

READING INFRASTRUCTURE DELIVERY PLAN

March 2018

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EXECUTIVE SUMMARY

This background paper provides further detail with regard to infrastructure requirements and delivery as identified in Section 10.3 of the Local Plan.

The purpose of this Infrastructure Delivery Plan (IDP) is to identify the key infrastructure required to support growth, resulting from housing and employment allocations during the Plan period to 2036. National planning policy provides the framework for this.

The approach adopted by Reading Borough Council is to focus on “the necessary infrastructure required to enable growth or support sustainable growth which will require capital expenditure i.e. largely in the form of physical works¹.”

Infrastructure delivery will be an ongoing process with local partners to ensure that priorities are properly reflected and provide a mechanism for cooperation between internal and external providers of infrastructure. It will also be important to continue working closely with neighbouring authorities in order to ensure that infrastructure provision supports development both in the Borough and within the wider Reading area.

The majority of housing development will occur on brownfield sites and represent 100 dwellings or less. Therefore, in most cases there will not be the requirement for significant infrastructure on a site by site basis. The infrastructure schemes will be strategic in nature, serving the impacts of growth from groupings of sites. Where there is need for site specific infrastructure, this will be addressed and negotiated at the detailed planning stage. The Infrastructure Delivery Schedule identifies key infrastructure requirements for major sites that are known at this time.

A range of different infrastructure requirements are reviewed in this report, but only infrastructure needed to support sustainable growth has been identified within the delivery schedule in Section 5. These include core transport projects, health provision, additional capacity for primary and secondary education places, open space provision and additional neighbourhood police infrastructure.

This will be a ‘living’ document, and as such there will be ongoing monitoring of infrastructure requirements and dialogue with infrastructure providers throughout the Plan period. Where required, the Plan will be updated in order to include new priority schemes.

¹ This aligns with the Council’s Community Infrastructure Levy. More detail on CIL and planning obligations can be found on the Council’s website at <http://www.reading.gov.uk/media/1067/Draft-Section-106-Planning-Obligations/pdf/S106-Planning-Obligations-SPD-Adopted-April-2015.pdf>

1. INTRODUCTION

1.1 A key part of the Local Plan process is ensuring that there is sufficient infrastructure to support the spatial development of the Borough and to support and contribute to sustainable communities. Reading Borough Council's Pre-submission Draft Local Plan identifies the spatial strategy, with key areas for future development. These are:

- Central Reading as the focus for meeting much of the identified development needs at medium to high density;
- South Reading as a location for meeting much of the remainder of development needs, and the enhancement of links from centre to South Reading;
- Some new development within district/local centres, including more diversity of services and facilities with some increase in densities;
- Limited re-allocation of some areas of employment to housing and supported uses;
- Increasing densities where appropriate in other areas with high levels of accessibility by public transport, walking and cycling; and
- Ensuring that urban extensions or garden villages close to Reading are provided with adequate facilities including infrastructure links into Reading.

Specific site allocations are identified within the Local Plan.

1.2 An Infrastructure Delivery Plan (IDP) is a document which identifies key pieces of infrastructure required to deliver growth. The aim of the IDP is to set out the infrastructure which Reading Borough Council considers will:

- Enable the delivery of growth, i.e. is required before a development or group of developments can take place; and
- Support sustainable growth, i.e. does not necessarily need to be implemented in advance of development, but will ensure the maintaining of quality of life for existing and future residents.

1.3 Such infrastructure is either that which is generally paid for through developer contributions and mainstream central or local funding, or that which developers need to provide on new sites, e.g. connections to utilities such as drainage, sewage, gas, electricity and water. The latter is usually privately financed, with costs being recouped from new customers. This IDP focuses on that infrastructure which requires some public funding. As utility infrastructure provision is an important part of overall infrastructure when planning new growth, utility providers have been contacted to identify any specific issues which would impact on the phasing and delivery for specific sites/ areas of growth throughout the Plan period. This is reported in Section 4 below. Where there are specific areas of capacity issues, this has been highlighted in the Schedule in Section 5, but no costs have been identified. Any detailed information regarding utilities has been included in the Appendix 1.

- 1.4 The Community Infrastructure Levy (CIL) allows local authorities to raise funds from owners and developers to fund strategic infrastructure projects. CIL is the primary mechanism for providing Borough-wide and cross-boundary infrastructure. This IDP will inform CIL spending decisions throughout the Plan period.
- 1.5 An IDP is a tool to support the Local Plan, used as part of the evidence base. The Plan seeks to identify the infrastructure implications of the growth in housing and jobs to 2036 within Reading Borough and the infrastructure requirements arising from this growth, the associated costs and funding, and how it might be delivered.
- 1.6 This Plan has been coordinated by the Local Planning Authority and utilises information from a range of sources including service providers within the Council, such as education, transport and housing, and external organisations such as NHS Clinical Commissioning Groups, Fire and Rescue Service and the Police. Through this engagement, the Council has sought to obtain as much information as possible regarding priorities and projects.
- 1.7 There will be ongoing liaison with the Reading UK CIC², a multi-agency partnership bringing together organisations from different parts of the public, private, community and voluntary sectors at the local level.
- 1.8 In addition, there is need for the Council to work with neighbouring authorities to ensure a coordinated approach to infrastructure provision. This is not only in terms of liaising with infrastructure providers, but in terms of determining the most suitable locations and scale of future infrastructure, especially for those schemes which may serve more than one local authority area.
- 1.9 Section 2 provides a brief summary of relevant policies and studies which have been used to inform this Plan.
- 1.10 Section 3 identifies the scale of development that needs to be accommodated.
- 1.11 In Section 4, the IDP details the types of infrastructure requirements by infrastructure category and sets out an overview of relevant strategy, existing provision and capacity, the impact of change and priorities for provision. This will assist in preparing any updates to S106 or CIL guidelines. It also provides background evidence for future funding requirements.
- 1.12 The majority of proposed developments will consist of less than 100 dwellings on brownfield sites, including intensification of use, and therefore will not usually necessitate the requirement for specific individual infrastructure provision. It is the cumulative impact of smaller development sites that needs to be addressed. There will be some larger sites which may require specific infrastructure. This will be negotiated through the planning process when these sites come forward for development. Section 5 includes an Infrastructure Delivery

² More information about the Reading UK CIC can be found at <http://livingreading.co.uk/>

Schedule which sets out the key strategic infrastructure projects for sub areas of the Borough - South, Central/East, North and West.

- 1.13 For some types of infrastructure, such as open space, there are already specific requirements. These are identified within the Local Plan policies and need to be met by future developments.

2.0 POLICY BACKGROUND, GUIDANCE AND STUDIES

2.1 The production of this IDP and the accompanying Infrastructure Delivery Schedule has been prepared within the framework of national guidance and policy, along with relevant approved cross-boundary work and local policy. Specific steps have been undertaken which were considered to be relevant to the scale and range of development within the Borough. In addition, there have been recent studies of infrastructure requirements for the central area of Reading and South Reading. The relevant key findings of these studies have been used to inform this Plan.

*The National Planning Policy Framework (2012)*³

2.2 The National Planning Policy Framework refers to local authorities playing a positive role in delivery of infrastructure in order to support the three dimensions of sustainable development: economic, social and environmental. In paragraph 162, it states:

“Local planning authorities should work with other authorities and providers to:

- Assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; and
- Take account of the need for strategic infrastructure, including nationally significant infrastructure within their areas.”

2.3 The NPPF identifies supporting sustainable economic development to deliver homes, business and industrial units and infrastructure as a core planning principle. Planning policy should seek to address the lack of infrastructure as a potential barrier to growth and investment. The NPPF also highlights the importance of working with neighbouring authorities to develop cross-boundary infrastructure. Guidance that aids in infrastructure delivery should be outlined in a supplementary planning document, such as this IDP.

2.4 Paragraph 182 states that the Local Plan must be “positively prepared” meaning “based on a strategy which seeks to meet objectively assessed development and infrastructure requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development.”

*Planning Practice Guidance*⁴

³ The National Planning Policy Framework can be accessed on the Government’s website at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

⁴ Planning Policy Guidance can be accessed on the Government’s website <http://planningguidance.communities.gov.uk/>

- 2.5 The Planning Practice Guidance provides detailed guidance for the requirements set out in the National Planning Policy Framework.
- 2.6 Paragraph 18 of the Planning Practice Guidance states that local planning authorities should identify “what infrastructure is required and how it can be funded and brought on stream at the appropriate time.” The PPG emphasises early discussions with infrastructure providers and the Local Enterprise Partnership in considering strategic challenges.
- 2.7 According to the PPG, this IDP seeks to “make clear what infrastructure is provided, who is going to fund and provide it and how it relates to the anticipated rate and phasing of development.”

Reading Borough Council's Local Plan⁵

- 2.8 In terms of specific policy requirement for infrastructure provision, the relevant proposed policies within the Local Plan are as follows:

CC9: Securing Infrastructure

This policy sets out the principle that development will mitigate its impacts on infrastructure. In doing so, it also sets out the priorities for securing infrastructure and relates both to the Community Infrastructure Levy regime and the use of Section 106 agreements. Priorities are as follows:

Highest priority:

- Transport infrastructure, including major cross-boundary or sub-regional infrastructure projects;
- Open space, green infrastructure and other measures to improve or enhance biodiversity;
- Education, including cross-boundary facilities;
- Economic development services and infrastructure, including employment, skills and training development initiatives and childcare provision.

Where relevant, high priority:

- Energy infrastructure, including decentralised energy projects;
- Health provision; and
- Police Service infrastructure.

Where specific need is identified and justified:

- Community facilities;
- Leisure and cultural infrastructure;
- Reading Central Area infrastructure and amenities, including public realm and street care enhancements;
- Environmental improvements outside the Central Area, such as within local centres, including off-site street tree and other tree planting;

⁵ The Local Plan can be accessed online at <http://www.reading.gov.uk/newlocalplan>

- Measures to tackle poor air quality or for on-going air quality monitoring; and
- Flood mitigation and prevention measures.

Community Infrastructure Levy

- 2.9 The Community Infrastructure Levy is paid by developers to the Council according to the Charging Schedule⁶ adopted in 2015. The money received from the levy is used to support and manage the impacts of development by funding infrastructure, e.g. road improvement schemes, open space improvements or new schools. CIL came into force in April 2010 through the Community Infrastructure Levy Regulations 2010⁷.
- 2.10 This IDP will help determine spending priorities for CIL monies throughout the plan period.

Thames Valley Berkshire Local Enterprise Partnership⁸

- 2.11 Thames Valley Berkshire Local Enterprise Partnership (TVBLEP) is a business-led partnership that contributes to the sustainable economic growth of Thames Valley Berkshire. The TVBLEP has four aims: grow enterprise and innovation, improve the employability and skills of our workforce, encourage international businesses to invest in TVB and help to deliver the strategic infrastructure needed to support growth. TVBLEP plays an important role in coordinating stakeholders to secure high-level infrastructure funding, often for cross-boundary projects.

Economic Development Needs Assessment (EDNA)⁹

- 2.12 The EDNA (published October 2016) was prepared by Nathaniel Lichfield & Partners on behalf of TVBLEP and analyses regional economic relationships in an effort to predict future employment trends and forecast need.
- 2.13 The objectively assessed economic development needs throughout the Plan period are expressed in terms of floorspace and type of employment use. These findings, along with the findings of the Housing and Economic Land Availability Assessment, have informed future housing and employment targets.

Strategic Housing Market Assessment (SHMA)¹⁰

⁶ Reading Borough Council's CIL Charging Schedule can be accessed on the Council's website at <http://www.reading.gov.uk/media/2594/Community-Infrastructure-Levy-Charging-Schedule/pdf/Community-Infrastructure-Levy-Charging-Schedule-20151.pdf>

⁷ The Community Infrastructure Levy Regulations 2010 can be accessed online at <http://www.legislation.gov.uk/ukdsi/2010/9780111492390/contents>

⁸ The TVBLEP's website can be found at: <http://thamesvalleyberkshire.co.uk/>

⁹ The EDNA can be accessed on the RBC planning policy page at <http://www.reading.gov.uk/readingldf>

- 2.14 The SHMA (published February 2016) considers the objectively assessed need (OAN) for housing. The SHMA identifies the scale and mix of housing and the range of tenures the local population is likely to need over the Plan period. The SHMA does not consider issues related to land supply, development constraints and infrastructure. It is for the Local Plan itself to consider what level of housing provision can be sustainably accommodated.
- 2.15 Key findings of the SHMA that have informed the Local Plan process are as follows:
- Out-migration of residents from London is expected to continue.
 - Reading's OAN for the plan period is 699 dwellings per annum and the specific housing mix should seek to accommodate more 3-bed properties, as well as more properties for aging residents.
 - The affordable housing need (net per annum) in Reading is 406 dwellings.
 - House prices have outstripped growth in earnings, leaving more and more residents unable to purchase their own homes.
 - The growth of Reading's economy is fundamentally shaped by connectivity and will be affected by changes concerning the M4, Crossrail, Heathrow Airport expansion and/or digital connectivity infrastructure.

