

Local Plan for the Bradford District

Local Infrastructure Plan (LIP)

June 2015 Update

Evidence Base



City of Bradford Metropolitan
District Council

Local Infrastructure Plan

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Executive Summary

The Local Infrastructure Plan is part of the evidence base for the Bradford District Local Plan and will play a key role in delivering the vision set out in the District's Sustainable Community Strategy and the Local Plan Core Strategy. The purpose of Local Infrastructure Plan is to provide an infrastructure capacity assessment for the District. This has included working in partnership with physical, social and green infrastructure providers to establish what infrastructure provision there is in the district, and identifying any gaps or capacity issues within the existing provision. The Local Infrastructure Plan also provides an initial assessment of what infrastructure will be required to support development within the District over the Local Plan period and how it could be implemented. It further aims to provide a clear steer on who is responsible for implementing policies and proposals, by when and the resources that will be required.

The first part of the Local Infrastructure Plan sets out the scale of the challenge in terms of population growth and demographic change as well as detailing the level and spatial distribution of growth proposed in the Local Plan Core Strategy. The information from chapters 6 and 7 of the Local Infrastructure Plan would help understand the strategic scale of infrastructure development, its broad spatial distribution, associated cost and anticipated timeframe for the delivery of future physical, social and green infrastructure up to 2030.

Future need has been broadly based on the analysis of infrastructure provider's forward plans and strategies against proposals in the Local Plan. A summary of future programmes has identified all the infrastructure requirements that are currently accounted for in the range of existing plans and investment strategies of the respective responsible agencies. Further work is however required following continued discussions with providers both to quantify the scale of gaps and determine future associated costs of delivery. The following information will be used to determine future infrastructure needs over the plan period:

- Population growth and demographic change;
- Levels and spatial distribution of proposed housing and economic growth;
- Legislation providers are required to comply with in order to meet demand;
- Use of standards, where appropriate, to plan for demand; and
- Estimated costs for provision of infrastructure where shortfalls have been identified.

At this stage it has been difficult to establish medium and longer term plans due to uncertainty over funding and service provision in public and private sectors. Further discussions with providers are needed to identify medium and long term infrastructure needs and estimate the cost of delivery. This information will be used to understand future funding requirements.

The Local Infrastructure Plan also incorporates a spatial assessment that summarises the distribution of future infrastructure demand within the district. The assessment highlights issues relating to current infrastructure gaps and future delivery in locations across Bradford and the implications this has for the Local Plan Core Strategy. The summary also identifies issues relating to phasing / timing and co-ordination of infrastructure provision alongside proposed housing and economic growth.

The cuts identified by the latest Comprehensive Spending Review will certainly have an impact upon various infrastructure and service provisions across Bradford. These impacts and how they will affect certain provisions within the district are not yet fully known. In light of these financial constraints, the level of infrastructure provisions may alter, therefore emphasising the importance of the Infrastructure Planning, in identifying potential efficiencies and ensuring growth is directed in appropriate areas and supported by strong evidences and sound investment plans.

A detailed funding plan and viability appraisal will be carried out in conjunction with the preparation of the final Local Plan Core Strategy. Further work is required to understand how gaps in funding can be resolved and the mechanisms by which the Council can secure public and private financing. This work will involve appraising existing funding streams and evaluating the use of alternative mechanisms such as the Community Infrastructure Levy (CIL).

The Local Infrastructure Plan is based on information currently available and must be able to respond to changing needs and circumstances over the plan period. Consequently it is a 'live' document and will be updated taking account of all the changes as they come forward. |

1 Introduction

1.1 An Overview of the Local Infrastructure Plan

Bradford Council is currently producing a new development plan, called a Local Plan, to guide future growth and development in the district up to the year 2030. The projected population growth and the envisaged delivery of at least 42,100 new homes across the district during this period are central themes within this document.

The Local Plan will comprise of a series of documents of which the Core Strategy is the key, as it sets out the long-term spatial vision for the district and the strategic policies to deliver that vision. To fulfil this role and to be found sound, the Core Strategy is required to identify the infrastructure requirements for its area, who will provide it, as well as, where and when. The preparation of a Local Infrastructure Plan (LIP) is therefore essential for local authorities to ensure that services can match demand and plans are effective in creating sustainable communities. The Local Plan will in turn play an important role in delivering the vision set out in the Community Strategy for Bradford District 2011 – 2014.

The LIP is a central evidence base document which should be used to help underpin strategic decision making on future targets for local growth and change. It takes a ‘bottom-up’ approach to assessing existing, planned and future infrastructure provision across a given area. During the evolution of the plan making process, the LIP has become a document of fundamental importance. This reflects that the appraisal of the quality and quantity of existing infrastructure, and the need for new infrastructure is an essential dimension in seeking to deliver sustainable development.

An effective Local Plan demands the integration of infrastructure and development within plan-making. Places are a mix of activities and systems which require the provision of appropriate infrastructure. In other words, to make places work, there must be a means by which a Plan is capable of being delivered. The Local Plan therefore should be based on sound infrastructure delivery planning.

The purpose of the LIP is to establish the links between plan-making and infrastructure provision across the district. It specifically considers the issues relating to the implementation of the Local Plan and, in particular, the means by which the required levels of infrastructure will be delivered, by whom and to what timescales.

Local Authorities and other statutory organisations are faced with the challenges of balancing fiscal prudence, aspirations for growth, objectives to regenerate areas, and adapting to societal change. Infrastructure provision is at the heart of meeting these various challenges and is the ‘glue’ by which Local Authorities can meet the needs of existing businesses and communities, whilst also achieving plans for substantial and sustainable economic restructuring, physical regeneration, and affordable housing growth to meet the needs of a growing population.

1.2 Role of the Local Infrastructure Plan

The preparation of the LIP has an important role to play in ensuring that the wider corporate vision for Bradford becomes reality. The upgrading of existing facilities and the provision of new infrastructure provides a means for promoting inward investment and economic development, improving quality of life for residential communities, and adapting to and mitigating the localised effects of climate change.

To be effective a LIP should look across the full range of infrastructure types in order to provide a comprehensive perspective on challenges and opportunities. This LIP, prepared on behalf of City of Bradford Metropolitan District Council (CBMDC), encompasses the following types of infrastructure:

- transport;
- utilities (electricity, gas, water; telecommunications);
- flood risk and drainage;
- waste and recycling;
- green infrastructure, open space and public space;
- sport, leisure and recreation;
- community and cultural;
- education;
- health; and
- emergency services.

In assessing these infrastructure types the LIP also takes a view on those infrastructure types which pose a significant constraint on plans for growth and change. It also sets out the likely infrastructure investment priorities for each of the four designated parts of the district; and identifies cross-boundary infrastructure delivery challenges.

The LIP will support the production of CBMDC's Bradford Local Plan Core Strategy / Local Plan. It sets out the infrastructure improvements needed to ensure the plans for development and change in the district are achievable. It will also inform the Council's approach to the Community Infrastructure Levy and any other funding and investment vehicles set-up in the district.

The LIP provides a framework for coordinating and focusing investment and action across different departments within CBMDC, and different stakeholders with responsibilities and interests in infrastructure.

The LIP should be an active document, and only portrays a certain period in time. In line with best practice the LIP is intended to be remain as a 'live draft' and will be reviewed and updated regularly alongside the Annual Monitoring Report monitoring. The PAS guidance notes that Local Infrastructure Plans should be monitored on at least an annual basis¹.

The aim and purpose of the LIP is to:

¹ Planning Advisory Service, A steps approach to infrastructure planning and delivery, For local strategic partnerships, and local authorities (June 2009)

- Review the range of existing physical, social and green infrastructure provision across the district;
- Identify infrastructure requirements to support future development in the district over the Plan period to 2030;
- Engage infrastructure providers in the Local Infrastructure Planning process and inform their future plans and programmes to help delivery the Local Plan spatial strategy; and
- Establish how the infrastructure is to be funded and who will be responsible for infrastructure delivery.

1.3 Local Context

Bradford is the fourth largest Local Authority District in England by population², and contains England's sixth largest city³. Bradford District has a rapidly growing population as a result of the inter-related factors of a young demographic age profile, high birth rate, and high levels of net inward migration. Planning positively and securing investment in infrastructure to achieve housing development to support Bradford District's population growth is therefore a key priority.

There are significant problems of deprivation in some parts of the district, with specific areas and certain sections of the demographic profile not fulfilling their potential. Infrastructure improvements have an important role to play in overcoming structural weaknesses, breaking down socio-economic barriers and supporting regeneration.

Whilst the district has genuine economic strengths, it is recognised that the overall economy underperforms compared to other major cities (both locally and nationally). Infrastructure improvements are needed to attract and retain business investment and to help bring forward development of the right quality, in the right locations, at the right time. Prioritisation of infrastructure provision will be required, taking account of the particular needs of unique land use patterns, and future site-specific land use proposals. For example, it will be important to consider options for Local Green Belt release and growth areas around Canal Road corridor, Bradford City Centre, an urban extension at Holme Wood and Queensbury, Menston, and Silsden and Steeton with Eastburn.

As part of the Leeds City Region, Bradford District has strong inter-dependencies with neighbouring local authority areas, particularly Leeds. With the 'Duty to Co-operate' placing a greater onus on cross-boundary working, the LIP provides an opportunity to reflect on the type and scale of infrastructure which affects cross-boundary issues (for example: joint housing market areas, travel to work areas, and public transport corridors). This makes it possible to understand what decisions, if any, can be made to develop complementary infrastructure investment decisions which mutually benefit all parties and deliver economic prosperity and sustainable development.

The Local Infrastructure Plan is supported by an 'Infrastructure Baseline' report which identifies the current baseline of provision, any existing issues, standards

² Census 2011

³ <http://www.ukcities.co.uk/populations/>

and shortfalls along with what changes and schemes are currently planned. At this stage of the infrastructure planning process, the areas of infrastructure that are critical for the delivery of the growth and visions of the Local Plan Core Strategy are focused upon to ensure that there are no significant barriers.

As well as providing a robust evidence base, this plan highlights the range of opportunities which can be achieved by the Council working in partnership with other physical, green, social and community infrastructure providers within the district. Ideas and concepts have been developed in conjunction with Council's other departments and services, local area partners, statutory infrastructure delivery bodies, city regional and regional policy makers, government agencies, the Regional Development Agency and the Homes and Communities Agency.

The findings of the Local Infrastructure Plan will thus aid all 'partner' service providers to identify and prioritise infrastructure demand across the district, linked to the Local Plan spatial plan for change and growth. It will create scope to explore greater efficiency and more beneficial outcomes in the planning and delivery of their individual service strategies. The framework to be produced will give a clear steer on who is responsible for implementing policies and proposals, by when and the resources that will be required. This approach will give greater confidence in the deliverability of the Local Plan for Bradford District.

The Local Infrastructure Plan will also provide the evidence for the creation of a charging schedule which will sit within the emerging Community Infrastructure Levy (CIL) for the district and set tariff levels to obtain financial contributions from planning permissions across Bradford to pay towards infrastructure provision. The CIL will replace the current system of Section 106 Agreements to collect planning obligations for infrastructure.

The findings from the study demonstrate that the population characteristics and trends across Bradford District vary geographically and therefore place more concentrated demands upon certain infrastructure types in specific areas. These trends are likely to continue, and require consideration by infrastructure providers when planning for infrastructure in the future. A collaborative approach can not only maximise resources, but also help to develop innovative solutions and encourage smarter investment through aligning objectives. In the face of challenging economic circumstances, considering infrastructure planning and delivery in a joined-up way will position the Council and its partners at the forefront of the place-shaping agenda.

The conclusions of this work can help shape the Council's future strategy for Bradford district and influence policy and investment decisions across a number of corporate agendas. As the Council moves towards a "Total Place" agenda having an integrated approach to policy will make efficient use of resources and allow for the effective joining up of investment opportunities to address infrastructure planning and delivery challenges.

The Local Infrastructure Plan and the Baseline Report are based on information currently available and must be able to respond to changing needs and circumstances over the plan period. Consequently these are 'live' documents and will be updated taking account of all the changes as they come forward.

2 Policy Context for Infrastructure Planning and Delivery

2.1 Overview

The context for robust infrastructure planning principally stems from policy and guidance for spatial planning at the national, regional and local level. However, there is a wider policy context for infrastructure which includes the regulatory requirements of infrastructure providers and joint priorities for investment planning at local, sub-regional and national level, and the overall legislation for maximising resource use, delivering a range of common objectives and delivering sustainable development. An overview of these policy objectives is set out below.

2.2 National

2.2.1 Planning Policy Framework and Planning Practice Guidance

The National Planning Policy Framework (NPPF) places great importance on Local Plans being evidence based. Paragraph 162 sets out the infrastructure evidence base required for Local Plans. This states that 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, water, 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.

The NPPF also states that Local Plans should ‘plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of the NPPF’ (paragraph 157).

With regard to infrastructure, paragraph 018, reference 12-018-20140306 of the 2014 Planning Practice Guidance states:

A Local Plan is an opportunity for the local planning authority to set out a positive vision for the area, but the plan should also be realistic about what can be achieved and when (including in relation to infrastructure). This means paying careful attention to providing an adequate supply of land, identifying what infrastructure is required and how it can be funded and brought on stream at the appropriate time; and ensuring that the requirements of the plan as a whole will not prejudice the viability of development.

Early discussion with infrastructure and service providers is particularly important to help understand their investment plans and critical dependencies. The local planning authority should also involve the Local Enterprise Partnership at an early stage in considering the strategic issues facing their area, including the prospects for investment in infrastructure.

The Local Plan should make clear, for at least the first five years, what infrastructure is required, who is going to fund and provide it, and how it relates to the anticipated rate and phasing of development. This may help in reviewing the plan and in development management decisions. For the later stages of the plan period less detail may be provided as the position regarding the provision of infrastructure is likely to be less certain. If it is known that a development is unlikely to come forward until after the plan period due, for example, to uncertainty over deliverability of key infrastructure, then this should be clearly stated in the draft plan.

Where the deliverability of critical infrastructure is uncertain then the plan should address the consequences of this, including possible contingency arrangements and alternative strategies. The detail concerning planned infrastructure provision can be set out in a supporting document such as an infrastructure delivery programme that can be updated regularly. However the key infrastructure requirements on which delivery of the plan depends should be contained in the Local Plan itself.

The evidence which accompanies an emerging Local Plan should show how the policies in the plan have been tested for their impact on the viability of development, including (where relevant) the impact which the Community Infrastructure Levy is expected to have. Where local planning authorities intend to bring forward a Community Infrastructure Levy regime, there is a strong advantage in doing so in parallel with producing the Local Plan, as this allows questions about infrastructure funding and the viability of policies to be addressed in a comprehensive and coordinated way.

Therefore the full understanding of the likely infrastructure requirements to facilitate growth is a key component in ensuring a deliverable plan.

2.2.2 National Infrastructure Plan 2014

The National Infrastructure Plan 2014⁴ is the latest in the series that was first published in 2010 outlining the vision for the future of UK economic infrastructure. The Plan sets out the challenges facing UK infrastructure and the government's strategy for meeting the infrastructure needs of the UK economy. The plan contains major commitments for investment in important infrastructure projects and explains how the UK is attracting new private sector investment.

The latest National Infrastructure Plan 2014 presents an overview of the government's policies, investments and record on infrastructure delivery since 2010. The document identifies that over 2,500 different projects or schemes have been delivered in this Parliament. It also details the government's approach to ensuring that the Top 40 priority investments remain on track to deliver, as well as providing the latest detail on the timing, funding and status of each of them.

The plan is published alongside the most robust, forward-looking infrastructure pipeline to date, which includes more detail than ever before on the status of UK infrastructure projects.

⁴ National Infrastructure Plan, HM Treasury (2014)

2.3 Sub Regional

2.3.1 Leeds City Region Strategic Economic Plan and Local Growth Fund

The 2012 'City Deals' and the subsequent 'Growth Deals' each introduced new freedoms and flexibilities for Local Enterprise Partnerships (LEPs). The Growth Deals in particular introduced the concept of Strategic Economic Plans (SEPs), multi-year plans setting out the economic growth ambitions for each LEP and how these are to be achieved. The Leeds City Region's Strategic Economic Plan sets out the LEP's ambition to:

- Deliver an additional £5.2bn in economic output.
- Help create an extra 62,000 jobs by 2021.
- Provide £675m in benefits savings to the Exchequer.
- Create an environment where for every £1 invested by the taxpayer, the City Region's – and the nation's – economic output will grow by nearly £10.
- Ensure that the City Region will be a net contributor to the public purse.

The plan was subsequently agreed with central government in July 2014 in a deal which approved:

- £573m from the government's Local Growth Fund to deliver the ambitious economic agenda between 2015 – 2021 – with £73m of new funding confirmed for 2015/16.
- £420m between 2015 – 2035 to deliver the West Yorkshire plus Transport Fund.

The closely related West Yorkshire-Plus Transport Fund is targeted specifically at increasing employment and economic growth across the LEP area. This 10 year programme of investment in transport has been created to help free new and existing businesses from the current restrictions they are experiencing and enable them to create and sustain a substantial number of new jobs. There are a number of Bradford District transport schemes that are included in the West Yorkshire Plus Transport Fund. The most notable is funding to improve Bradford Interchange and Bradford Forster Square Railway stations, which are both in the City Centre. The schemes are referenced in the Transport chapter and the Infrastructure Delivery Scheme in Chapter 14.

2.3.2 Leeds City Region Transport Strategy

This strategy sets out how transport should support the future development and prosperity of the Leeds City Region, in the context of the transition to a lower carbon economy. The strategy identifies the main issues and priority challenges for transport, the wider policy and spatial outcomes that transport needs to support, and a framework for developing interventions to inform a delivery and funding plan.

Bradford's growing population and the 50,000 new houses planned across the district means that there is a need to ensure that the transport infrastructure will allow efficient access to employment and services both within and outside the

district. The Leeds City Region Transport Strategy (Ove Arup and Partners Ltd., November 2009) has set out a range of transport interventions that will help to deliver sustainable improvements in the City Region in terms of ensuring safer transport modes, better connectivity and access to jobs and housings and transition to a lower carbon economy across the region. This document also informed the development of the Local Transport Plan 2011 - 2026.

Transforming the Regional City of Bradford is one of the top spatial priorities of the strategy and it proposes packages of improvements with an aim to significantly increase growth in economic development, jobs and homes through the renaissance of the city centre, and development and regeneration elsewhere.

Improving access to Leeds Bradford International Airport particularly by public transport is another major spatial priority of the transport strategy. The aim is to promote LBIA to play an increasingly complementary role to Manchester in supporting the economic competitiveness of the City Region.

The other two key priorities for Bradford District identified by the LCR Transport Strategy are the improvements of transport infrastructure to support the increased development opportunities in Airedale (Bradford to Skipton) and Shipley-Bradford canal Road Corridor and to restructure and regenerate east Bradford and west Leeds (Leeds-Bradford Corridor) to better support economic growth of both cities and Leeds City Region conurbation core.

Table: Summary of interventions proposed for Bradford in the LCR Transport Strategy

<p>Package of improvements to deliver transformational housing and employment growth in Bradford:</p> <ul style="list-style-type: none"> targeted highway improvements in the city centre and on outer ring road linked to the delivery of regeneration schemes improve bus/rail integration enhanced local rail services to Leeds and Halifax enhanced strategic rail connectivity to Manchester construct new railway stations – Apperley Bridge, Kirkstall Forge and Low Moor improve access to the rail network in south Bradford comprehensive bus priority for several corridors, including the A647 active traffic management and targeted highway improvements for the M62 corridor develop a city centre access and movement strategy Improved intercity connections
<p>Package of improvements to enhance connectivity to LBIA:</p> <ul style="list-style-type: none"> deliver comprehensive bus priority to improve journey time, reliability of existing bus services from Leeds, Bradford and Harrogate targeted highway improvements including the A65 corridor from Leeds and A658 corridor from Bradford evaluate the opportunities for bus links to connect with adjacent railway stations investigate the scope for transforming surface access links, including tram-train connections

<p>Package of improvements to support regeneration, housing growth and economic development in Airedale & Shipley-Bradford corridor;</p> <ul style="list-style-type: none"> - a "Regeneration Priority Area": • highway and public transport improvements in Shipley and Keighley • highway and public transport improvements to support Urban Eco Settlement on Canal Road corridor • integrated transport improvements in Saltaire/Shipley and Keighley linked to regeneration of the town centre • highway and public transport improvements east of Shipley to facilitate economic growth, housing and regeneration of the town centre • train lengthening and platform improvements • improve access to the rail network, particularly at Shipley • enhance bus/rail interchange • Improve inter-city connectivity
<p>Package of improvements to support housing growth and regeneration in the Leeds – Bradford Corridor:</p> <ul style="list-style-type: none"> • enhance local rail services between Bradford & Leeds • expand the park and ride facilities in the New Pudsey area • comprehensive bus priority for several corridors, including the A647 • targeted highway improvements linked to housing growth • examine the feasibility of new rapid transit corridors, including Leeds to Bradford
<p><i>Source: LCR Transport Strategy (Ove Arup and Partners, 2009)</i></p>

2.4 Local Context for Planning and Delivering Infrastructure

The current development plan for Bradford is the Replacement Unitary Development Plan (RUDP) adopted in 2005. CBMDC has been working towards producing a new Local Plan through a number of development plan documents including a Local Plan Core Strategy and supporting Area Action Plans. In due course, CBMDC will produce a Land Allocations DPD. This suite of planning documents will then supersede the RUDP upon adoption.

2.4.1 Emerging Local Plan Core Strategy

The Local Plan Core Strategy upon adoption will set the strategic direction for the district to 2030 and is currently at Submission Draft stage, with examination beginning in March 2015. When adopted, the plan will replace the strategic policies contained within the RUDP. The plan will include broad policies for guiding and restraining development, broad locations for new housing, employment and infrastructure investment. The Core Strategy will not allocate specific sites for new housing and employment development with this instead delegated to future Local Plan documents, the Land Allocations DPD, the Shipley & Canal Road Corridor AAP (S&CRCAAP) and the BCCAAP itself.

2.4.2 Emerging City Centre Area Action Plan

The Area Action Plan will guide the transformation of city centre regeneration area up to 2030⁵. The regeneration of Bradford City Centre is a priority regeneration area within the Bradford District and includes the main shopping, civic, entertainment and central business district of the city centre. In addition the boundary also includes more areas such as Little Germany, Goitside and the College and University campuses. It is intended that the city centre will be the focus of both employment and housing growth within the district over the duration of the plan's lifespan. It will be the role of the BCCAAP to formally allocate development sites within its boundary.

2.4.3 City Centre Masterplan and Neighbourhood Development Frameworks

In September 2003 Alsop Architects completed a masterplan for Bradford City Centre. Alongside the adopted and emerging planning policy, CBMDC in the mid-2000s commissioned a masterplan and series of neighbourhood development frameworks to establish the aspirations for specific defined character areas within the city centre, referred to as The Bowl, The Channel, The Market, and The Valley. These frameworks build on the earlier masterplan for the city centre, and create a deliverable strategy and a set of projects for each neighbourhood area.

2.4.4 Shipley and Canal Road Corridor Strategic Development Framework

In 2010, the Council commissioned consultants BDP to prepare a Strategic Development Framework (SDF) to provide a robust evidence base for the Shipley and Canal Road Corridor Area Action Plan. The purpose of this commission was to establish the development capacity of the SCRC and to produce a strategic masterplan for the SCRC in support of the AAP process.

The SDF identifies strategic development options based on a long term development scenario and strategic transport and blue/green infrastructure options to support the delivery of planned growth.

2.4.5 New Bolton Woods Masterplan

On the 17th November 2009 the Council's Executive granted approval for the establishment of a Joint Venture Company (JVCo) between the Council and Urbo Regeneration Ltd, as part of the preferred mechanism to pursue proposals to implement the comprehensive regeneration of the Shipley and Canal Road Corridor central area.

Known as Canal Road Urban Village Ltd, the JVCo has produced a master development plan for the central area that has been prepared in parallel with the SDF and will inform the Shipley and Canal Road Corridor AAP. A Masterplan for the comprehensive regeneration of the centre section has been prepared and

⁵ CBMDC Bradford City Centre AAP Further Issues and Options Report (2013): <http://www.bradford.gov.uk/NR/rdonlyres/490FF2CB-9EA5-4332-B1D6-4C983B714B8F/0/CITYCENTREAAP.pdf>

submitted to the Council by Canal Road Urban Village Ltd. On 9 October 2012, the Council Executive agreed to approve the New Bolton Woods Masterplan becoming material consideration that can be taken into account in the determination of any planning applications.

A key aspect of the masterplan is the delivery of a significant number of homes with a mix of supporting uses as part of an Urban Eco Settlement in Bradford.

2.4.6 Airedale Masterplan

The Airedale Partnership was established in February 2003 to provide strategic leadership for the regeneration of Airedale. This grouping of leaders from business, education and the community, in conjunction with Bradford Council and Yorkshire Forward, saw the need for a strategic masterplan to deliver the aspirations of the Bradford 2020 Vision for Airedale.

The aim of the masterplan and strategy is to establish a framework that will deliver a step-change in the local economy that benefits local people and protects and enhances the environment. It will advise future planning frameworks and investment plans for the Bradford District and the wider region.

The Airedale masterplan has a particular role in supporting the city centre initiatives; including transport connectivity and developments along the line of the proposed Bradford Canal that forms a green link between Airedale, Manningham and the City Centre. Integration of the thinking behind the Airedale, Canal Road Corridor and Bradford City Centre masterplans will deliver major benefits to Bradford District, and together they will help to provide the evidence base that will shape the future Local Plan.

2.4.7 West Yorkshire Local Transport Plan (LTP3)

West Yorkshire LTP3 was published in March 2011 and consists of a 15 year strategy (2011-2026), which is being delivered through three year Local LTP Implementation Plans.

The LTP continues to be seen by DfT as a key means of pulling together long term transport aims and the delivery plan for achieving these within a local area and relevant adjoining areas and setting this within the wider corporate agenda.

The West Yorkshire Local Transport Plan is now being revised into a Single Transport Plan by the West Yorkshire Combined Authority to encompass strategic schemes through WY+ Transport Fund. It is proposed that the new single plan will be a concise high level document with maps and graphics setting out the vision and ambition of the Combined Authority and reflect current thinking and priorities of individual Local Authorities.⁶

2.4.8 Rights of Way Improvement Plan (ROWIP)

The Rights of Way Improvement Plan was published in 2007 and sets out the Council's strategic aspirations for managing and enhancing the public rights of way network in the District.

⁶ <http://www.westyorks-ca.gov.uk/stp-survey/>

3 Approach to Producing the Local Infrastructure Plan

3.1 Introduction and Overview

The methodology has been informed by guidance in the Planning Advisory Service (PAS) Infrastructure Planning & Delivery Resource book⁷. The methodology has also been influenced by the approach adopted for the Regional Integrated Infrastructure Scoping Study for the Yorkshire and Humber⁸ and similar studies from across the country. Previous studies, including ‘Shaping Neighbourhoods’ (Barton H. et al., 2003) have been useful in establishing methods and standards.

This section sets out the methodology followed to produce the Local Infrastructure Plan. The aims were to:

- Review the range of existing physical, social and green infrastructure provision across the district;
- Identify infrastructure requirements to support future development in the district over the Plan period to 2030;
- Engage infrastructure providers in the Local Infrastructure Planning process and inform their future plans and programmes to help delivery the Local Plan’s spatial strategy; and
- Establish how the infrastructure is to be funded and who will be responsible for infrastructure delivery.

Figure 3.1: Infrastructure Planning Process (Source: PAS, 2008)

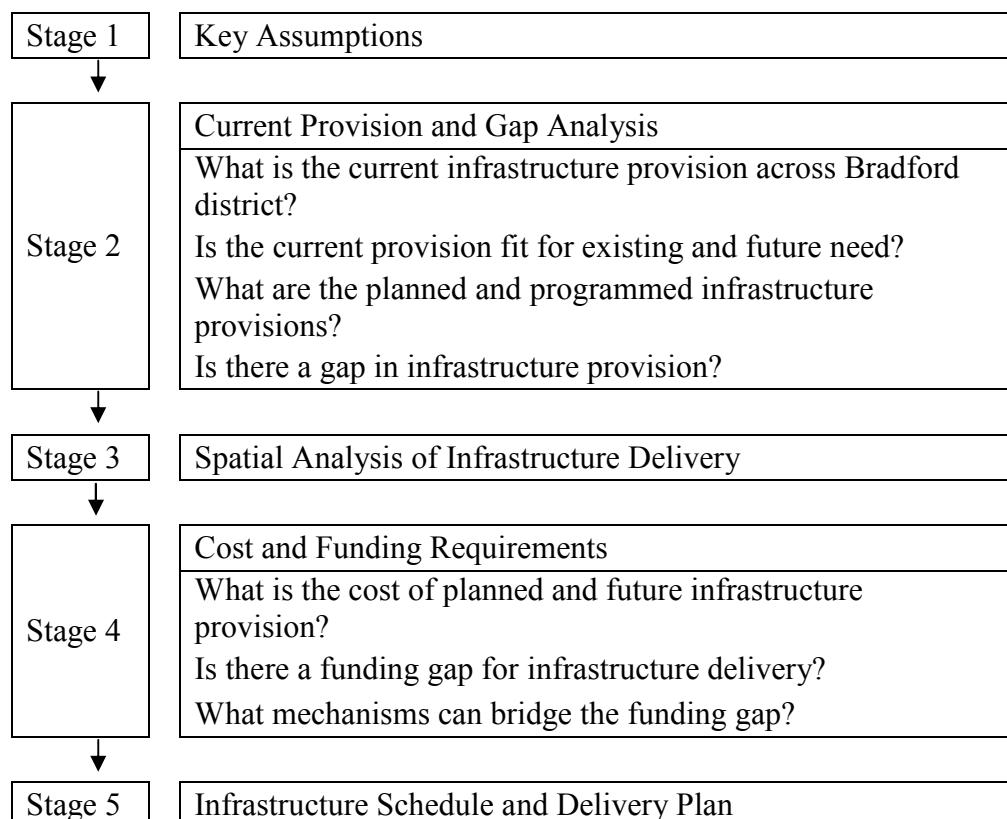


⁷ Planning Advisory Service (PAS) Infrastructure Planning & Delivery Resource book (2008)

⁸ Integrated Infrastructure Scoping Study for the Yorkshire and Humber, prepared for the Yorkshire and Humber Assembly by Arup (2008)

In order to provide a robust evidence base, this study has followed a staged approach as set out in diagram below. The culmination of the work has resulted in the creation of two outputs, an evidence base document which is attached as the **Local Infrastructure Baseline Study** report (included in Appendix A) and this **Local Infrastructure Plan report**. The process undertaken to produce this Local Infrastructure Plan is set out below.

Figure 3.2: Study Methodology



3.2 Summary of Approach

3.2.1 Stage One: Confirming Key Assumptions

The first stage of work set about confirming the overall assumptions which would be used to guide the Local Infrastructure Plan and baseline work. This included confirming:

- any sub area breakdown to the study area;
- the infrastructure types which would be covered;
- the scale of housing and economic growth as defined in the development plan and the locational focus of this growth;
- the timescale that the study would cover; and
- the approach to reporting the final information.

