough; it is one of the UK's largest WTW and provides a safe, dependable water supply for one third of London's inhabitants; 3 million people.

Future requirements

London has a growing water deficit. It is predicted to have supply demand deficits; it falls into deficit in 2012/13, with the supply demand balance deteriorating from a surplus of 1% in 2009/10 to a deficit of 15% by the end of the planning period.

This does not mean that there is a serious shortage of water but that there is an increased risk of restrictions on customer's use of water and of the need to seek Drought Orders or Permits (Thames Water Utilities have an adopted Drought Plan, 2010).

To plan water resources effectively in the future, Thames Water's Draft Final WRMP forecasts the amount of water that will need to be distributed; i.e. the "water demand"; this takes into account domestic or household consumption, commercial or non-household consumption and leakage or losses from the distribution network and customers' supply pipes. This is based on future population and property changes. The Draft Final WRMP also includes a detailed analysis of current and future water supply.

Leakage reduction remains Thames Water's highest priority for this area. The leakage control programme consists of Victorian mains replacement, active leakage control which includes the location and repair of leaks, and customer side leakage reduction. In addition, there will be a 15-year progressive programme of targeted compulsory metering, with the aim to individually meter all domestic properties where it is cost beneficial to do so.

According to the draft final WRMP, the preferred (least cost) final planning programme for London comprises a number of small groundwater schemes, two aquifer recharge schemes, three aquifer storage and recovery schemes, the reuse scheme at Hogsmill sewage treatment

works (STW) and another reuse scheme at Deephams STW. (Note: Abstraction schemes will be subject to the permitting process.)

Within the context of the London Borough of Richmond upon Thames, it must be noted that development management policies are in place that ensure water resources and associated infrastructure is protected. Policies also support the development or expansion of water supply facilities, either where needed to serve existing or proposed new development, or in the interest of long term water supply management. In addition, policies ensure that there is adequate water supply, or that extra capacity can be provided in time to serve the development, prior to new development being permitted. Policies refer to the fact that financial contributions may be required for new developments towards the provision of, or improvement to such infrastructure.

In addition, Thames Water advises it is important not to underestimate the time required to deliver necessary infrastructure, for example, local network upgrades take around 18 months to complete; treatment works upgrades can take 3-5 years to complete and the provision of new water resources and treatment works can take 8-10 years.

Costs

The nature of any network upgrades will depend on the level of development on specific sites together with other development within the catchment. Due to the complexities of sewerage networks and ahead of the Council's Site Allocations DPD, it is difficult to determine the infrastructure needs at this stage. Development management policies are in place to deal with this uncertainty.

Whilst no costs have been identified as a result of the above assessment, it has to be assumed that any projects in relation to managing and increasing water supply, such as mains replacements and leakage reduction projects, have significant costs attached to them. The costs for providing new infrastructure where required as a result of new development or upgrade works of existing infrastructure as well as recurrent costs of ongoing maintenance services can be significant.

Clarification will be sought from the service provider to identify whether there are any specific projects with related costs in this borough, which can then be included in the Council's subsequent Infrastructure Delivery Schedule. This Schedule will be able to reflect both land costs and construction/fit-out costs, and it can be clarified whether the figures include recurrent costs of providing ongoing services.

4.4.5 Surface and foul water infrastructure and waste water treatment

(last updated January 2012)

Introduction

Richmond's foul sewerage systems and sewage treatment is undertaken by Thames Water Utilities Ltd, who is the statutory sewerage undertaker for this borough. Under the Water Industry Act, Thames Water has a duty to ensure that its area is effectively drained and the contents of its sewers effectively dealt with.

Current provision

Richmond upon Thames is served by Modgen sewage treatment works (STW), which is situated in Isleworth, West London. Therefore, all sewage from this borough is collected using the system originally designed in Victorian times and channelled to this single STW. The

Environment Agency controls the discharge of effluent of treated sewage into the River Thames.

Thames Water is currently carrying out upgrade works at Mogden to significantly reduce the number of times partially-treated sewage overflows into the River Thames when the works become overloaded after heavy rain. It is anticipated that these upgrades will improve the ability to treat sewage flows by more than 50%; and the upgrade works are due for completion in March 2013. The scheme should provide sufficient treatment to ensure Mogden can cope with London's growing population to 2021 and beyond.

Future requirements

The investment issues underlying sewage provision arise from two sources. In the first place existing sewage treatment works may need expansion in order to handle increased volumes of waste water arising from a larger number of households. Secondly, higher environmental standards (e.g. arising from the EU) may mean that even with no increase in "demand" existing sewage treatment works require upgrading.

It is likely that there is limited capacity at some locations within the existing sewers and there will be a need for network upgrades in order to service major new development within the borough.

Within the context of the London Borough of Richmond upon Thames, it must be noted that development management policies are in place that ensure sewerage and waste water treatment infrastructure is in place ahead of new development being permitted. Developers are required to provide evidence that capacity exists in the public sewerage network to serve their development in the form of written confirmation. Where capacity does not exist then a drainage strategy has to be provided to show what infrastructure needs to be in place by when and who will fund it. Therefore, policies ensure that there is adequate surface water, foul water drainage and sewerage treatment capacity to serve the development or that extra capacity can be provided in time to serve the development, prior to new development being permitted. Policies refer to the fact that financial contributions may be required for new developments towards the provision of, or improvement to such infrastructure.

Thames Water's plans for the future (up to 2015) include improvements to the sewer network to reduce the risk of sewer flooding, while through local planning policies, as set out in the Development Management Plan (DM SD 7), the Council will require development proposals to incorporate Sustainable Drainage Systems (SuDS) to manage and reduce surface water run-off. In addition, Thames Water advises it is important not to underestimate the time required to deliver necessary infrastructure, for example, local network upgrades take around 18 months, whereas sewage treatment works upgrades can take 3-5 years.

Further requirements, now and in the future, may be identified through the Council's Surface Water Management Plan and Flood Risk Strategy.

Finally, the Thames Tunnel project also has to be considered in this section. This is Thames Water's major sewerage investment project going on in London at present. The Thames Tunnel aims to capture sewer discharges along the Thames and divert them to sewage treatment works via a sewer tunnel to be constructed under the River Thames. Its purpose is to improve river quality at times of rapid run off in storms. It is estimated that the proposal will cost around £4.1 billion, whereby the costs will be met by Thames Water's wastewater customers via increased bills. This project is not directly connected to the purpose of supporting growth and new developments in this borough. However, a site has been identified at Barn Elms School's Sports Centre for the capture and diversion of discharges from the West Putney Storm Relief combined sewer overflow into the Thames Tunnel.

Costs

The nature of any network upgrades will depend on the level of development on specific sites together with other development within the catchment. Due to the complexities of sewerage networks and ahead of the Council's Site Allocations DPD, it is difficult to determine the infrastructure needs at this stage. Development management policies are in place to deal with this uncertainty.

In addition, Thames Water is currently carrying out upgrade works at Mogden STW, which will improve the ability to treat sewage flows by over 50% by March 2013. This will provide sufficient treatment capacity for this borough to deal with the growing population.

The Council may however be making some investments in the Council owned highways including upgrades to the surface water network; there are however no further details or costs available at the moment of writing this report. It is furthermore expected that funding for surface/foul water drainage managed by Thames Water will continue to be sourced from its customers; to date, Thames Water has not outlined any significant deficits in this borough.

In addition, as a result of the Flood and Water Management 2010, the London Borough of Richmond has been designated as Lead Local Flood Authority and it will also take on the lead role of approving and adopting Sustainable Drainage Systems proposed as a result of new developments. This process will lead to new approval and charging processes within the Council.

To conclude, whilst no specific costs have been identified in relation to surface and foul water as well as waste water treatment infrastructure, it has to be assumed that these areas have significant costs attached to them, particularly the provision of new facilities where required as a result of new development or upgrade works of existing infrastructure as well as recurrent costs of ongoing maintenance services.

4.4.6 Flood risk and flood defence infrastructure

(last updated January 2012)

Introduction

A large proportion of the borough is situated in proximity to the River Thames and its tributaries, and not surprisingly therefore a relatively large number of properties within the borough are potentially at risk of flooding from rivers. The River Thames within this borough extends from Barnes to Hampton Court (upstream of Teddington Weir). Teddington Weir represents (formally) the tidal extent of the River Thames, and therefore the borough is at risk from both fluvial (river) and tidal flooding. Downstream of Teddington Weir, the borough is protected against flooding from the River Thames by the Thames Tidal Defence system, which provides protection against flooding through a combination of raised flood defences, flood proofing to riverside properties, and the Thames Barrier.

Some areas within Richmond consist of a relatively narrow floodplain along the Thames, much of which flood regularly and are occupied by parks and gardens. Whilst the amount of property at risk is generally small, there are some historic and important sites, including several schools, care homes, electricity substations, large residential areas, offices, major arterial routes and railway lines in the flood risk area.

Under the statutory duties and powers as set out in the Flood and Water Management Act 2010, the Council is legally required to take the lead role in managing local flood risk (this includes flood risk from all sources except from the River Thames and its main tributaries). Local research has been undertaken to understand the flooding issues within the borough

and to identify areas of high flood risk: this includes the Council's Strategic Flood Risk Assessment (SFRA)⁴⁸ and the Council's Preliminary Flood Risk Assessment (PFRA)⁴⁹. In addition, as part of the Drain London project⁵⁰, led by the Greater London Authority, a Surface Water Management Plan (SWMP)⁵¹ was completed for the London Borough of Richmond. The SWMP is a borough-wide investigation, identifying areas that may potentially be at risk from surface water and groundwater flooding.

Current provision

The Thames Barrier, which became operational in 1982, is one of the largest movable flood barriers in the world. The Environment Agency runs and maintains the Thames Barrier as well as the capital's other flood defences. The barrier spans 520m across the River Thames near Woolwich, and it protects 125km² of central London from flooding caused by tidal surges. It has 10 steel gates that can be raised into position across the River Thames.

The existing sources of flooding within this borough are:

- Tidal from the Thames upriver of the Thames Barrier (probability of 0.1% per annum, barrier controlled); flood depths up to 2 m if the Thames Barrier failed.
- Fluvial and tidal/fluvial from the Thames (probability >1% per annum; flood depths up to 3 m).
- Fluvial flooding from Beverley Brook (probability about 10% per annum)
- Fluvial from the River Crane, exacerbated by backing up from the Thames (probability >1% per annum, flood depths up to 2 m). The River Crane has an extensive floodplain in the tidal/ fluvial interaction zone.
- Fluvial and tidal/fluvial from the Duke of Northumberland's River. The flood risk is believed to be small.
- Local drainage, e.g. as a result of surface water runoff.
- Groundwater flooding from superficial strata, possibly connected to Thames levels.

It is important to highlight that in general the drainage (sewer) network is typically designed to cater for no greater than a 1 in 30 year design storm. For this reason, any event that exceeds this probability can be expected to result in overland flow that may pose a risk of flooding to local properties and areas.

The risk of flooding from surface water and/or the sewer network is difficult to predict accurately, and is heavily dependent upon local conditions during the passing of a storm (also refer to the section on surface and foul water drainage within this report). For example, leaves and/or a parked car may be blocking a gully, water levels within the receiving watercourse may be elevated preventing free drainage from (or backing up of) the sewers. It is important to ensure that the potential risk of localised flooding to a property is considered within a local context. Areas that are particularly vulnerable to localised flooding have been identified and assessed in the Council's SWMP, which also includes an action plan for the Council.

Existing flood risk management systems are:

- The Thames Barrier, to control tidal water levels.
- The Thames Barrier is also used to reduce fluvial flood levels.
- Secondary tidal defences along the Thames frontage.
- Beverley Brook flapped outfall

48 LBRuT, Strategic Flood Risk Assessment, August 2010; http://www.richmond.gov.uk/flood_risk_assessment.htm

49 LBRuT, GLA; Preliminary Flood Risk Assessment, May 2011; http://www.richmond.gov.uk/preliminary_flood_risk_assessment.htm

50 Drain London project, Greater London Authority; <http://www.london.gov.uk/drain-london>

51 LBRuT, Surface Water Management Plan, September 2011

- Beverley Brook bypass culverts that provide relief from fluvial flooding.
- The Crane gates that prevent high water levels in the Thames entering the River Crane. They are only effective when Crane flows are relatively low. When fluvial flows on the River Crane are high, the gates open even if the Thames water level is high.
- Local fluvial defences on the River Crane.
- Known combined sewer overflows (CSOs) for urban drainage flood mitigation.
- Flood forecasting and warning (provided by the Environment Agency)

It must be noted that there are no formal fluvial flood defences on the Thames. However, existing tidal defences, in particular the Thames Barrier, provide some protection against fluvial flooding downriver of Teddington. The current estimated standard of protection provided by these defences at Teddington is 3% per annum (1:30). There are some poorly defended areas including areas between the defences and the Estuary, and Eel Pie Island.

Future requirements

The Thames Estuary 2100 Plan⁵² recommends for the tidal area of the River Thames from Teddington Lock downstream, including Twickenham and Richmond, to continue with existing or alternative actions to manage flood risk at the current level (accepting that flood risk will increase over time from this baseline), working with others on local measures for key assets and infrastructure. Flood risk management in this part of the borough should be focussed on enhancing the landscape and amenity of the area. Suggested requirements are for improved and new defences where public access and views of the Estuary are maintained and enhanced.

However, for the tidal areas in Barnes and Kew, the recommended flood risk management approach is to take further action to reduce flood risk beyond that required to keep pace with climate change, this could include raising existing flood defences. There is a possibility that defence raising for tidal flood risk management may not be acceptable in all areas because of the adverse impact on the riverside. An alternative approach would be a combination of local secondary defences to protect parts of the floodplain, and floodplain management to reduce the impacts of flooding to existing properties and other assets.

At present, the Thames Barrier is closed to reduce fluvial flood risk (upstream of Teddington Lock). But climate change will increase the number of closures required to protect against rising tides. With increased and more intense rainfall, fluvial flood risk will also increase. The Thames Barrier will be less and less available to assist with managing this fluvial flood risk as it is conserved for tidal flood risk management – the purpose for which it was designed. (The particular constraint is the annual number of closures for the Barrier, as this must be limited to reduce the risk of failure and ensure readiness of the Thames Barrier for tidal surge flood conditions.) The Thames Barrier will continue to provide a high standard of protection against tidal flood conditions, but over the next 25 years its use for fluvial flood risk management will be gradually reduced. For the tidal area of Ham, Twickenham and Richmond, as well as for the fluvial parts of the borough, this means that alternative measures for managing fluvial flood risk must be put in place over the next 25 years. This means that vulnerable areas, such as undefended islands, will have to rely upon floodplain management measures in the future with localised defences to protect specific properties where this can be justified. Floodplain management measures include resistance and resilience of properties and increased reliance on flood warning and community flood management strategies.

Measures will also be required for tributary flooding, particularly from the River Crane which has an extensive fluvial floodplain in the fluvial/ tidal interaction zone (table A.1.). This will be affected by lack of space for new defences.

⁵² The Thames Estuary 2100 Plan, Environment Agency; <http://www.environment-agency.gov.uk/research/library/consultations/106100.aspx>

In addition to the TE2100 Plan, the Environment Agency, in cooperation with various public bodies and authorities, has recently produced a long-term plan to manage flood risk in the area of the Lower Thames – this is called the Lower Thames Flood Risk Management Strategy (LTS)⁵³, for the area from Datchet to Teddington. The LTS consists of large scale flood diversion channels, improvements to weir structures, widening of the channel and implementation of floodplain management options. The preferred option arising from the strategy, would take approximately 6,100 properties out of the very significant flood risk band (>5% annual chance of occurrence) within the full length of the Lower Thames flood plain. It would result in at least 7,200 properties being taken out of the 1 in 100 year flood risk zone.

The proposed works affecting this borough are:

- The study shows that some works to the river in this part of the borough are required in order to maintain the flows at their current level and to prevent any increase in flooding.
- Modifying weirs: this would involve increasing the capacity of Sunbury, Molesey and Teddington weirs to convey water during a flood. (Note: It is worth considering the hydropower schemes which are currently built/ planned on the lower Thames weirs. This may impact on the ability to alter these structures.)
- Local defences: this would protect localised areas such as those around Teddington Studios but this approach is ruled out in visually sensitive locations such as around Hampton Court Palace.
- Property level protection to those properties identified as being at highest risk of flooding and where local defences would not be appropriate.

Defra agreed in July 2011 the preferred option of the LTS. Initially, the LTS scheme in 2009 was eligible for 100% Defra Grant in Aid (GiA) funding; however, in June 2011 Defra introduced a new policy of Partnership Funding, which means that the delivery of the LTS will now involve a greater partnership between the respective planning authorities and the Environment Agency. Preliminary calculations show that the preferred option, arising from the LTS, will only receive just over half of the GiA funding required. Consequently the remainder will need to come from various forms of external contributions. This is a significant amount, currently calculated as at least £114m, on a present value cost basis.

Costs

At the time of writing this report, the Council is in the progress of developing a programme for implementing the actions and recommendations as set out in the Council's Surface Water Management Plan. To date, none of these actions have any costs allocated. There may however be projects in the near future that could be partly funded with money derived from new developments. For example, developments proposed in areas that have existing surface water problems could be the trigger for additional investment in the overall area and could help highlight further areas with capacity issues.