Housing and Economic Land Availability Assessment (HELAA)¹¹

- 2.16 The HELAA was prepared by Reading Borough Council and examines the potential for accommodating residential and economic development within the Borough. The EDNA and SHMA look at the need for new development, whilst the HELAA looks at the capacity for delivering that development.
- 2.17 The HELAA identified sites and broad locations with potential for development and then assessed development potential, suitability, availability and achievability. Key findings were as follows:
- There is capacity to provide 15,570 dwellings from 2013 to 2036 (671 per annum) in Reading Borough. When considered against identified need, this means there is a shortfall of 644 homes up to 2036.
 - There is capacity to provide approximately 112,000 sq. m of offices in Reading between 2013-2036. This represents a surplus over identified needs of over 59,000 sq. m.
 - There is capacity to provide approximately 112,000 sq. m of industrial and warehousing space in the Borough between 2013 and 2036. This represents a shortfall against identified needs of almost 36,000 sq. m. It is considered that there may be scope for considerable on-site expansion. Separate work will be undertaken on this.
 - For retail, there is capacity to provide small growth of around 5,000 sq. m.

¹⁰ The Strategic Housing Market Assessment can be accessed on the Council's website at http://www.reading.gov.uk/media/2959/Housing-Market-Assessment/pdf/Berkshire_Strategic_Housing_Market_Assessment_Feb_2016.pdf

¹¹ The Housing and Economic Availability Assessment can be accessed on the Council's website at <http://www.reading.gov.uk/readingldf>

- The capacity identified for leisure represents an increase of around 15,000 sq. m.

Western HMA Spatial Framework¹²

2.18 The West of Berkshire Spatial Planning Framework represents cross-boundary working between the four authorities of Bracknell Forest, Reading Borough, West Berkshire and Wokingham to identify large scale opportunities to meet future development needs. It is intended to develop a model for successful delivery of high quality infrastructure in order to meet the needs of existing and new residents in the area. The spatial framework identified the need for large scale residential development spanning administrative boundaries, the need to secure funding as a group of authorities and the need for integrated, 'boundary-less' infrastructure. The main opportunities identified within the framework are as follows:

- Major housing and mixed use development at Grazeley/Mortimer;
- A focus on town centre/commuter hub development;
- Infrastructure investment at Twyford Station to support Crossrail; and
- Sites that span the Bracknell Forest and Wokingham boundary.

Other Relevant Council Strategies¹³

2.19 Climate Change Strategy (2013-2020)—The Reading Climate Change Strategy was developed by the Reading Climate Change Partnership and outlines Reading's vision for reducing carbon emissions and preparing for climate change. The strategy aims to reduce the carbon footprint of Reading Borough by 34% by 2020 (in comparison with 2005 levels). The Strategy details the infrastructure needed to reduce carbon emissions. These include low-carbon travel infrastructure, maximising the resilience of existing infrastructure for more frequent extreme weather events, green energy infrastructure and biodiversity areas.

2.20 The Council's Corporate Plan (2016-2019) – This IDP has been prepared in line with the Corporate Plan's vision, service priorities and values. Projects identified in the Schedule in Section 5 reflect the overarching themes as follows:

- Safeguarding and protecting those that are most vulnerable;
- Providing the best life through education, early help and healthy living;
- Providing homes for those most in need;
- Keeping the town clean, safe, green and active;
- Providing infrastructure to support the economy; and
- Remaining financially sustainable to deliver these service priorities.

2.21 Local Transport Plan (2001-2026) – The Local Transport Plan contains the schemes and policies intended to improve transport. Reading is a regional transport hub. The LTP reviews current and future movement patterns and identifies

¹² The Western HMA Spatial Framework can be accessed online at <http://www.bracknell-forest.gov.uk/west-of-berkshire-spatial-planning-framework-final.pdf>

¹³ Relevant RBC strategies, plans and policies can be accessed on the Council's website at <http://www.reading.gov.uk/strategiesplansandpolicies>

opportunities for improving facilities and meeting future travel demand. Major Schemes include:

- Improved accessibility, e.g. dropped kerbs;
- Increasing bus patronage;
- Green Park Rail Station;
- Cycling Strategy;
- Increasing safety and walkability of pedestrian routes;
- Parking strategy and enforcement;
- Air quality management;
- Junction improvements; and
- Mass Rapid Transit and Park and Ride Schemes.

2.22 Open Spaces Strategy (2007, 2017 update note)— The OSS outlines the Council’s approach to management of and investment in recreational public open spaces. Reading’s overall amount of public open space is in line with national guidelines, but open spaces are unevenly distributed across the Borough. Because development within the Borough occurs at relatively high density, it is difficult to introduce new areas of public open space without large-scale redevelopment. The perceived quality of public open space varies significantly and many sites could use improvement. The OSS seeks to strengthen existing protection given to open space and bring about additional provision and improvements.

2.23 Sustainable Community Strategy (2011) — Reading’s Sustainable Community Strategy includes a vision to 2030 and identifies key challenges and opportunities. The SCS states that plans “will seek to provide more trees, protect wildlife, enhance the built environment, open space and watercourses, provide renewable energy, and improve transport and other infrastructure.” The report refers specifically to:

- The provision of smart infrastructure;
- Providing power and heat from local renewable sources;
- Transport initiatives to reduce CO2 emissions;
- Increasing wildlife corridors and the tree canopy;
- Enhancing skills in the workforce;
- Tackling congestion; and
- Provision of affordable housing.

3.0 GROWTH DURING THE PLAN PERIOD TO 2036

- 3.1 This IDP details the infrastructure required in association with housing and employment growth. This section identifies the amount of development that will take place and the sites where development is expected to be accommodated during the plan period to 2036.

Population and Jobs Borough Wide

- 3.2 At the time of the 2011 Census, the population of Reading Borough was 155,700 and was estimated to have risen to 161,800 in 2014¹⁴. The projected population to the end of the plan period in 2036 is 179,700¹⁵.
- 3.3 The Department of Communities and Local Government's 2012-based housing projections (as updated to take account of 2013 Mid-Year Population Estimate) projects household growth throughout the plan period of 11,875 households¹⁶.
- 3.4 Reading is a major employment centre, with 89,100 people working in the Borough at the time of the 2011 Census¹⁷. There are more jobs than people in Reading, which means Reading imports workers from other local authority areas. This places strain on the transport network and housing market.

Location and Nature of Major Changes

- 3.5 The role of the Local Plan is to provide a spatial strategy and policies to direct growth to the most sustainable locations in line with these major principles:
- Major development should be located in areas of high accessibility;
 - Development should be directed to areas in most need of regeneration; and
 - Development must have access to efficient and effective public transport.

The Local Plan defines these sustainable locations as the town centre and South Reading. In addition, there is recognition that development will continue on previously developed land and an expectation that there will still be much development which is relatively small scale and piecemeal, including windfall sites.

- 3.6 The Local Plan outlines the following elements that make up the spatial strategy for Reading:
- Central Reading as the focus for meeting much of the identified development needs at a medium and high density;

¹⁴ Office of National Statistics (ONS), NS Mid-Year Estimates for 2014, published 2016 - <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandtable2>

¹⁵ ONS

¹⁶ Strategic Housing Market Assessment (SHMA)

¹⁷ ONS

- South Reading as a location for meeting much of the remainder of the development needs, and the enhancements of links from the centre to South Reading and to major development locations beyond;
- Some new development within identified district and local centres, including more diversity of services and facilities and some increase in densities;
- Limited re-allocation of some areas of employment to housing and supporting uses;
- Increasing densities where appropriate in other areas with high levels of accessibility by public transport, walking and cycling;
- Ensuring that urban extensions or garden villages close to the Reading urban area are provided with adequate facilities including infrastructure links into Reading.

Housing

- 3.7 The Local Plan sets out the overall levels of housing supply over the plan period to 2036 and identified the need to plan for an average of 671 dwellings per annum. As the planning period started in 2013, there are already a number of sites which have been built or secured planning consent based on current infrastructure planning. This IDP focuses on the requirements associated with future growth.
- 3.8 The Local Plan identifies that the broad distribution of residential supply is expected to continue along current patterns for the foreseeable future. Proposed sites for housing allocation to 2036 are split roughly 50% in the centre, 20% in the south and 30% in other areas of the Borough.
- 3.9 Most growth is in small sites of less than 100 dwellings and therefore individual sites will not be of a scale to generate demand for significant additional infrastructure on their own, but collectively may affect area-wide infrastructure. Larger sites in the centre and south of the Borough will have a more significant impact on existing infrastructure and there may be some site specific infrastructure requirements. Relevant sections of the Local Plan identify infrastructure requirements to be considered. These will be determined once more detailed schemes are developed and will be negotiated during the planning process. The schedule in Section 5 below includes a number of schemes specifically for the south of the Borough.

Employment

- 3.10 Reading is a centre of regional economic activity and transport. The Central Berkshire Economic Development Needs Assessment (EDNA) found the following:
- In recent years Reading has recorded strong growth, outperforming regional and national averages.
 - There is a strong concentration of jobs in high-value telecoms, IT, professional services and utilities.

- Reading's strong industrial market benefits from access to strategic roads and a 'critical mass' of industrial occupiers and sites.
 - Reading benefits from a highly-skilled workforce and market intelligence suggests that the trend of decentralisation from Central London is expected to continue.
- 3.11 The EDNA recommends that Reading Borough plan to accommodate new office and industrial space in order to ensure that growth potential is not constrained. The Local Plan states that provision will be made for an additional 53,000-119,000 sq. m of office floorspace and 148,000 sq. m of industrial and/or warehouse space in Reading Borough for the period 2013 to 2036.
- 3.12 The overall strategy, therefore, is to seek additional employment provision in the centre and along the A33 corridor, whilst at the same time allowing the release of a few small areas no longer required for employment use.
- 3.13 There is more information with regard to economic development requirements set out in Section 4 below.
- 3.14 The next section provides a broad assessment and overview of a range of infrastructure requirements that will result from the future scale and location of growth.

4.0 OVERVIEW OF INFRASTRUCTURE REQUIREMENTS

- 4.1 It is vital that the necessary infrastructure is provided to accommodate planned growth to 2036. This section will provide an overview of infrastructure requirements under the overall categories of physical, green and social and community. This draws on the key findings of studies, discussions with infrastructure providers and other evidence gathering undertaken in relation to adopted and emerging plans.
- 4.2 Specific discussions have taken place with infrastructure providers to inform this infrastructure plan, as the Local Plan allocates further sites for development. This IDP aims to identify whether and where there are additional or updated infrastructure requirements resulting from the allocations identified.
- 4.3 This IDP does not intend to set out every piece of infrastructure required for every single site, but rather to identify key strategic pieces of infrastructure that will be required to support sustainable growth within the area.
- 4.4 As stated in Section 1 above, utility infrastructure requirements are addressed. The utility providers have not raised any insurmountable issues in dealing with the level of development anticipated. Providers did, however, state that there are some areas of the Borough which will require further investigation by developers as proposals come forward. These are reflected in the schedule in Section 5.
- 4.5 There will be further work required as sites come forward through the development management process to assess specific requirements to enable each. These would be negotiated through the S106 process for site-related requirements or affordable housing, while strategic infrastructure will be funded by CIL. In addition, there will be an ongoing review of the infrastructure requirements over the plan period. Any significant infrastructure project needs that arise will be included in updated versions of the Schedule.
- 4.6 The particular infrastructure types included are as follows:

Physical - Transport, Water Supply, Wastewater (Sewerage and Sewage Treatment Works), Electricity, Rail, Gas, Waste, Renewable Energy, Information and Communication Technology (ICT), Air Quality

*Green*¹⁸ - Open Space, Biodiversity

Social and Community - Education (Primary & Secondary), Post 16 Further Education, Early Years (Children's Centres and Nurseries), Community Facilities, Health, Police, Fire & Rescue, Housing (Extra Care), Economic Development, Leisure, Culture & Tourism

¹⁸ Green infrastructure includes play areas, recreation grounds, allotments, parks, green infrastructure and links and tree planting.

- 4.7 For each of these sub categories the following has been identified, where known:
- Relevant Strategy;
 - Existing provision and capacity issues;
 - Impact of future growth; and
 - Relevant priorities for meeting need.
- 4.8 Key projects are identified in the Infrastructure Delivery Schedule in Section 5.

PHYSICAL

Transport

Strategy: The Local Plan includes the following Core Transport Infrastructure projects as central to the Council's long-term vision:

- Cow Lane improvements
- Cycle Hire
- Green Park Station and multimodal interchange
- Low Emission Zone
- Major repair and improvement projects
- Mass Rapid Transit (MRT) schemes—East Reading MRT, South Reading MRT
- National Cycle Network Route 422
- Network management, junction improvements and road safety
- Park and ride at Thames Valley Park
- Public Transport and enhancements
- Reading West Station Upgrade
- Third Thames crossing
- Town Centre access and public realm enhancements
- Walking and cycling infrastructure

The Borough's third Local Transport Plan (LTP), adopted April 2011, focussed on developing long term transport measures and initiatives which promote an integrated and balanced transport environment capable of supporting Reading's role as a regional transport hub.

The next LTP (LTP 4) is currently being produced. This document sets the policy context up to 2036. More frequent rolling improvement plans every few years will detail current priority schemes.

