London Borough of Richmond upon Thames

Local Plan

Draft REVISED Sustainability Appraisal Scoping Report for the Local Plan

July 2020

Non-Technical Summary

1. Introduction

This document forms the Scoping Report for a Sustainability Appraisal (SA), incorporating the requirements for a Strategic Environmental Assessment (SEA), of the London Borough of Richmond upon Thames Local Plan.

The primary purpose of the Sustainability Appraisal (SA) is to promote sustainable development through the better integration of sustainability considerations in the process of preparing and adopting plans. SA is an iterative process allowing us to identify and report on the likely significant effects of the plan, and the extent to which the implementation of the plan will achieve the social, environmental and economic objectives by which sustainable development can be defined.

This is a draft Revised Scoping Report, based on the version produced in May 2016 for the adopted Local Plan (2018). Changes were made to the draft document following consultation in Spring 2020 with the three statutory consultees with environmental responsibilities in England, along with other relevant stakeholders with a sustainability remit or a local interest.

1.1 The Purpose of the SA/SEA

The purpose of the SA (incorporating SEA) is to ensure that environmental, social and economic considerations have been integrated into the preparation of the Local Plan. The SA will:

- Ensure compliance with the SEA Directive, SEA Regulations and guidance on SEA/SA;
- Review the Local Plan's relationship with other plans operating at a national, regional and more local level with regard to their policies and programmes;
- Establish the baseline environmental, social and economic characteristics of the area;
- Identify any current environmental constraints, issues and problems;
- Help develop viable options and alternatives; and
- Review the sustainability impacts of the options, and of any preferred SPD option.

1.2 The Local Plan

In Richmond upon Thames, Local Plans are managed through a portfolio of documents, which are individually known as Local Development Documents. These Local Development Documents or 'Plans' are either statutory (Development Plan Documents) or non-statutory (Supplementary Planning Documents). Development Plan Documents (DPDs) carry more weight as they are subject to an independent examination by a Planning Inspector before they are adopted. Supplementary Planning Documents are not subject to such an examination.

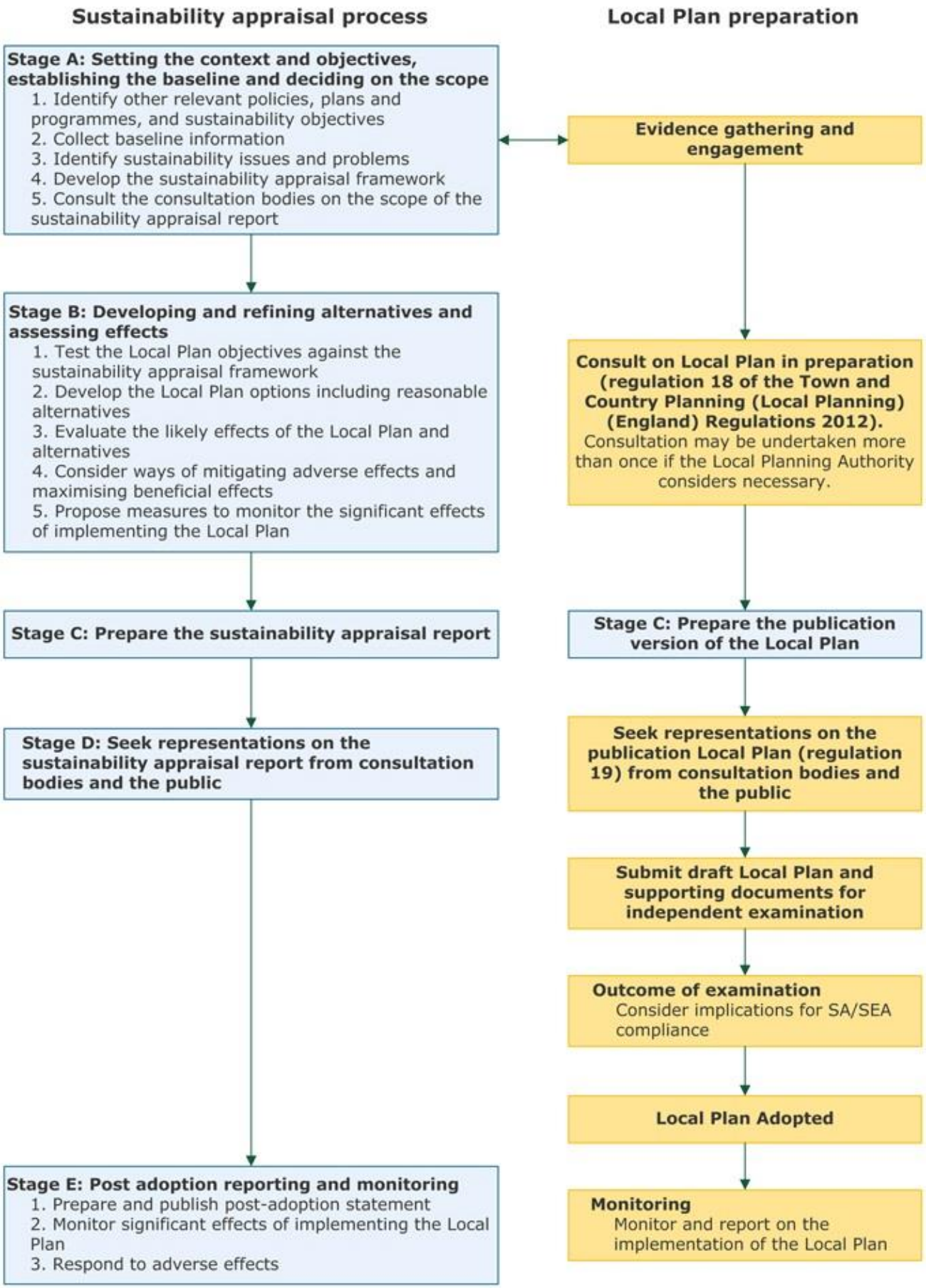
1.3 Methodology

The SEA/SA process consists of the following stages and is being undertaken in accordance with government guidance contained within Planning Practice Guidance (PPG): http://planningguidance.planningportal.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/strategic-environmental-assessment-and-sustainability-appraisal-and-how-does-it-relate-to-strategic-environmental-assessment/

The methodology is as follows:

- Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope
- Stage B: Developing and refining options
- Stage C: Appraising the effects of the plan
- Stage D: Consulting on the plan and the SEA/SA report
- Stage E: Monitoring Implementation of the Plan

The inter-relationship of the SA and Local Plan preparation process is set out in the diagram on the following page.


Sustainability appraisal process
Local Plan preparation
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope
1. Identify other relevant policies, plans and programmes, and sustainability objectives
2. Collect baseline information
3. Identify sustainability issues and problems
4. Develop the sustainability appraisal framework
5. Consult the consultation bodies on the scope of the sustainability appraisal report
Evidence gathering and engagement
Stage B: Developing and refining alternatives and assessing effects
1. Test the Local Plan objectives against the sustainability appraisal framework
2. Develop the Local Plan options including reasonable alternatives
3. Evaluate the likely effects of the Local Plan and alternatives
4. Consider ways of mitigating adverse effects and maximising beneficial effects
5. Propose measures to monitor the significant effects of implementing the Local Plan
Consult on Local Plan in preparation (regulation 18 of the Town and Country Planning (Local Planning) (England) Regulations 2012). Consultation may be undertaken more than once if the Local Planning Authority considers necessary.
Stage C: Prepare the sustainability appraisal report
Stage C: Prepare the publication version of the Local Plan
Stage D: Seek representations on the sustainability appraisal report from consultation bodies and the public
Seek representations on the publication Local Plan (regulation 19) from consultation bodies and the public
Submit draft Local Plan and supporting documents for independent examination
Outcome of examination
Consider implications for SA/SEA compliance
Local Plan Adopted
Stage E: Post adoption reporting and monitoring
1. Prepare and publish post-adoption statement
2. Monitor significant effects of implementing the Local Plan
3. Respond to adverse effects
Monitoring
Monitor and report on the implementation of the Local Plan

In the Scoping Report, Stage A of the methodology is further divided into five key tasks. This report summarises and completes Stage A of the Sustainability Appraisal process and accompanied the first informal stage of engagement on the Direction of Travel for the new Richmond Local Plan.

STAGE A: Setting the context and objectives, establishing the baseline and deciding on the scope	
Stage A1	Identify other relevant plans, programmes and sustainability objectives that will influence the Local Plan
Stage A2	Collect and develop relevant social, environmental and economic baseline information and define the character of the area
Stage A3	Identify key sustainability issues for the Plan to address
Stage A4	Develop the SA framework, consisting of the SA objectives, indicators and targets.
Stage A5	Consult on the scope of the SA

It should be noted that SA is an iterative process and some stages may need to be undertaken more than once. This Scoping Report includes some of the required elements of the final "Environmental Report" which is required by the SEA regulations.

1.4 Scope of the SA/SEA

Baseline data and the development of the SEA/SA framework has been organised in accordance with the topics required by the SEA Directive and as outlined in the PPG. The scope of the baseline review has been refined to cover the broader spectrum of sustainability issues which reflect the combination of both SEA and SA assessments.

2. Setting the context and objectives, establishing the baseline and deciding on the scope

2.1 Task A1: Identify other relevant plans, programmes and sustainability objectives

The development of the Plan may be influenced by other plans or programmes and by external environmental objectives such as those laid down in policies or legislation. Part of SEA Directive Annex 1a (e) requires an outline of the relationship with other relevant plans and programmes. Therefore, as part of this baseline review, a description of the most relevant policy context has been included in order to enable potential synergies to be highlighted and any inconsistencies and constraints to be identified.

2.2 Task A2: Develop relevant social, environmental and economic baseline information

Baseline data has been collected as required by the SEA Directive and PPG. This data has been fed into the sustainability baseline. The scope of this data collection has been expanded to include several additional social and economic topic areas in order to address the full spectrum of sustainability issues.

2.3 Task A3: Identify key sustainability issues

Within Richmond borough, certain sustainability issues are more significant than others. These issues will need to be highlighted as areas of concern within the Sustainability Appraisal. The key sustainability issues have been divided into social, environmental and economic.

2.4 Task A4: Develop the SA framework

A sustainability framework with decision making criteria to test the performance of the Plan has been developed. This framework assists in comparing the various policies, options and proposals for the area in general and for identified sites, in particular, in relation to their spatial location, proposed scale of growth and mix of land uses.

The objectives originally developed for the Sustainability Appraisal of the Core Strategy have been subsequently reviewed as part of the Development Management Plan, Twickenham Area Action Plan and 2018 Local Plan. For the purpose of preparing this report, the objectives have been reviewed again and compared to other national, regional and local documents. The objectives for the SEA/SA can be viewed in this report. Some of the objectives have been amended to reflect previous comments from stakeholders, but their general thrust for this borough remains the same. The objectives may be refined further based on consultations with statutory bodies and key stakeholders.

2.5 Task A5: Consulting on the scope of the SA

The Scoping Report was issued to the statutory consultees along with a covering letter clarifying their input and requirements within the statutory five-week period. Specific consultation questions were included within this document. They were to assist consultees with their responses. Other relevant stakeholders were also invited to comment.

A copy of all consultation questions can be found in Appendix 1.

Following the consultation on the draft Scoping Report, the Council considered and analysed all representations received. Where applicable, changes were made to the SA Scoping Report and/or SA Framework.

Sustainability Appraisal Scoping Report

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Implications of the Covid 19 Pandemic

The work to prepare the revised Sustainability Appraisal Scoping Report was largely undertaken prior to the current Covid-19 crisis. The baseline data is established on the evidence available before the Pandemic struck. There have been enormous changes to society and the medium and long-term implications are uncertain at the time of updating this report.

The current situation has highlighted that adjustments can be made to tackle threats to our society, which may have previously been considered as unrealistic or unachievable, such as people's behaviours. The exact impact of COVID-19 and reduced social contact on economy, income and employment is unclear. It will have exacerbated inequalities and disproportionately impacted in the short-term those who are self-employed, in jobs that cannot be done from home or in sectors that depend on footfall (retail, restaurants, pubs etc.). It will also impact those with less skilled jobs or those working with temporary or short-term contracts.

The air quality and noise pollution during lockdown changed dramatically. Only essential journeys being permitted led to quiet roads with little traffic and most noticeable in this borough the collapse in passenger air travel and the consequent noise disturbance. The restrictions on all but essential travel and social distancing measures implemented to contain the initial spread of coronavirus (COVID-19) has highlighted the 'critical importance' of access to high-quality green spaces to the public's wellbeing, albeit Richmond already has the largest area of public open space per head of population of any London borough.

Exercise has been redefined as a necessity, rather than a recreational choice or luxury and being active is regarded as important for physical and mental health. However, maintaining the public's safety has meant the short-term closure of facilities associated with sports and physical activities. Sport England's research[1] indicates activity levels have held up relatively well through lockdown. There could be growth in demand for outdoor sports and leisure, however there will be a need to support the sport and physical activity sector particularly for grassroots and community organisations whose resources may have been affected.

In terms of transport, there may be a possibility that the crisis is accelerating moves to a low carbon economy in some areas, such as encouraging cycling and walking. Since the pandemic people are choosing to walk and cycle, both for their essential journeys and for exercise during the lockdown. This in turn may have positive health impacts. The discouragement of travel, particularly by public transport, has massive short-term impacts on travel demand and journey purpose. Passenger journeys in London reached a historic low in April[2], and traffic levels on TfL roads fell by as much as 60 per cent, however, with effective public transport capacity reduced to 15% of normal due to social distancing, as lockdown measures ease there is concern traffic levels are increasing again and by June 2020 were already double the lockdown low.

The capacity of public transport has been dramatically reduced since the pandemic as a result of the challenge around social distancing. TfL, working with London's boroughs will make changes – through the London Streetspace Programme[1] – to focus on three key areas:

[1] https://tfl.gov.uk/travel-information/improvements-and-projects/streetspace-for-london

- The rapid construction of a strategic cycling network, using temporary materials, including new routes aimed at reducing crowding on Underground and train lines, and on busy bus corridors.
- A complete transformation of local town centres to enable local journeys to be safely walked and cycled where possible. Wider footways on high streets will facilitate a local economic recovery, with people having space to queue for shops as well as enough space for others to safely walk past while socially distancing.
- Reducing traffic on residential streets, creating low-traffic neighbourhoods right across London to enable more people to walk and cycle as part of their daily routine, as has happened during lockdown.

Some behavioural and societal change is hoped to be longer lasting, if not permanent, even as restrictions on movement are fully lifted. However, we can be confident that the climate emergency will continue to require travel by sustainable and active modes, and the current Covid-19 crisis may hasten a move towards this as people see benefits in walking and cycling. Air quality may have improved during lockdown[3], as the main source of emissions in the Borough is road transport with some falls in nitrogen dioxide (NO_2). However, caution should be applied as numerous factors influence air quality, and for other pollutants the picture is more complex, therefore this short-term impact is unlikely to be significant against overall emissions.

Household waste collected and recycling figures jumped, by 42% for dry recyclate[4], in Richmond as households emptied their attics and tidied their homes during lockdown. Additionally, the use of home delivery services will have increased the amounts of cardboard and packaging needing to be recycled. However, during this time commercial and industrial waste would have fallen, and for some areas such as medical equipment there has been an increase in single use plastics. Clearly the impact on long terms trends is yet to be seen.

Features of the economy such as vacancy rates, business survival and numbers of jobs in the Borough will alter with UK unemployment likely to rise to 9% in 2021[5] as we have entered a recession. However, predictions are for a sharp but brief period of economic decline with a clearly defined trough, followed by a strong recovery, and the Bank of England predicts a bounceback. The GLA medium-term planning projections[6] are London's real Gross Value Added (GVA) growth rate could be -16.8% this year due to the present COVID-19 crisis, however this growth rate is then expected to rebound to 17.2% in 2021 before returning to more normal figures in 2022 (4.5%).As the impacts of the crisis are felt across the whole country, we see no reason for the highly skilled local workforce in professional and managerial jobs, and a large amount of self-employed, and as one of the most entrepreneurial boroughs in the country, to not adjust and face the challenges as they did after the banking crash of 2008. Government has committed to support the economy by giving initial grant support to some businesses affected by the outbreak. The rise in home working and making use of technology, may have accelerated changes to employment, but also underlines the need for high quality telecoms and broadband infrastructure networks.

The High Street and retail in general have been massively hit, with significant falls in the volume of retail goods sales during lockdown[7]. The impact will likely exacerbate and intensify existent and ongoing structural changes relating to the rise in internet shopping (the proportion spent online soared to the highest on record in April 2020 at 30.7%, which compares with the 19.1% reported in April 2019), with a further contraction of retailers in the A1 (shops) use class; however, there has been a suggestion that independent / niche retailers and entrepreneurs may prove to be more resilient and there has been a growth in support for shopping locally. It may be that town centres are to become social spaces rather than primarily for retail. There is an opportunity to reconfigure the urban realm deciding how much space we really want or need to allocate to motor vehicles, how much to

pedestrians and cyclists, how much to businesses and how much to green infrastructure. The Council's Post Covid-19 Transport Action Plan[8] is already bringing forward measures across the borough, focusing on town centres and areas of high pedestrian footfall.

The limited access to normal daily activities, not just going to work, but normal social interactions with others have had an impact upon public health. Anxiety, apathy, and loneliness are some of the mental health consequences that will persist long after the pandemic ends, while the increased feelings of depression and stress, especially during a time of uncertainty, may have serious impacts on public health, increasing people's vulnerability to poor health, and weakening society as a whole. Effective public health responses and provision of social infrastructure will be key to promoting healthy communities.

Therefore, there may be opportunities that this crisis may bring in terms of lasting positive environmental, social and wellbeing impacts. However, at the time of writing, much of the implications remain speculative. Overall, the purpose of SA/SEA is to promote sustainable development by assessing the extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant environmental, economic and social objectives. As sustainability appraisal is an iterative process, if and when new evidence comes to light, we will review the SA objectives and make changes if necessary.

Similar uncertainty remains around the implications of Britain's withdrawal from the European Union, including the legislation affecting land use and the impacts on the regulatory environment. In the short term existing environmental and planning regimes continue. As part of the iterative process outlined above, as and when any new legislative requirements are clarified at the end of the Brexit transition period, we will address in future SA reports.

[1] https://www.sportengland.org/know-your-audience/demographic-knowledge/coronavirus#the_story_so_far
[2] https://www.london.gov.uk/business-and-economy-publications/londons-economy-today-issue-213-may-2020
[3] https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/estimation-changes-air-pollution-during-covid-19-outbreak-0
[4] https://cabnet.richmond.gov.uk/documents/s84710/COVID%2019%20Response%20FPR%20report.pdf
[5] The Bank of England's forecast May 2020 https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2020/may/monetary-policy-report-may-2020
[6] https://www.london.gov.uk/business-and-economy-publications/londons-economic-outlook-spring-2020
[7] https://www.london.gov.uk/sites/default/files/londons_economy_today_no213_280520.pdf
[8] https://cabnet.richmond.gov.uk/documents/s85374/Richmond%20Transport%20Action%20Plan%20Covid%2019%20-%20FINAL.pdf

1 INTRODUCTION

1.1 Strategic Environmental Assessment / Sustainability Appraisal

1.1.1 Sustainability Appraisal is a requirement of Section 39(2) of the Planning and Compulsory Purchase Act 2004 and encompasses social and economic considerations, as well as the environmental factors considered by Strategic Environmental Assessment under the Strategic Environmental Assessment (SEA) Directive (European Directive 2001/42/EC).

1.1.2 This document forms a draft Scoping Report for the Sustainability Appraisal (SA) of the London Borough of Richmond upon Thames new draft Local Plan.

1.1.3 A Sustainability Appraisal is a systematic process that attempts to predict and assess the economic, environmental and social effects that may arise from the Local Plan. The SA should:

- Take a long-term view of how the area covered by the Plan is expected to develop, taking account of social, environmental and economic effects of the proposed plan;
- Provide a mechanism for ensuring that sustainability objectives are translated into sustainable planning policies;
- Reflect global, national and local concerns;
- Provide an audit trail of how the plan has been revised to take account the findings of the SA;
- Form an integral part of all stages of plan preparation and incorporate the requirements of the European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”, the SEA Directive[2].

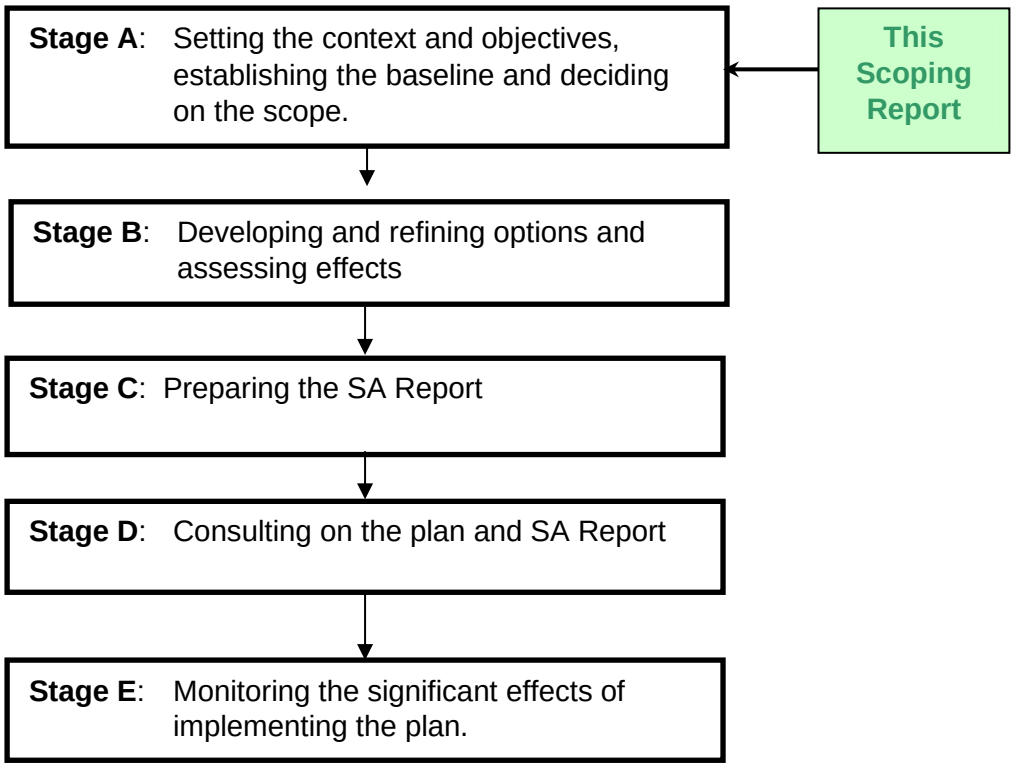
1.1.4 The purpose of this Scoping Report is to:

- Identify environmental, social and economic objectives contained in other plans and programmes that are relevant to the Local Plan;
- Draw together and analyse the broad environmental social and economic characteristics of the London Borough of Richmond upon Thames, and how these are changing;
- Consider, in light of the above, key issues and problems arising from this report that the Local Plan should address;
- Set out the appropriate objectives & targets for draft policies and options, and establish indicators against which progress towards meeting those objectives can be monitored in the future;
- Consult on the scope of the SA.

1.1.5 The five stages to be carried out during the Sustainability Appraisal are set out in Figure 1 below.

[2] Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001, “on the assessment of the effects of certain plans and programmes on the environment”.

Figure 1: Five stages to SA



1.1.6 The first stage (Stage A) of the SA process consists of five key tasks, which are set out in Table 1 below.

STAGE A: Setting the context and objectives, establishing the baseline and deciding on the scope	
Stage A1	Identify other relevant plans, programmes and sustainability objectives that will influence the Local Plan
Stage A2	Collect and develop relevant social, environmental and economic baseline information and define the character of the area
Stage A3	Identify key sustainability issues for the Plan to address
Stage A4	Develop the SA framework, consisting of the SA objectives, indicators and targets.
Stage A5	Consult on the scope of the SA

Table 1: Key tasks of Stage A

1.1.7 In addition to legislative requirements, Government guidance contained within the Planning Practice Guidance (PPG)[3] on "Strategic environmental assessment and sustainability appraisal" has been followed. Also, the practical guidance [4] on European Directive 2001/42/EC, called the "Strategic Environmental Assessment Directive: guidance", has been followed.

[3] PPG: https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal; last updated by the Ministry of Housing Communities & Local Government on 22 July 2019

[4] https://www.gov.uk/government/publications/strategic-environmental-assessment-directive-guidance, 2 September 2005

1.2 This Scoping Report

1.2.1 This Scoping Report is required to set out the findings of the first stage of the process (Stage A) and describe what happens next in the process. The Scoping Report was sent to the three statutory consultation bodies with environmental responsibilities in England, namely the Environment Agency, Natural England and Historic England (as required by the SEA directive) as well as to key stakeholders and other relevant bodies with a sustainability remit or local environmental interest, such as Thames Water (see Task A5). The scoping process is explained in the subsequent sections, and in line with the Council's Statement of Community Involvement (SCI), it was also placed on the Council's website. The draft report was available for a period of five weeks in order to comply with the SEA Regulations.

1.2.2 Specific consultation questions were included within the document to assist consultees with their responses. A copy of all consultation questions can be found in Appendix 1.

1.2.3 This Scoping Report is based on the Scoping Report originally produced for the Core Strategy in 2007[5] as well as the revised and updated Scoping Report produced for the Twickenham Area Action Plan in May 2011. In addition, the Scoping Report has again been reviewed for an emerging Site Allocations Plan and was subject to public consultation from 15 March until 19 April 2013. The Scoping Report was last reviewed in December 2015, to support the development of the Richmond Local Plan that was adopted in 2018. The final revised SA Scoping Report, which provided the basis for this revised report, is dated May 2016.

1.2.4 The SA baseline information, evidence and analysis are continually under review in an attempt to be as up to date as possible in order to inform the production process of the Local Plan. Due to current Government changes to the planning system and ongoing reviews of Government guidance, it cannot be guaranteed that all the data and documents used for this report are up to date. Therefore, this SA Scoping Report provides a snapshot in time. In addition, whilst this Scoping Report has been specifically produced to support the Local Plan, it may also be used to support the appraisal of other future documents prepared under the Local Plan.

1.2.5 The Authority's Monitoring Report (AMR)[6] will be the means of monitoring the SA indicators identified on a regular basis. As well as the baseline information included in this report, research may be undertaken for the Local Plan, which will form the evidence base for the Plan. The results of this research will be fed into the SA process and AMRs when available.

1.3 The Local Plan

1.3.1 While the Richmond Local Plan was only adopted relatively recently, i.e. July 2018, in the last two years there have been changes to national planning policy, and in

[5] www.richmond.gov.uk/sustainability_appraisal_local_plan
[6] http://www.richmond.gov.uk/authority_monitoring_report.htm

addition the new London Plan is in its final stages before adoption. The Council also adopted a Climate Emergency Strategy in January 2020, with a range of actions some of which have a direct bearing on Local Plan policies, as will other changes to the environment and economy. While elements of the 2018 Local Plan's vision are still relevant, some elements need updating, especially in relation to the borough's climate emergency and growing population. Therefore, the Council has commenced a review of its Local Plan, which will guide development across the borough over the long term. This review will involve the production of a new Local Plan, which will replace the current 2018 Local Plan and the Twickenham Area Action Plan. This revised and updated Scoping Report will be used to appraise the policies and proposals that will emerge as part of the drafting of the new Local Plan. More information on the new draft Local Plan can be viewed on the Council's website[7]. This includes the Local Development Scheme[8] which sets out the programme for the production of documents (see Table 2).

1.3.2 The existing Local Plan for the London Borough of Richmond upon Thames sets out how and where development in the borough will be delivered in the future and is currently made up of a series of documents, as shown in Table 2 below.

Plan	Function	Status
Local Plan 2018	Vision and Strategic policies, detailed policies for the management of development, and Site-specific proposals	Adopted 2018
Joint West London Waste Plan	Planning for waste	Adopted in July 2015
Twickenham Area Action Plan	Policies and proposals for Twickenham	Adopted in July 2013
Ham and Petersham Neighbourhood Plan	Vision and objectives, alongside more detailed policies and proposals, for the Ham and Petersham Neighbourhood Area	Adopted January 2019

Table 2: Existing adopted Development Plan Documents

1.3.3 The Council adopted the current Local Plan in July 2018. It provides the vision, objectives and strategy for the spatial development for the whole of the borough for a 15-year period from its adoption. The Local Plan is the primary development plan document for the borough and its policies assist in delivering the development requirements and needs of the borough, including numbers of new dwellings, as set out in the London Plan, and jobs. In addition, the Local Plan sets out policies and proposals for the borough's key development sites.

[7] www.richmond.gov.uk/local_plan

[8] www.richmond.gov.uk/local_development_scheme

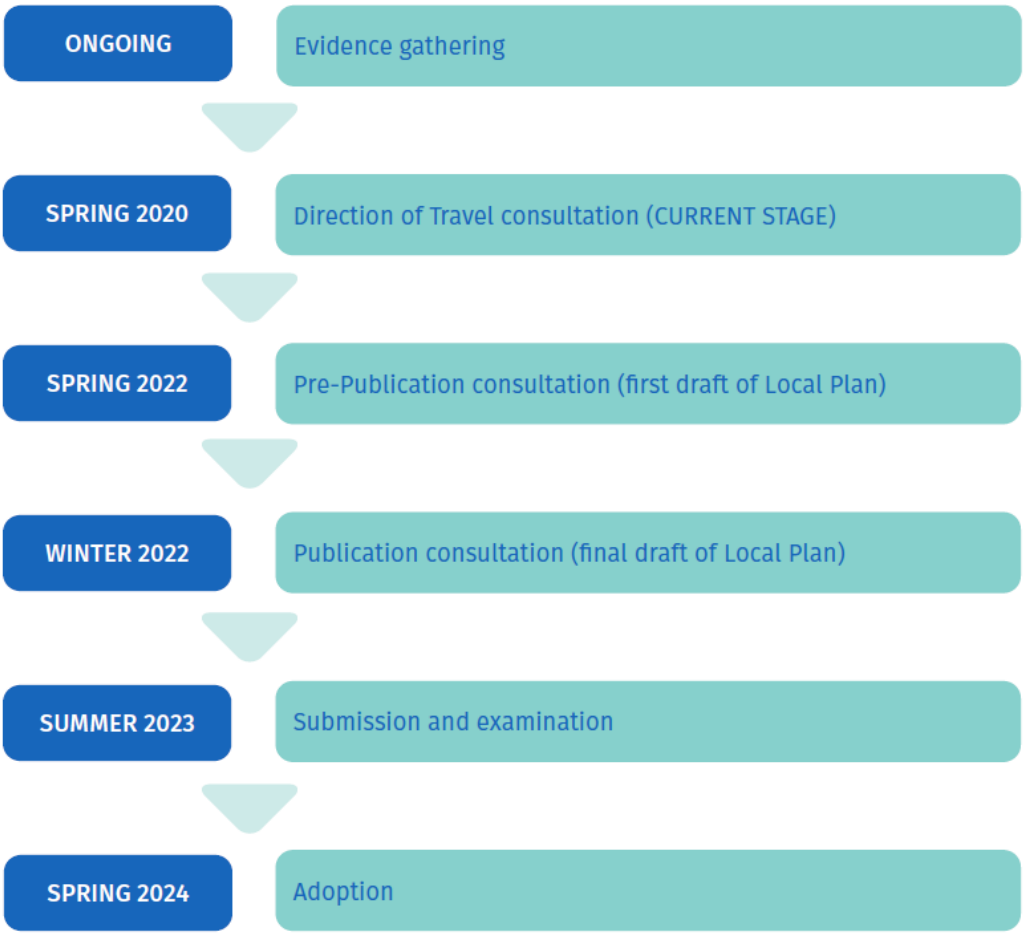


Figure 2: Stages in the preparation of the new Local Plan.

1.3.4 The location of the London Borough of Richmond is shown in Figure 3 below.

Figure 3: The borough in relation to its neighbours

1.3.5 The Council adopted the Area Action Plan for Twickenham Town Centre in 2013[9], which sets out detailed policies and proposals for Twickenham town centre.

1.3.6 Six West London boroughs (Brent, Ealing, Harrow, Hounslow, Hillingdon and Richmond upon Thames) and the Old Oak Common and Park Royal Development Corporation, together have prepared the West London Waste Plan[10]. It sets out a strategy for the sustainable management of waste and also identifies and allocates sites for managing the area's waste over the period up to 2031. The Joint West London Waste Plan, Planning for Waste was adopted in July 2015.

1.3.7 The Borough Community Infrastructure Levy **(CIL)** [11] , although not a formal Development Plan Document, is of relevance to the Local Plan as it sets out the Council's rates of CIL that apply to certain types of development in the borough.

1.3.8 The existing Local Plan, together with the Twickenham Area Action Plan, will be superseded by a new Local Plan. The Joint West London Waste Plan as well as the Ham and Petersham Neighbourhood Plan will remain unchanged.

1.3.9 The following chapters go through the various tasks of the scoping exercise.

[9] www.richmond.gov.uk/twickenham_area_action_plan.htm
[10] www.wlwp.net
[11] www.richmond.gov.uk/borough_cil.htm

2 CONTEXT REVIEW

2.1 Strategic Environmental Assessment / Sustainability Appraisal

2.1.1 Sustainability Appraisal is a requirement of Section 39(2) of the Planning and Compulsory Purchase Act 2004 and encompasses social and economic considerations, as well as the environmental factors considered by Strategic Environmental Assessment under the Strategic Environmental Assessment (SEA) Directive (European Directive 2001/42/EC). Under section 19(5) of the Planning and Compulsory Purchase Act 2004, the Local Plan must be subject to a Sustainability Appraisal (SA) throughout its production, ensuring that it is fully consistent with and helps to implement the principles of sustainable development. In addition, the Environmental Assessment of Plans and Programmes Regulations 2004 requires that an Environmental Assessment be undertaken that meets the requirements of EU Directive 2001/42/EC.

Task A1: Identify other relevant plans and programmes and sustainability objectives that will affect or influence the plan

2.2 Plans, Policies and Programmes

2.2.1 Task A1 involves establishing the context in which the Local Plan is being prepared. According to the guidance:

"The review should consider guidance at the international, EU or national level on sustainable development, as well as other policy documents such as Planning Policy Statements. Note should be made of any targets or specific requirements included within them, and what these relate to".

2.2.2 The list of the most relevant plans considered in the context of this Scoping Report is in Table 3 below. Note that no list of plans, policies or programmes (PPPs) can be definitive and the list will be kept under review during the SA process and updated if required. The London Borough of Richmond upon Thames will also consider other PPPs if they become relevant and will include them.