It is uncertain if the Environment Agency strategies, such as the LTS and TE2100, will require additional funding from local authorities in order to implement their strategies and to protect residents and properties within this borough. However, with the predicted effects of climate change, and given that local authorities have been designated as lead local flood authorities and as such responsible for the management of local flood risk issues, it is expected that the Council will have to fund flood defence and other flood alleviation infrastructure in the future.

4.4.7 Waste management and disposal

⁵³ Environment Agency, Lower Thames Flood Risk Management Strategy; <http://www.environment-agency.gov.uk/homeandleisure/floods/123097.aspx>

(last updated February 2012)

Introduction

Richmond has prepared a joint draft Waste Development Plan Document (WLWP) with the west London Boroughs of Brent, Ealing, Harrow, Hillingdon and Hounslow. The WLWP provides a planning framework for the management of all waste produced in the six boroughs over the next 15 years. It is needed to comply with the Mayor's London Plan (2011), which sets out targets for recycling and composting for waste from households, businesses and industry. Currently, a significant amount of waste is transferred outside of London for treatment or disposal in landfill. The London Plan requires that the majority of waste generated in London is managed in London, so that the Capital moves towards waste self-sufficiency by 2031.

The draft WLWP is going out for public consultation in January 2012; this consultation is on the proposed submission version of the Plan; the anticipated Examination of the WLWP is in January 2013, with adoption of the Plan by the west London boroughs in May 2013.

Current provision

The London Borough of Richmond upon Thames has several small waste facilities and two main sites: the Civic Amenity site in Townmead Road, Kew; and the Twickenham Depot, which is a site of 3.67 ha in Twickenham.

The West London Waste Authority (WLWA) is the statutory Waste Disposal Authority for the six west London boroughs, including Richmond, and as such is solely responsible for the transport, treatment and disposal of municipal waste collected by the boroughs. Currently most (some 71%) of the waste for disposal is delivered to the two rail transfer stations that WLWA operates at Transport Avenue, Brentford, and Victoria Road, South Ruislip. At these two sites the waste is compacted into ISO containers and loaded on to the railway and then taken by WLWA's rail transport contractor, DB Schenker Ltd, for final disposal to landfill sites operated by Waste Recycling Group PLC. Transport Avenue's waste is currently disposed of at Sutton Courtenay, Oxfordshire, and Victoria Road's waste is disposed of at Calvert, Buckinghamshire. Additionally, Transport Avenue receives borough collected green waste and green waste transported in from civic amenity sites, and this is shredded and sent by rail for composting also at Sutton Courtenay. In 2009, Transport Avenue sent over 33,000 tonnes of green waste for composting.

The WLWA and its constituent boroughs exported 995,900 tonnes of waste out of west London for landfill disposal in 2008. The majority of this waste was sent to Buckinghamshire (28%) and Bedfordshire (24%), followed by Oxfordshire (12%), with the remaining 36% divided between eight other authorities.

Landfill disposal accounted for approximately 1,056,000 tonnes of west London's waste in 2009, with over 94% of that exported to landfill facilities outside of west London. The remaining 60,080 tonnes was sent to Harmondsworth Landfill located in southwest Hillingdon. The majority of this waste was sent to both Buckinghamshire (28%) and Bedfordshire (24%), followed by Oxfordshire (12%) and the remaining 36% was divided between eight other authorities.

Overall in 2009/10 the WLWA and its constituent boroughs managed approximately 693,000 tonnes of Municipal Solid Waste⁵⁴. Of this total, 41% was reused, recycled or composted, with

⁵⁴ Municipal Solid Waste (MSW) in the west London boroughs is managed by the WLWA and includes household waste, kerbside collected recyclables, green waste and waste and recyclables collected at household waste and recycling centres.

the remaining 59% sent for disposal, nearly all to landfill outside west London. The figure below shows the means of waste management in the plan area in 2009/10, the latest full year for which figures are available.

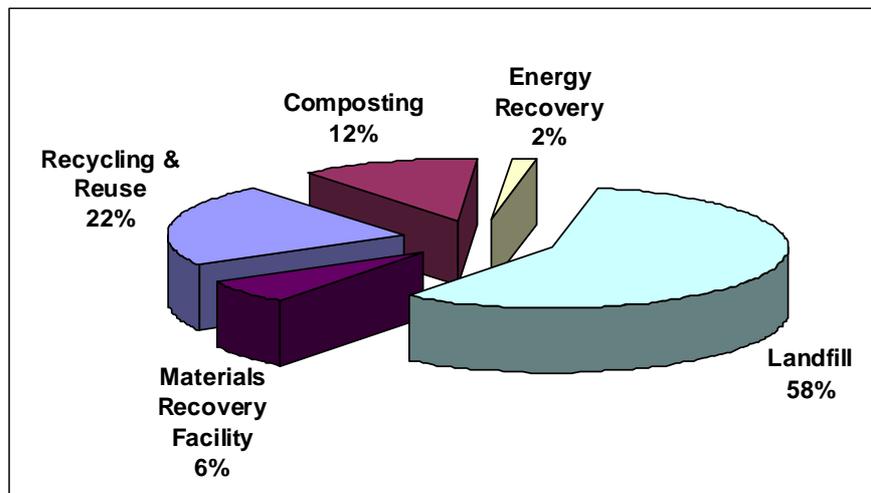


Figure 10: West London Waste Authority Municipal Solid Waste management (2009/10)

There has been an overall reduction in the amount of local authority collected waste sent to landfill in recent years as set out in the table below. However, landfill remains the primary waste disposal method used by the WLWA. Recycling and composting of local authority collected waste in the WLWA increased from 22.4% in 2006/07 to 34.8% in 2009/10.

Waste (tonnes)	2006/07	%	2007/08	%	2008/09	%	2009/10	%
Recycling & Reuse	116,000	14.6	131,000	16.9	139,000	19.0	155,000	22.4
Composting	62,000	7.8	71,000	9.2	84,000	11.5	86,000	12.4
Energy Recovery	3,000	0.4	3,000	0.4	1,000	0.1	12,000	1.7
Landfill	603,000	75.8	555,000	71.8	485,000	66.2	395,000	57.0
Materials Recovery Facility	13,000	1.6	13,000	1.7	25,000	3.4	45,000	6.5
Total waste	796,000		773,000		733,000		693,000	

Table 18: West London Waste Authority Municipal Solid Waste management (2006-2010)

Future requirements

Waste arisings projections are included in the London Plan (2011), with these figures considered the most up-to-date for west London and they were also used by the Mayor to determine the apportionment figures. The waste arisings and apportionment figures for west London are displayed in the table below.

	2011	2016	2021	2026
MSW arisings (tonnes per annum)	798,000	826,000	852,000	879,000
C&I waste arisings (tonnes per annum)	1,287,000	1,258,000	1,240,000	1,233,000
Total (MSW and C&I waste) arisings (tonnes per annum)	2,085,000	2,084,000	2,092,000	2,112,000
London Plan (2011) Apportionment (tonnes per annum)	1,399,000	1,595,000	1,798,000	2,019,000

Table 19: Quantity of waste forecast to be produced in west London and the apportionment figures from the London Plan (2011) for target years

According to the proposed submission version of the WLWP, no new sites for waste facilities are proposed in this borough up to 2026. The Twickenham Depot facility has been identified as an existing waste site that is considered to have potential for some reconfiguration and redevelopment.

The Addendum to the Joint Municipal Waste Management Strategy (JMWMS)⁵⁵ dated 2009 identified that the Partnership (Boroughs of Brent, Ealing, Hounslow, Harrow, Hillingdon and Richmond) was in danger of not meeting its landfill diversion requirements. It also recognised that new large-scale infrastructure was likely to take several years to procure, build and commission and thus an interim solution (Stage 1a) was required to achieve the necessary short-term landfill diversion. As part of this process, the following recovery capacity has been secured:

- 25,000 tonnes per year for the period 2009/10 – 2013/14
- 45,000 tonnes in 2014/15
- 90,000 tonnes per year for the period 2015/16 – 2034/35

Waste disposal authorities, through the Landfill Allowance Trading Scheme (LATS), have been given challenging limits for the amount of biodegradable waste that they are allowed to landfill.

The figure below assumes the recycling and composting level of 30.5% will remain constant and incorporates the recovery capacity procured through Stage 1a procurement process. It shows that by 2010/11 WLWA will fall into deficit in terms of LATS allowances. The maximum additional allowances required in any one year will be 80,000 and the total required over the period to 2020 will be just over half a million.

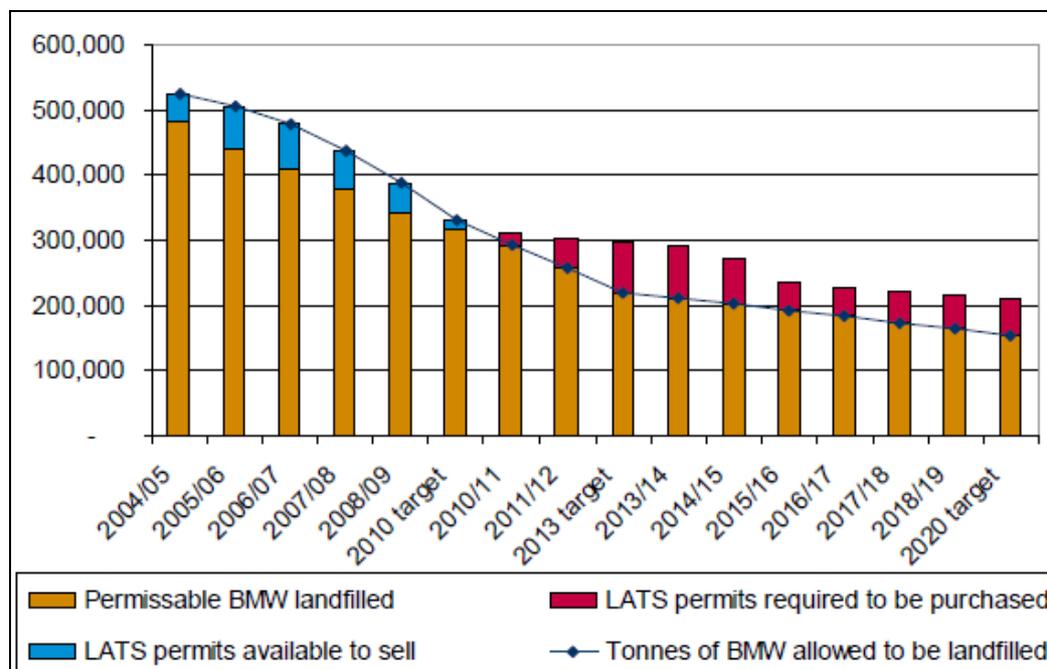


Figure 11: Landfill Allowance Trading Scheme Performance - Status Quo; Source: JMWMS, May 2009

The WLWA is now in a second stage procurement to manage the majority of the remaining residual waste streams. JWMS includes an appraisal of residual waste treatment options, but

55 Update to Joint Municipal Waste Management Strategy (JMWMS), May 2009; <http://wlwa.coopa.net/wp-content/uploads/West-London-Waste-Strategy-update-2009.pdf>

does not prescribe or preclude any form of residual waste treatment. From the inception of the JWMS to the present day there has been significant change in the market with respect to existing or consented treatment capacity, and to some extent the risks/track record of a number of treatment technologies. Notwithstanding the above, the WLWA has no preference for any particular technology provided the nature of the technology is proven on a commercial basis on a municipal scale in the UK or on a comparable basis in the EU. In order to promote value for money, the WLWA intends to allow the industry to decide the best options for treating its residual waste, based on the output specification. Each proposed solution will be evaluated against the evaluation criteria, which will set out the WLWA's priorities for the project. Further details, including costs and information in relation to the overall strategy for procurement can be found in the Cabinet report of 23 February 2012, which provides the West London Waste Authority Procurement Update⁵⁶.

Costs

There are significant expenditures and costs involved in the management and disposal of waste. Whilst the draft WLWP currently does not set out any requirements for new waste facilities/infrastructure in this borough, the Council will need to contribute financially to the provision of waste disposal, management and waste treatment facilities outside of the borough. Significant costs are also attached to the waste collection and disposal processes carried out by the Council as well as for the ongoing costs of the borough's waste facilities (e.g. Townmead Road and Twickenham Depot).

Information on costs for providing new and maintaining existing waste disposal and treatment facilities are however unknown to the team producing this IDP. Should further details and information in relation to costs or any specific projects become available, these can be included in the Council's subsequent Infrastructure Delivery Schedule, which can include both land costs and construction/fit-out costs. There will also be an opportunity within this Schedule to clarify whether any figures include recurrent costs of providing ongoing services.

4.4.8 Telecommunications

(last updated April 2012)

Introduction

The telecommunications industry has two components or layers: (1) the infrastructure backbone (trunk network) provided by BT, Virgin and other operators providing national or localised fibre networks; and (2) the infrastructure connections from the trunk network to the consumer and the actual voice and broadband services provided by BT, ADSL Providers, Virgin or fibre and wireless providers.

Telecommunications companies invest in their own backbone infrastructure. Network traffic and potential for new connections lead investment decisions. In general, large developments are attractive investments for the extension of backbone infrastructure. Telecommunications companies expect developers to build ducts on site but with fibre connections the number of ducts is minimised. Fibre connections are normal for business and the future for residential.

Current provision

Under the Telecommunications Act 1984, British Telecom is required to produce adequate future infrastructure for the long-term. The Council is unaware of any specific British Telecom infrastructure projects for the borough. It is considered that British Telecom will continue to

⁵⁶ Cabinet report, 23 February 2012, <http://modern.gov.richmond.gov.uk/documents/s31376/Report%20Item.pdf>

provide telecommunications services in Richmond to meet the needs arising from new development.

With regard to mobile communications, The Mobile Operators Association (MOA) represents the four UK mobile network operators: 3; O2; Everything, Everywhere (formerly Orange and T-Mobile); and Vodafone. The MOA is the focal point for the network operators on radio frequency health, scientific research and town planning issues associated with the use of mobile phone technology. The need for planning permission for new telecommunications equipment for mobile phone operators is generally dependent on height and location.

With regard to broadband provision, it is considered that all parts of the borough have access to broadband provision and that the service being received is sufficient to support day-to-day business and other activities. In addition, BT have recently started an upgrade programme of the "green boxes" in the borough to improve broadband services. Planning permission is not normally required for new or upgraded "green boxes" outside Conservation Areas.

Future requirements

Modern telecommunication systems have grown rapidly in recent years with a majority of the population now owning a mobile phone. Mobile communications are now considered an integral part of the success of most business operations and individual lifestyle with new services such as the advanced third generation (3G) services, demand for new telecommunications infrastructure is continuing to grow.

More base stations are planned as part of a programme to enhance the infrastructure for the existing mobile generation (2G) and create a new network for 3G. These are not specifically planning requirements.

In addition, BT plans to roll out fibre-based, super-fast broadband to as many as 10 million homes by 2012. The investment forms part of BT's wider strategy of delivering next generation broadband services nationwide. Again, these are not specifically planning requirements.

For large sites with high potential for services, companies will extend the backbone to provide connectivity. Where sites are small or have low potential for services, connections will be made from local infrastructure by BT if no one else. BT has a Universal Service Obligation (USO) which means they have an obligation to provide consumers with a telephony connection.

The Council has adopted a SPD providing guidance on the siting and design of telecommunications equipment. The key element of the SPD is to require telecommunications operators to undertake a sequential approach to identifying sites seeking less sensitive sites first. In particular where the Council, local residents or schools have indicated they have a significant concern over a site near a school or residential area they must first pursue sites in less sensitive areas. The document also provides guidance in relation to detailed design issues.

Costs

No specific costs have been identified in relation to the provision of telecommunication services. Given the importance of telecommunications infrastructure to businesses and residents within the borough and London as a whole, the competitive nature of the UK telecommunications industry, commercial investment in infrastructure and provision of services should guarantee the necessary funding.

4.5 Transport infrastructure

(last updated January 2012)

Introduction

The Local Implementation Plan (LIP) is a statutory document that is a borough wide and local area transport strategy that details how the Council's transport objectives contribute towards the implementation of key priorities set within the second Mayor's Transport Strategy (MTS2). The LIP also reflects the transport needs and aspirations of the people of Richmond, set out in its locally set objectives and indicators. The Council has recently published its second Local Implementation Plan (LIP2)⁵⁷, which sets out the Council's transport objectives and delivery proposals for 2011/12 to 2013/14 and provides direction of travel on longer term proposals to implement the MTS2 over the 20 year horizon, 2011-2031. The Council's LIP2 provides the main basis for the assessment of the transport infrastructure types in this Report.

Although the LIP2 is a long-term strategy, it must be noted that it mainly focuses on the next 3 years, i.e. 2011/12 to 2013/14. Any detailed information on projects, including costs and funding beyond this period is not contained within the LIP. There is no other overarching borough transport strategy. As such, although this IDP is a 15 year plan, in the context of the transport section of this report, the focus is on the next 3 years.