Existing provision and capacity issues: The Council continues to work on the projects and programmes identified in the LTP and to secure the necessary funding to achieve these, including funding by way of developer contributions. Funding has been secured from Local Transport Block Grants, Local Growth Funding secured by the Thames Valley Berkshire Local Economic Partnership, Section 106 and the Community Infrastructure Levy and the Business Improvement District Fund.

Impact of future growth: The Local Plan highlights that the scale of development envisaged during the Plan period will have significant impacts on the transport system and that this would require major investment in all modes of transport. The Core projects form an integral part of the Spatial Strategy and future development depends on the implementation of a range of projects, schemes and programmes. However, Reading's Transport Strategy does not rely solely on the delivery of these core projects to deliver the required outcomes. As part of the Local Plan process, consultants on behalf of RBC modelled the level of development envisaged by the Local Plan to assess the impact of sites identified in the Plan upon the Strategic Road Network.

Further evidence produced for the Local Plan demonstrated that the level of growth proposed during the Plan period can be accommodated with the implementation of the core projects and transport projects specific to the proposed sites for development.

Priorities for meeting need: The priorities are to continue with the core projects identified above and other works identified in local transport plans, which will support the level of overall growth proposed. Site specific requirements, emerging from proposals, will need to be negotiated at the time of future planning applications. Projects are identified in the schedule.

Water Supply

Strategy: Thames Water published their Water Resources Management Plan¹⁹ in February 2015 for the period 2015-2040. They are currently developing the next plan, which will cover the period from 2020 for at least the next 25 years. As a statutory water undertaker they have a duty to maintain the security of water supply and every five years they are required to produce a Water Resources Management Plan (WRMP) which sets out how they plan to provide water to meet customer's needs while protecting the environment over a 25-year period.

Their water supply area is divided into six Water Resource Zones (WRZ). Reading Borough falls within the Kennet Valley WRZ and their assessment uses the following:

- Forecasts of future population and properties based on census data (the latest being the 2011 Census);
- Regional spatial strategies;
- Past trends; and
- Expected increases in household water use;
- Local authorities' forecast of future population and household numbers.

Their overall assessment shows a positive supply/demand balance up to 2040 for the Kennet Valley WRZ. (Refer to the table in the Appendix).

Existing provision and capacity issues: Thames Water has identified a few sites where there are known local infrastructure capacity constraints. These will require detailed investigation and modelling to determine what infrastructure upgrades are required.

Impact of future growth: Thames Water forecasts suggest that there will continue to be a positive supply and demand balance for average demand to 2036 for the Borough taking account of current housing requirements.

However, with regard to specific areas of growth and specific site allocation within the Local Plan, Thames Water raised some issues of water supply capability. For the town centre, it was indicated that water and wastewater network upgrades would be required

¹⁹ Thames Water, Water Resources Management Plan <https://sustainability.thameswater.co.uk/-/media/site-content/corporate-responsibility/pdfs/wrmp14.pdf>

and that the scale of these upgrades would be determined by location and size of development and that detailed modelling would need to be undertaken.

Recent liaison with Thames Water has identified a number of areas where they have specific concerns regarding the water supply capability/capacity, mainly some sites in west and south Reading. They state that the water supply network in a number of areas is unlikely to support the demand anticipated from the proposed development. It will be necessary to undertake investigations of the impact of development and the completion of this will take several weeks. In the event of an upgrade to assets being required, up to three years lead time will be necessary.

Thames Water suggest that with regard to these specific sites, where they have highlighted potential issues of water supply infrastructure capability that the Council state the following: *“Developers will be required to demonstrate that there is adequate water supply capacity both on and off site to serve the development and that it would not lead to problems for existing or new users. In some circumstances it may be necessary for developers to fund studies to ascertain whether the proposed development will lead to an overloading of the existing water infrastructure.”*

Priorities for meeting need: Thames Water has highlighted that there are existing capacity issues in a number of areas, as referred to above and these will need to be addressed individually on a site by site basis by developers with Thames Water as and when proposals are being prepared.

Wastewater (Sewerage and Sewage Treatment Works)

Strategy: The Urban Wastewater Treatment Directive regulates the collection and treatment of wastewater for homes and industry. This is implemented in the UK through the Urban Wastewater Treatment Regulations (1994). The Directive affects statutory water and sewerage companies, in Reading’s case Thames Water, who own and operate the public sewerage system and treatment works.

The Thames Water 25 Year Strategic Direction Statement, as referred to above, identifies that the Water Framework Directive is set to result in stricter controls over what is discharged into rivers, leading to the need for major upgrades and possible rebuilding of sewerage assets.

Thames Water’s five year plan, from 2015-2020, sets out proposals to maintain and improve their services during that period. This business plan is submitted to the economic regulator, Ofwat, outlining future investment priorities and the likely cost. Thames Water has confirmed that there are no specific plans in this period to upgrade the Sewage Treatment Works in Reading.

Existing provision and capacity issues: The upgraded Sewage Treatment Works (STW) for Reading, located in the South of the Borough, was opened within the last 10 years. There is room to expand the facility if demand increases.

Impact of future growth:

Thames Water has indicated that with regard to foul water sewerage infrastructure we would not have any concerns with individual development sites. However, the total development identified in the sewerage catchment draining to Blakes Lock SPS within the Reading development plan may cause concern if all developments were to go ahead. Thames Water would welcome early consultation concerning any proposed development and once the scale of overall development in the catchment is known. RBC will work closely with Thames Water to provide this information in a timely manner.

As with water supply, Thames Water suggests that where they have highlighted issues of wastewater infrastructure capability that the Council state the following: *“Developers will be required to demonstrate that there is adequate wastewater capacity both on and off site to serve the development and that it would not lead to problems for existing or new users. In some circumstances, it may be necessary for developers to fund studies to ascertain whether the proposed development will lead to an overloading of the existing wastewater infrastructure.”*

Priorities for meeting need: Thames Water has confirmed that in terms of the Reading STW, there are no capacity issues and there are no plans for upgrading the STW in the business plan (2015-2020). This needs to be kept under review over the Plan period. However, the capital cost of sewage connections on and off site is usually met by the developer, with an offset to take account of future income.

Electricity

Strategy: Scottish and Southern Electricity Networks (SSE) is responsible for delivering electricity across southern England, including Reading. The Southern Electric Power Distribution Long Term Development Statement (SEPD LTDS)²⁰ identifies the network parameters and load forecasts. The main purpose of the LTDS is to assist existing and prospective users in making new or additional use of the existing distribution system. This is updated annually. More specific information related to system capacity is available upon request.

Existing provision and capacity issues: There are a number of substations located across the Reading Borough area and they all currently have capacity to take additional load. SEDP assesses the likely capacity required at high voltage and extra high voltage (11,000 volts and above), by a development, using typical demands for different building uses.

Impact of future growth: Scottish and Southern Energy identified that the capability of a number of networks and substations would be exceeded by the allocated development.

SEPD has advised that with regard to sites in south Reading, that there is currently spare capacity at their 132/33kv substation at Burghfield. However, SEDP also identify that in South Reading there are many existing commercial buildings, the refurbishment of which

²⁰ The Long Term Development Statement is available by request online at <https://www.ssepd.co.uk/LTDS/>

can result in major fluctuations in load forecasts following notification of such activity. They also clarify that the *“Green Park development will utilise some of the current spare capacity at Green Park as and when units are built. The Kennet Island development will utilise some of the current spare capacity at Courages. Upgrade at the European Weather Centre will utilise some of the current space capacity at Whitley Wood.”*

Priorities for meeting need: In order to accommodate development as proposed by the Local Plan in the town centre, Scottish and Southern Energy Power Distribution responded that they would need to carry out major reinforcement works to their infrastructure. Depending on the specific voltage, this could require up to 4 years lead-time with the highest voltage requiring a longer period of time for reinforcement. Depending on the nature of the works, they would either be chargeable on an appointment basis or fully rechargeable.

Gas

Strategy: A gas supply is currently regarded as an essential utility provision for new development. The national high pressure gas transmission system is owned and operated by National Grid, but the lower-pressure local distribution network in the Reading area is owned by SGN. The SGN Long Term Development Statement²¹, published annually, provides actual and ten-year forecast of volumes of transportation system usage. The Statement also identifies planned major reinforcement projects and associated investment.

Existing provision and capacity issues: Provision of on-site gas distribution is the responsibility of the developer. Reinforcements and developments of the local distribution network result from overall demand growth in a region rather than site specific developments.

Impact of future growth: Proposed growth over the plan period will not cause any major issues upon the Reading low-pressure network. SGN confirmed that based on information provided to them by RBC on the location of draft housing and employment allocations in December 2016 that it is unlikely reinforcement will be required to support the proposed load. This capacity is broadly in place. However, should the need for reinforcement arise, gas suppliers and distributors will need to be kept aware of development phasing.

Priorities for meeting need: The Long Term Development Statement identifies that SGN has an obligation to develop and maintain an efficient and economical pipeline system, and to comply with any reasonable requests to connect premises. Where reinforcement is required, this is charged for according to an agreed charging regime. Dependant on the scale, some reinforcement projects may have significant planning, resource and construction lead-times and as much notice as possible should be given. In particular, there is typically a requirement for two to four years' notice of any project requiring the

²¹ The SGN Term Development Statement can be accessed online at <https://www.sgn.co.uk/uploadedFiles/Marketing/Pages/Publications/Docs-Long-Term-Development-Statements/SGN-LTDS-2017.pdf>

construction of high pressure pipelines, although in certain circumstances, project lead-times may exceed this period.

Waste

Strategy: Waste infrastructure is that used in the collection, treatment and disposal of residential and commercial waste. The focus of waste policy is on more sustainable approaches to waste - increasing the value recovered and decreasing the amount sent to landfill.

Minerals and waste planning is a matter for a separate Minerals and Waste Development Framework. A joint Minerals and Waste Plan (JMWP) is being produced by Hampshire County Council on behalf of Reading Borough Council, Wokingham Borough Council, Bracknell Forest Borough Council and the Royal Borough of Windsor and Maidenhead. The JMWP is expected to be adopted in 2020. The JMWP will be in accord with the Waste Management Plan for England²² (December 2013) and the National Planning Policy for Waste²³ (October 2014).

With regard to municipal waste, the Government has set targets within the Waste Regulations 2011 which sets a 50% target for reuse and recycling. The Council's Corporate Plan commits to achieving a recycling rate of 42% by 2017. More information can be found in the Council's Waste Minimisation Strategy (2015-2020)²⁴. Additionally, the RE3 Strategy (2016/2017)²⁵ provides further information on targets and progress thus far.

The RE3 councils - Reading Borough Council, Wokingham Borough Council and Bracknell Forest Borough Council - have signed at 25 year contract (2006) with FCC Environment.

Existing provision and capacity issues: Local Authorities and private companies provide waste services. Local Authorities cover municipal waste. Infrastructure for other waste types is largely delivered through the private sector.

Within Reading there is a Household Waste Recycling Centre and transfer station at the Smallmead Site in South Reading, and a Material Reclamation Facility. There is no landfill site in the Borough.

Impact of future growth: Clearly, as the numbers of people and households increase, so will the average waste output in each area and for the RE3 area as a whole. Furthermore, additional housing being constructed in the area will have implications for construction waste. This will place additional demand on waste infrastructure. The Joint Minerals and Waste Plan will determine the need for additional infrastructure throughout the plan period.

²² Waste Management Plan for England - <https://www.gov.uk/government/publications/waste-management-plan-for-england>

²³ National Planning Policy for Waste <https://www.gov.uk/government/publications/national-planning-policy-for-waste>

²⁴ RBC Waste Minimisation Strategy http://www.reading.gov.uk/media/4418/Waste-Minimisation-Strategy-2015---2020/pdf/Waste_Minimisation_Strategy_2015_-_2020.pdf

²⁵ RE3 Strategy http://www.reading.gov.uk/media/5587/Item-13/pdf/Item_13.pdf

Priorities for meeting need: At present, there is still further capacity at the RE3 facilities in South Reading to accommodate municipal waste. This will continue to be reviewed throughout the Plan period.

Tackling the growth in waste is an essential element of RE3's strategy and a key objective is to work to reduce growth. In terms of future priorities, these will be reviewed and identified through a Joint Waste and Minerals Plan.

Renewable Energy

Strategy: Renewable energy is an integral part of the Government's longer-term aim of reducing CO₂ emissions by 80% by 2050 and reductions in CO₂ emissions of at least 26% by 2020, against a 1990 baseline²⁶. The Planning Act 2008 introduced statutory duties on regional and local plans to take action on Climate Change. Reading Borough Council published their Climate Change Strategy in September 2013 (for the period 2013-2020)²⁷. In the Strategy it is recognised that there are substantive schemes required to reduce carbon dioxide emissions in the short to medium term.

Existing provision and capacity issues: Renewables are being secured on a site by site basis as part of negotiations on planning applications and to meet the local planning policy requirements for Sustainable Design and Construction. Current schemes in the Borough include photovoltaic solar panels, thermal solar panels, ground source heat pumps and wind turbines²⁸.

Thames Valley Energy (TVE) has been commissioned by the Climate Berkshire Partnership to undertake a Renewable Energy Evidence Base for Berkshire²⁹, examining the potential for future investments into renewable and local carbon power generation across Berkshire. The report outlines around 12MW of renewable electrical energy and 12MWth of capacity provision by 2020.