Level: International /European Context
Kyoto Protocol on Climate Change, United Nations, 1999 It sets legally binding emissions reductions targets on the developed countries that have ratified it (including the UK). The Local Plan should contribute towards reducing carbon emissions, in line with these and further targets
UN Paris Climate Change Agreement (2015): International agreement to keep global temperature rise this century well below 2 degrees Celsius above pre-industrial levels.
United Nations Sustainable Development Goals (2015) The Sustainable Development Goals were set in September 2015

Air Quality Directive, 2008/50/EC, on ambient air quality and cleaner air for Europe. The objective of this Directive is to avoid, prevent and reduce harmful effects of ambient air pollution on human health and the environment.
The Wild Birds Directive 2009/147/EC
The EU Water Framework Directive 2000/60/EC
The Waste Framework Directive 2008/98/EC
Conservation of Natural Habitats of Wild Fauna and Flora Directive 92/43/EEC
UNESCO World Heritage Convention
European Landscape Convention
The European Convention on the Protection of Archaeological Heritage
National
The NPPF (revised 2019): promotes healthy, inclusive and safe places which; promote social integration, are safe and accessible and enable and support healthy lifestyles
National Planning Practice Guidance (PPG): Supports the content of the NPPF including promoting low carbon and renewable energy generation, including decentralised energy, the energy efficiency of existing and new buildings and sustainable transport.
Planning Policy for Traveller Sites: The Government's overarching aim is to ensure fair and equal treatment for travellers, in a way that facilitates the traditional and nomadic way of life of travellers while respecting the interests of the settled community.
A Green Future: Our 25 Year Plan to Improve the Environment 2018: Sets out goals for improving the environment within the next 25 years.
Ancient Monuments & Archaeological Areas Act 1979
Regional
Intend to Publish London Plan 2019
The London Plan: Spatial Development Strategy for Greater London, consolidated with alternations since 2011 (March 2016)
Mayor's Transport Strategy (2018)
Mayor's London Environment Strategy (2018)
Thames Estuary 2100: Managing flood risk through London and the Thames estuary (TE2100 Plan) (2012)
River Thames Scheme 2016, Updated 2018
Local
LB Richmond upon Thames Climate Emergency Strategy (2019-2024)
LB Richmond upon Thames Air Quality Action Plan (2019/20-2024/25)
LB Richmond upon Thames Local Implementation Plan (2019)
The Royal Botanic Gardens Kew, World Heritage Site Management Plan (2020-2025)

Table 3: List of the most relevant policies, plans, programmes, strategies and initiatives

2.2.3 The results of the analysis of the relationships with the plans, programmes and policies (PPPs) are summarised in Appendix 1. These represent legislation from international to local level and in general terms the lower level plans at national and regional level will have increasing relevance and bearing on the emerging plan. In most instances lower-tier PPPs would already reflect the higher tier requirements, unless they have been more recently produced or revised.

2.2.4 The review of relevant PPPs is carried out in order to ensure that the objectives in the Scoping Report are not in conflict with those in other PPPs and to highlight areas of

potential conflict, which may need to be addressed, such as meeting development needs whilst protecting biodiversity and heritage.

Key findings from the PPP analysis

2.3.1 The review of the policies, plans and programmes focused on those that are considered to be of greatest relevance to the emerging Local Plan.

2.3.2 The key findings from the PPP analysis can be summarised as follows:

Sustainable Development

Local Plan documents should be based upon the principles of sustainable development and provide a sustainable spatial vision and objectives. There are three dimensions to sustainable development: economic, social and environmental. Sustainable development requires economic growth that supports social progress and respects the environment; economic growth, social cohesion and environmental protection therefore must go hand in hand. The NPPF is a key planning document, whereby at its heart is a presumption in favour of sustainable development. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area. Key areas of sustainable development are building a strong and competitive economy, ensuring the vitality of town centres, promoting sustainable transport, delivering a wide choice of high quality homes, requiring good design, promoting healthy communities, mitigating and adapting to climate change, protecting and enhancing the natural, built and historic environment, ensuring social cohesion and inclusion, and managing natural resources more prudently and responsibly. Sustainable development should therefore be at the heart and a core principle of all Local Plan documents.

Climate Change

In July 2019 Richmond Council endorsed Parliament's declaration by declaring a Climate Emergency and also resolved to become carbon neutral by 2030. The Council's Climate Emergency Strategy and Action Plan were agreed in January 202011. A number of corporate actions have been identified including: reduction and removal single use plastics from Richmond Council sites, promotion of the circular economy, and a number of mitigation and energy efficiency measures for the Local Plan. In November 2019 the European Parliament declared a global "climate and environmental emergency", urged all EU countries to commit to net zero greenhouse gas emissions by 2050 and asked the European Commission to ensure that all relevant legislative and budgetary proposals are fully aligned with the objective of limiting global warming to under 1.5 °C. The Local Plan should focus on reducing carbon dioxide emissions to assist the UK in meeting its legally binding target by 2050, and the London-wide objective of becoming a zero-carbon city also by 2050. The Local Plan should also ensure that all new developments reduce carbon dioxide emissions. The overall aim should be to create sustainable communities with low carbon emissions that are resilient to the effects of climate change and to the volatile energy market through focusing on climate change mitigation, including energy efficiency, as well as climate change adaptation. New development should be energy efficient and planned to avoid increased vulnerability to the range of impacts arising

from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure. The costs associated with taking preventative action will be much less than those associated with dealing with consequences if action is taken now. Therefore, the Local Plan should aim to reduce carbon dioxide emissions to mitigate the effects of climate change and ensure that predicted changes are taken into account in order to create adaptable communities and buildings.

Flood Risk

A key target of the Climate Emergency Strategy is to ensure that development across Richmond addresses flood risks and promotes sustainable drainage. The Local Plan will promote and encourage development to be fully resilient to the future impacts of climate change in order to minimise vulnerability of people and property, including risks of flooding, water shortages and the effects of overheating. A key objective for this borough is to be fully prepared for flooding. The Local Plan should aim to reduce the risks of flooding to communities (people, properties and infrastructure) and ensure that flooding is given appropriate weight when considering the location and design of new development. A Strategic Flood Risk Assessment should inform the Local Plan policies and decisions on the location and design of development. The Local Plan should not promote development in unsustainable locations, such as in areas with high flood probability, and should not allow development that might increase the risk of flooding to others. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure (also see below).

Biodiversity and nature conservation

The nature conservation status of designated areas in the borough must be taken into account. The Local Authority is a Competent Authority under the EU Habitats and Wild Birds Directives. In advance of undertaking an Appropriate Assessment a Competent Authority should first undertake an assessment of Likely Significant Effects of the plan. This should consider the potential environmental impacts of the Local Plan on European Protected Sites within and outside the Borough and determine whether an Appropriate Assessment is required. The NPPF states that planning policy should identify and pursue opportunities for securing measurable gains for biodiversity. The Plan should facilitate and support quality networks of green infrastructure capable of supporting biodiversity and resilience against climate change. Policies should distinguish between the hierarchy of international, national and locally designated sites and ensure that areas designated for nature conservation purposes, threatened species and habitats are protected and that development does not have any detrimental impacts on biodiversity. Planning policies and decisions should minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. The aim should always be to enhance biodiversity wherever possible. Local Plans should also plan positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

Energy and renewable energy

The Local Plan needs to consider the way energy is supplied and encourage zero- and low-carbon energy technologies. The aims should be to reduce the contribution to climate change by minimising emissions of carbon dioxide through energy efficiency, combined heat and power, renewable energy and other technologies. There is an expectation that during this Local Plan period, all new developments will need to be zero carbon to contribute towards tackling the climate emergency. The Council promotes the move towards a low carbon economy and this new Local Plan should seek to require zero carbon standards for all new developments. Zero carbon can be best achieved through the application of the energy hierarchy (as set out in the London Plan and in Richmond's Local Plan) whereby development should maximise energy efficiency, use low carbon technologies and reduce carbon dioxide emissions through the use of renewable energy. This should also align with the Council's and Government's aim of tackling fuel poverty.

Waste Management

A more circular economy (re-use, remanufacture, repair, recycle) will see us keeping resources in use for as long as possible. It will allow us to extract maximum value from them, then recover and regenerate products and materials at the end of their lifespan. It prolongs the lives of materials and goods and moves away from the inefficient 'linear' economic model of 'take, make, use, throw'. The Local Plan policies should reflect the principles of minimising waste, promoting resource efficiency and moving toward a circular economy. The Local Plan must contribute to the national commitment to eliminate avoidable plastic waste over the lifetime of the 25 Year Environment Plan12, doubling resource productivity, and eliminating avoidable waste of all kinds by 2050. The Local Plan policies will need to support these targets and encourage waste reduction, efficient use of raw materials, increased use of recycled materials and composting in the borough.

Pollution and contamination

Local Plan policies should ensure there is no additional pollution (pollution of land, water, air and noise) from new development and road traffic, and the discharges to the environment associated with any development should be considered and mitigated. The issues of pollution are closely linked with the key areas of water quality, air quality and noise (see below). In line with the NPPF and London Plan, policies in the Local Plan should also consider any contamination effects of development as well as encourage remediation and the re-use of contaminated land.

Water quality and resources

Improving water quality, which includes surface water, ground water and rivers, should be a core aim within the Local Plan. Policies should ensure that water quality is protected and improved where possible, and that developments do not have any detrimental impact on both water quality and water resources. The Local Plan should also help to deliver the aims and objectives of the Water Framework Directive and Thames River Basin Management Plan. The Local Plan should assist in achieving the target for the ecological status of the borough's rivers, which is "good ecological potential" by 2027. In addition, policies should ensure that developments meet

challenging water consumption targets in order to address the issue of water scarcity in London.

Air Quality

The Local Plan should consider the potential that new development, buildings and transport may have adverse impacts on the air quality and potentially increase air pollution. It should be consistent with the Richmond upon Thames Air Quality Action Plan (2020) to meet the targets set out in the Mayor of London's strategy and the national strategy on air quality, which focus on reducing PM10 and NO2 pollution levels. The strategy for London is to have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities. Two pollutants remain a specific concern. These are particulate matter (PM10, PM2.5 and black carbon) and nitrogen dioxide (NO2). By 2024, the Borough aims to have less polluting traffic on its roads, contributing to an improvement in air quality across the borough. Policies promoting sustainable construction should reduce dust and emissions from the demolition and construction of buildings on site, including adverse effects from biomass boilers.

Noise

Measures to reduce and mitigate noise impacts on people, noise-sensitive land uses and biodiversity are required. Appropriate measures should be considered for reducing and mitigating noise around people and noise sensitive land uses. Local Plan policies should address noise implications by considering location, design and layout of development. The Local Plan should also be in line with the Mayoral Strategy on Ambient Noise, the aim of which is to minimise the adverse impacts of noise on people living and working in, and visiting London using the best available practices and technology within a sustainable development framework. Agent of change principles should be applied requiring property developers to take account of pre-existing businesses, such as music venues, before moving forward with a project.

Transport

Sustainable travel and the promotion of sustainable modes of transport should be integral to and a core principle of the Local Plan. Policies in the Local Plan should include reducing car-dependent development, increase other forms and choice of transport modes and promote vibrancy and economic activity in town centres. The Local Plan should facilitate more walking and cycling, improve linkages and ensure there are sufficient public transport linkages between homes, work places, local services and amenities. Making transport systems more efficient and safer, dealing with direct and indirect impact of road traffic, providing travel choice and accessibility for all are key issues to consider in the Local Plan. Sustainable modes of transport and giving priority to electric vehicles (EV) will also help to achieve the objectives in relation to mitigating climate change and reducing carbon dioxide emissions as well as in relation to reducing air and noise pollution. Active travel means more journeys being made by foot, bike or public transport around the borough – helping improve both public health and air quality. The Council's adopted LIP, features the headline target for 75% of trips to be by sustainable modes (walking, cycling and public transport) by 2041, from a baseline of 61%. The plan also includes targets for expanding the cycle network, improving air quality, reducing road danger and increasing the use of public transport.

Housing

Plans should provide a framework for addressing housing needs and other economic, social and environmental priorities. The Local Plan should aim to create sustainable, high quality homes and consider issues such as design, mixtures of housing types and tenures, associated open amenity spaces and proximity to local centres. The Local Plan should also maximise the provision of affordable accommodation that meets the needs of the community. Policies should promote the redevelopment of sites that provide a housing mix and good design that benefit the community as a whole while minimising environmental impact. All buildings, including new homes, should achieve high levels of environmental ratings to mitigate and adapt to climate change.

Economic development

The Local Plan should promote the development of positive strategies to underpin the planning and development of town centres. It should take account of existing evidence base to inform policies on employment land and premises, including future supply. Planning policies and decisions should recognise and address the specific locational requirements of different sectors. Policies should be flexible enough to accommodate needs not anticipated in the plan and allow for new and flexible working practices. There is a strong case for the Local Plan to protect all existing employment sites unless they are inherently unsuitable. Well-planned tourism development, and the regeneration of urban areas, can bring many benefits for local economies and the environment. Policies on economic development also need to consider the potential impacts on the natural environment that could arise from creating new industry and commerce. All buildings, including non-domestic buildings, should achieve high levels of environmental ratings to mitigate and adapt to climate change.

Open spaces and recreation

Open and recreational spaces are essential to the concept of sustainable development and place-making. Access to a network of high-quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities. Therefore, Local Plan documents should focus on the accommodation of the need for open space, sport and recreational provision. Policies should protect and enhance open spaces and recreational facilities and ensure that facilities are accessible to all to promote social inclusion, health and wellbeing. The network of multi-functional green spaces delivers not just a wide range of environmental and biodiversity benefits, but also benefit to local communities.

Historic environment and heritage

The Local Plan and its policies should recognise the unique place the historic environment holds in this borough, including the multiple ways that the cultural and historic heritage supports and contributes to the local, regional and national economy as well as to the community. The conservation of these heritage assets and their settings should be a key priority of the Plan and policies should be in place to protect them from harm and to take opportunities to enhance their significance. The more important the asset, the greater the weight should be to the asset's conservation. The Local Plan should encourage developments that enhance creativity and culture within

the borough and any potential impacts of developments on the historic environment and cultural heritage should always be considered.

Social environment, health and wellbeing

Decisions made in spatial planning have direct and indirect impacts on and affect the quality of life, including the social environment as well as the health and wellbeing of the population. Planning can for example contribute to an enhanced social environment by improving the liveability of streets and community cohesion, reducing inequalities that exist in access to housing and increasing opportunities for physical activity by improving access to open spaces, sport and recreation facilities, including the provision of walk-able mixed-use neighbourhoods. Therefore, Local Plan documents should focus on facilitating the improved health and wellbeing of the population, including access to health, education, sport, leisure and recreation facilities. Improved health of the population is also interlinked with reducing air, noise and water pollution as well as a reduction in carbon dioxide and other emissions.

3 COLLECTING BASELINE INFORMATION

Task A2: Develop baseline information and characterise the borough

3.1 Introduction

3.1.1 Baseline information provides the basis for predicting and monitoring the likely sustainability effects of a plan and helps to identify key sustainability issues and alternative means of dealing with them. Schedule 2 of the SEA Regulations requires information to be provided on:

(1) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.

(2) The environmental characteristics of areas likely to be significantly affected.

(3) Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive.

3.1.2 The following text as well as the information under the key sustainability issues in the next section summarises the baseline data and uses it to characterise the borough. Because SA/SEA is an iterative process it may be that future stages identify other data that need to be collected and monitored.

3.2 Summary

3.2.1 The London Borough of Richmond upon Thames is a relatively prosperous, safe and healthy borough that covers an area of 5,095 hectares (14,591 acres) in southwest London. It is the only London borough spanning both sides of the Thames, with river frontage of 21.5 miles. It contains over 100 parks; including two Royal Parks, Richmond and Bushy; the Royal Botanic Gardens at Kew, a UNESCO World Heritage Site; Historic Royal Palaces such as Hampton Court; and many other wildlife habitats. There are also many conservation areas and listed buildings, which reflect the rich historic character of the borough.

3.2.2 The local community has a clearly expressed view that the borough's natural and built environment should be protected and enhanced. The main town centre is Richmond and there are four district centres at Twickenham, Teddington, East Sheen and Whitton. Richmond borough is one of the least deprived areas in the country. It also has maintained a consistently higher employment rate than that of London as a whole since the onset of the economic downturn in late 2008. A large proportion of the population of Richmond work in managerial, professional and technical jobs, meaning that the residents are generally highly skilled. Median annual earnings for residents of Richmond are considerably higher than the London average, which reflects the borough's position as a desirable place to live and to commute from for well-paid jobs. Whilst many people commute out of the borough for work, at the same time, many non-residents come into Richmond to work each day.

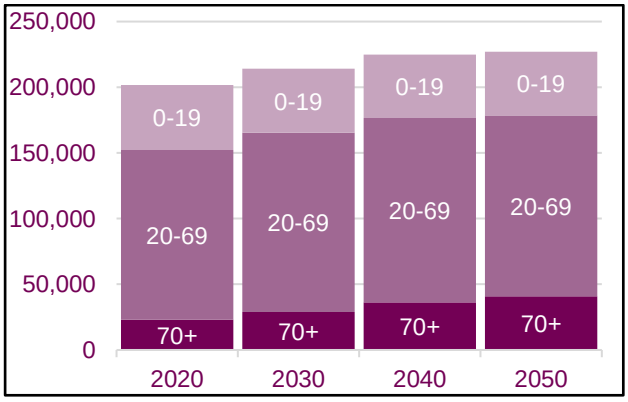
3.2.3 Overall, Richmond is an enterprising borough, whereby the enterprise stock has grown faster since 2000 than in London overall and business density levels are high. The visitor economy in Richmond supports a large amount of jobs. Major attractions like Kew Gardens, Hampton Court, Richmond Park and Twickenham stadium help to bring in around 3 million visitors per year. Whilst the borough has been relatively resilient to the economic pressures of recent years, there are some economic challenges. A significant constraint to growth is the physical infrastructure of the borough and the limited availability of employment land and good quality office space. Richmond is also the most expensive Outer London borough in which to buy a home and private rents are high. Affordability is a key issue affecting residents in Richmond both in the ability to rent or buy property.

3.3 Population

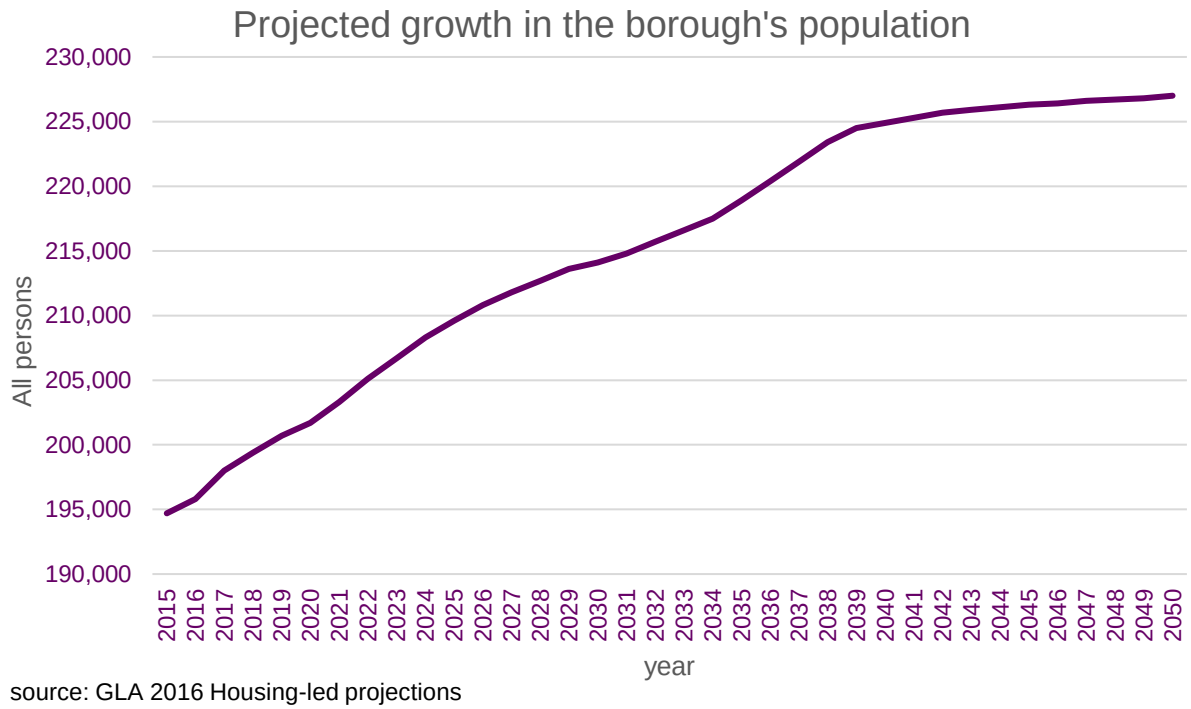
3.3.1 The estimated resident population of Richmond upon Thames is 199,419[12] in 2018 rising to an estimated 214,100 in 2030. The most up-to-date complete set of GLA projections are the **2016-based projections**.

	GLA 2016-based housing led projections for year 2020		
Age	**Male**	**Female**	**Total**
0-4	6,400	6,100	12,500
5-14	13,700	19,300	33,000
15-24	9,200	9,300	18,500
25-34	11,800	12,600	24,400
35-44	16,300	16,800	33,100
45-54	15,300	15,900	31,200
55-64	11,400	11,900	23,300
65-74	8,100	9,200	17,300
75+	6,000	8,500	14,500
Total	**98,200**	**103,500**	**201,700**

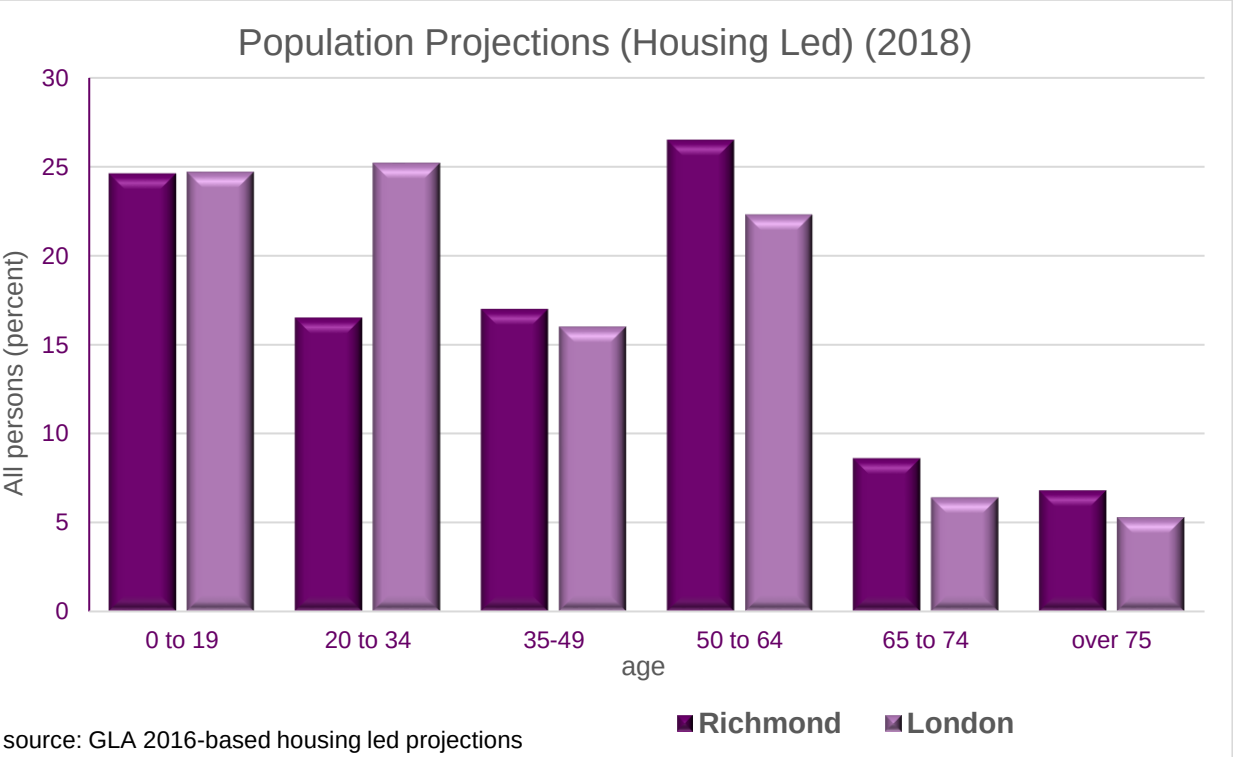
Table 4: Population and GLA projections for 2020 by age. Source: 2016-based GLA population projections (published July 2017)



[12] 2016-based GLA population projections (published July 2017).



source: GLA 2016 Housing-led projections



source: GLA 2016-based housing led projections

Compared with London

3.3.2 When compared to London, the Census reveals Richmond has a significantly lower percentage of people aged 20-34. Richmond has a higher percentage of the population in age 35 and over. This mirrors our understanding of Richmond as an

attractive place to live for families with children and older people while the relative affluence can mean it is difficult for young people to move into the borough.

3.3.3 The average age of a Londoner is 35.8 compared to 40 for the UK as a whole. The average age of Richmond resident is 37.1. The median age (where half the population is older and half younger) of Richmond resident's is older than London in general and more in line with the rest of the UK at 40.7. Half of Londoners are 35.3 or younger while the equivalent age for the UK is 40.1.

Household and Family Type

Type of household	Number	%	London %	England & Wales %
One person	26008	32.6	31.5	30.2
Married or same-sex civil partnership couple	28502	35.7	28.1	33.2
Co-habiting couple	8288	10.4	8.7	9.8
Lone parent -with dependent children	3882	4.9	8.5	7.2
Lone parent - with non-dependent children only	2382	3.0	4.1	3.5
Other households	10773	13.5	14.9	7.9
Lone households- Aged 65 and over	9434	11.8	9.5	12.4
Number of occupied households	79,835			
Average household size	2.31	-	2.47	2.36

Table 5: Household and Family Type
Source: Census 2011 Table KS105EW Household Composition © Crown copyright

3.4 Indices of Multiple Deprivation

3.4.1 The Index of Multiple Deprivation (IMD) 2019 is the official measure of relative deprivation for small areas (or neighbourhoods) in England. The IMD ranks every small area (Lower Super Output Area) in England from 1 (most deprived) to 32,844 (least deprived). For larger areas we can look at the proportion of LSOAs within the area that lie within each decile. Decile 1 represents the most deprived 10% of LSOAs in England while decile 10 shows the least deprived 10% of LSOAs. Richmond has overall 1 LSOA in the 20% most deprived, 2 in the 30%, 3 in the 40% and 7 in the 50% most deprived LSOAs. Using the IMD rank of average summary measure, this local authority ranked 288 in 2015 and 297 in 2019, out of 317 local authorities.

3.4.2 However, the relative lack of deprivation hides a more complex picture. For the Income Deprivation Affecting Older People Index (IDAOPI), 3 neighbourhoods in Richmond Borough are amongst the 20% most deprived neighbourhoods in the country. For the measure Barriers to Housing and Services, 5 neighbourhoods fall in the worst 20% of LSOAs in England.

3.4.3 The index Income Deprivation Affecting Children (IDACI), shows an improvement between the 2015 and 2019 indices. One neighbourhood in Richmond had been in the worst 10% most deprived in the country. This has now improved and there are 2 (2%) of Richmond's 115 x LSOAs in the worst 20 % most deprived in the country.

However, for some small areas, employment deprivation and crime rankings are amongst the worst 10% in the whole of England.

3.4.4 Whilst there is always going to be some unmet need in society, need in Richmond is particularly marked for those that are already experiencing disadvantage. Research commissioned by Richmond Parish Lands Charity (RPLC) and Hampton Fuel Allotment Charity (HFAC)[13] found that many Richmond residents are on the edge of crisis. This is often due to the compounding effects of the high cost of living in Richmond, failings in the system and the impact this is having on the growing prevalence and severity of mental health issues. Older people living in Richmond, often those who live by themselves, are at risk of social isolation. Although an older person living in the borough may own their own house and therefore be asset-rich, they are likely to be cash poor. This can be a barrier to accessing services and support, and compounded with the difficulties travelling in some parts of the borough and the lack of carers is likely to act as further barriers to accessing services.

3.5 Ethnicity

3.5.1 Richmond is similarly diverse as the rest of England and Wales but it is one of the least ethnically diverse boroughs in London. The non-white population was just over 14% of the borough's population in 2011 made up of non-white minority ethnic groups, the largest of which is Indian – 2.8%. English is spoken as the main language by 90% of residents, and 99% can speak English well.

	Richmond Borough		London	England & Wales
	Number	%	%	%
White: British	133,582	71.4	44.9	80.5
White: Irish	4,766	2.5	2.2	0.9
White: Other White	22,282	11.9	12.6	4.4
White: Gypsy or Irish Traveller	95	0.1	0.1	0.1
Mixed: White and Black Caribbean	1,250	0.7	1.5	0.8
Mixed: White and Black African	731	0.4	0.8	0.3
Mixed: White and Asian	2,857	1.5	1.2	0.6
Mixed: Other Mixed	1,942	1.0	1.5	0.5
Asian or Asian British: Indian	5,202	2.8	6.6	2.5
Asian or Asian British: Pakistani	1,163	0.6	2.7	2.0
Asian or Asian British: Bangladeshi	867	0.5	2.7	0.8
Asian /Asian British: Chinese	1,753	0.9	1.5	0.7
Asian or Asian British: Other Asian	4,622	2.5	4.9	1.5
Black or Black British: Caribbean	840	0.4	4.2	1.1
Black or Black British: African	1,643	0.9	7.0	1.8
Black or Black British: Other Black	333	0.2	2.1	0.5
Other ethnic group: Arab	1,172	0.6	1.3	0.4
Other ethnic group: Any other ethnic group	1,890	1.0	2.1	0.6

Table 6: Ethnic groups

[13] Rocket Science UK Ltd (2017) Understanding current and future need across Richmond

Source: Census of Population 2011, Key Statistics Table KS201EW Ethnic group, local authorities in England and Wales © Crown copyright

3.5.2 In 2011, Heathfield ward has by far the largest concentration of non-white ethnic minority groups (16.2%) living in the borough. Whitton and West Twickenham are also more ethnically diverse compared to the borough average, whereas Hampton is the least diverse.

3.6 Disability

3.6.1 The 2011 Census data shows that 11.8% of the borough's population has a limiting long-term illness, health problem or disability which limited their daily activities or the work they could do (includes problems that are due to old age). 19% of households in the borough contain someone with a long-term health problem or disability.

3.6.2 2.03% of the working age population are permanently sick or disabled. The England & Wales average for long-term limiting illness is 4.05%.

3.7 Qualifications

3.7.1 Richmond has a high proportion of the workforce working in managerial, senior and professional occupations (77,000 or 71.8%). This reflects the high qualifications of the workforce, and that the residents are generally highly skilled.

Highest level of qualification from Census (March 2011)

	Richmond (persons)	Richmond (%)	London (%)	England & Wales (%)
Level 4 and above	79584	53	37.7	27.2
Level 3	15920	10.6	10.5	12.3
Apprenticeship	2304	1.5	1.6	3.6
Level 2	15916	10.6	11.8	15.3
Level 1	11075	7.4	10.7	13.3
Other	9338	6.2	10.0	5.7
No qualifications	15915	10.6	17.6	22.7

Table 7: Figures are for those of aged 16 and over.
Note: % is the proportion of resident population of area aged 16 and over
Source: ONS Census 2011, KS501 EW.

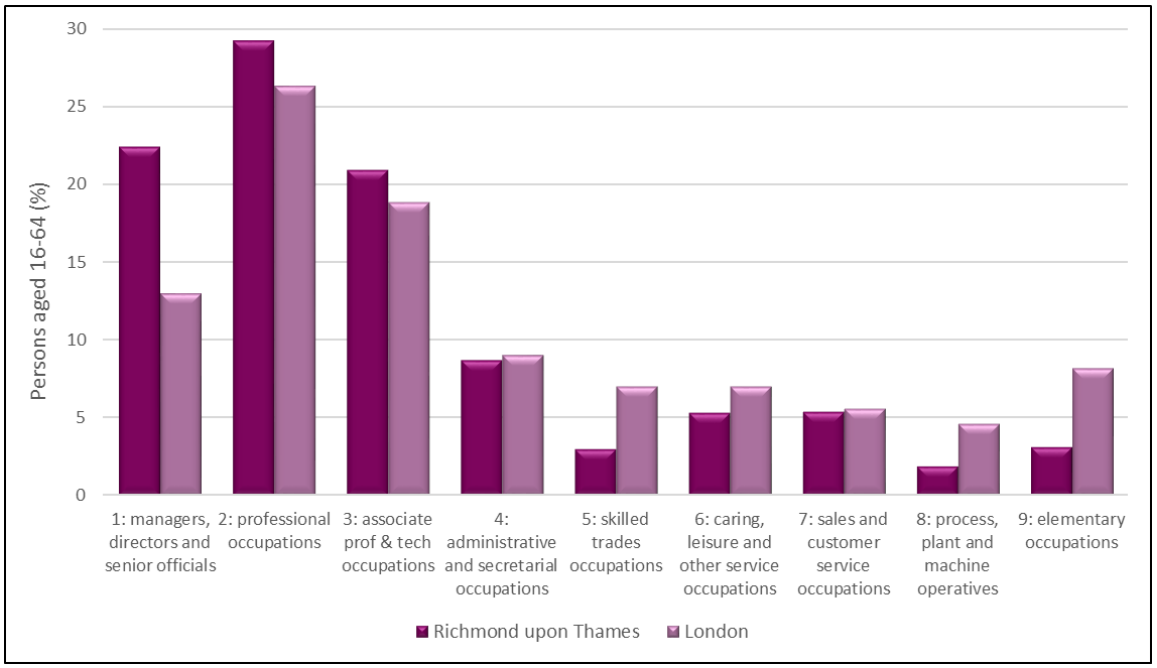


Figure 4: Proportion of persons aged 16-64 in the various occupations

3.7.2 The resident population in 2018 is highly trained with 67.9% of the workforce having NVQ4+ and only 3.4% having no qualifications. The level of qualification of the resident workforce in managerial, senior official positions and professional occupations is well above the London and UK average and the workforce in elementary occupations is significantly below the London and UK average. Richmond's resident weekly earnings are on average 17% higher than in London as a whole and 40% above the national average at £820 per week.