⁵⁷ LBRuT Second Local Implementation Plan for Transport (2011-2014); http://www.richmond.gov.uk/second_local_implementation_plan.pdf

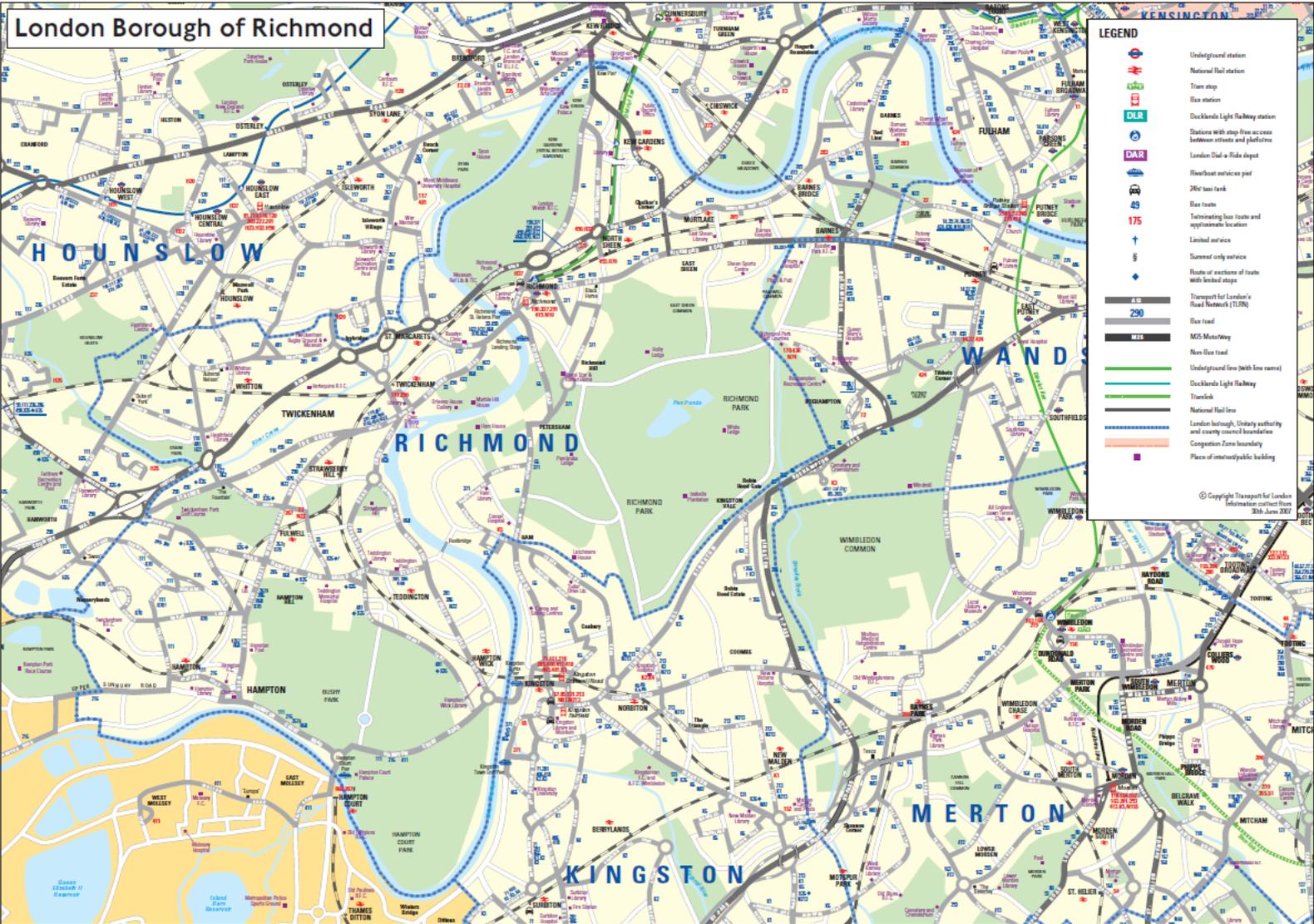


Figure 12: Multimodal map of Richmond Borough, Source: LBRuT LIP2

The following figure demonstrates the modal share of Richmond trips by borough of origin, trips per day and shares by main mode, average day (seven-day week) 2007/08 to 2009/10.

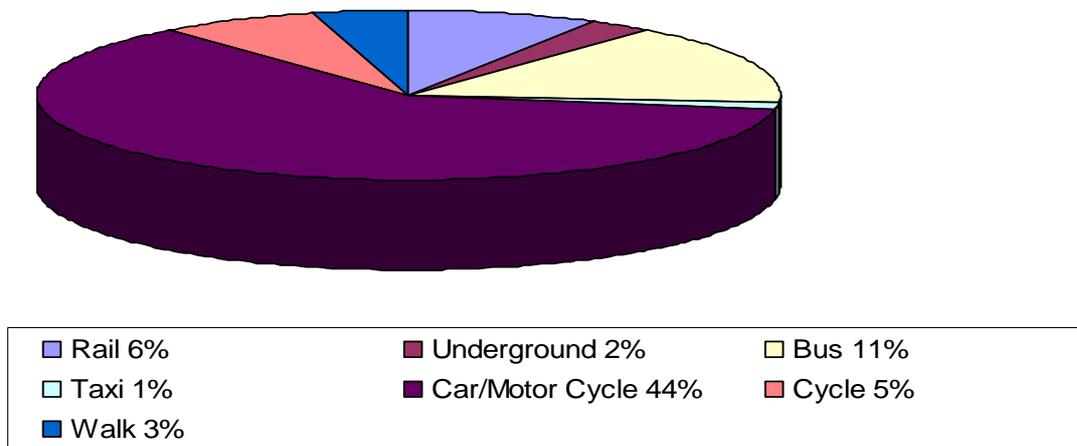


Figure 13: Modal share of Richmond trips (2007/08 to 2009/10); Source: LBRuT LIP2

The Mayor’s Transport Strategy⁵⁸ identifies Richmond as a Major Town Centre and strategic transport corridors (of sub-regional importance) are identified into/out of the borough; these include: links to and from Heathrow and Richmond then through to Kingston, Sutton and Croydon; links northeast towards the centre of London; and links southwest into Surrey.

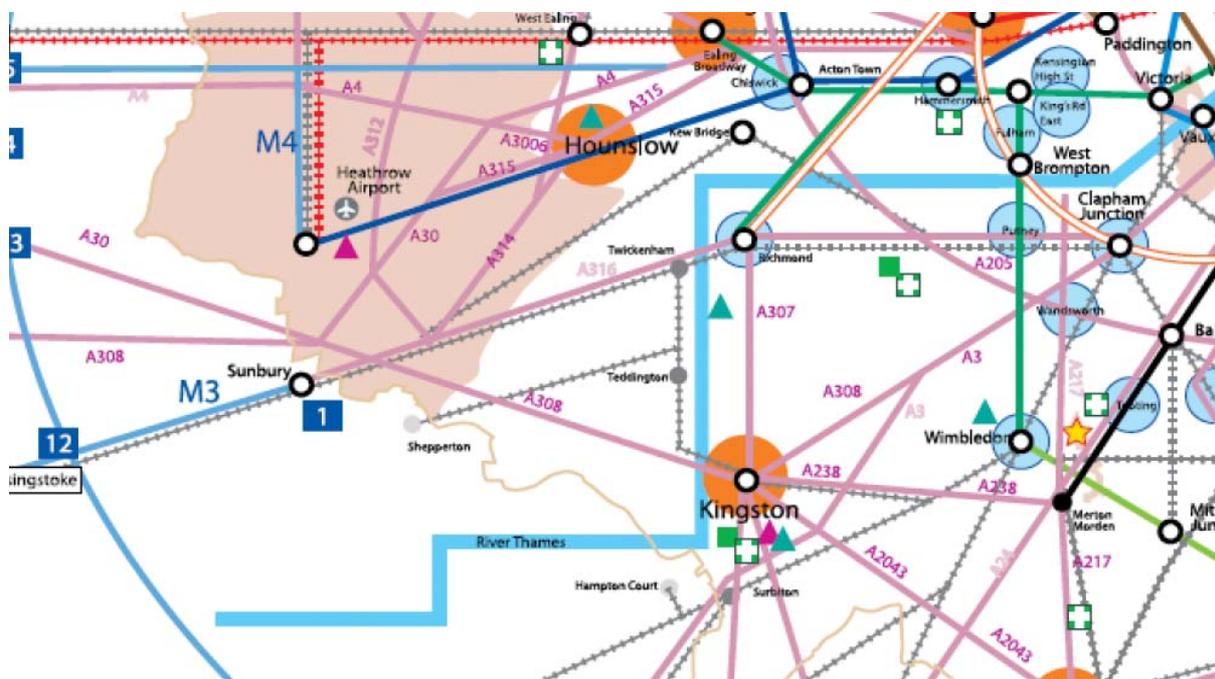


Figure 14: Richmond’s Sub-Regional Context; Source: LBRuT LIP2

⁵⁸ Mayor of London, Transport Strategy, May 2010; <http://www.london.gov.uk/publication/mayors-transport-strategy>

The objectives of the Richmond LIP2 will guide the way the Council will deliver transport improvements across Richmond over the lifetime of Richmond's second LIP:

1. To support and maintain the economic vitality of local shops and the Borough's thriving town and local centres.
2. To improve the local environment and quality of life for all residents of the Borough.
3. Improving safety for all road users.
4. Enhancing transport choice and reducing congestion.
5. Developing a transport system that is resilient and reflective of local needs and aspirations.
6. Deliver the "Uplift Strategy" for the regeneration of five particular areas of relative deprivation across the Borough.
7. Improve the accessibility, efficiency and attractiveness of transport Borough wide, thus increasing social inclusion.

The River Thames and the Royal Parks act as barriers to through routes in the borough, and as a result, high volumes of traffic are being channelled onto a small number of local roads. In particular, the transport network is a particular barrier in the north of the borough adversely affecting the areas of Sheen, Mortlake and Barnes. The rail lines also cause further difficulties. The severance to local communities caused by the A205 South Circular, the River Thames and railway lines is already a significant issue.

Major Schemes

Major Schemes are a key focus of the Mayor of London, and as a result, despite cuts in other areas the Major Schemes funding has had a small increase following the Comprehensive Spending Review 2010. During the lifetime of LIP2 a number of major schemes are proposed in the borough: Richmond Town Centre, Twickenham Town Centre, Whitton Town Centre (High Street).

Richmond Town Centre

The work on the £4m town centre project started in 2007/8 and the final phase will continue in 2011/12 (anticipated to be completed in March 2012); covering works in the town centre, including the area around the railway station. The works include new paving throughout the footways of the town centre, shared use loading bay/footway extensions, new street lighting and improved CCTV. A new service road outside Richmond Station will incorporate widened pedestrian areas and relocation of the bus stopping arrangements.

Twickenham Town Centre

The principle aim of any future scheme is to improve the town centre by enhancing the street scene, reduce accidents and making it more pleasant for all users. The Council's Twickenham Area Action Plan (AAP) will set out the overall strategy for the future of the town centre. Please refer to the Twickenham AAP for further information on improvement and transport works.

Whitton Town centre (High Street)

Proposals to upgrade the street scene, de-clutter signage, renew footways and street lighting, and ease congestion along the High Street will be incorporated with the review of on street parking. Where agreement can be reached, private forecourts will be included in the improvements. Gateways to the north and south of the High Street will be designed to better define the town centre, with "Welcome to Whitton" banners on lamp columns; improvements to Whitton Station are also part of the programme.

Costs and funding

Potential funding for LIP2

The Council's LIP2 identified all sources of funding that the Council will utilise to fund its programmes over the next three years.

Potential funding for LIP2 delivery				
	2011/12	2012/13	2013/14	Total
Funding Source	£000	£000	£000	£000
Integrated Transport				
Corridors, Neighbourhoods & Supporting Measures	2023	1941	1664	5628
Local Transport Funding	100	100	100	300
Major Schemes	0	2000	2000	4000
Total	2123	4041	3764	9928
Maintenance				
LIP Allocation – Principal Roads	644	1039	1039	2722
LIP Allocation – Bridges and Structures	19	145	132	296
Council Funding – Local Roads	1528	1000	1000	3528
Total	2193	2184	2171	6548
Capital Street Lighting				
	500	500	500	1500
Enabling Works (London Buses)				
	20	0	0	20
Car Clubs (TfL funded)				
	12	0	0	12
Developer Funding (s106)				
	1480	1000	1000	3480
Outer London Fund				
	1235	0	0	4235
Total	7563	7725	7435	25723

Table 20: Potential funding for LIP2 delivery; Source: LBRuT LIP2

Funding for major schemes

Major schemes funding is a separate source of funds available to the boroughs that supports larger projects of more than £1m in value. Although funding for Major Schemes is drawn from the overall London allocation it is “top-sliced” before the formula funding is allocated to boroughs. Funding is allocated through a competitive bidding process, and is a key source of funding for the Richmond Town Centre project.

With regard to Twickenham town centre redevelopment, in the immediate three years Richmond Council has made provision for £3,597,000 to be invested in Twickenham town centre through the LIP2. In the year 2012/13 £1,697,000 has been planned and the following year a further £1,900,000 is planned. The Council has in addition successfully bid from the Round 1 Outer London Fund, securing £496,700 for improvements to Twickenham’s high street and surrounding areas, with the aim of the consolidation of the town centre. The package of measures is designed to take the initial steps towards delivering the vision for Twickenham expressed in the Twickenham AAP.

With regard to works at Whitton High Street, funding for this scheme over the three years is £50,000 in 2011/12, £100,000 in 2012/13 and a further £100,000 in 2013/14. In addition, Richmond Council successfully bid for Outer London Fund Round 1 funding and secured a further £361,200 for improvements in Whitton town centre.

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			Total
					2011/12	2012/13	2013/14	
Major Schemes	Richmond Station Redevelopment			✓	0	1000	100	1100
Major Schemes	Twickenham Town Centre			✓	0	1000	1900	2900
Major Schemes Total					0	2000	2000	4000

Table 21: Major Schemes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

Financial Settlement

The Mayor of London determines each borough's annual allocation for the LIP funding. This formula incorporates historic patterns of spend with weightings based on public transport, safety, congestion and the environment and accessibility. Councils have to prepare a 3 year work programme (see table 20 above) of how they plan to spend the formula allocated funding which is submitted to TfL for assessment.

The Mayor of London's reduction in funding allocations to boroughs, together with the Spending Review 2010, there has been a significant reduction in funding available for transport programmes in the borough, from a high of £6.9m in 07/08 to an expected £2.9m this financial year (2011/12) and falling further to an expected £2.3m by 2013/14.

The reductions in Borough's grant allocation are roughly in line with the reductions to the London settlement and the following table outlines this change.

	2011/12	2012/13	2013/14
Previous indicative allocation	2111	2115	2115
Revised indicative allocation following CSR	2023	1941	1664
Reduction in indicative allocation	£88K	£174K	£451K

Table 22: LBRuT LIP2

Section 106 planning obligations

Almost all new development puts additional pressure on transport infrastructure; development should contribute to addressing that impact. Planning obligations (or Section 106 requirements) are an existing mechanism for ensuring that the impacts arising from a development on the site or in the wider locality are mitigated sufficiently. It should be noted that the Council's Community Infrastructure Levy (CIL), which is anticipated to come into force in late 2013, will change the way planning obligations can be used. In the future, developer contributions, either via Section 106 or CIL, may take the form of specific on-site works or financial contributions to wider transport improvements that support the development.

Therefore, pressures on the transport infrastructure resulting from new development will in the future need to be partially funded via CIL and Section 106 (it is assumed that some funding will also be available from TfL as well as capital funding).

4.5.1 Roads and highways

Current provision

As an outer London Borough the transport facilities are well developed, with the A316 (Great Chertsey Road) and A 205 (South Circular Road) trunk roads (part of the Transport for London Road network).

There is a total of 393 kilometres of public highway in the borough including 13 kilometres of the Transport for London Road Network (TLRN). The Council is the highway authority for all but the TLRN and Crown Roads. The hierarchy of roads is used as the basis for land use planning, traffic and environmental management measures; the road hierarchy is based on the following broad categories:

- a) Transport for London Road Network (TLRN)
- b) Strategic Route Network (SRN)
- c) London Distributor
- d) Local Roads
- e) Local Distributor Roads
- f) Local Access Roads
- g) Crown Roads – Those roads running through the Royal Parks

There are high levels of traffic, including through traffic, which has led to significant road congestion particularly in the morning and evening peaks.

In addition there will be many more people in a household with a car who may not have access to it, or be able to drive. Around 24% of households do not have a car. This accounts for approximately 41,500 people. Whilst much of the area has good public transport accessibility levels (PTAL), there are a few areas with lower levels, such as parts of Ham and Petersham, and areas in the extreme west of the Borough.

Future requirements

The Council has introduced a scheme called the “Highways Works Prioritisation”, which sets out that the Council will prioritise traffic schemes proposed by sections of the community. This being that in general local communities will need to demonstrate a majority of those residents who are affected by a scheme will only then go forward for further investigation. The purpose for having this ‘requirement’ is to ensure that limited resources of the Council are targeted where residents most want schemes implemented.

In addition, the “Highways Works Prioritisation” scheme also includes the decision to concentrate on fewer but larger schemes so as to get both best value for money from contractors and also to ensure, where possible, when a scheme is implemented it tackles all the highways issues in the vicinity rather than just one or two items. In this way it anticipated that the overall environment will be improved and also avoid the need to repeatedly visit area doing one item at a time.

The Council will actively seek cross border working with neighbouring authorities and involve private and voluntary sectors in identification of issues, possible solutions and proposal development and implementation.