Decentralised Energy

RBC has also commissioned TVE to identify potential sites for combined heat and power, district heating and decentralised energy power opportunities (district energy schemes). This includes developing project design options and feasibility assessment for an energy centre in the Civic area. In addition, they have developed a strategic/technical outline for a further Reading site, i.e. identifying other sites which have the potential for renewable schemes and district energy schemes. Such decentralised power generation and district heating plant is identified within the RBC's Climate Change Strategy as this was recognised

²⁶ More information on the Climate Change Act and UK regulations can be found online at <https://www.theccc.org.uk/tackling-climate-change/the-legal-landscape/global-action-on-climate-change/>

²⁷ RBC's Climate Change strategy can be accessed on the Council's website at <http://www.reading.gov.uk/media/1232/Climate-Change-Strategy/pdf/Climate-Change-Strategy.pdf>

²⁸ RBC Climate Change Strategy

²⁹ Berkshire Renewable Energy—2020 Evidence Base & Recommendations
<http://www.tvenergy.org/content/files/static/climate-berkshire-report-phase-2.pdf>

as offering the single largest carbon dioxide emission saving of any of the schemes. By generating electricity locally in a CHP plant, electrical power can be generated and the waste heat can be utilised to produce heating and cooler for local users in addition to locally generated electricity. This process is usually 80% efficient whereas centralised energy systems (power stations) are typically around 35% efficient.

Renewable Incentives

The UK incentive schemes for renewable energy are the 'Feed-in Tariff'³⁰ and the Renewable Heat Incentive³¹. Both of these schemes will offer a significant premium paid for all renewable energy produced using certain technologies.

The Sustainable Community Strategy³² (to 2020) includes renewable energy as one of the eight 'building blocks.'

Fuel Poverty

Around 13.9% of Reading's households are estimated to be in fuel poverty³³. (Their fuel bills exceed 10% of annual income). Opportunities to provide lower cost, green energy to these uses offers social as well as environmental benefits.

Impact of future growth: Alongside growth there will be the need to identify and incorporate additional renewable energy provision within the Borough and to look at site specific measures in line with national policy and the Local Plan's policy requirements of CC1 and CC4. This includes the potential for decentralised renewable energy site/s.

Climate Berkshire's Evidence Base will form the start of a wider programme looking to bring forward sufficient numbers of schemes across the 6 unitary authorities in Berkshire. Reading, as the largest urban area, has a high energy 'load' and therefore will need to import renewable energy and fuels from other Authority areas.

The infrastructure required will need to provide an increased quantity of heat and electricity from renewable sources. Berkshire is considered to have a relatively good supply of Biomass fuel available (managed woodlands and crop supply). One local supplier network has a potential estimated supply of 45,000 tonnes per annum.

Another method of generating heat using renewable energy is to use renewable electricity to power ground source heat pumps.

Priorities for meeting need: There is the need to look at more efficient and sustainable approaches to energy provision. There is consideration and investigation for district energy schemes in Reading, of a medium scale, which incorporate the use of renewable energy.

³⁰ More information about the Feed-in Tariff can be accessed on the Government's website at <https://www.gov.uk/feed-in-tariffs/overview>

³¹ More information about the Renewable Heat Incentive can be found online at <https://www.ofgem.gov.uk/environmental-programmes/domestic-rhi/about-domestic-rhi>

³² The Sustainable Community Strategy <http://www.reading.gov.uk/media/1238/Sustainable-Community-Strategy/pdf/Sustainable-Community-Strategy.pdf>

³³ ONS, Sub-regional fuel poverty data <https://www.gov.uk/government/statistics/sub-regional-fuel-poverty-data-2017>

The Civic area of Reading is a key location presently under consideration. These schemes provide heating and cooling networks which use the waste heat from generating electricity locally and therefore improve efficiency.

The business case for application of solar panels to Reading's roof space is compelling with the introduction of the 'Feed in Tariff.' The public sector will take the lead in applying these technologies. Over the past few years, the Council has successfully installed solar panels on over 450 Council homes.

Information and Communications Technology (ICT)

Strategy: The main thrust of national policy is that homes and employment require the support or technical infrastructure, which includes the provision of advanced Information and Communications Technology infrastructure. The NPPF states: "Advanced, high quality communications infrastructure is essential for sustainable economic growth. The development of high speed broadband technology and other communications networks also plays a vital role in enhancing the provision of local community facilities and services³⁴." The Government's National Infrastructure Delivery Plan³⁵ states: "Demand for digital services and applications will continue to rise rapidly, with a consequent acceleration in the amount of data being carried over networks. Over the next decade, we can expect the emergence of new services, applications and devices which will create additional demands on networks. To support this demand, the UK needs infrastructure that is high capacity, reliable, resilient, secure, affordable and fast."

Existing provision and capacity issues: Reading is a largely urban authority and as such already has a good level of ICT infrastructure. In particular there is a reasonable superfast broadband network within Reading, which is critical to attracting inward investment.

The implementation of Berkshire Superfast Broadband infrastructure is already underway. This project focusses on areas where there are currently no commercial plans to deliver superfast broadband services. In Reading, this program targets existing domestic and commercial properties to ensure a minimum Superfast infrastructure exists for 98% of properties by 2019. The current Superfast project is ultimately addressing gaps to ensure a minimum exists.

Independent of the Council's efforts, many companies are increasing domestic and commercial broadband availability. These include Opticlear, Virgin Media, WarWicknet and City Fibre.

The next target is Ultrafast and all development should be future proofed to ensure "fibre to the premises (FTTP)." This would deliver a signal over optical fibre, rather than existing copper infrastructure (such as telephone wires and coaxial cable). Currently in Reading, CityFibre are targeting "fibre to the premise" solutions for commercial businesses only.

³⁴NPPF, Section 42

³⁵The Government's National Infrastructure Delivery Plan can be accessed on the Government's website at <https://www.gov.uk/government/publications/national-infrastructure-delivery-plan-2016-to-2021>

Impact of future growth: There will be an ongoing need to raise the level of ICT infrastructure. We should expect increases in the amount of data being carried over networks and additional usage demand.

Priorities for meeting need: The Council encourages fibre-based gigabit solutions for any new developments installed to the premises in order to future proof broadband delivery at desired speeds. This is preferred to current fibre to cabinet network that still uses copper infrastructure for final delivery from a cabinet to a property. Copper ultimately restricts performance and restricts capacity.

All new development, particularly major developments, will be encouraged to deliver FTTP. This is much more cost-effective during initial construction than as an afterthought.

Air Quality

Strategy: The Air Quality Strategy for England 2007 and relevant environmental legislation requires all Local Authorities to 'review and assess' local air quality. Where exceedances are likely, the Local Authority must designate an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan that outlines the measures it intends to pursue.

Reading Borough Council has declared a single AQMA and has implemented an associated Air Quality Action Plan (2016 Update, RBC)³⁶. The Air Quality Action Plan looks at all aspects of air quality, including bonfires, domestic fuels, pollution from industrial processes, and climate change. However, it is recognised that the main source of air pollution in Reading is from traffic.

A policy on air quality is included in the Local Plan (EN15: Air Quality) and aims to ensure that increased development within the AQMA does not lead to a net increase in emissions as well as ensuring that there is appropriate mitigation.

Existing provision and capacity issues: The AQMA includes much of the central area and the main radial transport corridors.

Air quality is measured using a combination of methods providing detailed measurements, in real time, of the levels of different pollutants at a variety of places across the Borough.

The main air quality monitoring station is located within the grounds of the cemetery at Cemetery Junction and monitors a number of pollutants (NO_x, Ozone, PM₁₀ and PM_{2.5}). The stations on London Rd, Caversham Rd and Oxford Rd monitor NO₂ and PM₁₀.

Impact of future growth: The air quality impact of development varies significantly depending on where the development is, the nature of the development and the existing air quality traffic conditions. Air Quality assessments will deal with each site on an individual basis. A Public Health England report published in 2014 estimated the

³⁶ RBC Air Quality Action Plan Update http://www.reading.gov.uk/media/4209/Air-Quality-Action-Plan/pdf/AQAP_Proposed_actions.pdf

percentage of deaths linked to particulate air pollution in local authority areas. It estimated that in 2008, 62 deaths in Reading could be attributed to poor air quality (5.9% of deaths in the population over age 25). This is slightly higher than the national average of 5.3% of deaths in over 25s.

Priorities for meeting need: Air quality in Reading is generally good. However, there are areas close to congested and busy roads where there are higher levels of pollution, in excess of the air quality objective for nitrogen dioxide. Although Particulates (PM) are arguably more harmful to human health, Reading PM levels are below the EU limit value, therefore in Reading it is NO₂ which is the primary focus of the action plan, although reducing PM is a very strong secondary aim.

The Air Quality Action Plan identifies a key priority as ensuring that new development does not result in 'background creep' of pollution levels. Actions targeting diesel cars in particular are likely to see the biggest reduction in nitrogen dioxide levels. Improvements are not always possible from privately owned vehicles, but considerable investment has been made to reduce emissions from public buses in Reading, as well as taxis.

The priority is to reduce impacts or offset within the development in the first instance. However, there may be circumstances where a developer will be required to fund mitigating measures elsewhere to offset the increase in local pollutant emissions as a consequence of the proposed development. This may be through a specific scheme or measure, or a contribution to the cost of the monitoring network. The infrastructure policy in the Local Plan (CC9: Securing Infrastructure) identifies measures to tackle poor air quality or for ongoing air quality monitoring as one of the areas for which planning obligations could be sought. Most improvements to air quality are closely tied with improvements to transport, for example, reducing the use of private cars or increasing walking and cycling.

Specific projects identified within the Schedule in Section 5 are:

- Additional air quality monitoring in locations where development is likely to worsen air quality; and
- The implementation of a Low Emission Zone (LEZ).

These are seen as important measures to help both monitor and reduce high levels of NO₂ in hotspot locations. Other projects, such as electric vehicle charging stations, may also be considered and this will continue to be reviewed through the Plan period.

GREEN

Green Infrastructure is defined in National Planning Policy Framework and by Natural England as a strategic network of multi-national green space, both rural and urban, which is capable of delivering a wide range of environmental and quality of life benefits for local communities. It delivers a broad range of functions and provides vital socio-economic and cultural benefits which underpin individual and community health and wellbeing. These functions include: conserving and enhancing the natural environment; providing wildlife corridors; reducing noise and air pollution; and helping communities to adapt to a

changing climate through water and carbon management. In urban areas, functions include providing routes (e.g. footpaths and cycle ways) which link areas of open space within settlements; providing sustainable drainage, flood storage and urban cooling; and providing a wide range of opportunities for engagement and active citizenship, relaxation and quiet contemplation, sport, recreation and children's play.

For this IDP the majority of the areas defined under Green Infrastructure are under the heading Open Space. There is also a short section on Biodiversity including tree planting.

Open Space

Strategy: The overarching strategy on open space is contained within the Reading Borough Council's Open Spaces Strategy (2007, 2017 update note). Overall, the Borough is generally well served but the total open space is not on updates less than guidelines recommend and distribution is uneven across the Borough.

This is translated into specific policies in the Local Plan. EN7 identifies key areas of Local Green Space and Public Open Space. EN8 contains a presumption in favour of retention of undesignated open space. EN9 requires provision of open space as a result of new development. EN10 ensures that new development improves links to existing open space, where possible. OU1 discourages development of sports fields and playing pitches.

Existing provision and capacity issues: There are a range of different types of open spaces within the Borough, managed by the Parks and Open Spaces Team. Local Green Space (LGS) and Public Open Space (POS) are suitable for general recreational use and usually include parks, gardens and recreation grounds.

Key areas of deficiency identified in the Open Spaces Strategy are as follows:

- In central Reading, Public Open Space is, by and large, where residents are not;
- In north Reading, large areas are lacking children's play facilities;
- Areas immediately to the west, north-west, south and east of the town centre are amongst the most poorly supplied in the Borough in terms of recreational open space; the problem is exacerbated by very dense housing;
- Severance lines, such as railways or the IDR, further reduce residents' access to open space.

Additionally, play areas and equipment are used to capacity and continuous investment is needed simply to sustain existing provision.

Impact of future growth: Additional future growth will of course exacerbate these issues, particularly by increasing pressure on the current open space infrastructure. It is important therefore, that there is a managed programme of targeted open space growth and enhancement/improvement of existing areas, in order to support sustainable growth in the Borough.

Priorities for meeting need: There are a number of key projects identified in Council policy documents, which will support continued growth, and these are listed below and identified within the Schedule in Section 5 below:

- Extending the range of sports facilities and capacity of John Rabson Recreation Ground in South Reading. Many improvements have been made already, but grass pitches in particular suffer from waterlogging and reduce pitch availability and use;
- Improving the quality of existing open spaces, particularly larger parks;
- Updating play areas and equipment to ensure health and safety;
- Creating and improving link from residential development to adjacent open spaces;
- Improvements/enhancements to Christchurch Meadow to include sport facilities for team sport, tennis and other leisure uses; and
- Improving existing allotment space.