3.2.2 Stage Two: Evidence Base Gathering and Analysis of Current, Planned and Future Infrastructure Provision

Stage two was where the main body of work was carried out. This process involved desk based analysis, interviews and discussions with infrastructure providers, and discussions with those responsible for infrastructure delivery within the Council.

Technical assessments were carried out on each of following infrastructure types: Transport; Utilities; Telecommunications; Flood Risk and Drainage; Waste and Recycling; Green Infrastructure, Open Space and Public Space; Sport, Leisure and Recreation; Education; Community and Cultural; Health; and Emergency Services. To gain accurate information across all these infrastructure types meetings were held with a number of organisations and Council departments and services including.

Council Departments, Services and Teams:	External Infrastructure Providers:
Development Plans	
Major Development Team	Bradford and Airedale NHS
Asset Management	West Yorkshire Police
Housing	West Yorkshire Fire & Rescue
Transportation and Highways	Yorkshire Ambulance Service
Economic Development Services	Environment Agency
Minerals and Waste	Highways Agency
Environment and Neighbourhood	Yorkshire Water
Design and Conservation	National Grid
Libraries	
Museums and Galleries	

In reviewing the evidence base and understanding the main infrastructure issues there were four stages of work.

Stage two was where the main body of work was carried out. This process involved a review of existing baseline work carried out by CBMDC, desk based analysis, interviews and discussions with infrastructure providers, and discussions with those responsible for infrastructure delivery within the Council.

A draft Local Infrastructure Plan and Baseline report were published by CBMDC in 2011. Both these documents went through extensive public consultation alongside the Core Strategy Further Engagement Draft report in 2011-12.

To gain further and accurate information across all infrastructure types consultant Arup were commissioned in April 2012 to review and update the draft LIP in partnership with the Council. Meetings were held with a wide range of organisations and Council teams and departments. A full list of internal contacts within the Council and external organisations consulted is included in Appendix

C. The majority of these meetings were attended by an Arup and CBMDC Planning Policy Officer⁹.

3.2.3 Stage Three: Understanding the Cost of Infrastructure and Options for Funding Delivery

Stage three of the study reviewed the costs, investment, and funding mechanisms involved in delivering infrastructure. In determining the cost associated with infrastructure, it was possible to understand whether current funding options would cover these costs, or whether there was a gap in funding. Having identified whether there might be challenges linked to funding, it was possible to set out a series of other funding options and potential innovative funding mechanisms which could provide solutions to investment, such as Community Infrastructure Levy or the Growing Places Fund (see Section 7 for further detail).

Through this stage of work an assessment of current and potential future funding sources and how applicable they are to Bradford District has been completed. This has emerged through dialogue with stakeholders and a desk based review of relevant information.

3.2.4 Stage Four : Spatial Analysis of Infrastructure Provision and Delivery

The final stage of the Local Infrastructure Plan is a spatial analysis of the information gathered. Evidence is presented in terms of the infrastructure delivery issues, costs, and funding for each sub area in the District, as defined in the Local Plan – Core Strategy. It also sets out issues and conclusions relating to the phasing, timing and coordination of infrastructure provision alongside housing and economic growth.

⁹ A CBMDC representative was not available for the meeting with Anita Sims (Health) or Tony Poole (Drainage).

4 Assumptions and Planned Growth in Bradford

4.1 Introduction

Constructing an evidence base of infrastructure requirements and an analysis of infrastructure need can only be achieved through the use of the best available assumptions relating to existing and future growth patterns. This section sets out the various assumptions used to inform the subsequent assessment.

Section 4.2 sets out the overarching assumptions for the Local Infrastructure Plan.

Sections 4.3 to 4.6 set out assumptions on the scale and distribution of Housing and Commercial and Retail development for each spatial area of Bradford District; as well as documenting the key pieces of 'Identified Infrastructure' scheduled to be delivered in each area.

Bradford Council published a Further Engagement Draft of the Core Strategy in October 2011. The Core Strategy sets out a distribution of growth from 2013 to 2030. This timeframe has been used to help assess the existing capacity and future requirement for infrastructure in the District.

Section 4.7 sets out the assumptions on the housing growth trajectory for Bradford District. Section 4.8 considers governance arrangements relating to infrastructure.

4.2 Overarching Assumptions

The overarching study assumptions are set out below:

- The Local Infrastructure Plan should focus on 'critical' issues relating to infrastructure provision, which would ultimately impede the delivery of housing and economic growth, such as a new road required to unlock a strategic site or a requirement to upgrade an electricity primary substation.
- The Local Infrastructure Plan should focus on the main settlements in the district, as set out in the emerging Core Strategy settlement hierarchy, and retain a settlement focus in considering issues.
- Although the Yorkshire and Humber Plan Regional Spatial Strategy has now been abolished through the Localism Act, the evidence base that underpinned the direction of development identified for Bradford District is still relevant. Therefore this should be used to inform the strategic and spatial delivery of the Local Infrastructure Plan.
- The focus for the Local Infrastructure Plan and for reporting information should be: City of Bradford, including Shipley and Lower Baildon; Airedale; Wharfedale; and the South Pennine Towns and Villages.
- The amount, location, timescale and phasing of housing and economic growth and regeneration initiatives has been taken from the trajectory set out in the emerging Local Plan Core Strategy Publication Draft. As such, the assessments put forward in this document are accurate as at early 2014. The actual pace of development and demands placed upon infrastructure is however subject to change over time.
- The assessments made are based upon existing secondary evidence taken from the Council and wider stakeholders; and primary evidence through conversations with stakeholders. As such the information contained in this

report is set within the context of circumstances as at June / July 2012 to June/July 2015.

- The study recognises that some facets of infrastructure planning and delivery are coordinated at the City Region or regional scale, and also that the responsibility for delivery of certain types of infrastructure (for example emergency services) falls to organisations other than the Council.
- The scale of funding which has been committed and allocated to the Council and other infrastructure providers has been taken from secondary source material and reviewed by stakeholders. Assessments on funding have assumed all allocated funding will be committed.

Table 4.1 below shows the infrastructure types which have been reviewed and assessed.

Table 4.1: List of Infrastructure Types

Infrastructure Types	Specific Infrastructure
Transport	
	Highways
	Bus
	Park and Ride
	Rail
	Walking and Cycling
Utilities	
	Electricity
	Gas
	Water Supply
	Water Treatment
Telecommunications	
	Broadband
	ICT
Flood Risk and Drainage	
	Flood Risk and Drainage
Waste and Recycling	
	Waste Management
Green Infrastructure, Open Space and Public Space	
	Parks and Gardens
	Allotments
	Play Areas
	Access and Public Rights of Way
	Woodland, Natural and Semi-natural Greenspaces
Sport, Leisure and Recreation	
	Sports Pitches

Infrastructure Types	Specific Infrastructure
	Indoor Sports Facilities
Community and Cultural	
	Libraries
	Museums, Galleries and Theatres
	Cemeteries
	Community centres
Education	
	Nursery
	Primary schools
	Secondary schools
	College and Sixth Form
Health	
	GP Provision
	Hospital and Acute Care
Emergency Services	
	Fire and Rescue
	Police
	Ambulance

4.3 Development Assumptions

4.3.1 City of Bradford, including Shipley and Lower Baildon Overview

The emerging Bradford District Local Plan Core Strategy sets the outcomes envisaged at the end of the plan period (2030) following the implementation of policies, proposals and programmes outlined in the Strategy.

The outcome envisaged for the sub-area in the emerging Strategy is:

‘Peripheral communities, such as, **Allerton, Bierley, Buttershaw, Holme Wood, Ravenscliffe, Thorpe Edge, and Woodside** and inner city areas such as **Manningham, Little Horton and Laisterdyke** have improved significantly through comprehensive regeneration initiatives and the fostering of sustainable mixed communities with private housing and economic growth including community infrastructure.

The urban extension to **Holme Wood** has allowed for the creation of sustainable mixed housing and association retail and community amenities benefitting from combined district heat and power facilities, which has helped drive regeneration of this area.

New housing allocations both in and at the edge of the urban area of West Bradford have also enabled the creation of sustainable mixed housing and

associated retail and community amenities benefitting from combined district heat and power facilities. Transport infrastructure in South East Bradford and around the Outer Ring Road has been improved significantly to reduce congestion and promote more sustainable modes of travel.

Regeneration of Bradford city centre has been driven by key developments which have taken forward the original vision of the Alsop Masterplan; including a landmark Park at the Heart, the creation of a high quality central green business district, redevelopment of the 2 stations, high quality mixed use commercial developments, such as Westfield Bradford, redevelopment of the former Bradford Odeon, and the Channel Urban Village. The city centre has also benefited from a wide range of hotel developments as well as a major swimming pool facility.

Bradford city centre's enhanced role has meant that it has become the economic driver of the district; a regional destination for shopping, leisure and culture and the hub for public, commercial and civic services in the district.

The City Centre housing market is very buoyant following the development of a broad range of homes, together with the provision of convenience shops, linear parks and community facilities to support this, helping to create a city centre which is well used both day and night. The University and College have been fully integrated into the City Centre through the development of the Learning Quarter and both continue to play a vital role in the local economy, providing a skilled workforce, which have aided the investment in new creative and knowledge based industries and attracting investment to the District.

High quality office development in Bradford City Centre has supported the growth in home grown businesses, finance, banking, insurance and public sectors; this has been successfully linked with the skills base at the University of Bradford and the College to create a focus for significant office development in the City Centre.

A greening of the city centre has occurred, with key green infrastructure supporting biodiversity, healthier more active lifestyles and mitigating the effects of climate change in the city centre. The reopening of sections of the Bradford Beck, Beckside Park, and The Channel has created green linear parks reaching into the city centre and beyond. This green city centre has also acted as a catalyst in attracting firms and businesses to the city centre.

Shipley town centre and the Canal Road Corridor has truly become an area of extensive transformational change, which is regarded as an exemplar Eco Settlement between Bradford city centre and Shipley town centre. The corridor has borne witness to the delivery of mixed residential development with office, retail, sporting and leisure offer connected by a green corridor of the Bradford Canal running from Bradford city centre to Shipley.

This comprehensive re-development of brownfield sites has occurred within the context of high environmental standards and sustainable transport options. This has included the improvement of Frizinghall railway station, Bolton Woods and the new waterways and open spaces and wildlife areas. There have been significant improvements to connectivity and accessibility by road, rail, bus, walking and cycling between Shipley and Bradford City Centre delivered through the Connecting Airedale project.

Shipley has enhanced its role as an important town centre, through the expansion of its retail, leisure, office and housing market offer with the redevelopment of Market Square, the former indoor markets, Well Croft and much improved links to Saltaire and the Leeds Liverpool Canal. This development has created an area worthy of its location in close proximity to the World Heritage Site of Saltaire and been managed in a way which has enhanced both Shipley and the World Heritage Site, creating a better offer for visitors and residents alike.

The construction of the Shipley Eastern Link Road and associated accessibility improvements between the railway station and the town centre has played a significant role in the economic and physical regeneration of the town. The Shipley Eastern Link Road has opened up new opportunities for commercial and residential schemes in attractive waterside settings. Enhancements to the facilities at Shipley station and a good mix of office, residential, retail and leisure has elevated Shipley as a location of choice for businesses and residents wanting to locate in a vibrant town. High quality, fast and frequent public transport links to the major city centres of Leeds and Bradford and beyond has contributed to this vibrancy.

Saltaire village is truly a world class destination, with a high quality leisure and tourism offer infused with thriving commercial and residential functions. Salts Mill, at the heart of the village, has a key role in the economy, providing one of the largest areas of business space in Airedale for many of its innovative and successful enterprises. The restoration of Roberts Park, river and canal walkways and public realm enhancements together with the creation of a visitors centre has reinforced Saltaire's role as a major tourism and leisure destination. Saltaire has been recognised as a major asset for the district, which has contributed as the catalyst for the economic regeneration of neighbouring Shipley town centre with the creation of a hotel providing tourist and business accommodation as well as quality shopping and dining experience.

Baildon, Charlestown and Apperley Bridge have continued to be the main focus for digital sector research and business development areas benefiting from excellent rail links from Baildon station and Apperley Bridge station. The former treatment works at Apperley Bridge has become a high quality commercial research and development led technology business park of city regional significance with excellent pedestrian and cycle links to Apperley Bridge railway station which has fast frequent services to Skipton, Airedale, Bradford and Leeds. The business park at Apperley Bridge has created a wide range of direct and indirect employment and training opportunities for the people of Bradford district and the wider city region.¹⁰

Housing

The Bradford District Local Plan Core Strategy seeks to focus 28,650 new homes in the City of Bradford, including Shipley and Lower Baildon sub area. This includes the following distribution of new housing¹⁰:

¹⁰ CBMDC Core Strategy Further Engagement Draft, (2011)

Table 4.2: Distribution of new housing in the City of Bradford, including Shipley and Lower Baildon

Location	Proposed new homes
Bradford City Centre	3,500
Shipley and Canal Road Corridor	3,200
Shipley	1,250
SE Bradford	6,000
NE Bradford	4,700
SW Bradford	5,500
NW Bradford	4,500

Of particular interest is the proposed urban extension at Holme Wood, housing and economic growth along the Shipley Canal Road. The city centre is also a focus for housing, employment and leisure development.

Industrial, Commercial and Retail

The Bradford District Local Plan Core Strategy seeks to focus 100ha of employment land in the City of Bradford, including Shipley and Lower Baildon sub area. The key focus for employment related development will be Bradford City Centre, the Leeds Bradford Corridor, Esholt/Apperley Bridge, and Bradford South including the M606 corridor and existing Employment Zones ¹¹

The focus for retail development is in Bradford City Centre, followed by Shipley Town Centre, District Centre (Five Lane Ends, Girlington, Great Horton, Greengates, Thornbury, Tong Street and Odsal) and Local Centres.

Identified Infrastructure

The following schemes / proposed infrastructure are included in the emerging Core Strategy:

- Bradford-Shipley Canal and Linear Park;
- Leeds Bradford Country Park;
- Canal Road Corridor Improvements
- Shipley Eastern Link Road;
- South East Access Routes; and
- New stations at Apperley Bridge and Low Moor.
- Outer Ring Road Improvements

4.3.2 Airedale

Overview

The emerging Bradford District Local Plan Core Strategy sets the outcomes envisaged at the end of the plan period (2030) following the implementation of policies, proposals and programmes outlined in Strategy.

The outcome envisaged for the sub-area in the emerging Core Strategy by 2030 is:

¹¹ As detailed in the RUDP Saved Policies 2007

Keighley is the principal town of Airedale with its public, administrative, sporting, cultural and retail functions. The town has successfully retained its industrial economic base whilst establishing a reputation as a centre for research and development for manufacturing companies supported by institutions such as Park Lane College Keighley. Regeneration initiatives over the last 20 years have included the reinvention of Market Hall, Cavendish Court and redevelopment of Cavendish Retail Park and Former Keighley College site into high quality vibrant mixed use areas. Keighley has also born witness to heritage led regeneration, including the conversion of Dalton Mills, Keighley Townscape Heritage initiative and Cliffe Castle Park, in addition to waterfront access to the East and South of the town centre and railway station improvements. These schemes have all enhanced the character and heritage of Keighley reinforcing its role as an attractive shopping and leisure destination, whose facilities and services continue to serve the town and the surrounding rural villages. Keighley is an accessible town which has seen growth in housing including living over the shop, new builds and mill conversions, as part of intensive mixed use schemes in the commercial heart of the town. Keighley has also witnessed growth in its economy with the development of starter units for small and medium sized businesses, alongside business park premises for the larger digital, design, knowledge and service sectors which have been supported by enhancements to public transport and improved infrastructure connectivity throughout Airedale and into the Regional Cities of Bradford and Leeds as well as Wharfedale. The growth in economic activity has been complemented by significant investment in schools throughout Keighley which has increased attainment levels and the skills needed for local sectors.

Bingley has been reborn as a distinctive market town with high quality new housing, town centre residential units and office space. The town is a destination for speciality retail through the creation of the outdoor market set in a new square at the heart of the town which offers the opportunity for open air performances and community space. Bingley is the place to visit for food, drink and leisure and has seen the retail offer significantly improve through the redevelopment of the Myrtle Walk shopping centre, a larger anchor food store, new smaller shop units and library. The town has also seen enhancements to civic and social amenities with the new library and redesigned Jubilee Gardens and improvements to the river walk, park and visitor centre for the Five Rise Locks as well as the creation of a bus interchange outside the railway station, improved parking and transport improvements. Bingley has also seen the creation of new business premises for the digital and high technology sectors. The growth in economic activity has been further enhanced by significant investment in schools throughout Bingley which now provide the skills to serve the needs of these home grown industries.

The growth in economic activity has been further enhanced by significant investment in schools throughout Bingley which now provide the skills to serve the needs of these home grown industries.

Silsden has become an important small town for Airedale and adjoining lower Craven, with the creation of Silsden Rural Business Park with its good quality pedestrian and cycle routes to the Silsden and Steeton railway station, bus interchange and canal providing high quality industrial and office space for businesses wanting to relocate throughout Airedale and Craven. As well as employment opportunities, Silsden has also seen its retail and housing offer

enhanced to create a desirable and much sought after location complemented by investment in local schools.

Steeton with Eastburn is a settlement full of character with Airedale Hospital providing an excellent range of employment opportunities. It has seen high quality housing and commercial led mixed use developments that have assisted in providing safe and attractive pedestrian and cycle links to Silsden and Steeton railway station with its fast and frequent train services to employment and retail centres of Keighley, Skipton and Regional cities of Bradford and Leeds.

Housing

The Bradford District Local Plan Core Strategy seeks to focus 8,350 new homes in the Airedale sub area. This includes the following distribution of new housing:

Table 4.3: Distribution of new housing in Airedale

Location	Proposed new homes
Keighley	4,500
Bingley	1,400
Silsden	1,000
Steeton w. Eastburn	700
East Morton	100
Baildon	450
Cottingley	200

The major focus for housing will be in Keighley, but Steeton with Eastburn and Silsden will also require infrastructure investment to deliver housing and economic growth and prosperity.

Industrial, Commercial and Retail

The Bradford District Local Plan Core Strategy seeks to focus 30ha of employment land in the Airedale sub area. The key focus for employment related development will be the Airedale Corridor in particular northern and eastern Keighley, building on the success of the digital technology sector in the corridor together with existing Employment Zones¹². The focus for retail development will be on the town centres in Airedale, including Keighley, Bingley and Local Centres.

Identified Infrastructure

The following schemes / proposed infrastructure are included in the emerging Core Strategy:

- Keighley Town Centre / Hardings Road improvement
- Bus and Rail Interchange at Silsden and Steeton;
- Bingley Interchange.
- Highway Improvements to East of Silsden

¹² As detailed in the RUDP Saved Policies (2007)

4.3.3 Wharfedale

Overview

The emerging Bradford District Local Plan Core Strategy sets the outcomes envisaged at the end of the plan period (2030) following the implementation of policies, proposals and programmes outlined in Strategy.

The outcome envisaged for the sub-area in the emerging Core Strategy by 2030 is:

'Ilkley is the principal town of Wharfedale with its public administrative, cultural, retail, tourism and leisure functions with excellent rail and bus connections with Bradford and Leeds. The town has gained a reputation in serving the needs of high quality businesses and providing jobs and a range of shops and services to meet the needs of residents and visitors alike. As well as economic growth, the town has also seen ongoing growth to meet the needs of local residents with high quality ongoing developments over the last 20 years which has reinforced Ilkley's position as one of the most desirable and sought after residential locations in the country whilst providing greater housing choice. A new secondary school for the town has provided excellent accommodation for the young people of the town together with additional areas of much needed open space and sports centre facilities for the use by local community. The popularity of Rombalds Moor for recreation has been sensitively managed whilst safeguarding the unique biodiversity value of the Moor which is part of the South Pennine Moors Special Protection Area.

The Wharfedale towns of Burley-in-Wharfedale and Menston are both desirable locations and have both seen good quality housing developments supported by shops and community facilities. The two settlements have witnessed improvements to the environmental quality of the railway stations and continue to benefit from high quality, fast and frequent rail and bus services to Ilkley and the major city centres of Leeds and Bradford.

The village of Addingham, on the edge of the Yorkshire Dales National Park, has retained its character and sense of place whilst meeting local needs for affordable housing and local facilities. The village has also benefited from good bus connections to the principal town of Ilkley, the town of Silsden and neighbouring Skipton.'

Housing

The Bradford District Local Plan Core Strategy seeks to focus 1,600 new homes in the Wharfedale sub area. This includes the following distribution of new housing:

Table 4.4: Distribution of new housing in the Wharfedale

Location	Proposed new homes
Ilkley	800
Burley In Wharfedale	200
Menston	400
Addingham	200

The growth area in Wharfedale is around Menston.

Industrial, Commercial and Retail

The Bradford District Local Plan Core Strategy seeks to focus 5 ha of employment land in the Wharfedale sub area. Wharfedale will not be the focus of major commercial and retail development. Any future commercial and retail development will be focused in the main urban area, with a retail focus primarily on Ilkley, followed by Local Centres identified in the retail hierarchy and network of centres.

Identified Infrastructure

The emerging Local Plan Core Strategy does not identify any highways or green infrastructure requirements for Wharfedale. However there are infrastructure issues affecting Wharfedale, which are discussed in Section 5.3.

4.3.4 South Pennine Towns and Villages

Overview

The emerging Bradford District Local Plan Core Strategy sets the outcomes envisaged at the end of the plan period (2030) following the implementation of policies, proposals and programmes outlined in Strategy.

The outcome envisaged for the sub-area in the emerging Core Strategy by 2030 is:

‘Queensbury has seen a housing and economic growth over the last 20 years which has preserved and enhanced its retail and leisure offer. Black Dyke Mills has been transformed into retail, residential and commercial space and continues to play the role as the economic powerhouse of this important Pennine town. The town continues to benefit from fast and frequent bus services to Bradford city centre in the north and Halifax town centre in the south making the area a popular and sought after location.

Haworth continues to function as a widely recognised asset to the District with its Bronte Country heritage, the Bronte Parsonage Museum and the Keighley and Worth Valley Steam Railway. The traditional economy of the town has been diversified by providing accommodation for visitors, specialist shopping and dining experience as well as a popular location for film and television productions. Housing development in Haworth has continued to cater for local demand.’

Housing

The Bradford District Local Plan Core Strategy seeks to focus 3,500 new homes in the South Pennine Towns and Villages sub area. This includes the following distribution of new housing:

Table 4.5: Distribution of new housing in the South Pennine Town and Villages

Location	Proposed new homes
Thornton	700
Queensbury	1,000
Cullingworth	350

Denholme	350
Harden	100
Haworth	500
Oakworth	200
Oxenhope	100
Wilsden	200

Industrial, Commercial and Retail

The South Pennine Towns and Villages will not be the focus of major commercial and retail development. Any future commercial and retail development will be focused in the City of Bradford, Town Centres and District Centres. This sub area only contains Local Centres, which include Denholme, Harden, Haworth (Main Street), Haworth (Mill Hey), Queensbury and Thornton.

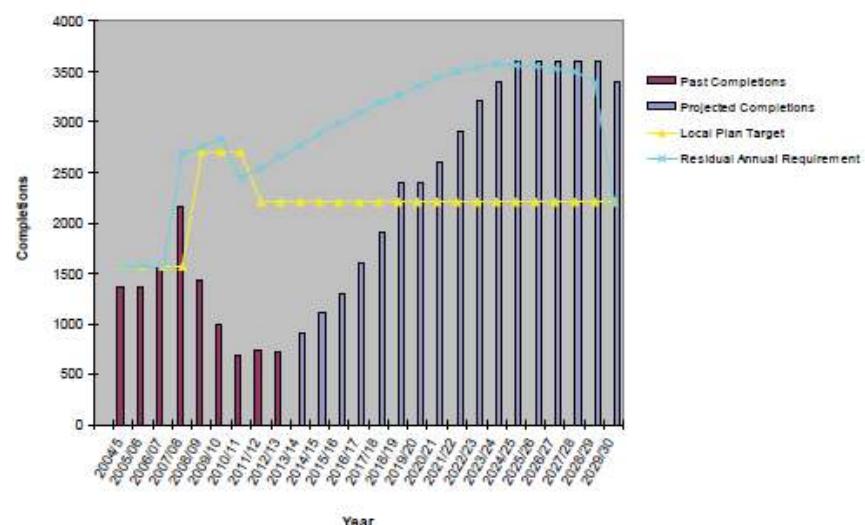
Identified Infrastructure

The emerging Local Plan Core Strategy does not identify any highways or green infrastructure requirements for the South Pennine Towns and Villages. However there are infrastructure issues affecting the South Pennine Towns and Villages, which are discussed in Section 5.4.

4.3.5 Housing Trajectory

The CBMDC emerging Core Strategy sets out a housing trajectory for the plan period (up to 2030). This is based on lower levels of housing in phase 1, with a step up in phase 2 and 3. As shown on Figure 4.1 below CBMDC are phasing higher level of housing growth towards the end of the plan period, this will allow some infrastructure to be delivered prior to the 'ramping up' of the annual housing target. Clearly the level of housing proposed will result in the requirement for new infrastructure. Section five of this report provides an overview of the infrastructure requirements across the District and in each sub area.

Figure 4.1: Housing Trajectory



Source: CBMDC Core Strategy, Publication Draft, 2014

4.3.6 Strategic Objectives

The Local Plan Core Strategy includes the following Strategic Objectives, which indicate how the spatial vision for Bradford District will be delivered by CBMDC and its partners in the public, private and voluntary sectors. Many of these objectives are identified as priorities in the Big Plan Sustainable Community Strategy and the Council's Corporate Plan.

The Strategic Objectives include:

- 1) To recognise and fully exploit the role of the City of Bradford and the towns along Airedale and Wharfedale as dynamic locations of choice for housing and economic growth within the Leeds City Region.
- 2) To ensure that the district's needs for housing, business and commerce are met, whilst promoting development of previously developed land and development in sustainable locations that reduces the need to travel and minimises the need to travel by car. In so doing overcrowding within the existing housing stock should be reduced.
- 3) To ensure that appropriate critical infrastructure including social and green infrastructure is in place to support sustainable growth and sustainable communities.
- 4) To provide a range of quality dwellings, in terms of type and affordability, to cater for the current needs and future growth of the District.
- 5) To promote the role of the Bradford District in the Leeds City Region economy by creating conditions for enterprise where business thrives, generating opportunity, prosperity and jobs.
- 6) To promote and support a successful growing economy with wide range and high quality employment opportunities, by fostering indigenous firms and by attracting inward investment in the high value creative, innovative and knowledge based industries.
- 7) To promote, manage and develop the image and the role of Bradford City Centre as a regionally significant business, commercial, shopping, civic and cultural area.
- 8) To support the University of Bradford and the district's colleges and schools in investing in buildings and spaces to ensure a well educated and skilled workforce.
- 9) To improve and develop excellent public transport and highway systems to increase the level of accessibility within the District and establish good connections with other parts of the Leeds City Region and the country by ensuring safety, efficiency and sustainability.
- 10) To ensure that Bradford is a diverse city where socially inclusive and vocal communities live and where the needs of citizens are met through improved access to good quality homes, jobs, shopping, cultural facilities, health and education provision and community facilities for a growing population.
- 11) To provide a clean, safe, secure, sustainable, attractive and accessible built and natural environment in order to reduce the fear of crime and disorder and foster a shared sense of civic pride and responsibility

- 12) Safeguard, enhance and promote the diverse historic built and natural heritage of the District which helps reinforce the local distinctiveness of places.
- 13) To reduce the impact of climate change through mitigation and adaptation, particularly through reducing pollution, energy consumption, the risk of flooding, and promoting the use of renewable energy and securing the means to become locally self sufficient.
- 14) Provide accessible and varied opportunities for leisure and recreation including access to the countryside and the utilisation of green infrastructure spaces and routes for walking and cycling.
- 15) Safeguard and manage the District's South Pennine Moors Special Protection Area and biodiversity assets through careful landscape, woodland and waterways management.
- 16) Safeguard and manage the District's natural and renewable energy resources, including water, agriculture, woodland and minerals, and promote the sustainable management of waste and recycling.

4.4 Governance Assumptions

The Local Plan Core Strategy includes an implementation and delivery section, which includes policies on the topics:

- Policy ID1 Development Plan Documents and Authority Monitoring Report;
- Policy ID2 Viability;
- Policy ID3 Developer Contributions;
- Policy ID4 Working with Partners;
- Policy ID5 Facilitating Delivery;
- Policy ID6 Simplification of planning guidance to encourage sustainable development;
- Policy ID7 Community Involvement; and
- Policy ID8 Regeneration Funding and Delivery.

This section also noted that the City of Bradford Metropolitan District Council (CBMDC) will work closely with relevant internal departments and a range of external partners, including Leeds City Region LEP, its Local Strategic Partnership, West Yorkshire Integrated Transport Authority, infrastructure providers and stakeholders, to ensure that requirements for new infrastructure and services can be met.

In partnership, the future need and delivery of new infrastructure will be explored and site opportunities for new or enhanced infrastructure will be identified. Planned infrastructure is set out in the Infrastructure Delivery Schedule, in chapter 6. This will be updated by the CBMDC Planning Service when necessary, to incorporate partners' future plans. As development sites are identified through the Bradford City Centre AAP, Shipley and Canal Road Corridor AAP and Allocations DPD, exact details of the required infrastructure provision will also be included and the Infrastructure Delivery Schedule will be updated accordingly.

5 Infrastructure Assessment

5.1 Overview

The following sections provide a summary of the assessments undertaken to determine the effectiveness of existing infrastructure, establishing whether existing infrastructure remains fit for purpose and/or whether proposed infrastructure provision is sufficient to deliver the capacity necessary to support plans for growth and change.

Assessments on the adequacy of current and future infrastructure are made on the basis of the assumptions set out in Chapter 4. The detailed evidence base and supporting data which underpins the summaries is set out in Appendix A.

To bring coherence to the assessment work, a summary of current and future infrastructure requirements is presented across the four spatial areas defined in Chapter 4. Each spatial summary section is concluded by a table detailing the ‘short’, ‘medium’ and ‘long term’ infrastructure issues, and the resulting actions needing to be carried out by CBMDC and other stakeholders in order to overcome existing constraints, begin infrastructure delivery and maintain infrastructure improvements to realise social, economic and environmental objectives and meet the growth targets envisioned in the emerging Core Strategy.

Each review of each sub-area is set out in terms of:

- Highlighting the infrastructure types that could pose significant challenges to delivering growth;
- Infrastructure types where additional infrastructure is required, but where it is deemed not critical to support planned levels of growth; and
- The remaining infrastructure types which are deemed non-essential or non-critical to any future targets for growth.

5.2 District-wide Assessment

5.2.1 Overview

Bradford district is faced with a number of opportunities and challenges. The district is changing and changing quickly. In terms of population, the district is set to grow approximately 23% by 2031. Population growth is also expected to bring demographic and social change, with strong growth in BME groups and also in the proportion and number of young people living within the district. This level of societal change will have a major impact on the demands for services, facilities and infrastructure across the district. It also poses questions as to the need for alternative approaches to service provision across the district, with there not just being the need for more infrastructure, but a radical re-think as to the way services are delivered and how they can be made more efficient.

Overcoming disadvantage, social inequality, and a divergence in quality of life between affluent areas and areas in need of regeneration will also drive requirements for new and different infrastructure. Healthcare, social care, and emergency service providers will all need to balance the unique demands of deprived communities and work collectively to raise standards of living.