Table 8 Employment of usual residents aged 16 to 74 by occupation (Oct 2018-Sep 2019)

	Richmond		London	England & Wales
(Standard Occupational Classification)	Number	%	%	%
Soc 2010 major group 1-3	*77,000*	*71.8*	*58.7*	*47.4*
1 Managers, directors and senior officials	22,100	20.6	13.3	11.3
2 Professional occupations	32,700	30.5	26.4	21.2
3 Associate professional & technical	22,200	20.7	18.7	14.8
Soc 2010 major group 4-5	*10,600*	*9.9*	*15.8*	*19.9*
4 Administrative & secretarial	7,600	7.1	8.9	9.7
5 Skilled trades occupations	#	#	6.8	10.0
Soc 2000 major group 6-7	*13,700*	*12.8*	*12.8*	*16.3*
6 Caring, leisure & other service occupations	7,000	6.5	7.1	9.0
7 Sales and customer service occupations	6,700	6.3	5.7	7.3
Soc 2000 major group 8-9	*6,000*	*5.5*	*12.7*	*16.4*
8 Process plant & machine operatives	#	#	4.5	6.2
9 Elementary occupations	3,900	3.6	8.1	10.2

Source: ONS annual population survey # Sample size too small for reliable estimate
Notes: Numbers and % are for those of 16+ % is a proportion of all persons in employment

3.7.3 However, a highly skilled, high earning, articulate population conceals the fact that there are those less fortunate: without work; with health problems; in fuel and housing poverty and those living in the scattered pockets of relative deprivation across the borough.

3.8 Economy and employment

3.8.1 A measure of the number of employee jobs (i.e. not all jobs) is the Annual Population Survey (APS). This sample survey relates to the characteristics of people living in an area. The APS is the largest regular household survey in the United Kingdom. It includes data from the Labour Force Survey (LFS), plus further sample boosts in England, Wales and Scotland. The survey includes data from a sample of around 256,000 people aged 16 and over.

Employee Jobs (2018)	Richmond		London	Great Britain
	employee jobs	%	%	%
Total employee jobs	**79,000**	**-**	**-**	**-**
Full-time	**53,000**	**67.1**	**73.5**	**67.6**
Part-time	**26,000**	**32.9**	**26.5**	**32.4**
Employee jobs by industry				
Manufacturing	1,000	1.3	2.2	8.1
Construction	2,500	3.2	3.6	4.7
Water supply, Sewerage, Waste Management & Remediation Activities	250	0.3	0.3	0.7
Wholesale and retail, including motor trades	10,000	12.7	12.0	15.2
Transport & storage	2,000	2.5	4.1	4.8
Accommodation and Food Services	8,000	10.1	8.4	7.6
Information and Communication	6,000	7.6	7.9	4.2
Financial, real estate, other business activities	3,750	4.8	9.7	5.2
Professional Scientific & Technical Activities	12,000	15.2	13.7	8.7
Administrative & Support Service Activities	7,000	8.9	10.9	9.1
Public Administration & Defence; Compulsory Social Security	1,500	1.9	4.3	4.3
Education	10,000	12.7	7.4	8.9
Human Health & Social Work	7,000	8.9	10.3	13.2
Arts, Entertainment & Recreation	6,000	7.6	2.5	2.5
Other services	2,250	2.8	2.3	2.0

Table 9. Employee Jobs by Industry

Source: Source: ONS Business Register and Employment Survey

Note: Employee jobs percentages are based on total employee jobs. Employee jobs excludes self-employed, farm-based agriculture, government-supported trainees and HM Forces. Totals do not always correspond because of confidentiality measures employed by ONS

Note: - denotes data unavailable

3.8.2 There was a good supply of office premises in Richmond although the dense nature of the borough limits the availability of potential new developments. Following the introduction of the Prior Approval process to allow offices to be converted into residential without planning permission, around a quarter of the Borough's office stock has been earmarked by developers for conversion to high value residential premises. The supply of smaller cheaper office accommodation is likely to be severely diminished. See the Council's Monitoring Report [14] for Employment Floorspace Monitoring (2017/18 to 2018/19) for further details.

3.8.3 The borough has seen a significant loss in employment floorspace over recent years, as shown in the graph below. Over the two years between 2017/18 to 2018/19, there was an overall loss of almost 30,300sqm of net employment floorspace, with the greatest losses in the B1 (73%) and Sui Generis (20%) use classes.

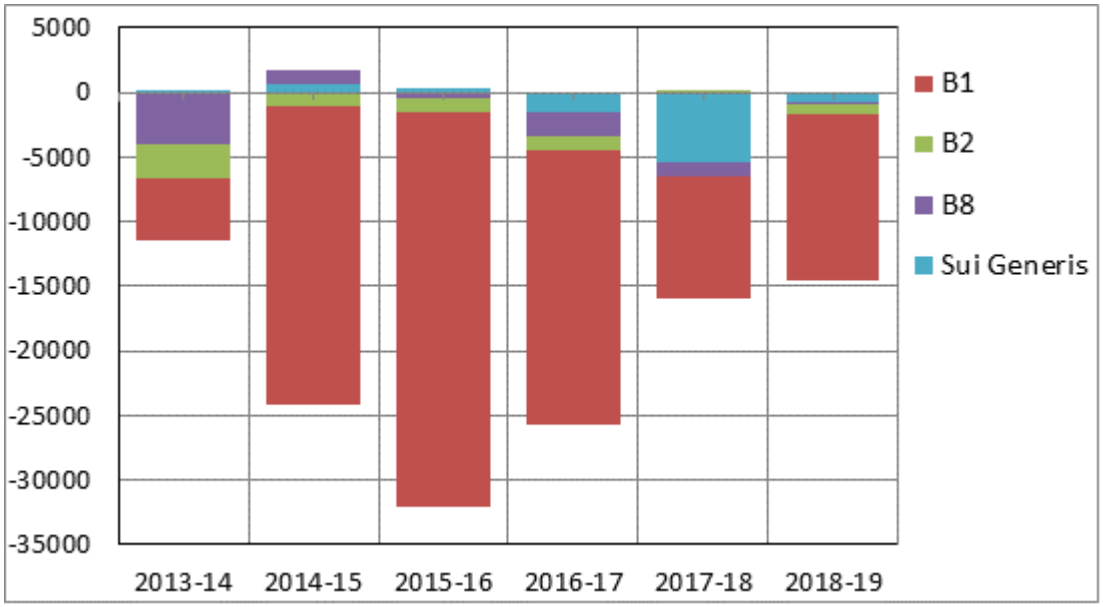


Figure 5: Employment Floor Space Losses 2013/14 to 2018/19; LBRuT Authority's Monitoring Reports

3.8.4 Following the significant losses in employment land, the Council designated as part of its Local Plan in 2018 locally important land and business parks as well as Key Office Areas in the borough, for which specific policies as set out in the Local Plan (2018) apply.

[14] https://richmond.gov.uk/media/18604/employment_floorspace_monitoring_2017_2019.pdf

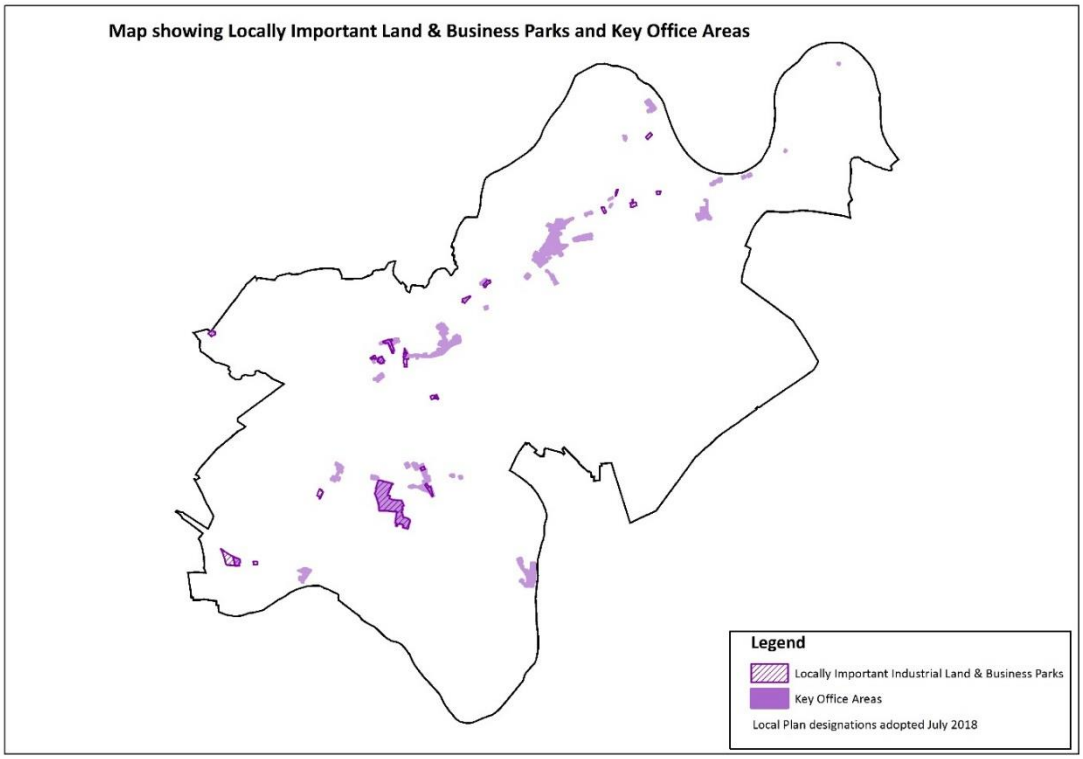


Figure 6 : Locally Important Industrial Land and Business Parks and Key Office Areas in LB Richmond

Business Counts

	Richmond Upon Thames		London	
	Number	**%**	**Number**	**%**
Enterprises				
Micro (0 To 9)	12,500	93.1	473,875	90.7
Small (10 to 49)	760	5.7	38,570	7.4
Medium (50 to 249)	125	0.9	7,650	1.4
Large (250+)	35	0.3	2,145	0.4
Total	13,425	-	522,240	-
Local Units				
Micro (0 To 9)	13,280	90.4	509,415	87.2
Small (10 to 49)	1,175	8.0	59,570	10.2
Medium (50 to 249)	200	1.4	12,885	2.2
Large (250+)	30	0.2	2,315	0.4
Total	14,690	-	584,185	-

Table 10: UK Business Counts (2019)
Source: Inter Departmental Business Register (ONS)
Note: % is as a proportion of total (enterprises or local units)

3.8.5 Many local people commute out of the borough to work and at the same time, many non-residents come to work in Richmond each day. In 2011, the Census told us that 62% (55,500 people) of all employed residents commuted out of the borough to work – most significantly to The City, Westminster, Hounslow and Kingston. 38% (34,000

people) of the resident workforce both lived and worked in the borough, and 50% of the borough's workforce (34,500 people) commuted into the borough to work. There are also strong commuting flows in and out of the various surrounding boroughs.

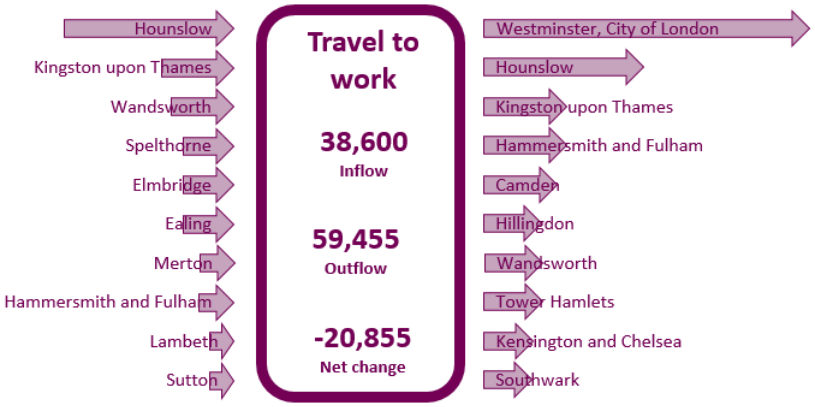


Figure 7: Commuting and Travel to work flows

	Richmond upon Thames				London			Great Britain
	Male %	Female %	Total (number)	Total (%)	Male %	Female %	Total (%)	(%)
Economically active†	87.3	75.5	110,100	81.3	84.4	71.7	78.1	78.9
In employment†	85.3	72.9	107,300	79.0	80.3	65.0	74.4	75.7
Employees†	69.4	59.3	82,600	64.3	62.7	59.3	61.0	64.7
Self employed†	15.4	13.1	23,700	14.3	17.3	8.9	13.1	10.8
Unemployed (model- based)§	#	#	3,500	3.2	4.8	4.4	4.6	3.9

Table 11: Labour force characteristics of working age population (Oct 2018-Sep 2019)

Source: ONS annual population survey

Notes:

#	Sample size too small for reliable estimate (see definitions)
†	numbers are for those aged 16 and over, % are for those aged 16-64
§	numbers and % are for those aged 16 and over. % is a proportion of economically active

3.8.6 The fall in the economically active female employees might be due to the high costs of child care in the borough. It may too be a driver for the increase in self-employment by women who seek to fit child care around the flexibility of being self-employed.

3.8.7 The way we work is continuing to change, for example the popularity of working from home and provision of serviced accommodation for flexible use is becoming more in demand. Richmond upon Thames has a higher proportion of self-employed workers than the rest of the country and many of these will work from home.

Benefits Claimants

3.8.8 The measure of the number of people receiving Universal Credit principally for the reason of being unemployed is still being developed by the Department for Work and

Pensions. Consequently, this component of the total Claimant Count does not yet correctly reflect the target population of unemployed claimants and is subject to revisions. For this reason, the Claimant Count is currently designated as Experimental Statistics. As Universal Credit Full Service is rolled out in particular areas, the number of people recorded as being on the Claimant Count is likely to rise.

3.8.9 Although unemployment rose significantly during the recession, it remains relatively low. In December 2019, 1.7% of the borough's residents were claiming benefit (not necessarily out of work benefits), lower than in London and Great Britain.

	Richmond upon Thames		London	Great Britain
	Number	%	%	%
All people	2,065	1.7	3.0	2.9
Males	1,095	1.8	3.2	3.4
Females	975	1.5	2.7	2.4

Table 12: Claimant count by sex - not seasonally adjusted (December 2019)
Source: ONS Claimant count by sex and age
Note: % is the number of claimants as a proportion of resident population of area aged 16-64 and gender

3.9 Town centres

3.9.1 The existing Local Plan sets out a hierarchy of centres (shown in the map below) and specifies what type of development is acceptable, where it should go and the scale that is appropriate, for each type of centre.

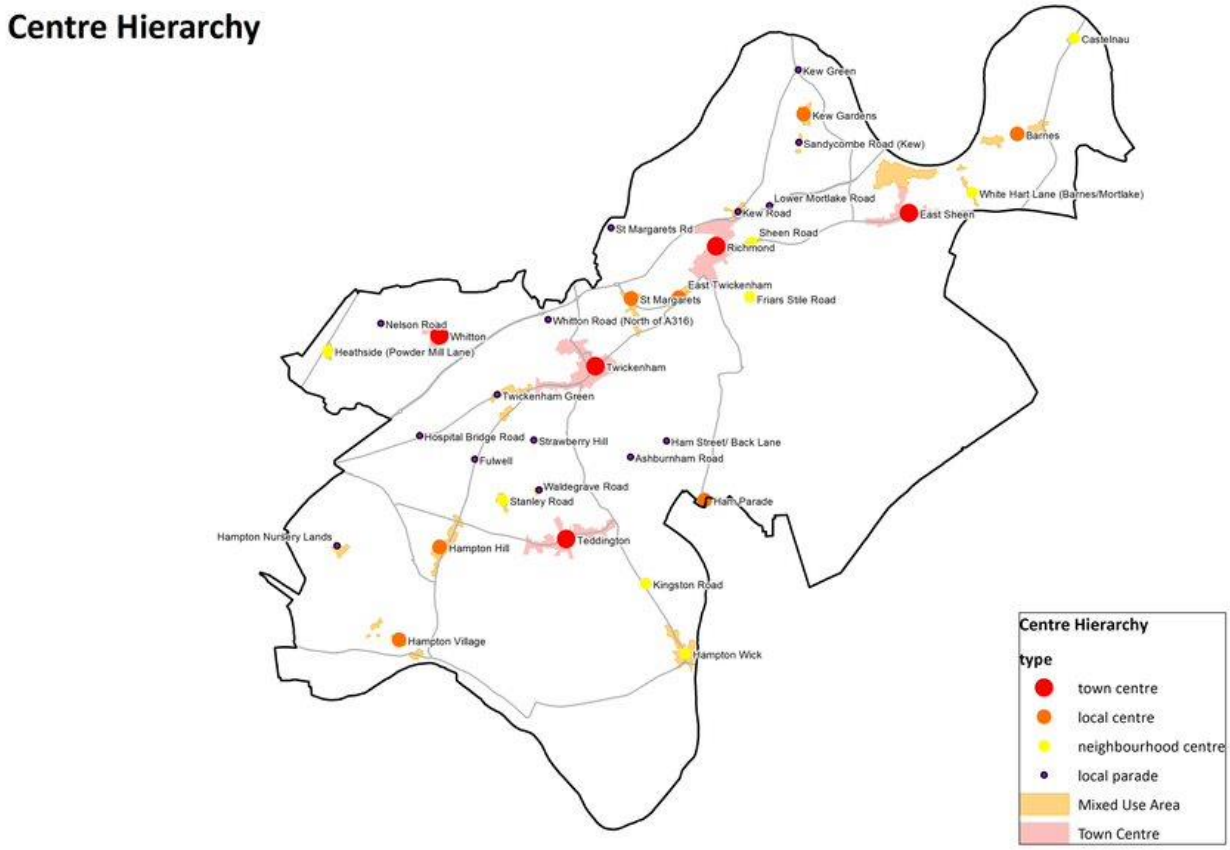


Figure 8. Hierarchy of centres across Richmond upon Thames.

3.9.2 The borough's town centres of Richmond, Twickenham, Teddington, Whitton and East Sheen generally perform well compared to other parts of London and the country. Since 2012 these centres have typically had vacancy figures between half and approximately two thirds of the national figure, albeit it that the latest research pre-dates the Covid-19 pandemic.

3.9.3 Previously, vacancy levels were generally regarded as a good indicator of the health of town centres. The latest data available, predating the pandemic, [i] show a GB vacancy rate of 11.8% for the first half of 2019, and a retail vacancy of 13%. These figures have fluctuated recently, falling to a low in the second half of 2016, after which they have been gradually rising, although not as yet reaching 2013-2014 levels. In all likelihood, vacancy rates in centres, including retail, will rise following the pandemic, resulting from the economic consequences of the lockdown.

3.9.4 The borough vacancy rate also rose between 2017 and 2019 to 8.0%, compared with 6.6% in 2017. This rate had not reached the levels experienced in 2012, although as with the national data, pre-dates the pandemic. Vacancy rates were lower in designated shopping frontages in 2019. In 2019 the borough-wide shop vacancy rate was 7.4%, higher than in 2016 & 2017 but lower than in 2015.

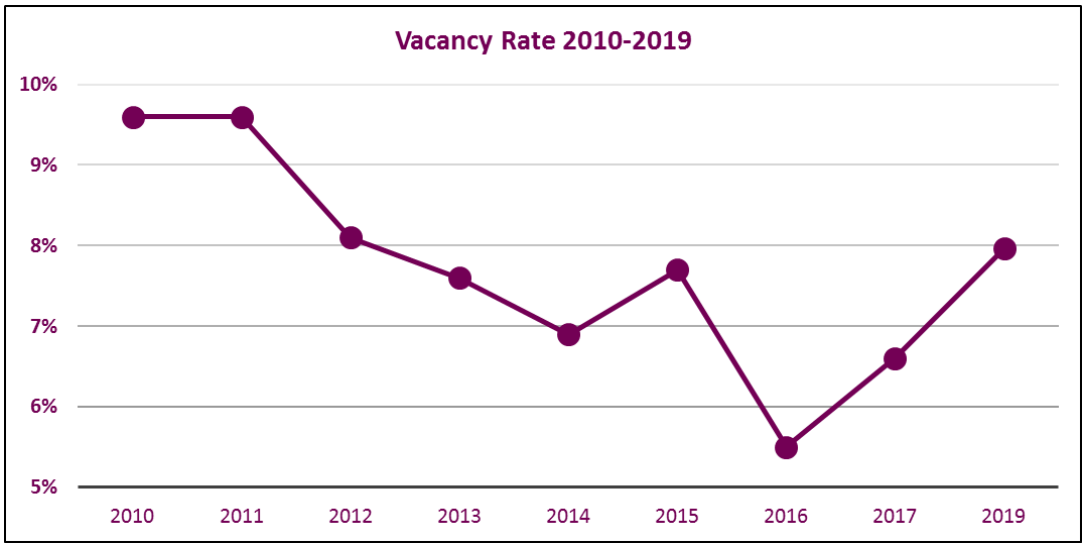


Figure 9. Vacancy Rates in LB Richmond upon Thames, 2010 to 2019

3.9.5 At this point, there are very little post-pandemic data available and it is difficult to predict the impact that the lockdown will have on the economy in the medium and long term. Structural change to the retail sector, particularly the growth of internet shopping, was already having a significant impact on retailers prior to the pandemic. Forecasting impact is difficult. However, it is possible that the amount of retail space required will further decline, and that centres will need to continue to diversify and embrace change. It is possible that shopping habits will be changed on a permanent basis. Retailer requirements may also change in terms of the type and location of space needed in the short and longer term. Also, some consider that smaller centres offering local services and shopping for communities will experience a renaissance. Clearly, the impact of the pandemic on the wider economy, and town centres in particular, will need to be closely monitored, as it has the potential to significantly affect the role and make up of borough centres having considerable implications for change of use.

Figure 10. Number of vacant shops in LB Richmond upon Thames, 2012 to 2019

3.9.6 In addition to the five larger centres, there are around thirty local and neighbourhood centres and parades spread across the borough, which are particularly important for top-up shopping and especially for those who are less mobile or who don't have access to a car. It has been an established principle to provide local shopping opportunities within 400 metres of people's homes by protecting shops and facilities which meet a local need. There should be a continued aim to provide top-up shopping opportunities within walking distance for residents, and protect local shops and services serving a localised need.

3.10 Transport and Communications

3.10.1 The Mayor's Transport Strategy[15] 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.

3.10.2 The Council's Local Implementation Plan (LIP3) sets out the Council's transport objectives and delivery proposals for 2019/20 to 2021/22 and provides direction of travel on longer term proposals to implement the Mayor's Transport Strategy (MTS) over the 20 year horizon, 2018-2041. The new Local Implementation Plan (LIP) features the headline target for 75% of trips to be by sustainable modes by 2041, from a baseline of 61%. The LIP also has targets for expanding the cycle network,

[15] Mayor's Transport Strategy 2018; https://www.london.gov.uk/what-we-do/transport/our-vision-transport/mayors-transport-strategy-2018

improving air quality, reducing road danger and increasing the use of public transport..

3.10.3 Richmond's Climate Emergency Strategy (2020) recognises that transport was the largest emitting sector of UK greenhouse gas emissions in 2017. The Council has a role to play in influencing the behaviour of residents in the borough and the Richmond Active Travel Strategy[16] will enable and encourage 'modal shift' away from the highest emitting forms of transport towards the lower emitting forms of transport where possible. The creation of this strategy is not about forcing people out of their cars; it is intended to help create a borough where people do not feel forced into their cars because they don't feel safe or confident enough to travel by foot, cycle or public transport. It reflects how people currently travel, and aims to support residents in leading active, healthy lifestyles.

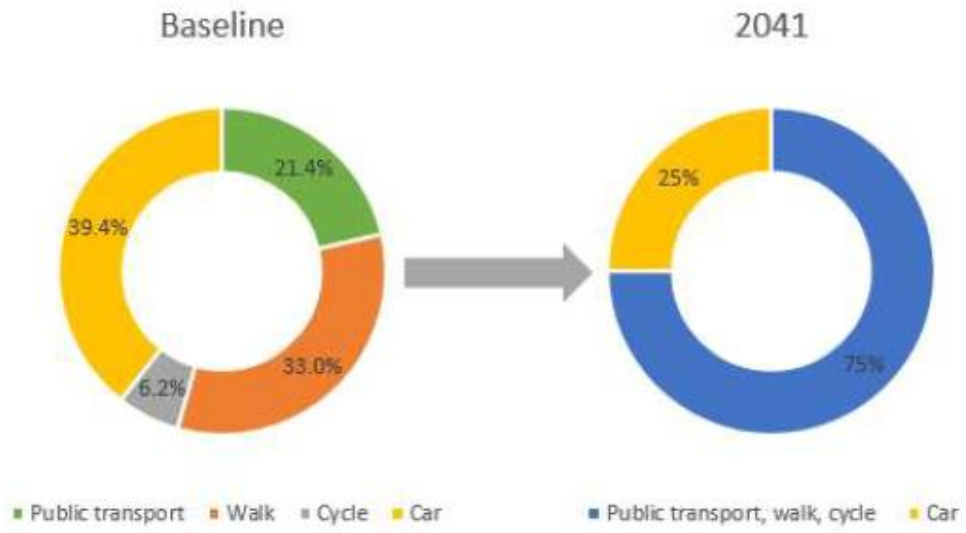


Figure 11: Baseline and target mode shares (LBRuT, Third Local Implementation Plan, 2019)

3.10.4 There are 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 (those running through the Royal Parks). The A316 (Great Chertsey Road) and A205 (South Circular) are the two major trunk roads in the borough and are both part of the TLRN.

Road network

3.10.5 The proximity of the M3, M4 and M25 provide good road communication to the South West, West and Midlands, as well as to the rest of London and the South East. Heathrow Airport nearby means international communications are very good. As an outer London borough, the transport facilities are well developed. 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)

[16] https://www.richmond.gov.uk/services/roads_and_transport/cycling/cycling_strategy

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

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

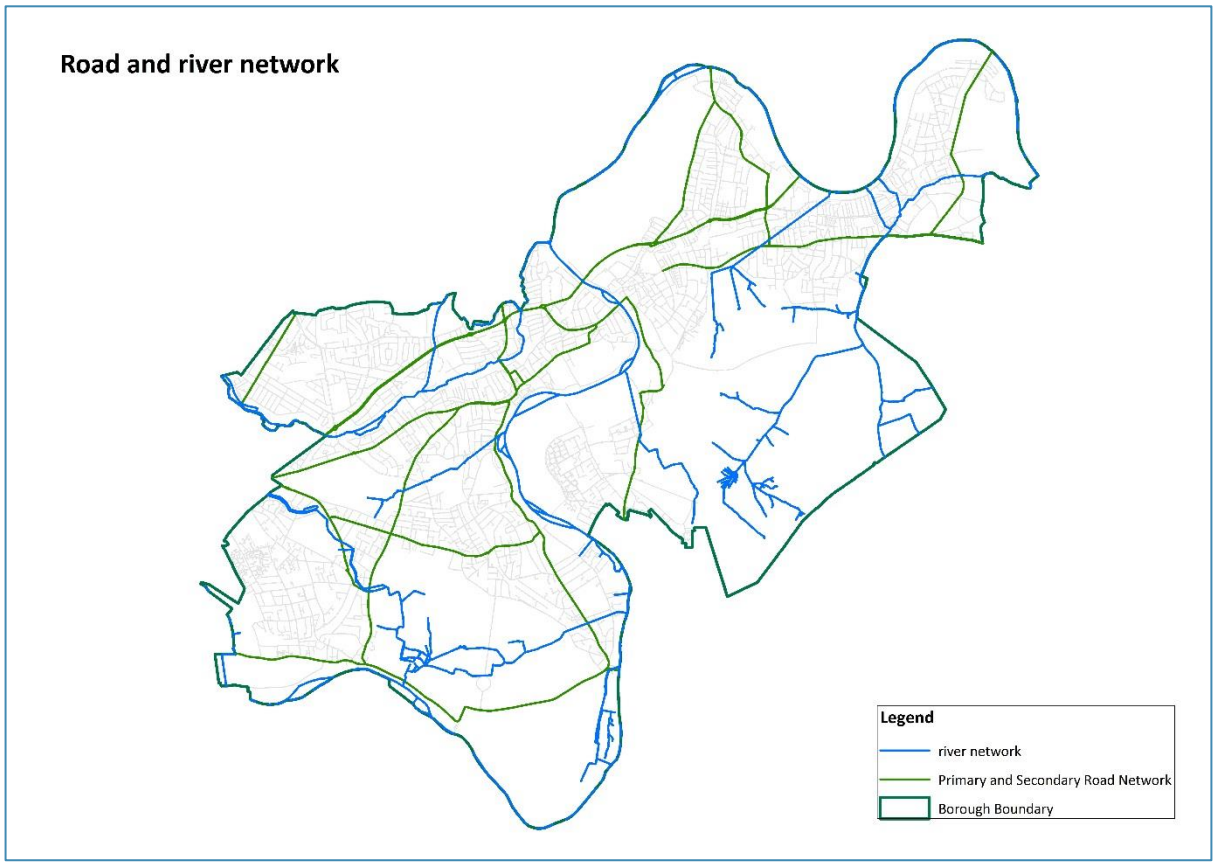


Figure 12: The Borough's road and river network

3.10.7 The River Thames is a major source of severance within the borough, as are the Royal Parks and some portions of the rail network. There are ten bridges that cross the River Thames within the borough. Of these, seven are road bridges and three are foot bridges. The largest gap between road bridges is over 7km, between Richmond Bridge and Kingston Bridge

3.10.8 Just over 75% of households in the borough have at least one car or van, with overall car ownership at 1.06 cars per household and a car trip rate of 1.17. Both car ownership and car use rates are comparable to other outer London boroughs. Car ownership levels are highest in the west of the borough, in Hampton Hill, west Twickenham and Whitton. Ownership levels are also high in the area bordering the north side of Richmond Park, where housing densities are very low.

3.10.9 Access to public transport varies across the borough, with Public Transport Accessibility Levels (PTALs) ranging from 6a (the second highest level) in Richmond and 5 in Twickenham, to PTAL 2 and below in most of the borough. There is some correlation between car ownership and PTALs, with lower car ownership levels in Richmond and Twickenham.

Rail network

3.10.10 There are 14 rail stations across the borough. While most are radial routes offering services to Central London, the borough does feature one of the few orbital routes in London with the Kingston loop running between Richmond and Kingston via Twickenham, Strawberry Hill, Teddington and Hampton Wick. There are overland, Waterloo and North London lines and underground, District Line services.

3.10.11 The Mayor's Transport Strategy sets the strategic direction for transport across London. The strategy includes a headline target for 80% of all journeys to be undertaken by walking, cycling or public transport by 2041, including 75% of trips in outer London. On a local level, this will require a 14% mode shift away from cars over the next 25 years, from a baseline of 61%. The borough has strong base levels of walking and cycling (32.2% and 6.2% respectively). Access to public transport is limited in many parts of the borough, including parts of Ham and Petersham and areas in the west of the borough.

3.10.12 Car ownership levels are high and continue to increase, but vehicle mileage is decreasing. Severance can make some local journeys difficult, particularly for those with limited mobility. The targets set for 2022 envision a borough with more people walking, cycling and using public transport, with fewer use of streets as rat runs and improved air quality.

3.10.13 The areas with the highest levels of NO2 are concentrated along the TLRN - the A316 Chertsey Road, A205 South Circular and the A3 on the south east boundary of the borough. Amongst local roads, Castelnau, the A308 Hampton Court Road and Twickenham and Richmond town centres have the highest levels of NO2. The best opportunity for reducing NOx (and NO2) is to focus on reducing the number of vehicles (particularly diesel vehicles) using these roads and ensuring that remaining vehicles are low and zero emission.

Cycling network

3.10.14 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 individual trips and to link with the formal cycle route network.

3.10.15 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.

Pedestrian provision

3.10.16 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.

3.10.17 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.

3.10.18 The 27km 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 and by visitors.

3.11 Education

3.11.1 The London Borough of Richmond upon Thames has one nursery school and 17 nursery units, 44 primary schools, and ten secondary schools. Of the 44 primary schools, 17 are church schools, and of the 44, 33 are all-through (ages 4 to 11) primary schools, five are infant schools (ages 4 to 7), five are junior schools (ages 7 to 11), one is a nursery school, and two are free schools.

3.11.2 Since 2012, the permanent Year 7 capacity within the borough's state-funded secondary schools has increased by 26.7%, as follows[17].:

School	2012	2019	Difference
Christ's (Church of England)	120	150	+30
Grey Court	210	240	+30
Hampton High	210	180	-30
Orleans Park	200	216	+16
Richmond Park Academy	220	180	-40
The Richmond upon Thames School	N/A	150	+150
St Richard Reynolds Catholic High	N/A	150	+150
Teddington	240	240	0
Turing House	N/A	125	+125
Twickenham	200	180	-20

[17] LBRuT School Place Planning Strategy 2019, Achieving for Children

Waldegrave (girls-only pre-sixth form)	200	216	+16
Total	1,600	2,027	+427

Table 13: Permanent Year 7 capacity within Richmond's state-funded secondary schools
Source: LBRuT School Place Planning Strategy 2019, Achieving for Children

3.11.3 However, in 2019 the number of spare places in the western half of the borough had reduced to a minimal level; and there was no spare capacity in the eastern half at all and therefore a need for more places to be provided. The River Thames acts as a barrier, both actual and perceived, for many. Now that the primary expansions of the last decade are feeding into the secondary phase, catchments of most schools are becoming smaller and very few pupils travel from one side of the river to the other. There is a large and increasing forecast shortfall of places in the eastern half of the borough, which requires substantial additional permanent provision. Only the provision of a new secondary school – Livingstone Academy – as part of the redeveloped Stag Brewery site in Mortlake will meet that shortfall. It is likely, too, that a new school would draw children from families who would otherwise opt for the private sector,

3.11.4 The proportion of pupils living and attending a school in Richmond upon Thames who are eligible for Free School Meals (FSM) has gone up to 8.7% in 2019, from 7.9% in 2015. The proportion of FSM pupils was 15.4% in England in 2019, up from 12.8% in England in 2015.

3.11.5 The majority of pupils attending the borough schools are from white ethnic backgrounds (76.8%), with the largest minority ethnic groups being pupils from mixed backgrounds (9.5%) and pupils from Asian/Asian British backgrounds (8%). The diverse range of pupil backgrounds is evident from the fact that pupils speak over 140 languages other than English.

3.11.6 Standards achieved in Key Stage 2 tests taken by 11-year-old pupils in Richmond primary schools are above national averages. In 2019:

- The proportion of pupils living and attending a school in Richmond upon Thames achieving expected standards in reading writing and maths was 81%. This was higher than England (65%) in both state funded and all schools.