Biodiversity

Strategy: Section 40 of the Natural Environment and Rural Communities Act Biodiversity Duty states that “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”

The NPPF sets out the key planning principles for biodiversity conservation and enhancement. It states that the planning system should contribute to and enhance the natural and local environment by recognising the wider benefits of ecosystem services, minimising impacts on biodiversity and providing net gains in biodiversity by establishing coherent ecological networks that are more resilient to current and future pressures. Current thinking encourages councils to adopt the concepts of natural capital, green infrastructure and multifunctional green space.

The Reading Biodiversity Action Plan (BAP)³⁷, due to be reviewed, sets out the aims, objectives and actions that the Council and its BAP partners will undertake to conserve and enhance Reading’s biodiversity.

Single Data List 160, “Improved local biodiversity” measured the performance of local authorities for biodiversity by measuring the number of Local Wildlife Sites under positive conservation management.

The need for the conservation and enhancement of biodiversity is set out in the Local Plan in EN12 which identifies and protects areas of existing biodiversity value and seeks to join them together through the establishment of a green network. Local Plan policies define the Green Network as comprised of Local Wildlife Sites, Local Nature Reserves, Areas of Biodiversity Action Plan Habitats, open space, green links and Biodiversity Opportunity Areas.

³⁷ Reading Biodiversity Action Plan http://www.reading.gov.uk/media/5972/Reading-Biodiversity-Action-Plan/pdf/Reading_BAP_February_062.pdf

Trees are also important and maintaining and enhancing biodiversity and the requirement for new development to make provision for tree planting is addressed by Local Plan policy EN14. The Council has adopted a Tree Strategy (2010)³⁸, which seeks to significantly increase the amount of tree coverage in the Borough and identifies the areas which are a priority for tree planting. The Strategy is accompanied by a Tree Planting Plan.

Existing provision and capacity issues: Local Wildlife Sites (LWS) are sites of significant value for the conservation of wildlife and represent local character and distinctiveness. They have an important role to play in meeting local and national targets for biodiversity conservation. They are of particular importance in an urban borough such as Reading. In Reading, there are 25 LWS with 19 of these owned or managed by RBC. LWS are regularly reviewed by the Berkshire Local Wildlife Site Partnership.

Impact of future growth: There is a need to proactively protect and enhance biodiversity. New development should seek to enhance biodiversity wherever possible and this includes trees, which provide important habitats on their own and help mitigate the impacts of climate change.

Priorities for meeting need: It is important that there are mechanisms in place to protect, conserve, enhance and extend habitats across the Borough in line with the local and national BAPs. In particular: that existing parks are enhanced in terms of their biodiversity value; new, open spaces sustainable drainage systems are designed and managed to maximise their ecological value and; that the Borough's residents have access to well-managed sites of importance for nature conservation.

There is also need to identify new, and enhance existing, LWS and ecological links and stepping stones, to ensure that wildlife can move through the Borough. This can be through on or off-site provision or, for example, where a development is adjacent to a LWS. Contributions may need to be made to ensure that any increased recreational pressure on that site is managed and does not adversely impact upon the site's conservation status. Where possible, tree cover should be enhanced.

There will be ongoing work to identify such opportunities and to secure implementation of these through the Plan period. Further detail will feed into future reviews of the IDP.

SOCIAL AND COMMUNITY

Education - Primary & Secondary

Strategy: The Local Plan aims to improve the quality of life of those living in the Borough through education. The Children and Young People's Plan (2015-2018)³⁹ sets out the Council's vision for services for children and young people. One of the key priorities is improving schools and raising attainment. These plans do not have implications for

³⁸ Tree Strategy for Reading <http://www.reading.gov.uk/media/1195/Reading-Tree-Strategy/pdf/Tree-Strategy.pdf>

³⁹ Reading Children and Young People's Plan <http://www.rcvys.org.uk/download/reading-children-and-young-peoples-plan-2015-2018/>

infrastructure provision, although there is a vision of providing a range of services on secondary school sites, i.e. co-location of schools, health and children's services, which may impact on the location and need for service around the Borough.

Existing provision and capacity issues: There are a total of 40 primary and 10 secondary schools. Primary and secondary school catchment areas can be viewed on the Council's website⁴⁰.

The analysis on school places and admissions indicates that Borough wide there is a lack of surplus capacity within primary and secondary schools. Generally speaking, primary schools are under particular strain throughout the Borough. Secondary schools are less strained and pupils are able to travel further to access a place, if need be. Reading sends about 10% of primary pupils and 38% of secondary pupils across the Borough's boundaries to attend school in surrounding authorities.

Impact of future growth: The Education Authority has identified that for primary and secondary, there is already pressure. This is particularly being felt in the east, the town centre and along the Oxford Road Corridor. This is based on live birth data and does not factor in issues such as housing growth, which is likely to exacerbate the current projected position. Generally speaking, 1,000 additional dwellings require one primary school, while 6,000 dwellings require one secondary school, although some of this need can potentially be met through on-site expansion of existing schools and considering existing capacity, not necessarily new schools.

In the south of the Borough, several schools are likely to be directly affected by major sites proposed in south Reading, through increasing demand for available places. Diffuse patterns of population growth from major sites could lead to a disproportionate impact on some primary schools operating near to, or at their full capacity already.

Across the Borough, the increase in primary school places will translate into an increased demand for secondary places and demand for secondary school places is rising on the year. Based on current projections, a shortfall of year 7 places begins to appear in the 2019-2020 school year. A need has been identified for a new 6 form entry secondary school located close to the town centre and two 1 form entry expansions at other existing secondary schools. Any increase in pupil places will take into account the effects of transboundary pupil movements on secondary schools in South Oxfordshire.

In terms of particular areas of the Borough, the Education Department has identified that any development, likely to result in child yield, in the east and the town centre, and possibly the north west of the Borough, is going to add to the existing problem of under provision of school places in these areas. Also, the potential size of the proposed residential development in the south will have significant impacts on education infrastructure in this part of the Borough.

⁴⁰ Primary School Admissions Guide http://www.reading.gov.uk/media/4647/InfantPrimary-School-Admissions-Guide-for-Parents-and-Carers/pdf/RBC_PRIMARY_GUIDE_Jan17.pdf Secondary School Admissions Guide http://www.reading.gov.uk/media/4587/Secondary-School-Admissions-Guide/pdf/RBC_SECONDARY_Guide_17-18.pdf

Further analysis regarding school places in the north of Reading has been undertaken with Oxfordshire County Council with the aim of estimating how many Year 7 places would be needed over the next 7 years in the absence of any housing impact. This work determined that, excluding any housing impact, Chiltern Edge School at its current 4-form entry size is essential to meet the need for school places across this area. Even with the highest realistic assumption regarding leakage to non-state schools, in some years there would still be a shortage of places, most severely in 2019 and 2021, which would justify Chiltern Edge School increasing its intake to 6 forms of entry at least in those years. If leakage rates are lower, then Chiltern Edge School would need to provide 6 forms of entry on a sustained basis, and further additional capacity would be needed, at least in some years.

Priorities for meeting need: There will be ongoing work to identify needs and to secure creation of primary and secondary school places throughout the Plan period. Further detail will feed into future reviews of the IDP. At this time, the new Local Plan includes policies requiring school provision at Dee Park and Park Lane Primary. Mixed-use sites in the town centre include the possibility of education provision. A new secondary school (Elvian School) is currently under construction on Bath Road. Moorlands Primary will undergo expansion from 1 FE to 2 FE by September 2019. A new 6 form entry secondary school should be established in 2019 with two 1 form entry secondary expansions following in 2021. Reading Borough Council and Oxfordshire County Council support the need for Chiltern Edge School to remain open at 4 forms of entry, and in some years grow to 6 forms if needed. More information is listed in the IDP schedule.

Post 16 Further Education

Strategy: Of particular significance is the national level strategy 'Raising of the Participation Age', which sets out the Government's current priority to increase participation rates in education or training for 16-18 year olds. It requires that every young person, up to his or her 18th birthday, should be in education or training. In particular they seek to reduce the number of young people who are NEET (Not in Employment, Education or Training). Critical to this, is the growth in apprenticeships, which the Government see as one of the main routes into training post 16.

Another key aspect of education policy is entitlement for young people (14-19) to access foundation learning⁴¹ and apprenticeships.

Existing: Provision of post-16 education and training in Reading is currently delivered by a range of providers including Reading College, schools' 6th forms and private training providers. The Education Bill will provide for the establishment of a much wider range of education establishments. Maintained schools will be free and indeed encouraged, to become Academies. Communities will be able to set up free schools, which may include

⁴¹ Foundation Learning is the provision for all young people working at low levels of attainment, i.e. below the level of higher GCSE grades. This includes all young people with learning difficulties and therefore includes young people who have profound or multiple learning difficulties. Foundation learning comprises three components: Vocational Learning, Functional Skills in English Maths and IT; and Personal Social Development.

14-19 studio schools for young people at risk of disengagement and universities may be able to sponsor the setting up of University Technical Colleges for 14-19 year olds.

Currently in Reading the published data is 4% NEET and 2% not known. These statistics are published by the LA on a monthly basis and annually by DfE (the annual data is based on an average for November-January). In 2016 RBC's three month average was 4% NEET, the lowest since records have been taken⁴².

Reading Borough serves the wider Reading catchment with Reading as a net importer of new provision. This is predominantly because of Reading College's presence in the Borough; Wokingham does not have any FE provision; and Newbury College is in the west of West Berkshire and so residents in the eastern end of West Berkshire probably choose Reading College as their provider. Indeed, of the 16-18 year old learners who access provision in Reading only 24.3% of these are Reading residents⁴³.

Impact of change: According to GLA population projections there is anticipated to be sustained growth to 2036. However, Reading will continue to be a net importer of new provision, so will continue to play a significant role in the post 16 education and training provision.

Although there is sufficient capacity in the further education section to deal with demand, the physical space needs to be appropriate for delivery, i.e. 'fit for purpose'. The training element could be on the job training, which involves a component of college, based training. This will lead to a major growth in full time education or part time education through day release and training. In terms of capital expenditure there is sufficient capacity in the Further Education Sector to deal with this future demand.

Priorities: There is unlikely to be a specific requirement for additional infrastructure, but providers will need to ensure that existing accommodation is fit for purpose. There will be additional demands on training providers in terms of apprenticeships, which may be met through the work placements etc.

There will be further work in developing the Reading and Central Berkshire 14-19 Partnership to provide high quality education and training that meets their needs, interests and abilities.

There are no specific capital infrastructure requirements identified in the Schedule in Section 5 below, but this will kept under review through the Plan period.

Early Years - Children's Centres and Nurseries

Strategy: The Council's Children and Young People's Plan (2015-2018) sets out the vision for services, but does not identify specific requirements for capital infrastructure.

⁴² NEET data can be found on the government's website at <https://www.gov.uk/government/publications/young-people-neet-comparative-data-scorecard>

⁴³ Learning and Skills Council

The Childcare Act (2006) requires all local authorities to ensure sufficient childcare for working, studying or training parents and for all disabled children. The role of the local authority is to manage the market to ensure sustainability, capacity and flexibility. Quality pre-school experience supports cognitive and emotional development, improves school readiness and allows parents to enter work in order to raise household income⁴⁴.

The Government introduced a new national funding formula for Early Years in April 2017. This funds early education and childcare in new ways in order to deliver high quality services in which parents have choice. In September 2017, eligible three- and four- year olds began receiving 30 hours childcare. This extends the current provision of 15 hours per week.

Existing provision and capacity issues: Reading's Childcare Sufficiency Audit for 2016⁴⁵ presents a picture of childcare provision in Reading, including availability, cost and quality. International migration and a high birth rate have led to significant increases in the child population⁴⁶, with much of the growth in areas of deprivation. In particular, high levels of deprivation are clustered throughout the Abbey Ward, South Whitley, Northumberland Avenue and areas of Norcot, Southcote and Lower Caversham.

The total number of childcare providers has decreased since the last Childcare Sufficiency Audit by 5.5% from 256 to 242 registered providers. Registered providers are not evenly distributed across wards and there is very little provision available past 7 p.m. This suggests a need for more flexible hours and increased provision, particularly in underserved wards.

In Central Reading it was determined that in the inner wards nursery places were limited, with a number of nurseries oversubscribed. Capacity restrictions in the east of the central area and the Oxford Road area were also observed due to more limited access to nursery and children's centre.

Impact of future growth: Planned development will increase the stock of housing, particularly in Abbey and Whitley wards. This will increase the demand for childcare in these areas. Furthermore, the increase in entitlement from 15 hours to 30 hours for eligible three- and four-year-olds will create additional demand.

Priorities for meeting need: There are no specific priorities at present. This will be subject to ongoing review.

⁴⁴ Reading's Childcare Sufficiency Audit 2016

⁴⁵ Available online at http://www.reading.gov.uk/media/5849/Childcare-Sufficiency-Assessment-2016/pdf/READING_CSA_FINAL_amended.pdf

⁴⁶ Reading's Childcare Sufficiency Audit 2016

Community Facilities

Strategy: RBC's Neighbourhood Strategy⁴⁷ identifies the vision and targets for community involvement in decision making regarding community services within the area. It does not include specific capital infrastructure projects, but does identify a range of community services to be delivered. This strategy aims to join up services and target resources to more effectively meet the needs of those in some of Reading's most deprived localities.