As set out in the delivery plan of the Council’s LIP2, in relation to roads and highways the following initiatives will be introduced:

- Focus on managing the existing network as best as possible through both technological means and environmental changes that encourage other modes of transport where there are reasonable alternatives.
- Minor traffic management schemes to improve traffic flows and improve the street scene through rationalisation of signing and road markings.

- Good state of repair and maintenance of roads and footpaths, including the renewal of carriageways and footways, new and well maintained street lighting with the overall aim of delivering improved streetscape and public spaces.
- Use of technology in managing speeds: move towards systems which inspire compliance from the motorist, not relying on penal and/or engineering measures; speed management, implementation of Speed Indication Devices within borough to manage speeds at key locations.
- Reducing the impact of new developments: new traffic management funded by developer contributions; layouts will be designed that decrease the permeability of a new development at the same time increasing its pedestrian and cycle permeability.
- Network Management Duty: co-ordination of work on the public highway; maintenance of the register of adopted roads; network condition survey; inspection of statutory undertakers works following works carried out on the public highway; monitoring street works in progress ensuring compliance with Health and Safety; reporting all defective apparatus which are the responsibility of statutory undertakers; Asset Management Adoptions of Highways; Council participation in TfL's Traffic Management Forum in order to take on best practice and comply with the Network Management Duty.
- Freight: where lorry traffic exceeds the local environmental capacity of an area, then the Council will consider a range of measures to reduce lorry numbers. Support initiatives to promote the use of local suppliers can also reduce road freight mileage.
- Environmental improvements that both reduce speeds of traffic and improve the surrounding environment; including review of street furniture
- Travel Plan support for schools and workplaces and funding of school based initiatives.
- Increase safety by using CCTV at key transport interchanges

Costs

In addition to the costs and funding section set out above in the introductory section on transport, TfL and the Mayor have determined that because of the importance of ensuring that roads are maintained to a high level, there will be no reduction to the budget for Principal Road renewal. Accordingly, it is expected that the Council should submit works at a similar level to that indicated for 2011/12 which is approximately £800K.

Funding for Structures and Bridges is allocated London-wide and reviewed annually on a needs basis, and as such can vary year to year.

	2011/12	2012/13	2013/14
Revised indicative allocation following CSR	2023	1941	1664
Principal Road Maintenance	644	1039	1039
Bridge Maintenance	19	145	132
Total	£2686K	£3125K	£2835K

Table 23: Summary of expected LIP funding for LBRuT following CSR; Source: LBRuT LIP2

In addition to the costs and funding section set out above in the introductory section on transport, please see the two tables below for the detailed programme of investment of the individual actions, initiatives and measures as set out above.

Principal Road Maintenance Schemes and Programmes:

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)	

					2011/12	2012/13	2013/14	Total
Maintenance - Principal Road Renewal	Church Rd Barnes Carriageway and Footway renewals		LIP allocation		412	0	0	412
	St Margaret's Rd Carriageway and Footway renewals				233	0	0	233
	<ul style="list-style-type: none"> Strawberry Vale, footway and carriageway upgrade, from Cross Deep to Twickenham Road Hanworth Road, Heathfields, footway and carriageway upgrade, from Nelson Road to borough boundary. Sheen Road, footway and carriageway upgrade, from Manor Road to Sheen Common Drive 		LIP allocation		0	1039	0	1039
	<ul style="list-style-type: none"> High Street Hampton Hill, Fulwell & Hampton Hill, footway and carriageway upgrade, from Park Road to Uxbridge Road Twickenham Road, Teddington, footway and carriageway upgrade, Strawberry Vale to Manor Road High Street Teddington, Teddington, footway and carriageway upgrade, from Manor Road to Elmfield Avenue 				0	0	1000	1000
Total					645	1039	1000	2684

Table 24: Principal Road Maintenance Schemes and Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

Bridge Maintenance Schemes and Programmes:

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			Total
					2011/12	2012/13	2013/14	
Maintenance - Bridges and Structures	Kew Road Bridge Assessment		LIP allocation		0	0	10	10
	Park Road Bridge Assessment		LIP allocation		0	0	9	9
	Shacklegate Lane Bridge Assessment		LIP allocation		0	0	6	6
	Stanley Road Bridge Assessment		LIP allocation		6	0	0	6
	Tudor Road Bridge Assessment		LIP allocation		13	0	0	13
	Wellington Road Bridge Assessment		LIP allocation		0	0	7	7
	Queens Road Bridge Interim Measures		LIP allocation		0	25	0	25
	Uxbridge Road Interim Measures		LIP allocation		0	20	0	20
	Bridge structure assessment and remedial measures as identified through annual	LIP allocation		0	100	100	200	

	program of inspection and assessment							
Bridges and Structures Total					19	145	132	296
Maintenance total					664	1184	1132	2980

Table 25: Bridge Maintenance Schemes and Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

Road Safety Schemes and Programmes:

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			Total
					2011/12	2012/13	2013/14	
Road Safety	Borough-wide collision investigation	Annual review of road traffic accidents to generate accident remedial measures at various locations	LIP allocation	✓	50	60	50	160
Road Safety	Speed Management	Delivering a co-ordinated program for the use of speed indicator devices at a range of locations borough-wide to influence vehicle speeds	LIP allocation	✓	50	60	60	170
Road Safety	Junior Safety Officers	Promoting road safety in Primary Schools	LIP allocation	✓	5	0	0	5
Road Safety	Community Safety Initiatives	Borough Road Safety initiatives targeting specific sections of the community including Older Road Users, Youth and users of Powered Two Wheelers	LIP allocation	✓	15	15	15	45
Road Safety	Drink Drive	Safety awareness campaigns specifically directed at reducing the level of impaired driving in the Borough	LIP allocation	✓	5	5	5	15
Road Safety	Sixth Cross Road / Staines Road / Hospital Bridge Road	ATS modifications and junction improvements to reduce right-turn accidents and improve pedestrian facilities	LIP allocation		150	0	0	150
Road Safety	Park Road, Teddington	Completion of 2010/11 scheme	LIP allocation		30	0	0	30
Road Safety	Hanworth Road / Powdermill Lane	Installation of ATS at junction	LIP allocation		25	0	0	25
Road Safety	Hampton Court Road	Realignment works at the round-about for road safety and capacity	LIP allocation		40	0	0	40
Road Safety	A305 Richmond to Sheen Corridor	Implementation of potential low-cost minor road safety improvements following accident analysis	LIP allocation		15	0	0	15
Road Safety	Secondary School Road Safety Projects	Promoting Road Safety Within Schools	LIP allocation		10	5	5	20
Road Safety	Future Years road safety	Specific schemes to be identified through local	LIP allocation		0	150	150	300

	measures	transport plans informed by annual borough-wide investigation and analysis program						
Road Safety Total					395	290	290	975

Table 26: Road Safety Schemes and Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

Congestion Reduction Schemes and Programmes:

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			Total
					2011/12	2012/13	2013/14	
Congestion	Congestion Hot Spots	reducing congestion on Borough Roads through localised capacity increases at junctions	LIP allocation	✓	110	100	100	310
Congestion	Network assurance	Minor traffic management measures to improve vehicle flows including auditing of signage and street markings to improve local street scenes and to ensure smooth vehicle flows.	LIP allocation	✓	80	60	60	200
Congestion	Waiting and Loading Restrictions Review	Programme to monitor and review the provision of yellow lines on Borough roads with a view to minimising the impacts on local businesses and maximising parking opportunities in all areas of the Borough.	LIP allocation	✓	30	30	30	90
Congestion	ATS Timings Review and Modification	In conjunction with TfL Signals review the operation and timing of ATS in the Borough with a view to maximising the smooth flow of vehicles.	LIP allocation	✓	20	50	50	120
Congestion	Hampton Hill High Street / Park Road	Left-turn kerb realignment to facilitate the movement of HGVs and Buses.	LIP allocation	✓	7	0	0	7
Congestion	Sixth Cross Road / South Road / Wellington Road	Reconfigure ATS junction layout to improve pedestrian facilities	LIP allocation		40	0	0	40
Congestion	Future Years congestion measures	Specific schemes to be identified through local transport plans informed by annual borough-wide investigation and analysis program	LIP allocation		0	110	50	160
Congestion Total					287	350	290	927

Table 27: Congestion Reduction Schemes and Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

Environment and Public Realm Programmes and Schemes:

LBRuT -	Programme	Programme Descriptions	Funding	Ongoing	Funding
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Programme Area	areas		source	scheme?	(£,000s)			Total
					2011/12	2012/13	2013/14	
Environment and Public Realm	Air and Noise Pollution monitoring	Ongoing Monitoring of air and noise pollution levels Borough-wide	LIP allocation	✓	10	10	10	30
Environment and Public Realm	Richmond Riverside	Delivering improvements to the Richmond Riverside area through implementation of access management measures and parking controls.	LIP allocation	✓	75	20	0	95
Environment and Public Realm	Twickenham Town Centre	Progression of Major Scheme	LIP allocation		94	0	0	94
Environment and Public Realm	Richmond Town Centre	Delivery of ongoing town centre improvement scheme		✓	400	50	0	450
Environment and Public Realm	Whitton High Street	LIP funding contribution to Major Schemes program for Whitton High Street	LIP allocation	✓	50	100	100	250
Environment and Public Realm	Sheen Cross Service Road	Investigation, design and consultation on planned improvements at the Sheen Cross Service Road with a view to implementing a pedestrianisation program.	LIP allocation	✓	0	10	50	60
Environment and Public Realm	Richmond Park Gate	investigation, design and consultation on planned access improvements to Richmond Park Gate including the potential for closure of one exit gate, the provision of footway and an improved public realm,	LIP allocation	✓	0	5	10	15
Environment and Public realm	The Causeway, Teddington	pedestrian enhancement of junction of park road, middle lane, park lane and the causeway, with restricted vehicle access to the causeway	LIP allocation	✓	0	50	50	100
Environment and Public Realm	Future Years environment and public realm measures	Specific schemes to be identified through local transport plans informed by annual borough-wide investigation and analysis program	LIP allocation	✓	0	76	90	166
Environment and Public Realm Total					629	321	310	1260

Table 28: Environment and Public Realm Programmes and Schemes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

4.5.2 Overground and underground railways

Current provision

The rail network is good with 14 stations across the Borough, but they are largely radial with overland (Waterloo and North London lines) and underground (District Line) rail links. The South West Trains National Rail network serves 13 of the 14 stations within the borough:

- Barnes
- Barnes Bridge
- Fulwell
- Hampton
- Hampton Wick
- Mortlake
- North Sheen
- Richmond
- St Margaret's
- Strawberry Hill
- Teddington
- Twickenham
- Whitton

The fourteenth station, Kew Gardens is used by London Overground Services to and from Richmond and also District Line trains stop at Kew Gardens. In July 2011 a new contract was agreed to deliver an upgraded District Line throughout London, including the branch that serves the Borough. New signalling will allow longer trains to run more often on the District Line and so significantly raise the lines capacity servicing the Borough.

Whilst the majority of the stations serve as local interchanges with bus services, some of them are isolated from areas of major activity and suffer from safety and security issues, which can be either actual or perceived. These issues have been address under the Station Access Programme.

Work has been carried out on behalf of South West Trains to install secure cycle parking at several stations in the Borough. Restricted cycle parking has been installed at Twickenham Rail Station, making cycle parking far more secure. A cycle hire scheme has been introduced at Richmond Railway Station, a partnership between the Council and South West Trains, launched June 2010.

Rail freight will be encouraged where practicable and suitable, and where the impact on adjoining land and buildings is of an acceptable level.

Network Rail has published the final London & South East Route Utilisation Strategy (RUS)⁵⁹ on 28 July 2011. The RUS forecasts an increase of over 30% in the numbers of commuters using the National Rail services into the capital during the weekday morning peaks up to 2031. Network Rail and its industry partners believe that this RUS provides a robust strategy for the rail industry in the coming years.

Future requirements

As set out in the delivery plan of the Council's LIP2, in relation to overground and underground railways the following will be introduced:

- Rail Station Interchange Improvements to improve public transport.

⁵⁹ Network Rail, London & South East Route Utilisation Strategy, July 2011;

<http://www.networkrail.co.uk/browseDirectory.aspx?dir=%5CRUS%20Documents%5CRRoute%20Utilisation%20Strategies%5CRUS%20Generati on%202%5CLondon%20and%20South%20East>

- Improve disabled access at transport interchanges and other bus and train stations, particularly in the specific areas which are considered to be in most need of uplift (Hampton North, Mortlake, Whitton, Ham, and Barnes).
- Ongoing programme to deliver accessibility improvements at rail services.
- Partner South West Trains and London Underground/Overland on improvements to stations across the Borough.
- December 2011 Richmond upon Thames Council agreed outline planning permission for a new replacement railway station at Twickenham.

Costs

In addition to the costs and funding section set out above in the introductory section on transport, please see the two tables below for the detailed programme of investment of the individual actions, initiatives and measures as set out above.

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			
					2011/12	2012/13	2013/14	Total
Public Transport (Rail)	Rail Station interchange improvements	On-going program of delivering accessibility improvements at rail stations Borough-wide.	LIP allocation	✓	30	70	60	160
Public Transport (Rail) Total					30	70	60	160

Table 29: Public Transport (Rail) Schemes / Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

4.5.3 Buses

Current provision

The bus network coverage in the borough is extensive; there are around 30 bus services that provide services to most parts of the borough. The major bus interchanges are located at the Richmond, Twickenham and Teddington town centres. In addition, a bus garage is located at Fulwell.

The new generation of Countdown service sign, as well as new media channels and formats to reach more passengers than ever before in a cost effective way, are supported by the Council. TfL has confirmed that it is replacing all Countdown signs in the Borough will be replaced with the new generation of sign. This is the next step in London Buses' provision of real time bus service information for passengers.

Future requirements

As set out in the delivery plan of the Council's LIP2, in relation to buses the following will be introduced:

- The Council will continue to work with TfL, London Buses and the individual service providers to develop the borough's infrastructure to improve bus reliability.

- Ongoing programme to deliver accessible bus stops within the borough.
- Review of bus routes with the view of extending them when the conditions suite.
- Ongoing review of the operation and performance of bus lanes in the borough to establish their effectiveness; where they are not then removal or modification may be considered.
- Bus lanes and bus priority works through the borough will be prioritised only where they improve bus passenger journeys.
- Improve disabled access at transport interchanges and other bus and train stations and review of bus lanes will lead to improved access to Uplift Areas by public transport where identified.
- Well-established partnership and liaison arrangements will continue to be supported having delivered effective local service development of routes and bus priority provision.

Costs

In addition to the costs and funding section set out above in the introductory section on transport, please see the two tables below for the detailed programme of investment of the individual actions, initiatives and measures as set out above.

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			
					2011/12	2012/13	2013/14	Total
Public Transport (Bus)	Bus Stop Accessibility	On-going program of delivering accessibility improvements at bus stops Borough-wide.	LIP allocation	✓	30	80	70	180
Public Transport (Bus)	Motorcycles in bus lanes	A review of the current operation of the experimental orders allowing the operation of powered two wheelers in bus lanes, both Borough-wide and London-wide, and if results are positive implement more broadly across the Borough's bus lanes.	LIP allocation	✓	0	5	5	10
Public Transport (Bus)	Bus Lane Review (Richmond Road bus lanes)	review of the operation of the bus lanes on Richmond Road with a view to optimising performance through reductions in operating hours to 7am to 7 pm.	LIP allocation	✓	25	55	50	130
Enabling Works	Avondale Road bus boarders	Consultation and implementation of bus boarders in Avondale Road at the request of London Buses	London Buses		20	0	0	20
Public Transport (Bus) Total					75	140	125	340

Table 30: Public Transport (Buses) Schemes / Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

4.5.4 Cycle facilities

Current provision

The topography, layout of the road network, large amount of green spaces and high levels of bicycle ownership in the borough (compared with other parts of Outer London) make it conducive to cycling. The borough's cycle network includes an extensive network of routes linking district centres, railway stations and green spaces. Many of these routes follow quieter residential roads, with some facilities on busier main roads to cater for different types of users and cycling abilities. However, the road network generally should be regarded as a facility for cyclists as much as for vehicular traffic. It is recognised that cyclists can and will use the highway network as a whole for their highly individual trips and to link with the formal cycle route network.

The River Thames offers many opportunities for recreation and cycling trips with public access to approximately 27 kilometres of the riverbank. In addition, National Cycle Network Route 4 (Thames Cycle Route) passes through the borough running between Hampton Court Palace and the Wildfowl and Wetland Trust at Barnes via Kingston Bridge, Teddington Lock, Richmond Park and Barnes.

Future requirements

The Council would like to formalise cycling on several sections of the Thames Towpath within the borough by formally advertising and confirming Cycle Tracks Orders following statutory consultation with interested parties. The use of the river bank for cycling is of strategic importance into and out of the borough.

There are no 'Cycle Superhighways' planned for within the borough, although one proposed route runs to the north of the borough, while a second runs to the east. However the South London Orbital Greenway is being promoted by TfL, sometimes referred to as Route 75, and the Council is involved in early discussions on the scope that Sustrans have produced. The route would pass through the Borough and be for both cyclists and pedestrians that pass through green space connected by quiet residential streets.