3.11.7 At Key Stage 4, 16-year-old pupils in Richmond maintained secondary schools and academies achieve GCSE and equivalent results above national averages. In 2019 the proportion of pupils living and attending a school in Richmond upon Thames achieving Grade 5 or above in English and Maths GCSEs was 56%, compared to 43% in England state funded schools and 40 % in all schools in England Students in Richmond borough achieving AAB or higher in A levels was 21.7%, significantly higher than the England all schools /colleges average of 16.5%.The standards attained by pupils in Richmond's primary and secondary schools and academies are above the national average. This data does not include privately educated school children or children attending schools outside the Borough

3.11.8 Since March 2014, three free schools have been approved for opening within the borough, and one primary school, Sheen Mount, has been approved for permanent

expansion. Two two-form entry primary schools were approved, to open in September 2015: Richmond Bridge Primary and Twickenham Primary. A five-form entry 11-16 secondary school Richmond upon Thames College free school, proposed by Richmond upon Thames College, Richmond Council and Harlequins Rugby Club has been approved to open in September 2017 on the Richmond upon Thames College site in Egerton Road, Twickenham. Whilst these new schools will meet some of the basic need for school places and will be very welcome within the local family of schools, more places will be required to meet longer-term forecast demand, particularly in the primary phase.

3.12 Health and Wellbeing

3.12.1 Overall Richmond is healthy, safe and rich in assets. Life expectancy is increasing and the number of people dying prematurely is lower than other areas. There are low levels of crime and accidents and many green spaces, good schools and high levels of volunteering. For many in Richmond, health and wellbeing is already much better than the average across London.

3.12.2 However, although the overall picture compared to the rest of England is positive, this can hide the fact that there are large numbers with health and wellbeing issues. The local Strategic Needs Assessments process (JSNA)[18] examines a broad cross-section of data and reveals needs which might otherwise be overlooked. Particular priorities have been identified by staff, patients and members of the public in focus groups, meetings and surveys. Some of the priority local needs identified through the JSNA process, developed to inform commissioning intentions *are linked to the theme of 'place' and the life-course themes of 'start well', 'live well' and 'age well'.*

3.12.3 Place

- The borough has been declared an **Air Quality Management Area (AQMA)** because it has exceeded permissible levels of pollution. The overwhelming contributor to pollution in the borough is from road transport. All exceedances in our borough are along our main roads and highways and in our town centres. The largest sources of pollution locally were road transport, construction, and industrial and domestic heat and power.
- **Two primary schools** in Richmond are in areas that exceed the legal air pollution limits.[19]
- Public Health England (PHE) has estimated that the fraction of annual all-cause adult mortality attributable to anthropogenic (human-made) particulate matter (PM2.5), expressed as the percentage of annual deaths from all causes in those aged 30 plus (Health Protection, Indicator D01, 2018 data) is 6.3% for Richmond, which is lower than London (6.6%), but higher than England (5.2%) averages. This crudely translates into 15.1 attributable deaths per 100,000 population per year.

[18] 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.
[19] Mayor of London, London Assembly; hundreds of London schools exceed legal air quality levels, July 2016

- Just over 75% of households in the borough have at least one car or van, with overall car ownership at 1.06 cars per household and a car trip rate of 1.17. Both car ownership and car use rates are comparable to other outer London boroughs.[20] Most trips in the borough do not involve a car however – 60% of trips taken by residents are by foot, cycle or public transport and there is a desire to see this increase.
- Richmond upon Thames is an Outer London Borough composed of eighteen wards that cover an area of 22.2 square miles - 57% of this area is made up by over 100 parks and open spaces. Only 28% of residents use **outdoor space for exercise or health reasons,** although this is the second highest percentage in London.
- Whilst overall participation is high, analysis shows that **not all population groups engage equally in sport and physical activity**. Women, older adults, people with disabilities and mental health difficulties, and those from areas of relative deprivation are some of the groups which demonstrate lower levels of participation.[21]

Start Well

3.12.4 There is gap in **educational attainment** between children eligible for free school meals and those not. 58.2% of children eligible for free school meals achieved a 'good' level of development at the end of reception and 70.8% achieved the expected level in the phonics screening check in Key year 1, reading, writing and maths, compared to 76.2% for London and 70.1% for England.[22]

- A significantly lower percentage of children (75.9%) have received 2 doses of **MMR immunisation at or before the age of five** compared with the England average (86.4%).
- The rate of **A&E attendances (0-4 years)** has increased steadily the last three years, from 518 per 1000 in 2013/14 to 844 per 1000 in 2018/19. This is now significantly higher than both the England average (655 per 1000) and the London average (755 per 1000).[23]
- In 2018/19, there were 308 per 100,000 hospital admissions as a result of **self-harm** in those aged 10-24 year-olds. This is above London average of 195 but below England average of 444 per 100,000.[24]
  - Estimated prevalence of mental health disorders in children and young people as a percentage of the population aged 5 to 16 in Richmond was estimated to be at 7% (2,008) in 2018. [25]
- In 2018/19, 16.1% of children in reception were overweight or obese which is significantly better than both national (22.6%) and London proportions (21.8%). As children grow up, this figure increases and by year six, 22.6% of

[20] Richmond Local Implementation Plan (2019) https://richmond.gov.uk/media/17448/third_local_implementation_plan.pdf
[21] JSNA Community Access Strategy Newsletter, 2017
[22] Public Health Outcomes Framework 1.02i & 1.02ii, 2015/16
[23] Public Health Outcomes Framework 3.03x, 2018/19
[24] PHE Child Health Profiles, 2018/19.
[25] PHE Child Health Profile, 2017/2018. https://fingertips.phe.org.uk/profile-group/mental-health/profile/cypmh

children were overweight or obese. These figures have a stable trendline and also remain below national (34.3%) and London (37.9%) averages.[26]

Risky behaviours

3.12.5 **Prevalence of smoking** for 2018/19 in those aged 15 plus and are current smokers is 11.8% compared to London at 16.5% and England at 16.7%. [27]

- The three-year average rate of **alcohol specific admissions** for children under 18 years old has increased slightly from 22.6 per 100,000 (2014/15- 2016/17) to 33.2 (2016/17-2018/19). On average 14 children a year are admitted to hospital for an alcohol specific condition in Richmond. For 2016/17 to 2018/19 for London it was 16.5% and for England it was 31.6%.[28]
- For 2018/19 there were 144 new referrals into **the Young Persons Substance Misuse Service**, a reduction from 226 in 2017/18. The top three referral routes were via children's services, followed by A&E and education providers. Primary substance use reported during 2018/19 were linked to cannabis 33% followed by alcohol 12%, others such as Benzodiazepines and MDMA were less than 2%. The ages of those referred to the service were mainly 15 to 16 (40%), followed by those who were 17 to 18 (27%) and 13 to 14 (21%). In terms of gender, 40% were female and 60% male while regards to ethnicity 37% were White, 6% Mixed, 3% Black, and 1% for Asian and Other (51% did not state their ethnicity).[29]
- Deaths from drugs misuse is 2.6 per 100,000 population (2016-18 data), this is lower than London (3.1 per 100,000) and England (4.5 per 100,000). [30]

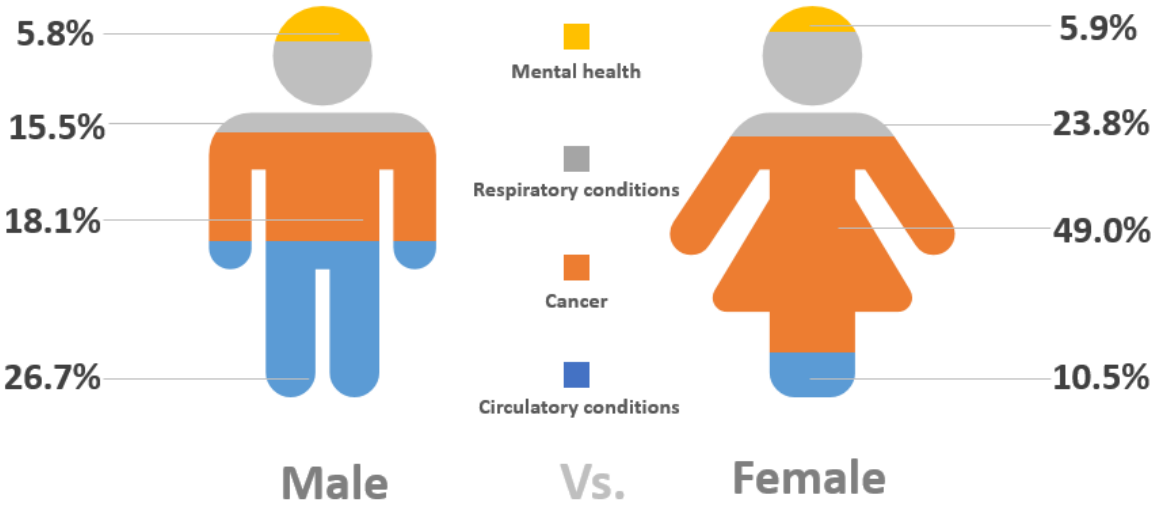
Live Well

3.12.6 **Life expectancy at birth** provides us with information on the estimated length of life a new born baby would survive if he/she experienced the age-specific mortality rates for that area and time period throughout his/her life. Males: In 2016-18, life expectancy at birth in males in Richmond was 82.5 years, which was higher than the England average of 79.6 years and the London average of 80.7 years. Locally, life expectancy has steadily increased in males and they are living 4.1 years longer than they were in 2001-03. Females: In 2016-18, life expectancy in females in the borough was 86.4 years which was higher than the England average of 83.2 and the London average of 84.5 years. Locally, life expectancy has steadily increased in females and they are living 4.1 years longer than they were in 2001-03.
Health inequalities

[26] PHE Child Health Profile, 2017/2018. https://fingertips.phe.org.uk/search/obesity#page/0/gid/1/pat/6/par/E12000007/ati/102/are/E09000027/cid/4/page-options/ovw-do-0
[27] PHE Health Profile, 2018/19. https://fingertips.phe.org.uk/search/smoking#page/0/gid/1/pat/6/par/E12000007/ati/102/are/E09000027/iid/91547/age/188/sex/4/cid/4/page-options/ovw-do-0
[28] PHE Health Profile. https://fingertips.phe.org.uk/profile/local-alcohol-profiles
[29] Data provided by Achieving for Children (2019)
[30] PHE Health Profile (2019). https://fingertips.phe.org.uk/search/drugs#page/0/gid/1/pat/6/par/E12000007/ati/102/are/E09000027/cid/4/page-options/ovw-do-0

- In 2015-17, a male living in the most deprived quintile of the borough was expected to live to 78.8 years, while his counterpart living in the least deprived quintile would expect to live 7.2 years longer (86.0 years). Among females the gap was slightly smaller with those living in the most deprived quintile expected to live to 83.7 years, 3.8 years fewer than her counterpart living in the least deprived quintile of the borough (87.5 years).[31]

Key differences of the life expectancy gap between the most and least deprived quintile in men and women in Richmond, by top causes of deaths, 2015-17[32]



Note only main causes are included in the figure above. Deaths under 28 days, digestive, external and other causes of death are not included.

3.12.7 Age well

[31] The Segment Tool (2015-2017) 2015 IMD data
[32] Public Health England, Segment Tool. 2015-2017

The accumulated impact of behaviours and exposures earlier in life, combined with functional decline lead to increased levels of disease in older people.

- 9% of the borough is made up of the population aged 65-74 years. Highest proportion is seen within the wards of Hampton, Teddington and Hampton North.
- 5% of the borough is made up of the population aged 75-84 years. Highest proportion is seen within the wards of Kew, South Richmond and Teddington.[33]
- The number of people aged 65 years or over is projected to increase from 2020 to 2030 by 15.7%.[34]
- One person households comprising those aged 65 plus constitutes 11.8% of the population of Richmond (2020 GLA data)
- According to death record data, 20.8% of deaths amongst older people (65 plus) in Richmond throughout 2017 took place in a care home. This is higher than London (18%) but lower than England (26%).
- A higher proportion of Richmond's population are living with a diagnosis of dementia (0.6%) than average in the rest of London (0.5%). This is, in part, due to the high proportion of people aged 65 years and above in the borough (15.4%). Approximately 7.2% of this older cohort in Richmond are currently living with dementia, further 31% of people with dementia in Richmond have not been diagnosed.
- **Co-morbidity is high**, with 70% of people with dementia having one or more other long-term conditions. [35]
- It is estimated that in 2018, 1,564 people aged above 65 years provided more than 20 hours of unpaid care per week in Richmond. This figure is predicted to increase to 2,389 by 2035. [36]

Health care infrastructure

3.12.9 The partners in relation to health care infrastructure are the South West London Clinical Commissioning Group[37] (SWLCCG) and NHS England[38]. A total of 1,713,000 patients were registered with a GP in the NHS South West London CCG (covering the boroughs of Richmond, Wandsworth, Sutton, Merton, Croydon and Kingston) on 1 May 2020. GPs in Richmond work together as part of the SWLCCG, to offer free primary care health services for local people. Richmond Clinical Commissioning Group (CCG) is a clinically led member organisation. This means that GPs make decisions about local health services by using their local knowledge to improve services and focus resources where there is greatest need.

3.12.10 The nearest Hospitals for acute Accident & Emergency are outside of the borough – 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

[33] DataRich. Population Slicer. 2017. Data used: 2019-2029
[34] GLA population projections (2020)
[35] Richmond Dementia Needs Assessment (2019). https://www.datarich.info/health-conditions/dementia/
[36] Institute of Public Care. Projecting Older People Population Information. [Cited 11 Nov 2018] Available from: http://www.poppi.org.uk/index.php
[37] http://www.swlondonccg.nhs.uk/
[38] http://www.england.nhs.uk/

Teddington, Hampton, Twickenham, Ham and East Sheen, with over 25 GP practices across 29 sites in the borough. All NHS practices currently offer appointments during extended hours' sessions, providing patients with a range of early morning, evening and/or Saturday appointments.

3.12.11 Whitton Corner Health and Social Care Centre brings community health, social services, mental health and other primary care services together under one roof, offering an integrated package for local residents. The borough has 44 pharmacies all providing a full range of essential services, advanced services, enhanced services and locally commissioned services on behalf of Richmond Council and SWLCCG. There is also one online pharmacy that can provide essential and advanced services. Richmond has 24 pharmacies per 100,000 population, which is higher than the London and England averages[39].

3.12.12 Hounslow and Richmond Community Healthcare[40] (HRCH) are the NHS organisation responsible for providing community healthcare to the 425,000 adults and children living in 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 they aim to go further, providing joined up, higher quality, personalised and efficient services that lead to better outcomes for patients.

3.12.13 The main provider of adult and children's mental health services is South West London and St George's NHS Mental Health Trust[41]. A range of services are provided across sites, including The Maddison Centre, Teddington; Barnes Hospital, with other outreach teams and services. The trust are delivering two state-of-the-art hospital buildings for modern inpatient facilities at Springfield University Hospital in Tooting and Tolworth Hospital in Kingston and refurbished mental health facilities in Richmond, Barnes and Twickenham, along with a commitment to provide extensive community healthcare – treating people closer to their families and their home. They will be maintaining a reduced presence at Richmond Royal and Barnes Hospital but are selling off parts of the sites to fund their two new hospitals as part of the Trust's Estate Modernisation Programme, a programme of social infrastructure re-provision to ensure continued delivery of social infrastructure across the Trust area.

3.13 Social Care

3.13.1 The Council's Market Position Statement 2018/19[42] sets out the state of the local social care market at that time. The council's overall intention is to increase the provision of community-based services which will promote people's wellbeing and their independence in their own homes; preventing, reducing and delaying the need for mainstream services. 1688 adults were receiving support funded by Adult Social Services in Richmond-upon Thames as of 31 March 2017. Between 2014/15 –

[39] http://www.richmond.gov.uk/pharmaceutical_needs_assessment.pdf
[40] http://www.hrch.nhs.uk/
[41] http://www.swlstg-tr.nhs.uk/
[42] https://www.richmond.gov.uk/media/16024/market_position_statement_2018.pdf

2016/17, the total number of service users in care homes reduced by 4%, whilst those receiving community-based support has increased by 5%.

3.13.3 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 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 (there are two such facilities in the borough – Twickenham, Sandown Court; and Hampton, Dean Road) and others are proposed.

3.13.4 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. According to CQC data (October 2017), there are 8 nursing homes in the borough with a total of 472 beds, although some of these beds may not be categorised as nursing. In addition, there are 37 residential homes in the borough with a total of 483 beds.

3.13.5 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. The focus of the Council's commissioning model for learning disability services is to reduce reliance on residential care, move service users towards supported living and greater independence where possible, with fewer out of borough placements. In Richmond, 3,683 people aged over 18 are estimated to have a learning disability (2% of total population). There was a 5% increase in the number of adults with a learning disability receiving social care services funded by the Council between 2014/15-2016/17. The number of those aged 18+ predicted to have a learning disability in Richmond-upon Thames in 2017 was set to increase 20% by 2035 with the highest increase seen in the over 85s.

3.13.6 In 2018/19 185 people attended one of the Council's three day-centres providing services to people with dementia or a physical disability or another day centre outside of the borough[43]. 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.

3.14 Housing

3.14.1 At the time of the 2011 Census there were 79,835 households in the borough. This represents an increase of approximately 3,735 homes over the 2001 figure, which already reported an increase of just over 3,000 on the 1991 figure. The London Plan (2015) sets out the average annual minimum housing supply targets for each borough until 2025. As a minimum the Council need to provide an extra 3,150 homes over the next ten years or a target of 315 homes per annum. In the AMR 2018/19, the rate of completions (419) significantly exceeded the annual 315 homes target. For future housing land supply there is an identified 1,508 units over the 5-year period, which is 309 units more than the remaining target in the London Plan

[43] https://www.richmond.gov.uk/media/18458/adult_social_care_how_we_have_done_2018_19.pdf

2015. The new London Plan proposed a significant increase in the overall housing target, with a particular increase in small sites delivering additional housing across outer London based on standardised growth assumptions. This in turn resulted in a significant proposed increase for the borough to deliver a minimum of 811 homes per annum (2019/20 to 2028/29). However, at the time of writing, the Examination Panel Report recommended a change to the borough target to 411 homes per annum, to reflect the realistic output from small sites, which the Mayor of London has accepted and is reflected in the Intend to Publish London Plan (2019). The final housing target, including any specific small sites target, will not be known until the London Plan is finalised as expected later in 2020.

3.14.2 From 30 May 2013 the Government introduced amended permitted development rights to allow for greater flexibility for the change of use of existing offices to residential, subject to a notification procedure with the local planning authority. In 2014/15 and 2015/16 it delivered a significant proportion of completions, but this has reduced from 23% in 2017/18. The housing net gain of 419 in 2018/19 includes 59 units (14%) completed through the prior approval process.

Year	Completions
2009/10	145
2010/11	399
2011/12	208
2012/13	695
2013/14	235
2014/15	304
2015/16	491
2016/17	460
2017/18	382
2018/19	419
Total	3,738

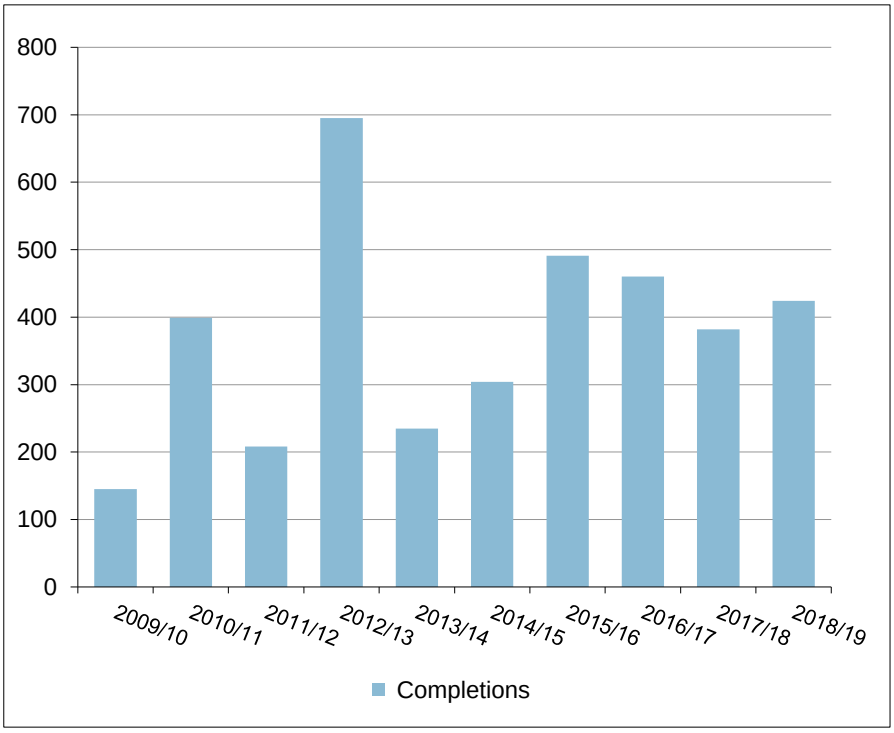


Table 14: Housing Completions in the Borough 2009/10 to 2018/19
Source: LBRuT Decisions Analysis System: completions – Planning Policy Section, as reported in AMRs

3.14.3 In 2001, the average size household in the borough was 2.23 people, and over a third of households were single people. This has now risen to 2.31 (2011 Census). The average household size in London increased from 2.35 persons in 2001 to 2.47 persons in 2011, challenging assumptions over the last 10 years that average household size is generally in decline. According to the 2011 census, the level of home ownership is 63.6%, with a further 21.8% renting from private landlords and another 13.3% (nearly 10,650) households renting from a registered social landlord.

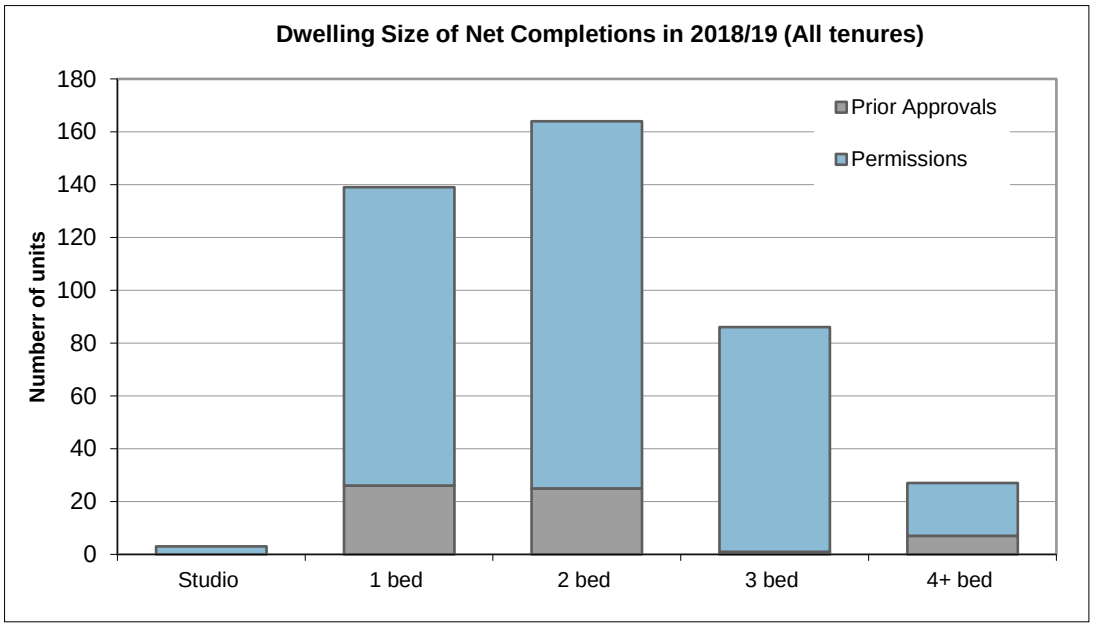


Figure 13: Net Completions 2018/19: Dwelling Size
Source: AMR Housing 2018/19 LBRuT

3.14.4 In common with most of the rest of London, the cost of housing is extremely high. In July 2019, according to the Land Registry, the average house price in Richmond upon Thames was £670,233. England average was £248,836. Comparing average prices of houses across Greater London, Richmond is the most expensive Outer London borough to buy in and private rents are high. The median gross annual pay for residents in the borough was estimated to be £42,650 in the 2019 Annual Survey of Hours and Earnings.

3.14.5 The attractiveness of the borough as a place to live is also reflected in the rent levels found in the private sector. The median rent in London was £1495 per month. Rents were generally highest in Inner London, where the median rent was £1,700, and in Outer London it was £1,300. Richmond upon Thames had the highest median rent (£1,600) while Bexley, Croydon, Havering and Sutton shared the lowest median rent (£1,100). For comparison, the lowest median rent in England was £410 in Kingston upon Hull (Yorkshire and the Humber).

Private Rental Market Summary Statistics – April 2018 to March 2019 Source: www.gov.uk/government/statistics/private-rental-market-statistics

Private Rental Market Statistics

Statistic	Room	Studio	1 bed	2 bed	3 bed	4+ bed
Monthly Rent (median figure)						

Median rent in LB Richmond upon Thames	-	£950	£1224	£1575	£1995	£3250
Median rent in Outer London	£580	£950	£1250	£1500	£1800	£2500

Table 15: Monthly Rent recorded between 1 April 2018 and 31 March 2019 for London

Statistics derived from fewer than five observations have been suppressed and denoted by '-'
Source: London Rents Map: www.gov.uk/government/statistics/private-rental-market-statistics

3.14.6 These figures are based on aggregate sample data supplied by the Valuation Office Agency (VOA) and are based on agreed market rents from private rented sector lettings collated between 1st April 2018 and 31st March 2019. The data is based on agreed rents rather than advertised and reflects the market rather than landlords'/estate agents' expectations, however in an improving market the data may be conservative as it's based on a 12 month rolling database and the expectation is that private sector rents will rise in the face of continued increasing demand.

	Richmond Upon Thames		London	
	Total	%	Total	%
All Households	**79,835**		**3,266,173**	
Owned-Outright	23,756	29.8	689,898	21.1
Owned-Mortgage*	26,994	33.8	886,309	27.1
Shared Ownership	601	0.8	42,108	1.3
Social Rented	10,051	12.6	785,993	24.1
Private Rented	17,440	21.8	819,085	25.1
Living Rent Free	993	1.2	42,780	1.3

Table 16: Tenure breakdown in 2011

Source: Office for National Statistics, 2011 Census, © Crown copyright

3.14.7 While Richmond has the third highest average resident income of all Local Authorities in the UK and the highest house prices in outer London, private rents are also the highest in outer London and increased by 39% between 2011 and 2015. This represents a significant growth in housing costs in real terms. In contrast, Richmond has the fourth smallest social housing sector in Greater London. The Homelessness Reduction Act (HRA) 2017 came into effect in April 2018, bringing substantial changes to how local authorities assess and discharge their statutory homelessness duties including a shift of focus to preventing rather than dealing with the consequences of homelessness, and has seen a drop in the number of homelessness decisions and acceptances. Despite fewer decisions and acceptances, 2018/19 saw a significant increase in numbers of people approaching the Council as homeless or threatened with homelessness, from 389 in 2017/18 to 1,002 in 2018/19[44]. During the first full year of the HRA 2017 the Council was successful in preventing homelessness for 155 households, by facilitating moves to alternative accommodation or providing adaptations to ensure current accommodation is suitable, which is a significant achievement. The most common reason for homelessness in 2018/19 was exclusion by family and friends, accounting

[44] Richmond Housing & Homelessness Strategy 2020 – 2025 draft subject to consultation

for 40% of all accepted cases. The trend seen over recent years of increased homelessness arising from the private rented sector continued, albeit at a reduced rate, and was the reason for homelessness in 34% of cases, being the second most common reason for homelessness in the Borough. The proportion of households citing this reason has steadily increased over recent years, highlighting the increasing difficulties in maintaining access to the private rented sector in the Borough and throughout London. During 2018/19 262 households were placed into temporary accommodation. During 2018/19 there were 121 new rough sleepers verified in the borough. The Council has collaborated with SPEAR and other partners to secure funding to enhance rough sleeper services.

Affordable Housing

3.14.8 Fewer than 13% 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 10,416 units in 2019/20. PA Housing also has significant stock of around 1,800 units. Other housing associations include London and Quadrant and Metropolitan Thames Valley, and a large number of other associations with fewer than 200 units each. The existing housing association stock profile of predominantly smaller units, low turnover of larger social housing dwellings for rent and the needs of overcrowded and homeless households and transfer applicants all drive the need for larger affordable properties.

3.14.9 In 2018/19 17% of completed units (70 units net) were delivered as affordable housing, from two large sites, which is considerably below the strategic borough-wide target. The average delivery over the period 2005/06 to 2018/19 was 20% affordable. The Council also funds a Housing Capital Programme to support the development of affordable housing to meet the needs of borough residents and has provided £12.3m helping to deliver 283 affordable homes for rent in the Borough since 2010/11.

3.14.10 In the period from 2014 to 2033, a net deficit of 964 affordable homes per annum was identified in the Borough's Strategic Housing Market Assessment 2016 (SHMA), demonstrating the substantial need for affordable homes and particularly affordable rented homes to meet urgent housing needs. As at 31st March 2020 there were 4,467 applicants on the Housing Register and the challenges facing housing and homelessness services in the borough remain substantial and a refresh of the Richmond Housing and Homelessness Strategy for 2020–2025 is being undertaken [45].

3.15 Crime and community safety

3.15.1 Richmond remains one of the safest boroughs in London with an overall crime rate of 62 crimes per 1000 population for June 2019 to May 2020 (12,202 offences). This is the best out of the 33 London Boroughs for the period to May 2020. The overall crime rate had fallen from 65 crimes per 1,000 population or 12,736 offences recorded for the period December 2018 to November 2019.

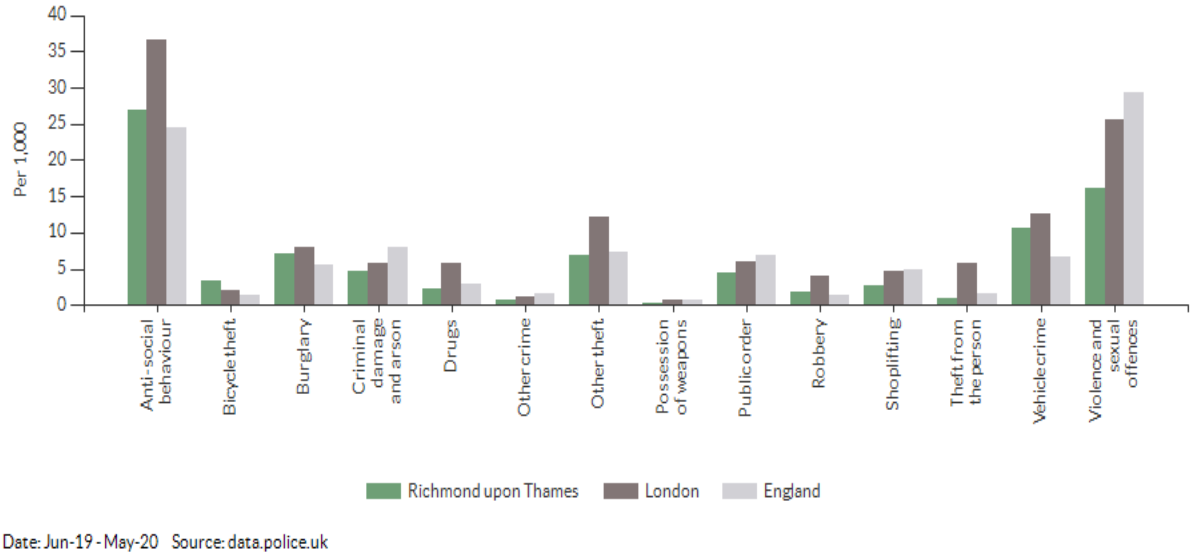
[45] Richmond Housing & Homelessness Strategy 2020 – 2025 draft subject to consultation

3.15.2 As actual crime levels are still fairly low in Richmond compared to London and neighbouring boroughs, and any fairly small increase in crime numbers can have a disproportionate effect.

	Richmond upon Thames		London		England	
	Count	Per 1,000	Count	Per 1,000	Count	Per 1,000
Anti-social behaviour	5,297	26.9	326,868	36.7	1,378,164	24.6
Bicycle theft	649	3.3	18,308	2.1	72,330	1.3
Burglary	1,399	7.1	71,423	8	313,084	5.6
Criminal damage and arson	937	4.8	51,233	5.8	450,692	8.1
Drugs	438	2.2	50,654	5.7	163,460	2.9
Possession of weapons	48	0.2	6,308	0.7	39,590	0.7
Public order	881	4.5	53,543	6	380,594	6.8
Robbery	334	1.7	34,854	3.9	72,090	1.3
Shoplifting	533	2.7	41,021	4.6	276,670	4.9
Theft from the person	203	1	52,398	5.9	87,149	1.6
Other theft	1,358	6.9	108,629	12.2	404,999	7.2
Vehicle crime	2,113	10.7	111,946	12.6	377,812	6.8
Violence and sexual offences	3,183	16.2	228,092	25.6	1,638,184	29.3
Public disorder and weapons	510	2.7	33,566	4	134,095	2.5
Violent crime	1,862	9.8	139,404	16.8	606,623	11.3
Other crime	126	0.6	10,206	1.2	88,691	1.6

Table 17: Crime rate by type of crime June 2019 to May 2020
Source: data.police.uk

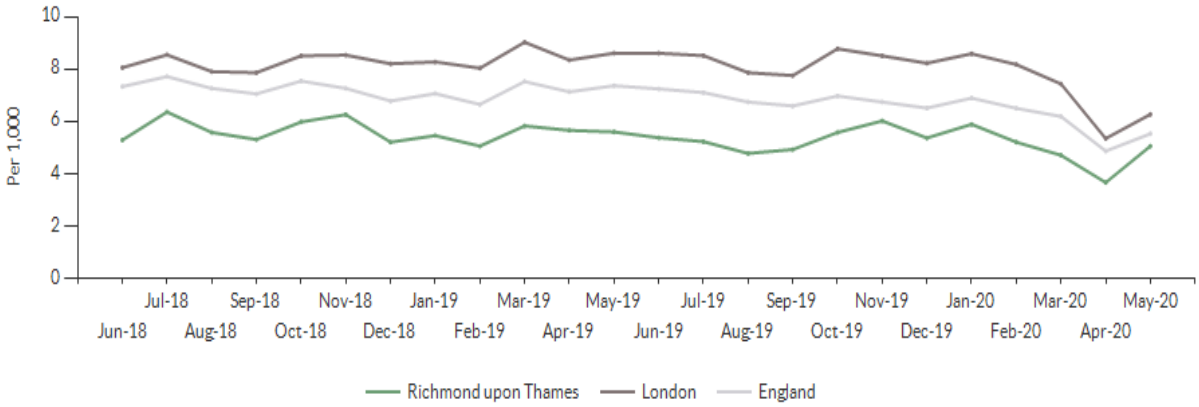
Figure 14: Crime rate by type of crime



Date: Jun-19 - May-20 Source: data.police.uk

3.15.3 It can be seen that anti-social behaviour (27 per 1000 persons) and violence and sexual offences (16 per 1,000 persons) are the main criminal behaviours, followed by vehicle crime, burglary and other theft.