Accommodating the housing and employment growth on top of a dynamic and varied set of circumstances will be difficult. However, the level of forecast growth provides an opportunity to look again at existing infrastructure, assess its effectiveness and understand what the district needs to deliver to make a fundamental change to the way it functions and operates. Strategic infrastructure at the district-wide scale can make transformational changes to people's lives and the way that business operates within the district. Targeted investment in identified, priority locations supported by sophisticated approaches to district-wide infrastructure planning and implementation can position the district as a place which is successful, cohesive, has a strong sense of place and identity and which functions effectively as a self-sufficient location and as part of a coherent Leeds City Region.

5.2.2 Transport

Transport infrastructure will play a key role in facilitating a sustainable future within the district. Unlocking regeneration areas (City Centre, Shipley and Canal Road Corridor, Manningham, Airedale and Leeds-Bradford Corridor) to allow them to fulfil their potential whilst also stimulating new low carbon economic activity will be a primary focus for the Local Plan period.

Bringing greater connectivity across the district and bolstering linkages with other centres of economic activity is one of the Council's principal objectives. Relieving congestion and at the same time changing behaviours to engender greater occupancy on public transport and more walking and cycling across the district must be a key action for infrastructure planning and delivery.

Building upon Bradford's locational advantage and links to Leeds City Centre, the rest of West Yorkshire and the wider Leeds City Region, will be important for the future effectiveness of the district. The entire transport network will be required to play a role in realising greater interaction with other centres so as to boost economic output. More frequent, better quality public transport with improved journey times (inclusive of the three rail routes and bus operating corridors) is required to ensure sustainable approaches to managing the network. Similarly greater connectivity and greater use of Leeds Bradford International Airport outside of the district within Leeds, and connections to the motorway network via the M606 and M62 are needed to support a more robust economy across the district.

Internally within the district there are a number of challenges to connect communities, businesses; housing and employment areas with services and facilities. Some locations and sub-areas are poorly served by public transport, cycling and walking infrastructure which serves to reinforce disadvantage and in certain locations compounds other social, environmental and health related issues.

The historic road pattern and highway network in Bradford, characterised by a radial pattern of routes leading to the city centre, surrounded by outer and an inner ring road has become, in certain locations a barrier and constraint to growth. The current settlement pattern and their current socio-economic profiles means that there are significant variations in the level of wealth across the district, which is reflected in patterns of commuting (especially for example from Wharfedale and Ilkley) to jobs and other locations. This consequently results in pockets of problematic congestion, and whilst congestion is not symptomatic across the

entire district, its effect on the district and its knock-on impacts on the functionality of Bradford City Centre and other growth hubs make it a district-wide issue and one which will require a mixture of strategic and local transport infrastructure investment to remedy

Support and investment which facilitates better connections to other locations outside the district will be increasingly important in the short term as the district is forecast to not create enough jobs on its own to meet the demands of a growing labour force. In the long term, effective internal public transport routes and a more resilient highway network will be pivotal to underpin sustainable housing and economic growth.

5.2.3 Utilities

Electricity Supply: The local electricity distribution network in Bradford District is operated by Northern Powergrid (Yorkshire) plc. The network connects to the National Grid network which is owned and operated by National Grid Company. Electricity is regulated by Ofgem.

Through review of the Northern Powergrid Long Term Development Statement¹³ and informal discussions with Northern Powergrid it has been confirmed that electricity provision is generally adequate to meet growth aspirations. However minor local reinforcements would be needed at primary substations, as well as cabling and the installation of a new secondary substation. Size and timescales of these elements would depend upon the size of the development and its delivery timescale.

Any proposals for reducing electricity demand and seeking decentralised energy generation and greater sustainability of buildings is set to be defined in the Bradford City Centre Area Action Plan - this will promote decentralised energy in areas of greatest opportunity, while taking into account viability.

The costs of local reinforcements are included in Section 6 and the Infrastructure Schedule in Section 8.

Gas Supply: The local gas distribution network in the Bradford District is owned by Northern Gas Networks (NGN) and supplied by National Grid. Bradford is well positioned in West Yorkshire being close to the major gas import installations on the East Coast. United Utilities Operations Ltd (UUOL) carries out the day to day maintenance of the system and is responsible for the engineering behind any necessary diversions or reinforcements.

The Northern Gas Networks Business Plan Data Template 2014 to 2021¹⁴ and informal discussions with Northern Gas networks and United Utilities have suggested that the overall gas network in the Bradford District is robust and flexible and that strategic reinforcement of the network would not be necessary to support the proposed housing and employment growth.

Local reinforcements will be required to service local developments as and when these are allocated through the forthcoming Allocations Development Plan Document and Area Action Plans. The costs of local reinforcements are included in Section 6 and the Infrastructure Schedule in Section 8.

¹³ Northern Powergrid Long Term Development Statement, November (2011)

¹⁴ Northern Gas Networks Business Plan Data Template, 2014 to 2021

Water Supply and Treatment: Yorkshire Water is appointed as the water and sewerage undertaker for the Bradford District through the Water Industry Act (WIA) 1991. Yorkshire Water is the only water and waste water treatment provider for Bradford District. Yorkshire Water use local development plans, economic information, population forecasts and other data to plan for growth and new provision. The plans then feed into the Yorkshire Water five year investment plans called AMP periods. Yorkshire Water made extensive comments on the latest draft of the Bradford Core Strategy (2012) and the 2011 version of the Local Infrastructure Plan (LIP) and associated baseline.

There are sub area specific water supply and treatment issues that are identified in the relevant sections. These relate to the infrastructure needed to treat waste water.

5.2.4 Telecommunications

Arup telecommunications specialists have carried a high-level assessment of the telecommunication networks in Bradford District. This is included in baseline in Appendix A.

BT Openreach and Virgin media have their network connected to households and businesses across the District. Market competition is good, with broadband availability and speed offering residents and non-residents both choice and range.

The City of Bradford will benefit from investment through the Urban Broadband Fund, to become one of the UK's first super-connected cities. £14.4 million of funding has been confirmed for Leeds and Bradford. Even with the planned improvements to broadband in the City of Bradford there is a need to enhance telecommunication infrastructure to meet planned housing and employment growth, and to serve new sites directly. These improvements would be market-led and local strategic infrastructure would be needed at the access layer, which is the cabling from the home to street cabinet, as well as cabling from the street cabinet to the exchange. The cost of these improvements would need to be met by a developer as part of their scheme.

5.2.5 Flood Risk and Drainage

CBMDC produced a Preliminary Flood Risk Assessment in 2011¹⁵, as part of their requirements as a Lead Flood Authority. This concluded that there were no areas that fell within the criteria of being 'Indicative Flood Risk Areas'. The assessment noted that CBMDC will continue to monitor flood risk and collect data to monitor flood events.

Currently there are no specific site allocations situated within the flood zone, though it is understood that considerable capital investment is proposed as part of the district wide regeneration process. Developments within this zone are likely to be supported by the council but the floor levels must be situated above the 1% (1 in 100 years) flood level.

Through a dialogue with the Environment Agency and the CBMDC Drainage Team, it has been confirmed that the City of Bradford has an overflow tunnel to

¹⁵ CBMDC Preliminary Flood Risk Assessment, Preliminary Flood Risk Assessment to comply with the Environment Agency Final Guidance 2011

deal with flooding from the Bradford Beck. The CBMDC Drainage Team have developed a model of the Bradford Beck and are able to factor any new development into this model to confirm the impact on flood risk. There may be some flood risk along Canal Road. There are no flooding issues that are considered severe enough have resulted in worked up Environment Agency schemes.

The flood risk and drainage issues in this sub area will be managed through the sequential and exceptions tests on all future site allocation. There will also need to be a case by case assessment of potential mechanisms or localised solutions to reduce flood risk. This could include the use of SUDS, which is strengthened by CBMDC becoming the SUDS approval body for the District from April 2013.

5.2.6 Education

Pre-school early education is delivered in a range of public, private and voluntary sector facilities. The introduction of a new entitlement to free early education for disadvantaged two year olds from 2013-14 is placing strain on capacity in disadvantaged areas. Past experience is that private and voluntary sector providers have expanded in line with new opportunities to deliver early education. It is assumed that this market response, allied to interest from some schools with nursery capacity, will provide the necessary short-term correction in capacity.

Analysis of the baseline information on provision (included in Appendix A) and discussion with CBMDC Children's Services has confirmed capacity constraints in both primary and secondary school places across the District. This is particularly acute in City of Bradford, including Shipley and Lower Baildon and Wharfedale.

The increase in demand for school places has been caused by high population growth across the District. For example from 2004 to 2010 the District has experienced an average of 8,279¹⁶ live births each year equating to 13% of all births in Yorkshire and the Humber Region.

Children's Services have produced an Education Organisation Plan (EOP)¹⁷ in late 2014. This document has considered the educational needs of the sub-area (and the district as a whole) in more detail. The updated outputs of the EOP will be fed into the next revision to the LIP and the baseline analysis report.

CBMDC Children's Services have confirmed that the number of children in primary schools has been growing steadily over the last five years due to an increase in the birth rate, newcomers to the district and a consequent increase in the number of four-year olds being admitted into reception year. An annual report on school admissions and the associated pressures showed that Bradford will have its highest ever number (8,782) of children of the age to start primary school in September 2015. This is up from just over 7,700 in 2009. Based on the number of children in the District registered with the NHS the number of reception places required is forecast to rise further.

¹⁶ Live Births, Nomis 2010

¹⁷ EOP is available on the Council website

http://www.bradford.gov.uk/bmdc/education_and_skills/planning_education_provision

Children's Services confirmed that to accommodate this anticipated short term growth the Council has embarked on a programme of creating additional school places within a number of existing primary schools across the district. So far the council has increased pupil capacity at 46 primary schools since 2010. This increase in capacity is needed to meet the requirements of children already in the educational system and therefore will be met by Government funding in the form of the Basic Need Allocation (see Section 6 and 7 for more details).

The in-house CBMDC Children's Services formula¹⁸ has been used to calculate how many places are likely to come from new housing growth. This formula uses the Department for Education's costs for a school place and assumes two children per school year (7 years for secondary school places) for every 100 new homes.

A range of assumptions on the type of housing have been made and this is detailed in Appendix B. CBMDC Children's Services will continue to monitor children in the system and plan accordingly. This calculation is detailed in Appendix A and show in full in Appendix B. This provides an indication of additional places and is designed as a guide to aid planning for infrastructure.

The formula predicts that the planned housing from 2013/2014 to 2029 / 2030 will generate the need for 3,171 primary school places.

Secondary school pupil numbers are forecast to rise. By 2015 an additional 3,500 new student places are needed, which is made up of an increase in both statutory age pupil places (11-16) and post-16 students. Overall, by 2018, secondary school pupil numbers are set to increase by at least 14%. This means by 2018 two new secondary schools would be needed to ease the increasing pressure for space faced by existing schools, as the "bulge" years passing through primary schools move up.

The in-house CBMDC Children's Services formula has been used to calculate how many places are likely to come from new housing growth. This formula uses the Department for Education's costs for a school place and assumes two children per year group on average but dependant on the type and size of housing.

A range of assumptions on the type of housing have been made and this is detailed in Appendix B. CBMDC Children's Services will continue to monitor children in the system and plan accordingly. This calculation is detailed in Appendix A and show in full in Appendix B. This provides an indication of additional places and is designed as a guide to aid planning for infrastructure.

The formula predicts that the planned housing from 2013/2014 to 2029 / 2030 will generate the need for 2,718 secondary school places.

Children's Services have confirmed that secondary school capacity improvements would be programmed to follow the completion of the primary school capacity improvements works. The exact requirements are highlighted through the Education Organisation Plan (EOP), which is updated each year. The EOP also looks to clarify the cost profile of any capacity improvements, with the assumption that the cost of providing education for the existing population living in existing housing will be met by the Basic Needs Allocation.

¹⁸ Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

The evidence base, supported by discussions with education providers confirms that there is no capacity gap or funding gap for the provision of further and higher education across the District.

Sub area specific analysis has been provided in sections 5.3 to 5.6. Section 6 of the report details how the CBMDC education contributions formula has been used to calculate how many school places may come forward from new housing growth, the implications of any capacity gaps, and other potential funding sources.

5.2.7 Waste and Recycling

The CBMDC Planning Services is currently developing a Waste Management Development Plan Document¹⁹ which seeks to allocate the sites that are needed to meet projected waste needs up to 2030. Following the termination of the PFI process, the Council has approved the Municipal Waste Minimisation and Management Strategy at Council's Executive Committee on 13th January 2015. This new strategy considers what further actions the council could take to move the management of its waste to more sustainable levels, minimise waste, boost recycling and thus reduce the amount of residual waste that requires treating via a waste treatment procurement exercise.

Based on the evidence base information set out in the emerging Waste Management DPD there is a significant need for waste management facilities within the District. However, the Waste Management DPD will allocate sufficient site to ensure there is adequate treatment capacity to meet the proposed housing and employment growth up to 2030.

5.2.8 Green Infrastructure, Open Space and Public Space

The Bradford Open Space, Sports and Recreation Study²⁰ and further investigations by the Council's Department of Environment and Sport indicate that there are some deficits in open space and play provision across the District. In addition it is deemed important to improve the standard of existing green space and deliver new green space to aid regeneration and improve the quality of place and quality of the residential offer across the District and overcome the negative impacts and lack of coherence brought about due to the legacy of an industrial heritage and a dense urban built environment

Additional work undertaken by Natural England on Accessible Natural Greenspace Standards (ANGST) shows a deficit in certain parts of the District – mainly urban Bradford.

Wherever possible regeneration should put green infrastructure at the heart of development proposals to help improve environmental sustainability, promote healthier lifestyles, tackle ill-health; as well as establishing GI as means to boost flood protection and environmental resilience.

Enhancing key strategic assets, improving access and establishing greater connectivity across GI assets should be a priority with a view to making connected system of green infrastructure across the district. In this respect, the District's public rights of way network is a key asset in connecting between GI

²⁰ CBMDC, Bradford Open Space, Sports and Recreation Study (2006)

and into residential areas. The Rights of Way Improvement Plan provides a framework for improvements to this network.

The District also contains significant GI infrastructure assets in the form of internationally important upland moorlands, in some locations (particularly Airedale and Wharfedale) in very close proximity to settlements. These form part of the South Pennine Moors Special Protection area (SPA) and Special Areas of Conservation (SAC), which are European designations and, as such, fall under the European Union Habitats Directive.

In planning for GI linked with regeneration in the District, the Council, as competent authority, is legally obliged to ensure that development does not result in significant impacts on these moorland areas. To this end, a Habitats Regulations Assessment has been carried out of the Local Development Plan Core Strategy which has identified likely impacts and proposes mitigation and avoidance measures in relation to them. These measures will form part of the overall approach to GI and open space provision within the District and will include habitat and access enhancements plus other management measures.

CBMDC will be required to adopt a district-wide perspective to investment and delivery. This can be done through small scale investment on a project by project basis, but must maintain overarching aim to realise wider ambition. Significant housing and commercial developments must be targeted to help realise investment. Significant new housing delivery is forecast across the district, especially in the City of Bradford, Shipley and Lower Baildon sub-area, which has the potential to develop communities which are supported by a coherent sense of green space and open space 'on-site' but which offer the potential through funding mechanisms to provide contributions towards GI 'off-site'.

The Council is also set to start working on developing a District-wide Open Space Strategy in 2013. The Open Space Strategy will set a framework for providing open space and outdoor sports needs throughout the district. Improving existing green space to enhance the quality of place and quality of the residential offer in various sub-areas will be a priority within the emerging Strategy. There is also an aspiration to create space for both green and blue (e.g. water based) infrastructure within the sub- areas. This programme of work would 'stitch together' heritage buildings, existing landscape character and range of cultural associations. Green infrastructure can also provide the opportunity for safe and attractive pedestrian and cycle routes to promote the use of sustainable modes of transport.

In relation to the Habitats Regulations Assessment of the Core Strategy, a Management and Mitigation Strategy will be produced which will set out a framework for delivering mitigation measures in relation to impacts on the South Pennine Moors SPA/SAC.

Given that these Strategies are still to be finalised, it has not been possible to directly define approved or planned schemes. However, qualitative discussions with the relevant Departments have identified the following priorities:

- An aspiration for a new Country Park in the Tong area to enhance the role of the green belt between Bradford and Leeds as a high quality Country Park for active recreational leisure for residents of both districts.
- A new park in East Bradford, potentially working closely with housing association, Incommunities;

- New outdoor recreational facilities where planned housing growth puts strain on existing resources;
- Potentially a new park in Silsden linked to planned housing growth;
- Development of the linear park from Shipley to Bradford, along the Canal Road Corridor;
- Enhancement of existing open space and play areas;
- Local enhancement of key routes across South Pennine Moors to reduce visitor impact
- Key habitat enhancement to offset impacts of development
- Visitor management measures (wardening, information provision etc.) to influence visitor behaviour and reduce disturbance to protected species and habitat
- Provision of strategic greenspace to absorb and deflect pressure from European sites and;
- Continued maintenance of Council assets (funded through Council funding and S106 contributions).

The delivery of on-site or off-site small scale green infrastructure / sports contributions and strategic infrastructure need to be managed through S106 and potential CIL contributions. This will be investigated further through the economic viability work for the Community Infrastructure Levy.

5.2.9 Sport, Leisure and Recreation

The majority of the District has inadequate supply of outdoor sports facilities and playing pitches to cater to current demands with particular localised pockets of under-provision. The Council is currently carrying out a Playing Pitch Strategy. The Playing Pitch Strategy will update the evidence base in terms of deficits in sports provision and set out detailed outdoor sports needs throughout the district.

Generally, across the District there is always a demand for more pitches and the need to have a sufficient stock of pitches to allow some to be “rested” for a season. Due to increasing demand this does not happen leading to overuse of the resource and subsequent deterioration of quality. It is anticipated that the Playing Pitch Strategy will identify that there is a pent up demand for pitches and that existing pitches are overused. This is supported by anecdotal evidence.

In terms of indoor sports facilities, there are a wide range of privately, publicly and voluntarily run sports facilities across the District; however a number of public sports facilities and swimming pools are no longer fit for purpose. The supply of sports facilities is below national averages, with facilities operating at or approaching 100% capacity.

The Department of Environment and Sport is currently reviewing provision to develop a new Sports Facilities Strategy for the District. The strategy will provide an evidence base in terms of deficiencies in sports facilities provision against current and predicted levels of population to develop priorities for investment and future needs.

Although strategy documents are not yet completed initial evidence indicates areas of under-provision, and need for:

- An accessible, city centre swimming pool facility to sit at the head of the District's hierarchy of provision
- A network of community sports and swimming pool facilities located around centres of population, especially as personal mobility (access to a car) is lower than the national average
- Rugby league pitches in Bradford South. The Department of Environment and Sport is currently investigating opportunities to use an existing school site in Wyke, which has been vacated as part of the BSF programme, with plans to redevelop the existing pitches.

It had been envisaged that the BSF initiative would have resulted in additional sport, leisure and recreation facilities (set within schools but accessible by the public). Where BSF schools have been cancelled, there is increasing pressure on public and private facilities to accommodate this additional demand.

Although the majority of this current provision is by the private-sector, there are opportunities to deliver public sector facilities in a joined-up, coordinated way. Further opportunities to develop joint and multi-agency sport and leisure facilities also exist through schools that have benefitted from BSF programme.

There is a requirement to deliver new sport, leisure and recreation facilities in the future. Future plans for existing and new facilities will also need to reflect on the continued cost of maintaining and improving facilities during their operational life.

Details of the costs of providing these facilities and actual and potential funding mechanisms are set out in Section 6 and summarised in Section 8.

5.2.10 **Community and Cultural**

A review of the Bradford District Cultural Strategy²¹ and consultation with stakeholders reveals that community and cultural infrastructure is under-utilised and not currently offering optimal value to the local community. Funding for community and cultural facilities is also difficult due to the current state of constrained Local Government finance. To overcome this, CBMDC is looking at opportunities for rationalising current facilities, co-locating services and cluster resources to maximise benefits to the local communities. Ensuring facilities are utilised more effectively can also be achieved by improving levels of access by communities. To achieve this some communities in the sub-area may require improved transport connectivity and improved ways and means to provide greater access to facilities.

The provision of museums, galleries and theatres and community centres are the responsibility of CBMDC and private companies, including voluntary organisations. The funding to meet future needs would continue to come from existing sources.

Future development proposals include the creation of multi-function community hubs in Idle and Wyke.

²¹ CBMDC Bradford District Cultural Strategy, 2003

The funding and delivery of community and cultural facilities is not straight forward. The Council works in partnership with others on making the business case for delivering services but it is also reliant of supportive funding from other third party sources, including Heritage Lottery Fund and the Arts Council. This makes the long term planning and delivery of community and cultural infrastructure challenging, and highlights the need to explore opportunities to partner with other development opportunities and private –led proposals.

CBMDC's Library Services highlight that a number of libraries are in need of maintenance. In 2010 a review of services resulted in four libraries (with opening hours of less than 10 hours a week) being run by community groups and one has been replaced by a mobile library. The Central Library has recently been relocated in several premises near the City Park.

Taking account of quantitative and qualitative data it has been confirmed that planned housing and employment growth will not directly affect the level of infrastructure required to deliver library services in the District. This is because facilities can be delivered in a number of differing types of buildings and premises; allied with the fact that changes in patterns of behaviour demonstrate that only a proportion of new residents within new housing developments will utilise library facilities.

The CBMDC Bereavement Services Team constantly monitor the take up of cemetery places and crematorium provision. Monitoring data is set out in Appendix A. Through dialogue it was noted that there is broadly enough cemetery provision to meet projected needs. However there is a requirement to identify a site for a new crematorium in Bradford South and additional cemetery space may be required in the Shipley / Bingley area.

5.2.11 Health

The National Health Service (NHS) is currently being reformed. There is currently transitional arrangement in place with the Primary Care Trusts working with the newly formed Clinical Commissioning Groups (CCGs). From April 2013 the CCGs will take responsibility for commissioning health services. The CCGs are a consortium of GPs surgeries and hospitals. They are led by GPs.

Through discussions with a representative from NHS Public Health it was confirmed that the NHS have invested in improving health services in this area over the last ten years and have the infrastructure in place to deliver the required level of health provision. It was noted that the NHS receive additional funding related to deprivation and therefore the CCG are able to target additional resource at the more deprived parts of Bradford.

Through discussions with NHS public health it was confirmed that there are no plans to close any existing hospitals or GP surgeries. It was also noted that nationally the NHS are moving towards more community based care, which will result in less need for premises and can be linked to existing GP surgery's.

The NHS commissioning board and West Yorkshire Commissioning Board oversee the local CCGs and are required to factor in population growth and plan for any extra provision that will be required. Through discussions with NHS Public Health it was noted that given the recent investment in health provision in the District it is unlikely that new facilities will be required, however additional

GPs will be required in existing facilities. The CCGs will continue to monitor take up of health care and plan accordingly.

The cost of increasing health provision will be met by funding from central government, which is linked to the population registered in each CCG.

5.2.12 Emergency Services

The Fire Services in Bradford District is delivered by the West Yorkshire Fire Service. West Yorkshire Fire & Rescue Authority has no major plans for the estate in the Bradford area apart from ongoing refurbishment and repairs to improve the energy efficiency of the fire stations and minimise the need for ongoing maintenance.

Risk assessments in terms of fire hazards and related safety issues have been carried out on the future housing and economic growth in these areas. The scale of growth has been factored into the service provision with current resources and capacity sufficient to meet the anticipated growth.

Co-locating fire stations with other services is challenging due to access requirements and the scale of space required for manoeuvring and parking fire engines. The service is however occasionally able to offer space to other partners, particularly ambulance and police when they require an additional base to meet demands. There are further proposals of replacing ten existing fire stations across the region with five new fire stations over a five year period and moving appliances at one other fire station in 2012-13. These are the proposed changes by the authority to combat the loss of up to £18 million in central government grants over the next four years²².

Through dialogue with the West Yorkshire Fire Service it has been confirmed that the current operational capacity of the service is sufficient to cater for the current population and future planned growth. It was also confirmed that the cost of delivering any new provision will be met by the West Yorkshire Fire Service through funding from Central Government and Council tax.

The Ambulance Service in the Bradford District is delivered by the Yorkshire Ambulance Service. Bradford ambulance station is well positioned but the site and facility is larger than required. The Trust is considering opportunities to provide their ambulance station on a smaller site in a fairly central position within the city area possibly within a shared facility with other partner services. They are in discussions about the feasibility of joining in with the PCT's planned scheme for Haworth Road in Bradford West.

The current stations and the network of standby points provide a sufficient level of resource for the area and are also expected to meet the increased level of demand from housing and economic growth. Any future demand for additional rapid response facilities in the city over the medium to longer term will be demand led. Typical costs associated with a rapid response facility are approximately £35,000 - £40,000. The delivery of large-scale housing schemes (such as Shipley-Canal Road Corridor, Holme Wood) could result in the delivery of an additional rapid response facility to reflect the shift in critical mass within

²² The Draft Integrated Risk Management Action Plan 2012 – 2013

the city. Engagement with YAS during the phasing and delivery of these larger schemes will be vital to ensure effective service provision.

The estate agents Dacre, Son and Hartley work with the Ambulance Service on their property assets and have a close working relationship with the service. They have confirmed that the current stations and network of standby points provide a sufficient level of resource for the District. It was also confirmed that if the demand increased permanently then Yorkshire Ambulance Service would commission resources based on the forthcoming review. The delivery of new standby points would allow additional resource to be provided at relatively low cost. The cost of delivering any new provision will be met by the Yorkshire Ambulance Service through funding from Central Government and Council tax.

The Police Service in Bradford District is delivered by the West Yorkshire Police Authority. At a district level the overall approach of WY Police is to rationalise and create efficiencies across the police force and deliver services at a more neighbourhood level. The Authority also has a need to find suitable bases for the Neighbourhood policing teams especially within the Bradford South division.

Through dialogue with the Police Service it has been confirmed that the current provision of police services is sufficient to meet planned housing and employment growth. The cost of delivering any new provision will be met by the West Yorkshire Police through funding from Central Government and Council tax.

5.3

City of Bradford, including Shipley and Lower Baildon

5.3.1

Overview

City of Bradford, including Shipley and Lower Baildon is the dominant sub-area within the district and features the City of Bradford and its environs; as well as the established local centres of Shipley and Baildon.

The City of Bradford (which looks broader than just the city centre) is the political, social and economic hub whose influence has wide reaching impacts on the district as a whole and across the Leeds City Region conurbation. With the City acting as focal point for housing and economic growth it is important to reflect on the strengths and weaknesses of the City and recognise the severe polarisation that exists, with deprivation and disadvantage sitting alongside prosperity.

Although accustomed to accommodating large-scale growth, the City of Bradford, including Shipley and Lower Baildon sub-area is scheduled to receive major amounts of new homes and economic development. Avoiding a situation where this increase in demand overpowers existing facilities and services (especially in the light of any existing deficits or poor performing infrastructure) will be the primary focus across the lifetime of the Local Plan. Careful and selective growth, which happens in conjunction with effective provision of new infrastructure, will be required to balance financial, demand, and deliverability pressures.

Summary of Issues

Infrastructure that could pose significant challenge to delivering growth:

Transport; and

Education

Infrastructure where on-going work is required to ensure does not pose significant challenge to delivering growth:

Green Infrastructure, Open Space and Public Space

Sports, Leisure and Recreation

Flood Risk and Drainage

There are no other significant infrastructure issues that will impair achieving the planned housing and employment growth in the City of Bradford, including Shipley and Lower Baildon. A summary of these issues are included in section 5.2.3. Details by each infrastructure type can be found in Appendix A / Baseline Report.

A map detailing the infrastructure issues in this sub area can be found at the end of this chapter.

5.3.2 Transport

Proximity to Leeds and other conurbations sees Bradford City Centre uniquely placed and should allow for the city to play a prominent role within the Leeds City Region and Yorkshire as a whole. The influence of Leeds as a centre for employment, shopping, leisure and other services is felt across Bradford district's transport network and in peak periods the inflow of commuters from Leeds to Bradford is around two thirds the number of movements in the opposite direction²³. The number of trips between Bradford and Leeds, in both directions, creates specific transport problems and exacerbates congestion and overcrowding on the highways network and public transport.

Taking account of stakeholder discussions with CBMDC's Planning, Transportation and Highways Services and qualitative evidence²⁴ it has been confirmed that many parts of the City of Bradford and the Shipley and Lower Baildon areas suffer significant levels of traffic congestion and slow speeds during the peak periods. In terms of existing infrastructure, there are a number of congestion 'hot spot' locations including Harrogate Road/New Line junction, Canal Road Corridor and Fox Corner in Shipley. Congestion problems occur on many routes in the peak periods, including the A647 Leeds Road.

City of Bradford's transport network is dominated by radial routes leading to and from the city centre. These routes are subject to consistently high traffic flows throughout the day and most are heavily congested in the peak periods.

Whilst data on traffic volumes in the Bradford urban area²⁵ shows a recent reduction (down 5.6% between 1999 and 2009); road-based and in particular car-based trips remain proportionately high, placing considerable strain on the highway network; with some parts identified as being at capacity during many parts of the day.

Major delays are experienced on radial routes to Bradford City Centre, on the A6177 Outer Ring Road, on the A650 Tong Street; with knock on consequences for bus routes, road safety, pollution, and severance.

The quantity and quality of existing rail service provision is mixed across the sub-area. Services from Bradford and Shipley to the north of the district (Airedale and Wharfedale Lines) are generally good and benefit from frequent services to Leeds and Bradford, supported by a high quality rolling stock. There are issues with the quality of rail station buildings and facilities in the city centre with schemes proposed to improve the quality of the built environment and public realm at Bradford Interchange and Bradford Foster Square stations. There are also issues with service quality on the rail route between Bradford Interchange and Leeds, via Pudsey, Calderdale and Manchester (Calder Valley Line) with older rolling-stock being used on this route some of which is not fit for purpose.

Levels of planned growth in the sub area are significant. Current proposals for 28,650 additional homes and an extra 105 hectares of employment land by 2030 will result in significant demand for transport services. This overall level of growth in the sub-area, with accompanying transport movements and trip

²³ Metro, West Yorkshire Local Transport Plan 3 2011 - 2026

²⁴ Reference list included in Appendix C

²⁵ Bradford District-Wide Transport Study in Support of the Core Strategy Final Report (October 2010)

generation supplanted on to an already fragile transport network would inevitably compound existing congestion on key routes. This highlights the importance of a comprehensive, multi-modal transport infrastructure investment programme to manage existing capacity constraints, and facilitate new development.

Although the City Centre is forecast to only receive 3,500 new homes over the plan period, the intensification of trips on the transport network that this new population will bring poses challenges. When added to transport movements already entering the city centre from the rest of the district and in-commuting from other locations, the city centre is likely to see an elongation of peak traffic flow periods and increased congestion in periods either side of the peak.

All areas of the City of Bradford face the demands of accommodating considerable housing growth over the plan period. It is recognised in the evidence base and elsewhere that this level of planned growth must be supported by large-scale transport (road and rail) infrastructure improvements. This is confirmed with proposals for major schemes such as a new railway station at Low Moor, improvements to Frizinghall station, a new railway station at Apperley Bridge; as well as new road infrastructure with the Shipley Eastern Link Road, and improvements to the highway network in South East Bradford. These schemes will complement the provision of a high quality bus services connecting other areas of Bradford (e.g. Allerton and Heaton) with the city centre.