Both Central Government and the Mayor for London are looking to local authorities to build on existing efforts to increase the numbers and safety of cycling and programmes of engineering, encouragement, education and enforcement have been identified to increase the levels of cycling. The Council is promoting and improving facilities for cycling as a utility and leisure form of transport.

The Council fully supports cycling and the potential lies in maximising the benefits for cyclists and vulnerable road users generally, from all traffic management schemes. The objective is to increase cycle usage, not just as method of transport in its own right but also as a means to reduce congestion, air & noise pollution and the number and severity of road traffic collisions as well as to improve social inclusion and the health and well being of residents, employees and visitors.

As set out in the delivery plan of the Council's LIP2, in relation to cycling the following detailed initiatives will be introduced:

- Improved transport links, in particular walking and cycling links to local and main shopping centres, including better signing.
- Opportunities exist to improve accessibility and permeability of public spaces for walking, cycling and public transport.
- High Street environmental improvements (particularly in the specific areas which are considered to be in most need of uplift: Hampton North, Mortlake, Whitton, Ham, and Barnes): new carriageway and footway surfacing; improved lighting to increase

personal safety; improve cycle links to the areas specified above from the borough's cycling network.

- Review and rationalise signing and other street furniture
- Secure cycle parking: cycle parking at Richmond railway station; provide secure, weatherproof and CCTV monitored parking at most railway stations in the borough.
- Cycle training at schools
- Support Cycle Hire schemes
- Reducing the impact of new developments: layouts will be designed that decrease the permeability of a new development at the same time increasing its pedestrian and cycle permeability.
- Smarter Travel Richmond programme has done valuable work in promoting walking and cycling in the borough and the Council will build on these successes. New physical works such as new cycling signing and improvements to the cycle network, including completion of borough wide cycle network; pedestrian/cycle/access improvements at Richmond Riverside.
- Thames Towpath upgrade: substantial completion of the borough's Greenways Network including confirmation of Cycle Tracks Orders on several sections of the Thames Towpath to formally allow cycling.
- Finalise draft Cycle Strategy (2011-2025): currently in final stages of consultation before adoption. Included in the draft Strategy is the long term objective of introducing a "Barclays Cycle Hire" like scheme into the Borough.

Costs

In addition to the costs and funding section set out above in the introductory section on transport, please see the table below for the detailed programme of investment of the individual actions, initiatives and measures as set out above.

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			
					2011/12	2012/13	2013/14	Total
Cycling	Cycle Training	Cycle Training for all Primary School pupils	LIP allocation	✓	50	50	50	150
Cycling	Cycle Direction Signing	Signing of Borough cycle routes as identified in CRISP studies and through the Cycling Liaison Group	LIP allocation	✓	10	5	5	20
Cycling	Cycle Parking	To provide additional cycle parking Borough-wide, including key trip generator sites such as rail stations and retail/commercial centres	LIP allocation	✓	25	25	25	75
Cycling	Borough Cycle Network	Implementation of improvements to the Borough Cycle Network as identified through CRISP studies and through the CLG.	LIP allocation	✓	80	60	60	200
Cycling	SUSTRANS Greenways	Funding for implementation of projects identified through the SUSTRANS Greenways including: Mortlake Green - Ship Lane, Barnes Common, Teddington Lock,	LIP allocation	✓	50	30	30	110

		Crane Park						
Cycling	Cycle Tracks Act	Program to convert the Thames footpaths for shared use and improve surfacing and signage.	LIP allocation	✓	50	50	45	145
Cycling	Future Years cycling measures	Specific schemes to be identified through local transport plans informed by annual borough-wide investigation and analysis program	LIP allocation	✓	0	110	75	185
Cycling Total					265	380	300	945

Table 31: Cycling Schemes and Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

4.5.5 Pedestrian facilities, including towpath

Current provision

Walking plays an important part in urban life and is a part of almost all journeys, whether as the complete journey or as a link between other modes of transportation making up longer trips. While there are parts of the borough where the condition of the footways, the signing and the street furniture could be improved, there is a generally good basic walking infrastructure within the borough. The majority of the borough's signal-controlled junctions now have pedestrian phases and the majority of the borough's 305 public rights of way are adequately accessible.

There are also a number of long distance recreational walking routes that are signed and promoted. There are three strategic walking routes within the borough and they include sections of the London Outer Orbital Path, the Capital Ring and the Thames Path.

The 27 km towpath along the River Thames provides a very important regional recreational function. In general, the River Thames, its towpath and the recreational areas along the river are well used by local communities, residents, workers as well as by visitors.

Future requirements

There is great potential for increasing walking as a proportion of all journeys.

All schemes introduced within the borough are likely to have an element of walking involved and pedestrians will be considered at all stages to ensure that the walking environment continues to be improved.

As set out in the delivery plan of the Council's LIP2, in relation to pedestrian facilities the following will be introduced:

- High Street environmental improvements (particularly in the specific areas which are considered to be in most need of uplift: Hampton North, Mortlake, Whitton, Ham, and Barnes); this includes: de-cluttering of streets to improve pedestrian environment; measures to remove barriers to access such as unnecessary street clutter; improved lighting to increase personal safety; opportunities exist to improve accessibility and permeability of public spaces for walking, cycling and public transport.
- Good state of repair and maintenance of roads and footpaths, including the renewal of carriageways and footways, new and well maintained street lighting with the overall aim of delivering improved streetscape and public spaces.

- Improved Transport Links: improve walking and cycling links to local and main shopping centres, including better signing.
- Review and rationalise signing and other street furniture.
- Reducing the impact of new developments: layouts will be designed that decrease the permeability of a new development at the same time increasing its pedestrian and cycle permeability.
- Smarter Travel Richmond programme has done valuable work in promoting walking and cycling in the borough and the Council will build on these successes, such as pedestrian/cycle/access improvements at Richmond Riverside.
- Thames Towpath upgrade: substantial completion of the borough's Greenways Network.
- Education: junior safety officers, promoting road safety in primary schools; pedestrian training for Year 3's.
- Improved walking environment will generally encourage more walking to access urban and local centres so contributing to improvements in air quality.

In addition, access to, along and across the River Thames is vital for ensuring the recreational areas and open spaces along the river can be used to the maximum potential. The Council has strong policies on the protection and enhancement of the River Thames, e.g. the emerging Twickenham Area Action Plan includes the intention to reinforce and make the most of both the River Thames corridors up and downstream.

The Council is fully engaged in the "London's Arcadia", a project to encourage universal access, understanding and enjoyment of London's Arcadian Thames through the enhancement, conservation and promotion of the natural and built heritage at the core of the Thames Landscape Strategy area. London's Arcadia is the largest open space of its kind in London covering the stretch of Thames running from Teddington beneath Richmond Hill to Kew. Included in it is the objective to regenerate public spaces such Twickenham and Richmond riverside promenades and the repair and conservation of the historic Thames towpath.

See above regarding the "South London Orbital Greenway" in Cycle Facilities.

Costs

In addition to the costs and funding section set out above in the introductory section on transport, please see the table below for the detailed programme of investment of the individual actions, initiatives and measures as set out above.

LBRuT - Programme Area	Programme areas	Programme Descriptions	Funding source	Ongoing scheme?	Funding (£,000s)			Total
					2011/12	2012/13	2013/14	
Pedestrians	Pedestrian Training	Pedestrian Training plays a key role in the Borough's road safety plan and this funding allows us to engage with year 3 pupils to teach them on-road practical pedestrian skills with our fully qualified team of trainers.	LIP allocation	✓	20	20	20	60
Pedestrians	Pedestrian Crossing	Provision of pedestrian crossing facilities arising	LIP allocation	✓	50	100	100	250

	Facilities	from feasibility studies and surveys						
Pedestrians	Rights of Way Improvement Plan (ROWIP)	Implementation and maintenance of commitments arising from the statutory ROWIP.	LIP allocation	✓	10	5	5	20
Pedestrians	Pedestrian Footbridge improvements	Implementation of pedestrian access improvements at footbridge and lock bridges Borough-wide.	LIP allocation	✓	10	10	9	29
Pedestrians	A306 Barnes Common to Hammersmith Bridge	Design, consultation and implementation of improvements to pedestrian facilities at locations along this key walking route.	LIP allocation	✓	48	50	0	98
Pedestrians	Stanley Road/Fulwell Road/Shacklegate Lane	Implementing improvements to pedestrian facilities - zebra crossing and junction works.	LIP allocation	✓	20	40	0	60
Pedestrians	Teddington Lock Strategic Links	Delivering improvements to a key walking and cycling route.	LIP allocation		40	0	0	40
Pedestrians	Future Years pedestrian measures	Specific schemes to be identified through local transport plans informed by annual borough-wide investigation and analysis program	LIP allocation	✓	0	70	70	140
Pedestrians Total					198	295	204	697

Table 32: Pedestrian Schemes and Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

4.5.6 River transport (along and across the River Thames)

Introduction

The River Thames meanders for 34 km through a landscape of historic and royal parks, heritage sites, a variety of wildlife habitats, residential and employment areas through this borough. It links major visitor attractions of the borough including Hampton Court Palace, Ham House, Marble Hill House, Richmond town centre and Kew Gardens with central London. This borough it is the only London borough that is bisected by the Thames and therefore has one of the longest river frontages and recreational areas along the Thames (on both banks) in London.

Please also refer to the Thames Landscape Strategy Hampton to Kew⁶⁰. : <http://thames-landscape-strategy.org.uk/arcadianthames>

Current provision

There are two ferry services along our stretch of the river:

- (1) Hammertons Ferry provides a chargeable ferry service between the north side of the Thames (near Marble Hill House) and Ham House on the south side of the bank. However, this service is run by a private provider, which is outside of the control of the Council and cannot be guaranteed into the future. In addition, it is only available from

⁶⁰ Thames Landscape Strategy: <http://thames-landscape-strategy.org.uk/arcadianthames>

1 March to 31 October, with some weekends in the winter where weather permits the running of the service. Note that it is currently shut due to work occurring at Richmond half tide lock.

- (2) Hampton Ferry runs from opposite the Bell Inn, Hampton to Hurst Park, East Molesey daily between April and October.

In addition, there are a number of companies in the area who operate boat trips including Turk Launches (Richmond, Kingston and Hampton Court), Westminster Passenger Services (from Westminster to Kew, Richmond and Hampton Court) and Parr's Circular Cruises (from Richmond Pier to Teddington Lock). London River Services Limited (LRS), a wholly owned subsidiary of TfL, owns and operates eight passenger piers on the Thames between Millbank and Greenwich. From Westminster pier leisure services run to Tower and Greenwich all year round, and to Kew, Richmond, and Hampton Court during summer.

The River also acts as a major barrier for transport movements in the borough; there are important existing links over the River Thames, specifically the footbridge over the River Thames that links Teddington with Ham, and the footbridge linking Old Deer Park and St. Margarets.

Future requirements

As set out in the delivery plan of the Council's LIP2, modern river services will be introduced and it will be continued to protect wharfs to safeguard them for future use if not presently used and the land around them in order that they continue to be viable.

In relation to the River Thames acting as a barrier for transport movements, there is a commitment in the Council's Core Strategy (Policy CP 5.c) to investigate the possibility of a footbridge across the Thames between Ham and Twickenham for pedestrians and cyclists, but to date no funding has been secured even for a feasibility study.

Another potential link across the River Thames, for which the Council is not aware that it is either feasible or funding available, would be a link from Kew across the River Thames to Syon Park; a bridge for pedestrians and cyclists at this point could link major recreational and open areas within the boroughs of Richmond and Hounslow.

Costs

In addition to the costs and funding section set out above in the introductory section on transport, please also refer to the LBRuT LIP2 for the detailed programme of investment of the individual actions, initiatives and measures as set out above. This sets out a full description, funding sources, allocated funding as well as the relationship to the Mayoral Transport Strategy goals and LIP2 objectives.

As mentioned above, to date, no funding has been identified for any of the possible foot-/cycle-bridges across the River Thames, and none of these projects has even had a feasibility study.

4.5.7 Car parking

Current provision

There is considerable pressure on parking in this borough – many older properties do not have off street parking and there is not much capacity for further on street parking in most

areas. This is worsened where there is a demand for commuter parking. Approximately 30% of the borough's residents are within Controlled Parking Zones.

According to the 2007-2010 Local Implementation Plan for Transport⁶¹, the Council manages 27 off-street car parks in the borough. These car parks provide 2681 spaces in total and 40 disabled bays. In addition, parking takes place in formal and informal private off-street car parks as well as on-street and the exact number of these is unknown and may vary over time without the Council's knowledge. It is therefore difficult for the Council to know the exact number of overall car parking spaces across the whole borough.

In view of this, when schemes or large planning applications come in the Council would carry out an up to date car parking assessment in the vicinity. Recently the Council has commissioned consultants to carry out a parking survey in Twickenham town centre as part of the evolving Twickenham Area Action Plan.

Future requirements

As set out in the delivery plan of the Council's LIP2, humane parking enforcement will be introduced to:

- Discourage commuter parking – give priority to residents needs, Residents Parking Schemes.
- Manage parking controls to help maintain the vitality and viability of our villages and town centres.
- Work with key visitor attractors in the borough.

4.5.8 Travel Choice

Measures are also introduced by the Council's LIP2, which focus on providing sustainable modes of transport and support to schools in their travel planning where they are still pursuing this area of work. Some of this work is generated where planning permissions have been granted and it is a condition to develop a travel plan. The following measures as set out in the LIP2 could assist in reducing pressure on parking in this borough:

- Electric Vehicle Charging Points: The Council will continue to support the Mayor's plan to encourage electric cars but not on the public highway. Private developers will be encouraged to install new points on their developments.
- Car Clubs: car clubs have proven to be a success in Richmond and the Council will continue to enhance this initiative, in partnership with residents and businesses.
- Enhancing accessibility by supporting choice in transport: being an Outer London Borough which is not extensively served by public transport, efforts will be made to ensure that the Council's transport proposals fully embrace the importance of access to private means of transport in the daily life of our residents.

Costs

In addition to the costs and funding section set out above in the introductory section on transport, please see the table below for the detailed programme of investment of the individual actions, initiatives and measures as set out above.

LBRuT -	Programme	Programme Descriptions	Funding	Ongoing	Funding
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61 LBRuT Local Implementation Plan for Transport (2007-2010); http://www.richmond.gov.uk/2007-2010_local_implementation_plan_for_transport.htm

Programme Area	areas		source	scheme?	(£,000s)			
					2011/12	2012/13	2013/14	Total
Travel Choice	Council Travel Plan	There are several actions within the Plan that will be implemented to raise the profile of various staff travel benefits including car clubs, Oyster cards, car sharing, pool bikes, cyclist training, etc.	LIP allocation		10	0	0	10
Travel Choice	School Travel Plan - School Support	To provide support to schools in preparation of their School Travel Plans.	LIP allocation		14	0	0	14
Travel Choice	School Travel Plan - Small Grants	Funding to support Gold and Silver committed schools with valid STPs to achieve their STP targets	LIP allocation		14	0	0	14
Travel Choice	Engineering Works	Implementation of Highways and Traffic Management projects identified in STPs.	LIP allocation	✓	90	85	55	230
Travel Choice	Walk on Wednesday Upgrade	Funding for the Walk on Wednesday (WoW) and Big WoW programs for primary and secondary school projects. Program aimed at raising road safety and sustainable travel awareness for year 6 pupils and parents.	LIP allocation	✓	30	0	0	30
Travel Choice	Future Years Travel Choice Measures	Specific schemes to be identified through the LIP period		✓	0	20	20	40
Car Clubs	On street car club bay implementation borough wide	Identification of bays, traffic orders, signage, lining and officer time	LIP allocation		12	0	0	12
Travel Choice Total					170	105	75	350

Table 33: Travel Choice Schemes/Programmes, LIP 2011/12 – 2013/14 Programme of Investment; Source: LBRuT LIP2

4.5.9 Community transport

Introduction

The Council's Accessible Transport Unit (ATU) coordinates transport related schemes by providing information, advice and services for residents in the borough with mobility difficulties. The ATU is responsible for the issue and administration of: [Freedom Passes for disabled people](#), [Super Shopper Bus Scheme](#), [Taxicard scheme](#) and [Blue Badge Scheme](#). These schemes have to be applied for and assessed under set criteria relevant to each scheme.

Current provision

There are three schemes in the borough to help people with mobility problems to go shopping:

- 1) The [Super Shopper Bus Scheme](#): funded by Richmond Council and administered by the Richmond Accessible Transport Unit. The service runs fortnightly trips to either the Sainsbury's superstore in Richmond or the Tesco superstore in Isleworth and is for Richmond residents who have mobility problems, are unable to shop without assistance and have no other transport available. The vehicle is provided by Richmond Council and is fully accessible.
- 2) [FISH](#): a voluntary care scheme for frail and housebound residents of Barnes, Mortlake and Sheen. It provides door-to-door help with weekly shopping and other local trips in a fully accessible minibus service run in partnership with Richmond and Kingston Accessible Transport.
- 3) [Hampton Enterprise](#): provides door-to-door shopping facilities for people in need living in Hampton and Hampton Hill.

Group activities: The Richmond and Kingston Accessible Transport (RaKAT) can provide accessible vehicles with or without a driver and the Accessible Transport Unit (located at Disability Action and Advice Centre (DAAC), 4 Waldegrave Road, Teddington, TW11 8HT) can advise on transport options.