Figure 15: Change in the overall crime rate: Richmond upon Thames 2018 to 2020



Source: data.police.uk

3.16 Leisure

3.16.1 Each year, over 1.4 million visits are made to the Borough's libraries, 900,000 visits to sports centres, 500,000 visits to galleries and museums, and 460,000 visits to theatres and performing arts venues. In 2015 4.5 million visitors to the borough generated revenue of £496million. The Council's tourism website[46] receives over a million hits per annum and produces information and guides for visitors to the borough.

3.16.2 The borough has a varied arts scene making use of its many venues, and Richmond upon Thames Arts Council[47] ("arts richmond") is an umbrella voluntary organisation, which has numerous groups affiliated to it. All aspects of the arts are covered including visual arts and crafts, drama, music, literature and dance. The Rambert School of Ballet and Contemporary Dance (Twickenham) and the Royal Ballet School (White Lodge, Richmond Park) are both situated within the borough.

3.16.3 Richmond upon Thames contains the Orange Tree Theatre, London's only permanent theatre-in-the-round; Hampton Hill Playhouse and Richmond Theatre, along with many drama groups. These range from amateur youth dramatics to the Richmond Shakespeare Society. Open-air concerts take place in Marble Hill Park and the Royal Botanical Gardens, Kew. A new Community Building with arts facilities was opened in Twickenham in 2016; The Exchange makes a significant contribution to the cultural life of the borough.

[46] www.visitrichmond.co.uk
[47] http://www.artsrichmond.org.uk/

3.16.4 The Council's Arts Service[48] works to deliver innovative and accessible arts for residents and visitors of the borough by organising and encouraging all forms of creative development to provide arts for everyone, including exhibitions in three galleries, a diverse range of festivals, events for families and an award winning education provision for all ages and needs.

3.16.5 ARThouse Open Studios Festival[49] is Richmond upon Thames' annual open studios festival, during which individual artists, community groups, schools and colleges open their homes, studios, classrooms and gardens to showcase a wide range of artwork created in the local area. The borough art collection is housed at Orleans House Gallery[50], which stages a changing programme of temporary exhibitions. There are also the Stables Gallery and the Riverside Gallery. The Arts Service continues to produce and promote an exciting programme of dance performance and participation with vibrant and varied activities and events in a host of venues throughout the borough. An annual Literature Festival, organised by the Council's Arts Office, with workshops and readings by authors and poets, has been held in the borough since 1992.

3.16.6 There are 12 lending libraries, catering for all ages for example IT training for silver surfers. Information and reference services and a local studies collection can be found in the Old Town Hall in Richmond. The libraries provide books, e-books, CDs, DVDs, newspapers, periodicals, community and council information, general reference books, internet access and education and study support. The libraries have regular children's activities and class visits, and also provide access to computers and photocopiers

Sport

3.16.7 There are a number of indoor sport and leisure facilities in the borough. The Council's Sport & Fitness Service directly manages 5 dual use sports & fitness centres at Whitton, Teddington, Sheen, Hampton and Orleans Park. There are also various private facilities in the borough, catering for a wide range of residents. There are two large public indoor pools in Teddington and Richmond (Pools on the Park), where there is also an outdoor pool. Hampton outdoor pool is run by a charity and opens to the public, and there are various indoor and outdoor pools attached to schools. Twickenham is the home of the English Rugby Football Union (RFU) and the Harlequins Rugby Football Club at the Stoop Memorial Ground. Other clubs play at the Old Deer Park and Richmond Athletic Ground St Mary's University, Strawberry Hill, hosted training on its grounds for teams in the 2012 London Olympics and the winning All Blacks (New Zealand) rugby football team practiced there for the 2015 Rugby World Cup held at Twickenham. There are a number of specialist centres in the borough catering for individual sports including Richmond Gymnastics Centre, Busen Martial Arts & Fitness Centre and the Anglo'-Japanese Judo Club.

[48] http://www.richmond.gov.uk/home/leisure_and_culture/arts.htm
[49] http://www.richmond.gov.uk/depts/opps/eal/leisure/arts/arthouse/arthouse_open_studios
[50] http://www.richmond.gov.uk/home/leisure_and_culture/arts/orleans_house_gallery.htm

3.16.8 In assessing the sports and open space needs there may be the need to balance expansion of buildings to meet educational requirements and the need to maintain land for sports. As well as the specific pressure on educational sites it is recognised that while the borough is generally well provided with green space and sports provision, the projected population growth (including growth in school pupils) and increased participation levels will increase demand. There is a need for 4 additional 3G pitches (i.e. long pile artificial turf pitch suitable for football/rugby) in the next 10 years to accommodate the need and future demand for football and rugby, both union and league and in particular for floodlit training facilities. There is currently no identified need for additional hockey pitches, bowling greens and tennis courts, although floodlighting for tennis courts remains an issue that, if resolved, could significantly extend the hours available to meet current demand.

3.16.9 The 2015 Indoor Sports Facilities Needs Assessment has found that there are 15 sports halls on 14 sites. There is a lack of daytime (during school hours) access to indoor sports hall provision, although there are various opportunities in neighbouring authorities. The report identifies opportunities for improvements, extensions and new indoor facilities in the borough to meet daytime demand. The consultant's report suggests unmet / latent demand, where East Richmond (Ham & Petersham) has the biggest shortfall in sports hall provision. There is significant pressure on the two existing public swimming pools due to high levels of demand for swimming. However, demand is being met through use of pools in private club facilities as well as in the independent schools. In addition, there are 32 swimming pools in neighbouring boroughs within 1 mile radius of the borough, which help to meet demand for swimming from Richmond residents There is a shortfall in full size, specialist facilities for minority sports such as volleyball, handball, martial arts, badminton, futsal and netball. High charges have been referenced by some voluntary clubs as a barrier to hire and their ability to deliver sports development. There is no specialist indoor tennis provision in Richmond, but demand is being met by neighbouring commercial facilities, such as the National Tennis Centre in Roehampton and David Lloyd in Heston.

3.16.10 A detailed assessment of the playing fields and outdoor sports spaces was carried out in 2018[51]. The parks' sports pavilions are generally in good condition, but some will need further investment. 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 also have athletics facilities. Various public or pay and play facilities are available in the borough, including Richmond Park and Amida Golf. The River Thames and Thames Young Mariners' lake at Ham cater for a variety of water-based sports activities. Other water-based events include the annual Oxford and Cambridge Boat Race and The Great River Race, which attract many spectators into the borough. There are also a wide range of different types of community centres and spaces available to hire across the borough, from which many different activities are run.

[51] https://www.richmond.gov.uk/media/6524/playing_pitch_strategy_assessment_report.pdf

3.17 Natural environment

3.17.1 Richmond upon Thames is one of the richest boroughs in London in terms of the total area of public green space, quality and diversity of parks, open spaces, conservation areas and the wealth of different habitats and species. It has over 21 miles of River Thames frontage, the longest stretch of the River Thames of any London borough, and over 100 parks, commons and woodlands. This includes 16 Green Flag sites, two Royal Parks, Richmond and Bushy, containing herds of red and fallow deer, the Royal Botanical Gardens at Kew, a World Heritage Site and many other wildlife habitats.

3.17.2 A large contribution to the green infrastructure and open space networks are the areas designated as Metropolitan Open Land, which make up around 60% (3054 ha) of the Borough's area. Around 135 ha within the borough are designated as Green Belt. Many of the Borough's open areas are multi-functional, e.g. they provide important habitats for species, access to nature, sports pitches, recreational areas, playing fields, play areas and areas for just relaxing, sitting or walking.

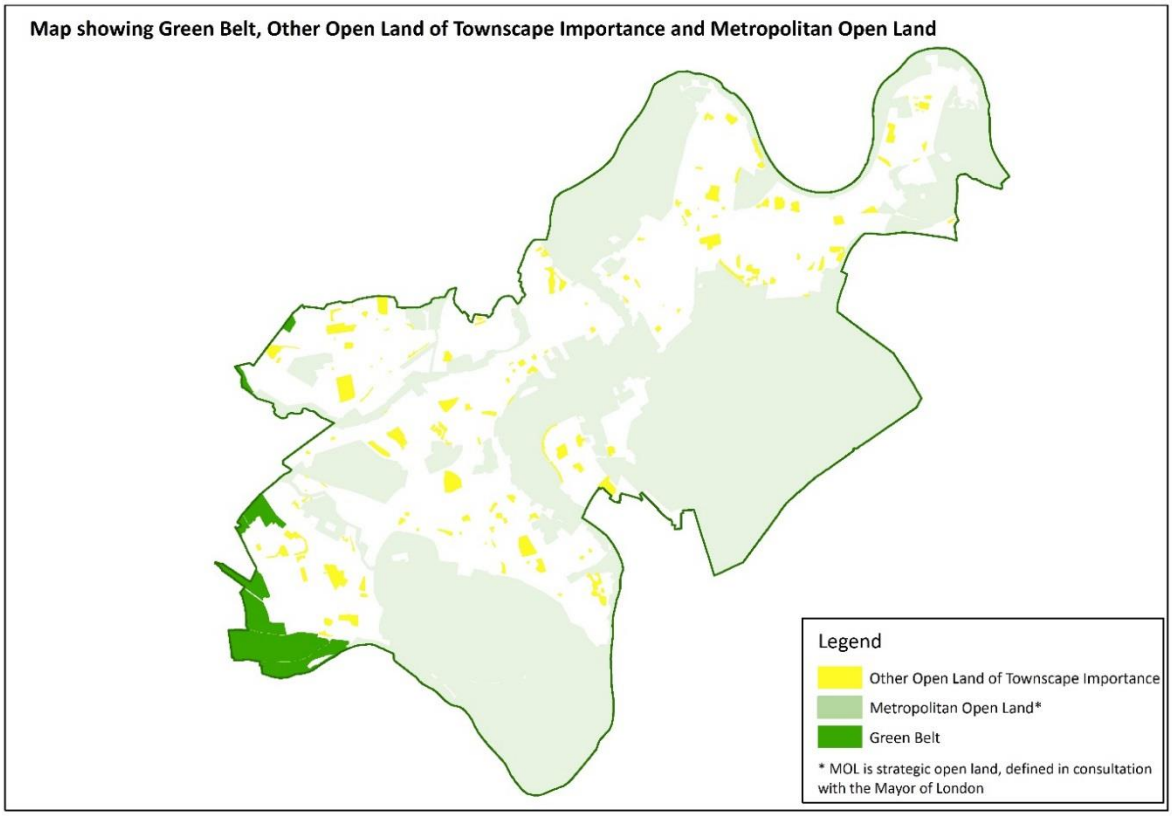


Figure 16: Designated Green Belt, Other Open Land of Townscape Importance and Metropolitan Open Land.

3.17.3 The key findings of the Borough's 2015 open spaces assessment included:

- In total there are 200 sites identified in the borough as open space provision. This is an equivalent of 527 hectares across the borough.
- Over four fifths of all open spaces (83%) score above the thresholds set for quality. Most noticeably, more play provision and natural and semi-natural sites score above the thresholds for quality compared to other typologies; reflecting the generally excellent standard of sites.
- Conversely civic space, cemeteries and amenity greenspace have fewer sites scoring above the threshold. For amenity greenspace this tends to be due to the smaller and less attractive appearance of provision.
- The majority of all open spaces (98%) are assessed as being above the threshold for value. A reflection towards the importance of provision in providing social, environmental and health benefits.
- There are no gaps in play provision in the borough as there are 44 dedicated sites with play areas, of which 42 sites rate above quality threshold.

3.17.4 Historic parks and gardens cover around 2026 ha of the Borough (generally on land also designated as MOL), whereby Richmond Park is 930 hectares and Bushy Park is 445 hectares. The borough has large areas of open grassland but many of these sites are not managed primarily for nature conservation, for example the sports pitches, recreational areas and playing fields. Sites designated as Other Open Land of Townscape Importance (OOLTI) are smaller pieces of open land; there are just over 160 sites designated as OOLTI.

Biodiversity, geodiversity, flora & fauna

3.17.5 Richmond has an enormous wealth of wildlife (biodiversity) and there are many important areas of land with statutory and non-statutory designations. These include three sites designated as Site of Special Scientific Interest (SSSI) (Richmond Park, Bushy Park and Barn Elms Wetland), and over 110 Other Sites of Nature Importance. (Note: Bushy Park was recently designated because of its invertebrates, veteran trees and acid grassland; it is among the top ten sites in England for decaying wood invertebrates).

3.17.6 The Local Biodiversity Action Plan 2019 (LBAP)[52], produced by the Richmond Biodiversity Partnership of many organisations and charities, including the South West London Environment Network (SWLEN), Richmond Council, professional bodies, communities and local residents within the borough, sets out the framework for the protection, conservation and enhancement of wildlife within the borough. The list of habitats and species in this plan is not exhaustive, but it aims to concentrate on and prioritise those habitats and species, which are rare, in decline, or characteristic of Richmond, which will help raise the profile of biodiversity.

[52] https://swlen.org.uk/richmond-biodiversity-action-plan/

3.17.7 The priority habitats within this borough, which are also of regional and national importance, are: Acid Grassland, Ancient Parkland/Veteran Trees, Broadleaved Woodland, Reedbeds and the Tidal Thames. The priority species, which are also of regional, national and international importance, are: Bats, Mistletoe, Song Thrush, House Sparrows, Swifts, Stag Beetles, Tower Mustard, Water Voles and Black Poplar.

3.17.8 There are many important areas of broad-leaved woodland within Richmond borough, but most of them are secondary woodlands that have naturally regenerated and succeeded from heathland or acid grassland areas after grazing ceased, such as on Barnes, East Sheen and Ham Commons. There is no ancient woodland within the borough, but there are more veteran trees in the Borough of Richmond than France and Germany combined and many of these magnificent ancient trees are in Richmond Park and The Copse in Ham. Ancient trees, standing deadwood and fallen timber contribute to one of our most important habitats for biodiversity, especially in Richmond Park. A lot of the borough's grasslands are acidic and the largest areas are contained within Richmond Park, Bushy Park and Home Park (Hampton Court). Other important acid grassland sites are the commons of Barnes, Ham and East Sheen. There are also some important sites within the borough that contain scrub, and these tend to be the Commons where grazing has ceased and succession has progressed, such as on Barnes Common but of importance is also Ham Lands Local Nature Reserve.

3.17.9 Richmond Park is a site of both national and international importance for wildlife conservation. It is London's largest SSSI, a National Nature Reserve and a Special Area of Conservation (SAC). The Park is a foremost UK site for ancient trees, particularly oaks. The trees and associated decaying wood support nationally endangered species of fungi, as well as a remarkable range of nationally scarce invertebrates. The Park is the third best site in Britain for decaying wood invertebrates, including the stag beetle, which is one of the reasons for the sites' designation as a SAC. Over 200 rare species of beetle can be found there.

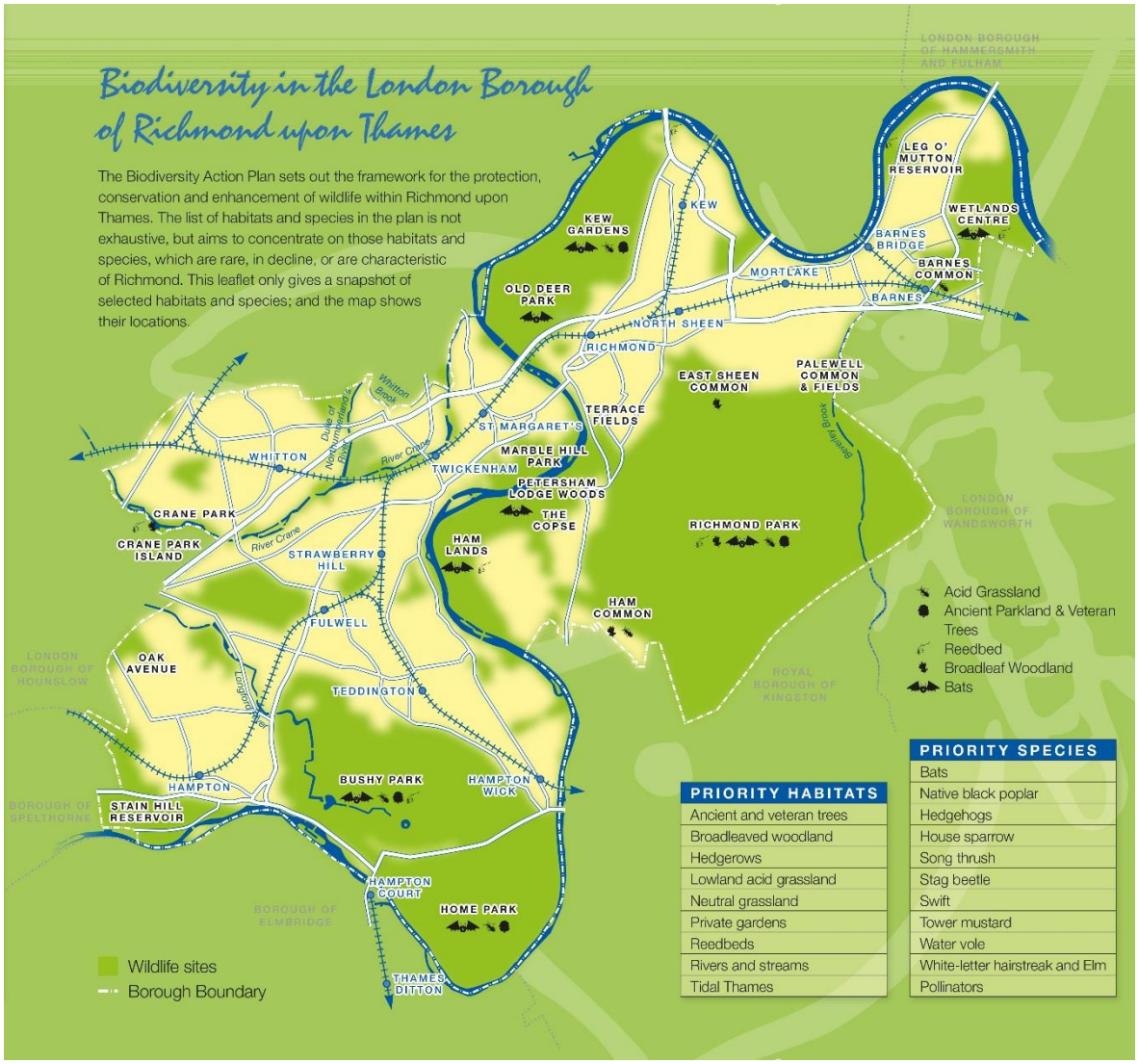


Figure 17: Biodiversity in Richmond upon Thames

3.17.10 Geodiversity is the variety of rocks, minerals and fossils together with the variety of soils, natural processes and landforms. Geodiversity is closely associated to biodiversity as it underpins biodiversity, with soils being the link between them. Therefore, the condition of geodiversity should be conserved, enhanced and where necessary restored.

3.17.11 There are many important wetland (flowing and standing water) areas within the borough. The most important is the River Thames, (Richmond is the only London borough to straddle both side of the Thames), of which there are tidal and non-tidal sections in the borough, but also the London Wetlands Centre in Barnes, which has over 42 hectares of created lakes, ponds and marshes. The centre offers the opportunity to see rare and beautiful wildlife. More information on Richmond's biodiversity and nature conservation can be found at: https://swlen.org.uk/richmond-biodiversity-action-plan/

Water quality

3.17.12 The most important watercourse in the borough is the River Thames.. Other watercourses include the River Crane, Duke of Northumberland River, Longford River and Beverley Brook. There are also wetland areas, which provide ideal habitats for many species, for example Leg O'Mutton reservoir and London Wetland Centre in Barnes as well as the Stain Hill reservoirs in Hampton and Pen Ponds in Richmond Park. The River Thames flows through the borough past open stretches of woodland and parkland, Victorian industrial waterfront and urban frontages. There is public access to much of the riverbank in the borough either by towpath or riverside open space.

3.17.13 The Water Framework Directive (WFD) is European legislation designed to protect and enhance the quality of rivers, lakes, streams, groundwater, estuaries and coastal waters, with a particular focus on ecology. The Environment Agency is the lead authority on the WFD in England and Wales. Councils are required to plan and deliver actions that will improve their water environment. There are four designated river water bodies that extend across the borders of Richmond upon Thames:

- The River Thames
- Beverley Brook
- The River Crane
- Port Lane Brook

3.17.14 The three tables below identify the current and predicted ecological status of the above watercourses and the breakdown of the physico-chemical and biological status.

Water course	2016 Classification Status	Overall status
River Thames (Egham-Teddington)	Poor	Poor
Beverley Brook (Motspur Park to Thames)	Moderate	Moderate
River Crane (incl. part of Yeading Brook)	Poor	Poor
Port Lane Brook	Moderate	Moderate

Table 18: WFD Ecological status
Notes: includes biological, physico-chemical and hydromorphological status
Source: Environment Agency

Water course	Physico-chemical status	Dissolved oxygen	pH	Phosphate	Ammonia
River Thames (Egham-Teddington)	**Good**	Good	High	Moderate	High
Beverley Brook (Motspur Park- Thames)	**Moderate**	Good	High	Poor	Moderate

River Crane (incl. part of Yeading Brook)	**Moderate**	Moderate	High	Poor	Good
Port Lane Brook	**Good**	High	High	Moderate	High

Table 19: WFD Water Quality 2016
Notes: Chemical water quality - physico-chemical status under the Water Framework Directive
Source: Environment Agency

Water course	Biological status	Diatoms	Macro-phytes	Macro-invertebrates	Fish
River Thames (Egham-Teddington)	**Poor**	Poor	Poor	Good	Good
Beverley Brook (Motspur Park to Thames)	**Bad**	Moderate	Moderate	Moderate	Bad
River Crane (incl. part of Yeading Brook)	**Poor**	Poor	Poor	Moderate	Moderate
Port Lane Brook	**Moderate**	-	-	Moderate	-

Table 20: WFD Biological status
Notes: Biological status under the Water Framework Directive
Source: Environment Agency

3.17.15 Under the WFD, these need to achieve good ecological potential by 2027. A programme of measures to improve the status is being developed. This will include a series of measures to address urban diffuse pollution in parts of London.

3.18 Water resources

3.18.1 In Richmond upon Thames the average water consumption in 2010-11 was 167 litres per person per day. On average, a person in England currently uses 141 litres of water per day. In their plans, water companies are forecasting a reduction to 123 litres per person per day on average by 2045. A number of water companies are going much further than 123 litres per person per day, for example Yorkshire Water is aiming for 111 litres per person per day by 2045 and Southern Water has committed to a target of 100 litres per person per day by 2040. Locally, Thames Water have installed over 250,000 smart water meters, which may help households to reduce their water consumption.

	2011- 12	2012-13	2013-14	2014-15	2015-16	2016-17
Thames Water	161	155	156	151	149	146

Table 21: Water Consumption litres per person per day - Thames Water Company
Source: CCWater/Discover Water

3.18.2 The borough is in Thames Water's 'London water resource zone'. This zone is seriously water stressed. London's principal source of water is the Lower River Thames upstream of Teddington Weir; two thirds is from the River Thames, 22% from the River Lee and 15% from groundwater (the confined Chalk aquifer). There are 11 licensed abstractions, predominantly from groundwater sources. These are mostly

for amenities like golf courses and sports grounds, but also for public supply and agriculture. 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.

3.18.3 The River Thames, the Beverley Brook and the River Crane fall into the London Catchment Abstraction Management Strategy (CAMS) area. The main water resource is the confined chalk aquifer, which underlies most of London. This has been assessed as being over-licensed, but is managed so that groundwater doesn't flood any of London's deep infrastructure. The Beverley Brook and River Crane have water available for further abstraction subject to local assessment. The River Thames wasn't assessed as it is heavily influenced by the tide so any abstracted water is quickly replenished.

3.18.4 Thames Water Utilities Ltd have prepared their Water Resources Management Plan[53], which covers the period 2015-2040. In addition, Thames Water produces regularly Five-Year Asset Management Plans (AMP), which set out Thames Water's investment programmes and spending allowances based on a five-year cycle; AMP7[54] is the current plan that runs from 2020 to 2025.

Pollution of watercourses

3.18.5 Good water quality in the River Thames is vital for the survival of fish, especially in summer months. Storm water can overwhelm the sewers leading to high levels of organic matter discharging to the river, which is then oxidised by bacteria. If the river flow is low and the temperatures high the oxygen content is rapidly depleted and fish die. The Rivers Crane and Duke of Northumberland have wildlife value but there is room for improvement in those parts of the borough where the Crane has been channelled into a concrete-lined open conduit.

3.18.6 In addition, run-off from road surfaces carries contamination of oil and other hydrocarbons and metals from tyre rubber, exhausts and catalysts. In some areas run-off from major roads does cause harm to adjacent watercourses. However in Richmond upon Thames run-off from roads is taken into combined sewers to sewage treatment works and then to the Thames. Resulting pollution of the Thames from road-run off would therefore normally be minimal. However, during heavy rain episodes storm-water overflows do flow directly into the Thames and road run-off would make up part of the pollution burden.

3.18.7 The main factor influencing water quality of the River Thames is Mogden Sewage Treatment Works (STW) and in the Kew to Barnes stretches, the combined sewage overflow (CSO) problem (see above). In these stretches acute water quality issues associated with dissolved oxygen may occur, leading to fish kills or levels preventing the movement of migratory fish. Nevertheless, the quality of the River Thames has improved significantly over the past 20 years.

https://corporate.thameswater.co.uk/-/media/Site-Content/Thames-Water/Corporate/AboutUs/Our-strategies-and-plans/Water-resources/Our-current-plan-WRMP14/WRMP14_Section_0.pdf

[54] www.thameswater.co.uk/about-us/17481.htm

3.18.8 In addition, Thames Water has carried out a £140m upgrade at Mogden STW in west London (LB Hounslow) to extend sewage treatment capacity by 50%. This has significantly reduced the amount of storm sewage that overflows into the tidal stretches of the River Thames when the site becomes overloaded during heavy rainfall. The improvements also helped to meet tighter quality standards for the effluent that Thames Water discharges. The project involved installing new equipment and upgrading the existing plant. As well as significantly reducing sewage discharges, these improvements are helping to reduce odour at the site, as the use of storm tanks has been reduced during heavy rain, and new and existing equipment has been covered over. The completed extension generates up to 50 per cent of its power requirements from renewable energy generated from 'poo power' - where electricity is generated by burning methane derived from sewage. The STW, in Isleworth, currently serves 2.1 million people but has made allowances for a six per cent population increase until 2021.

3.18.9 It is important to protect the borough's water resources and supplies and ensure there are no unacceptable threats to surface water and ground water quantity and quality. The Council has therefore adopted development management policies 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 a development, prior to new development being permitted.

3.18.10 The Thames Tideway Tunnel is the final and most challenging piece of the overall plan to tackle the million tonnes of sewage discharged into the River Thames each year from London's Victorian sewers. These discharges occur up to 60 times a year on average. Without tackling this, ten years from now the 39 million tonnes of sewage, which is currently discharged into the river in a typical year, is forecast to rise to 70 million tonnes. The Tunnel due to be completed in 2024 will deal with this problem for at least the next 100 years. It is a sewer the width of three London buses, which will run up to 20 miles from west to east London, up to 75 metres below ground, broadly following the route of the River Thames. It will connect up to the 34 most polluting sewer overflows, as identified by the Environment Agency, to capture sewage which would otherwise spill into the river, before transferring it to Beckton sewage works to be treated.

3.18.11 There is one site as part of the Thames Tideway Tunnel in the borough at Barn Elms. The main work site is in the south eastern corner of the Barn Elms Schools Sports Centre. The surrounding area is a combination of mainly playing fields, but also residential and community facilities. The site will be used to intercept the West Putney Storm Relief combined sewer overflow. At this location, in a typical year, there would be 30 discharges of untreated sewage with a volume of about 35,000 tonnes into the tidal River Thames. When the tunnel is in operation it is expected that only one discharge will occur. The main construction began in 2016.

3.18.12 For more information on water quality and water resources in Richmond upon Thames please see the Environment Agency's website: http://www.environment-agency.gov.uk.

3.19 Soil and land contamination

3.19.1 Impacts on soil include the loss of productive areas and erosion of soils due to construction activities and maintenance of the transportation infrastructure, as well as contamination from current use of de-icing and other chemical agents, and past contamination from lead in vehicle exhausts and other toxic land uses and processes.

3.19.2 Land contamination in particular can impact on the health of humans as well as animals and cause damage to the wider environment including: watercourses, aquifers (natural underground water stored within rocks) and even buildings. Land that has been contaminated means land affected by increased levels of hazardous substances such as heavy metals, non-metals (e.g. Lead, Mercury and Arsenic), organic compounds e.g. Petroleum Hydrocarbons and radioactive materials. Local Authorities have a statutory duty to deal with contaminated land within their area. The Town and Country Planning Act 1990 also gives powers to Local Authorities to ensure that land that is contaminated is cleaned up so that it is suitable for its proposed use.

3.19.3 Although the borough is primarily residential in character, historically there have been a range of industrial activities including: chemical manufacture, sewage treatment, gas works and many more. Contamination may also arise from inappropriate disposal of household materials e.g. cleaning products (e.g. white spirits and bleaches), technical oils, paints, ash and pesticides.

3.19.4 Current government policies have led to increased pressure to redevelop brownfield sites (sites that have been previously developed). It is important to ensure that elevated levels of contamination identified on these sites are reduced to levels which no longer pose a significant risk to human health or the wider environment. Many sites in the borough have been remediated through the planning process as they were redeveloped. The Council works closely with developers to ensure that appropriate methods and controls are put in place to deal with land contamination. Richmond upon Thames's Contaminated Land Strategy[55] sets out the Council's approach to implementing their duties under the Environment Act 1995.

3.19.5 In addition, the Environment Agency also assists in bringing sites back into beneficial use through land contamination work. Risks to groundwater in the borough are low because the area does not have a significant industrial heritage. Also, the pathways for pollutants to enter the groundwater in the Chalk aquifer are limited due to the presence of the London Clay. Nevertheless, the Environment Agency has assessed 58[56] sites since 2000, reviewed well over 100 planning consultations and continued to protect groundwater in the vulnerable Secondary aquifer (River Terrace Deposits)

[55] http://www.richmond.gov.uk/contaminated_land_strategy.htm

[56] Note that this figure only includes Environment Agency investigated sites. The Council will have investigated further sites through the planning process during the same time period.

and surface water in the River Thames by applying advice on sustainable drainage systems and applying the principles of the NPPF (previously PPS23, Planning and Pollution Control).

3.19.6 The Environment Agency has recorded the following land pollution incidents in the borough:

- The number of minor (category 3) incidents recorded each year has remained low. The two most common causes of incidents were fire and unauthorised activity such as fly-tipping or unauthorised discharge or disposal.
- Twenty six environmental pollution incidents are recorded by the EA in Richmond upon Thames between 2001 and 2019[57]. In 2001 there was one category 1 (Major) incident on the land due to fly tipping and one category 2 (significant) incident of crude sewage discharge causing air pollution. The most common pollution incidents affected water with twelve sewage discharges due to storm sewage.

3.20 Flooding

3.20.1 Under the statutory duties and powers as set out in the Flood and Water Management Act 2010[58], 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, for which the Environment Agency remains the lead body). Local research has been undertaken to understand the flooding issues within the borough and to identify areas of high flood risk. The Council is presently updating the Strategic Flood Risk Assessment 2015-2020 (SFRA)[59]. This builds on the outcomes of the London Borough of Richmond upon Thames Surface Water Management Plan (SWMP) and Preliminary Flood Risk Assessment (PFRA)[60], and incorporates information from the earlier Strategic Flood Risk Assessments (SFRA). Parts of Richmond Borough have a particular susceptibility to surface water and sewer flooding due to the urbanised nature of the area and the complexity of the sewer system leading to a high potential for constrictions, blockages and failure. Therefore, in addition as part of the Drain London project[61], led by the Greater London Authority, a Surface Water Management Plan (SWMP)[62] 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.

3.20.2 Flooding may also occur due to a failure in the sewerage infrastructure. Policy LP23 of the adopted Local Plan requires developers to provide evidence that adequate capacity exists in the public sewerage and water supply network to serve their development in the form of written confirmation. Where capacity does not exist and to avoid overloading of existing infrastructure, a drainage strategy is required to show the necessary infrastructure and its funding.

[57] https://data.gov.uk/dataset/c8625e18-c329-4032-b4c7-444b33af6780/environmental-pollution-incidents-category-1-and-2
[58] Flood and Water Management Act 2010: http://www.legislation.gov.uk/ukpga/2010/29/contents
[59] LBRuT Strategic Flood Risk Assessment: http://www.richmond.gov.uk/flood_risk_assessment.htm
[60] LBRuT Preliminary Flood Risk Assessment: https://www.richmond.gov.uk/preliminary_flood_risk_assessment
[61] Drain London project, Greater London Authority; http://www.london.gov.uk/drain-london
[62] LBRuT Surface Water Management Plan: http://www.richmond.gov.uk/surface_water_management_plan.htm

Likelihood of flooding

3.20.3 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.

3.20.4 The borough has some land within flood zones 2 and 3, whereby flood zone 2 represents the 1 in 1000 year probability of flooding, and flood zone 3 represents the 1 in 100 year probability of fluvial flooding or 1 in 200 year probability of tidal flooding. Zone 3 is further sub-delineated into zone 3a and zone 3b, whereby zone 3b is also referred to as the functional floodplain.

3.20.5 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 or insufficient capacity in the sewerage system.
- Groundwater flooding from superficial strata, possibly connected to Thames levels.

3.20.6 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. Therefore, properties and infrastructure within the borough are also at risk of flooding from other, more localised sources of flooding, such as surface and groundwater flooding, and sewer flooding due to surcharging of sewers and drains or due to the failure of infrastructure. Flooding could also occur away from the floodplain as a result of development where

off-site infrastructure is not in place ahead of development. Areas that are particularly vulnerable to localised flooding have been identified and assessed in the Council's Surface Water Management Plan (SWMP), which also includes an action plan for the Council.

3.20.7 Existing flood risk management systems that affect flooding in this borough 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.
- 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).