Further specific transport infrastructure improvements will also be required to enable and support proposed housing and economic developments in the area particularly along Shipley-Canal Road Corridor, Leeds-Bradford Corridor and in Holme Wood. The Highway Agency and the CBMDC Bradford District-wide Transport Study (2010) have highlighted that the planned growth and development in and around these areas will see significant additional demand and impacts on the A650 route to M62 and on the A647 between Bradford and Leeds ring-roads.

In terms of delivery, improvements to the highway network at Saltaire have already been delivered and the first stage of a public transport hub at Shipley. Transport is in development. Further schemes are being planned to deliver improvements to:

- General capacity and junction improvements to the road network, including Canal Road Corridor, Harrogate Road/New Line junction and Tong Street;
- Bowling Back Lane and the A647 Leeds Road to improve connections to the City Centre from the east;
- City Centre Railway Stations (Bradford Interchange and Bradford Forster Square); and
- Bus operations.

There are a number of proposed schemes that would improve connectivity to and from the City of Bradford with neighbouring local authority areas. For example, investment on the Calder Valley Line seeks to deliver timetable improvements to create rail capacity and eventually seeks to electrify the route. The proposed Next Generation Transport Scheme could link Bradford and Leeds by trolleybus as an extension to the scheme in Leeds which has recently received DfT approval.

Those transport schemes that are directly linked to planned new housing, for example South East Bradford Access Routes to facilitate the urban extension at Holme Wood, will be the subject of on-going dialogue between the Council, the Homes & Communities Agency, the Highways Agency and the developer.

Upgrades to the quality and frequency of transport connections to Leeds-Bradford International Airport will be important to support housing delivery and the long-term economic performance of the sub-area. Plans to improve surface access (including public transport) to and from the Airport continue to be discussed, with direct rail or tram train links to Apperley Bridge and improvements to the junction on Harrogate Road and New Line critical to future growth aspirations.

A full list of the committed and proposed transport schemes have been included in the Infrastructure Schedule in Section 8. The funding situation for the schemes and potential funding mechanisms are detailed in Section 6. The schemes have also been prioritised as essential or desirable, in line with the definition in Section 8.

5.3.3 Education

The provision of school places in the City of Bradford, Shipley and Lower Baildon sub-area is a critical infrastructure issue.

Analysis of the baseline information on provision (included in Appendix A) and discussion with CBMDC's Children's Services has confirmed capacity constraints in both primary and secondary school places across the sub-area. The City of Bradford, including Shipley and Lower Baildon, is deemed to have no or very limited capacity to accommodate new school places. Areas where there are particular capacity issues are in the inner city centre zones of Bradford, especially in postal code areas BD2, BD9, BD17, BD18, which equates to north and west Bradford and Baildon.

The formula used by CBMDC Children's Services to predict school places required as a consequence of new housing developments has been applied to give an indication of the number of school places needed over the Local Plan period. The formula shows that the planned 28,650 new homes will generate the need for 2,005 primary school places and 1,719 secondary school places in this sub-area up to 2030.

This forecast uplift in demand for primary and secondary school places have wide ranging ramifications for existing school institutions. Set against existing capacity levels, the growth in numbers would appear unmanageable and would pose significant risks to maintaining and enhancing the quality of education provision so as to support visions for economic growth.

Children's Services have produced an Education Organisation Plan (EOP)²⁶ which is updated each year. This document has considered the educational needs of the sub-area (and the district as a whole) in more detail. The updated outputs of the EOP will be fed into the next revision to the LIP and the baseline analysis report.

²⁶ EOP is available on the Council website

http://www.bradford.gov.uk/bmdc/education_and_skills/planning_education_provision

Due to a lack of data at the correct spatial scale, it has not been possible to fully quantify the exact gap in education provision at a sub-area level. Therefore quantitative analysis (where available) is supplemented by a qualitative assessment of the educational issues in the City of Bradford, Shipley and Lower Baildon. A more detailed breakdown of the datasets and a presentation of the ‘worst case’ scenario for educational requirements at a district wide level are set out in Appendix A.

Primary School Provision: The level of housing planned for the City of Bradford, Shipley and Lower Baildon would result in the need for approximately 2,005²⁷ primary school places, in addition to places generated by the population in existing housing. At present there are no plans for any new primary schools to be developed within the sub-area. As such, capacity will need to be generated through more efficient use of existing buildings and facilities, with a combination of short-term measures (e.g. introduction of ‘bulge’ classes) helping to manage the shortfall in capacity. In the long term this does not represent a sustainable model for on-going management of provision; and the EOP explains how these changes will be managed in the future.

Secondary School Provision: The sub-area had seven secondary schools in phase three of the Building Schools for the Future Programme²⁸. The loss of this funding has left a number of schools in need of investment to unlock capacity and improve the quality of buildings and facilities. It has been confirmed that Bradford will receive funding from the Priority School Building Programme (PSBP) for two schools in this sub area: Belle Vue Boys' School and Carlton Bolling College²⁹. However, these investment would not help increase the capacity or number of places at these schools.

The recent delivery of free secondary schools has helped increase the number of places but there is still incapacity issues remained in this sub area. Also, given the nature of free schools, they are likely to only have a limited impact in terms of overcoming the disparity in capacity across the different locations in the sub-area.

The emerging Local Plan Core Strategy seeks to focus 26,000 new homes in the urban area of Bradford, which will further exacerbate existing uncertainties over capacity. The level of housing planned for City of Bradford, Shipley and Lower Baildon would result in the need to provide approximately 1,719 secondary school places, in addition to places generated by the population in existing housing.

5.3.4 Green Infrastructure, Open Space and Public Space

The Bradford Open Space, Sports and Recreation Study³⁰ and further investigations by the CBMDC Department of Environment and Sport indicate that communities across the City of Bradford, Shipley and lower Baildon sub-area are adequately provided for in terms of the overall quantum of existing green and open spaces. However, improving the standard of existing green space is deemed

²⁷ Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

²⁸ Belle Vue Boys, Belle Vue Girls, Carlton Bolling College, Laisterdyke BEC, St Bede's, St Josephs and Thornton Grammar school

²⁹ <http://www.education.gov.uk/schools/adminandfinance/schoolscapital/a00209336/priority-school-building-programme> CBMDC confirmation

³⁰ CBMBC, Bradford Open Space, Sports and Recreation Study (2006)

vital to enhancing the quality of place and quality of the residential offer across the sub-area and overcome the negative impacts and lack of coherence brought about due to the legacy of an industrial heritage and a dense urban built environment.

Since the Bradford Open Space, Sports and Recreation Study was completed additional open space has been provided (e.g. play areas) and existing facilities have been improved (e.g. Roberts Park and Lister Park). Investment to improve open space in the sub-area has resulted in Lister Park and Harold Park achieving Green Flag park status.

However, even with recent improvements it has been acknowledged that there remains a slight deficit in the number of play areas in north and south Shipley and a gap in park and garden provision in Bradford East. This is mirrored in work carried out by Natural England regarding access to natural greenspace in certain parts of urban Bradford. Evidence from stakeholders has also identified that the City Centre is deficient in green open space in terms of quantity, quality and accessibility. Bradford City Centre requires improvements to levels of connectivity alongside enhancements to the quality of the public realm to achieve greater prosperity and contribute towards urban cooling

With 28,650 new homes identified for the sub-area, of which 11,000 are proposed for South East and North East Bradford, there will be significant additional demand and requirement for additional park and garden provision.

Recent delivery of City Park and the definition of the Shipley-Canal Road Corridor Linear Park Proposals demonstrate a track record of delivery and are critical aspects in the Council's long term ambition of linking various schemes together to provide a continuity of theme adding distinctiveness to the sub-area's profile.

As discussed in section 5.2 the Council is set to start working on developing a District-wide Open Space Strategy in 2013. Given the Open Space Strategy is still to be finalised; it has not been possible to directly define approved or planned schemes. However, qualitative discussions with the Department of Environment and Sport have identified the following priorities:

A new park in East Bradford: to tackle the deficit in open space in this location. East Bradford is a densely populated area; therefore the ability to find sites for new parks is limited. The new park would also provide a new park for planned housing growth. It was highlighted by the CBMDC Department of Environment and Sport that a new park would have excellent regeneration benefits and they were looking at working with in-communities to use land assets and regeneration schemes to locate a potential site.

An aspiration for a new Country Park in the Tong area: This is also set out in the emerging Core Strategy as the Leeds-Bradford Country Park. This would serve the proposed new housing at Holme Wood and improve the quality of place in this area. Any proposal would need to link into any proposal for the release of Green Belt land at Holme Wood. The vision for the area and cross-boundary links would need to be agreed with Leeds City Council.

To create a Linear Park along Canal Road: which is also set out in the emerging Core Strategy. The linear park will support planned housing and employment growth (3200 homes) and aid regeneration. A Sustrans cycleway and

footpath is currently being planned by the CBMDC, this will begin the concept of linear park, which can be further enhanced in the future.

Other aspirations to improve access within and across the City of Bradford, Shipley and Lower Baildon – particularly in accessing parts of Airedale are contained within the Rights of Way Improvement Plan, which recognises the ROW network as a key asset in this regard. One such example would be the Dalesway footpath link which links Forster Square in central Bradford out along the Canal Road hillside to Shipley and then over to Ilkley to join the Dalesway proper.

5.3.5 Sports, Leisure and Recreation

Evidence from the Bradford Open Space, Sports and Recreation Study³¹ indicate that the majority of the City of Bradford, Shipley and lower Baildon sub-area has adequate supply of outdoor facilities and playing pitches to cater to current demands albeit that there are localised pockets of under-provision.

By way of example there is an existing deficiency in the number of cricket pitches, with increasing demand at peak times. This is particularly acute in Bradford North, South and West. There is also an identified deficiency of designated mini and junior football pitches in Bradford South. Popularity and increasing demand for rugby league in Bradford South has led to an identified shortfall in the number of existing rugby league pitches.

The Council is currently carrying out a Playing Pitch Strategy which will be completed in mid-2013. The Playing Pitch Strategy will update the evidence base in terms of deficits in sports provision and set out detailed outdoor sports needs throughout the district

In terms of indoor sports facilities, the sub area has a wide range of privately, publicly and voluntarily run sports facilities; however the supply of these sports facilities is below national averages and a number of public sports facilities and swimming pools are no longer fit for purpose with facilities operating at or approaching 100% capacity.

The Department of Environment and Sport is currently reviewing provision to develop a new Sports Facilities Strategy for the District. The strategy will provide an evidence base in terms of deficiencies in sports facilities provision against current and predicted levels of population to develop priorities for investment and future needs.

Given the large-scale level of housing and employment growth within the sub-area the current shortfall in provision in certain locations and across certain sport/leisure/recreation types will be amplified. Evidence also shows that across the sub-area there is significant difference between the quality of service provision and facilities in the public and private sectors.

³¹ Bradford Open Space, Sports and Recreation Study (2006)

Although strategy documents are not yet completed initial evidence would suggest need for:

- An accessible, city centre swimming pool facility to sit at the head of the District's hierarchy of provision
- Consideration for a revised network of community sports and swimming pool facilities located around centres of population, in South Bradford, north of Bradford City Centre, and East Bradford
- Rugby league pitches in Bradford South. The Department of Environment and Sport is currently investigating opportunities to use an existing school site in Wyke, which has been vacated as part of the BSF programme, with plans to redevelop the existing pitches.

It had been envisaged that the BSF initiative would have resulted in additional sport, leisure and recreation facilities (set within schools but accessible by the public). Where BSF schools have been cancelled, there is increasing pressure on public and private facilities to accommodate this additional demand.

Details of the costs of providing these facilities and actual and potential funding mechanisms are set out in Section 6 and summarised in the infrastructure schedule in Section 8.

5.3.6 Flood Risk and Drainage

The Council's Strategic Flood Risk Assessment (SFRA)³² highlights that the delineation of the high-risk zone within the City of Bradford, Shipley and Lower Baildon sub-area is relatively straightforward, and does not warrant significant hydraulic modelling for the purpose of a general risk assessment. Whilst the accuracy of the floodplain extent needs to be improved and a programme of hydraulic model improvements is underway by the Environment Agency, the delineation of the floodplain is well understood as a result of recent flood events.

The existing evidence base shows that the flood risk areas in Shipley and Lower Baildon follow the primary watercourses of the River Aire, the Leeds-Liverpool Canal and various other streams and becks, whilst most of the areas of flood risk within the City of Bradford are located in the sub-catchment areas of the Bradford Beck (including Eastbrook) in and around the city centre.

The 'natural' flood plains as shown in EA's flood risk maps are illustrated as if there were no flood defences in place, although where they do exist, higher levels of protection are shown. For example, in order to alleviate flood problems within Bradford City Centre, a substantial flood alleviation scheme was constructed in 1993, effectively diverting Bradford Beck and Westbrook (Bradford West) away from the city centre flood risk area. The current indicative floodplain map does not account for the presence of this scheme.

Although the Bradford Beck diversion reduced the extent and severity of flooding that could be expected within the identified flood risk area in city centre and surrounds, a proportion of the city centre remains within the high risk zone. The

³² BMDC (2003) Bradford Strategic Flood Risk Assessment. Report dated March 2003.
JBA Consulting

flood affected area is not considered functional floodplain; however it is also not defended to an appropriate standard. Because the precise zoning is difficult to categorise, a default position has been reached with the area classified as Zone 3a.

Through a dialogue with the Environment Agency and the CBMDC Drainage Team it is has been confirmed that the City of Bradford has an overflow tunnel to deal with flooding from the Bradford Beck. The CBMDC Drainage Team has developed a model of the Beck and are able to factor any new development into this model to confirm the impact on flood risk. There may be some flood risk along Canal Road. There are no flooding issues that are considered severe enough have resulted in worked up Environment Agency schemes.

There is technically no gap in Flood Risk and Drainage infrastructure; there will be requirement for on-site solutions and further development of options including sequential assessment through the Site Allocation DPD and Area Action Plans.

5.3.7 Other Infrastructure Types

Overview

Based on the baseline analysis information, the remaining infrastructure types have been identified as not having any 'significant' capacity constraints on existing infrastructure, nor has it been identified that they require 'significant' intervention to accommodate additional demands generated by growth proposals as set out in the emerging Local Plan Core Strategy.

Furthermore, many of the following infrastructure types are the responsibility of private delivery agencies, such as Yorkshire Water. Reflecting on their investment plans and statutory responsibilities it is considered that these infrastructure types do not pose a significant risk or constraint to CBMDC's plans to deliver the housing and employment growth set out in Section 4. Appendix A includes a full account of the evidence base used to inform the analysis of infrastructure types in this section.

Utilities

Electricity Supply: There are no sub area specific infrastructure issues relating to electricity supply, other than District wide issues identified in section 5.2

Water Supply and Treatment: It has been confirmed through the previous comments received on the Core Strategy and LIP and a further discussion with a stakeholder from Yorkshire Water that the provision of water treatment and supply are adequate to meet the proposed 28,650 new housing and employment growth in this sub area. The Yorkshire Grid provides adequate water supply for Bradford and Esholt Wastewater Treatment Works has enough capacity to meet all predicted water treatment requirements.

Telecommunications: The City of Bradford will benefit from investment through the Urban Broadband Fund, to become one of the UK's first super-connected cities. £14.4 million of funding³³ has been confirmed for Leeds and Bradford.

³³ http://www.culture.gov.uk/news/news_stories/8931.aspx

Even with the planned improvements to broadband in the City of Bradford there is a need to enhance telecommunication infrastructure to meet planned housing and employment growth, and to serve new sites directly. These improvements would be market-led and local strategic infrastructure would be needed at the access layer, which is the cabling from the home to street cabinet, as well as cabling from the street cabinet to the exchange. The cost of these improvements would need to be met by a developer as part of their scheme.

Waste and Recycling

Following the termination of the PFI process, the Council has approved the Municipal Waste Minimisation and Management Strategy at Council's Executive Committee on 13th January 2015. This new strategy considers what further actions the council could take to move the management of its waste to more sustainable levels, minimise waste, boost recycling and thus reduce the amount of residual waste that requires treating via a waste treatment procurement exercise. This may or may not result in the delivery of a new waste management facility within the District, dependant on the recommendations of the procurement exercise.

Community and Cultural

City of Bradford is well served by community and cultural facilities reflecting its position as the main urban area in the district. Facilities such as the National Media Museum, Alhambra Theatre, St George's Hall, two Art Galleries and the Central Library highlight the city centre's role in raising the profile of tourism and the visitor economy in the district and acting as a location for the clustering of community and cultural facilities. Outside the city centre, Cartwright Hall, Bradford Industrial Museum, Cliffe Castle, Bolling Hall, Salt's Mill and the Saltaire World Heritage Site near Shipley adds variety to the cultural offer of the area.

Evidence gathered from the CBMDC Libraries Section highlights a number of libraries that are in need of maintenance, particularly the Great Horton Library. In 2009 a review of services resulted in the operation of four libraries (with opening hours of less than 10 hours a week) being transferred to community groups and one community being served by a mobile library. Further details are provided in the baseline report in Appendix A.

Subsequent to the 2009 review it has been confirmed that there are emerging plans to move the Great Horton Library into Great Horton village hall to allow the site to be disposed of by CBMDC Asset Management team.

The CBMDC Bereavement Services constantly monitor the take up of cemetery places and crematorium provision. Monitoring data is set out in Appendix A. Through dialogue it was noted that there is a requirement to identify a site for a new crematorium in Bradford South. A modern facility meeting the latest guidelines and standards is necessary (e.g. inclusive of processes for mercury filtering) and it has been identified that any such new facility should be more closely located to demand. Plans are for the crematorium to offer a feeling of tranquillity in a semi-rural setting. There are a number of high quality facilities in West Yorkshire and it is noted that these services are being used more regularly than the older crematorium in Bradford.

The cost of this facility would need to be met by Council budgets, as set out in detail Appendix A and summarised in Section 6 and the Infrastructure Schedule in Section 8.

Health

The City of Bradford, Shipley and Lower Baildon is covered by two Clinical Commissioning Groups; Bradford City (broadly covering the GP's surgery's and hospitals inside the ring road) and 3 Bradford District (the rest of Bradford and Shipley).

The Airedale and Bradford NHS Strategic Plan 2010/14³⁴ and Joint Strategic Needs Assessment 2012³⁵ both confirm that there are a number of health issues affecting this sub area. The relative poverty of this area and overcrowding of housing, related to both poverty and cultural choice result in a relatively high requirement for health services. Through discussions with a representative from NHS Public Health it was confirmed that the NHS have invested in improving health services in this area over the last ten years and have the infrastructure in place to deliver the required level of health provision. It was noted that the NHS receive additional funding related to deprivation and therefore the CCG are able to target additional resource at the more deprived parts of Bradford.

There are no sub area specific infrastructure requirements, other than the overarching requirements set out in section 5.2.

Emergency Services

The Fire Services in Bradford District is delivered by the West Yorkshire Fire Service. Fire and rescue services in Bradford, Shipley and Lower Baildon area are delivered from the five whole time stations located in Bradford (District HQ), Shipley, Idle, Fairweather Green and Odsal. These stations are operational 24 hours a day, seven days a week.

There are no sub area specific infrastructure requirements, other than the overarching requirements set out in section 5.2.

The Ambulance Service in the Bradford District is delivered by the Yorkshire Ambulance Service. The ambulance service in Bradford, Shipley and Lower Baildon is provided from Bradford Station and three other standby points located within the area.

Bradford ambulance station is well positioned but the site and facility is larger than required. The Trust is considering opportunities to provide their ambulance station on a smaller site in a fairly central position within the city area possibly within a shared facility with other partner services. They are in discussions about the feasibility of joining in with the PCT's planned scheme for Haworth Road in Bradford West.

The delivery of large-scale housing schemes (such as Shipley-Canal Road Corridor, Holme Wood) could result in the delivery of an additional rapid response facility to reflect the shift in critical mass within the city. Engagement

³⁴ Airedale and Bradford NHS Strategic Plan 2010/14

³⁵ Airedale and Bradford NHS Joint Strategic Needs Assessment (2012)

with YAS during the phasing and delivery of these larger schemes will be vital to ensure effective service provision.

The Police Service in Bradford District is delivered by the West Yorkshire Police. Bradford South division of the West Yorkshire Police Service covers most of the City of Bradford area. Shipley and part of Baildon falls within the Airedale and North Bradford division. There is also a police station in Shipley.

The Authority also has a need to find suitable bases for the Neighbourhood policing teams especially within the Bradford South division. Large-scale housing schemes (e.g. Shipley-Canal Road Corridor, Esholt, and Holme Wood) could pose service delivery issues due to the changing residential profile and critical mass of the urban area. However it was felt that the appropriate phasing of such schemes would allow the commensurate level of additional policing to be delivered.

5.3.8 Summary of Infrastructure Planning and Delivery across City of Bradford, Shipley and Lower Baildon

The table below sets out infrastructure issues for the City of Bradford, Shipley and Lower Baildon area. It identifies when solutions and further work is required to deliver improvements and to enable the successful delivery of housing and economic growth.

		Time Scales		
		Short Term	Medium Term	Long Term
Transport	Reducing congestion on key parts of the road network and improving connectivity within and beyond the district are important infrastructure issues.	Work with neighbouring local authorities to implement the West Yorkshire Plus Transport Fund.	Implement strategic and site specific mechanisms to enable delivery of priority schemes.	Implement revised framework and mechanisms reflecting any new or alternative funding and investment opportunities.
		Investment in the District's key road network, in particular in the outer ring roads and Shipley - Canal Road corridor is vital to enable and support regeneration, housing and economic growth in the area.	Undertake technical assessment to determine priorities for strategic and site specific transport infrastructure investment.	Review progress; re-assess priorities to establish correct framework and explore mechanisms to deliver long term scheme aspirations.
		Delivering improvements to highways and public transport services is key to enable specific housing-led regeneration in parts of the area.	Option generation for site specific schemes, understanding potential alternative solutions, and decisions on priorities.	
		CBMDC are seeking to deliver 28,650 new homes in this sub area up to 2030.	Review the scope and undertake feasibility	

		Time Scales	
	Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030
	<p>This will clearly impact on the congestion of key routes and capacity improvements and new infrastructure will be required to accommodate this growth. Council has identified a number of transport schemes that seek to combat the above congestion issues or create new infrastructure to facilitate housing delivery.</p> <p>Funding from the Local Transport Plan is being used to deliver improvements to Saltaire Roundabout and the first stage of a public transport hub at Shipley Station. Transport schemes are being developed to deliver improvements to Canal Road (with a first phase now fully funded), capacity and junction improvements to road network, improvements to the city centre railway station and bus improvements. Options for improvement to the A647 Leeds Road Corridor are being developed that would improve connections to the city centre from the east.</p>	<p>Assessment for potential major capital schemes e.g. Canal Road improvements, Tong Street improvements, city centre stations masterplan.</p> <p>Assessment to align with outcomes for district and the LCR – i.e. city centre regeneration, Shipley-Canal Road corridor, Leeds-Bradford corridor development.</p> <p>Set framework for mechanisms to deliver strategic and site-specific schemes, reflecting both public and private funding opportunities.</p>	<p>Deliver short lead in schemes that are funded through LTP or WY Plus Transport Fund</p> <p>There are a number of schemes that would improve the connectivity of the</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
	<p>City Centre with neighbouring local authority areas. For example there are proposals for improvements to the Calder Valley Line, including timetable improvement to create capacity and eventually seeks to electrify the route. The Next Generation Transport Scheme could link Bradford and Leeds by trolleybus. There are also transport schemes that are directly linked to planned new housing. For example at Holme Wood a new access road would be required to facilitate planned housing growth.</p> <p>A list of the committed and proposed transport schemes have been included in the Infrastructure Schedule in Section 8. The funding situation for the schemes and potential funding mechanisms are detailed in Section 6. The schemes have also been prioritised as essential or desirable, in line with the definition in Section 8.</p>			
Utilities	<p>There are no major utilities infrastructure issues in the City of Bradford, Shipley and Lower Baildon</p>	Small scale local reinforcement to support	Small scale local reinforcement to support	Undertake review of networks to ensure capacity exists or can be provided for

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2033	2033-2030
	Area. Strategic reinforcement of the network therefore is not required.	development.	Review delivery plans for large-scale developments to ensure requirements and scale are included in investment plans for utility providers.	to facilitate long term growth objectives.
Telecommunications				
	There are no major communications and ICT infrastructure issues in the City of Bradford, Shipley and Lower Baildon Area.	Small scale local reinforcement to support development.	Proactive move to bring Next Generation Access operators to district and upgrade provision.	Proactive move to bring Next Generation Access operators to district and upgrade provision.
			Implementation of the Urban Broadband Fund. Bradford can become one of the UK's first super-connected cities. £14.4 million of funding has been confirmed for Leeds and Bradford.	Undertake review of networks to ensure capacity exists or can be provided for to facilitate long term growth objectives.
Flood Risk		The historic flooding issues in Bradford do not warrant significant defensive infrastructure measures to be taken.	Finalise and complete Bradford SFRA Level 2 Study and feed into Allocations DPD and Area	Re-examine flood risk and drainage issues in light of climate change and development patterns.
				Re-examine flood risk and drainage issues in light of climate change and development patterns.

		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2023	2023-2030
	<p>The Emerging Core Strategy and future Allocation DPD and Area Action Plans for the City Centre and Canal Road will advocate approach to development which will limit impact of flood risk.</p> <p>Action Plans.</p>	<p>Proactive move to explore potentials for alternative water and drainage management system e.g. rainwater harvesting, SUDS. This can be supported by close working with the Drainage team in CBMDC, which will become the SUDS approval authority from April 2013.</p>	<p>Develop and implement policies to ensure alternative water and drainage management system facilitates appropriate developments.</p>	<p>CBMDC will work with the Environment Agency and Yorkshire Water to consider innovative flood solutions for Canal Road and City Centre.</p> <p>The existing model of the Bradford Beck will be used to indicate flood risk and support development in the city centre.</p>

		Time Scales	
	Short Term	Medium Term	Long Term
	2013-2018	2018-2033	2023-2030
Waste Management	<p>New waste management infrastructure is needed to support moving waste up the waste hierarchy and to divert away from landfill.</p> <p>The infrastructure required to meet Bradford District's waste needs up to 2030 is set out in emerging Waste Management DPD. It is planned that this will be adopted in 2016.</p>	<p>Deliver the approach set out in the Waste Management DPD, including the delivery of waste facilities on allocated sites.</p> <p>Monitor and review waste arisings. Explore opportunities for behavioural change.</p> <p>Monitor and review reuse and recycling rates being achieved.</p> <p>Monitor and review cross boundary movements of waste.</p>	<p>Monitor and review waste arisings and performance of new waste management facilities.</p> <p>Explore further opportunities for behavioural change.</p> <p>Deliver the policies and sites set out in the Waste Management DPD.</p> <p>Monitor and review reuse and recycling rates being achieved.</p> <p>Monitor and review cross boundary movements of waste.</p>
Green Infrastructure and Open Space	<p>Broadly speaking the quantity of green space is sufficient to cater to demands of the area currently. There is a minor deficit in East Bradford.</p>	<p>The delivery of a Sustrans Cycleway along Canal Road. This will complement the development of the proposed linear park along the corridor</p>	<p>Deliver the priorities set out in the Open Space Strategy and Core Strategy.</p> <p>Further development of the</p>

		Time Scales		
	Short Term	Medium Term	Long Term	
Summary	2013-2018	2018-2023	2023-2030	
Issues over quality and accessibility.	<p>and will be further developed through Open Space Strategy and the Canal Road Area Action Plan.</p> <p>The development of an Open Space Strategy to identify the priorities and costs for open Space Provision over the next 15 years.</p> <p>This will include:</p> <ul style="list-style-type: none"> - Further feasibility work on a new country park in Tong. - Investigate options for the open space deficit in East Bradford. - Continue to develop the linear park along Canal Road. <p>Delivery of Rights of Way improvements as set out in ROWIP</p> <p>Appropriate open space policies will be developed through the emerging Core Strategy to link with the priorities in the open space strategy. This will provide the framework for delivering</p>	<p>Canal Road Linear Park through the Bradford Canal Road Area Action Plan.</p> <p>Continued enhancement and improvements of green space and play areas through on site contributions, council budgets and potentially CIL for strategic place making green infrastructure, such as the new country park.</p>	<p>determine whether strategic roles and functions of green infrastructure and open space have altered.</p> <p>Update strategies accordingly to review quality, accessibility and quantity of infrastructure.</p>	

		Time Scales	
	Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030
Sports, Leisure and Recreation	<p>Quantity of outdoor sport, leisure and recreation facilities is broadly enough to meet current requirements.</p> <p>There is a deficiency of designated mini and junior football pitches across the District, including the urban area of Bradford. There is capacity in Bradford North to meet demand, but not enough pitches in Bradford South</p> <p>Some over quality and accessibility of facilities.</p> <p>New swimming pool required in city centre and a new Rugby League facility in South Bradford.</p>	<p>A playing pitch strategy and audit of sports facilities will feed into the planned Open Space Strategy. This will highlight gaps in sports provision and an action plan to fill the gaps.</p> <p>CBMDC are looking at the use of an existing school site in Wyke which is being vacated as part of the BSF programme. To deliver a new Rugby League facility for South Bradford.</p> <p>Explore opportunities for co-location of facilities and joint service delivery options.</p>	<p>Implement Open Space Strategy and Core Strategy Policies to deliver facilities in line with Council objectives.</p> <p>Review the provision of sports, leisure and recreation facilities to see if they match housing and economic growth objectives.</p> <p>Deliver long term strategy to drive up quality, deliver multi-purpose facilities and upgrade quality and accessibility of existing facilities.</p>
			Undertake feasibility study and prioritise options for

		Time Scales	
	Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030
Community and Cultural	<p>new City Centre swimming pool.</p> <p>Appropriate sports / open space policies need to be developed through the emerging Core Strategy, to provide the framework for delivering either on site green space or a contribution to off-site green space.</p>	<p>The delivery of improvements to the Central Library, to remodel the first two floors and bring the top two floors up to health and safety standards are planned for 2013. CBMDC capital funding has been secured for these works.</p> <p>Focus is on Bradford City to continue being central hub for community and cultural offers in the District.</p> <p>Some community and cultural infrastructure are underutilised and not fit for purpose requiring improvements to quality and accessibility.</p>	<p>Continue to enhance and maintain existing facilities.</p> <p>Explore wider funding and investment opportunities.</p> <p>Secure funding and identify site for a new crematorium in South Bradford.</p> <p>Explore opportunities for co-location of facilities and</p>
			Implement upgrades to quality and deliver new provision in line with Council objectives.