Existing provision and capacity issues: There are a number of community centres across the Borough which are used for a range of activities. Infrastructure studies undertaken for RBC identify that most community centres have space capacity, but inflexible space restricts the level and type of activities supported.

Impact of future growth: The projected adult population increase will increase demand for a range of community services and therefore demand on centres, using space capacity at a number of sites.

Priorities for meeting need: New community centres should involve co-location of services. Future funding opportunities need to be sought for neighbourhood area improvements, which would include works to key community centres. The Council aims to work closely with existing community groups and Housing Associations to provide multipurpose facilities during regeneration. Ongoing efforts include work in Southcote, Amersham Road and Dee Park. At this time, no specific projects are identified within the schedule, but this will be kept under review throughout the plan period.

Health

Strategy: Primary health care services are provided by the North and West Reading Clinical Commissioning Group (CCG) and the South Reading CCG. In April 2013, CCGs replaced Primary Care Trusts in managing the provision of healthcare. As commissioners, CCGs decide which health services should be provided, who will provide for them and how they should be paid for. CCGs are made up of GP practices in the area. Primary Care Strategies and Annual Reports are available on the CCGs websites⁴⁸.

The funding that the CCGs receive from the Department of Health, based on the relative health and deprivation of the population, is used to pay for all NHS health care for the population. This ranges from Public Health services aimed at preventing illness, G.P. and other primary care services, through to highly specialist treatments for individual patients at regional and national centres of excellence.

Nationally, there is a move to reconfigure health service delivery into larger, more 'fit for purpose' facilities to provide a wider range of services. This is in addition to the demand which results from new housing development. Larger surgeries can often offer a wider range of co-located primary services which provide wider choice and access for patients.

⁴⁷ Reading Borough Council Neighbourhood Strategy <http://www.reading.gov.uk/media/1240/The-Neighbourhood-Strategy/pdf/The-Neighbourhood-Strategy.pdf>

⁴⁸ CCG websites: <http://www.southreadingccg.nhs.uk> and <http://www.nwreadingccg.nhs.uk>

Existing provision and capacity issues: CCGs undertake detailed demographic work, and make planning assumptions about a growing population. Recent work has been undertaken to assess current capacity of GP services within the whole Berkshire area, however the final results of this study are not yet publically available. They are still determining health infrastructure requirements and the CCGs are developing criteria for developing primary care premises. The Council will continue to have ongoing dialogue with the CCGs.

For South Reading, the CCG identifies that most surgeries are operating close to or at full capacity, and some have increased surgery hours to help meet demand.

The CCG has provided broad data for GP practices in the remainder of the Borough. The issues are similar to the south with the majority of practices operating at capacity. There is a walk-in centre at Broad Street Mall in the centre of Reading, which opened in August 2009.

Impact of future growth: Based on estimated yields of potential proposed housing sites, almost none of the practices in South Reading have the capacity to accommodate growth within their current premises. There are limitations on the expansion potential of several surgery premises, especially as three practices are converted houses and the other two have no additional land to expand.

For the central area the issues are similar. This borne out by further updated information recently received from the CCG. This identifies that most GP practices could not accommodate a growth in population.

A significant increase in levels of patients could lead to Department of Health targets for patient access to healthcare slipping.

Priorities for meeting need: Because most GP practices are operating at capacity, it is anticipated that one or more new or replacement facilities would be required in the area. CCGs would want to ensure that any new facility accommodated the anticipated growth in population in South Reading and in Central Reading. There is also a priority to increase the size of facilities to raise capacity and coverage.

The health infrastructure requirements, in terms of specific sites for re-provision, are still to be determined.

The CCG has a strategic preference to relocate facilities into locations that establish larger site provision, rather than disparate services across a number of smaller sites.

Relevant costs/funding cannot be determined accurately until the CCGs know what additional capacity is required and how that will be dealt with (e.g. extensions, new sites), the CCG formula should estimate this cost in terms of developer contribution.

There will be ongoing discussion regarding their specific requirements and this will be fed into updating the Plan and Schedule.

Police

Strategy: One of the key themes of RBC's Sustainable Community Strategy is *Safer and Stronger Communities*. Reading's Crime and Disorder Reduction Partnership, who work to tackle crime, anti-social behaviour and the fear of crime, have produced a Community Safety Plan, 2016-2019⁴⁹. This Partnership comprises statutory agencies, including Reading Borough Council, Thames Valley Police, the Probation Service, Royal Berkshire Fire and Rescue Service and NHS Clinical Commissioning Groups. This sets out strategy, targets and aims until 2019. This focuses on dealing with issues at the neighbourhood level, capitalising on the move of all major partners towards more locality-based working.

The Thames Valley Police (TVP) Police and Crime Plan⁵⁰ identifies strategic objectives. Specific actions are set within the context of funding cuts and the need to deliver services with limited resources available. TVP aims to make communities safer, increase public confidence, reduce costs by improving efficiency, improve service delivery and improve outcomes for victims of crime, as well as to aid in the prevention and investigation of crime with ANPR cameras.

Existing provision and capacity issues: Neighbourhood policing is apportioned to meet different levels of need, which is dictated by the population in each local area. The current coverage is in line with operational requirements.

Impact of future growth: The most visible form of Police infrastructure at the local level is the neighbourhood police office, but there are other support and associate functions that will be affected by planning related growth, and that will require expanded or new facilities to offset that impact.

The projected rises in the South Reading and Central Reading populations as a whole will lead to increased demand for Police services. In particular, the TVP guidance on LDFs states that large scale development sites will require new and enhanced police facilities arising from growth. For smaller urban area allocations, the expansion of existing communities through incremental growth will impact on police resources, potentially significantly changing their character and community safety resource requirements.

The TVP Strategic Plan states that "...funding cuts have been imposed from central government, and consequently the need to maximise the productivity of our resources, to improve and focus on service delivery is of paramount importance". TVP have informed the Council that they are constrained in their capital spending and this affects their ability to respond adequately to the requirements of growth at all levels of service provision, in providing for new buildings and adaptations of existing buildings, and other non-property infrastructure such as new vehicles, bicycles and equipment.

⁴⁹ Community Safety Plan http://www.reading.gov.uk/media/2499/Community-Safety-Plan/pdf/Reading_CSP_2016-2019.pdf

⁵⁰ Police and Crime Plan <https://www.thamesvalley-pcc.gov.uk/police-and-crime-plan/>

Priorities for meeting need: In terms of specific infrastructure requirements within the Borough, TVP has identified the following (these are included in the Schedule):

South

- A new police facility to replace the current Reading Police Station - There is a preference to establish a new facility within South Reading. This would replace the current Reading Police Station, relocating the majority of staff and departments to the new facility, aside from the local teams that served the town centre itself.

Central and West

- A local town centre facility to retain TVP's presence in Reading Town Centre, including locating the existing town centre teams here.
- A number of smaller, one to two room touchdown facilities, linked to new growth where appropriate. Typically, these could be provided as part of or within existing or new community facilities.

Borough-wide

- Contributions towards the roll out of new Automatic Number Plate Recognition (ANPR) Cameras within Reading, particularly located around the strategic road network and in locations with increased activity linked to new development and growth.
- Contributions towards infrastructure to increase opportunities for 'digital policing,' thus increasing the visibility, mobility and effectiveness of TVP to police local neighbourhoods.

Indicative costs for such facilities will be provided by TVP. These will feed into further future work.

Fire & Rescue

Strategy: Services are delivered by the Royal Berkshire Fire and Rescue Service (RBFRS) on behalf of Royal Berkshire Fire Authority (RBFA). They have produced a Five Year Integrated Risk Management Plan 2015-2019⁵¹, which includes key projects for the period. RBFRS's primary role is to deliver effective prevention, protection and emergency response services to reduce community risk. The integrated risk management plan outlines how the Service identify and assess risks and provides high level plans to manage those risks.

Existing provision and capacity issues: RBFRS has four fire stations in the Borough, namely Caversham Rd, Wokingham Rd, Whitley Wood and Dee Rd. These provide four emergency fire engines crewed 24/7 by full-time staff. The Whitley Wood station also serves as a training facility. Currently, RBFRS has a response standard of arrival within 10 minutes of a call for 75% of all emergency incidents.

⁵¹ RBFRS Corporate Plan and Integrated Risk Management Plan <http://www.rbfrs.co.uk/wp-content/uploads/2015/12/RBFA-Corporate-Plan-and-IRMP-Final-Version.pdf>

Impact of future growth: The location of the existing fire stations is considered adequate with regard to travel times. However, additional development is viewed as likely to increase incident types, including the two highest risks to the public: road traffic collisions and dwelling fires.

Priorities for meeting need: It is likely that proposed developments and growth will have an impact on the demand for the Fire Service and may necessitate the provision of additional resources, but the RBFRS has not identified additional capital infrastructure requirements at this time.

Designing safety into the built environment, including fire prevention, reduces risk and therefore demand on the Fire and Rescue Service. Some of these measures are including in the building regulations but RBFRS also recommends the inclusion of domestic and commercial sprinklers. This would limit the need to alter existing fire service provision in new housing areas, thus reducing associated costs for proposed provision. This would also reduce casualties, reduce damage and protect the environment. RBFRS welcome the opportunity to work with the Council and developers to fully discuss the benefits of such systems.

A recent review of the fire station locations across the brigade area concluded that the level of service can be improved by relocating the whole-time fire station from Dee Road to a new fire station facility, preferably in Theale. This would improve the level of operational cover toward the west of Reading. Until such time as any new fire station is built in Theale, the Dee Road crews and appliance will remain in their current location for the time being.

In addition, information from local authorities about future growth patterns to 2036, along with existing demand pressure are feeding into this long term planning, and consideration of where the most effective locations for fire stations are within the area, which would be optimum in terms of required response times. This will be kept under review throughout the plan period.

Housing - Extra Care

Strategy: The RBC Market Position Statement (2016-2019)⁵² sets out the Council's vision for strategic commissioning of care and support services, including extra care housing (ECH). This reflects the national commitment to increasing the supply of housing including affordable housing, improving conditions of existing housing and preventing homelessness. Since 2008, the Council have been able to reduce the numbers of people going into care homes before they need to by ensuring more older people receive a high level of care in their own homes. It is increasingly clear that a neighbourhood level focus is important.

The Local Plan identifies that in order to meet demand, there will be a requirement for the delivery of units of extra care housing. The Council will regularly monitor the need for and delivery of all affordable housing, including ECH.

⁵² Market Position Statement http://www.reading.gov.uk/media/3105/Market-Position-Statement/pdf/MPS_2016-19_FINAL.pdf

There are specific detailed policies in the Local Plan on affordable housing and accommodation for vulnerable people. The affordable housing policy requires provision on all sites with specific priority for family sized housing, specialist accommodation for vulnerable people and extra care housing.

Existing provision and capacity issues: There is a clear identified need for the provision of accommodation for vulnerable people. Currently, there are five ECH schemes in Central, West and South Reading. These are a mix of commissioned and Council-owned schemes. Beechwood Grove in Caversham is due to open in 2018. ECH is a modern alternative to these for many older people. It offers residents the security and privacy of owning or renting their own home with 24 hour care and support on site. It normally includes a mix of more independent and able residents together with those who are less independent. ECH forms a priority as part of the Borough housing programme.

Impact of future growth: Population increases will impact on the demand for services and the ongoing need to examine alternative approaches to older and vulnerable care provision. The demand for extra care housing will continue to rise. Facilities will need to adapt in order to cater for more residents with medium to high needs, support clients with dementia and provide neighbourhood activities to meet the needs of the wider elderly community.

Priorities for meeting need: RBC's Housing Department are prioritising the expansion of the number of ECH schemes and it is proposed that these should be spread throughout the Borough. The availability of sites and the potential benefits of 'clustering' older persons will influence the review of the way in which schemes are spread.

There are a number of potential ECH schemes being considered at present to meet the requirement. These are at different stages and include the following:

- Green Park Village South Reading - 80 units to be funded through S106 - Whilst members have supported the development of this scheme within the wider establishment of a new community at Green Park, it is anticipated that the scheme will serve a much wider catchment than South Reading - attracting residents from across the Borough.
- Beechwood Grove, Caversham—expected to open in 2018
- Arthur Clark Home, Dovedale Close—development of former care home for 43 ECH apartments

Work is ongoing to identify suitable new sites on available land, including looking at RBC land holdings.

The development of a new scheme, from site selection to opening, is estimated to take around 24 months. New, purpose-built ECH will be preferred over remodelling existing residential care and sheltered housing unless there are very strong reasons to consider the latter.

The Council will commission ECH schemes with partners who can assure high quality scheme design and delivery.

Most of these schemes have securing funding through S106, HCA, NGP, but may require some element of LA subsidy. The Council will continue to pursue bringing these schemes forward and other opportunities which present themselves.

The commitment to provide ECH is identified within the Schedule. There are particular aspirations for additional ECH in East Reading, North Reading and the South west. This will be reviewed over the Plan period and will be fed into the Schedule as required.

Economic Development

Strategy: The current Reading Economic Development Plan (2016-2020)⁵³ was written by Reading UK CIC in collaboration with Reading Borough Council. It focuses on three goals: supporting opportunities for employment of local people, growing opportunities to strengthen the local economy and raising Reading's profile as a place of growing opportunity. In 2015, Reading Borough Council commissioned a report on economic development services from Renaisi. This report concluded Reading UK CIC and the Council should focus on:

- Reducing long-term unemployment and providing a better resource of local labour through raising skill levels; and
- Maximising investment through promotion, business engagement and in micro start-ups and workplace provision.