3.20.8 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). The Thames Barrier has been closed 186 times since it became operational in 1982 (correct as of October 2019). Of these closures, 99 were to protect against tidal flooding and 87 were to protect against combined tidal/fluvial flooding. The frequency of closures is increasing due to high tides, storms and heavy rainfall.

Properties at risk

3.20. 9 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 not significant, 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 areas prone to flooding. The Environment Agency's National Flood Risk Assessment (Nafra) shows that 62% of these properties are in areas where the likelihood of flooding is low. In addition, The Lower Thames Strategy, which is a long-term plan to manage flood risk in the Lower Thames area, identified 15,000 properties with a 1% annual (1 in 100 year) chance of flooding, from Datchet to Teddington.

Historic flooding events

3.20.10 In 1947 flooding occurred along the banks of the River Thames at Teddington, upstream at Hampton and along the Longford River. Since then, the borough has experienced flooding several times: in 1965, 1974, 1988, 1990, 1999, 2000, 2003 and 2007. The flood events in 1965 and 1999 both occurred as a result of flooding from the River Crane, to the west of Richmond town. In 1974, a small area on the bank of the River Thames at Hampton flooded. The flooding in 1988, also occurred from the River Thames but was more extensive, stretching from Hampton to

Teddington. Flooding at the confluence of the River Thames and areas further downstream on the Thames occurred in 1990. The more recent flood events, in 2000 and 2003, both occurred along the River Thames from Hampton to Teddington. There were also smaller areas of flooding along the Longford River. The summer 2007 flooding was largely due to surface water flooding as a result of heavy and intense rainfall. Flooding in January 2014 involved rainfall events occurring in rapid succession and therefore high flows were sustained over a long period resulting in the highest recorded volume of water for any two and half month period since flow records began in 1883. The Thames Barrier was closed 50 times from 5 December 2013 to 5 March 2014. Of these closures, 41 have been classified as fluvial to protect west London from high flood flows arriving from upstream and 9 have been classified as tidal to protect London from high sea levels in the Thames estuary. Typically, reactive mitigation measures have been implemented in response to past flood events, usually with the construction of new drainage infrastructure. However, climate change and continued urbanisation are likely to increase flood risks in the future unless action is taken to mitigate or adapt to that risk

Flood warnings

3.20.11 The Environment Agency offers a free flood warning service, which gives advance warning[63] of flooding via phone, text, email, pager or fax.

July 2011	
Floodline Warnings Direct (FWD)	3,991
Extended Direct Warnings (EDW)	11,447
Total	**15,438**

Table 22: Properties in Richmond borough that are signed up to flood warnings
Note: These figures do not include all homes at risk from tidal flooding. These properties receive flood warnings from other sources such as broadcasts on local radio, particularly LBC who have agreed to broadcast flood warnings in London.
Source: Environment Agency

3.21 Climatic factors and climate change

3.21.1 Richmond Council has declared a Climate Change Emergency and published its Climate Emergency Strategy in January 2020. The Council resolved to become recognised as the Greenest London Borough and to produce the strategy and action plans necessary to realise the goal to become carbon neutral by 2030. London and Richmond Borough have experienced and will continue to experience significant changes in climate over the coming decades. These climatic changes can be summarised as follows:

- Hotter, drier summers;
- Milder, wetter winters;
- More frequent extreme high temperatures;
- Increases in rainfall and associated increase in fluvial flooding and surface water flooding;

[63] http://www.environment-agency.gov.uk/homeandleisure/floods/38289.aspx

- Increases in sea level rise and increases in storm surge height;
- Decreases in soil moisture content in summer;
- Possible higher wind speeds.

3.21.2 The latest State of the UK Climate 2018 report shows several indicators consistent with the expected effects of a warming climate, alongside evidence of considerable natural variability on annual to multi-decadal timescales. The average temperature over the most recent decade (2009-2018) has been on average 0.3 °C warmer than the 1981-2010 average and 0.9 °C warmer than the 1961-1990 average. All the top ten warmest years for the UK, in the series from 1884, have occurred since 2002. A recording of 38.7 °C at Cambridge Botanic Garden on 25th July 2019 became the highest summer temperature officially recorded in the UK.

3.21.3 The longest running instrumental record of temperature in the world, the Central England Temperature dataset, shows that the most recent decade (2009-2018) was around 1 °C warmer than the pre-industrial period (1850-1900). This temperature rise in the UK is consistent with warming that has been observed at a global scale, of around 1 °C since pre-industrial times. The 21st century so far, has been warmer than the previous three centuries.

3.21.4 The most recent decade (2009-2018) has been on average 1% wetter than 1981-2010 and 5% wetter than 1961-1990 for the UK overall. Winters in the UK, for the most recent decade (2009-2018), have been on average 5% wetter than 1981-2010 and 12% wetter than 1961-1990. Summers in the UK have also been wetter, by 11% and 13% respectively. Total rainfall from extremely wet days (days exceeding the 99th percentile of the 1961-1990 rainfall) increased by around 17% in the decade (2008-2017) for the UK overall. However, changes are largest for Scotland and not significant for most of southern and eastern England. Mean sea level around the UK has risen by about 17 cm since the start of the 20th century (when corrected for land movement).

3.21.5 The predicted changes in temperature and precipitation for the London region are set out in the following two tables below:

Predicted central estimate of changes in **temperature** for the **London region** for the **2020s** for the low, medium and high emissions scenario

Emissions Scenario	Low	Medium	High
Winter mean temperature	+ 1.3 ºC	+ 1.3 ºC	+ 1.4 ºC
Summer mean temperature	+ 1.6ºC	+ 1.6 ºC	+ 1.5ºC
Summer mean daily maximum temperature	+ 2.2ºC	+ 2.1ºC	+ 2.0ºC

Predicted central estimate of changes in **temperature** for the **London region** for the **2020s** for the low, medium and high emissions scenario			
Emissions Scenario	Low	Medium	High
Summer mean daily minimum temperature	+ 1.7ºC	+ 1.6ºC	+ 1.7ºC

Table 23: Predicted changes in temperature for London:
Source: UKCP09

Predicted central estimate changes in **precipitation** for the **London region** for the **2020s** for the low, medium and high emissions scenario			
Emissions Scenario	Low	Medium	High
Annual mean precipitation	+ 1%	0%	0%
Winter mean precipitation	+ 6%	+ 6%	+ 7%
Summer mean precipitation	- 7%	- 7%	- 4%

Table 241: Predicted changes in precipitation – London region
Source: UKCP09

3.21.6 The likely effects of climate change, such as the drier/hotter summers and the increased precipitation in winters can have various impacts on the borough, including:

- Higher probability of flooding as a result of the increase in precipitation during the winter, particularly the risk of surface water flooding but also fluvial flooding.
- Drier, warmer summers are likely to lead to pressure on water resources, possible drying out of grassland and parks, less evaporative cooling benefit from vegetation, increased demand on recreational outdoor activities, possible hosepipe bans and damages to infrastructure.
- Changes could also affect biodiversity, habitats and water quality, particularly during long spells of dry and hot weather; there may be changes in the abundance of species, which may need to adapt to changes in weather patterns and climate.
- Impacts on health could include heat stress to the old, poor and vulnerable communities and people, increased demand for cooling and ventilation for thermal comfort, which is likely to have knock-on impacts on the emergency services.
- The changes are also likely to have economic and financial impacts, for example the losses and damages due to flooding, subsidence, heat waves, increased cooling demand etc.

3.21.7 Potential temperature related Associated Impacts include

- Increased demand for water for irrigating green spaces;
- Higher risk of fires on scrub and heathland;
- Lower incidence of winter ‘fuel poverty’ and related cold-weather mortality;
- Outdoor lifestyles change levels of exposure to air pollution (see below);
- Modes of transport could shift (more walking and cycling);
- Energy use for summer cooling could exceed energy saved through less winter warming;

- Higher rates of refuse decay implying need for more frequent waste collection;
- Successive hot summers could have a compound impact exceeding isolated hot summers

Ecological and carbon footprint

3.21.8 In 2008, the Stockholm Environment Institute (SEI) published experimental results by local authority[64] for the following indicators:

- the ecological footprint in global hectares per capita,
- the carbon footprint in tonnes of carbon dioxide (CO_2) per capita, and
- the greenhouse gas footprint in tonnes of carbon dioxide equivalent (CO_2eq) per capita.

3.21.9 The *Ecological Footprint* is a calculation that estimates the area of the Earth's productive land and water required to supply the resources that an individual or group demands, as well as to absorb the wastes that the individual or group produces. A person's *Carbon Footprint* is the direct effect that the personal actions and lifestyle (such as the use of electricity in the home and travel needs) have on the environment in terms of the total amount of CO_2 emissions. The *Greenhouse Gas Footprint* is calculated by estimating not just the CO_2 emissions that any activity causes, but also any emissions of other greenhouse gases (such as methane and nitrous oxide).

3.21.10 It is an unfortunate fact that Richmond upon Thames has one of the highest ecological, carbon and greenhouse gas footprints in London and the UK (see Table below).

	Ecological Footprint (gha/capita)	Carbon Footprint (tonnes CO_2/capita)	GHG Footprint (tonnes CO_2eq/capita)
UK	5.30	12.08	16.34
London	5.48	12.12	16.55
Richmond upon Thames	6.38	13.99	19.19

Table 25: Estimated ecological footprint, carbon footprint, GHG footprint
Source: SEI Experimental results, 2008: http://data.london.gov.uk/datafiles/environment/environmental-footprint-data.xls
Notes: The ecological footprint is in global hectares per capita. The carbon footprint is in tonnes of carbon dioxide. The greenhouse gas footprint is in tonnes of carbon dioxide equivalent (CO_2eq) per capita (CO_2) per capita.

[64] The 2004 estimates have been generated using Version 2 of the Resources and Energy Analysis Programme (REAP).

3.21.11 The carbon footprint in Richmond upon Thames is 13.99 tonnes of CO_2 per capita[65]. The sector with the highest contribution to this footprint is the domestic sector, i.e. housing, and more specifically the electricity, gas and other fuels used in the home. Large contributions are also associated with the transport and food sector. See the table and figures below for the estimated footprints by theme/sector:

	Ecological Footprint Percentage Breakdown	Carbon Footprint Percentage Breakdown	GHG Footprint Percentage Breakdown
Housing	23%	29%	23%
Transport	18%	25%	22%
Food	27%	12%	20%
Consumer Items	14%	13%	13%
Private Services	7%	8%	8%
Public Services	9%	11%	11%
Capital Investment	2%	3%	2%
Other	0%	0%	0%

Table 26: Richmond upon Thames – Estimated footprint breakdown by theme
Source: SEI Experimental results, 2008: http://data.london.gov.uk/datafiles/environment/environmental-footprint-data.xls

Carbon dioxide emissions

3.21.12 The table below shows the summary data for CO_2 emissions within the scope of influence of Local Authorities (previously National Indicator 186: per capita CO_2 emissions in the LA area), sector and fuel details (Units: kt CO_2). London's per capita emissions were estimated at 3.4 tonnes of CO2e in 2017, down from 3.5 tonnes of CO2e in 2016.

Year	Industry and Commercial	Domestic	Road Transport	Grand Total	Population ('000s, mid-year estimate)	Per Capita Emissions (t)
2012	232	420	160	876	189.0	4.6
2013	242	424	160	889	191.1	4.7
2014	245	367	168	836	193.3	4.3

[65] Resources and Energy Analysis Programme (REAP). *Footprint data, London*. REAP v2 Experimental release: 15-10-08. Published by SEI 2008. Available at http://www.resource-accounting.org.uk/downloads

2015	189	344	163	751	194.1	3.9
2016	158	325	163	699	195.2	3.6
2017	151	324	151	678	195.7	3.5

Table 27: CO_2 emissions in the London Borough of Richmond from 2005 – 2012
Source: London Energy and Greenhouse Gas Inventory (LEGGI)
Note: LEGGI shows estimates of energy consumption and GHG emissions from Homes, Workplaces and Transport within the Greater London area. It is produced by the Greater London Authority on an annual basis to measure progress against the Mayor's Climate Change Mitigation and Energy Strategy. LEGGI uses sub-regional energy data (electricity, gas and other fuels) published by BEIS for stationary sources, and transport data from the London Atmospheric Emissions Inventory (LAEI) for mobile sources.

CO_2 emissions reductions in the London Borough of Richmond

Per capita	Reduction 2012 - 2017	-23.9%
Kilotonnes CO2	Reduction 2012 - 2017	-22.6%

Table 28: CO_2 emissions reductions from 2012 – 2017 in the London Borough of Richmond
Source: LBRuT analysis

3.22 Air Quality

3.22.1 Poor outdoor air quality often leads to a reduced quality of life and can be a contributing factor to many health problems, ranging from premature deaths caused by heart and lung disease to worsening of asthmatic conditions, as well as damaging ecosystems, biodiversity and valued habitats. Action to manage and improve air quality is largely driven by EU legislation and in London boroughs, by the Mayor's London Environment Strategy 2018. The 2008 ambient air quality directive (2008/50/EC[66]) sets legally binding limits for concentrations in outdoor air of major air pollutants that impact public health such as particulate matter (PM10 and PM2.5) and nitrogen dioxide (NO2).

3.22.2 The Government set out its plans for dealing with all sources of air pollution, making air healthier to breathe, protecting nature and boosting the economy in the Clean Air Strategy 2019. It complements three other UK government strategies, the Industrial Strategy, Clean Growth Strategy and the 25 Year Environment Plan. In London, the Mayor's London Environment Strategy [67], published in May 2018, contains a comprehensive list of measures to improve air quality. The aim is "*for London to have the best air quality of any major world city by 2050, going beyond legal requirements to protect human health and minimise inequalities*".

3.22.3 This strategy includes setting new targets for $PM_{2.5}$ with the aim of meeting World Health Organization guidelines by 2030, the establishment of zero emission zones from 2020, the introduction an air quality positive development, the phasing out the

[66] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:0044:EN:PDF
[67] Mayor of London, 2018, *London Environment Strategy*.

use of fossil fuels to heat, cool and maintain London's buildings, the introduction of a low emission zone for non-road mobile machinery (NRMM) and the introduction of Low Emission Neighbourhoods (LENs). One action has been the Ultra Low Emission Zone (ULEZ) launched in Central London in April 2019.

3.22.4 The borough produced an Air Quality Action Plan in 2019, which was finalised in March 2020[68], which covers the actions intended to tackle air pollution in the borough over the next five years. This includes firm **action** to reduce traffic and create a healthy Richmond town centre and the introduction of 20mph speed limits on residential streets. The whole borough has been designated an 'Air Quality Management Area (AQMA) for both nitrogen dioxide (NO2) and PM_{10} (particles less than 10 microns), whereby the majority of air pollution derives from road traffic. The latest Annual Status Report[69] (published May 2020) indicates the AQMA should be maintained. The Greater London Authority (GLA) has identified four Air Quality Focus Areas (AQFAs) in Richmond (see Figure 18 below); this is subject to review and change in the future. There are currently no Low Emission Neighbourhoods (LENs) or Clean Air Zones (CAZs), but this may also change in the future.

3.22.5 The main source of emissions in the borough is road transport. For NOx other important sources in the borough include aviation and the provision of heat and power. For PM – construction, and domestic wood burning are also important. For PM_{10} resuspension of deposited particles is also an important local source. Note this is based on the London Atmospheric Emission Inventory (LAEI) 2016, not roadside monitoring data.

3.22.6 The Council monitors local air quality by the use of both continuous analysers and diffusion tubes. Diffusion tubes are located at a number of sites throughout the borough and monitor nitrogen dioxide. Continuous analysers monitor air quality in the borough 24 hours a day; currently the Council has one mobile monitoring unit that is moved around the borough to different locations and two static units (one is located in Castelnau outside the Public Library and the other is at the Wetlands site in Barnes). For the most recent Richmond Air Quality Report, please see: https://www.richmond.gov.uk/progress_reports_and_air_quality_action_plans

[68] http://www.richmond.gov.uk/air_quality_action_plan.htm (the online plan has a 'live' element, with status matrices being updated regularly)
[69] https://www.richmond.gov.uk/media/19196/2020-annual-status-report_lbrut.pdf

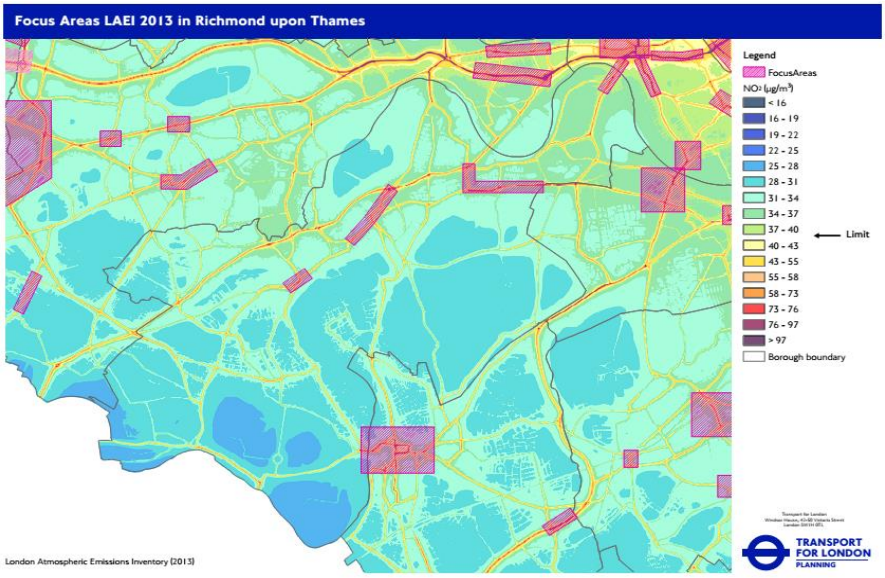


Figure 18 showing hotspot locations where the GLA believe a poor air quality problem to be most acute.

3.22.7 Continuous monitoring is carried out for the following pollutants: nitrogen dioxide (NO2), Ozone (O_3), and Particulates (PM_{10}). The results of the air quality monitoring data can be found on:

https://www.richmond.gov.uk/air_pollution and
http://www.londonair.org.uk/LondonAir/Default.aspx

3.23 Waste and recycling

3.23.1 The London Borough of Richmond is a Waste Collection Authority and part of the West London Waste Authority (WLWA), which is the authority responsible for its waste collection, disposal and recycling. The other boroughs in the WLWA are Brent, Ealing, Harrow, Hillingdon and Hounslow. These boroughs along with Old Oak Common and Park Royal Development Corporation have adopted the joint West London Waste Plan (2015). This Plan identifies sites for the wide range of waste facilities needed to manage the waste produced in West London up to 2031.

3.23.2 The transfer treatment and metal recycling inputs in the WLWA in 2018 were:

Site Type	West London Waste Authority tonnes
Hazardous waste	386
HIC	1,502

Clinical	6
Civic amenity site	85
Non Biodegradable	84
Transfer Total	**2,063**
Material recovery	412
Physical	489
Physico-chemical	94
Chemical	-
Composting	69
Biological	76
Treatment Total	**1,140**
Vehicle depollution	20
Metal recycling site	136
Metal Recycling Sector Total	**156**

Table 29: transfer treatment and metal recycling inputs in the WLWA in 2018
Source: Defra waste statistics 2019

Household Waste

3.23.3 Household waste accounts for around 600,000 tonnes or 87% of local authority collected waste arisings in the WLWA. Household waste in Richmond upon Thames accounted for around 77,000 tonnes of the WLWA total. The household waste collected per person in England has fallen by 9 per cent over the last eight years, from 429 kg in 2010/11 to 395 kg in 2017/18. In Richmond upon Thames the household waste collected per person per year has decreased over the period and by the year ending March 2018, stood at 378kg per head of population.

Year	**Collected household waste per person** (Richmond upon Thames)	**Waste from household kg per person (England)**
2010/11	422 kg	429
2011/12	393 kg	414
2012/13	403 kg	405
2013/14	409 kg	408
2014/15	386 kg	410
2015/16	382 kg	411
2016/17	390 kg	399
2017/18	387 kg	395
2018/19	378 kg	-

Table 30: Household waste collections
Source: WasteDataFlow, 20/02/2020

Landfill

3.23.4 There has been an overall reduction in the amount of local authority collected waste sent to landfill in recent years: 7,933,000 tonnes in 2013/14 to 3,213,000 tonnes in 2017/18. Energy recovery is the primary waste disposal method used by the WLWA: 60% for the year ending March 2019[70].

3.23.5 Around 12.5 per cent of all local authority managed waste was sent to landfill in 2017/18. This was equivalent to a total 3.2 million tonnes of waste, and 924 thousand tonnes lower than in 2016/17, a fall of 22.3 per cent. Landfill tax continues to be the main driver for diverting waste from landfill. Increasing numbers of EfW incineration plants have come on line in recent years and this has provided local disposal authorities with a cheaper alternative to landfill gate fees.

Recycling and composting

3.23.6 There is a kerbside recycling collection for residential properties and recycling facilities are situated throughout the borough. Sites are available to recycle a range of materials, including glass bottles, newspapers, cans, books, textiles, aluminium and green waste.

3.23.7 Currently around 36 per cent of waste in the borough is recycled, mainly at the Townmead Road waste transfer station in Kew. Once waste has been collected it is delivered to WLWA's Transport Avenue waste transfer station located in Brentford. The waste is compacted into ISO containers and loaded on to the railway and then taken by the Authority's rail transport contractor, EWS Ltd, for final treatment or disposal outside London.

3.23.8 The rolling 12 month 'waste from households in England' recycling rate to end March 2018 was 44.8 per cent. Richmond upon Thames has one of the highest household recycling and composting rates in London, rising from ranking 5th in 2010/11, at 43%. This rate improved to a peak of 46% but since 2013 has fallen, though the current rate of 43% is significantly higher than the London average of around 33%, (see Figure below) (Defra, 2019). Note: Inner London has substantially more flats wherein typical recycling rates are substantially lower than from houses. Generally, an authority with a small proportion of their total recycling accounted for by organic wastes will have a lower recycling rate[71].

[70] Waste Data Interrogator 2018

[71] Statistics on waste managed by local authorities in England in 2017/18, Defra, 2018

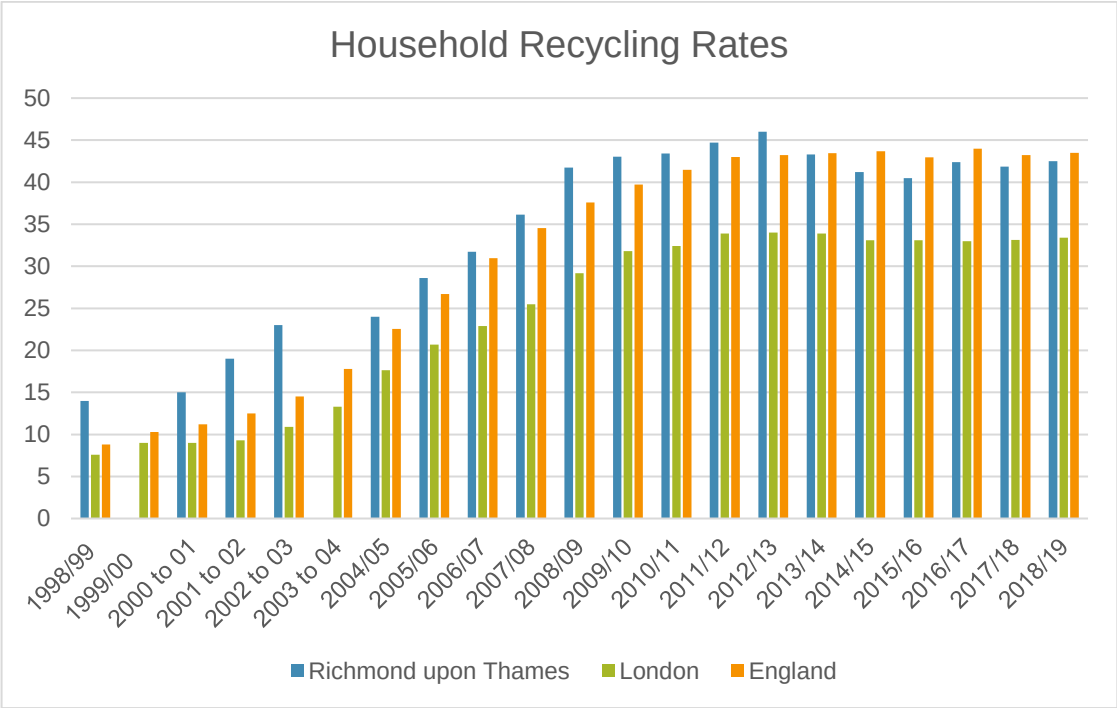


Figure 19 Household Recycling Rates Source DEFRA

For Waste Collection Authorities (WCA) and Unitary Authorities (UA):
X/Y x 100, where:
X = Tonnage of household waste collected by the WCA or UA which is sent for recycling/composting (including private/voluntary collections of household waste for recycling)
Y = Total tonnage of household waste collected by the WCA or UA (including private/voluntary collections of household waste for recycling)

Hazardous waste

3.23.9 The volume of hazardous waste arising in Richmond upon Thames in 2018 was 3,995 tonnes. This accounted for less than 1% of all London's hazardous waste (Environment Agency, 2018). The primary disposal method was 'recovery' (59%) followed by 'waste transfer' (20%), 'landfill' and 'treatment' (9% and 8% respectively)[72].

3.23.10 Further information including detailed statistics on waste can be found on Defra's website: http://www.defra.gov.uk/statistics/environment/waste/ and on the West London Waste website: http://www.westlondonwaste.gov.uk/.

3.24 Historic environment

Historical Context

3.24.1 Historically Richmond upon Thames attracted royalty, as can be seen through the legacy of Royal Parks, Kew and Hampton Court Palace. The royal connections to Richmond date back to Edward I (1272-1307), when the area was known as the Manor of Sheen. The various royal palaces at Richmond, Kew and Hampton Court were refuges for pleasure and from plague. In 1637 Charles I created a new park to continue his passion for hunting and field sports. This new park, Richmond Park, was given to the City of London after Charles I's execution. In 1683 the Earl of Rochester rebuilt Petersham Lodge into a mansion with a formal forest garden of walks and vistas on the hillside. Riverside villas and mansions expanded in the second decade of the 18th century based on the ideal of the villa as a classical retreat for man from the court and city. Henry the Eighth resided in Hampton Court Palace with five of his six wives, and his daughter Queen Elizabeth I lived in Richmond Palace. The areas around Richmond Town and Twickenham were home to many wealthy people, including, for example, Horace Walpole, who built Strawberry Hill House. Numerous artists and writers contributed to the popularity and development of the area in particular, Pope, Reynolds and Turner. In 1827, Queen Victoria opened Hampton Court and Bushy Park to the public and by 1841 the two gardens of Kew were merged to form the Royal Botanic Gardens, Kew which were then opened to the public. Many of these historic houses and gardens are now within public ownership and many are undergoing restoration such as Marble Hill House. [1]

Heritage and designations

3.24.2 Today, the borough has 85 designated Conservation Areas[2]. Each area is accompanied by a Conservation Area Statement, which explains why and when it was designated, plus a short history and a map showing the boundary. The borough's Conservation Area Statements and Appraisals include details of many of the most impressive buildings and include audits of streetscape items of heritage or aesthetic value in each area. There are also many notable protected trees both within Conservation Areas and with Tree Preservation Orders.

[72] Hazardous Waste Data Interrogator 2018, Environment Agency

3.24.3 Richmond upon Thames has the richest historic environment outside central London with approximately 1,371 listed buildings[3]. A listed building is a building that has been designated as being of special architectural or historic interest. It is included in a list that is prepared by the Secretary of State for Culture, Media and Sport. Historic England, the National Trust and the Historic Royal Palaces all own properties within the borough. The heritage attractions within the borough include Hampton Court Palace, Ham House, Strawberry Hill House, Garrick's Temple to Shakespeare, Kew Palace, Marble Hill House and Richmond Theatre.

3.24.4 There are also four Scheduled Monuments in the borough; they include: The Brew House in Bushy Park; Ham House; Hampton Court Palace; and Kew Palace. Royal Botanic Gardens Kew was inscribed on the UNESCO World Heritage Site List in 2003. In addition, there are 14 open spaces on the Historic England 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.

3.24.5 Richmond Borough contains an elaborate network of framed view lines, avenues and vistas along and from the River Thames and Richmond Hill. This visual network gradually evolved from the early 17th century, formed by key landmarks such as palaces, villas, the Royal Observatory, Kew Pagoda, obelisks, bridges, church towers and spires, and the planted avenues which still provide definition and structure to the landscape today. In the 18th century framed vistas directed from Richmond Hill were created, one looked down to the grand avenue of Queen's Ride to White Lodge, a hunting lodge built for King George I. The other looked out from King Henry's Mound across London to St Paul's Cathedral. This view towards St Paul's Cathedral is now one of London's strategic views, protected by government directive. Richmond Hill offers the only view in England to be protected by an Act of Parliament—the Richmond, Ham and Petersham Open Spaces Act passed in 1902—to protect the land on and below Richmond Hill and thus preserve the fine foreground views to the west and south over a meander in the River Thames, immortalised in paintings by Sir Joshua Reynolds and J. M. W. Turner, The figure below provides an overview of the borough's network of protected views and vistas.

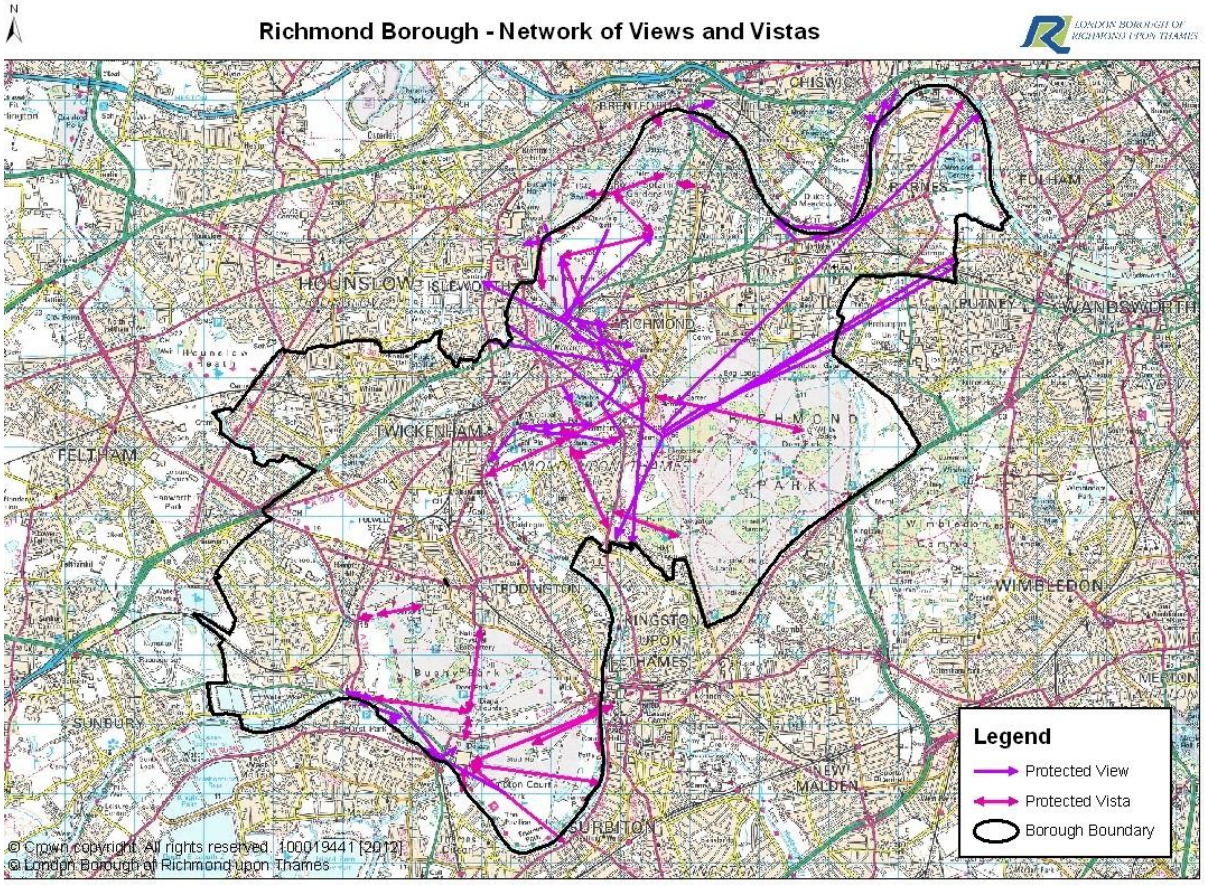


Figure 20: Network of designated Views and Vistas; Source: LBRuT

3.24.6 Within the borough there are many buildings that due to their historical associations, architectural style, visual interest or siting within an area, are of significance to the history and character of the local environment. However, they may not possess sufficient interest to warrant statutory listing as being of 'special architectural or historic interest'. Instead the Council may, following consultation with owners, designate them as Buildings of Townscape Merit (BTM), the majority of which can be found in the 85 Conservation Areas. BTMs are buildings, groups of buildings or structures of historic or architectural interest which have been identified as contributing significantly to the townscape but are not on the statutory list. Many different types of structures are now designated as BTM (over 13,000 in this borough), ranging from houses and cottages to shops, churches, public buildings, railway stations, to industrial premises; and now includes boundary walls, post boxes, drinking troughs, monuments, and marker stones.

3.24.7 In addition, the borough's exceptional links to artistic, literary and sporting cultural heritage are also relevant and should be recognised. For example, the Blue plaques (such as that to Virginia Woolf) and other key locations such as St Anne's Church, Kew, burial place of artists Zoffany and Reynolds, Turner's House and Eel Pie Island are of importance within the borough.

Heritage at Risk

3.24.8 Richmond has fourteen structures on the Heritage at Risk Register[4] and one Conservation Area at risk which is Platts Eyot. Several of these are buildings and boathouses on Platts Eyot, an island at Hampton. The Council continue to seek solutions to enable building repairs and re-use to secure their long-term future.

Heritage and trans-boundary issues

3.24.9 The Sustainability Appraisal takes a slightly wider view in relation to the historic environment and heritage assets and therefore trans-boundary issues are also being considered. It is important to have an understanding of these trans-boundary issues, particularly for any heritage assets that are located near or adjacent to the borough boundary such as Hampton Court Palace or that are located just outside the borough. Proposals for sites within LB Richmond could potentially affect neighbouring authorities' heritage assets, including their setting, and vice versa. For example, the Royal Botanic Gardens of Kew World Heritage Site has a buffer zone, which falls partly within the neighbouring borough of Hounslow. In addition, Hounslow has a range of highly significant heritage assets close to the borough boundary, such as Syon House, Syon Park and Duke's Meadows near Chiswick. The Royal Borough of Kingston upon Thames also has highly significant heritage assets, such as the Clattern Bridge. Many nationally and regionally important heritage assets are located along/near to the River Thames in this part of London; they are also recognised in the Thames Landscape Strategy.