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
	<p>South Bradford. The CBMDC Bereavement Services are currently searching for an appropriate site. Coordinating and clustering of existing facilities and resources is required while ensuring quality across the district.</p>	Joint service delivery options.		
Education	<p>There is a current issue related to primary and secondary school places in the City Of Bradford, Shipley and Lower Baildon.</p> <p>The areas where there are particular capacity issues are in particular the inner city of Bradford, in postal code areas BD2, BD9, BD17, BD18, which is broadly north and west Bradford and Baildon.</p>	<p>Deficit in primary and secondary school places to be tackled through primary school extension programmes, which runs from 2013 to 2018.</p> <p>Identify mechanisms to tackle predicted shortfall of secondary school places from 2016 onwards.</p>	<p>Identification of any new schools that may be required following the primary school extension programme.</p> <p>Consider capacity of secondary schools and if any capacity improvements are needed.</p>	<p>Continue to monitor children number in the area and school provision and plan accordingly, with consideration of the areas where new housing will be focused.</p>
				<p>Continued monitoring of children in the area and capacity issues on a school by school basis.</p> <p>The delivery of free secondary schools has helped but there is still incapacity issues remained in this sub area. There will also be a need to increase primary school places over the plan period.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2030	2023-2030
	<p>The majority of the demand for new school places is being generated by the population living in existing housing. A detailed calculation of the likely places generated from new housing is summarised in section 5.1.3, the baseline in Appendix A and the calculation sheet in Appendix B.</p>	<p>Close working between the CBMDC planning policy and Children's Services to consider impacts of allocations from the Canal Road and City Centre Area Action Plans and future Allocations DPD.</p>		
Health	<p>Housing and economic growth factored into service delivery up to 2030 by the NHS Commissioning Board.</p>	<p>The NHS is moving towards more community based care, which will result in less need for premises.</p> <p>The Clinical Commissioning Groups (CCGs) will commission the services needed for GPs and hospitals in Bradford.</p>	<p>On-going maintenance and provision of health services linked to population growth and needs in Bradford District.</p> <p>Review service provision to ensure facilities can accommodate growth and patient numbers beyond 2023.</p> <p>This sub area is covered by two CCGs and these groups will meet the health needs in the District.</p>	

		Time Scales	
		Short Term	Medium Term
		2013-2018	2018-2030
Emergency Services	<p>Current and planned provision sufficient to meet demands of potential growth.</p>	<p>On-going review of emergency service provision to deliver efficiencies.</p> <p>Investigate opportunities for co-location of facilities and joint service delivery options.</p> <p>Liaise with Emergency Service providers to understand the implication of large scale allocations in Allocations DPD and the Area Action Plans.</p>	<p>On-going delivery of emergency services with consideration of population growth and distribution.</p> <p>Review service delivery arrangements, reflecting on housing and economic growth through liaison with emergency service providers.</p> <p>Consider how specific large-scale housing developments (Shipley-Canal Road Corridor, Holme Wood East) may change service delivery. This is likely to relate to the increase in personnel or new vehicles rather than the provision of new stations.</p> <p>Proactive approach to ensure growth plans are factored into emergency service plans and strategies for improving service delivery.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030	
			Investigate further opportunities for co-location of facilities and joint service delivery options.	

Bradford City, Shipley and Lower Baildon: Identified Infrastructure Requirements

TRANSPORT

The following schemes are required to meet projected housing and employment;

- Shipley Eastern Link Road
- Fox Corner, Shipley
- Saltaire Roundabout

SHIPLEY

TRANSPORT

There are a wide range of transport schemes that are required to deliver the planned housing and employment growth:

- Bradford City Centre Station Improvements;
- West Bradford Radial Routes;
- Harrogate Road / New Line, Greengates - Junction Improvement;
- Low Moor Station;
- Apperley Bridge Station;
- South East Bradford Link Road;
- LTP Hubs Programme;
- Canal Road;
- Calderdale Rail Improvements;
- Tong Street Improvements;
- Bradford - Huddersfield Corridor Improvements;
- Inner Ring Road Stage 4/5;
- Tram-train or fixed rail to Leeds Bradford International Airport;
- Bowling Back Lane Improvements;
- South Bradford - Shipley: signal priority and bus lane provision;
- West Bradford Bus Corridor Improvements;
- Leeds - Bradford New Generation Transport.

These schemes could be funded through the West Yorkshire Plus Transport Fund, LTP 3 funding or Development Contributions (CIL).

GREEN INFRASTRUCTURE, OPEN SPACE AND PUBLIC SPACE

The following green infrastructure is required to meet projected housing and employment needs in this sub area;

- A new park in East Bradford, working closely with in-communities;
- A Leeds - Bradford country park in the Tong area;
- New outdoor recreational facilities where planned housing growth puts strain on existing resources;
- Potentially a new park in Silsden linked to planned housing growth;
- Development of the linear park from Shipley to Bradford, along the Canal Road Corridor.

BRADFORD CITY

COMMUNITY AND CULTURAL

The Bradford Council Bereavement Service have confirmed a new crematorium facility is required in south Bradford. This would need to be funded through the CBMDC Bereavement budget.

COMMUNITY AND CULTURAL

The central library is in need of renovation to make it fit for purpose. CBMDC funding has been allocated for these improvements and work is scheduled for 2013.

EDUCATION

There is existing capacity issues in Bradford City. New housing will create demand for additional primary and secondary places across Bradford City. The new school places will be funded by the Basic Needs Allocation (capital funding for education provided to CBMDC) and developer contributions (through either CIL or S106).

SPORTS, LEISURE AND RECREATION

Delivery of a new 25 metre pool in Bradford City Centre. This could be funded by CMBDC budget or CIL.

WASTE AND RECYCLING INFRASTRUCTURE

A new municipal waste management facility is planned in Bowling Back Lane, Bradford. This will be funded through a PFI contract.

Key

Identified Infrastructure Requirements:

Capacity Improvements to Education Infrastructure



Transport Improvements



Community and Cultural Provision



Waste and Recycling Infrastructure



Green Infrastructure, Open Space and Public Space



Sports, Leisure and Recreation



5.4 Airedale

5.4.1 Overview

Airedale is a diverse and multi-faceted corridor extending towards the north-west of the district; away from the city centre of Bradford.

It features settlements which have reached a critical mass and are forecast to grow further, as well as smaller market towns in need of investment and regeneration to enable them to fully shift towards a post-industrial economic age. Airedale has a ground swell of activity from local small and medium enterprises – the challenge is to harness this burgeoning potential and ensure infrastructure (particularly transport, ICT and green infrastructure) works to bolster existing assets and overcome current deficiencies.

Across Airedale there is also scope to deliver significant housing growth, either through expansion of principal towns or through the selective release of Green Belt land in smaller villages which occupy strategic locations on the public transport network. Any growth proposals and expansion at key poles will need to reflect the availability of infrastructure funding, so as to ensure growth and expansion happens in step with additional capacity provisions.

Summary of Issues

Infrastructure that could pose significant challenge to delivering growth:

- Utilities
- Transport

Infrastructure where on-going work is required to ensure does not pose significant challenge to delivering growth:

- Flood Risk and Drainage
- Green Infrastructure, Open Space and Public Space
- Sports, Leisure and Recreation
- Education

There are no other significant infrastructure issues that will impair achieving the planned housing and employment growth in Airedale. A summary of these issues are included in Section 5.2.8. Details by each infrastructure type can be found in Appendix A / Baseline Report.

A map detailing the infrastructure issues in this sub area can be found at the end of this chapter.

5.4.2 Transport

Transport connectivity in Airedale is mixed, with some aspects of the transport network performing well, whilst other components suffer from poor performance characterised by capacity constraints, journey time unreliability and lack of integration.

In terms of road based movements the north-south radial route leading to and from the city centre features prominently. This route (A650) is busy for many parts of the day and heavily congested in the peak periods, with the heaviest flows occurring on the route from Airedale through the city centre and onwards to the national motorway network. Significant pockets of road based traffic congestion occur around Keighley, especially on the A650 Hard Ings Road. The recent Bingley Relief Road has unlocked some capacity on the Bingley section of the A650 and has reduced traffic congestion around Bingley town centre. The highway network in Bingley can be deemed fit for purpose and is meeting current demands.

Airedale is well served by rail connections, with regular services to Leeds, Craven and the Lancashire. The railway lines are characterised by frequent services to mainline stations and feature modern, high quality electric rolling-stock. Evidence indicates that there are some capacity constraints on peak services particularly on journeys into Leeds.

The Airedale sub-area is the focus for large-scale housing and employment growth (8,350 new homes and nearly 30 hectares of employment land). This new development will generate significant increased demand for transport services within Airedale, along the Airedale Corridor, and connecting back to the city centre and other conurbations in West Yorkshire and Lancashire.

The nature of the topography and geography of the sub-area means that there has long been a requirement to shift towards more sustainable modes of transport and connectivity so as to maintain growth. The focus for new transport infrastructure is therefore correctly focused on driving up demand for different transport modes, reducing overall trips, average distance travelled and average travel time.

Nevertheless it is clear that the existing transport network will require major investment to accommodate the level of increased demand and additional trip generation instigated by growth in the sub-area. Particular growth poles in Keighley, Bingley and Silsden will require new transport infrastructure to underpin their development potential and help to unlock growth.

Specific proposed transport infrastructure schemes include:

- A Keighley traffic management scheme including a gyratory and the dualling of Hard Ings Road;
- Bus rail interchange facilities at Steeton and Silsden Station and Bingley station;
- Critical road infrastructure in accordance with the Connecting Airedale Transport Improvement Project and highway access to developments in Silsden. Enhanced bus network to/from Steeton and Silsden bus rail interchange and a walking / cycling bridge linking Silsden to the station and Steeton
- Improving public transport access between Airedale, City of Bradford including Shipley and Lower Baildon, Craven and Leeds, as well as improving public transport within and between the towns and villages in Airedale, including rail stations, cross valley links, cycleway and public rights of way improvements.

A full list of all the committed and proposed transport schemes is included in the Infrastructure Schedule (section 8) and potential funding mechanisms are set out in Section 6.

5.4.3 Utilities

5.4.3.1 Electricity

Through review of the Northern Powergrid Long Term Development Statement³⁶ and informal discussions with Northern Powergrid it has been confirmed that the primary substation at Silsden is likely to need additional reinforcement, some at the secondary 11kV level and eventually at the primary 33kV level at Silsden. Given the planned housing growth of 1,000 homes in Silsden it is likely that improvements to the primary 33kW substation will be required. However this depends on the phasing of development. A number of smaller (fewer than 100 dwelling schemes) could be served through improvements to the 11kV secondary substation. The costs of strategic reinforcements (of a primary substation) would normally be in the order of £2m to £5m for strategic (primary substation) reinforcements and between £20k and £250k for local (secondary substation) reinforcements. These costs would either be paid by the housing developer or partly funded by Northern Powergrid. Early dialogue with Northern Powergrid would be advisable when further details of allocation and phasing are available.

5.4.3.2 Gas

There are no sub area specific infrastructure requirements, other than the overarching requirements set out in Section 5.2.

5.4.3.3 Water Supply and Treatment

It has been confirmed through Yorkshire Water's previous comments received on the Core Strategy and LIP and a further discussion with a stakeholder from Yorkshire Water that the Yorkshire Grid provides adequate water supply for Airedale. It was also confirmed that the Aire Valley Trunk Sewer is at capacity and that they Yorkshire Water can no longer accept any new foul or surface water flows to this sewer. The Aire Valley Trunk Sewer collects the foul drainage from the areas of Kildwick, Glusburn, Cross Hills Sutton-on-Craven, Steeton and Silsden.

Yorkshire Water has commented that any increase in flows would create an unacceptable risk in pollution to the local aquatic environment. The Environment Agency has also raised this issue.

It has been confirmed through the previous comments received on the Core Strategy and LIP and a further discussion with a stakeholder from Yorkshire Water that Yorkshire Water is currently producing a Drainage Area Plan for the Aire Valley Trunk Sewer Catchment, to fully understand the flows draining to the sewer, including historic land drainage connections and cross connections, plus the implication of future development.

³⁶ Northern Powergrid Long Term Development Statement, November (2011)

The Drainage Area Plan is due to be completed by the end of the AMP 5 (2015) and the findings will be fed into the plans for AMP 6 (2015 – 2020). However there is currently no timescale for any future investment in the Aire Valley Trunk Sewer. The capacity of the sewer is clearly an issue for housing and employment growth, as 8,350 new homes are planned for Airedale, with the majority requiring connection into the Aire Valley Trunk Sewer. There may therefore be some issues with phasing development in Airedale and further discussions with Yorkshire Water are needed when phasing is developed. It will be important for improvements to this sewer to be considered at the beginning of the AMP 6 period.

Yorkshire Water also flagged some water treatment capacity issues in Airedale. At Keighley / Marley and Dowley Gap Wastewater Treatment Works (WwTW) there may be a requirement to increase capacity in AMP6 / consider phasing of the sites. These two WwTW serve Keighley, Riddlesden, East Morton, Bingley, Eldwick and Cottingley.

Yorkshire Water confirmed that if that the required capacity improvements would be funded by Yorkshire Water as the water provider for the area.

5.4.4 **Green Infrastructure, Open Space and Public Space**

The Bradford Open Space, Sports and Recreation Study³⁷ and further investigations by the CBMDC Department of Environment and Sport indicate that that there is adequate open space in Airedale, but additional play equipment is required in west Keighley to meet future growth needs and there are significant catchment gaps in Baildon and Steeton which may be covered by provision in neighbouring authorities. Improving the overall quality and level of accessibility to these existing green spaces within Airedale are vital to fulfilling the objectives for regeneration in the area. Further work is also being undertaken by the Council to produce Green Infrastructure Strategy which will determine priorities for future investment.

The Leeds-Liverpool Canal and the River Aire are key focus for recreation; and so are a number of formal parks and visitor attractions such as East Riddlesden Hall, Cliff Castle Museum, Shipley Glen and Baildon Moor.

The public rights of way network forms a key recreational and active transport (walking, cycling) asset in Airedale. This part of the District provides multiple opportunities for walkers, cyclists and horse-riders but does suffer from lack of provision for certain modes and missing links which would considerably enhance the network. The Rights of Way Improvement Plan contains details of such issues.

Airedale, along with Wharfedale, is one of the key areas where the proximity of certain settlements and future development could impact upon the nearby South Pennine Moors SPA/SAC. The main focus of management and mitigation strategy to avoid or reduce these impacts on protected moorland is within these two valleys due to their proximity to Rombalds Moor, which lies between them.

The Council is also set to start developing an Open Space Strategy for the District, which is likely to commence in 2013.

³⁷ CBMDC, Bradford Open Space, Sports and Recreation Study (2006)

Given the timescale for the development of this Strategy it has not been possible to directly reference the Open Space Strategy, but initial evidence suggests that the only strategic requirement is potentially a new park in Silsden to meet the open space requirements for housing growth planned for Silsden.

5.4.5 Sports, Leisure and Recreation

The Bradford Open Space, Sports and Recreation Study³⁸ and qualitative assessment by the Council's Department of Environment and Sport highlight that the majority of the Airedale sub area has adequate supply of outdoor facilities and playing pitches to meet the potential demand in the short to medium term; but some reinforcements and new facilities may be required in the longer term. The Study noted that there is a deficiency in designated mini and junior football in Keighley. The issue for sport, leisure and recreation infrastructure in Airedale are linked to the quality and accessibility of current facilities.

Current outdoor sports and recreation facilities are sufficient to cater the existing demand. There is however certain catchments gaps for large outdoor facilities and the shortfalls are being met by surplus provisions at other parts of the district.

The Council is currently carrying out a Playing Pitch Strategy which will be completed in mid-2013. The Playing Pitch Strategy will update the evidence base in terms of deficits in sports provision and set out detailed outdoor sports needs throughout the district

In terms of indoor facilities the majority of the Airedale sub-area has a supply of sports facilities below national averages, with facilities operating at or approaching 100% capacity. The sub-area has a range of privately, publicly and voluntarily run sports facilities; however a number of public sports facilities and swimming pools are no longer fit for purpose.

The CBMDC Department of Environment and Sport is currently reviewing provision to develop a new Sports Facilities Strategy for the District. The strategy will provide an evidence base in terms of deficiencies in sports facilities provision against current and predicted levels of population to develop priorities for investment and future needs.

Given the timescale for the development of this Strategy it has not been possible to directly reference the Sports Facilities Strategy, but initial evidence suggests that there are no direct priorities for Airedale, but as the strategy is developed some priorities may be identified.

5.4.6 Education

The provision of school places in the Airedale is an important infrastructure issue. Airedale has not been identified as an area with existing educational capacity issues. However the sub areas of City of Bradford, Shipley and Lower Baildon and Wharfedale both have more acute educational capacity issues.

³⁸ CBMDC, Bradford Open Space, Sports and Recreation Study (2006)

Even so the planned 8,350 new houses in Airedale will clearly generate additional school places. The formula used by Children's Services to predict school places in new housing developments has been used to provide an indication of the number of school places linked to housing development.

The formula³⁹ results in a requirement for 584 primary school places and 501 secondary school places in Airedale up to 2030. The settlement structure of Airedale means that often schools are quite far apart, and this can result in issues when the local school has no capacity for new pupils.

Children's Services have produced an Education Organisation Plan (EOP)⁴⁰ which is updated each year. This document has considered the educational needs of the sub-area (and the district as a whole) in more detail. The updated outputs of the EOP will be fed into the next revision to the LIP and the baseline analysis report.

It has not been possible to quantify the exact gap in education provision related to planned housing growth at a sub area. This is because the exact capacity levels per school were not available. A qualitative assessment of the educational issues in the Airedale is provided in this section. A quantitative assessment of the worst case educational requirements at a district wide level are detailed in section 6 and the Infrastructure Schedule in Section 8.

Primary School Provision: CBMDC Children's Services confirmed that to accommodate this anticipated short term growth in primary school places the Local Authority has embarked on a programme of creating additional school places within a number of existing primary schools across the District, although only one of these schools was in Airedale (Crossflatts) further details of this can be found in Appendix A. This increase in capacity is needed to meet the requirements of children already in the educational system and therefore will be met by funding from Central Government in the form of the Basic Need Allocation, which is set out in Section 6. The level of housing planned for Airedale would result in approximately 584⁴¹ new primary school places, in addition to places generated by the population in existing housing.

Secondary School Provision: The Airedale sub area had 4 secondary schools in phase three of the Building Schools for the Future Programme. The loss of this funding has left a number of schools in need of investment, including Bingley Grammar School. However it has been confirmed that Bradford will receive funding from the Priority School Building Programme (PSBP) for two schools in this sub area; Oakbank School and the Samuel Lister Academy.

³⁹ Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

⁴⁰ EOP is available on the Council website
http://www.bradford.gov.uk/bmdc/education_and_skills/planning_education_provision

⁴¹ Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

The level of housing planned for Airedale would result in approximately 501⁴² new secondary school places, in addition to places generated by the population in existing housing. It should be noted here that, the above two secondary schools in the PSBP would not create any additional capacity or places so they are not likely to accommodate additional pupils generated through new housing developments in this sub area. There are also currently no free schools planned in Airedale and therefore additional provision will need to be provided by CBMDC Children's Services. Capacity improvements are planned following the completion of the primary school capacity improvements and the exact nature of the requirements confirmed through the School Organisation Plan, which is updated each year.

Section 6 of the report details how the CBMDC education contributions formula has then been used to calculate how many of these school places are likely to come from new housing growth, the resulting gap in infrastructure and potential funding sources.

5.4.7 Flood Risk and Drainage

The Environment Agency and the CBMDC Drainage Team highlighted their awareness of flooding problems at Silsden Beck. The Council will be required to meet the sequential and exceptions tests on all future site allocation. There will also need to be site by site assessment of potential mechanisms or localised solutions to reduce flood risk.

There is technically no funding gap for flood risk and drainage infrastructure, as this will need to be delivered on a site by site basis and a strategy developed further through the Allocations DPD and Area Action Plans.

5.4.8 Other Infrastructure Types

Appendix A includes a baseline for all infrastructure types. The remaining infrastructure types will not impact on the ability to deliver the planned housing and employment growth in Airedale.

Telecommunications:

There are no sub area specific infrastructure requirements relating to telecommunication provision, other than the overarching requirements set out in section 5.2.

Waste and Recycling:

There are no sub area specific infrastructure requirements relating to waste and recycling provision, other than the overarching requirements set out in section 5.2.

Community and Cultural

The community and cultural offer in Airedale is dominated by provision in Keighley. Bingley, the other principal town, has limited provisions and the town therefore loses trade to neighbouring Bradford and Leeds where people go for a much wider range of goods and services.

⁴² Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

There are no sub area specific infrastructure requirements relating to libraries, museums, galleries, theatres or community centre, other than the overarching requirements set out in section 5.2.

The CBMDC Bereavement Services constantly monitor the take up of cemetery places and crematorium provision. This is set out in Appendix A. Through dialogue with the CBMDC Bereavement Services it was noted that there is likely to be a requirement for an additional cemetery site in the Bingley area in the next 15 years, as the Nab Wood cemetery is now full. The cost of new cemetery space would need to be met by Council budgets and is set out in Appendix A. A summary of the costs and funding sources are set out in Section 6 and the Infrastructure Schedule in Section 8.

Health

Airedale is covered by two Clinical Commissioning Groups; Bradford District (Bingley) and Airedale, Wharfedale and Craven (the rest of Airedale).

The Airedale and Bradford NHS Strategic Plan 2010/14⁴³ and Joint Strategic Needs Assessment 2012⁴⁴ both confirm that there are some areas of poverty in Airedale, mainly Keighley. But the majority of Airedale does not face the acute health issues faced by the City of Bradford. There are no sub area specific infrastructure requirements relating to health provision, other than the overarching requirements set out in Section 5.2.

Emergency Services

The Fire Services in Bradford District is delivered by the West Yorkshire Fire Service. Through dialogue with the Fire Service it was confirmed that the service is reviewing its services over the next two years, this may mean that some of the facilities will need to be improved in the future, but are operating well in current conditions.

Fire Services in Airedale is provided from two whole time stations in Keighley and Bingley. There is also a retained fire station in Silsden. However, the draft Integrated Risk Management Action Plan (IRMP) 2012-13 recommends that the second fire engine at Silsden should become a back-up appliance based at Keighley and this has now been implemented.

The Ambulance Service in the Bradford District is delivered by the Yorkshire Ambulance Service. Ambulance services are provided by the three stations in Bradford and are supplemented by stations within Leeds and Craven, if any incidence requires additional assistance.

The Police Service in Bradford District is delivered by the West Yorkshire Police. Police services in Airedale are provided by the Airedale and North Bradford division of the West Yorkshire Police. The divisional headquarter is located in Airedale House, Keighley and there is also a substation in Bingley. Airedale house has custody facilities which have recently been expanded.

There are no sub area specific infrastructure requirements for the Ambulance Service and Police Service, other than the overarching requirements set out in section 5.2.

⁴³ Airedale and Bradford NHS, Strategic Plan (2010/14)

⁴⁴ Airedale and Bradford NHS, Joint Strategic Needs Assessment (2012)

5.4.9 Summary of Infrastructure Planning and Delivery across Airedale

The table below sets out infrastructure issues for Airedale. It identifies when solutions and further work is required to deliver improvements and to enable the successful delivery of housing and economic growth.

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2033	2023-2030
Transport	<p>Reducing congestion on key parts of the road network particularly in and around Keighley and improving interurban connectivity between Airedale and Bradford city centre.</p> <p>Delivering improvements to highways and public transport services is also critical to tackling social exclusion.</p>	<p>Undertake technical assessment and generate options to determine priorities for strategic and site specific transport infrastructure investment.</p>	<p>Implement strategic and site specific mechanisms to enable delivery of priority schemes.</p>	<p>Implement revised framework and mechanisms reflecting any new or alternative funding and investment opportunities.</p> <p>Review progress; re-assess priorities to establish correct framework and explore mechanisms to deliver long term scheme aspirations.</p>
			<p>Assessment to align with outcomes for district – i.e. city centre regeneration, Shipley-Canal Road Corridor development.</p>	<p>Set framework for mechanisms to deliver strategic and site-specific schemes, reflecting both public and private funding opportunities.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
Utilities		Deliver any schemes with short lead in funded through WY+TF or LTP.		
		<p>There are some utility issues in Airedale.</p> <p>Yorkshire Water has confirmed that the Aire Valley Trunk Sewer is at capacity. To provide the sewage capacity for housing and employment growth set out in the emerging Core Strategy capacity improvements are required. There is also a requirement to upgrade some of the Wastewater Treatment facilities in Airedale.</p>	<p>Yorkshire Water is carrying out a Drainage Area Plan for the Aire Valley Trunk Sewer Catchment, to fully understand the flows draining to the sewer, including historic land drainage connections and cross connections, plus the implication of future development.</p> <p>The Drainage Area Plan is due to be completed by the end of the AMP 5 (2015) and the findings will be fed into the plans for AMP 6 spending period, which runs from 2015 – 2020).</p> <p>There is adequate gas infrastructure in Airedale to meet proposed housing and employment needs. The electricity network is generally adequate, however there will be some capacity issues around Silsden linked to the planned housing growth in the town.</p>	<p>Strategic Reinforcements of the primary electricity sub-station at Silsden in the short to medium term, to facilitate planned housing growth.</p> <p>Small scale local reinforcement of gas and electricity in the wider Airedale sub area may be required to support development.</p> <p>The delivery of a solution to the Aire Valley Trunk Sewer, ideally this should have happened in the short term.</p>

		Time Scales	
		Short Term	Medium Term
		2013-2018	2018-2023
Summary	Aire Valley Trunk Sewer. However Yorkshire Water has a statutory duty to supply and treat water and will fund improvements to the Aire Valley Trunk Sewer and Wastewater Treatment Works. Further dialogue is needed with Yorkshire Water to understand phasing requirements and options for the sewer. Small scale local gas and electricity reinforcement to support development. Strategic Reinforcements of the primary electricity substation at Silsden in the short to medium term, to facilitate planned housing growth.	2023-2030	
Telecommunications	There are no major communications and ICT infrastructure issues in	Small scale local reinforcement to support	Proactive move to bring Next Generation Access

Time Scales			
	Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030
Airedale.	development.	operators to district and upgrade provision.	operators to district and upgrade provision. Undertake review of networks to ensure capacity exists or can be provided for to facilitate long term growth objectives.

	Flood Risk
	<p>Assessments have highlighted complex flood risk issues across Airedale, given its topography.</p> <p>Surface water flooding can occur on sites that are not technically in flood risk zones. This can be managed to some extent by on-site drainage and Sustainable Urban Drainage Systems.</p> <p>Core Strategy and emerging Allocation DPD will advocate approach to development which will limit impact of flood risk.</p> <p>Finalise and complete Bradford SFRA Level 2 Study and feed into Allocations DPD and Area Action Plans.</p> <p>Proactive move to explore potentials for alternative water and drainage management system e.g. rainwater harvesting, SUDS.</p> <p>This can be supported by close working with the Drainage team in CBMDC, which will become the SUDS approval authority from April 2013.</p> <p>Re-examine flood risk and drainage issues in light of climate change and development patterns.</p> <p>Develop and implement policies to ensure alternative water and drainage management system facilitates appropriate developments.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
	CBMDC will work with the Environment Agency and Yorkshire Water to consider innovative flood solutions for Airedale.			
Waste Management	<p>New waste management infrastructure is needed to support moving waste up the waste hierarchy and to divert away from landfill.</p> <p>The infrastructure required to meet Bradford District's waste needs up to 2030 is set out in emerging Waste Management DPD. It is planned that this will be adopted in 2016.</p>	<p>Deliver the approach set out in the Waste Management DPD, including the delivery of waste facilities on allocated sites.</p> <p>Monitor and review waste arisings. Explore opportunities for behavioural change.</p>	<p>Monitor and review waste arisings and performance of new waste management facilities.</p> <p>Explore further opportunities for behavioural change.</p>	<p>Deliver the policies and sites set out in the Waste Management DPD.</p> <p>Monitor and review reuse and recycling rates being achieved.</p>
				<p>Monitor and review cross boundary movements of waste.</p>

		Time Scales		
	Short Term	Medium Term	Long Term	2023-2030
Summary	2013-2018	2018-2023		
Green Infrastructure and Open Space	<p>Broadly speaking the quantity of green space is sufficient to cater for future demands in Airedale. There are some minor play areas issues. There are some issues over quality and accessibility.</p> <p>The proposed growth at Silsden may result in a requirement for additional open space provision.</p>	<p>Further work will be carried out in the short term to identify the Open Space requirements in the District. This will provide costs and priorities.</p> <p>Appropriate open space policies need to be developed through the emerging Core Strategy, to provide the framework for delivering either on site green space or a contribution to off-site green space.</p>	<p>Develop and implement the Open Space Strategy to bring about improvements to quality of green infrastructure and open space and increased accessibility.</p> <p>Further development of the Canal Road Linear Park through the Area Action Plan.</p>	<p>Develop and implement the Open Space Strategy to bring about improvements to quality of green infrastructure and open space and increased accessibility.</p> <p>Review housing and economic growth to determine whether strategic roles and functions of green infrastructure and open space have altered.</p> <p>Continued enhancement and improvements of green space and play areas through on site contributions, council budgets and potentially CIL for strategic place making green infrastructure, such as the new country park.</p> <p>Consider open space provision in Silsden through the Core Strategy and Allocations DPD.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2023	2023-2030
		<p>where improvements in quality of facilities is required.</p> <p>Seek opportunities to enhance ROW network</p> <p>Develop a range of management and mitigation measures to reduce impacts on South Pennine Moors SPA/SAC – including wardening, visitor information, habitat and access enhancement</p>	<p>measures to reduce impacts on South Pennine Moors SPA/SAC – including wardening, visitor information, habitat and access enhancement</p>	
Sports, Leisure and Recreation		<p>Quantity of outdoor sport, leisure and recreation facilities is broadly enough to meet current requirements but there is a deficiency of designated mini and junior football pitches across the area.</p>	<p>A playing pitch strategy is planned for 2013. This will feed into the planned Open Space Strategy. This will highlight gaps in sports provision and an action plan to fill the gaps.</p> <p>Appropriate sports / open space policies need to be developed through the emerging Core Strategy, to</p>	<p>Implement Open Space Strategy to deliver facilities in line with Council objectives.</p> <p>Review the provision of sports, leisure and recreation facilities to see if they match housing and economic growth objectives.</p> <p>Deliver long term strategy to drive up quality, deliver multi-purpose facilities and upgrade quality and accessibility of existing facilities.</p>