The Local Plan and Local Transport Plan continue to play a key role in the regeneration and growth of the town. Reading continues to prosper economically because of its excellent transport connections. The Local Plan aims to identify and guide the use of available sites by establishing a balance between land for housing (including affordable), industry, commerce and mixed-use town centre locations. Our vision is for a vibrant Reading, one that is attractive to global business, but ultimately grows opportunities for local people and promotes the sharing of benefits across all communities.

Existing provision and capacity issues: Reading has strong economic performance with higher than national average GVA (Gross Value Added)⁵⁴. Cities Outlook 2016⁵⁵ ranks Reading 2nd in the UK for economic contribution per worker, 2nd for the number of businesses per capita and top 5 for average wages and skills. It lies at the heart of the Thames Valley; a sub-region home to some of the largest information technology companies, as well as companies undertaking research in life science, biotechnology and environmental technology. Reading itself is home to companies such as Oracle, Prudential,

⁵³ Growing Opportunity, Reading's Economic Development Plan (2016-2020)
<http://livingreading.co.uk/doing-business/economic-development-strategy>

⁵⁴ GVA is a measure of the value of the goods and services produced in the economy. It is primarily used to monitor the performance of the national economy and is now the measure preferred by the Office for National Statistics (ONS) to measure the overall economic well-being of an area.

⁵⁵ Reading UK CIC, Reading retains status as leading UK city economy
<http://livingreading.co.uk/reading-retains-status-as-leading-uk-economy>

Microsoft and Cisco. In order to continue this success, Reading must ensure the proper infrastructure and housing is in place to enable further growth.

Detailed work has been undertaken on reviewing employment land in the Borough. The Housing and Economic Land Availability Assessment (2016) assessed the need for any additional employment floorspace and identified which sites should be retained in employment use and which could be developed for alternative uses. Generally, the results of the quantitative need assessment predicted the need to protect current employment uses and to ensure a mix of size and type of units to 2036. These quantitative, as well as qualitative, issues have been addressed through policies in the Local Plan.

Existing challenges include:

- 17% of residents have no qualifications;
- 8,000 homeless, lower than average life expectancy, 10% of households in fuel poverty; 18.8% of children living in poverty;
- Road congestion;
- Lack of affordable housing and rising house prices and rents;
- Need to strengthen the offer and perception of Reading's cultural and arts identity.

Impact of future growth: Growth will continue to place demands on the existing infrastructure and one of the key issues is the need to protect a range of employment sites, which are suitable for both major employers, and small and medium sized enterprises. In particular, retaining sites for small business is important, since they will be at the heart of economic growth and service the needs of major employers in the Borough. As such, small businesses should be encouraged to remain within the Borough rather than be forced to locate elsewhere because of a lack of suitable and available sites. It is equally important to retain employment sites which meet the needs of business that provide job opportunities for local people with low or no qualifications, or those from disadvantaged communities. The loss of suitable sites may further restrict the opportunity for such groups to participate in the local economy. This especially supports meeting the objective of smart growth; an environment where local people can access employment, at all levels, and where new businesses can start up and flourish. Another key issue is the need to strengthen regional connectivity and public transport links through major transport and infrastructure proposals in order to increase our capacity for economic growth.

Priorities for meeting need: It is clear that to support economic the following needs to be addressed:

- Transport congestion and infrastructure;
- Housing provision and affordability; and
- Skills and education.

In terms of specific employment infrastructure, one identified priority for Reading is the need to ensure that there is a sufficient range of employment space, and in particular the provision of managed 'incubator' space for small business start-up - in all sectors, but

especially to facilitate micro business start up's in the service, industrial and manufacturing sectors. Protection of core employment areas within the Local Plan will ensure that a range of different employment land is available and maintained to support a range of employment types. Major transport projects necessary to facilitate growth are described in a dedicated section within this IDP.

Leisure

Strategy: The Council envisions a leisure provision that is accessible, affordable for residents and sustainable in revenue terms to support investment into the future. Provision will include a wide variety of facilities to cater for local communities with a significant degree of partnership with public (university) and private partners. The most significant project remaining is the re-provision of Arthur Hill Pool at Palmer Park, along with additional facilities. This would be provided through a partnership arrangement. In the short term, a temporary pool will be located at Rivermead Leisure Centre. The Retail and Leisure Study⁵⁶ identified the need for entertainment uses such as bowling, ice skating and additional cinema provision, as well as the need for replacement swimming facilities.

Existing provision and capacity issues: Reading Sport and Leisure (RSL) consists of three centres – Central Swimming Pool, Meadway Sports Centre and Palmer Park Sports Centre. In addition to the public provision there are also a number of facilities provided through the private sector.

Impact of future growth: Major developments, especially in the south and centre of the Borough are likely to place further demand on such facilities. In terms of public provision, it is inevitable that activities for which there is highest demand will be more likely to be provided as they can be justified in terms of meeting the needs of local people and be financially viable.

Priorities for meeting need: In general, there is a need to extend and develop existing underutilised facilities to meet the needs of current and future users. The re-provision of Arthur Hill swimming pool at Palmer Park and extension and refurbishment of the facilities is a key priority for the Council. Overall, there is a need to update and improve Reading's indoor sport provision. This may include re-provision of the Central Swimming Pool within the town centre and/or refurbishment or extension of Meadway facilities. These projects are included in the Schedule.

In terms of public provision, there will continue to be a review of trends in the leisure fitness market by the RSP management and consideration of the need to provide access to a wide range of sporting activities locally.

Major leisure development should take place within the centre of Reading.

⁵⁶ Western Berkshire Retail and Commercial Leisure Assessment
http://www.reading.gov.uk/media/7160/Western-Berkshire-Retail-and-Leisure-Study-2017/pdf/Western_Berkshire_Retail_and_Leisure_Study_2017.pdf

Culture & Tourism

Strategy: Reading's Culture and Heritage Strategy 2015-2030⁵⁷ states, "By 2030, Reading will be recognised as a centre of creativity with a reputation for cultural and heritage excellence at a regional, national and international level with increased engagement across the town."

The Culture and Heritage Strategy seeks to strengthen and diversify local partnerships in order to secure investment for Reading as leading cultural destination. The delivery of the strategy will:

- Offer diverse opportunities and activities representative of Reading's demography;
- Capitalise on opportunities to expand inward investment within the cultural sectors;
- Ensure culture supports healthy communities and cultural wellbeing; and
- Support work that is inspiring and new, through a commitment to achieving excellence through exemplary projects.

At this time, there are a number of ongoing projects aimed at realising this vision including an extension and refurbishment of South Street Arts Centre and the restoration of the Abbey Ruins and Abbey Gate. Currently, the regeneration of the Civic Area is under review and there is ongoing work to look at the future potential for a replacement Hexagon.

A public library service is a statutory duty under the Public Libraries and Museums Act 1964, which identifies that this service is to be provided for everyone who lives, works or studies in an area. There is a space standard of 30 square metres per 1,000 population⁵⁸, which is used by local authorities as a benchmark for provision. Local authorities are also required by The Local Government Act 1972 to make proper arrangements for any documents that belong to or are in the custody of the council.

Existing provision and capacity issues: The Hexagon theatre is the main arts performance venue in the Borough serving Reading and its wider catchment. However, other Council facilities include the Concert Hall and South Street Arts Centre.

In 2007, there was a review of performance arts provision in the Borough, which focussed on the Hexagon theatre and whether it required replacement or refurbishment. There was recognition of the need to provide an updated theatre as a result of this review. The key issue is that the Hexagon is outdated and at capacity.

There are seven libraries within Reading Borough and the central library is a reference library of regional significance, having previously been the reference library for Berkshire. Studies by Community Sense & CRE have highlighted that library services are full to capacity and that some libraries, particularly the central library, have experienced a

⁵⁷ Reading's Culture and Heritage Strategy 2016 <http://www.reading.gov.uk/media/4807/Culture--Heritage-Strategy-2015-2030/pdf/CultureandHeritageStrategy2015f.pdf>

⁵⁸ Museums and Library Archives (MLA) – 'A Standard Charge Approach' 2008

significant increase in numbers of users over the last few years. In Reading, archival service is provided through a joint arrangement with the other unitary authorities in Berkshire.

Impact of future growth: Additional growth in the Borough will place increasing demands on the existing cultural infrastructure including the Theatre, which of course serves a wider catchment than Reading itself. The level of demand for library services is also projected to increase.

Priorities for meeting need: Options considered are as follows:

- A replacement for the Hexagon with good acoustics, and upgraded facilities if sufficient capacity to attract major rock and pop acts, etc.
- Aspirations for significant investment in and remodelling of the Town Hall & Museum to intensify uses and ensure financial sustainability;
- The potential for the former Prison site to contribute to the cultural offer of the town (disposal and future use is being negotiated with the Ministry of Justice);
- More space to support further library services in the future through expansion of existing facilities or alternative sites as part of a wider community hub;
- Ensuring that the archive service provided through the Berkshire Record Office has the capacity to meet growing demand;
- Strengthening connections between cultural development and other high quality spaces such as Forbury Gardens and Caversham Court.

There will be ongoing dialogue to determine cultural infrastructure needs throughout the Plan period.

5.0 INFRASTRUCTURE DELIVERY PLAN SCHEDULE

- 5.1 The Schedule below⁵⁹ sets out a number of key infrastructure projects either planning or in progress across the Borough. These projects are identified as either Borough wide or related to specific locations of south, west, central/east and north. Infrastructure schemes identified are of a strategic nature, rather than site specific. Any site specific requirements will become evident through more detailed proposals for sites and the associated needs for infrastructure. These will be negotiated through the planning process and in line with requirements of Local Plan policy CC9, the Council's S106 Supplementary Planning Guidance (and future revisions) and in accordance with relevant CIL Regulations.
- 5.2 In preparing the following schedule, the Council has contacted relevant internal and external providers of infrastructure. It includes information (where known) about the infrastructure needs and requirements, anticipated costs, funding, phasing and delivery agency. In terms of costs and funding this has been included for programmed schemes along with reasoned assumptions about costs and potential sources of funding for other longer term infrastructure requirements. This will be reviewed through the Plan period.
- 5.3 The schedule includes the best information available at this time assembled following reasonable steps by the Council to engage with relevant organisations⁶⁰, but when planning long term to 2036 there will be areas where there is a lack of current knowledge. This assessment therefore focuses on the need for Local Planning Authorities to look at those requirements that are key to delivery in the first few years and indeed it must be recognised that for many organisations, their planning processes are relatively short i.e. 3-5 years. It is for future monitoring and reviews to provide further detail for the timescale beyond this, as and when that detail becomes available. Further work will be undertaken with infrastructure providers to determine priorities and needs through the Plan period to 2036, including firming up on budgetary information.

⁵⁹ As included in the Local Plan

⁶⁰ Policy guidance on infrastructure delivery recognises that there may be some difficulties in assembling information, but that the Council should demonstrate that all reasonable steps have been taken to engage. There is also recognition in NPPF that there will be gaps in information and that it will not always be available when it is required.