Transport for London Schemes

Transport for London runs two schemes to help people with mobility problems:

- 1) [Dial-a-Ride](#): a door-to-door service run by Transport for London for people with mobility problems who are unable to use mainstream public transport. The service uses distinctive red minibuses that can accommodate wheelchairs and is for short trips that must be booked in advance (for members of the scheme only).
- 2) [Travel Mentoring Service](#): this service gives disabled Londoners advice on planning a journey. It can also help them gain the confidence to make more use of public transport by providing someone to accompany them the first few times they use a low floor bus, accessible tube route or overground train service.

Taxis:

The London Taxicard provides door-to-door transport in licensed black taxis and private hire vehicles for permanent residents of the borough who are blind or who have long term, severe mobility difficulties and difficulty using public transport. An eligible person must apply to become a scheme member, who then pays a flat fare of £2.50 plus any amount shown on the meter above £10.80.

Other provisions:

There are transport schemes in the borough that can help with getting to Social Clubs, Luncheon Clubs, Specialist Day Centres, Intensive Day Care Centres and appointments:

- 1) Social Clubs: they can sometimes provide transport to and from vulnerable adult's homes. The Richmond Consortium has a list of [Day Centres and Social Clubs](#) and other [Social Centres](#) with contact details.
- 2) Specialist Day Centres and Intensive Day Care Centres: there are six [Specialist Day Centres and Intensive Day Care Centres](#) in the borough.
- 3) Hospital and other transport needs: A GP may be able to arrange transport to and from hospital appointments.

- 4) The Richmond Consortium also has a [list of local Voluntary Care Groups](#) in the borough, many of which also provide transport for shopping trips, dental and medical appointments.

School travel

Home to school travel grants are payments by local authorities of the cost of travel for compulsory school-age pupils travelling from home to school. It is the legal responsibility of the parents/guardians to ensure that children attend school, however local education authorities have a legal duty to provide the costs of transport in certain circumstances. In most cases, pupils will be able to travel from home to school at no cost to them or their parents, due to [Transport for London's free bus and tram travel scheme](#).

Disabled Persons Freedom Pass Scheme

This scheme is available to permanent residents of the borough who meet the eligibility criteria. This pass allows for free travel on London's underground, buses, docklands light railway and trams at all times; free travel on National Rail from 9.30 am Mondays to Fridays and all day weekends and public holidays; free travel on the London Overground networks. In addition, Richmond Council has agreed to the issue of passes to some applicants with a mental health need.

Future requirements

With an increasing older population in the borough, it can be assumed that the requirements for transport by mobility impaired people will increase in the future. However, no specific requirements have been set out in Council's plans and programmes.

Costs

No costs have been identified to date.

4.5.10 Taxis

Current provision

There is considered to be sufficient existing taxi provision in this borough.

In addition, the London Taxicard scheme provides door-to-door transport in licensed black taxis and private hire vehicles for permanent residents of the borough who are blind or who have long term, severe mobility difficulties and difficulty using public transport. An eligible person must apply to become a scheme member, who then pays a flat fare of £2.50 plus any amount shown on the meter above £10.80.

Future requirements

There are plans to introduce a number of new taxi ranks around the borough before the end of the 2011/12 financial year. Other ranks maybe considered in the following years. The Council is working with the Public Carriage Office of TfL on the future provision of new ranks.

Costs

Funding for future taxi ranks will come out of LIP2 funding and where a whole town centre scheme is under way the costs could be included in the overall scheme costs. Also refer to

the LBRuT LIP2 for the detailed programme of investment of the individual actions, initiatives and measures set out above.

4.6 Heritage assets

(last updated December 2011)

Introduction

Investment in the borough's heritage assets is a cross cutting issue which affects physical, green, transport and social infrastructure. Historic Buildings, spaces and areas are key components of the local environment and represent community infrastructure.

Designated Heritage Assets (as defined in PPS5, to be superseded by the National Policy Framework in early 2012) are World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens or Conservation Areas designated as such under the relevant legislation. Heritage Assets are buildings, monuments, sites, places, areas or landscapes positively identified as having a degree of significance meriting consideration in planning decisions. Heritage assets are highly valued components of the historic environment.

Current provision

The London Borough of Richmond upon Thames has a large number of heritage assets, which include over 1600 listed buildings, 72 conservation areas, 3 scheduled ancient monuments (The Brew House, Bushy Park; Hampton Court Palace; and Kew Palace), the Royal Botanic Gardens Kew World Heritage Site and many Buildings of Townscape Merit. In addition, there are 14 open spaces on the English Heritage register of historic parks and gardens, including Richmond Park, Bushy Park, Hampton Court Park, Royal Botanic Gardens Kew (including Old Deer Park), Ham House, Marble Hill House, Strawberry Hill, Hampton Court House, Richmond Terrace Walk, Pope's Garden, York House Gardens, Terrace Gardens and Buccleugh Gardens (Richmond Hill) and Teddington Cemetery. There are many protected trees within conservation areas and with Tree Preservation Orders. In addition, many parts of the borough are designated as Archaeological Priority Areas (as identified by English Heritage).

The Council has many adopted planning policies that protect and enhance the borough's built heritage, particularly when new development is considered. This is a very important issue in this borough, which has a high quality environment with a large number of (designated) heritage assets. National guidance also provides a strong basis for these policies which cover Conservation Areas, Listed Buildings, Buildings of Townscape Merit, archaeology, a World Heritage site, war memorials, and views and vistas.

Future requirements

Current and future requirements arise from the need to preserve and enhance the fabric and significance of the borough's heritage assets, specifically the setting of the World Heritage Site, designated conservation areas, listed buildings, scheduled ancient monuments, and historic parks and gardens.

Existing planning policies will ensure that any alterations and extensions including partial demolitions are based on an accurate understanding of the significance of the asset including the structure, and respect the architectural character, historic fabric and detailing of the original building. High priority will be given to the retention of the original structures, features, materials and plan form or features that contribute to the significance of the asset. The Council can also use its legal powers to take steps to secure the repair of Listed Buildings, where appropriate.

As new development proposals are promoted, there is also a need to provide for the proper evaluation and investigation of the borough's archaeological heritage (both above and below ground).

Costs

The AMR monitors progress on the preservation and enhancement of heritage assets in the borough. This monitoring prioritises the identification of areas or buildings at risk and highlights where there is a need for further investment to preserve and enhance these assets. Whilst no specific costs have been identified, it is considered that the majority of the funding for these assets is potentially available from the Heritage Lottery, Big Lottery, smaller grants from various charities and other associated funding streams available for heritage works, all of which would be subject to successful bids. Officers are aware through listed building and planning applications and general queries of the condition of the large number of individually owned buildings which whilst may not be considered "at risk" require on-going maintenance to ensure their continued preservation. Whilst smaller grants from charities are occasionally available building owners would generally be expected to self fund restoration and repair.

5 Summary of infrastructure assessment & requirements

The table below summarises the results of the infrastructure assessment and the overall requirements for new community infrastructure facilities, as set out in Section 4 above. It also reflects the certainty and any uncertainties in future needs and demands.

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
Social and community infrastructure								
Nurseries and Early years	1 nursery school and 16 primary schools with nursery units. 6 Children's Centres. Provision by nurseries and childminders.	No standards to measure against and difficult to fully assess existing provision from a myriad of public and private sources.	Not quantified, although demand expected to remain high with high birth rate.	Unknown	Unknown	LBRuT, Private providers	Certain and reliable based on Council Strategy, but some uncertainty with provision from private and public and sectors.	4.1.1 (assessment last updated January 2012)
Primary education	40 primary phase schools.	Expansion in recent years/underway to address significant increase in applications.	Medium- to long-term possible need to consider additional provision in the East Sheen, Ham/Petersham, Hampton/Hampton Hill, Heathfield/Whitton and Richmond areas.	Council Primary School Expansion Capital Programme for short-term. Unknown for medium-long term.	Ongoing programme	LBRuT, Academies, Free Schools	Certain and reliable based on Council Strategy. Uncertain around impact of move to academies and free schools, but kept under review.	4.1.2 (assessment last updated February 2012)
Secondary education	8 secondary schools	None identified, considerable	Demand is expected to	Council Capital	Ongoing programme	LBRuT, Academies,	Certain and reliable based	4.1.3 (assessment

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
		spare capacity in secondary school provision	increase towards capacity by 2016. Undertaking feasibility for one, possibly two, additional secondary schools (including one Roman Catholic)	Programme for 2016/17 includes up to 750 secondary school places. Unknown in relation to other long-term costs.		Free Schools	on Council Strategy. Uncertain around impact of move to academies and free schools, but kept under review.	last updated February 2012)
Special education needs	Within mainstream schools and specialist support in 2 special schools	None identified	None identified	Council Capital Programme for 2016/17 includes SEN places.	Ongoing programme	LBRuT, Academies, Free Schools	Certain and reliable based on Council Strategy. Uncertain around impact of move to academies and free schools, but kept under review.	4.1.4 (assessment last updated February 2012)
Further/higher/adult education	No post-16 provision in secondary schools/academies. Further/higher/adult education opportunities at Richmond Adult	Council committed to establishing sixth forms in borough's secondary schools in 2013. College	Council committed to establishing sixth forms in borough's secondary schools in 2013. College improvement plans	Council Capital Programme for 2016/17 includes approximately 1,000 sixth form places.	Short-term	LBRuT, Academies, Free Schools, RACC, RuTC, St Mary's University College	Certain and reliable based on Council Strategy and plans of Colleges.	4.1.5 (assessment last updated February 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	Community College, Richmond upon Thames College and St Mary's University College	improvement plans for redevelopments.	for redevelopments.					
Health care (including Hospitals and GPs)	Community-based services from network including Teddington Memorial Hospital, 5 clinics and over 30 GP practices. Networks for mental health services, dentistry, optometry, pharmacies.	New clinic in Whitton opening Spring 2012. Interest in new GP facilities in Twickenham and East Sheen.	Possible requirements to respond to changes in premises and operational legislation. Potential for mental health services consolidation.	Unknown	Unknown	NHS South West London, Hounslow and Richmond Community Healthcare, South West London and St George's NHS Mental Health Trust	Certain and reliable based on NHS and MHT plans and strategies, although uncertainty around changes in healthcare commissioning.	4.1.6 (assessment last updated December 2011)
Adult social care	Housing related support, including extra care housing, residential homes and nursing homes. Services for adults with a learning disability including housing.	Need for redevelopment of existing sheltered and residential care schemes into extra care housing.	Supported living options. No other needs quantified, but may be maintenance issues with existing provision and shortage of funding. Emphasis on co-location and	Unknown	Unknown	Housing: LBRuT, Registered Providers, private and not-for-profit organisations. Services and Centres: LBRuT, NHS	Certain and reliable based on Council Strategy, but move towards commissioning will use different models of service delivery.	4.1.7 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	<p>Council day care services at 3 centres. Also many day centres, clubs and groups run by voluntary organisations.</p> <p>1 carers day centre.</p>		<p>dual use of similar facilities and activities to ensure long-term viability.</p>			<p>South West London, voluntary sector</p>	<p>Some uncertainty with provision from public and voluntary sectors.</p>	
Sport facilities	<p>24 adult football, 31 junior and 7-a-side pitches, further 30 pitches at schools; 6 pitches in parks; 2 Council owned sport grounds and leased to football clubs; 5 rugby pitches, 6 n schools, 8 in parks 23 cricket pitches; 5 in parks; Several floodlit and non-floodlit hockey pitches; 50 hard court, 8 grass tennis courts; 50 courts at schools; 70 voluntary/ commercial courts;</p>	<p>Floodlit pitches; Sport pavilions in need of upgrade; Only a small number of tennis courts are floodlit;</p>	<p>1) Installation of floodlighting for artificial grass pitches, (for football, hockey, hard surfaces, e.g. for tennis and netball; for some grass areas e.g. for football training) 2) "3G" floodlit artificial turf pitch in east of borough (Ham) 3) Upgrading of parks pavilions to serve a range of sports, e.g. football and cricket 4) Upgrading of Richmond Park golf course site,</p>	<p>Unknown</p>	<p>Unknown</p>	<p>LBRuT, Private sport providers</p>	<p>Certain and reliable; based on PPG17 Needs Assessment and on input and discussion with Council's Head of Sport and Fitness</p>	<p>4.1.8 (assessment last updated January 2012)</p>

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	3 indoor courts at St. Mary's; Sufficient provision of bowls, netball, athletics, golf and water sports facilities		including provision of a new driving range 5) Retention and upgrading of club facilities, including improving access for all ages and abilities					
Leisure facilities (sports halls and indoor)	5 dual use sports & fitness centres; all secondary school with exception of Waldegrave school have sports hall; 11 commercially operated health & fitness clubs 2 public indoor pools in Teddington and Richmond; outdoor pools in Richmond and Hampton Very few specialist centres for individual sports	Waldegrave school sports has no sports hall; Unsatisfied demand for pools – under provision of 1 indoor pool in the borough; No provision for volleyball;	1) Improved indoor sports facilities at Whitton and Hampton Sport & Fitness Centres 2) Provision of new sports hall at Waldegrave School, also catering for the needs of identified specialist sports 3) Provision of a dual use sports centre at Grey Court School 4) Need for 1 indoor pool (e.g. 25 metre school / community pool in Ham) 5) Installation of	Unknown	Unknown	LBRuT, Private sport providers	Certain and reliable; based on PPG17 Needs Assessment and on input and discussion with Council's Head of Sport and Fitness	4.1.9 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
			retractable roof on outdoor pool at Pools on the Park 6) Retention of Busen Martial Arts & Fitness Centre 7) Provision of a new specialist centre for Volleyball 8) New boxing facility at Twickenham Brunswick Centre					
Community centres	At least 8 dedicated community centres, plus other spaces and rooms available for community use, across the borough. Some are dedicated to certain users.	No standards to measure against and difficult to fully assess existing provision from a myriad of public and private sources.	Not quantified, but local needs will continue, may be maintenance issues with existing provision and shortage of funding. Emphasis on co-location and dual use of similar facilities and activities for community use to ensure long-term viability.	Unknown	Unknown	Voluntary Sector, LBRuT	Uncertain picture with provision from private, public and voluntary sectors, not co-ordinated by a single body.	4.1.10 (assessment last updated December 2011)
Youth centres	6 sites, plus a bus and outreach work	No designated facility in Whitton	Need for investment in sites	Unknown	Unknown	LBRuT	Certain and reliable based	4.1.11 (assessment

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	for areas of the borough without dedicated clubs, centres or projects. Two sites provide for disabled young people.	and Heathfield.	in Ham and Petersham, Twickenham, Hampton and Whitton and Heathfield.				on Council Strategy, but funding could be uncertain.	last updated January 2012)
Libraries	12 sites	Identified strategy for improvements to Whitton, and potential for co-location with other public services in Kew and Ham.	Plans for an integrated library in Richmond. Move to franchise to voluntary sector or community groups to manage.	£750,000 to implement the new library strategy and delivery model. Other costs unknown.	Short-term	LBRuT, voluntary sector	Certain and reliable based on Council Strategy.	4.1.12 (assessment last updated December 2011)
Affordable housing	Over 8,000 general need units owned by housing associations.	Over 5,000 households on Richmond Housing Register.	Need to maximise future delivery, predominantly for family homes.	Unknown overall cost. Council Housing Capital Programme and Affordable Housing Fund, Registered Providers resources	Ongoing programme	LBRuT, HCA, Registered Providers	Certain and reliable based on Council Strategy and partnership working with HCA and RPs.	4.1.13 (assessment last updated March 2012)
Arts and Culture e.g. museums, galleries, theatres	Number of galleries, museums, theatres, arts venues and	None identified, difficult to fully assess existing	Not quantified. Need to increase	Unknown.	Unknown	LBRuT, Arts Council, private and	Certain and reliable based on Council	4.1.14 (assessment last updated

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	cinemas across the borough, in addition to other heritage assets.	provision from a myriad of public, voluntary and private sources.	number of volunteers identified.			voluntary sector	Strategy and partnership working.	December 2011)
Emergency services								
Police	3 police stations. 10 custody cells currently operational and 4 cells for contingency purposes. 17 Safer Neighbourhood Teams.	Regional training centre and potential for new front counter in Richmond under development. Ongoing replacement of older and unsuitable buildings.	Permanent bases for some safer neighbourhood teams, improve provision of custody cells, develop single Patrol Base facility, enhance front counter facilities, and back-office accommodation.	Unknown	Unknown	Metropolitan Police	Certain and reliable based on Estate Strategy, but responsibilities now under Mayor.	4.2.1 (assessment last updated January 2012)
Ambulance	70 ambulance stations across London; this borough falls into the “west” operational area 2 stations in the borough at Richmond and Twickenham;	None identified	Opportunities for co-location with Primary Care Trust, but this would need to take into account locational needs of Ambulance; it is assumed that Ambulance has no development requirements in the borough Services	No costs identified	N/A	N/A	Certain and reliable, based on London Ambulance Service Strategic Plan	4.2.2 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
Fire service	2 fire stations in the borough: Twickenham and Richmond; Fire service plans and locates its fire stations and engines to ensure London-wide cover/not focussed on borough level	None identified; note that service standards are linked to response times, not to development and housing numbers	No requirement for new infrastructure in the borough, but 2 fire stations (Richmond and Twickenham) are in need of refurbishment	Unknown, but the LFEPA is likely to have insufficient funding for this in their Capital Programme	Unknown	London Fire Brigade; London Fire and Emergency Planning Authority	Certain and reliable, based on London Fire Brigade publications and Asset Management Plan 2011, and LFEPA response to consultation	4.2.3 (assessment last updated April 2012)
Green infrastructure								
Parks, open spaces, trees and woodlands	Over 2,000 ha of open space; 517 ha (146 sites) are Council owned and managed Over 16,000 trees managed by the Council	None; the borough has 13 ha per 1000 compared to the Sport England's recommended 2.48 ha (6 acres) per 1000.	Very few areas of the borough are outside the 400 m catchment for local parks; Need for protection, enhancement and management of existing parks, open spaces and trees	Unknown, but significant costs for maintenance and upgrade of existing facilities	N/A	LBRuT, Royal Parks, English Heritage, National Trust, Crown Estates, RHP, Church Commissioners	Certain and reliable information has been used; it is based on the PPG17 Needs Assessment and recent update of Public Open Space deficiency map	4.3.1 (assessment last updated December 2011)
Allotments	24 allotment sites (27 ha), 9 of which are statutory; 21 are on Council	There is high demand for allotments; long waiting lists;	Difficult to measure demand for allotments; new approach to	Unknown; costs for maintenance and	N/A	LBRuT, Crown Estates	Reliable data, based on Allotment Strategy	4.3.2 (assessment last updated December