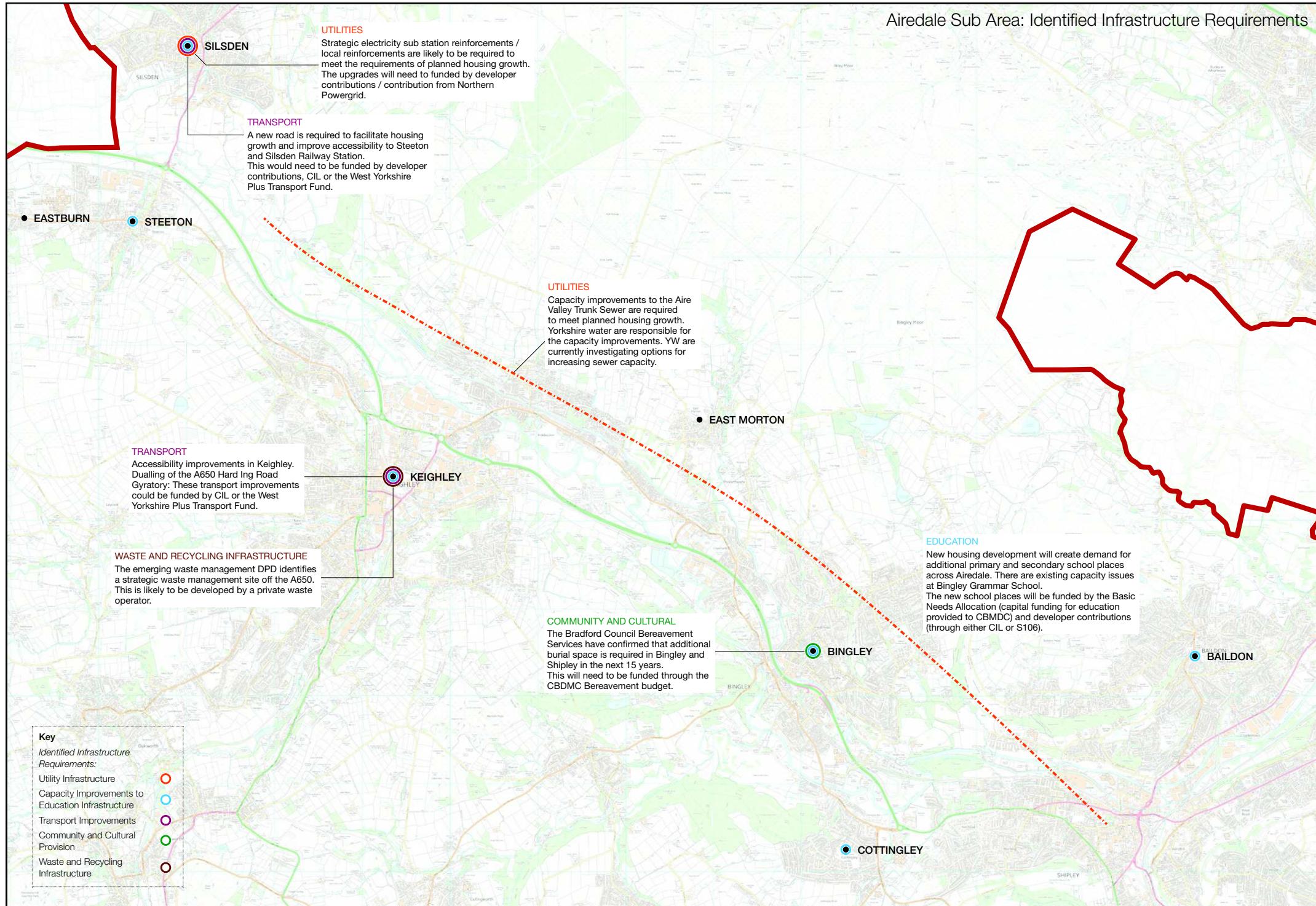
		Time Scales	
	Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030
Community and Cultural	<p>Provision of community and cultural facilities is limited and lacks variety across Airedale.</p> <p>Some community and cultural infrastructure are underutilised and not fit for purpose requiring improvements to quality and accessibility.</p> <p>Coordinating and clustering of existing facilities and resources is required while ensuring quality across the district.</p>	<p>Enhance and maintain existing facilities where funding permits.</p> <p>Begin to identify a site for new cemetery provision in the Shipley / Bingley area to replace Nab Wood.</p> <p>Explore opportunities for co-location of facilities and joint services delivery options.</p>	<p>Enhance and maintain existing facilities where funding permits</p> <p>Continue to enhance and maintain existing facilities.</p> <p>Explore wider funding and investment opportunities.</p> <p>Deliver new cemetery provision in the Shipley / Bingley area to replace Nab Wood.</p>
Education	<p>The wider Bradford District already has an issue with provision of primary and secondary school places linked to growth the existing population. However Airedale is not identified as</p>	<p>Deficit in primary and secondary school places to be tackled through primary school extension programmes, which runs</p>	<p>Continue to monitor number of children in the area and school provision and plan accordingly, with consideration of the areas</p> <p>Identification of any new primary or secondary schools that may be required following the primary school extension programme.</p>

		Time Scales		
	Short Term	Medium Term	Long Term	
Summary	2013-2018	2018-2023	2023-2030	<p>where new housing will be focused.</p> <p>Consider capacity of secondary schools and if any capacity improvements are needed.</p>
	<p>an area where this is a really problem at the moment. Although given planned housing growth there will be a need for plan for additional school places.</p> <p>The delivery of free secondary schools has helped but there is still incapacity issues remained in this sub area. There will also be a need to increase primary school places over the plan period.</p> <p>The majority of the demand for new school places is being generated by the population living in existing housing. A detailed calculation of the likely places generated from new housing is summarised in section 5.1.3, the baseline in Appendix A and the calculation sheet in Appendix B.</p>	<p>from 2013 to 2018.</p> <p>Identify mechanisms to tackle predicted shortfall of secondary school places from 2016 onwards.</p> <p>Continued monitoring number of children in the area and capacity issues on a school by school basis.</p> <p>Close working between the CBMDC planning policy and Children's Services to consider impacts of the future Allocations DPD.</p>		<p>On-going maintenance and provision of health services linked to population growth and needs in Bradford District.</p>
Health	Housing and economic growth factored into service delivery up to 2030 by the NHS Commissioning Board.	The NHS is moving towards more community based care, which will result in less need for premises.	The Clinical Commissioning	<p>On-going maintenance and provision of health services linked to population growth and needs in Bradford District.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
		Groups (CCGs) will commission the services needed for GPs and hospitals in Bradford.		
		This sub area is covered by two CCGs and these groups will meet the health needs in the District.		
Emergency Services		Current and planned provision sufficient to meet demands of potential growth.	On-going review of emergency service provision to deliver efficiencies. Investigate opportunities for co-location of facilities and joint service delivery options.	On-going delivery of emergency services with consideration of population growth and distribution. Review service delivery arrangements, reflecting on housing and economic growth through liaison with emergency service providers. Proactive approach to ensure growth plans are factored into emergency service plans and strategies for improving service delivery Investigate further

		Time Scales		
		Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030	
			opportunities for co-location of facilities and joint service delivery options.	

Airedale Sub Area: Identified Infrastructure Requirements



5.5 Wharfedale

5.5.1 Overview

Wharfedale has a unique and important role to play in the current and future capability of the district. A combination of factors including the local natural environment, existing range and type of housing stock, legacy and reputation as an employment location and relative proximity to both Bradford City Centre and other economic centres across West Yorkshire means the sub-area has many advantages to build upon.

With these positives comes additional demands on services and infrastructure and the balance of delivering new growth, maintaining and enhancing infrastructure and service standards, and realising any new infrastructure in an affordable and viable way is the main challenge for the sub-area.

Summary of Issues

Infrastructure that could pose significant challenge to delivering growth:

- Education

Infrastructure where on-going work is required to ensure does not pose significant challenge to delivering growth:

- Flood Risk and Drainage
- Transport (rail capacity)

The remaining infrastructure topics are not deemed to pose any issues to the planned housing and employment growth in Wharfedale. A summary of these issues are included in Section 5.3.5. Details by each infrastructure type can be found in Appendix A / Baseline Report.

A map detailing the infrastructure issues in this sub area can be found at the end of this chapter.

5.5.2 Education

The provision of school places in the Wharfedale sub area is a critical infrastructure issues. There is an existing capacity issue in Wharfedale, due to its popularity as a family location and loss of BSF funding for Ilkley Grammar School. The CBMDC Children's Services have confirmed that there is an existing capacity issue for both primary and secondary school places in Wharfedale.

Relatively low levels of housing planned for this sub area (1,600 new homes), but it is likely that housing sites will be targeted by family house builders. A focus on family house building and the increased popularity of Wharfedale as an attractive location for families means that the demand for school places will be high.

The formula used by CBMDC Children's Services to predict school places in new housing developments has been used to provide an indication of the number of school places linked to housing development. It should be noted that, it is likely that the number of school places generated by housing in Wharfedale would be higher than demonstrated by the formula, for the reasons explained above.

The formula⁴⁵ results in a requirement for 112 primary school places and 96 secondary school places in Wharfedale up to 2030.

It has not been possible to quantify the exact gap in education provision related to plan housing growth at a sub area. This is because the exact capacity levels per school were not available. A qualitative assessment of the educational issues in Wharfedale sub area is provided in this section. A quantitative assessment of the worst case educational requirements at a district wide level are detailed in section 6 and the Infrastructure Schedule in Section 8.

Primary School Provision: CBMDC Children's Services confirmed that to accommodate this anticipated short term growth the Local Authority has embarked on a programme of creating additional school places within a number of existing primary schools across the District, although only one of these schools was in Wharfedale (Ilkley) further details of this can be found in Appendix A. This increase in capacity is needed to meet the requirements of children already in the educational system and therefore will be met by funding from Central Government in the form of the Basic Need Allocation, which is set out in Section 6. The level of housing planned for Wharfedale would result in a requirement for approximately 112 primary school places, in addition to places generated by the population in existing housing. Although as detailed above, given the popularity of Wharfedale as location for family building, this requirement for school places is likely to be higher than predicted by the District wide formula.

Secondary School Provision: The level of housing planned for Wharfedale would result in a requirement for approximately 96 secondary school places, in addition to places generated by the population in existing housing. Although as detailed above, given the popularity of Wharfedale as location for family building, this requirement for school places is likely to be higher than predicted by the District wide formula. There are currently no free schools planned in Wharfedale and therefore additional provision will need to be provided by CBMDC Children's Services. They have also confirmed that capacity improvements are planned following the completion of the primary school capacity improvements and the exact nature of the requirements confirmed through the Education Organisation Plan, which is updated each year.

5.5.3 Flood Risk and Drainage

The Environment Agency and the CBMDC Drainage Team have highlighted that there are some flooding problems at Backstone Beck in Ilkley. The Drainage team in CBMDC are currently developing a model of the three becks in Ilkley. The aim of the modelling work is to understand the impact of future development on flood risk and consider mitigation measures.

There are no worked up flood alleviation schemes for the Wharfedale sub area. There are no sub area specific additional flood risk infrastructure requirements, other than the overarching requirements identified in section 5.2.

⁴⁵ Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

5.5.4 Transport

Wharfedale occupies a strategic location in terms of its geography and in terms of its functional links to the rest of Bradford district, Leeds district, and the rest of West Yorkshire. Its connectivity is reflected in its attractiveness for residents and businesses, but its attractive location also poses potential long term challenges for maintaining good quality transport links and journey time reliability.

Some routes within the sub-area, especially the A65/A6038 corridor, are already congested at peak times, with severe delays at junctions in Ilkley, Menston and Guiseley.

Overall there are limited other transport network issues in the Wharfedale sub-area. There are regular rail services to mainline stations in both Leeds and Bradford, with high quality electric rolling stock in operation. There are some capacity constraints on the rail network at peak times particularly to Leeds and capacity issues are noted in rail station car parks.

The modest growth set out in the emerging Local Plan Core Strategy will increase demands on transport infrastructure, resulting in additional trip generation and the potential for constraints on the network. Whilst the existing transport system in the sub-area is broadly fit for purpose based on existing development patterns, the evidence indicates that further interventions and/or investments will be required on the network to ensure it remains fit for purpose and can accommodate growth and change during the period of the Local Plan.

Evidence from the City of Bradford District-Wide Transport Study (October 2010), supplemented by additional, more up-to-date information from CBMDC has identified the following potential transport infrastructure schemes:

- A cycle route through the Wharfe Valley to improve sustainable access from Addingham to the rail network at Ilkley, and provide better cycle access from the rail network to the Yorkshire Dales National Park. Potential junction improvements in the Menston area – albeit that future schemes are constrained by availability of space to realise significant extra highways capacity;
- Enhanced public transport systems within and between Ilkley and settlements in Wharfedale, including rail station, cycleway and public rights of way;
- Aligning strategic patterns of future development (including any prospect of selective green belt land release) to best instigate non car-based movements and reducing the overall need to travel.
- Improve surface access and public transport access to Leeds Bradford International Airport by encouraging more direct public transport connections from Ilkley.

Potential funding mechanisms are set out in Section 6 and a full list of all the committed and proposed transport schemes is included in the Infrastructure Schedule (Section 8).

5.5.5 Other Infrastructure Issues

Utilities

Electricity Supply: There are no sub area specific electricity requirements, other than the overarching requirements set out in section 5.2.

Gas Supply: There are no sub area specific gas requirements, other than the overarching requirements set out in section 5.2.

Water Supply and Treatment: It has been confirmed through the previous comments from Yorkshire Water received on the Core Strategy and LIP and a further discussion with a stakeholder from Yorkshire Water that there should be enough wastewater treatment capacity in Ilkley and Ben Rhydding to meet the proposed housing and employment growth, although further details of the phasing and distribution of development would be useful, when available. At Menston and Burley it is likely that capacity improvement would be needed to the treatment works to meet the proposed housing and employment growth. This would need to be included in Yorkshire Waters AMP 6 spending period (2015 – 2020). Yorkshire Water will monitor the capacity of this treatment works. Any capacity improvements to water treatment and supply would be delivered by Yorkshire Water.

Telecommunications: An assessment of the telecommunication networks in Bradford District has been carried out by Arup. This is included in baseline in Appendix A. The competition for broadband provision in Wharfedale is good, apart from exchanges around Addingham. This doesn't mean there is a bad service, it just means that are not as many broadband providers to choose from. There are no additional telecommunication infrastructure requirements, other than the overarching requirements identified in section 5.2.

Waste and Recycling

There are no sub area specific waste and recycling infrastructure requirements, other than the overarching requirements identified in section 5.2.

Green Infrastructure, Open Space and Public Space

Wharfedale avoided the full impact of the Industrial Revolution, and still retains much of its rural and agricultural character. The green infrastructure in Wharfedale is distinctive as it has more extensive areas of woodland and tree cover than many other parts of the district. The area also has a strong visual connection with the adjoining Yorkshire Dales National Park and despite substantial residential expansion; all the four main settlements have retained their distinct local identity and separation from each other.

The whole of the valley corridor is popular for informal outdoor recreation. Rombalds Ridge and Ilkley Moor are key green assets for the area and serve whole of the district and beyond. The green space in Wharfedale is distinctive as it has a more extensive area of woodland (including the Bradford Council owned and managed Middleton Woods) and tree cover than many other parts of District.

The public rights of way network forms a key recreational and active transport (walking, cycling) asset in Wharfedale. This part of the District provides multiple opportunities for walkers, cyclists and horse-riders but does suffer from lack of provision for certain modes and missing links which would considerably enhance the network. The Rights of Way Improvement Plan contains details of such issues.

Wharfedale, along with Airedale, is one of the key areas where the proximity of settlements and future development could impact upon the nearby South Pennine Moors SPA/SAC. The main focus of management and mitigation strategy to

avoid or reduce these impacts on protected moorland is within these two valleys due to their proximity to Rombalds Moor, which lies between them.

The Bradford Open Space, Sports and Recreation Study⁴⁶ indicates that the majority of the sub area has adequate provision of parks and gardens. There are some catchment gaps in terms of parks and gardens in Addingham, Menston and east of Ilkley, but they are either met by parks in neighbouring Districts (Menston) or accessibility of naturally occurring green infrastructure (Ilkley and Addingham). There is also a shortfall of children play areas in Ilkley, Addingham and Burley-in-Wharfedale. Upgrading of certain play areas as well as installation of new equipped ones are required to reduce the significant catchment gap.

Maintaining the overall quality and increasing the level of accessibility to these existing green spaces within Wharfedale are vital to fulfilling the objectives for future development in the area.

As detailed in section 5.2 the Council is set to start working on developing a District-wide Open Space Strategy in 2013. Given the Open Space Strategy is still to be finalised, it has not been possible to directly define approved or planned schemes. There is scope for improvements to the management of the moors, including footpaths, visitor parking, visitor management and vegetation management – in the context of managing and mitigating additional recreational impacts as set out above.

Wharfedale also has the largest allotment waiting list in the District. There are no plans to create any new allotments, but the Council are trying to redevelop underused or vacant / overgrown plots to make them available to people on the waiting list.

There is likely to be a requirement to deliver new open spaces in the future, when the exact location of housing sites is confirmed. There will also be the continued cost of maintaining and improving existing parks and green spaces. Details of the costs of providing these facilities and actual and potential funding mechanisms are set out in Section 6 and summarised in the infrastructure schedule Section 8.

Sport, Leisure and Recreation

The Bradford Open Space, Sports and Recreation Study⁴⁷ and discussions with CBMDC Department of Environment and Sport indicate a mixed provision of sports and leisure facilities in Wharfedale. There is a deficiency of designated mini and junior football pitches across the District, including no capacity in Ilkley. Apart from this Wharfedale has adequate sports, leisure and recreation facilities to cater to the demands of future housing and employment growth.

In terms of indoor sports facilities the majority of the Wharfedale sub-area has a reasonable supply of sports facilities. The sub-area has a range of privately, publicly and voluntarily run sports facilities; however some public sports facilities and swimming pools are outdated and no longer fit for purpose.

The Council's Department of Environment and Sport is currently reviewing provision to develop a new Sports Facilities Strategy for the District. The strategy will provide an evidence base in terms of deficiencies in sports facilities provision

⁴⁶ CMDC Bradford Open Space, Sports and Recreation Study, (2006)

⁴⁷ CBMDC, Bradford Open Space, Sports and Recreation Study, (2006)

against current and predicted levels of population to develop priorities for investment and future needs.

There is likely to be a requirement to deliver new indoor and outdoor sports provision in the future, when the exact location of future housing sites is confirmed. There will also be the continued cost of maintaining and improving existing parks. Details of the costs of providing these facilities and actual and potential funding mechanisms are set out in Section 6 and summarised in the infrastructure schedule Section 8.

Community and Cultural

In Wharfedale, community and cultural offer is mainly concentrated in Ilkley. Provision is limited in outer settlements of Addingham, Menston and Burley-in-Wharfedale. These areas therefore lose trade to neighbouring Bradford and Leeds where people go for a much wider range of goods and services.

There are no sub area specific community and cultural infrastructure requirements, other than the overarching requirements identified in section 5.2.

The costs and funding options for community and cultural facilities are included in Section 6 and in the Infrastructure Schedule in Section 8.

Health

Wharfedale is covered by one Clinical Commissioning Groups; Airedale, Wharfedale and Craven. Wharfedale is a relatively popular location to live attracting the upwardly mobile and there is limited deprivation. This means that generally the population has fewer requirements for health services, when compared with the rest of the Bradford District.

Through discussions with NHS public health it was confirmed that there are no plans to close any existing hospitals or GP surgeries. Although it has recently been reported in the local press that the NHS is considering the services available at Coronation Hospital in Ilkley. This may mean additional future provision at this hospital.

Emergency Services

The sub area is served by the West Yorkshire Fire Service, which provides Fire Service facilities from the two whole time stations in neighbouring Keighley and Bingley. There is also a retained fire station in Ilkley.

The sub area is served by Yorkshire Ambulance Service, which provides three stations in Bradford and are supplemented by stations within Leeds and Craven, if any incidence requires additional assistance

The estate agents Dacre, Son and Hartley work with the Ambulance Service on their property assets and have a close working relationship with the service. They have confirmed that the Menston Ambulance station is no longer in the optimum location to respond to emergency calls. The ambulance service are reviewing how the service is delivered this is considering a Hub and Spoke way of delivering services. The full details of this are planned to be published in 2012.

The West Yorkshire Police have confirmed that the police service is sufficient to meet planned housing and employment growth. Police services in Wharfedale are

provided by the Airedale and North Bradford division of the West Yorkshire Police.

There are no sub area specific infrastructure requirements for West Yorkshire Police or the West Yorkshire Fire Service.

5.5.6 Summary of Infrastructure Planning and Delivery across Wharfedale

The table below sets out infrastructure issues for Wharfedale. It identifies when solutions and further work is required to deliver improvements and to enable the successful delivery of housing and economic growth.

		Time Scales		
		Short Term	Medium Term	Long Term
Transport	Summary	2013-2018	2018-2030	2023-2030
	There are no major transport issues in Wharfedale.	Small scale investment in the rail network to ensure that rail capacity keeps pace with demand.	Implement strategic and site specific mechanisms to enable delivery of priority schemes.	Undertake review of networks to ensure capacity exists or can be provided for to facilitate long term growth objectives.
Utilities		Local highways improvements to support housing growth and tackle safety issues. Wharfedale Cycle Route.	Review progress; re-assess priorities to establish correct framework and explore mechanisms to deliver long term scheme aspirations.	Undertake review of networks to ensure capacity exists or can be provided for to facilitate long term growth objectives.
		Small scale local reinforcement to support development. Capacity improvements to the Wastewater Treatment Works in Menston and Burley (if required) in the AMP 6 period (2015 –	Small scale local reinforcement to support development. Review delivery plans for large-scale developments to ensure requirements and scale are included in	

		Time Scales		
	Short Term	Medium Term	Long Term	
Summary	2013-2018	2018-2023	2023-2030	
growth. This would need to be included in Yorkshire Waters AMP 6 spending period (2015 – 2020).	2020).	investment plans for utility providers.		
Telecommunications				
	There are no major communications and ICT infrastructure issues in Wharfedale.	Small scale local reinforcement to support development.	Proactive move to bring Next Generation Access operators to district and upgrade provision.	Proactive move to bring Next Generation Access operators to district and upgrade provision.
		Explore how proactive engagement with public and service providers could facilitate greater uptake.		Undertake review of networks to ensure capacity exists or can be provided for to facilitate long term growth objectives.
Flood Risk				
	There are parts of Wharfedale that have experienced flooding in the past. The Environment Agency has particularly noted the Backstone Beck in Ilkley.	Finalise and complete Bradford SFRA Level 2 Study and feed into Allocations DPD and Area Action Plans.	Re-examine flood risk and drainage issues in light of climate change and development patterns.	Re-examine flood risk and drainage issues in light of climate change and development patterns.
	The Drainage team in CBMDC are currently developing a model of the three becks in Ilkley. The aim of the modelling work is to understand the impact of future development on flood	Proactive move to explore potentials for alternative water and drainage management system e.g. rainwater harvesting, SUDS.	Develop and implement policies to ensure alternative water and drainage management system facilitates appropriate	

		Time Scales		
	Short Term	Medium Term	Long Term	
Summary	2013-2018	2018-2023	2023-2030	<p>risk and consider mitigation measures.</p> <p>Core Strategy and emerging Allocation DPD will advocate approach to development which will limit impact of flood risk.</p> <p>This can be supported by close working with the Drainage team in CBMDC, which will become the SUDS approval authority from April 2013.</p> <p>CBMDC will work with the Environment Agency and Yorkshire Water to consider innovative flood solutions for Wharfedale.</p>
Waste Management	<p>New waste management infrastructure is needed to support moving waste up the waste hierarchy and to divert away from landfill.</p> <p>The infrastructure required to meet Bradford District's waste needs up to 2030 is set out in emerging Waste Management DPD. It is planned that this will be adopted in 2016.</p>	<p>Deliver the approach set out in the Waste Management DPD, including the potential delivery of waste facilities on non-allocated sites.</p> <p>Monitor and review waste arisings. Explore opportunities for behavioural change.</p>	<p>Monitor and review waste arisings and performance of new waste management facilities.</p> <p>Explore further opportunities for behavioural change.</p>	<p>Deliver the policies and sites set out in the Waste Management DPD.</p> <p>Monitor and review reuse and recycling rates being achieved.</p> <p>Monitor and review cross boundary movements of waste.</p> <p>Deliver the policies and sites set out in the Waste Management DPD.</p> <p>Monitor and review reuse and recycling rates being</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
		achieved.	Monitor and review cross boundary movements of waste.	Monitor and review cross boundary movements of waste.
Green Infrastructure and Open Space		<p>Broadly speaking the quantity of green space is sufficient to cater for future demands in Wharfedale.</p> <p>There are some minor play areas issues. There are some issues over quality and accessibility.</p> <p>There is scope for improved management and visitor infrastructure for Ilkley and Burley Moors.</p>		
		Further work will be carried out in the short term to identify the Open Space requirements in the District. This will provide costs and priorities.	Develop and implement the Open Space Strategy to bring about improvements to quality of green infrastructure and open space and increased accessibility.	Review housing and economic growth to determine whether strategic roles and functions of green infrastructure and open space have altered.
		<p>Appropriate open space policies need to be developed through the emerging Core Strategy, to provide the framework for delivering either on site green space or a contribution to off-site green space.</p> <p>Develop action plan to deliver improvements to quality of sports, leisure and</p>		
		<p>Continued enhancement and improvements of green space and play areas through on site contributions, council budgets and potentially CIL for strategic place making green infrastructure (such as a new park outside this sub area).</p>		
		<p>Update strategies accordingly to review quality, accessibility and quantity of infrastructure.</p>		

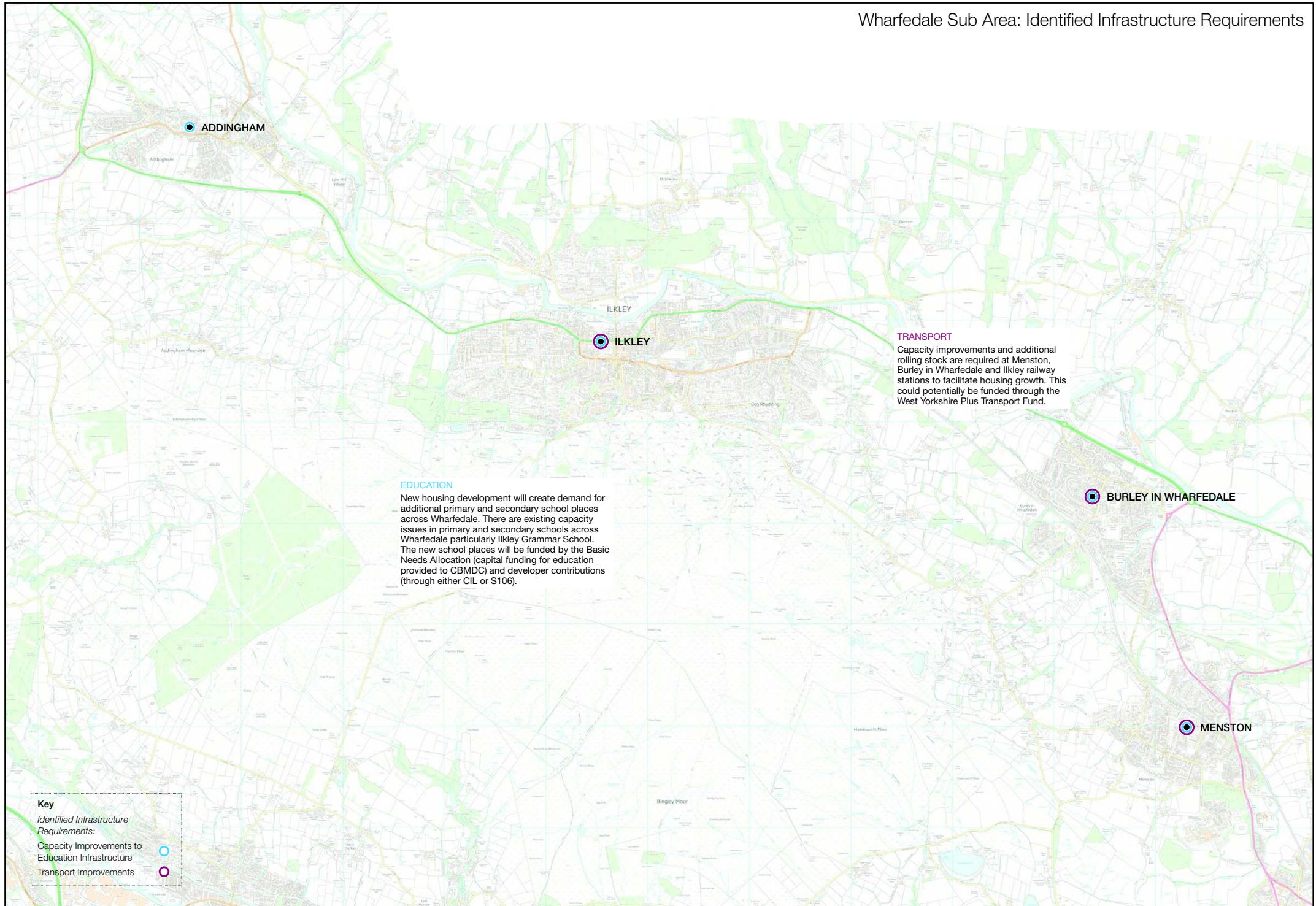
		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2023	2023-2030
		recreation facilities and to increase accessibility. Seek opportunities to enhance ROW network Develop a range of management and mitigation measures to reduce impacts on South Pennine Moors SPA/SAC – including wardening, visitor information, habitat and access enhancement	Strategic improvements to ROW network Develop a range of management and mitigation measures to reduce impacts on South Pennine Moors SPA/SAC – including wardening, visitor information, habitat and access enhancement	
	Sports, Leisure and Recreation	Sufficient provision for Sports and Recreation facilities to cater to potential demand. There is however a deficit of mini and junior playing pitches in Ilkley.	A playing pitch strategy and audit of sports facilities will feed into the planned Open Space Strategy. This will highlight gaps in sports provision and an action plan to fill the gaps. Appropriate sports / open space policies need to be	Implement Open Space Strategy and Core Strategy policies to deliver facilities in line with Council objectives. Review the provision of sports, leisure and recreation facilities to see if they match housing and economic growth objectives.

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
		developed through the emerging Core Strategy, to provide the framework for delivering either on site green space or a contribution to off-site green space.		Deliver long term strategy to drive up quality, deliver multi-purpose facilities and upgrade quality and accessibility of existing facilities
Community and Cultural				
		Provision of community and cultural facilities is mixed. Issues over distribution and accessibility.	Enhance and maintain existing facilities where funding permits.	Implement upgrades to quality and deliver new provision in line with Council objectives.
		No identified plans to improve or create new community and cultural infrastructure. Coordinating and clustering of existing facilities and resources is required while ensuring quality across the district.	Investigate opportunities for co-location of facilities and joint services delivery options.	Continue to enhance and maintain existing facilities.
		Some community and cultural infrastructure are underutilised and not fit for purpose requiring improvements to quality and accessibility.		Explore wider funding and investment opportunities.

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
Education	<p>Wharfedale is highlighted as an area with existing primary and secondary school capacity issues.</p> <p>Given the existing capacity issues and the popularity of Wharfedale as a family location it is predicted that there will be a continued demand for school places in Wharfedale.</p> <p>The majority of the demand for new school places is being generated by the population living in existing housing. A detailed calculation of the likely places generated from new housing is summarised in section 5.1.3, the baseline in Appendix A and the calculation sheet in Appendix B.</p>	<p>Deficit in primary and secondary school places to be tackled through primary school extension programmes, which runs from 2013 to 2018.</p> <p>Identify mechanisms to tackle predicted shortfall of secondary school places from 2016 onwards.</p>	<p>Identification of any new primary or secondary schools that may be required following the primary school extension programme. The secondary school capacity issues are likely to be programmed following the completion of the primary school capacity improvements.</p>	<p>Continue to monitor number of children in the area and school provision and plan accordingly, with consideration of the areas where new housing will be focused.</p> <p>Consider capacity of secondary schools and if any capacity improvements are needed.</p> <p>Continued monitoring number of children in the area and capacity issues on a school by school basis. This may result in a need to provide some additional secondary school places.</p> <p>Close working between the CBMDC planning policy and Children's Services' to consider impacts of the</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2030	2023-2030
Health	future Allocations DPD.			
	Housing and economic growth factored into service delivery up to 2030 by the NHS Commissioning Board.	The NHS is moving towards more community based care, which will result in less need for premises. The Clinical Commissioning Groups (CCGs) will commission the services needed for GPs and hospitals in Wharfedale. This sub area is covered by one CCG and this group will meet the health needs in the District.	On-going maintenance and provision of health services linked to population growth and needs in Bradford District.	On-going maintenance and provision of health services linked to population growth and needs in Bradford District.
Emergency Services	Current and planned provision sufficient to meet demands of potential growth.	On-going review of emergency service provision to deliver efficiencies. Review service delivery arrangements, reflecting on housing and economic	Review service delivery arrangements, reflecting on housing and economic	On-going delivery of emergency services with consideration of population growth and distribution.