Archaeology

3.24.10 There are large areas within the borough where archaeological potential exists, such as Kew Gardens, Richmond Park, The Old Deer Park, parts of Ham and Petersham, Hampton Court and Bushy Parks, parts of Twickenham riverside and Richmond town. Specialist bodies, normally Historic England[5] and the Greater London Archaeological Advisory Service[6], provide advice and guidance on areas where archaeological potential exists.

3.24.11 Archaeological Priority Areas are areas with known potential for archaeological remains. They are identified using historical information on finds and current archaeological knowledge by Historic England and provided to the Council for planning purposes. These areas help protect archaeological remains that might be affected by development. The borough's APAs are being reviewed by Historic England and the Greater London Archaeological Advisory Service (GLAAS) as part of a rolling programme of reviews across London. The latest available APAs constraints map will be published at historicengland.org.uk/services-skills/our-planning-services/greater-london-archaeology-advisory-service/greater-london-archaeological-priority-areas/

[1] All London Green Grid – Arcadian Thames Framework, Design for London, 2012

[2] Further information on the Borough's Conservation Areas and Conservation Area Statements: http://www.richmond.gov.uk/conservation_area_appraisals_and_management_plans

[3] Further information on the Borough's Listed Buildings: http://www.richmond.gov.uk/listed_buildings

[4] https://historicengland.org.uk/images-books/publications/har-2018-registers/lon-har-register2018/

[5] www.historicengland.org.uk

[6] www.historicengland.org.uk/services-skills/our-planning-services/greater-london-archaeology-advisory-service/

3.25 Indicators

3.25.1 Generally speaking, baseline information is collected using **indicators**. Examples of indicators include the percentage of people in an area describing their health as not good or the number of unfit dwellings in a district or borough. If indicators are monitored over time, the resulting data can reveal *trends* in performance (i.e. whether something is getting better or worse). Indicator performance can also be gauged in relation to wider geographical areas (e.g. counties or regions) if comparable data is available. Indicator performance can also be assessed in relation to *targets* where these exist. Indicator data can be very useful for identifying the sustainability problems in an area to which a Local Plan may need to respond. The Authority's Monitoring Report will provide the basis for monitoring the Local Plan's effects. Please refer to Appendix 4 for the Draft Sustainability Appraisal Monitoring Framework.

3.25.2 Some baseline trends will occur in any case without the Local Plan. Some of these are listed below.

- **Increased air travel:** With potential airport expansion projects that are due to take place at Heathrow, the number of flights is set to increase and there will be corresponding increases in disturbance, noise and emissions. Post the Covid pandemic we await to see how the airline sector recover.
- **Vehicular emissions:** European emissions regulations date back to 1970, with the first EU-wide standard – known as Euro 1. The regulations, which are designed to become more stringent over time, define acceptable limits for exhaust emissions of new light duty vehicles sold in EU and EEA (European Economic Area) member states. Increased efficiency of engines and emissions technology has reduced air pollution and the trend is expected to continue. According to Department for Business, Energy & Industrial Strategy (BEIS) statistics from 2018, transport still accounted for 33% of all carbon dioxide emissions, with most of this coming from road transport.
- However, BEIS estimates current emissions from road transport have fallen back by around 8.5% over the last decade to levels last seen in 1990, having previously peaked in 2007.

- **River water quality:** The success of efforts made by the borough council to protect or increase water quality in the Thames is in part dependant on the efforts of those local authorities up stream and the efforts of the Environment Agency.
- **National and global economy:** Every local authority area contributes to the national and global economy but local prosperity is in turn dependant on the state of the national as well as the global economy. Leaving the EU, presents a challenge for Britain's economy and prosperity.
- **Population:** The total population and any influx of population into the borough will be subject to change dependant on national and global population and migration trends.

4 IDENTIFYING SUSTAINABILITY ISSUES

Task A3: Identifying key sustainability issues for the SA and Local Plan to address

4.1.1 The identification of sustainability issues and problems is an opportunity to define some of the key issues for the Local Plan to address [73]. There are many possible sustainability issues but not all will be significant for the borough. The issues recorded are those acknowledged as a priority for the borough.

4.1.2 The sustainability issues confronting the London Borough of Richmond upon Thames have been identified from the following sources:

- Issues identified in review of PPPs (see Task A1);
- Analysis of baseline data and trends (see Task A2 and Appendix 1);
- Knowledge of officers working in the borough;
- Previous responses on the SA Scoping Report and preliminary consultation with key organisations such as the Environment Agency, Historic England and Natural England.

4.1.3 The key issues are divided into the three main aspects of sustainability (Environment, Social and Economic) and are set out in the table below. It is recognised that many of the issues are cross-cutting and could have been placed under any one of the headings. The issues may remain similar over time, but the priorities may alter, due for example to increased awareness of poor air quality, and/or the declaration of a climate emergency. However, for ease of discussion, and to link in with the sustainability objectives (identified in the Sustainability Framework – Task A4), they have been placed under one section only. As a result of the consultation on the Draft Scoping Report with the statutory bodies, some amendments may be made to the sustainability issues identified.

Aspect	Sustainability Issue
Environment	Tackling and responding to the climate emergency, including climate change mitigation and adaptation, particularly flood risk
	Sustainable construction, energy efficiency and renewable energy, including achieving zero carbon standards

[73] ODPM: A Practical Guide to the Strategic Environmental Assessment Directive, 2005

	Protection and enhancement of the natural environment and green infrastructure, including green and open spaces
	Protection and enhancement of the built environment, historic assets and their settings, including heritage at risk
	High quality design and public realm
	Pollution (air, noise, water), particularly poor air quality
	Waste reduction, waste treatment and increased recycling
Social	Lack of opportunities for the provision and adequate supply of affordable housing
	Need for housing opportunities for all
	Varying levels of poverty and affluence across the borough
	Access to essential community facilities, including health, education, leisure, local services and shopping
	Creating a safe, healthy and inclusive place to live
	Reducing the need to travel, improving choices for more sustainable travel and accessible public transport for all
Economic	Protection of employment land and premises
	Skills mismatch and small employment base within the borough
	Improve the resilience of businesses and the economy
	High car use and transport infrastructure at capacity during peak times; congestion on road network
	Need for education, training and local employment opportunities
	Support the vitality, viability and uniqueness of town and local centres

Table 31: Sustainability aspects and key issues identified

4.1.4 The table below sources each of the sustainability issues (as set out in the table above), provides brief background information and outlines considerations to be taken forward in preparing the Local Plan. It should be noted that the possible policy options or proposals for sites put forward are an initial view only. Policy options and alternatives and options for sites will be developed as work on the Local Plan progresses and information from the evidence base becomes available. The results of this consultation will help to shape the policy direction.

Sustainability Issues in the London Borough of Richmond upon Thames

Sustainability Issues	Description	Possible policy option	Data Source
Environmental Issues			
Tackling and responding to the climate emergency, including climate change mitigation and adaptation, particularly flood risk	Climate change is a key issue facing the borough. Buildings of the future will need to be able to adapt to increased temperatures, drier summers and wetter winters. The borough is centred around the River Thames. Four other major water courses run through the borough: River Crane, Beverley Brook, Duke of Northumberland's River and Longford River. Flooding both upstream (fluvial/non tidal) and downstream (tidal) of Teddington Weir is serious during extreme events and may well worsen in years to come as a result of climate change. Limiting run off from new development is an extremely important issue that will need to be addressed. All sources of flooding should be considered, including surface water and sewer flooding.	Development should be designed in a way so that it can adapt to the likely effects of climate change. Direct inappropriate development (more vulnerable classification) away from areas of flood risk using the appropriate sequential and exception tests. Development should be limited in areas that are at identified as being likely to flood, especially residential (more vulnerable) and basement (highly vulnerable) developments, should be *strictly* limited in floodplain areas. In all areas of the borough consideration should be given to sustainable drainage systems (SuDS). Through the use of SUDS, runoff from new developments should be limited to that of equivalent Greenfield runoff rates. Implementation should be in line with the London Plan drainage hierarchy. Development should be strictly restricted within 16 metres of the tidal sections of the River Thames, within 8 metres of non-tidal main rivers and other watercourses (including ditches and drains).	MHCLG and DEFRA Flood and Water Management Act Environment Agency EU Floods Directive
Sustainable construction,	The main source of carbon dioxide is from combustion of fossil fuels i.e. through	Developments must follow the Mayor's Energy Hierarchy (Lean, Clean, Green)	DECC

Sustainability Issues	Description	Possible policy option	Data Source
energy efficiency and renewable energy, including achieving zero carbon standards	electricity generation, or vehicle emissions. Buildings are the biggest cause of carbon dioxide emissions in the UK. Richmond has one of the highest carbon footprints in London per capita. Need to conserve natural resources e.g. through energy efficiency, & conservation of materials and water. Communities and buildings have to adapt to the likely effects of climate change.	Seek a reduction in traffic congestion and encourage sustainable modes of transport in order to reduce pollution. Criteria must be established that require low carbon and renewable energy within development proposals. Development should meet the highest standards of energy efficiency, sustainable design and construction possible, and ensure that buildings are designed to cope with the likely predicted changes in climate.	EU Renewable Energy Directive EU Energy Efficiency Directive BREEAM
Protection and enhancement of the natural environment and green infrastructure, including green and open spaces	The borough contains some areas designated as being of international and national, regional and local importance. Most notably, Richmond Park, the Wetlands Centre, Bushy and Home Park. Non-native invasive species introduced into the borough can damage the environment and biodiversity. Increased public access to sensitive habitats, including designated sites, may potentially have negative impacts. The density of development around a park can increase its isolation resulting in a greater degree of fragmentation of the green spaces.	Ensure biodiversity is not adversely affected by development and enhance wherever possible. Ensure development around and in between the Royal Parks does not threaten their biodiversity value or lead to a degradation and fragmentation of the green spaces. Take account of the threat of non-native species when developing policies and proposals for sites. Whilst access to nature should be promoted, mitigation measures need to reflect the mitigation hierarchy and enhance the natural and local environment (as set out in the NPPF paras 170-177) by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their	Conservation objectives European Sites: London and South East Condition of SSSIs / Natural England Access to Nature / Natural England GiGL

Sustainability Issues	Description	Possible policy option	Data Source
		statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate	
Protection and enhancement of the built environment,	Short-term visions for the development and demand for new housing and other needs can result in inappropriate development and demolition, which can	Continue protecting, and wherever possible enhancing, the borough's rich historic environment, including the character and the setting of such assets;	Historic England LBRuT monitoring

Sustainability Issues	Description	Possible policy option	Data Source
historic assets and their settings, including heritage at risk	affect the character of a historic area or individual building. Potentially, the loss of character by incremental change is the biggest pressure. There is potential for the character of the landscape and townscape to be harmfully affected by change, e.g. through insensitive housing development. Issues related to traffic congestion, air quality, noise pollution and other problems can affect the historic environment and detract from the setting of heritage assets.	this includes the borough's Conservation Areas, Listed Buildings and Buildings of Townscape Merit, Royal Botanic Gardens Kew World Heritage Site, and Registered Parks & Gardens. As and when opportunities arise, support and encourage the reduction of the number of sites at risk of loss. Protect and promote a high quality environment. Ensure that development needed for economic or social needs does not adversely affect the character of the borough.	
High quality design and public realm	The quality of new developments and the quality of public realm, civic spaces and general soft/hard landscaping is of high importance to this borough.	Ensure development is of the highest possible design and quality that does not impact on the townscape and landscape character of the borough.	LBRuT monitoring
Pollution (air, noise, water), particularly poor air quality	The main source of pollution is the large volumes of road and air traffic. The whole borough is an Air Quality Management Area	Ensure development does not exacerbate the existing air quality issue and seek to implement measures to reduce predicted exceedances. Development should be located where it may reduce distances travelled.	Days of air pollution Annual mean levels of NO2 and particulates Local monitoring
Waste reduction, waste treatment	The Council will need to increase recycling rates and provide facilities for dealing with waste locally.	Avoid waste, promote the sustainable waste management hierarchy and ensure disposal and landfill is the last option	London Plan, GLA waste strategy

Sustainability Issues	Description	Possible policy option	Data Source
and increased recycling		considered. Promote the circular economy.	DEFRA Municipal Waste Statistics WasteDataFlow Statistics EU Directive on Landfill, 1999
Social Issues			
Lack of opportunities for the provision and adequate supply of affordable housing	The provision of housing, in particular affordable housing, is one of the most important issues affecting the borough.	Ensure that housing provision helps to provide sufficient homes for all sections of the community. Possible need to reallocate land for housing. The location of additional housing is important as it should be situated on previously developed land where possible and accessible to employment, facilities and public transport.	LBRuT monitoring Strategic Housing Market Assessment 2016 Annual housing land supply update in LBRuT AMR
Need for housing opportunities for all, including issue of affordable housing price/earnings affordability ratio	House prices in the area are higher on average (£665,390) compared to the National Average (£235,298), according to Land Registry in November 2019. This makes it difficult for people to afford to buy homes. There is also a shortage of affordable (rented / part-owned) homes in the district. The Council's housing service indicates that the provision of family accommodation for social affordable rent is the main priority.	Policies to continue to provide for meeting affordable housing need. The location of affordable housing also has implications (see above).	NPPF London Plan ONS Annual Survey of Hours and Earnings Strategic Housing Market Assessment (2016) Census 2011

Sustainability Issues	Description	Possible policy option	Data Source
Varying levels of poverty and affluence across the borough	The borough is generally affluent with an average IMD rank summary measure in the least deprived 10% in England. However within the most affluent wards it is likely that there are pockets of local deprivation.	Address issues of social exclusion and accessibility for disadvantaged groups. Ensure that social and economic sustainability objectives are taken fully into consideration in key wards.	London Plan English Indices of Deprivation 2019 ONS Annual Population Survey
Access to essential community facilities, including health	Generally the health of the borough is good with a high life expectancy. 76.3%, 17.8% and 5.9% of borough residents reported their health to be respectively good, fairly good and not good. However the population is aging and this will require additional services and facilities to support its well-being.	Ensure that enough health care facilities are provided as part of new development and that there is comprehensive transport to health centres and facilities throughout the borough. Increasing health service provision to meet requirements for older age groups	Joint Strategic Needs Assessment Census 2011 ONS Projections show a significant increase in the 85+ population over the next 12 years. NHS Richmond DWP Benefit Claimants
Access to essential community facilities, including educational facilities and services	Results from the borough's schools are generally above the England average. Due to increasing demand (often from outside the borough) many schools are operating at capacity. The population of Richmond upon Thames is generally well educated, with a well qualified workforce. There are problems due to lack of childcare facilities/after school clubs etc.	Need to ensure that sufficient educational facilities and choice is provided and are accessible to potential users. There are areas in the borough with a need for more primary school places. Childcare provision can be encouraged as part of new development.	Department for Education Performance Tables Choice and diversity: a policy paper for Education and Children's Services 2010

Sustainability Issues	Description	Possible policy option	Data Source
Access to essential community facilities, including leisure facilities and local services	Access to a range of accessible and inclusive activities can enhance the quality of life of residents and visitors. The River Thames is a popular and important natural attraction for locals and tourists alike. The Thames path should be safeguarded.	New housing and publicly accessible buildings and workplaces should be accessible for mobility impaired and disabled. Need to ensure there is sufficient provision of accessible leisure facilities as part of new housing development and that proposals are located in areas, which meet a requirement for local needs and do not harm amenity of residents. Develop greater public access to waterways within the borough.	Labour Force Survey ONS Annual Population Survey Sport, Open Space and Recreation Needs Assessment LBRuT Town Centre & Retail Research LBRuT monitoring
Access to essential community facilities, including shopping	Access to local shopping.	Protection of local shopping facilities and filling gaps where identified.	LBRuT Town Centre & Retail Research LBRuT monitoring
Creating a safe, healthy and inclusive place to live	Fear of crime and antisocial behaviour (which is disproportionate to actual level of crime) could possibly lead to negative effects upon the health of residents. Disorder and anti-social behaviour especially related to crowds, weekends and evening in the borough's town centres is a concern. This could have a possible negative effect upon the economic well-being e.g. in town centres.	Use of design and layout of development to reduce crime, vandalism, graffiti and fear of crime. Facilitate social distancing. Ensure a balanced town centre retail and evening economy. Potentially introduce areas of special control.	Anti-social behaviour as recorded by LBRuT Crime rate (per 1000 population) recorded by the Metropolitan Police Authority

Sustainability Issues	Description	Possible policy option	Data Source
	Decrease in community cohesion.		
Reducing the need to travel, improving choices for more sustainable travel and accessible public transport for all	Approximately 24% of households do not have a car; this accounts for around 18,000 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.	Reducing the impact of new developments through 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. Travel assessments and travel plans, particularly for school and workplaces.	LBRuT Highways monitoring Local Implementation Plan (3)
Economic Issues			
Protection of employment land and premises	Between 2013/14 and 2016/17 in total there was over 92,000 sqm of net floorspace lost, with the greatest losses (84%) in the B1 use class (due mainly to PD rights). There is a very limited amount of employment land in the borough. For the remaining employment land and premises, there is pressure from housing and higher value land uses to redevelop existing employment sites. The latest Council's employment floorspace monitoring demonstrates that over the two years between 2017/18 to 2018/19, there was an overall loss of almost 30,300sqm of net employment floorspace, with the greatest losses in the	Protect all existing employment sites unless they are inherently unsuitable.	LBRuT Employment Land Study 2009, 2013, Update 2016 and Update 2017 LBRuT employment floorspace monitoring

Sustainability Issues	Description	Possible policy option	Data Source
	B1 (73%) and Sui Generis (20%) use classes.		
Promotion of economic growth	Possible mismatch between land and property available for business development and demand. High number of self-employed workers, many of whom work from home	Ensure employment land availability	Monitoring of consents Employment Land Study (2009) & (2013) and 2016 & 2017 Updates LBRuT employment floorspace monitoring
Business start-ups and closures	Large numbers of small businesses & entrepreneurship.	Provide for the needs of local businesses on appropriate sites.	OND Business Demography APS data Local Economic Assessment (2010)
Skills Shortages and small employment base within the borough	There are very low unemployment levels in the borough, with only 1.6% of the working age population (or 1,935 people) claiming Job Seekers Allowance; compared to 4.4% in London and 4.8% in the UK as a whole. Claimant count has remained more or less static since late 2010. Only a small proportion of the local population is classified long term unemployed.	Ensure affordable housing targets are met including the provision of sufficient rented and shared ownership accommodation for lower paid workers.	Unemployment rate for the borough from GLA claimant rates 2011 Business All in One (LBRuT) ONS Claimant Count data DWP Benefits Claimants

Sustainability Issues	Description	Possible policy option	Data Source
	The high house prices have led to a shortage of low paid and key workers living in the area.		
Improve the resilience of businesses and the economy	Insufficient diversity of economic sectors represented in the area Number of empty non-domestic properties.	Encourage the retention and provision of a range of small business units to meet the needs of local business.	IDBR/APS LBRuT Town Centre Land Use Surveys Council Tax & Revenues
High car use, transport infrastructure at capacity during peak times, congestion on road network	High levels of traffic, including through traffic, which leads to significant road congestion particularly in the morning and evening peaks. High levels of car ownership and dependency	Locate major trip generating activities in town centres and areas of high public transport accessibility (in order to increase opportunities for alternative means of travel). Reduction of congestion and encouragement of Active Travel choice and car clubs. Promote walking, cycling and public transport as alternatives to car travel for short journeys. Where opportunities arise, particularly in major development schemes, embed car-free or car-lite lifestyles from the outset.	Employment floorspace in main centres LBRuT monitoring Public Transport use from TfL
Need for education, training and local employment opportunities	The borough has generally a highly skilled, high earning, articulate population but this conceals the fact that there are those less fortunate: without work; with health problems; in fuel and housing poverty and	Ensure policies and initiatives are in place that focus on providing training and local employment opportunities, particularly for those in the areas of relative deprivation.	Unemployment rate for the borough from GLA claimant rates

Sustainability Issues	Description	Possible policy option	Data Source
	those living in the pockets of relative deprivation across the borough.		English Indices of Deprivation 2019
Supporting the vitality, viability and uniqueness of town and local centres	Overall, the number of vacancies throughout the borough's five main centres is between around 5% and 11%, whereby Teddington has the lowest and Whitton the highest rate. In 2019 the borough-wide retail vacancy rate was 7.4%, higher than in 2016 & 2017 but lower than in 2015. Rates are below the national average (c.13%).	Ensure that main town centre uses are protected and that any new town centre uses are located in the high streets.	LBRuT Town Centre & Retail Research LBRuT monitoring

Table 32: Sustainability issues in the London Borough of Richmond upon Thames

5 FORMULATING SUSTAINABILITY APPRAISAL OBJECTIVES

Task A4 Develop the sustainability framework consisting of sustainability objectives, indicators and targets.

5.1 Introduction

5.1.1 In order to measure the operation of the Local Plan, help assess the sustainability of its policies, and to monitor its achievement in sustainability terms, sustainability objectives and indicators are developed. The objectives are, where possible expressed in terms of targets, the achievement of which should be measurable using the indicators selected.

5.1.2 The Sustainability Appraisal (SA) objectives are based on the issues which are affecting the borough, as identified in the previous chapter.

5.2 SA Objectives

5.2.1 The Community Plan (2016-2020)[74] objectives are specific to the development of the London Borough of Richmond upon Thames and are detailed below:

- The vision is for a borough where people will lead happy lives and are able to enjoy life, with opportunities to learn, develop and fulfil their potential;
- Where people can live as independently as possible in the local community and feel empowered to take responsibility for their health and wellbeing, and plan for their future;
- Where people feel safe, are respected and valued, and able to contribute to their communities and where diversity is celebrated;
- Where the local character of the environment is protected and new development is high quality and compatible with local character, meets people's needs and provides opportunities for all; and
- Where the towns and local centres are attractive, viable for businesses and contribute positively to the quality of life for residents and visitors.

5.2.2 The Council has identified three themes which describe how it will work in partnership with the local community and inform everything they do to put people first. The themes are:

1) Involving and engaging local people and businesses
2) Delivering cost effective services to meet local needs.

[74] https://www.richmond.gov.uk/community_plan

- Tackling inequality and creating opportunities for children and young people
- For a healthy borough
- For a safer borough
- To support businesses, the voluntary and community sectors and the arts
- For a greener borough

3) Being accountable to local people.

5.2.3 While the Community Plan objectives set the aims and aspirations of the borough, the Local Plan SA objectives are more specific goals for land use in Richmond upon Thames. The SA objectives purely provide the framework for assessment. They are designed to provide a balance between the three objectives of sustainable development: the environment, the economy and society. The objectives reflect the key sustainability issues in the borough, as identified in the previous step (Stage A3). Many of the objectives are cross-cutting and not purely social, environmental and economic objectives.

5.2.4 For the purpose of the Local Plan the SA objectives have been reviewed over time and compared to other national, regional and local documents, including the Community Plan. The final list of draft objectives for the SA can be viewed below. The objectives may be refined further based on consultations with statutory bodies and key stakeholders.

SA objectives for the London Borough of Richmond upon Thames Local Plan	Env	Econ	Soc
1) To prevent and reduce the amount of waste, and minimise the use of non-renewable resources.	✔		
2) To reduce pollution (such as air, noise, light, water and soil), improve air quality and minimise impacts associated with developments.	✔		✔
3) To reduce reliance on private transport modes, encourage alternatives to the car, and enhance safer routes and permeability for walkers and cyclists.	✔		✔
4) To tackle the climate emergency by reducing greenhouse gas emissions in new developments and promoting zero carbon technologies and renewable energy	✔		✔
5) To adapt to the effects of a changing climate by protecting and managing water resources, and avoiding or reducing flood risk from all sources.	✔	✔	✔
6) To protect and enhance existing habitats, species and biodiversity, and to seek to increase these where possible.	✔		
7) To promote high quality and sustainable urban design, including preserving and, where possible, enhancing the borough's heritage assets and their settings.	✔	✔	✔
8) To protect and enhance the quality and range of parks and open spaces as part of the wider green infrastructure network.	✔		✔
9) To ensure development makes efficient use of land, buildings and infrastructure.	✔	✔	✔
10) To provide a range of high quality and affordable housing to meet local needs.		✔	✔
11) To promote healthy, safe and inclusive communities, and promote equal opportunities.			✔
12) To ensure access to local services and facilities, including local shopping, leisure facilities, sport and recreation opportunities.		✔	✔
13) To increase the vitality, viability and uniqueness of the borough's existing town centres, local centres and parades.		✔	✔
14) To promote sustainable economic growth and employment opportunities.		✔	✔

5.3 SA Assessment Framework and Decision Making Criteria

Sustainability Appraisal objective	Decision making criteria	Assessing of Local Plan Policies
1) To prevent and reduce the amount of waste, and minimise the use of non-renewable resources.	• Will it prevent waste wherever it occurs? • Will it promote sustainable waste management, following the waste hierarchy, and reduce consumption of materials and resources? • Will it increase waste recycling?	Analysis of: •Existing use and buildings •Location •Vacant sites •Derelict sites •Potential options for future land uses
2) To reduce pollution (such as air, noise, light, water and soil), improve air quality and minimise impacts associated with developments.	• Will it impact on natural resources, soil, air and water quality? • Will it reduce emissions of pollutants? • Will it impact on locations that are sensitive to air pollution? • Will it impact on noise levels? • Will it lead to more light pollution? • Does it improve water quality? • Will it safeguard soil quality and quantity?	•The whole borough is an Air Quality Management Area •Analysis of potentially contaminated land and past industrial land uses •River Thames Policy Area •River Crane corridor
3) To reduce reliance on private transport modes, encourage alternatives to the car, and enhance safer routes and permeability for walkers and cyclists.	• Will it impact on traffic congestion? • Will it encourage the use of public transport? • Will it encourage walking and cycling? • Is the proposal/land use in a location with appropriate PTAL level? • Will it make use of existing transport infrastructure? • Will it encourage alternatives to the car?	Analysis of: •PTAL level •Town centre boundary •Area of Mixed Use •1 km distance to primary school •3 km distance to secondary school •1 km distance to GP surgery •400m distance to Area of Mixed Use

Sustainability Appraisal objective	Decision making criteria	Assessing of Local Plan Policies
		•400m distance to main town centre •Public Right of Way
4) To tackle the climate emergency by reducing greenhouse gas emissions in new developments and promoting zero carbon technologies and renewable energy.	• Does it maximise energy efficiency? • Will it reduce greenhouse gas and particularly carbon dioxide emissions by reducing energy consumption? • Does it involve the incorporation of zero- and low carbon technologies? • Does it incorporate renewable energy technologies? • Will it include energy recovery? • Is it in keeping with the principles of the Council's Sustainable Construction Checklist SPD?	Analysis of: •Existing use and buildings •Potential options for future land uses •Monitoring of Sustainable Construction Checklist target measures
5) To adapt to the effects of a changing climate by protecting and managing water resources, and avoiding or reducing flood risk from all sources	• Will the proposal be affected by flooding, i.e. is it within zone 2, 3a or 3b? • Will it lead to increased surface water flooding? • Will it lead to sewer flooding? • Will it impact or increase the risk of flooding to other people and property? • Will it promote and include climate change adaptation measures? • Will it include measures to reduce water consumption?	Analysis of: •Location within flood zone •Surface water maps •Localised flooding maps, where available
6) To protect and enhance existing habitats, species and biodiversity, and to seek to	• Will it impact on national, regional or local BAP habitats and/or species? • Does it affect a site designated for nature conservation purposes?	Analysis of: •Tree Preservation Orders •Sites designated for nature conservation purposes, including SSSI and OSNI

Sustainability Appraisal objective	Decision making criteria	Assessing of Local Plan Policies
increase these where possible.	• Will it impact on access to nature? • Does it support ecosystems and lead to any enhancements in biodiversity, particularly in non-designated sites? • Will it lead to a biodiversity net gain? • Will it impact on existing networks of open spaces and create new green spaces? • Will it lead to a degradation or fragmentation of the green spaces?	• Existing on-site habitats and biodiversity features (NB: If development is proposed on protected or BAP species sites, local authorities should consult the Natural England Standing Advice)
7) To promote high quality and sustainable urban design, including preserving and where possible enhancing the borough's heritage assets and their settings.	• Will it affect the significance of heritage assets through direct impacts or impacts on their setting? • Will the design enhance the local character? • Have opportunities that make a positive contribution to the local character and area been identified? • Will it impact on any potential archaeological remains? • Will it impact on the Kew World Heritage Site, its buffer zone and its wider setting?	Analysis of: •Conservation Area(s) •Listed Building(s) •Building(s) of Townscape Merit •Royal Botanic Gardens Kew World Heritage Site •Archaeological Priority Area •River Thames •River Crane •Historic Parks & Gardens
8) To protect and enhance the quality and range of parks and open spaces as part of the wider green infrastructure network.	• Will it increase or decrease public open space deficiency? • Will it lead to loss or degradation of designated spaces such as Green Belt, MOL, Local Green Space or OOLTI? • Will it improve connectivity between existing open spaces? • Will it encourage the enhancement of the wider green infrastructure network?	Analysis of: •Existing use and buildings •Metropolitan Open Land •Green Belt •Local Green Space •Other Open Land of Townscape Importance •Historic Parks & Gardens •Open spaces assessment

Sustainability Appraisal objective	Decision making criteria	Assessing of Local Plan Policies
9) To ensure development makes efficient use of land, buildings and infrastructure.	• Will it optimise on the use of previously developed land, buildings and existing infrastructure? • Will it lead to a loss of greenfield sites or backgarden land? • Does it incorporate sustainable design and construction practices? • Is there remediation of contaminated land?	Analysis of: •Existing use and buildings •Vacant site •Derelict site •Potential options for future land uses •Potential contaminated land
10) To provide a range of high quality and affordable housing to meet local needs	• Will it increase the number of homes? • Will it increase the number of affordable homes? • Will it reduce the number of unsuitable/unfit homes? • Does it increase accessibility for wheelchair users?	Analysis of: •Existing use and buildings •Potential options for future land uses •Conservation Areas
11) To promote healthy, safe and inclusive communities, and promote equal opportunities.	• Will it impact on access and/or provision of health facilities? • Will it encourage healthy life styles? • Does it follow Security by Design principles? • Will it contribute to a reduction in the actual crime level? • Will it contribute to a reduction in the fear of crime? • Will it be likely to increase public well-being?	Analysis of: •Existing use and buildings •Area of relative disadvantage •Potential options for future land uses
12) To ensure access to local services and facilities, including local shopping, leisure facilities, sport and recreation opportunities.	• Will it improve accessibility to key local services? • Will it impact or lead to a loss of essential services and community facilities? • Will it enable people to stay independent?	Analysis of: •Area of relative disadvantage •1 km distance to primary school •3 km distance to secondary school •1 km distance to GP surgery

Sustainability Appraisal objective	Decision making criteria	Assessing of Local Plan Policies
	• Does it improve access for all, such as for those with limited mobility, wheelchairs? • Does it provide any facilities or services that can be accessed by all?	•400m distance to Area of Mixed Use •400m distance to main town centre •Public open space deficiency •Town Centre Boundary •Area of Mixed Use •Public Right of Way
13) To increase the vitality, viability and uniqueness of the borough's existing town centres, local centres and parades.	• Will it promote and add to the vitality and viability of town centres? • If the site is located in a town centre, will it include retail or town centre uses? • Does it reinforce a centres' retail role?	Analysis of: •Employment use •Town Centre Boundary •Area of Mixed Use •Key shopping frontage •Secondary shopping frontage •Frontage/area subject to specific restrictions
14) To promote sustainable economic growth and employment opportunities.	• Will it improve business development? • Will it impact on the local economy? • Will it lead to local economic growth? • Does it provide jobs? • Will it meet local business needs? • Is it commercial space, of suitable size and in an appropriate location? • Will it increase employment opportunities? • Will it increase training and skilled employment?	Analysis of: •Employment use •Town Centre Boundary •Area of Mixed Use •Key Office Areas •Locally Important Industrial Land and Business Park

Table 33: SA Framework and Decision-Making Criteria

5.4 Compatibility of Sustainability Appraisal Objectives

5.4.1 As part of the process of developing SA objectives the internal compatibility has been tested to identify any particular tensions or inconsistencies. There may be possible conflicts between SA objectives. A number of SA objectives have been identified as having a potential impact on each other, and these are set out in a compatibility matrix in Appendix 2. The impact of these SA objectives on each other can only be determined and made clear when considering options against the SA objectives. In these cases where any negative impacts are identified, they could be addressed through mitigation. The majority of negative impacts are between environmental and economic SA objectives. Some tensions will always exist between them; however, both are required to ensure sustainable development.

5.4.2 Even though incompatibilities exist, it is not necessary to re-write the SA objectives on these grounds. As stated in government's SEA guidance[75] "There may be tensions between objectives that cannot be resolved; the compatibility assessment should clarify these so that subsequent decisions are well based, and mitigation can be considered".

5.5 SA Monitoring Framework

5.5.1 In general, information monitored by the Council in relation to the implementation and effectiveness of the adopted Plans and policies is published in the Authority's Monitoring Report (AMR)[76] as required by current planning regulations. Any policies and proposals developed as part of a DPD will be reviewed in the light of the results of monitoring and any other significant changes in circumstances.

5.5.2 The success and effectiveness of the SA/SEA process will also be monitored using the indicators and baseline data, through the Authority's Monitoring Report. We would use existing indicators as a basis to establish a new framework to support the emerging Local Plan. Please refer to Appendix 4 for the Draft Sustainability Appraisal Monitoring Framework.

75 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf

76 https://www.richmond.gov.uk/services/planning/planning_policy/local_plan/authority_monitoring_report

6 CONSULTING ON THE SCOPE AND NEXT STAGES

Task A6 Consult on the scope of the SA with the relevant statutory bodies, key stakeholders and the public

6.1.1 In order to meet the requirements of the SEA Regulations, the views of the three statutory consultees (Natural England, Historic England and the Environment Agency) were sought in relation to the scope and level of detail to be included in the SA report (incorporating SEA).

6.1.2 The SA Scoping Report was made available for comments for a five-week period from 24 February 2020. In particular, the Council also sought the views from the three statutory bodies (Environment Agency, Historic England and Natural England) to meet the regulations and the requirements of the Duty to Co-operate.