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	owned land, remaining 3 are on Crown land	existing unmet demand with specific shortfall in Kew and Whitton	manage waiting list system with aim to better assess demand over next 5 years; Allotment Strategy focuses on management of existing sites before considering expansion onto new sites	management of existing facilities				2011)
Cemeteries and crematoria	6 active, Council owned cemeteries; And 2 managed by Hammersmith & Fulham and 1 by Hounslow; 2 crematoria just outside borough	None; sufficient burial space for 50 years; spare capacity in crematoria facilities	None identified	None	N/A	N/A	Certain and reliable; based on Council information and GLA Audit of Burial Provision	4.3.3 (assessment last updated December 2011)
Play facilities	45 children's play areas: 42 Council and 3 Royal Parks Agency owned	Good provision following substantial recent investments; Only few small pockets in borough over	Rising child population; more emphasis on play will lead to increase in demand; Need for safe play sites with minimal	Unknown, but significant costs relating to maintenance and upgrade of existing facilities; costs for meeting	Unknown	LBRuT, developers, park owners	Assessment based on certain and reliable information (Play Strategy)	4.3.4 (assessment last updated February 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
		400m away from facility; More provision needed for older age range, e.g. more adventurous equipment and more natural play space areas	formal supervision from 0 to 8; need for provision for older age range; Identify opportunities for dual use of school playing facilities; use of parks and open spaces as “door step” play areas	the needs of new developments				
Rivers	34 km River Thames with 27 km towpath; River Crane, Beverley Brook and Duke of Northumberland River Borough's rivers have ecological status	None identified	Scope for improving the network along the River Crane Corridor; Improvements to access to, along and across the rivers, in particular the possibility of a foot-/cycle bridge between Ham and Twickenham and between Kew and Syon Park	Unknown; likely to be maintenance and management costs; some costs towards improvements but no details about projects	Unknown	Environment Agency, Port of London Authority, LBRuT	Based on readily available information; certain	4.3.5 (assessment last updated December 2011)
Utilities and physical infrastructure								

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
Electricity	National Grid high voltage electricity overhead transmission lines / underground cables	None identified	None identified	N/A	N/A	National Grid	Assumption that existing networks can deal with any future demands resulting from new development	4.4.1 (assessment last updated December 2011)
Gas	No gas transmission assets in the borough; Southern Gas Networks owns and operates the local gas distribution network	None identified	None identified	N/A	N/A	National Grid, Southern Gas Networks	Assumption that existing networks can deal with any future demands resulting from new development	4.4.2 (assessment last updated December 2011)
Low and zero carbon energy infrastructure	No larger low and zero carbon energy infrastructure in the borough; but small-scale renewable and low-carbon technologies within existing and proposed developments	No current plans to develop decentralised energy or large scale renewable energy systems in the borough; Heat Map and Energy Masterplan is being produced by GLA/Arup for LBRuT, which	Renewable and low carbon energy will make an increasing contribution to energy supply in the future; adopted policies encourage these technologies; major developments and proposals on large	Unknown; difficult to estimate costs for the provision of new facilities; but significant costs and capital works can be associated with low-/zero carbon	Unknown	LBRuT, Energy Providers, Developers	Based on Council's Climate Change Strategy and adopted LDF policies	4.4.3 (assessment last updated December 2011)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
		may identify opportunities	sites will have to prioritise low/zero carbon energy supply	infrastructure				
Water resources and supply	Thames Water supply; borough average consumption is 167 l/p/p/d; Thames Water Hampton Water Treatment Works in this borough	London has growing water deficit; water shortages; increased risk of drought shortages	Water supply demand deficit is predicted for the next years and beyond; increased use of restrictions; Thames Water priorities: leakage reduction, Victorian mains replacement, active leakage control; aquifer storage, recharge and recovery schemes in London	Unknown; but the costs for providing new, upgrading existing infrastructure and recurrent costs of ongoing maintenance services can be significant	Unknown	Thames Water	Based on Thames Water's Water Resource Management Plan and Five-Year Asset Management Plans (AMP5) Complexities of sewerage networks makes it difficult to determine the infrastructure needs at this stage	4.4.4 (assessment last updated April 2012)
Surface and foul water infrastructure and waste water treatment	Borough is served by Modgen sewage treatment works;	Thames Water is carrying out upgrade works at Mogden to extend sewage treatment capacity by 50% by March 2013	Mogden scheme to provide sufficient treatment to ensure it can cope with London's growing population up to 2021.	Thames Tunnel project: £4.1 billion; Modgen upgrade costs:	Unknown	Thames Water, LBRuT (for some drainage aspects)	Based on Thames Water's Five-Year Asset Management Plans (AMP5) Complexities of	4.4.5 (assessment last updated April 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
			Maybe need for network upgrades in order to service major new development within the borough.	unknown In general costs for providing new, upgrading existing infrastructure and recurrent costs of ongoing maintenance services can be significant.			sewerage networks makes it difficult to determine the infrastructure needs at this stage	
Flood risk and flood defence infrastructure	Flood risk: River Thames, Beverley Brook, River Crane, Duke of Northumberland's River Flood defence infrastructure: Thames Barrier; flood defences along the tidal River Thames and River Crane, flapped outfalls, culverts, combined sewer	None identified	Flood risk management measures; Improve and create new defences for the tidal area of River Thames, and for Barnes and Kew the existing flood defences will need to be raised. Less use of Thames Barrier for fluvial flood risk; alternative arrangements are	Lower Thames Strategy: £116m funding gap Other costs are unknown, but some are likely to be significant, e.g. future flood defences and flood alleviation schemes	Specific details are unknown, but expected to be Medium to long term	Environment Agency, Other Lead Local Flood Authorities, LBRuT	Based on Council and Environment Agency flood risk publications and strategies. Actions within Surface Water Management Plan have not been costed yet. Council is likely to have to fund	4.4.6 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	overflows; flood forecasting and warning		needed for fluvial parts of the borough – rely upon floodplain management				local flood defence and other flood alleviation infrastructure in the future due to new role as designated lead local flood authorities	
Waste management and disposal	Several small waste facilities and two main sites in the borough: Townmead Road, Kew; and Twickenham Depot; West London Waste Authority (WLWA) is the statutory Waste Disposal Authority	WLWA in danger of not meeting its landfill diversion requirement; deficit in Landfill Allowance Trading Scheme	No new sites for waste facilities are proposed in this borough up to 2026, but LBRuT will need to contribute to creating new waste facilities elsewhere; Twickenham Depot – potential for reconfiguration;	Unknown; significant costs for management and disposal of waste; financial contribution towards provision of new waste facilities outside of the borough; significant costs for waste collection and disposal processes	Unknown	WLWA, GLA, LBRuT	Based on draft West London Waste Plan (2011) and Joint Municipal Waste Management Strategy (2009), but uncertainties with WLWP	4.4.7 (assessment last updated February 2012)
Telecommunications	British Telecom	Recently started	British Telecom is	None	N/A	Telecom	It is assumed	4.4.8

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	<p>infrastructure;</p> <p>Mobile Operators Association (MOA) (representing five major UK mobile network operators); good broadband provision in borough</p>	<p>upgrade programme of the “green boxes” in the borough to improve broadband services</p>	<p>required to provide adequate future infrastructure for the long-term;</p> <p>More base stations are planned as part of a programme to enhance the infrastructure for the existing mobile generation (2G) and create a new network for 3G;</p> <p>British Telecom plans to roll out fibre-based, super-fast broadband to as many as 10 million homes by 2012</p>	<p>identified</p>		<p>operators; Mobile Operators Association (representing 3, O2, Everything, Everywhere (formerly Orange and T-Mobile) and Vodafone</p>	<p>that any future demands resulting from new development will not put pressure on existing / planned new networks</p>	<p>(assessment last updated April 2012)</p>
Transport infrastructure								
Roads and highways	<p>393 km of public highway, including 13 km of the Transport for London Road Network</p>	<p>Council’s “Highways Works Prioritisation”</p>	<p>Council’s LIP2 sets out future needs: manage existing network, improve traffic flows and street scene,</p>	<p>LIP allocation (2011/12 to 2013/14): £2684k for road</p>	<p>Short-term (LBRuT LIP2 for 2011/12 to 2013/14)</p>	<p>LBRuT, TfL</p>	<p>Certain and reliable; based on Council’s LIP2 (2011-14)</p>	<p>4.5.1 (assessment last updated January 2012)</p>

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
			maintain roads and footpaths, manage speed, reduce impact of new development, consider heavy lorry traffic;	maintenance, £2980k for bridge maintenance, £975k for road safety, £927k for congestion reduction, £1260k for environment and public realm				
Overground and underground railways	Good rail network; 14 stations	New signalling on the District Line will allow to increase lines capacity; Safety and security issues at some station – Station Access Programme; Installation of secure cycle parking and cycle hire scheme at Richmond	Council's LIP2 sets out future needs: rail station interchange improvements to improve public transport; improve disabled access at interchanges, particularly in Uplift areas; ongoing programme to delivery accessibility improvements; replace Twickenham railway station	LIP allocation (2011/12 to 2013/14): £160k for rail station interchange improvements	Short-term (LBRuT LIP2 for 2011/12 to 2013/14)	LBRuT, TfL, Network Rail, South West Trains	Certain and reliable; based on Council's LIP2 (2011-14)	4.5.2 (assessment last updated January 2012)
Buses	Extensive coverage	New generation	Council's LIP2 sets	LIP allocation	Short-term	LBRuT, TfL	Certain and	4.5.3

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	in the borough; 30 bus services; major interchanges at Richmond, Twickenham and Teddington; Bus garage at Fulwell	of Countdown service signs to be installed in borough	out future needs: improve bus reliability by working with partners; ongoing programme to delivery accessible bus stops; review of bus routes and operation and performance of bus lanes	(2011/12 to 2013/14): £340k for public transport (bus stop accessibility, bus lane review, bus boarders etc)	(LBRuT LIP2 for 2011/12 to 2013/14)		reliable; based on Council's LIP2 (2011-14)	(assessment last updated January 2012)
Cycle facilities	Extensive cycle network linking district centres, railway stations and green spaces; National Cycle Network Route 4 (Thames Cycle Route)	Formalise cycling on section of Thames Towpath; South London Orbital Greenway; promote and improve facilities for cycling as a utility and leisure form of transport	Council's LIP2 sets out future needs: improve transport links, accessibility and permeability of public spaces; high street environmental improvements and links to borough's cycling network; secure cycle parking at railway stations; cycle training at schools; support cycle hire schemes; reduce impact of new developments;	LIP allocation (2011/12 to 2013/14): £945k for cycle parking, network improvements, signage, training etc.	Short-term (LBRuT LIP2 for 2011/12 to 2013/14)	LBRuT, TfL	Certain and reliable; based on Council's LIP2 (2011-14)	4.5.4 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
			new cycling signage; Thames Towpath upgrade; finalise draft Cycle Strategy					
Pedestrian facilities, including towpath	Good basic walking infrastructure within the borough; long distance recreational walking routes: London Outer Orbital Path, the Capital Ring and the Thames Path; 27km towpath along River Thames; London's Arcadia project	Condition of footways, signing and street furniture could be improved	Council's LIP2 sets out future needs: high street environmental improvements; good state of repair and maintenance of footpaths, new and well maintained street lighting; improve walking and cycling links to local and main shopping centres, including better signing; Thames Towpath upgrade; promoting road safety in schools;	LIP allocation (2011/12 to 2013/14): £697k for pedestrian improvements (e.g. crossings, rights of way plan, links, training etc)	Short-term (LBRuT LIP2 for 2011/12 to 2013/14)	LBRuT	Certain and reliable; based on Council's LIP2 (2011-14)	4.5.5 (assessment last updated January 2012)
River transport (along and across the Thames)	2 ferry services: Hammertons Ferry from north side of Thames to Ham House; Hampton ferry from Hampton	Thames is barrier for transport movements; need for foot-/cycle bridge	Council's LIP2 sets out future needs: need for modern river services; continue to protect wharfs; foot-/cycle	Unknown / none identified; no LIP allocation for river transport;	Unknown	LBRuT, TfL, Private providers	Certain and reliable; based on Council's LIP2 (2011-14)	4.5.6 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	to Hurst Park; Turk Launches boat trips between Richmond and Hampton Court; Westminster Passenger Services from Westminster to Kew, Richmond and Hampton Court; Parr's Circular Cruises (from Richmond Pier to Teddington Lock);	from Twickenham / north side of Thames to Ham / south side of borough	bridges between Twickenham and Ham, as well as Kew over Thames to Syon Park	assumed to be delivered by private providers				
Car parking	Council manages 27 off-street car parks; these provide 2681 spaces in total and 40 disabled bays; Overall number of car parking spaces in borough, including on-street and private, is unknown	Pressure on parking as many older properties don't have sufficient off street parking; not much capacity for further on-street parking	Council's LIP2 sets out future needs: discourage commuter parking – priority to residents needs; manage parking controls;	Costs for managing parking controls and human parking enforcement are unknown	Short-term (LBRuT LIP2 for 2011/12 to 2013/14)	LBRuT	Certain and reliable; based on Council's LIP (2007-10) and LIP2 (2011-14)	4.5.7 (assessment last updated January 2012)
Travel choice	Sustainable modes of transport are available in the	Accessibility	Need to provide sustainable modes of transport:	LIP allocation (2011/12 to 2013/14):	Short-term (LBRuT	LBRuT, TfL		4.5.8 (assessment last updated

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
	borough, including car clubs		electric vehicle charging points, car clubs, enhancing accessibility by supporting choice in transport	£350k for supporting sustainable modes of transport (incl. Council / school travel plan, on-street car clubs etc)	LIP2 for 2011/12 to 2013/14)			January 2012)
Community Transport	Super Shopper Bus Scheme, FiSH, Hampton Enterprise, Richmond and Kingston Accessible Transport – help with shopping and other local trips, accessible vehicles; TfL Dial-a-Ride and Travel Mentoring Service scheme; TfL free bus and tram travel scheme	None identified	None identified	Unknown where funding for community transport derives from	N/A	LBRuT, TfL, Voluntary / community groups	Based on readily available information from the Richmond Accessible Transport Unit	4.5.9 (assessment last updated January 2012)
Taxis	Sufficient existing taxi provision	None identified	Plans to introduce a number of new taxi ranks around the borough; Council is working with the Public Carriage Office of	Unknown	Unknown	LBRuT, TfL, Taxi companies	Certain and reliable; based on Council's LIP2 (2011-14)	4.5.10 (assessment last updated January 2012)

INFRASTRUCTURE TYPES	Existing provision	Current shortfall	Future need	Costs / funding (where known)	Phasing (where known)	Delivery Partners	Certainty / reliability of information	Section in Detailed Assessment
			TfL on the future provision of new ranks					
Heritage assets and civic spaces								
Historic buildings, spaces and areas	Over 1600 listed buildings, 72 conservation areas, 3 scheduled ancient monuments (The Brew House, Bushy Park; Hampton Court Palace; and Kew Palace), the Royal Botanic Gardens Kew World Heritage Site, many Buildings of Townscape Merit; 14 open spaces on the English Heritage register of historic parks and gardens	None identified	Need to preserve and enhance the fabric and significance of the borough's heritage assets; Council monitors progress on preservation and enhancement of heritage assets; Council has policies and legal powers in respect to Listed Buildings	Unknown	N/A	LBRuT, English Heritage, Developers	Based on readily available information from the Council	4.6.1 (assessment last updated December 2011)

Table 34: Summary of LBRuT infrastructure requirements (assessed as of April 2012)

6 Council Capital funding and funding gap

6.1 Council Capital funding and funding sources

The main potential public funding sources for infrastructure include:

- Council's Capital Programme⁶²** – updated every year in line with the revenue strategy and the impact of the local government finance settlement on the resources available, and informed by the Asset Management Plan. The Council has two Private Finance Initiative (PFI) schemes, which are for Older Peoples Homes and Primary Schools. On 8th November 2010, the Council's Cabinet agreed to a change of direction for the Council, a new way of working that will see the Council take on an increased commissioning role, building community capacity and working closely with partners to deliver services that truly meet local needs. For 2011/12, the reduced Government settlement and funding cuts reflected the unprecedented economic circumstances across the county. The 2011/12 capital investment programme reflected the Council's priorities by expansion and refurbishment of borough schools and addressing the backlog of maintenance identified to keep Council premises fit for purpose, and towards affordable housing, for an overall total of £65.849m, and over £162m during the 5 year period. Capital grants are key to the programme reflecting Central Government investment in Education projects. However, there is still considerable uncertainty over the actual level of grant funding that will be received. The funding gap for the programme is increasingly taken up by borrowing as time goes on.
- Homes & Communities Agency (HCA)⁶³** – provide funding to assist with delivery of affordable housing, although funding levels have been reduced in recent years and for the current 2011-15 Affordable Homes Programme.
- Outer London Fund⁶⁴** – the Mayor of London's three-year initiative dedicated to strengthening the vibrancy and growth of high streets and their environs, particularly set up to support boroughs which will see the least impact from the Olympics and Crossrail, but are still paying for them through business rates or Council Tax levies. The Council secured £1.2 million of funding, which consists of £496,700 for Twickenham; £361,200 for Whitton; and £376,595 for Barnes.
- New Homes Bonus⁶⁵** – introduced by Government in 2011, match funds the additional council tax raised for new homes, with an additional amount for affordable homes, for the following six years. The Council received an allocation for 2011/12 of £642,532 which was used for the affordable housing programme.