		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2023	2023-2030
		<p>growth through liaison with emergency service providers.</p> <p>Investigate opportunities for co-location of facilities and joint service delivery options.</p>	<p>Proactive approach to ensure growth plans are factored into emergency service plans and strategies for improving service delivery</p> <p>Investigate further opportunities for co location of facilities and joint service delivery options.</p>	



5.6 South Pennine Towns and Villages

5.6.1 Overview

South Pennine Towns and Villages represent a cluster of settlements to the south-west of the district. Characterised by networks of historic post-industrial towns interspersed with countryside which is of local and sub-regional importance; future growth plans for the area need to reconcile protection of the natural environment, whilst increasing levels of connectivity and supporting settlements as they diversify and become more self-sufficient.

Summary of Issues

Taking account of the evidence base in Appendix A, and the analysis in Section 5 it has been identified that in terms of quantity of provision, there is no single infrastructure type that could pose a significant challenge to delivering growth in this sub-area. However, accessibility to public transport is shown to be a significant barrier to growth and sustainable development.

A combination of infrastructure investment is therefore required in order to support plans for growth and change and facilitate a long term sustainable future for this sub-area.

A map detailing the infrastructure issues in this sub area can be found at the end of this chapter.

5.6.2 Other Infrastructure Issues

A summary of infrastructure issues are set out below:

Transport

Across the South Pennine Towns and Villages there are issues of poor internal connectivity. Connections to other parts of the district and in particular to Bradford City Centre pose obstacles to the sub-area acting as a cohesive part of district and it also causes constraints in terms of delivering housing and economic growth and the delivery of sustainable communities.

Rural areas suffer from poor accessibility and the lack of local facilities. Car owners can usually compensate as they have greater choice in terms of trip frequency, length and destination. But, pockets of communities and settlements suffer from lack of access to the car, and relatively limited choices in terms of innovative transport solutions, limited public transport and limited rail access. Whilst accessibility needs to be examined on a community by community basis, it is an issue for the district in creating and supporting sustainable communities.

The quality of public transport provision and the level of service provided by both the bus and rail network are identified as a problem for these settlements.

Schemes to improve the quality, frequency and service pattern on both bus and rail are included within long term transport improvement schemes at the Leeds City Region level.

The transport challenges in these rural towns and villages require solutions in order to improve levels of access to homes, jobs and services. However,

enhancing transport infrastructure in these areas must be considered in the wider context of the planning, funding and delivery of schemes required to ensure the successful delivery of the Local Plan objectives

The costs and funding options for this scheme is included in Section 6 and in the Infrastructure Schedule in Section 8.

Utilities

Electricity Supply: There are no sub area specific electricity requirements, other than the overarching requirements set out in section 5.2.

Gas Supply: There are no sub area specific gas requirements, other than the overarching requirements set out in section 5.2.

Water Supply and Treatment: It has been confirmed that the provision of water treatment and supply are adequate to meet the proposed housing and employment growth and that the Yorkshire Grid will provide adequate water supply for the South Pennine Towns and Villages. Yorkshire Water has confirmed that there should be enough wastewater treatment capacity in Oxenhope to meet the proposed housing and employment growth. At Oakworth, Wilsden, Harden, Cullingworth, Haworth and Denholme it is likely that capacity improvement would be needed to the treatment works to meet the proposed housing and employment growth. This would need to be included in Yorkshire Water's AMP 6 spending period (2015 – 2020). Yorkshire Water will monitor the capacity of this treatment works. The cost of these works would be met by Yorkshire Water.

Education

The predicted increase in demand for places is not evenly distributed across the District, but concentrated in specific areas. The proposed distribution of housing growth will further exacerbate the capacity issues in these areas. The South Pennine Towns and Village sub area is not identified as an area where there is already a shortage of school places, but the 3,500 new homes that are planned for the sub area will clearly impact on school place provision. It will be important to plan for the new school places that will be needed. The issue in this sub area relates to the distance between primary and secondary schools. This can result in children having to travel further to reach a school with capacity.

The formula used by CBMDC Children's Services to predict school places in new housing developments has been used to provide an indication of the number of school places linked to housing development.

The formula⁴⁸ results in this level of housing requiring 245 primary school places and 210 secondary school places in the South Pennine Towns and Villages sub area up to 2030.

At a district wide level there is a shortfall in Education funding, as detailed in section 5.2. A summary of the infrastructure gap and funding methods is included in Section 6 and in the Infrastructure Schedule in Section 8.

Telecommunications

⁴⁸ Calculation based on CBMDC formula and assumptions on housing type – shown in Appendix B.

There are no sub area specific telecommunication requirements, other than the overarching requirements set out in section 5.2.

Flood Risk and Drainage

Through dialogue with the Environment Agency (via email) and a meeting with CBMDC Drainage Team it has been noted that there is an existing flooding problem at Bridgehouse Beck, Haworth.

There are no other additional sub area specific flood risk and drainage requirements, other than the overarching requirements set out in section 5.2.

Waste and Recycling

There are no sub area specific waste and recycling requirements, other than the overarching requirements set out in section 5.2.

Green Infrastructure, Open Space and Public Space

Areas within the South Pennine Moors in Bradford District can be regarded as sensitive to change due to having a strong character, high historic continuity and combining accessibility and relative safety with a feeling of remoteness.

The Bradford Open Space, Sports and Recreation Study⁴⁹ and investigations by the CBMDC Department of Environment and Sport indicate that that there is adequate to meet the proposed growth in the sub area.

The emphasis in the area is therefore on improving the quality and accessibility of the existing green spaces. There may however be opportunities for housing-led projects aiming to deliver regeneration alongside green infrastructure improvements in the area. It will make the link between upgrading green infrastructure to raise the quality of place and ultimately raise the quality of the residential offer.

There is likely to be a requirement to deliver new open spaces in the future. However there will also be the continued cost of maintaining and improving existing parks. The gaps and funding options for green infrastructure are detailed in Section 6 and in the Infrastructure Schedule in Section 8.

These parts of the District are close to and easily accessible from the South Pennine Moors SAP/SAC protected moorland areas. As such, there is potential for impacts from development and so GI provision needs to take account of the need to manage and mitigate these impacts.

The area is also a significant attraction for outdoor recreational activity, including walking, horse-riding, cycling and the rights of way network is a significant asset. There are issues of connectivity, legal status and condition on the network in this part of the District which could be improved. The ROWIP sets this out in more detail.

Sport, Leisure and Recreation

The South Pennine Towns and Villages have limited sports provision, with facilities concentrated in Queensbury and Thornton. The Bradford Open Space,

⁴⁹ CBMDC, Bradford Open Space, Sports and Recreation Study (2006)

Sports and Recreation Study⁵⁰ and the CBMDC Department of Environment and Sport indicate that the provision of outdoor sports pitches is adequate; any shortfalls are currently being met by surplus provisions at other parts of the district.

There is also a deficit across indoor sports facilities, including the provision and access to sports halls. Current facilities are operating at or approaching 100% capacity with a number of public sports facilities and swimming pools are no longer fit for purpose. However, some of the issues are stemming from poor spatial distribution of facilities rather than due to quantitative deficiency.

The Council is currently reviewing provision to develop a new Sports Facilities Strategy for the District. The strategy will provide an evidence base in terms of deficiencies in sports facilities provision against current and predicted levels of population to develop priorities for investment and future needs

Currently S106 contributions are used to create and maintain sports pitches, the Council would seek to continue to gain funding through S106 and consider other funding options. The gaps and funding options for sports, leisure and recreation are detailed in Section 6 and in the Infrastructure Schedule in Section 8.

Community and Cultural

Provision and access to community and cultural facilities is relatively limited, with facilities being concentrated in and around City of Bradford. Haworth is an important cultural attraction; increasing accessibility to this cultural amenity is a priority. Improving accessibility to these facilities for residents from surrounding rural areas is critical to helping deliver sustainable communities in Pennine moors.

There are no sub area specific library, museum, theatre, cemetery or crematorium requirements, other than the overarching requirements set out in section 5.2.

Health

The South Pennine Towns and Villages sub area is covered by two Clinical Commissioning Groups; Bradford District (Urban Bradford, outside the ring road) and Airedale, Wharfedale and Craven (Oakworth).

The Airedale and Bradford NHS Strategic Plan 2010/14⁵¹ and Joint Strategic Needs Assessment 2012⁵² both confirm that there are some areas of poverty in this sub area, including Denholme and Thornton. On the other hand parts of the sub area are relatively wealthy (e.g. Haworth).

Emergency Services

There are no sub area specific emergency service requirements, other than the overarching requirements set out in section 5.2.

⁵⁰ CBMDC, Bradford Open Space, Sports and Recreation Study (2006)

⁵¹ Airedale and Bradford NHS Strategic Plan 2010/14

⁵² Airedale and Bradford NHS Joint Strategic Needs Assessment (2012)

5.6.3 Summary of Infrastructure Planning and Delivery across South Pennine Towns and Villages

The table below sets out infrastructure issues for the South Pennine Towns and Villages sub area. It identifies when solutions and further work is required to deliver improvements and to enable the successful delivery of housing and economic growth.

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2030	2023-2030
Transport	Ensuring adequate public transport accessibility for those without a car, especially in light of budget cuts for supported bus services.	Undertake technical assessment and generate options to determine priorities for investment in public transport networks.	Implement strategic mechanisms to enable delivery of priority schemes.	Implement revised framework and mechanisms reflecting any new or alternative funding and investment opportunities.
		Set framework for mechanisms to deliver strategic investment, reflecting both public and private and third sector funding opportunities.	Review progress; re-assess priorities to establish correct framework and explore mechanisms to deliver long term scheme aspirations.	Deliver projects with short lead in times that can be funded from available resources.

		Time Scales	
		Short Term	Medium Term
		2013-2018	2018-2030
Utilities	There are no major utilities infrastructure issues in the South Pennine Towns and Villages. Strategic reinforcement of the network therefore is not required.	<p>Small scale local reinforcement to support development.</p> <p>Review delivery plans for large-scale developments and scale are included in investment plans for utility providers.</p>	<p>Small scale local reinforcement to support development.</p> <p>Review delivery plans for large-scale developments and ensure requirements and scale are included in investment plans for utility providers.</p>
Telecommunications	There are no major communications and ICT infrastructure issues in South Pennine Towns and Villages.	<p>Small scale local reinforcement to support development.</p> <p>Explore how proactive engagement with public and service providers could facilitate greater uptake.</p>	<p>Proactive move to bring Next Generation Access operators to district and upgrade provision.</p> <p>Undertake review of networks to ensure capacity exists or can be provided for to facilitate long term growth objectives.</p>
Flood Risk	There are parts of the South Pennine Towns and Villages that have	Finalise and complete	Re-examine flood risk and drainage issues in light of

		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2033	2033-2030
	<p>experienced flooding in the past. The Environment Agency has particularly noted the Bridgehouse Beck in Haworth.</p> <p>Core Strategy and emerging Allocation DPD will advocate an approach to development which will limit impact of flood risk.</p>	<p>Bradford SFRA Level 2 Study and feed into Allocations DPD and Area Action Plans.</p>	<p>drainage issues in light of climate change and development patterns.</p> <p>Develop and implement policies to ensure alternative water and drainage management system facilitates appropriate developments.</p> <p>Proactive move to explore potentials for alternative water and drainage management system e.g. rainwater harvesting, SUDS.</p> <p>This can be supported by close working with the CBMDC Drainage team, which will become the SUDS approval authority from April 2013.</p>	<p>climate change and development patterns.</p> <p>CBMDC Drainage Team will work with the Environment Agency and Yorkshire Water to consider innovative flood solutions for the South Pennine Towns and Villages.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
Waste Management	<p>New waste management infrastructure is needed to support moving waste up the waste hierarchy and to divert away from landfill.</p> <p>The infrastructure required to meet Bradford District's waste needs up to 2030 is set out in emerging Waste Management DPD. It is planned that this will be adopted in 2016.</p>	<p>Deliver the approach set out in the Waste Management DPD, including the potential delivery of waste facilities on non-allocated sites.</p> <p>Monitor and review waste arisings. Explore opportunities for behavioural change.</p> <p>Monitor and review reuse and recycling rates being achieved.</p>	<p>Monitor and review waste arisings and performance of new waste management facilities.</p> <p>Explore further opportunities for behavioural change.</p> <p>Deliver the policies and sites set out in the Waste Management DPD.</p> <p>Monitor and review reuse and recycling rates being achieved.</p>	<p>Deliver the policies and sites set out in the Waste Management DPD.</p> <p>Monitor and review reuse and recycling rates being achieved.</p> <p>Monitor and review cross boundary movements of waste.</p>
Green Infrastructure and Open Space	<p>Broadly speaking the quantity of green space is sufficient to cater for future demands in the South Pennine Towns and Villages. There are some issues over quality and accessibility.</p>	<p>Further work will be carried out in the short term to identify the Open Space requirements in the District.</p> <p>This will provide costs and</p>	<p>Develop and implement the Open Space Strategy to bring about improvements to quality of green infrastructure and open</p>	<p>Review housing and economic growth to determine whether strategic roles and functions of green infrastructure and open</p>

		Time Scales		
	Short Term	Medium Term	Long Term	2023-2030
Summary	2013-2018	space and increased accessibility.	space have altered.	Update strategies according to review quality, accessibility and quantity of infrastructure.

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
	on South Pennine Moors SPA/SAC – including wardening, visitor information, habitat and access enhancement			
Sports, Leisure and Recreation		<p>Sufficient provision for Sports and Recreation facilities to cater to potential demand. The provision is quite spread out given the nature of the sub area and there are some issues of quality and access.</p> <p>A playing pitch strategy and audit of sports facilities will feed into the planned Open Space Strategy. This will highlight gaps in sports provision and an action plan to fill the gaps.</p> <p>Appropriate sports / open space policies need to be developed through the emerging Core Strategy, to provide the framework for delivering either on site green space or a contribution to off-site green space.</p>	<p>Implement Open Space Strategy to deliver facilities in line with Council objectives.</p>	<p>Review the provision of sports, leisure and recreation facilities to see if they match housing and economic growth objectives.</p> <p>Deliver long term strategy to drive up quality, deliver multi-purpose facilities and upgrade quality and accessibility of existing facilities.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Community and Cultural				
Summary	2013-2018	2018-2023	2023-2030	
Provision of community and cultural facilities is mixed. Issues over distribution and accessibility.	Some community and cultural infrastructure are underutilised and not fit for purpose requiring improvements to quality and accessibility.	<p>Enhance and maintain existing facilities where funding permits.</p> <p>Investigate opportunities for co-location of facilities and joint services delivery options.</p> <p>Coordinating and clustering of existing facilities and resources is required while ensuring quality across the district.</p>	<p>Enhance and maintain existing facilities where funding permits</p> <p>Continue to enhance and maintain existing facilities.</p> <p>Explore wider funding and investment opportunities.</p>	Implement upgrades to quality and deliver new provision in line with Council objectives.
Education	The wider Bradford District already has an issue with provision of primary and secondary school places linked to growth the existing population. However the South Pennine Towns and Villages is not identified as an area where this is a really problem at the moment. Although given planned	Deficit in primary and secondary school places to be tackled through primary school extension programmes, which runs from 2013 to 2018.	<p>Identification of any new primary or secondary schools that may be required following the primary school extension programme.</p> <p>Consider capacity of secondary schools and if any</p>	Continue to monitor number of children in the area and school provision and plan accordingly, with consideration of the areas where new housing will be focused.

		Time Scales		
		Short Term	Medium Term	Long Term
	Summary	2013-2018	2018-2023	2023-2030
	<p>housing growth there will be a need for plan for additional school places.</p> <p>The majority of the demand for new school places is being generated by the population living in existing housing. A detailed calculation of the likely places generated from new housing is summarised in section 5.1.3, the baseline in Appendix A and the calculation sheet in Appendix B.</p>	<p>tackle predicted shortfall of secondary school places from 2016 onwards.</p> <p>Continued monitoring number of children in the area and capacity issues on a school by school basis.</p> <p>Close working between the CBMDC Planning Service and CBMDC Children's Services to consider impacts of the future Allocations DPD.</p>	<p>capacity improvements are needed.</p>	
Health	<p>Housing and economic growth factored into service delivery up to 2030 by the NHS Commissioning Board.</p>	<p>The NHS is moving towards more community based care, which will result in less need for premises.</p> <p>The Clinical Commissioning Groups (CCGs) will commission the services</p>	<p>On-going maintenance and provision of health services linked to population growth and needs in Bradford District.</p>	<p>On-going maintenance and provision of health services linked to population growth and needs in Bradford District.</p>

		Time Scales		
		Short Term	Medium Term	Long Term
Summary		2013-2018	2018-2023	2023-2030
Emergency Services	needed for GPs and hospitals in Bradford.	This sub area is covered by two CCGs and these groups will meet the health needs in the District.		
	Current and planned provision sufficient to meet demands of potential growth.	On-going review of emergency service provision to deliver efficiencies. Investigate opportunities for co-location of facilities and joint service delivery options.	Review service delivery arrangements, reflecting on housing and economic growth through liaison with emergency service providers.	On-going delivery of emergency services with consideration of population growth and distribution. Proactive approach to ensure growth plans are factored into emergency service plans and strategies for improving service delivery Investigate further

		Time Scales		
		Short Term	Medium Term	Long Term
Summary	2013-2018	2018-2023	2023-2030	
			opportunities for co location of facilities and joint service delivery options.	

South Pennines Towns and Villages: Identified Infrastructure Requirements

OAKWORTH

HARDEN

HAWORTH

CULLINGWORTH

WILSDEN

OXENHOPE

THORNTON

TRANSPORT

The provision of commuter services on the Worth Valley railway has been identified as a transport project that is required to meet proposed housing growth in this sub area. This could be funded through incorporation into existing railway franchises.

TRANSPORT

A network of feeder services are required to connect Harden and Cullingworth to Bingley. This would need to be funded by the West Yorkshire Plus Transport Fund.

EDUCATION

New housing development will create demand for additional primary and secondary school places across the South Pennine towns and villages. The new school places will be funded by the Basic Needs Allocation (capital funding for education provided to CBMDC) and developer contributions (through either CIL or S106).

Key

Identified Infrastructure Requirements:

Capacity Improvements to Education Infrastructure
Transport Improvements



5.7**Cross Boundary Issues and Duty to Cooperate****5.7.1 Overview**

The Localism Act (2011) and National Planning Policy Framework (2012) introduced a duty to cooperate across Local Planning Authority boundaries. Paragraph 181 of the NPPF states that 'Local planning authorities will be expected to demonstrate evidence of having effectively cooperated to plan for issues with cross-boundary impacts when their Local Plans are submitted for examination'.

This section therefore sets out the mechanisms that will be put in place to tackle potential cross boundary infrastructure issues.

5.7.1.1 Transport

By nature many transport schemes have cross boundary significance. Some schemes will have direct cross boundary relevance in that improvements to a road or rail route may cross one or more district boundaries and many more will have cross boundary impacts by making it easier for people from neighbouring districts to access locations.

Many proposed schemes will lead to cross boundary issues. All schemes with direct cross boundary implications (being located partly in Bradford and partly in a neighbouring district) are shown in the table below.

Table 5.1: Cross Boundary Schemes

Cross Boundary Issues	Neighbouring Authority	How will cooperation occur?
Tram-train or fixed rail to Leeds Bradford International Airport.	Leeds City Council	High level development work between both Leeds City Council, City of Bradford MDC, Metro and DfT. Metro will coordinate the introduction of this scheme.
Calder Valley Rail Improvements	Leeds City Council, Manchester City Council, Calderdale Council, Rochdale Council.	Metro and TfGM will coordinate the introduction of this scheme. A working group is already established with membership from all interested parties.
Bradford - Huddersfield Corridor Improvements	Kirklees Metropolitan Council	Partnership work between Bradford, Calderdale and Kirklees Councils and Metro. Metro will coordinate the introduction of this scheme.
Highways Efficiency Bus Package	Leeds City Council	High level development work between both authorities and Metro

The Wortley curve scheme is located entirely outside of the Bradford District. The scheme will consist of infrastructure enhancements to enable provision of faster and more frequent direct rail links to London. Potential specific interventions to

improve connections between Bradford and the East Coast Main Line could include: reinstating the Wortley Curve; power supply upgrades on the Airedale Line; the east-of-Leeds electric horseshoe scheme; and influencing franchise specifications, as well as working with open access train operating companies.

Over the longer-term, priorities will also include improvements to local and regional rail services to ensure rapid access to and from the station(s) in the Leeds City Region on the HS2 and potential HS3/Trans North network, as well as changes to the service pattern on the existing north-south long-distance rail routes. This would help exploit the benefits of capacity release as a result of HS2 and potential HS3/Trans North network by providing more direct London services to Bradford District.

5.7.2 Other Infrastructure issues

Table 5.2: Cross Boundary Issues

Cross Boundary Issues	Neighbouring Authority	How will cooperation occur?
Education Primary and secondary schools in Menston, Otley and Guiseley.	Leeds City Council	The CBMDC Children's Services are working with Leeds City Council on cross boundary issues.
Education Primary and secondary schools in Steeton and Silsden and Crosshills.	North Yorkshire County Council	The CBMDC Children's Services are working with Craven District Council and North Yorkshire County Council on cross boundary issues.
Utilities Electricity provision around Silsden, will impact on Crosshills and Bradley.	Craven District Council	Work with Craven District Council to understand how electricity capacity will impact on the proposed housing distribution, included in the Local Plan.
Water Supply and Treatment	All neighbouring authorities.	Yorkshire Water is responsible for the supply and treatment of water in Bradford and all neighbouring districts.
Waste Planning / Disposal	Calderdale Council	Cooperation through the joint PFI waste contract.
Mineral Planning	All neighbouring authorities	Cooperate with neighbouring authorities and statutory bodies on all strategic mineral planning matters.
River Catchment, Flood Risk Drainage	All neighbouring authorities	Coordination by Environment Agency and LPA Drainage Teams.
Green Infrastructure	All neighbouring authorities	Assessment of “in-combination” effects of surround authorities plans on South Pennine Moors SPA/SAC – in terms of additional recreational/visitor

		pressure and demand
Super Connected cities	Leeds City Council	The delivery of the scheme will be coordinated by the Leeds City Region Local Enterprise Partnership.

6 Infrastructure Requirements, Funding and Delivery

6.1 Overview

This chapter reflects on the analysis of infrastructure capacity and constraints, and the impact of proposed growth targets and future provision opportunities as set out in Chapter 5; as well as the wider evidence base set out in Appendix A.

Taking each infrastructure type in turn, this chapter takes stock of the implications for current and planned infrastructure, outlines the likely funding and delivery mechanisms which could be used, and clarifies the infrastructure types and spatial locations which present themselves as a priority in order to facilitate the level of growth and change set out in the emerging Local Plan Core Strategy.

Conclusions reached on each infrastructure type aim to inform where action is required, or where a different approach may be necessary in order to realise progress and bring out investment.

It is apparent that there are certain essential services required by a community, although the relative importance and ranking of different services could be enthusiastically debated. Table 6.1 sets out broad categories and a hierarchy that provides a starting point for ongoing decision-making.

Table 6.1 - Infrastructure Sectors Hierarchy of Need

Category	Infrastructure Sectors
Basic Needs	Transport, flood risk management, water, wastewater, waste
Safety & Health Care	Ambulance, fire and rescue, police, primary and acute health care, social care
Education & Skills	Early years, primary, secondary and further education, information technology and communications
Place-making & Self-fulfilment	Libraries, community centres, cultural facilities, sports facilities, recreation, open space, enhanced public realm

The picture is of course more complex than that represented here. For instance, recognition of the preventative health benefits of exercise suggests that sports facilities should rank equally with health care. Open space can also play an important role in flood risk management, providing a further example of where a single project can serve more than one purpose. Nonetheless, it is expected that conventional service modes and priorities will continue to have a bearing on decisions made.

6.2 Transport

Transport is of paramount importance in order to realise the level of residential and commercial growth set out in the emerging Local Plan.

In all sub-areas it has been shown that the existing transport network is vulnerable, and so an integrated solution is required to overcome constraints whilst simultaneously enabling development. It is imperative that greater

alignment is reached between the delivery and funding of transport infrastructure and strategies for growth and regeneration.

A twin-track approach is needed: on the one hand priority should be given to achievable, deliverable transport infrastructure schemes to unlock development sites and allow momentum on development to be maintained; and on the other hand a coherent land-use development strategy should be enacted which seeks to optimise the delivery of parcels of land, certain land allocations and masterplans so that growth does not over-burden capacity.

A number of transport infrastructure investment proposals have been put forward. Many of these major infrastructure schemes are dependent on CBMDC obtaining Government or other third party funds. Where such funds are available and committed the transport improvement schemes will improve the network in the short term, helping to underpin growth targets between 2012 and 2018. Where funds have not been committed schemes remain aspirational and the timescales for delivery are unclear.

In seeking to set out priorities for new infrastructure provision and enhancing existing infrastructure there is a need to consider best value and optimal solutions. Currently 25 of the 30 transport schemes are deemed a priority and 'essential' infrastructure. However, where funding is not committed for a particular scheme questions must be raised as to whether there are alternative options which could be brought forward at a smaller-scale, or incrementally so as to begin to overcome issues of capacity and quality, but at the same time enable residential and commercial development.

Using information available when this report was originally prepared on the number of proposed schemes, and those that are in receipt of committed funding, the current funding gap is £425.25 million for 'essential' schemes and £60 million for 'desirable' schemes*. This is based on schemes where the cost is known, if there is no cost information it has been included in the infrastructure schedule, but not factored into the above figure.

On a sub-area basis this breaks down on the following basis*:

District-wide: £262m gap for essential; £0m for desirable;

City of Bradford, Shipley and Lower Baildon: £133m gap for essential; £60m for desirable;

Airedale: £20m gap for essential; £0m for desirable;

Wharfedale: £5m gap for essential; £0m for desirable; and

South Pennine Towns and Villages: £0.5m gap for essential; £0m for desirable.

Other: (Wortley Curve) £10m gap for essential; £0m for desirable.

Potential options to deliver schemes which currently do not have committed funds are future rounds of the West Yorkshire Local Transport Plan Implementation Plan, the West Yorkshire Plus Transport Fund, the Single Local Growth Fund and potential Community Infrastructure Levy contributions.

* These funding gap figures may include cost of some schemes that have already been implemented. See Section 8- Infrastructure Schedule for detail.

Greater collaboration with the private sector is required to overcome these funding gaps and to bring about comprehensive transport infrastructure improvements. More effective 'joint' approaches between the public and private sector must be adopted; with public bodies boosting confidence through land allocations, certainty of development and forward funding or gap funding where appropriate. The private sector must become more open to collaboration and be more willing to re-invest or share the potential returns on investment with the public sector and other partners. For example the Joint Venture currently being used to drive development on the Canal Road Corridor.

An integrated strategy for providing housing and employment growth in optimum locations will reduce number and length of car journeys and maximise opportunities to encourage the use of sustainable modes of transport. This will also assist in wider corporate objectives to reduce the impact of transport on the environment, especially with regard to its effect on air quality and its contribution to climate change.

Much of the housing growth proposals across the district are linked to major regeneration and single large-scale development proposals – e.g. Shipley and Canal Road Corridor, expansion at Silsden, the urban extension at Holme Wood and potential local Green Belt land releases. It is apparent that upgrades to the transport infrastructure are deemed to be the most important component in unlocking these developments. In light of uncertainties in major transport infrastructure funding, important decisions are required as to the approach on these development sites – with the prospect of phased delivery, allied with small-scale infrastructure improvements seeming more likely in the short to medium term, rather than waiting for major infrastructure investment to take place before any development occurs.

For strategic transport infrastructure improvements a corridor-based enhancement programme is advocated. Taking a more holistic approach affords the opportunity to balance the need for specific targeted improvements which can have a significant and/or transformational effect on the district. An example of a transformational infrastructure improvement is the proposal for improvements to the surface access and public transport access to Leeds Bradford International Airport.

Further details are set out in the Infrastructure Schedule in Section 8 which includes all the major committed and proposed transport schemes across the district. The schedule includes an assessment of whether the schemes are essential or desirable for delivery of the Districts housing and employment growth aspirations, cost estimates (where available) and potential funding mechanisms.

6.3 **Education**

6.3.1 **Overview**

As stated in Section 5, education provision is one of the most critical infrastructure issues in Bradford. The demand for school places will increase significantly over the plan period. Forecast levels of housing growth will result in new households and new demand, which will exacerbate the demand generated from the existing population and the high birth rate in the district.

Evidence from the Education Improvement Strategy (2012 – 2015) shows that there are over 1,300 more one-year-old children registered with a GP living in the district than there are 11-year-olds. This is equivalent to over 46 additional class groups a year or 320 additional class groups required across the whole primary sector compared to the number required 10 years ago.

The rapid growth in numbers of children aged 1 to 11 will also start to filter through into the secondary sector and will require in the order of 200 additional secondary class groups over time.

6.3.2 Early Years

Given the prominent role played by the private and voluntary sectors in the delivery of early years places, it is assumed that the pressure arising from introduction of a new entitlement to early education for disadvantaged two year olds will be corrected largely by expansion of these sectors.

Children's Services have produced an Education Organisation Plan (EOP)⁵³ which is updated each year. This document has considered the educational needs of the sub-areas (and the district as a whole) in more detail. The updated outputs of the EOP will be fed into the next revision to the LIP and the baseline analysis report.

6.3.3 Primary School

The evidence base shows that the number of children in primary schools will rise up to 2030. Accordingly the Council and partners have embarked on a programme of creating additional school places within a number of existing primary schools across the district.

It is expected that the Basic Needs Allocation will cover the cost of providing additional spaces for those children within the existing population living in existing housing. This necessary investment has been calculated at approximately £50 million and it is confirmed that any investment would be used to deliver capacity improvements over the next five years.

The Basic Need Allocation for 2013/2014 onwards (i.e. next financial year) has not been set; this makes it difficult to create a long term plan for providing new primary school places and so whilst the current position is stable, it will be important for the Council and the LIP to regularly monitor whether any capacity shortfalls emerge over time.

The CBMDC in-house formula has been used to calculate how many additional primary school places are likely to come from new housing growth. The formula predicts that the planned housing from 2013/2014 to 2029/2030 will generate the need for 3,171 primary school places.

⁵³ EOP is available on the Council website

http://www.bradford.gov.uk/bmdc/education_and_skills/planning_education_provision

The formula then predicts the cost of these places⁵⁴. The worst case scenario, with the assumption that there are no surplus primary school places available, is an additional cost of approximately **£90 million**.

Given the forecast high population growth in Bradford, it is important that new development contributes to the cost of primary education infrastructure. To provide an indication, if each planned new house contributes, it would result in an average cost of approximately £2,055 per residential unit. Full details are set out in Appendix B.