6.1.3 The Council is keen to ensure that the SA is comprehensive and robust enough to support the Local Plan during public examination. It was therefore desirable for other bodies with environmental, social and economic responsibilities to provide representations on the draft Scoping Report.

6.1.4 A Scoping Report forms part of the evidence base for the Local Plan, in that it sets out the scope and level of detail of the SA. Following the consultation on the draft Scoping Report, the comments and responses were fully considered, and updates and amendments made to this Scoping Report.

6.1.5 The 4 responses received on the Draft Sustainability Appraisal Scoping Report have been published on the Council's website[77] alongside all of the responses on the Direction of Travel consultation. Following receipt of comments on the draft Scoping Report, any necessary changes and other updates were made to this document, and this revised SA Scoping Report published.

What happens next

6.1.6 The Local Plan will be subject to the later stages of the SEA using the SEA framework presented in Chapter 5. A full Sustainability Appraisal report (incorporating the later stages of the SEA process) will then be produced and made available to other stakeholders and the general public for wider consultation alongside the emerging Local Plan.

[77] https://www.richmond.gov.uk/media/20378/sa_scoping_all_responses_schedule.pdf

6.1.7 The next stages in the SA process are completed alongside the preparation of the Local Plan. The emerging policies and options for specific sites to be included in the Plan will be tested against the SA framework, before the next stage of consultation on the Plan alternatives and options proceeds.

6.1.8 Following consideration of the options, the draft Local Plan will be subject to a further sustainability appraisal, the findings of which will be set out in the final SA Report for the Local Plan, incorporating an Environmental Report as required by the SEA Regulations.

6.1.9 The third stage will be the SA / SEA Statement, following adoption of the Plan, setting out the difference the process has made.

7 GLOSSARY

Affordable Housing
Social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Eligibility is determined with regard to local incomes and local house prices. Affordable housing should include provisions to remain at an affordable price for future eligible households or for the subsidy to be recycled for alternative affordable housing provision. See the NPPF for definitions of “social rented”, “affordable rented” and “intermediate housing”.

Air Quality Management Areas
Areas designated by local authorities because they are not likely to achieve national air quality objectives by the relevant deadlines.

Archaeological interest
There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

Authority’s Monitoring Report (AMR)
Provides an annual evidence base upon which the implementation of the policies in the Local Plan (also previously referred to as Local Development Framework) and Unitary Development Plan can be assessed.

Baseline
A description of the present and future state of an area, in the absence of any plan, taking into account changes resulting from natural events and from other human activities.

Biodiversity
Literally the 'variety of life' - the number and mix of species of animals and plants in a given area, and the range of urban and rural habitats making up the ecosystem, including the links and interactions between all of these.

Biodiversity Action Plan
A plan that sets objectives and actions for the conservation of biodiversity in the UK, London and Richmond respectively, with measurable targets. The action plan also identifies priority species and habitats for conservation.

Birds and Habitats Directives
European Directives to conserve natural habitats and wild fauna and flora.

BREEAM
BREEAM (Building Research Establishment Environmental Assessment Method) is the leading and most widely used environmental assessment method for buildings within the UK. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance. It assesses the performance of buildings in the following areas: management, energy use, health and well-being, pollution, transport, land use and ecology, waste, materials and water.

Brownfield Site – see Previously Developed Land

Climate change adaptation
Adjustments to natural or human systems in response to actual or expected climatic factors or their effects, including from changes in rainfall and rising temperatures, which moderate harm or exploit beneficial opportunities.

Climate change mitigation
Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.

Combined Heat and Power (also see Decentralised Energy)
Combined Heat and Power (CHP) is the use of a single piece of plant to generate both heat and electricity. In conventional power generation large quantities of energy in the form of heat are wasted. The waste heat from the CHP plant's engine is utilised for a heating application such as making hot water or space heating.

Community Infrastructure Levy
A levy allowing local authorities to raise funds from owners or developers of land undertaking new building projects in their area.

Conservation (heritage)
The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.

Consultation Body
In the context of SA and SEA, a Consultation Body is an authority, which, because of its environmental responsibilities, is likely to be concerned by the effects of implementing plans and programmes and must be consulted under the SEA Directive. The Consultation Bodies in England are Historic England, Natural England and the Environment Agency.

Decentralised Energy (also see Combined Heat and Power)
A Decentralised Energy (DE) scheme provides heat and/or power from a central source at or near the point of consumption to more than one building, dwelling or customer. It includes high efficiency co-generation or Combined Heat and Power (CHP), on-site renewable energy systems and/or energy recycling systems. It is an alternative to providing individual national grid-connected systems to each dwelling. Schemes can vary in size from a few dwellings to city-wide networks, and reduce costs for tenants and cut carbon dioxide emissions.

Development
Defined and qualified by the Town and Country Planning Act 1990 (s.22) as the carrying out of building, engineering, mining or other operations in, on, over, or under land, or the making of any material change in the use of any building or other land.

Development Plan Documents (DPDs)
The development plan for an area is made up of the combination of strategic policies (which address the priorities for an area) and non-strategic policies (which deal with more detailed matters). See also Local Plan.

Economic development

Development, including those within the B Use Classes, public and community uses and main town centre uses (but excluding housing development).

Ecological networks
These link sites of biodiversity importance.

Environmental Assessment
Generically, a method or procedure for predicting the effects on the environment of a proposal, either for an individual project or a higher-level "strategy" (a policy, plan or programme), with the aim of taking account of these effects in decision-making. The term "Environmental Impact Assessment" (EIA) is used, as in European Directive 337/85/EEC, for assessments of projects. In the Strategic Environmental Assessment (SEA) Directive, an environmental assessment means "the preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision", in accordance with the Directive's requirements.

Environmental Report
A document required by the SEA Directive as part of an environmental assessment, which identifies, describes and appraises the likely significant effects on the environment of implementing a plan or programme (see SA Report).

European site
This includes candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas, and is defined in regulation 8 of the Conservation of Habitats and Species Regulations 2010.

Green infrastructure
A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

Heritage asset
A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).

Historic environment
All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.

Indicator
A measure of variables over time, often used to measure achievement of objectives.

- **Output Indicator:** An indicator that measures the direct output of the plan or programme. These indicators measure progress in achieving plan or programme objectives, targets and policies.
- **Significant Effects Indicator:** An indicator that measures the significant effects of the plan or programme.
- **Contextual indicator:** An indicator used in monitoring that measures changes in the context within which a plan or programme is being implemented.

International, national and locally designated sites of importance for biodiversity
All international sites (Special Areas of Conservation, Special Protection Areas, and Ramsar sites), national sites (Sites of Special Scientific Interest) and locally designated sites including Local Wildlife Sites.

Local Development Document (LDD)
There are two types of Local Development Document: Development Plan Documents and Supplementary Planning Documents.

Local Development Scheme (LDS)
The LDS sets out the local authority's programme for preparing the Local Plan.

Local planning authority
The public authority whose duty it is to carry out specific planning functions for a particular area. This includes all London boroughs, district councils, county councils and also the Greater London Authority.

Local Plan
The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004. The term includes old policies, which have been saved under the 2004 Act.

Main town centre uses
Retail development (including warehouse clubs and factory outlet centres); leisure, entertainment facilities the more intensive sport and recreation uses (including cinemas, restaurants, drive-through restaurants, bars and pubs, night-clubs, casinos, health and fitness centres, indoor bowling centres, and bingo halls); offices; and arts, culture and tourism development (including theatres, museums, galleries and concert halls, hotels and conference facilities).

National Planning Policy Framework (NPPF)
The National Planning Policy Framework was published by the UK's Department of Communities and Local Government in March 2012, revised on 24 July 2018 and again on 19 February 2019. It forms the basis of the planning system in England. Its central theme is the 'presumption in favour of sustainable development', set out in twelve core land-use planning principles, which underpin both plan-making and decision-taking.

Objective
An objective is a statement of what is intended, specifying the desired direction of change in trends.

Open Space
Any open land that is used by the public or local community for outdoor recreation, whether publicly or privately owned and whether use is by permission, as of right, or de facto. All open space of public value, including not just land, but also areas of water (such as rivers, canals, lakes and reservoirs) which offer important opportunities for sport and recreation and can act as a visual amenity.

Planning Practice Guidance (PPG)

On 6 March 2014 the then Department for Communities and Local Government (DCLG), now called the Ministry of Housing, Communities and Local Government launched this planning practice guidance web-based resource. For the first time, planning practice guidance is now available entirely online. The PPG is a living document and is regularly updated by the Government.

Pollution
Anything that affects the quality of land, air, water or soils, which might lead to an adverse impact on human health, the natural environment or general amenity. Pollution can arise from a range of emissions, including smoke, fumes, gases, dust, steam, odour, noise and light.

Previously developed land
Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure. This excludes: land that is or has been occupied by agricultural or forestry buildings; land that has been developed for minerals extraction or waste disposal by landfill purposes where provision for restoration has been made through development control procedures; land in built-up areas such as private residential gardens, parks, recreation grounds and allotments; and land that was previously-developed but where the remains of the permanent structure or fixed surface structure have blended into the landscape in the process of time.

Primary shopping area
Defined area where retail development is concentrated (generally comprising the primary/key and those secondary frontages which are adjoining and closely related to the primary/key shopping frontage).

Primary/key and secondary frontages
Primary/key frontages are likely to include a high proportion of retail uses which may include food, drinks, clothing and household goods. Secondary frontages provide greater opportunities for a diversity of uses such as restaurants, cinemas and businesses.

Ramsar sites
Wetlands of international importance, designated under the 1971 Ramsar Convention.

Renewable and low carbon energy
Includes energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass and deep geothermal heat. Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels).

Responsible Authority
In the SEA Regulations, a Responsible Authority means an organisation, which prepares a plan or programme subject to the SEA Directive and is responsible for the SEA.

Scoping
The process of deciding the scope and level of detail of a SA, including the sustainability effects and options which need to be considered, the assessment methods to be used, and the structure and contents of the SA Report.

Setting of a heritage asset
The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

Site of Special Scientific Interest
Sites designated by Natural England under the Wildlife and Countryside Act 1981.

Special Areas of Conservation
Areas given special protection under the European Union's Habitats Directive, which is transposed into UK law by the Habitats and Conservation of Species Regulations 2010.

Special Protection Areas
Areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within European Union countries. They are European designated sites, classified under the Birds Directive.

Strategic Environmental Assessment (SEA)
Required by European (European Directive 2001/42/EC) and UK law, SEA is a way of systematically identifying and evaluating the impacts that a plan is likely to have on the environment. The aim is to provide information in the form of an Environmental Report that can be used to enable decision makers to take account of the environment and minimise the risk of the plan causing significant environmental damage. Government guidance advises that where a plan requires both strategic environmental assessment and sustainability appraisal, that the former process should be integrated into the latter one.

Strategic Environmental Assessment (SEA) Directive
European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

Strategic Environmental Assessment (SEA) Regulations
The Environmental Assessment of Plans and Programmes Regulations, 2004.

Strategic Flood Risk Assessment
The NPPF requires Local Planning Authorities to appraise the risk of flooding in their areas by undertaking a Strategic Flood Risk Assessment (SFRA), the aim of which is to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. The SFRA is a report which includes a series of maps that define areas of flooding in the borough according to various levels of risk and from the River Thames, its tributaries and other sources. The Council has recently updated its SFRA (an update of earlier reports from 2008, 2010 and 2016). This SFRA (2020) will be used to inform land allocations, to facilitate the application of the Sequential Test and in particular, advise Development Management and developers on flood risk matters.

Statement of Community Involvement (SCI)
The SCI is a document explaining to stakeholders and the community how and when they will be involved in the preparation of the Local Plan, previously referred to as Local Development Framework, and the steps that will be taken to facilitate this involvement.

Supplementary planning documents
Documents which add further detail to the policies in the Local Plan. They can be used to provide further guidance for development on specific sites, or on particular issues, such as design. Supplementary planning documents are capable of being a material consideration in planning decisions but are not part of the development plan.

Sustainability Appraisal
The Planning and Compulsory Purchase Act 2004 requires Local Development Documents to be prepared with a view to contributing to the achievement of sustainable development. Sustainability Appraisal is a systematic appraisal process. The purpose of Sustainability Appraisal is to appraise the social, environmental and economic effects of the strategies and policies in a Local Plan from the outset of the preparation process. This will ensure that decisions are made that accord with sustainable development.

Sustainable transport modes
Any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, low and ultra low emission vehicles, car sharing and public transport. It is also used to describe all forms of transport which minimise emissions of carbon dioxide and pollutants.

Town centre
Area defined on the local authority's proposal map, including the primary shopping area and areas predominantly occupied by main town centre uses within or adjacent to the primary shopping area. References to town centres or centres apply to city centres, town centres, district centres and local centres but exclude small parades of shops of purely neighbourhood significance. Unless they are identified as centres in Local Plans, existing out-of-centre developments, comprising or including main town centre uses, do not constitute town centres.

Transport assessment
A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

Transport statement
A simplified version of a transport assessment where it is agreed the transport issues arising out of development proposals are limited and a full transport assessment is not required.

Travel plan
A long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through action and is articulated in a document that is regularly reviewed.

Wildlife corridor
Areas of habitat connecting wildlife populations.

Zero Carbon
The Mayor of London defines 'Zero carbon' homes as homes forming part of major development applications where the residential element of the application achieves at least a 35% reduction in regulated carbon dioxide emissions (beyond Part L Building Regulations 2013) on-site. The remaining regulated carbon dioxide emissions, to 100%, are to be off-set

through a cash in lieu contribution to the Council's Carbon Offset Fund, which is ring fenced to secure delivery of carbon dioxide savings elsewhere in the borough.

Appendix 1: Copy of all consultation questions

Consultation questions:

1) **Do you agree that these are the most relevant policies, plans, programmes or sustainable development objectives that will affect or influence the Local Plan?**

2) **Do you agree that the baseline data collected is appropriate to the plan?**

3) **Do you have, or know of, any additional relevant baseline data which should be added to that already listed?**

4) **As far as you are aware, are there any inaccuracies or anomalies in the data presented?**

5) **Do you agree that these are the key sustainability issues for Richmond borough?**

6) **Are you aware of any issues which, in your opinion, should be added, or any that should be removed?**

7) **Do you agree with the revised objectives? And if not, should any objectives be re-worded or removed?**

8) **Are there any particular indicators that we should be including for measurement and monitoring?**

9) **Does your organisation collect any data /information that would be useful to the monitoring of the Local Plan documents, which you would be happy to supply?**

10) **Do you have any further comments on the draft SA Scoping Report?**

Appendix 2: Relevant policies, plans and programmes, and sustainability objectives.

Policy /plan programme/strategy/initiative	Objectives, Key Targets and Indicators of the plan or programme	Implications for Sustainability Appraisal (SA) and Local Plan (LP)
Level: International		
Kyoto Protocol on Climate Change, United Nations, 1999; and Decision 2010/778/EU determining the respective emission levels allocated to the Community and each of its Member States under the Kyoto Protocol pursuant to Council Decision 2002/358/EC 2010	This decision has allocated to the Union and Member States the respective emission levels in terms of tonnes of carbon dioxide, equivalent for the first quantified emission limitation and reduction commitment period under the Kyoto Protocol	Consider objectives in relation to reducing greenhouse gas and CO2 emissions Local Plan policies and proposals should include commitments and requirements for reducing carbon dioxide emissions
UN Paris Climate Change Agreement (2015)	International agreement to keep global temperature rise this century well below 2 degrees Celsius above preindustrial levels.	Consider climate change.
United Nations Sustainable Development Goals (2015): The Sustainable Development Goals were set in September 2015 to replace and update the Millennium Development Goals. They cover all three dimensions of sustainable development (economy, social and environment): • End poverty in all its forms everywhere • End hunger, achieve food security and improved nutrition and promote sustainable agriculture • Ensure healthy lives and promote well-being for all at all ages	The 2030 Agenda for Sustainable Development is a historic global agreement to eradicate extreme poverty, fight inequality and injustice and leave no one behind. Agreed by world leaders at the UN in 2015, the 17 Sustainable Development Goals (SDGs) succeed the Millennium Development Goals (MDGs). The government's objectives are: • Get the best Brexit deal for Britain • Make the economy work for everyone • Build the homes people need • Improve schools, colleges and universities • Protect the natural environment	Through the SA and consultations, the Council should be mindful of the SDG: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels The Local Plan should take account of all the goals, but with particular focus on SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

• Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
• Ensure availability and sustainable management of water and sanitation for all
• Ensure access to affordable, reliable, sustainable and modern energy for all
• Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
• Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
• Reduce inequality within and among countries
• Make cities and human settlements inclusive, safe, resilient and sustainable
• Ensure sustainable consumption and production patterns
  • Take urgent action to combat climate change and its impacts
  • Conserve and sustainably use the oceans, seas and marine resources for sustainable development
  • Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
	• Keep our families, communities and country safe
	• Tackle injustices, wherever they exist in our society.
	The UK presented its Voluntary National Review in July 2019 at the High Level Political Forum alongside 46 other countries.	

• Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels • Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development		
UNESCO World Heritage Convention International agreement adopted by the General Conference of UNESCO in 1972	Certain places on Earth are of outstanding universal value and should therefore form part of the common heritage of humankind.	Protection of the World Heritage such as The Royal Botanic Gardens, Kew is the duty of the international community as a whole.
Level: European		
Air Quality Directive, 2008/50/EC	on ambient air quality and cleaner air for Europe. The objective of this Directive is to avoid, prevent and reduce harmful effects of ambient air pollution on human health and the environment	The SA framework and Local Plan should take account of the requirements for reduced air pollution.
The Birds Directive 2009 Directive 2009/147/EC is a codified version of Directive 79/409/EEC as amended	The preservation, maintenance, and re-establishment of biotopes and habitats shall include the following measures: Creation of protected areas. Upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones. Re-establishment of destroyed biotopes. Creation of biotopes.	Consider implications of the Local Plan for birds.
The Water Framework Directive	The Water Framework Directive (WFD) is European legislation designed to protect and	We are required to plan and deliver actions that will improve our water environment. There

Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy	enhance the quality of our rivers, lakes, streams, groundwater, estuaries and coastal waters, with a particular focus on ecology. The Environment Agency is the lead authority on the WFD in England and Wales.	a four designated river water bodies that extend across the borders of Richmond upon Thames: • The River Thames • Beverley Brook • The River Crane • Port Lane Brook
The Waste Framework Directive 2008 Directive 2008/98/EC on waste	Prevention or reduction of waste production and its harmfulness. The recovery of waste by means of recycling, re-use or reclamation. Recovery or disposal of waste without endangering human health and without using processes that could harm the environment	Consider minimising waste production as well as promoting recycling.
The Habitats Directive 1992 Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	Promote the maintenance of biodiversity taking account of economic, social, cultural and regional requirements. Conservation of natural habitats and maintain landscape features of importance to wildlife and fauna.	Consider biodiversity, flora and fauna including habitat connectivity. Local Plans should include robust policies to protect SACS
European Landscape Convention 2000	The first international treaty to be exclusively devoted to all aspects of European landscape. Promotes the protection, management and planning of the landscapes and organises international co-operation on landscape issues.	Protect the landscape of the Borough. Promotes protection of exceptional landscapes but also takes everyday landscapes into consideration.
The European Convention on the Protection of Archaeological Heritage	The 1992 treaty aims to protect the European archaeological heritage "as a source of European collective memory and as an instrument for historical and scientific study"	Protect archaeological sites
Level: National		

National Planning Policy Framework (NPPF, 2019)	The NPPF is the overarching policy framework for the delivery of sustainable development across England.	Sustainability appraisal should be an integral part of the plan preparation process, and should consider all the likely significant effects on the environment, economic and social factors.
National Planning Practice Guidance (NPPG)	The National Planning Practice Guidance provides technical guidance on topic areas in order to support policies set out within the NPPF. It aims to allow for sustainable development as guided by the NPPF. It is a document that's been updated several times since its first publication in 2014.	The principles and requirements of national policy will need to be embedded within the SEA framework and appraisal.
Planning Policy for Traveller Sites, August 2015	The Government's overarching aim is to ensure fair and equal treatment for travellers, in a way that facilitates the traditional and nomadic way of life of travellers while respecting the interests of the settled community.	This policy must be taken into account in the preparation of development plans, and is a material consideration in planning decisions. Local planning authorities preparing plans for and taking decisions on traveller sites should also have regard to the policies in the NPPF so far as relevant.
Flood and Water Management Act 2010 Author: UK Government Status: Statutory Date: 2010	Introduces Lead Local Flood Authorities, who gain new powers and responsibilities such as: • Developing Flood Risk Management Strategies • Designation and registration of assets • Creation of SUDS approval bodies • Investigation of flooding	Reducing the risk to and from flooding will be included in the SA objectives. Local Plan documents should set out aims and policies to reduce flood risk and ensure new development addresses flood risk.
A Green Future: Our 25 Year Plan to Improve the Environment (2018)	Sets out goals for improving the environment within the next 25 years	The SA framework and Local Plan should take account of the goals and targets.
The Ancient Monuments and Archaeological Areas Act 1979	A law passed by the UK government, the latest in a series of Ancient Monument Acts legislating to protect	Damage to an ancient monument is a criminal offence and any works taking place within one require scheduled monument consent from the Secretary of State.

	the archaeological heritage of England & Wales and Scotland.	
Level: Regional		
The London Plan – Intend to Publish version December 2019 This Plan has been submitted to the Secretary of State and will be laid before the London Assembly in 2020.	This is a replacement Plan sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years i.e. 2019 to 2041. The published London Plan takes account of the comments received during the consultation process and the recommendations of the panel that conducted the Examination in Public.	The concept of Good Growth – growth that is socially and economically inclusive and environmentally sustainable – underpins the London Plan and ensures that it is focused on sustainable development. The Local Plan policies and SA objectives must be in general conformity with the New London Plan.
The London Plan: Spatial Development Strategy for Greater London, consolidated with alternations since 2011 (March 2016)	The London Plan is the overall strategic plan for London. It sets out a fully integrated economic, environmental, transport and social framework for the development of the capital to 2031. The London Plan forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor.	The Borough will have to ensure that the policies in the Local Plan and the objectives of the SA are in general conformity with policies and objectives in The London Plan.
The Mayor's Transport Strategy 2018, TfL	Sets out the policies and proposals to reshape transport in London over the next two decades. The strategy includes a headline targets for all journeys to be undertaken by walking, cycling or public transport by 2041, including 75% of trips in outer London	The SA framework and Local Plan should take account of the healthy streets approach that encourage walking, cycling and public transport.

The London Environment Strategy 2018, GLA	Vision to turn London into a zero Carbon city by 2050. Includes cutting harmful emissions, protecting the Green Belt and green spaces, and preparing London to respond to climate change.	The SA framework and Local Plan should take account of the policy and actions to deliver the good growth strategy
Thames Estuary 2100: Managing flood risk through London and the Thames estuary (TE2100 Plan) Author: Environment Agency Status: Statutory Date: 2012	The TE2100 Plan sets out the strategic direction for managing flood risk in the Thames estuary to the end of the century and beyond. It sets out how we will continue to protect 1.25 million people and £200 billion worth of property from tidal flood risk. Communities in London and along the Thames estuary already benefit from world-class defences, but flood risk is increasing. The TE2100 Plan recommends what actions the Environment Agency and others will need to take – in the short term (next 25 years), medium term (the following 15 years) and long term (to the end of the century). The plan is based on current guidance on climate change, but is adaptable to changes in predictions for sea-level rise and climate change over the century.	The SA will include objectives in relation to reducing risk to and from flooding. Local Plan policies should consider and address flood risk, and in particular take account of the findings of this Plan.
River Thames Scheme 2016 Author: Environment Agency Status: Updated 2018	The River Thames Scheme is a long-term plan to manage flood risk in the Lower Thames area. The strategy aims to reduce the risk of river flooding to 15,000 properties and 2,400 businesses with a 1% annual (1 in 100 year) chance of flooding, from Datchet to Teddington. There will be; • individual property protection measures; • capacity increases to Sunbury, Molesey and Teddington weirs;	• The SA will include objectives in relation to reducing risk to and from flooding. • Local Plan policies will have to duly consider flood risk, and its policies will be informed by this Scheme.

	• widening and deepening the Desborough Cut; • developing outline planning proposals for the engineering channel. • building three flood diversion channels.	
Level: Local		
LB Richmond upon Thames Climate Emergency Strategy (2019) and Action Plan (2020-2024)	Sets out the Council's approach to climate change and reducing the borough's carbon footprint.	Focus on Low carbon and high sustainability actions
LB Richmond upon Thames Air Quality Action Plan (2019 -2024)	Covers the actions intended to take to tackle air pollution in the borough over the next five years	Policies to change behaviour, promote active modes of transport and use regulatory controls to tackle pollution.
LB Richmond upon Thames Third Local Implementation Plan, Roads and Transport (2019)	Sets out how the LBRuT will implement the Mayor's Transport Strategy on a local level. Includes a three-year delivery plan.	Measures to reduce pollution from Transport
The Royal Botanic Gardens Kew, World Heritage Site Management Plan 2020-2025 (adopted 2020)	Sets out the management framework for sustaining the 'Outstanding Universal Value' (OUV) of the RBG Kew WHS.	Protect the setting and wider environs of the RBG Kew WHS

Appendix 3: Compatibility Matrix of SA Objectives

SUSTAINABILITY APPRAISAL OBJECTIVES	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1														
2	?													
3														
4	+	+	+											
5				+										
6	?	+	+	+	+									
7			+	?	+									
8			+		+	+	+							
9	+	+		+	x		+							
10				x	x	x	?	?	?					
11	?	+	+	+	+		+	?		+				
12							+				+			
13							+			X		+		
14		?	?	x	x	x		?	?	x				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

SUSTAINABILITY APPRAISAL OBJECTIVES

KEY		
	+	Positively compatible
	X	Possible conflict
	?	Uncertain
		Neutral

TABLE 34: COMPATIBILITY MATRIX OF SA OBJECTIVES

Appendix 4: Draft Sustainability Appraisal Monitoring Framework

SA Objective	Monitoring indicator	Monitored by	Timeframe
1) To prevent and reduce the amount of waste, and minimise the use of non-renewable resources	Capacity of new waste management facilities by type	www.capitalwastefacts.com and any Reporting by (LBRuT) Street Scene performance	3 year programme Data will be reported elsewhere (WLWP) and therefore need to be reported only every 3 years.
	Quantity of household waste arising, and managed, by management type	Reporting by (LBRuT) Street Scene performance	3 year programme Data will be reported elsewhere (WLWP) and therefore need to be reported only every 3 years.
	Quantity of household waste reused, recycled and composted	Reporting by (LBRuT) Street Scene performance	Annually
	Quantity of household collected waste land filled	Reporting by (LBRuT) Street Scene performance	3 year programme Data will be reported elsewhere (WLWP) and therefore need to be reported only every 3 years.

SA Objective	Monitoring indicator	Monitored by	Timeframe
2) To reduce pollution (such as air, noise, light, water and soil), improve air quality and minimise impacts associated with developments**.**	Number of days p.a. when air pollution is moderate or high for PM10* *Daily mean particles (PM10) not to exceed 50 micrograms per cubic metre, more than 35 times a year, at any measuring site	(LBRuT) Special Projects team LBRuT	3 year programme
	Number of new developments (subject to SCC) that incorporate measures to reduce noise.	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Planning permissions granted contrary to Environment Agency advice on flooding and water quality grounds.	Environment Agency and LBRuT	Annually
3) To reduce reliance on private transport modes, encourage alternatives to the car, and enhance safer routes and permeability for walkers and cyclists	Percentage of completed non residential development complying with maximum parking standards set out in the LDF.	LBRuT monitoring	Annually
	No of households registered with a car club	LBRuT monitoring	3 year programme
	Percentage of trips by main mode: walking and cycling	LBRuT monitoring	3 year programme
	Level of parking occupancy in town and local centre car parks.	LBRuT monitoring	Annually

SA Objective	Monitoring indicator	Monitored by	Timeframe
4) To tackle the climate emergency by reducing greenhouse gas emissions in new developments and promoting zero carbon technologies and renewable energy	Percentage of regulated CO_2 emissions saved below Building Regulations 2010 target level through all low carbon measures (for developments subject to Sustainable Construction Checklist – SCC).	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Energy trends data at LA level	DECC data	Annually
	Proportion of new residential developments that meet Code for Sustainable Homes Level 3	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Proportion of new non residential buildings over 100sqm to meet the relevant BREEAM “excellent” standard.	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Proportion of residential conversions that can be assessed under EcoHomes (or any subsequent new applicable standard) that meet the “excellent” rating.	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Number of developments approved against the recommendation of the statutory water / sewerage undertaker on low pressure / flooding grounds.	LBRuT monitoring	3 year programme

SA Objective	Monitoring indicator	Monitored by	Timeframe
5) To adapt to the effects of a changing climate by protecting and managing water resources, and avoiding or reducing flood risk from all sources	Proportion of residential developments subject to the Sustainable Construction Checklist with a maximum water consumption target of 105 litres/person/day.	LBRuT monitoring of Sustainable Construction Checklist SPD	Reported on 3-yearly basis through monitoring of SCC SPD
	Number of new developments subject to the Sustainable Construction Checklist that have incorporated sustainable drainage in their development; by type of sustainable drainage technique	LBRuT monitoring of Sustainable Construction Checklist SPD	Reported on 3-yearly basis through monitoring of SCC SPD
	Change in area of permeable surfacing (net gains and net losses in sqm) as a result of new developments subject to the Sustainable Construction Checklist.	LBRuT monitoring of Sustainable Construction Checklist SPD	Reported on 3-yearly basis through monitoring of SCC SPD
	Number of new developments subject to the Sustainable Construction Checklist that have incorporated energy efficient design with a specific heat demand of less than equal to 15kWh/sqm	LBRuT monitoring of Sustainable Construction Checklist SPD	Reported on 3-yearly basis through monitoring of SCC SPD
6) To protect and enhance existing habitats, species and biodiversity, and to seek to increase these where possible. .	Loss of or inappropriate development on designated SSSIs, and Other Sites of Nature Importance.	LBRuT monitoring	Annually
	River water bodies classified under the Water Framework Directive to achieve good ecological status	Environment Agency monitoring	3 year programme

SA Objective	Monitoring indicator	Monitored by	Timeframe
	No of developments subject to the SCC which improve on-site biodiversity by incorporating new features and/or habitats, by type of features.	LBRuT monitoring of Sustainable Construction Checklist SPD	Reported on 3-yearly basis through monitoring of SCC SPD
	No of developments subject to the SCC incorporating green roofs, by type	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Area of borough deficient in access to Sites of Nature Importance (hectares) (includes SSSIs and Other Sites of Nature Importance)	LBRuT monitoring	3 year programme
7) To promote high quality and sustainable urban design, including preserving and where possible enhancing the borough's heritage assets and their settings.	Number of Listed Buildings or Buildings of Townscape Merit demolished	LBRuT monitoring	Annually
	Number of heritage assets on/added/removed from the English Heritage "Heritage At Risk" Register p.a.	LBRuT monitoring	3 year programme
	The level of satisfaction with the design and layout of new housing schemes	LBRuT monitoring	3 year programme
	Percentage of new homes built to building regulations standard M4(2) entitled 'accessible and adaptable dwellings'. (see also 11 below)	LBRuT monitoring	3 year programme
8) To protect and enhance the quality and range of parks and open spaces as part of the wider green infrastructure network.	Loss/inappropriate development on designated open spaces e.g MOL, River Thames, Green Belt, OOLTI and public open space	LBRuT monitoring	Annually

SA Objective	Monitoring indicator	Monitored by	Timeframe
9) To ensure development makes efficient use of land, buildings and infrastructure.	Proportion of new residential developments that meet BREEAM “excellent”.	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Proportion of new non residential buildings over 100sqm to meet the relevant BREEAM “excellent” standard.	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Proportion of residential conversions that can be assessed under BREEAM (or any subsequent new applicable standard) that meet the “excellent” rating.	LBRuT monitoring of Sustainable Construction Checklist SPD	Annually through monitoring of SCC SPD
	Number of contaminated land sites, remediated or investigated with no further requirement for remediation	(LBRuT) Special Projects team	3 year programme
	Net additional dwellings for reporting year, over previous, years and in future	LBRuT monitoring	Annually
10) To provide a range of high quality and affordable housing to meet local needs.	Percentage of all new housing completions which is affordable housing	LBRuT monitoring	Annually
	Completions by dwelling size	LBRuT monitoring	3 year programme
	Percentage of new homes built to wheelchair standards on developments	LBRuT monitoring	3 year programme
11) To promote healthy, safe and inclusive communities, and promote equal opportunities. .	Percentage of new homes built to building regulations standard M4(2) entitled 'accessible and adaptable dwellings'.	LBRuT monitoring	3 year programme

SA Objective	Monitoring indicator	Monitored by	Timeframe
	Number of recorded crimes pa. Retain position in top 3 for lowest crime figures in Met Police area.	Metropolitan Police Service figures	Annually
	Progress on Public Transport improvements in 5 areas of relative disadvantage	LBRuT monitoring	3 year programme
	Amount of completed floorspace in clinic/health centre use	LBRuT monitoring	3 year programme
12) To ensure access to local services and facilities, including local shopping, leisure facilities, sport and recreation opportunities.	Number of planning obligations achieved and money raised for community uses by type (health, sport, education, etc).	LBRuT monitoring	Annually
	Improving public health profile. Ranking in the top 3 within the SHA for the range of indicators used in the Local Health Profiles.	Department of Health	Annually
	Percentage of completed floorspace (new development & net additional floorspace) for town centre uses (A2, B1a and D2) within town centre boundaries/mixed use areas. For A1, % of completed floorspace within, adjacent to or well-related to designated frontages.	LBRuT monitoring	Annually
13) To increase the vitality, viability and uniqueness of the borough's existing town centres, local centres and parades.	Vacancy rates within designated shopping frontages for Richmond, the district and smaller centres.	LBRuT monitoring	Annually
	Proportion of retail A1 uses in key shopping frontages	LBRuT monitoring	3 year programme

SA Objective	Monitoring indicator	Monitored by	Timeframe
	Amount and type of completed employment floorspace developed by employment type.	LBRuT monitoring	Annually
14) To promote sustainable economic growth and employment opportunities.	Employment land for which planning permission has been granted by UCO for the monitoring year (ha)	LBRuT monitoring	Annually
	Amount of employment floorspace lost to completed non-employment uses (identifying use classes)	LBRuT monitoring	Annually
	Completed small business units under 250sqm	LBRuT monitoring	3 year programme
	No of workers in the borough (employees in employment)	LBRuT monitoring	3 year programme

Table 35 Draft Sustainability Appraisal Scoping Report Monitoring Framework.

[i] Local Data Company, GB Retail and Leisure Market Analysis H1 2019 Update, Published September 2019.