This IDP is written in a time of diminishing public funding in the context of continued economic uncertainty. Various strategies and plans have each identified their own funding sources or potential gaps, and while other public bodies should have their own Government funding streams they may also be suffering cutbacks and uncertainty.

There could be other funding sources available in the future such as: Business Improvement Districts (BIDs)⁶⁶ – a flexible funding mechanism to improve and manage a clearly defined

⁶² http://www.richmond.gov.uk/treasury_management

⁶³ <http://www.homesandcommunities.co.uk/ourwork/our-funding>

⁶⁴ <http://www.london.gov.uk/priorities/business-economy/investing-future/outer-london-town-centres>

⁶⁵ <http://www.communities.gov.uk/housing/housingsupply/newhomesbonus/>

⁶⁶ The Council has just carried out a feasibility study into launching a Business Improvement District (BID) for Twickenham.

commercial area, based on the principle of an additional levy on all defined ratepayers following a majority vote; or Tax Increment Financing (TIF) – allows local authorities to borrow against predicted growth in their locally raised business rates, which can be used to fund key infrastructure and other capital projects.

6.2 The funding gap

In light of the above assessment to date, it is considered that there will be a significant infrastructure funding gap, not least because a number of areas require ongoing maintenance and all funding sources are under pressure in the current economic climate. The funding gap is likely to run into millions of pounds, but is not confirmed at this stage (as of April 2012).

The separate Infrastructure Delivery Schedule will include confirmation of costs, phasing, delivery partners, funding sources etc for certain infrastructure types and projects, including their location, where a demand/need for future provision has been identified. This document will be published in the summer 2012.

The costs and funding sources (where included) in this report are also likely to change during the plan period (next 15 years), depending on the exact timeframes in which individual elements are delivered.

Any costs that are identified in this report or in the subsequent Infrastructure Delivery Schedule are based on the best available information at the time of publication, and may be subject to change at a later stage.

7 Partnership working

Partnership working is vital to delivering infrastructure, and as outlined in the infrastructure assessments in Section 4, there are a variety of organisations and bodies, including the Council, that are responsible for delivery. The use and alignment of funding and public assets will need to be considered as part of taking forward infrastructure delivery, and should be a means of drawing together capital investment from the wider public sector within the borough.

Some of the key public bodies that the Council already works with are the Greater London Authority (GLA), Transport for London (TfL), the Homes & Communities Agency (GLA), and NHS Richmond and the West London Mental Health NHS Trust. Some of the key strategic partnerships which already exist are:

- **Richmond upon Thames Partnership (RP)**⁶⁷ – together the public, private and voluntary and community sectors to improve the quality of life for all those who live work or visit the borough. The RP operates at a level which enables strategic decisions to be taken and allows action to be determined at a local level. The RP is responsible for the Richmond upon Thames Community Plan 2007 - 2017, which was partly developed by the RP partners and sets out the shared vision for the borough from now until 2017. The RP has four thematic partnerships on Community Safety Partnership, Children and Young People's Trust Board, Cultural Partnership, and Health and Wellbeing Board.
- **South London Partnership**⁶⁸ – comprises six south London councils namely, Croydon, Kingston, Merton, Richmond, Sutton and Wandsworth. Main priorities over

⁶⁷ http://www.richmond.gov.uk/richmond_upon_thames_partnership

⁶⁸ <http://www.southlondonpartnership.co.uk/home.aspx>

the coming years are to create a robust south London economy and a greener and more sustainable future.

- **London Local Enterprise Partnership⁶⁹** – covering the whole of the capital, the new London Enterprise Partnership (LEP) will identify opportunities for business and economic growth, innovation, training and job creation. It will also make the case to central Government to ensure London receives its fair share of funds to support economic development. It will meet for the first time in February 2012.

8 Planning obligations and CIL

From 6 April 2014 CIL will be the only mechanism for collecting funds to support new infrastructure where these funds are pooled, e.g. for education, transport, public realm/open space. As set out in the past three years LBRuT's Annual Monitoring Reports⁷⁰ (2007/08, 2008/09, 2009/10), Richmond Council agreed monetary Section 106 amounting to £4,996,150 in total. Of the total amount, £981,259 was for educational contributions, £2,061,800 for transport and £453,681 for public realm/open space. The 2010/11 AMR reports for the first year on monies received rather than monies expected.

Type of Obligation	Number	Money received
Education	11	£545,630.74
Transport	14	£377,723.67
Public Realm	7	£373,938.96
Health	5	£8,243.93
Affordable housing	1	£5,000.00
Monitoring		£10,818.80
TOTAL		£1,321,356.10

Table 35: Monies received from planning obligations in financial year 2010/11; Source: LBRUT S.106 Officer/ Finance, reported in 2010/11 AMR

Although some of these contributions are site specific, many of them are pooled to cover areas in the vicinity of several developments. Without an adopted CIL charging schedule, from April 2014 this would not be possible.

Note that as of April 2014, Section 106 agreements will only be able to be applied to affordable housing, some "in kind" infrastructure (e.g. transfer of land or buildings) and financial contributions in exceptional cases where there are still site-specific development mitigation requirements necessary to make a particular development acceptable in planning terms.

9 Infrastructure Delivery

It is therefore considered that taking forward a CIL Charging Schedule, based on the future needs identified in the Infrastructure Delivery Plan, is the way forward in the challenging financial climate to address future infrastructure needs.

An Infrastructure Delivery Schedule will be developed following the publication of this IDP. This will include confirmation of costs, phasing, delivery partners, funding sources etc for

⁶⁹ <http://www.london.gov.uk/publication/london-enterprise-partnership-proposal>

⁷⁰ LBRuT, Annual Monitoring Report, 2010/11; http://www.richmond.gov.uk/ldf_udp_annual_monitoring_report.htm

certain infrastructure types and projects, including their location, where a demand/need for future provision has been identified. This document will be published in the summer 2012.

The level of CIL will need to be informed by a viability assessment and confirmation of the aggregate funding gap and infrastructure needs, to take forward the preparation of a CIL Charging Schedule, for which public consultation on the preliminary draft is anticipated to be towards the end of 2012⁷¹. Only following the required consultation and independent examination can a CIL be adopted, and then the spending of CIL will require its own methodology and governance to consider the priorities for how funding is spent in due course.

10 Monitoring and review

As set out in the introductory section of this report, the IDP provides a snap-shot in time and best available information has been used at the time of its production. It has been developed building heavily upon existing strategies, plans and programmes. In the context of changing circumstances in relation to funding and uncertainty about services and their delivery as well as due to updates to existing and new strategies and programmes for the delivery of services, the needs, demands and requirements for infrastructure can change significantly within a short period of time.

Thus, this is a living document and it is therefore recommended that the Richmond IDP is monitored and reviewed on a regular basis to take account of significant changes that may alter the infrastructure assessment.

The following key questions should be addressed as part of the IDP review process. If the answer to any of the questions is yes, then a review of the IDP in light of the identified changes should be carried out.

1. Have there been any changes to strategies, plans, programmes and other documents on which the assessment of the infrastructure is based upon? If so, it should be considered whether this change/update is significant enough to trigger a review of the IDP; updated information could also be captured as an addendum to the IDP.
2. Have there been any amendments to the regulatory framework and legislation, which could have a significant impact on the assessment and outcomes of the IDP?
3. Is the definition of “infrastructure” still applicable for this borough? Should the IDP exclude or include new types of infrastructure and services?
4. Have there been any significant changes in the delivery of services both within the Council as well as externally? Are services now being delivered by another public/private organisation or partnership? Do any of these changes alter the infrastructure assessment contained within the IDP in such a way, that a review of the IDP may become necessary?
5. Have infrastructure projects, where a need in relation to this service has been identified in the IDP, been implemented, and would this thus alter the assessment of that relevant infrastructure type/sector?
6. Has new information been published in relation to development and growth which would change the assessment for infrastructure needs and demands in the borough?

⁷¹ For further information on LBRuT's CIL and anticipated timescales see: http://www.richmond.gov.uk/community_infrastructure_levy.htm

7. Has new population or demographics data or the interpretation thereof been published? If so, does this significantly alter the assessment of future needs and demands for infrastructure in the borough?
8. Have any significant funding sources been made available since the IDP has been published, or have previously known funding sources become unavailable as a result of unexpected circumstances? If so, does this significantly alter the assessment contained within the IDP?
9. Does the IDP provide a basis for assisting the Council in determining on which infrastructure types and projects money, particularly Section 106 and CIL monies, should be spent on?

The Council will continue to monitor the spending of Section 106 monies; in the future this analysis will also include collected CIL payments and where the CIL monies have been spent on. This information will be published in the Authorities Monitoring Reports, which are currently produced on an annual basis.

11 References and bibliography

- Age UK Richmond Upon Thames, Annual Review 2010-11, Improving later life
<http://www.ageuk.org.uk/BrandPartnerGlobal/richmonduponthamesVPP/Documents/Annual-Review-2011.pdf>
- Audit of London Burial Provision; A report for the Greater London Authority by Julie Rugg and Nicholas Pleace, Cemetery Research Group, University of York; March 2011;
<http://www.london.gov.uk/publication/audit-london-burial-provision>
- Community Infrastructure Levy (Amendment) Regulations, 2011;
<http://www.legislation.gov.uk/ukdsi/2011/9780111506301/note>
- Community Infrastructure Levy – Detailed proposals and draft regulations for reform, Department for Communities and Local Government, October 2011;
<http://www.communities.gov.uk/documents/planningandbuilding/pdf/1997385.pdf>
- Community Infrastructure Levy Guidance: Charge setting and charging schedule procedures, Department for Communities and Local Government, March 2010;
<http://www.communities.gov.uk/documents/planningandbuilding/pdf/1518612.pdf>
- Community Infrastructure Levy Regulations, 2010;
<http://www.legislation.gov.uk/ukdsi/2010/9780111492390/contents>
- Environment Agency, Lower Thames Flood Risk Management Strategy;
<http://www.environment-agency.gov.uk/homeandleisure/floods/123097.aspx>
- GLA Demographic Projections; Strategic Housing Land Availability Assessment, Round Demographic Projections, GLA, 2010; <http://data.london.gov.uk/datastore/package/gla-demographic-projections>
- GLA Population Projections 2010 Round, SHLAA,
<http://data.london.gov.uk/datastore/package/popproj-2010rnd-shlaa-borough-sya>
- Joint Municipal Waste Management Strategy (JMWMS), Update, May 2009;
<http://wlwa.coopa.net/wp-content/uploads/West-London-Waste-Strategy-update-2009.pdf>
- Joint Strategic Needs Assessment 2010-11; <http://www.richmond.gov.uk/jsna.htm>
- Joint West London draft Waste Development Plan Document (WLWP), 2011;
<http://www.wlwp.net/>
- LBRuT Allotment Strategy 2010 - 2015 – “A Growing Community”, adopted January 2010;
http://www.richmond.gov.uk/allotment_strategy_2010-2015.pdf
- LBRuT, Annual Monitoring Report, 2010/11;
http://www.richmond.gov.uk/ldf_udp_annual_monitoring_report.htm
- LBRuT Connecting Communities Library strategy 2011-2014;
http://www.richmond.gov.uk/2125_library_strategyweb.pdf
- LBRuT, Council Owned Tree Management Policies, adopted in January 2008;
http://www.richmond.gov.uk/tree_strategy_for_pruning_and_planting.pdf

LBRuT, GLA; Preliminary Flood Risk Assessment, May 2011;
http://www.richmond.gov.uk/preliminary_flood_risk_assessment.htm

LBRuT Learning Disability Commissioning Strategy 2010-2013;
http://www.richmond.gov.uk/ld_strategy_-_final_version_-_jan10_3_.pdf

LBRuT Local Development Framework Core Strategy, April 2009;
http://www.richmond.gov.uk/local_development_framework_core_strategy.htm

LBRuT Local Development Framework Development Management Plan, November 2011;
http://www.richmond.gov.uk/development_management_dpd.htm

LBRuT Local Development Framework Twickenham Area Action Plan (Pre-publication version); http://www.richmond.gov.uk/twickenham_area_action_plan.htm

LBRuT Local Implementation Plan for Transport (2007-2010);
http://www.richmond.gov.uk/2007-2010_local_implementation_plan_for_transport.htm

LBRuT Older People's Supported Accommodation Review, March 2008;
http://www.richmond.gov.uk/older_peoples_supported_accommodation_review_1.pdf

LBRuT Open Space, Sport and Recreation Needs Assessment, updated in March 2008,
http://www.richmond.gov.uk/needs_assessmentfinalupdatemar08.pdf

LBRuT Planning Obligations Strategy;
http://www.richmond.gov.uk/section_106_planning_obligations.

LBRuT Play Strategy 2007-2011;
<http://cabnet.richmond.gov.uk/documents/s13673/Appendix%202.pdf>

LBRuT Play Strategy, 2011-2014; http://www.richmond.gov.uk/2384_play_strategy_2011.pdf;

LBRuT Second Local Implementation Plan for Transport (2011-2014);
http://www.richmond.gov.uk/second_local_implementation_plan.pdf

LBRuT, Strategic Flood Risk Assessment, August 2010;
http://www.richmond.gov.uk/flood_risk_assessment.htm

LBRuT, Surface Water Management Plan, September 2011; not yet available online

London Ambulance Service NHS Trust, Strategic Plan, 2006/07- 2012/13;
http://www.londonambulance.nhs.uk/talking_with_us/freedom_of_information/classes_of_information/what_are_our_priorities_and_ho.aspx

London Fire Brigade, Asset Management Plan 2011 – Delivering property improvement & management; [http://www.london-fire.gov.uk/Documents/FEP1831_\(Appendix\).pdf](http://www.london-fire.gov.uk/Documents/FEP1831_(Appendix).pdf)

London Fire Brigade, How We Are Making Your Borough Safer, London Borough of Richmond, 2009/2012; <http://www.london-fire.gov.uk/Documents/Richmond0912.pdf>

Major Incident Procedure Manual, London Emergency Services Liaison Panel, Seventh Edition, 2007; http://www.leslp.gov.uk/docs/Major_incident_procedure_manual_7th_ed.pdf

Metropolitan Policy Authority Estate Strategy 2010-2014; <http://www.mpa.gov.uk/work/estate/>

Metropolitan Police Estate, Asset Management Plan, Richmond upon Thames, November 2007

National Planning Policy Framework, Department for Communities and Local Government, March 2012; <http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf>

Network Rail, London & South East Route Utilisation Strategy, July 2011; <http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/rus%20generation%202/london%20and%20south%20east/london%20and%20south%20east%20route%20utilisation%20strategy.pdf>

Office of National Statistics (ONS), 2010, Mid Year Estimates; <http://www.ons.gov.uk/ons/publications/all-releases.html?definition=tcn:77-22371>

South West London & St Georges NHS Mental Health Trust Annual Trust Plan, 22 January 2010; http://www.swlstg-tr.nhs.uk/publications/annual_trust_plan/

Thames Water Utilities Ltd, Draft Final Water Resources Management Plan; December 2011; <http://www.thameswater.co.uk/cps/rde/xchg/corp/hs.xsl/5392.htm>

Thames Water Utilities Ltd, Thames Water Business Plan – Our Plans for Water 2010-2015; <http://www.thameswater.co.uk/cps/rde/xchg/corp/hs.xsl/10051.htm>

The Localism Act 2011; <http://www.legislation.gov.uk/ukpga/2011/20/contents/enacted/data.htm>

The London Plan Implementation Plan 1, published for public consultation, Greater London Authority, January 2012; <http://www.london.gov.uk/consultation/london-plan-implementation-plan>

The Planning Act 2008; <http://www.legislation.gov.uk/ukpga/2008/29/contents>

The Thames Estuary 2100 Plan, Environment Agency; <http://www.environment-agency.gov.uk/research/library/consultations/106100.aspx>

UKCIP, 2009: <http://ukclimateprojections.defra.gov.uk/>