Figure 10.2: Summary Infrastructure Delivery Schedule

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LOCATION	SCHEME	NEED FOR SCHEME	SCHEME REQUIREMENTS	CAPITAL COST AND FUNDING	TIMESCALES (where known)	LEAD DELIVERY AGENCY
PHYSICAL						
Borough-wide	Cycle Hire	Encouraging active travel and promoting an alternative to car use	Operation, maintenance and expansion of publicly available bike hire scheme	Unknown—LTP block grant, S106	Ongoing	Reading Borough Council (RBC)
	Cycling Strategy	Encouraging active travel and promoting an alternative to car use	Local measures to encourage cycling routes, lighting, cycle parking, etc.; new areas of development to be connected to existing network	Unknown—LTP block grant, S106	Ongoing	RBC
	Major Repair and Improvement Projects	Improving and maintaining existing infrastructure	Continuous maintenance and improvement of existing facilities and infrastructure including retaining walls, culverts, subways, footbridges and flood defence schemes	Unknown—LTP block grant	Ongoing	RBC

Borough-wide	Mass Rapid Transit (MRT) Schemes	Providing alternatives to car use and encourage sustainable transport use; reduce congestion; improve accessibility and air quality	Dedicated express, limited stop bus-based rapid transit connected to Park and Ride locations; focused in key areas of growth and key routes in urban areas	Approx. £100,000,000—LTP block grant, LGF	2018-2036	RBC
	National Cycle Network Route 422	Increase connectivity and the National Cycle Network, encourage uptake of cycling	East-west national cycle route with shared use facilities & cycle routes; improvements of existing infrastructure & links; new facilities	Approx. £1,100,000—Growth Deal, S106	2016-2018	RBC
	Network Management, Junction Improvements and Road Safety	Increase attractiveness of public transport, reduce congestion, promote sustainable travel and improve road safety	Improvements to existing infrastructure and enhanced provision	Unknown—LTP block grant, S106	Ongoing	RBC
	Park & Ride Sites	Reduce the mode share of trips by car to central Reading, thereby reducing congestion and improving accessibility and air quality	A series of new Park and Ride sites and local transport interchanges will be provided on key routes to Reading	Approx. £19,000,000 - S106, LTP, LGF	2018-2036	RBC, adjoining authorities
	Public Transport and Enhancements	Increase attractiveness of public transport, reduce congestion, promote sustainable travel, improve accessibility and air quality	Improvements to existing public transport infrastructure and provision enhancement including bus stops, bus lanes, bus priority at junctions	Unknown—LTP block grant, S106	Ongoing	RBC

Borough-wide	Third Thames Crossing	Reduce congestion	Provide alternative north-south route across the River Thames via a new road bridge	Approx. £100,000,000—LGF	2020-2036	Wokingham, RBC, Oxfordshire, South Oxfordshire
	Walking Strategy	Encouraging active travel and promoting an alternative to car use	Local measures to encourage walking; new areas of development to be connected to existing pedestrian networks; improve walking route, pedestrian crossings, lighting and accessibility	Unknown—LTP block grant, S106	Ongoing	RBC
	Decentralised Renewable Energy Site	To reduce the carbon footprint of the Borough, and reduce and stabilise energy costs, through the development of low carbon, localised energy infrastructure, to reduce the dependency on fossil fuels and assist in meeting local and national targets for reducing CO ₂ emissions, in line with global action to avert severe climate change.	Details not known at this time; interventions will likely focus on the town centre	CIL, Section 106	Ongoing	RBC
	Water and Wastewater	To ensure sufficient capacity to accommodate future growth	There are a number of areas within the Borough including some parts of west and south Reading where Thames Water has identified potential capacity issues with water and wastewater, in particular with the overall scale of development in the catchment draining to Blakes Lock SPS.	Costs to be determined by Thames Water with developer	To be confirmed as and when a development comes forward and where issues have been highlighted by Thames Water. Thames Water has indicated that	Thames Water and relevant developer

Borough-wide			For these areas, detailed investigation and modelling will be required to determine if a local infrastructure upgrade is required.		upgrades to assets can take up to 3 years lead in time.	
	Berkshire Superfast Broadband	To ensure sufficient capacity to accommodate future growth; support economic growth by increasing digital connectivity	Implementation of broadband infrastructure to 24mb wherever possible; ensure a minimum superfast infrastructure for 98% of properties by 2019; private sector is developing fibre based gigabit solutions	£192,000 RBC capital funding; private funding from a variety of providers	Ongoing	RBC, private sector providers
	Electricity	To ensure sufficient capacity to accommodate future growth	In order to accommodate development as proposed in the central area major reinforcement works to the 13200 and 33000 volt infrastructure would need to be carried out. Large amount of cables and plant which, may require diverting and relocating as a result of development designs and layouts.	Costs to be determined by SSE chargeable to developments on an apportionment basis and major extension to the 11000 volt and low voltage networks, which is fully rechargeable to the developments	Ongoing	SSE
	Air Quality Monitoring	To assess the levels of pollutants at hotspot locations where further development is likely to worsen air quality	NOx analyser, enclosure and associated infrastructure	£70,000 - Section 106, DEFRA Air Quality Grant	Ongoing	RBC
	Green Park Station Multi-Modal interchange	Reducing congestion and improving sustainable travel options to major employment sites and future housing development	A new train station and multi-modal interchange at Green Park on the Reading-Basingstoke Line with enhanced facilities	Approx. £16,000,000	2018-2019	RBC, Network Rail, Great Western Railway

South	South Reading MRT	Providing alternative modes to car use and encourage sustainable transport use; reduce congestion; improve accessibility and air quality	Dedicated express, limited stop bus-based rapid transit connected to Mere oak Park and Ride, areas of growth and key routes in the urban area	Approx. £55,000,000—LGF, S106	2016-2020 (phases 1-4); further phases subject to funding	RBC
Central/ East	Cow Lane Improvements	Allow freight, public transport and sustainable modes to use this strategic route to central Reading and remove a major bottleneck	Remove major bottleneck caused by restricted height and width at Cow Lane	Unknown	2018-2020	Network Rail, RBC
	Low Emission Zone	Improve air quality	Unknown	Unknown—LTP block grant, S106	Unknown	RBC
	Reading West Station Upgrade	Facilitate current and future passenger numbers, improve accessibility and step-free access	Improve standard of passenger waiting facilities and platforms; increase bike parking; provide step-free access with two lifts on either side of the footbridge; improved ticket vending machines and low ticket counter window	Approx. £3,500,000—LGF, S106	Unknown	RBC
	Town Centre Access and Public Realm Enhancements	Reducing the impact of congestion; delivering a higher quality public realm; encouraging healthier lifestyles; improving access to central Reading	Junction improvements; accident remediation scheme; improved way finding	Unknown—LTP block grant, S106, BID	Ongoing	RBC
Central/ East	East Reading MRT	Providing alternative modes to car use and encourage sustainable transport use;	Dedicated express, limited stop bus-based rapid transit connecting Reading town	Approx. £24,000,000—LGF, CIL	2018-2021	RBC, Wokingham

		reduce congestion; improve accessibility and air quality	centre/Reading Station and TVP Park and Ride along key commuting corridor			
	TVP Park and Ride	Reduce congestion and improve accessibility and air quality	New Park and Ride site in the vicinity of Thames Valley Park Business Park	Approx. £3,600,000—LGF, S106	2017-2018	Wokingham, RBC, Oxfordshire, South Oxfordshire
GREEN INFRASTRUCTURE						
Borough-wide	Thames Parks Plan	To increase the capacity of these regionally important parks to accommodate the outdoor/leisure recreation needs of the expanding population and to protect and enhance ecological value.	Physically link the eight Thames Parks creating a chain of quality green space with high amenity, ecological and landscape value.	£5,000,000 (est.) - S106, other funding sources being sought	From 2017 onwards	RBC
	Open Spaces Strategy	Improve the quality of existing public open space and facilities particularly in larger parks to benefit the wider population.	Improvement to strategically important open-spaces.	£2,000,000 Dependent on receipt of grant funding and/ or S106 contributions	Ongoing	RBC
	Green Infrastructure / Access to Open Space	To develop green infrastructure network and links, including along watercourses.	Linking existing green links, and formalising off-road routes between parks, with signage and surfacing.	Unknown	Ongoing	RBC
	Play Requirements	Most of the current stock of play equipment is more than a decade old. At current levels of use, this is declining; an increasing population accelerates the rate of decline, so that equipment needs continually to be refreshed.	When deemed a Health & Safety liability with over-use, it needs to be replaced or removed. Continuous investment is needed simply to sustain the existing provision. Because many of the Council's 55 play areas are used to capacity, increases in the local	£3.2 million dependent on receipt of grant funding or CIL/S106 contributions	2017-2027	RBC

Borough-wide			population require increases in equipment; needs to be upgraded with technological advances to sustain the interest of children of all ages.			
	Biodiversity Plan	To protect, enhance and increase biodiversity in parks, open spaces, allotments, cemeteries, woodland, watercourses, riparian corridors and wetland areas	Reading's Biodiversity Plan identifies a number of actions including: Enhancing and increasing habitats for plants and wildlife; creating links between existing habitats; increasing plant diversity across grassland open spaces; improvement and additional planting of hedgerows; improving diversity of tree species in woodlands; improving and enhancing the Borough's watercourses and riparian corridors.	£375,000	2017 - 2027	RBC
	Allotment Creation & Enhancement	Ongoing development pressure on existing private allotments. Very long waiting lists for allotments, which will be exacerbated by additional growth	To improve allotment provision within the Borough (especially in the North and West)	Dependent on funds becoming available or on a development opportunity making land available	Ongoing requirement	RBC
South	John Rabson Recreation Ground and the Cowsey	Public open space improvements within a deprived area; This is the only park in South Reading which has been identified as being a sufficient size to develop as a Neighbourhood Park with varied facilities and providing a range of experiences. Grass pitches suffer from waterlogging reducing availability and effectiveness.	Extend range of sports facilities and support more intensified use; landscaping and additional facilities as resources become available	£500,000 Further phases dependent on receipt of additional grant funding or S.106 contributions	2017 onwards	RBC

Central/ East	Kenavon Drive and surrounding open space provision	To create and improve links with adjacent open space and the town centre.	Enhance recreational / open space that serves this area; Increased levels of residential accommodation require broader range of facilities capable of sustaining increased levels of use.	£1,000,000	2017 onwards	RBC
	Christchurch Meadows	Increase capacity and quality of facilities to cater for increased growth in population and demand.	Enhance sports facilities including team sports, tennis and update leisure facilities	£500,000	2017 onwards	RBC
SOCIAL AND COMMUNITY						
Borough-wide	Updating and improving Reading's indoor sports provision	Create high quality leisure venues to encourage and support greater levels of physical activity by Reading residents.	Reprovide Arthur Hill Swimming Pool at Palmer Park Stadium, Central Swimming Pool within town centre catchment and refurbish/extend Meadway and refurbish other indoor sports centres to provide activities reflecting modern needs and demands. Ensure facilities support increased activity and health initiatives.	Unknown-- Potential-Sport England, New Opportunities Fund, RBC, Capital funds from sale of land	2017 - 2022	RBC
	Police Facilities	To make communities safer, increase public confidence, reduce costs by improving efficiency, improve service delivery and improve outcomes for victims of crime, as well as to aid in the prevention and investigation of crime with ANPR cameras	Premises - New police station in South Reading, touchdown space in central Reading and potentially other areas. Digital Policing Program including smartphones, tablets, body-worn video, vehicle wifi and other new capabilities, including enhanced and new ANPR cameras at	Unknown, ANPR is £11,000/camera	Ongoing	Thames Valley Police

Borough-wide			strategic locations within the Borough			
	Townsafe and CCTV	To update aging CCTV infrastructure in the town centre and continue expansion of the Townsafe radio program	Updates to CCTV infrastructure in the future; initial investment to provide Townsafe radios to new businesses throughout the borough	Section 106, CIL	Medium to long term	RBC
	Extra Care Housing	Dated existing provision and providing more options for an ageing population to reduce the demands on other care services	Delivery of extra care housing provision, mental health accommodation, learning disability accommodation and dementia friendly provision	Not known at this time	Ongoing	RBC, HA partners
	Primary Education	To provide sufficient primary school places to accommodate Reading's growing population.	Moorlands Primary School expansion from 1FE to 2FE by Sept. 2019; additional primary places needed in the north and centre in shorter term, and in the south in longer term	Education Funding Authority, CIL, Section 106	Ongoing	RBC
	Secondary Education	To provide sufficient secondary school places to accommodate Reading's growing population.	Need for additional 9 forms of entry to 2026, comprising: <ul style="list-style-type: none"> • One new 6FE secondary school, preferably close to town centre - site identification process underway; • Expansion of existing schools to provide 3 forms of entry. 	Education Funding Authority, CIL, Section 106	Required by 2021	RBC
	Healthcare	Additional capacity at existing surgeries and new surgeries associated with major development (particularly in the north, centre and south); Additional A&E and Maternity capacity is expected to be needed at the Royal Berkshire	Identifying and securing sites for new surgeries on major residential developments; expanding existing surgeries in line with CCG estate and staffing strategies; expansion of A&E and Maternity facilities	CIL, Section 106	Ongoing	Clinical Commissioning Groups, NHS

		Hospital				
	Postal Services	Additional capacity for universal postal services.	For every 400 new dwellings, one additional postal worker is required, and for developments approaching 1,000 new dwellings in one area, an increased footprint or new delivery office may be required.	Royal Mail	Ongoing	Royal Mail, RBC to keep RM updated of scale and timing of development

6.0 REVIEW AND MONITORING

- 6.1 It is essential that the infrastructure delivery schedule is kept up to date and regularly monitored to ensure that future growth is achievable and supported by the necessary infrastructure. The IDP will be reviewed regularly via the Annual Monitoring Report or an alternative monitoring process.
- 6.2 One area which will need to be kept under review is development located in neighbouring authorities on the boundary of the Borough. This will affect existing infrastructure capacity within the Borough and current Reading Borough residents who access services within adjacent authorities.
- 6.3 There will be ongoing liaison with the Thames Valley Berkshire Local Enterprise Partnership to ensure that there is a coordinated approach to infrastructure provision over the Plan period.

Thames Water Projections

Kennet Valley, maintains a surplus over the planning period gradually declining as demand grows and the planning uncertainties increase.

Table: The supply-demand balance in each of the water resource zones

Water resource zone	2011	2015	2020	2025	2030	2035	2040
London	18.8	-59.4	-132.7	-213.1	-291.7	-361.1	-415.9
Swindon and Oxfordshire	37.34	27.08	-0.14	-12.05	-21.30	-26.70	-32.66
Slough, Wycombe and Aylesbury	21.47	11.57	7.93	4.89	0.77	-2.60	-6.09
Guildford	6.85	0.85	0.06	-1.14	-2.14	-2.85	-3.80
Henley	5.32	5.14	4.76	4.31	3.80	3.26	2.67
Kennet Valley	41.25	26.05	21.68	16.38	11.41	7.84	5.49

Note the data are in Ml/d with deficits shown in bold red.

Source: Thames Water Resources Management Plan 2015-2040 (February 2015)