6.3.4 Secondary Schools

Whilst in simple terms there is sufficient capacity in secondary schools to meet growth, the location of these available spaces does not match the spatial demand profile. Additional growth set out in the Local Plan is only set to compound this problem, especially in the City of Bradford, Shipley and Lower Baildon sub-area.

In terms of prioritisation of infrastructure provision and the implications for funding it is currently unclear what role free-schools will play in the long term future of secondary education. Whilst appealing, their long term viability is being questioned, with many struggling to attract and maintain the requisite number of students; there are also question marks about their role in driving up the quality and diversity of the education offer within Bradford as the district looks to strengthen its economic future.

The PSBP schools in the City of Bradford and Airedale sub-areas will be of a quality which aligns with the ambition of the district. However, they are unlikely to provide additional capacity to cater for the planned housing developments. These alone also will not solve the mismatch between quantity of provision and spatial demand. Certain locations within each of the four sub-areas will be reliant on the Basic Need Allocation in order to enable any further capacity improvements.

Any required improvements to existing schools will be programmed following the completion of the primary school capacity improvements. The exact cost of these secondary school capacity improvements is not known, but the CBMDC Children's Services will outline further details on costs and any necessary provision as part of their ongoing work programme.

The in-house CBMDC formula has been used to calculate how many places are likely to come from new housing growth. The formula predicts that the planned housing from 2013/2014 to 2029 / 2030 will generate the need for 2,718 secondary school places. The formula then predicts the cost of these places⁵⁵.

The worst case scenario, with the assumption that there are no surplus secondary school places available is that the additional secondary school places would cost approximately **£116 million**. This is a worst case scenario, as it may be that some additional capacity may be realised through other methods, for example the potential for free schools in the City of Bradford.

⁵⁴ Each primary school places costs £13,345, Department for Education cost used in the CBMDC education formula.

⁵⁵ Each secondary school places costs £ 20,110 Department for Education cost used in the CBMDC education formula.

Given the expected high population growth in the district, and the identified complexity of provision versus demand, it is important that new development contributes to the cost of education infrastructure. To provide an indication, if each planned new house contributes, it would result in an average cost of approximately £2,654 per residential unit. Full details are set out in Appendix B.

There is also no funding gap for higher and further education, which is deemed to be funded by existing funding streams.

There is therefore a shortfall of £90 million for primary school places and £116 million for secondary school places up to 2030. The detailed assumptions used to calculate this shortfall are included in the baseline information in Appendix A. This shortfall will be partly filled through Community Infrastructure Levy funding and through the Basic Needs Allocation from Central Government. Further work on the level of funding that can be raised through CIL is currently underway. The Basic Funding Allocation may also provide some funding for places that can be filled by children from new housing developments.

The details are included in the Infrastructure Schedule in chapter 7 and baseline report in Appendix A and calculations in Appendix B.

6.4 **Green Infrastructure, Open Space and Public Space**

The challenge for green infrastructure is to continue to protect and enhance existing assets whilst simultaneously seeking funding to deliver new and aspirational schemes which drive up the quality of green infrastructure provision in the district and which contribute towards place-making and healthier lifestyles. The long-term maintenance of such new provision is also a key consideration and needs to be built in to any delivery.

Funding and delivering green infrastructure is traditionally complex and piecemeal. In terms of prioritisation it will therefore be important to strike the correct balance between taking advantage of being able to realise new infrastructure via targeted investment on key corridors and housing delivery hot spots, versus the overarching ambitions to deliver a concerted, strategic scale improvement to the level of green infrastructure across the district.

New development and targeted investment along corridors takes a bottom up approach and can be underpinned via development contributions and a mixture of on-site and off-site payments. It is important that funding is a mix of capital and revenue funding to allow any new on-site provision to be maintained.

The final Open Space Strategy will set out the priorities and costs for future provision, with a focus on the following:

A new park in East Bradford, which would be seen to have excellent regeneration benefits and they were looking at working with housing association, Incommunities to use land assets and regeneration schemes to locate a potential site.

A new County Park in the Tong area which would serve the proposed new housing at Holme Wood and improve the quality of place in this area.

A green link along Canal Road to aid regeneration. A cycle path running through a new informal park is currently being planned for implementation shortly by the CBMDC..

Potentially a **new park in Silsden** linked to planned housing growth;

Enhancement of **existing open space and play areas**; and

The management and mitigation strategy will also set out the priorities and costs for measures designed to reduce or avoid impacts from new development on the South Pennine Moors SPA/SAC which are protected at European level.

The Rights of Way Improvement Plan and its future updates will set out priorities and costs for measures to improve and enhance this key recreational and access network.

Continued maintenance of Council assets (funded through Council funding and S106 contributions).

Regeneration at Holme Wood, Allerton, Ravenscliffe, Thorpe Edge, Buttershaw and Woodside and inner city areas such as Manningham, Little Horton and Laisterdyke should consider substantial GI packages as part of their overall development potential to underpin the regeneration ambition and to realise commensurate environmental, health and well-being improvements alongside improvements to the standard and quality of the housing stock.

Improving green infrastructure networks along the Shipley & Canal Road Corridor, Bradford City Centre and to the east and west along key public transport corridors (especially the Leeds Bradford Corridor and south along the M606 corridor) should be deemed prioritises for the medium term.

The delivery of the above schemes can be funded through a number of means.

In the past the general approach has been to gain S106 to improve existing recreation open space and playing fields developers for on-site provision.

Historic S106 contribution from 2008 to July 2012 show that an average of £205,000 of capital funding and £42,000 of revenue funding per year has been received by the parks, gardens and sports teams. This has paid for new play areas, sports pitches and maintenance.

A number of other sources of funding have also been used to deliver green infrastructure improvements, including Heritage Lottery. This has resulted in over £1 million of funding per year, a lot of this was linked to Heritage Lottery funding for Roberts Park.

The approach to on-site and off-site / strategic green infrastructure will need to be clearly set out in any future Community Infrastructure Levy for Bradford District. This is currently being investigated, but the Community Infrastructure Levy could potentially be used to deliver some of the strategic infrastructure information listed above.

6.5 Sports, Leisure and Recreation

A number of sports facilities across the district are no longer fit for purpose. They fall short of current benchmarks for accessibility, energy consumption / greenhouse gas production and running costs. Fundamentally it is not practical to

make significant improvements to many of these facilities without a long term strategy of replacement.

The final Open Space Strategy will set out the priorities and costs in the future. This will be informed by a Playing Pitches Audit. Priorities in the strategy are likely to be:

- Any new pitches required through the Pitches Audit, which will feed into the Open Space Strategy, which include mini and junior football pitches. A new Rugby League facility is planned in South Bradford;
- New outdoor recreational facilities where planned housing growth puts strain on existing resources;

Currently S106 contributions are used to create and maintain sports pitches and play areas, and it seems likely that the Council will continue to gain funding through S106 and continue to draw in funding from other sources to supplement as appropriate.

The level of indoor sports facilities provision is below national averages, with facilities operating at or approaching 100% capacity. The building infrastructure at many facilities is known to be in poor condition. CBMDC's figures show that five-year backlog maintenance costs across the sports portfolio were estimated £12million in 2011/12; with over £7million needed for the district's community swimming pools.

In 2012 the Council committed to review the current level of sports facilities provision across the District and develop a revised sports facilities strategy with options including:

A city centre sports and swimming pool facility, at the top of the hierarchy of provision providing for all levels of access and ability across the District.

Community sports facilities to meet identified deficiencies in provision and predicted population increases

The approach to indoor sports facilities provision, for central and community sports facilities, will need to consider all potential funding options and also be clearly set out in any future Community Infrastructure Levy for Bradford District.

Delivery can be funded through a variety of sources.

Council should look to S106 to continue to improve existing provision and secure additional provision on-site as appropriate.

Historic S106 contribution from 2008 to July 2012 show that an average of £205,000 of capital funding and £42,000 of revenue funding per year has been received by the parks, gardens and sports teams. This has paid for new play areas, sports pitches and maintenance.

The approach to on-site and off-site sports provision will need to be clearly set out in any future Community Infrastructure Levy for Bradford District.

6.6 Flood Risk and Drainage

There is **no identified gap in Flood Risk and Drainage Infrastructure**. The Council will be required to meet the sequential and exceptions tests on all future site allocation. There will also need to be a case by case assessment of potential mechanisms or localised solutions to reduce flood risk, which will be delivered by the private sector. This could include the use of SUDS, which will be strengthened by CBMDC becoming the SUDS approval body for the District from April 2013.

6.7 Utilities

6.7.1 Gas

Discussions with United Utilities have suggested that the overall gas network within CBMDC is robust and flexible and that strategic reinforcement of the network would not be necessary to support the intended development plans. Local reinforcements will be required to service local developments as and when these are allocated and designed.

Local reinforcement would cost between £20 to £250k, but would be need to be funded by the developer in partnership with Northern Gas.

6.7.2 Electricity

Electricity provision is generally adequate to meet the growth aspirations. However minor local reinforcements would be needed at primary substations, as well as cabling and the installation of a new secondary substation. Size and timescales of these elements would depend upon the size of the development and its delivery timescale. There are some capacity issues at Silsden as detailed in Section 5.

Depending on the phasing of development at Silsden there will be a requirement for local reinforcements (£20k to £250k) or strategic reinforcements (£2 to 5 million). The cost of these works may be partly paid for the Northern Powergrid or as a cost to the developer.

6.7.3 Water Supply and Treatment

The supply of to the whole Bradford District is adequate to meet proposed housing and employment growth. There may be a requirement to upgrade a number of Wastewater Treatment Works (as detailed in the sub area profiles) in the Yorkshire Water AMP 6 (2015 – 2020) spending period. The Aire Valley Trunk Sewer has reached capacity and there is a need to increase the capacity of the sewer to meet the requirements of the planned housing and employment in Airedale. This is currently being investigated by Yorkshire Water and is likely to be placed in their AMP 6 period. It will be important to liaise with Yorkshire Water to understand when this development is likely to be phased into the programme. Yorkshire Water is not able to provide a timetable to feed into this study.

The above works will need to be funded by Yorkshire Water as part of their statutory duty to supply and treat water.

6.7.4 Telecommunications

The assessment of the telecommunication networks in Bradford District is included in Appendix A. The City of Bradford will benefit from investment through the Urban Broadband Fund, to become one of the UK's first super-connected cities. The majority of Bradford is considered to good competition when it comes to Broadband. The only area where this is not the case is Addingham. This doesn't mean the provision is poor, it just means there is less choice.

Even given the planned improvements in Bradford, there would still be a need to improve telecommunication infrastructure to meet planned housing and employment growth by serving the new sites directly. These improvements would be market led and local strategic infrastructure would be needed at the access layer, which is the cabling from the home to street cabinet, as well as cabling from the street cabinet to the exchange.

The cost of these improvements would need to be met by a developer as part of their scheme.

6.7.5 Waste and Recycling

A Waste Management Development Plan Document is currently being developed by the CBMDC Planning, Transportation and Highways Services. This document seeks to allocate the waste management sites needed to meet projected waste needs up to 2030.

Based on the evidence base information set out in the emerging Waste Management DPD there is a significant need for waste management facilities within the District. However, the Waste Management DPD will allocate sufficient site to ensure there is adequate treatment capacity to meet the proposed housing and employment growth up to 2030.

The funding to deliver the required facilities will be delivered through a combination of the Council and private sector investment.

6.8 Community and Cultural

6.8.1 Libraries

The library provision in Bradford is funded through Council Funding. There are a number of libraries that are in need of maintenance, particularly Great Horton Library.

It is also worth noting that an increase in housing and employment will not directly affect the infrastructure needed to deliver library services, as this can be

delivered in any sort of premise and is likely to only be used by a proportion of any new housing development.

6.8.2 Cemetery Provision

CBMDC Bereavement Services constantly monitor the take up of cemetery places and crematorium provision. This is set out in Appendix A. There is a requirement to identify a site for a new crematorium in South Bradford. This is needed to meet the modern standards of crematorium (linked to mercury filtering), to improve the quality of the environment and also to locate the facility in the area where there is demand for the service. The cost of this facility would need to be met by capital funding through Bradford Council, and would be approximately £4 to 5 million and is set out in detail Appendix A and summarised the Infrastructure Schedule in Section 8. There will also be a requirement to identify new cemetery space in Shipley / Bingley, following the closure of Nab Wood to new burials. This is likely to cost approximately £1.5 million and would need to be funded through Bradford Council capital funding.

6.8.3 Museums, Galleries and Theatres and Community centres

The provision of museums, galleries and theatres and community centres are the responsibility of CBMDC, private companies and voluntary organisations. The funding for these uses would continue to come from existing sources.

The funding for Council run libraries, cemeteries and museum galleries and community centres will be provided through CBMDC capital and revenue funding. Other facilities will continue to be provided by private companies and voluntary organisations.

6.9 Health

The NHS is currently undergoing a number of changes. Bradford District will be covered by three Clinical Commissioning Groups, who will be in charge of commissioning services for GP surgery's and hospitals.

General reform within the NHS will mean that the service is required to deliver savings of around £20billion over the next four years. On a pro rata basis this will mean the health service for Bradford and Airedale will need to save approximately £200million – in excess of 20% - over the same period. This will be a significant challenge for local NHS services.

NHS funding	2010/11	2011/12	2012/13	2013/14	2014/15
	£'bn	£'bn	£'bn	£'bn	£'bn
Revenue	98.7	101.5	104	106.9	109.8
Increase		2.8	2.5	2.9	2.9
% Increase		2.8%	2.5%	2.8%	2.8%

In terms of estate management and investment in buildings and infrastructure the Bradford and Airedale Single Integrated Plan assumes the revenue cost associated with investment in estates will be approximately £500,000 for the next four years.

This investment will be targeted at those developments the PCT has agreed as priority with its board in 2009/10 and ratified in 2010/11. These investments will need to be reviewed in light of any government policy announcements in relation to asset ownership and any changes to investment vehicles such as LIFT

The funding for health will be provided by central government based on the number of people registered in Bradford and their level of deprivation.

6.10 Emergency Services

Although the emergency service providers have undergone significant restructuring and have had to make revisions to their ways of working in light of public sector spending cuts, it has not been found that significant capacity constraints or shortfalls are to be found in terms of provision of services in the district.

Whilst it is noted that the West Yorkshire Fire Service has the lowest expenditure per head of population and that it also receives the lowest grant per head of population it has not been identified as a constraint to future service delivery.

The cost of any new provision by the West Yorkshire Fire Service, Yorkshire Ambulance Service and West Yorkshire Police will continue to be met through funding from central government and the local council tax precept.

6.11 Summary of Funding Arrangements

Figure 6.1: Summary table of funding⁵⁶

Infrastructure Type	Committed Funding	Potential Funding Mechanisms	Funding Gap
Transport	Funding has been secured through the Local Transport Plan 3 - Hubs Programme, Saltaire Roundabout improvements, Low Moor Station and Apperley Bridge Station. Full details of this funding are provided in the Infrastructure Schedule.	West Yorkshire Plus Transport Fund. Direct additional central government funding CBMDC Partner funding - eg bus operators. CIL.	There is a funding gap of £469.5 million for transport schemes classified as essential and £283 million for schemes classified as desirable. Some of this could potentially be delivered through the West Yorkshire Transport Fund. Developer Contributions (CIL).
Utilities	The Yorkshire Water budget (from Central Government and Council tax).	Yorkshire Water Northern Powergrid United Utilities National Grid Northern Gas	There is a need to increase the capacity of the Aire Valley Trunk Sewer. Yorkshire Water is aware of this issue and is looking into the issue.

⁵⁶ May include reference to projects that have already been implemented

	<p>Northern Powergrid and National Grid funding to deliver electricity infrastructure.</p> <p>Northern Gas and United Utilities funding to deliver gas infrastructure.</p>	Developer Contributions	<p>This will be funded by Yorkshire Water.</p> <p>There is a need to increase waste water treatment facility capacity. This will be funded by Yorkshire Water.</p> <p>There may be a requirement for Strategic Reinforcements to the electricity network at Silsden – £2 – 5 million</p> <p>In addition local electricity reinforcements are likely to be required - £20 – 250k</p> <p>Local gas reinforcement may be needed.</p> <p>This will need to be funded by developer contributions / energy company funding.</p>
Telecommunication	£14.4 million has been confirmed as part of the Leeds and Bradford Super Connected Cities Project. This funding is from the Yorkshire and Humber ERDF Competitiveness Programme 2007 – 2013.	Private Sector Developers Telecommunications Operators	No identified funding gap.
Flood Risk and Drainage	Committed funding from the Flood Reliance City Fund to produce a 1D/2D model of the becks that run through Ilkley.	Developer Contributions to on-site systems / SUDS CBMDC Environment Agency	No identified funding gap.
Waste and Recycling	Delivery of a new municipal waste facility as part of a PFI at Bowling Beck Lane, Bradford.	Private sector CBMDC Council Tax	No identified funding gap.
Green Infrastructure, Open Space and Public Space	There is committed CBMDC funding to maintain existing parks and natural/countryside spaces – plus rights	CBMDC Sustrans Developer contributions of on-site and off-site green	<p>Unknown, will be worked up through the Open Space Strategy</p> <p>Unknown at present –</p>

	of way network	space (S106 / CIL) An average of £205,000 of capital funding and £42,000 of revenue funding has been received from S106 contributions from 2008 to July 2012. Heritage Lottery, Local Landfill Tax, Sports England Natural England Pennine Prospects In the past an average of almost £2 million per year from 2007 to 2012 has been received from the above sources.	worked up through SPA/SAC management and mitigation strategy plus ROWIP
Sports, Leisure and Recreation	There is committed CBMDC funding to continue to operate existing facilities.	CBMDC Sustrans Developer contributions of on-site and off-site green space (S106 / CIL)	Unknown, will be worked up through the Open Space Strategy
Community and Cultural	Libraries There is existing committed funding to continue to provide library services in the District. The CBMDC Executive has spent £900,000 to deliver necessary works to bring the Central Library to health and safety standards. Burial Services There is existing committed funding through the CBMDC Bereavement Service. This is used to maintain existing facilities. There is also	CBMDC Voluntary/Community Groups Private sector CBMDC Capital Funding will be required to fund: A new crematorium in South Bradford – £ 4 – 5 million	There is no identified gap in funding. There is no gap in funding, as Council budgets will provide the required funds.

	<p>revenue raised by use of the Council owned cemetery facilities and burial space.</p> <p>Museums, Galleries and Theatres</p> <p>Community Groups</p> <p>There is CBMDC funding to operate CBMDC owned facilities. Private facilities are funded by private parties</p>	<p>New burial space in the Shipley / Bingley - £ 1.5 million</p> <p>CBMDC</p> <p>Private sector</p> <p>Voluntary/Community Groups</p>	<p>There is no identified funding gap.</p>
Education	<p>Children's Services in CBMDC have received an average of approximately £7 million of Basic Needs Allocation (Capital funding for new school places) from 2008 – 2013.</p>	<p>CBMDC Basic Allocation Funding (this has not been confirmed for 2013/2014), but some funding will be available.</p> <p>Developer contributions</p> <p>From 2009 – 2013 a total of £800,000 has been secured from new housing development for education provision⁵⁷.</p>	<p>There is no funding gap for early years and further / higher education provision.</p> <p>Based on the CBMDC Education Contributions formula and the cost of school places generated by new housing development may be:</p> <p>£90 million for primary school places and £116 million for secondary school places.</p> <p>This could be provided by Development Contributions (CIL) and Basic Needs Allocation.</p>
Health	<p>NHS funding is provided to the Clinical Commissioning Groups based on the number of people registered for health services.</p>	<p>NHS Funding</p>	<p>No identified funding gap.</p>
Emergency Services	<p>The budgets of the West Yorkshire Police Service, Yorkshire Ambulance Service and West Yorkshire Fire</p>	<p>Central Government Funding.</p> <p>Council Tax</p>	<p>No identified funding gap.</p>

⁵⁷ S106 Monitoring by CBMDC

	Service will continue to be funded through Central Government funding and Council Tax.		
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7 Funding Sources

7.1 Overview

There are three categories of complementary infrastructure funding sources considered below:

- Grants and subsidies
- Local revenue generation
- Equity and debt

7.2 Grants and subsidies

7.2.1 WY-Plus Transport Fund

West Yorkshire local authorities are proposing to introduce a local transport fund of £1billion for implementation of major public transport and highways schemes between 2014 and 2025. The fund was originally predicated on creating a transport levy via a precept on local authority council tax, topped up by securing other bespoke funding sources including a top slice of LTP funding and devolved DfT Major Scheme Funding. Changes to legislation relating to levy increases and the creation of the Single Local Growth Fund has changed the way that this funding will need to be raised and a proposal is in preparation for negotiation with Government.

The transport fund, which forms part of the Leeds City Region's City Deal, targets combined projects that will deliver enhancements in GVA and jobs. The West Yorkshire Combined Authority will be set up in April 2014 to administer and deliver this funding, providing appropriately robust governance structures. Transport projects that will receive funding from the scheme have already been prioritised though this may need to be reviewed in the context of any new funding mechanism adopted..

The transport fund represents a major source of funding and probably the principal source of 'core' funding for transport schemes in the future along with any additional funding secured from the Single Local Growth Fund between 2015 and 2021.

7.2.2 New Homes Bonus (NHB)

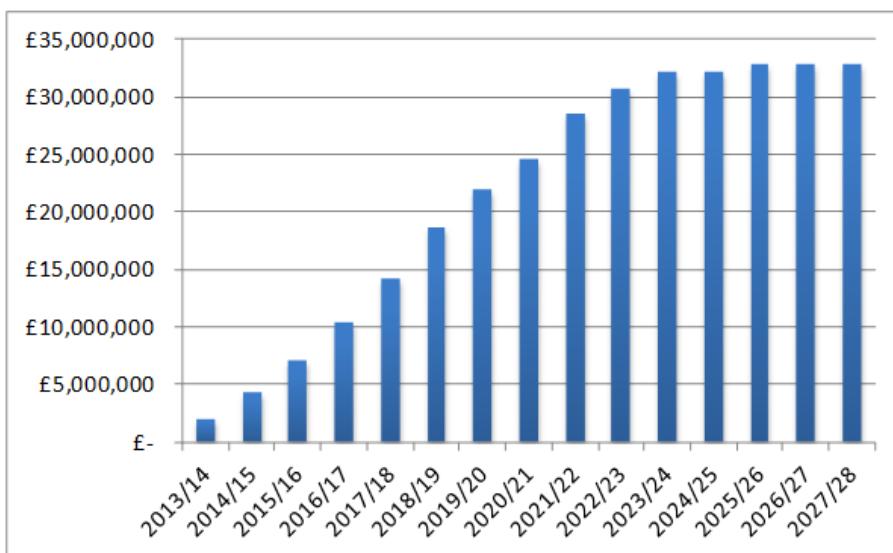
The New Homes Bonus provides local authorities with a financial payment equal to the national average for the council tax band on each additional property and paid for the following six years as a un-ringfenced grant. Local authorities can utilise the income generated by the New Homes Bonus to pay for infrastructure requirements.

As an illustration of the potential NHB receipts, the grant relating to a mid value council tax D property would be £1439 per annum or £8634 for six years. Applying this level to the net housing development trajectory set out in the emerging Local Plan - Core Strategy (3,000 units per annum), demonstrates the potential for considerable funding contributions. Figure 7.1 below illustrates the

projected receipts over the Core Strategy period, from just over £2million in 2013/14 to £32million per annum from 2023 onwards.

The delivery of new homes bonus is dependent on housing delivery and net housing growth performance, to which there is inevitably a fair degree of risk. However, given that the infrastructure requirements are based on this development trajectory, it is reasonable to plan for this level of funding from NHB.

Figure 7.1: Illustrated example of projected New Homes Bonus (NHB) Revenue based on Council Tax D grant



7.2.3 Government and European grants

Capital grants represent project specific funding for capital projects from Government, the EU or the National Lottery. Such funds could be received from quasigovernment sources such as HCA, Central Government Departments or other organisations. The current financial climate has led to a dramatic drop in grant funding available, however, there remain some sources of funding that can potentially be drawn into infrastructure schemes, such as the Regional Growth Fund, national lottery and the European Regional Development Fund (ERDF) and it is reasonable to assume that there will be a continuation in the availability of project specific grants in the future.

7.3 Local Revenue generation opportunities

7.3.1 Business rate retention

In December 2011, following a lengthy consultation period, proposals to enable local authorities to retain a portion of locally generated business rate income were published and incorporated into the Local Government Finance Bill.

The Government is proposing to introduce the business rate retention scheme from April 2013, which will allow local authorities to retain a portion of business rate growth, enabling this income to be used for investing in infrastructure.

The mechanism for introducing the proposals are complex and a further consultation is currently open until September 2012 to seek views on the approach. The mechanism includes provision for tariffs and top ups to allow for a 'safety net', to ensure that local authorities in low demand areas are compensated by the redistribution of income from high demand areas.

There is a significant case nationally for utilising business rate income for infrastructure funding and delivery, particularly where infrastructure can help unlock economic development and commercial property opportunities. However, the ability to use this source will depend on the net growth of business rates over time. For Bradford, the level of business rate growth can be modelled according to the development trajectories anticipated in the Core Strategy. However, the level of business rates that will be available to be retained is subject to the Government's consultation and is yet to be formally established.

7.3.2 Proceeds from the disposal of assets

Proceeds from the disposal of surplus Council and other public sector owned assets form a further source of funding that can potentially be used to pay for infrastructure works. Bradford Council owns a significant amount of land, some of which it is anticipated will be available for release for development over the period of the development plan. However, it should be recognised that the utilisation of capital receipts for infrastructure investment purposes will be subject to internal assessment in the same way as any other investment proposal and that there will need to be strong business case in respect of contributing to the Council's corporate objectives and priorities.

There is also potential for utilisation of other public sector assets such as the Homes and Communities Agency (HCA) and other Government Departments. The HCA is taking a stewardship role in the disposal of surplus Government assets including the former Yorkshire Forward property portfolio, in order to ensure that such assets are used to deliver housing development and regeneration.

A full audit of the public sector asset base is required in Bradford to determine the potential availability of property assets that can be used for these purposes.

7.3.3 Council tax increase

Hypothecation of Council Tax as part of the Integrated Transport Authority (ITA) has been considered and implemented by a number of local authorities based on a limited increase in Council Tax specifically to help fund new infrastructure development. A council tax supplement is effectively being mooted as part of the West Yorkshire Transport Fund proposals so there is effectively a precedent for such an approach. Effectively, the increase in council tax revenue is ring-fenced specifically for infrastructure in the area – potentially even specifying the infrastructure item for which the council tax supplement is required. This is set as an increase for a defined period, therefore demonstrating a long term commitment to the delivery of enhanced infrastructure. This income stream can then be used either for direct delivery or to be securitised to borrow prudentially to fund the additional provision. Whilst increasing council tax represents a potentially politically sensitive option, it offers an effective and direct means of increasing revenue for infrastructure projects.

7.4 Equity and debt

7.4.1 Growing Places Fund (GPF)

The Growing Places Fund was set up by the Government in late 2011 as a £400million (extended by a further £270million in the March 2012 budget) to provide seed capital for Local Economic Partnerships (LEPs) to establish Revolving Infrastructure Funds (RIFs). The fund is to be used to pay for infrastructure projects that facilitate development, leasing land value, a portion of which can then be recycled into the fund to pay for further infrastructure projects.

The Government allocated the funds to LEPs on the basis of a formula relating to socio-economic data. Leeds City Region was allocated £24million, topped up to £36million following the budget and launched a call for projects earlier this year. The fund can be used to:

- Unlock and accelerate the development of key growth sectors;
- Support the potential of firms to grow and adapt;
- Establish physical infrastructure; and
- Delivery key investment to support economic growth.

The stated priorities for the first round in Leeds City Region are:

- Lever a minimum of £3million GPF for each £1million GPF;
- Start to repay a loan or investment with three years;
- Require funding of between £0.5million and £2million;
- Increase employment and provide apprenticeship opportunities;
- Support a low carbon economy; and
- Provide a long term legacy to the LCR.

We understand that the majority of interest in the first round has been from private sector applicants seeking loan finance to fund site infrastructure works that can unlock development sites. However, future rounds will enable the public sector to act as 'project sponsor' and could include GFP being used to forward fund infrastructure works in lieu of CIL and/or S106 receipts.

The ethos of GPF is about establishing a sustainable source of finance for local infrastructure projects, and therefore, GPF could offer long term complementary funding to CIL for local infrastructure schemes in Bradford. However, the seed capital is relatively small; assuming Bradford District receives its fair share of the fund (say 10%), this would amount to only £2.4 million over a period likely to be a minimum of three years. Furthermore, it is a competitive funding mechanism and therefore there can be no guarantee of Bradford receiving any funding at all.

The scale of the fund could however be enlarged through the establishment of a broader based Revolving Investment Fund for Leeds City Region, which forms a key element of the City Deal, outlined below.

7.4.2 Leeds City Region Regional Investment Fund (RIF)

A separate but linked proposal established in the LCR's City Deal was to develop a Revolving Investment Fund for Leeds City Region. This fund is estimated at £400million for ten years, based on pooled local funding sources matched by devolved future Government funding sources. These will include:

- Local authorities matching Growing Places Fund money already committed
- Regional Growth Fund, Round 3 and future rounds
- Over the longer term, pooling of CIL revenue and business rate receipts
- HCA and other sources

Clearly, in view of the expectation that some of this fund will comprise pooled CIL revenue receipts, careful regard must be had so as to avoid any double counting in estimating future infrastructure funding packages. Furthermore, as with GPF, it is a revolving fund and therefore it is anticipated that projects will be funded on a loan/equity basis with receipts being recycled into the fund. It therefore implies that RIF will offer a means of forward funding infrastructure in lieu of CIL and other receipts, but the degree to which it offers an additional / alternative source of grant is unclear at the present stage.

However, notwithstanding the implicit caveats, the RIF clearly represents an important source of funding for infrastructure projects, which crudely on a pro rata basis could equate to £4million per annum for each of the ten districts over a period of ten years.

7.4.3 Prudential borrowing

The Government's CIL guidance documents highlight the availability of prudential borrowing to local authorities to enable forward funding of infrastructure works. The Council can borrow from a number of sources, most commonly from the Public Works Loan Board (PWLB). The cost of prudential borrowing is particularly low and typically ranges from 3-4.5%, well below typical private sector debt or equity costs. However, whilst PWLB borrowing is cheap the local authority needs revenue headroom to ensure debt repayments through the term of the borrowing – taking into consideration the risks of delivery of CIL revenue. The use of prudential borrowing is clearly a valuable source of funding to assist with cashflow, but as it is debt it will not plug any funding gaps.

7.4.4 Institutional investment

There is currently a drive in central government to increase the level of investment from institutions for infrastructure projects, particularly from pension funds. The March 2012 budget outlined the proposal to establish a new 'Pension Infrastructure Platform' owned and run by UK pension funds with an initial investment fund of £2billion commencing in 2013. Local Government and LEPs are also exploring ways of securing institutional investment in revolving funds, following Greater Manchester's example of using the local authority pension scheme in the 'Evergreen' model.

Clearly, the availability of investment from pension funds and other institutions will depend to a considerable extent on the level of return and the guarantees that

can be offered in infrastructure projects. Indications from elsewhere are that scale and critical mass are also important and therefore at the local level, the best prospect of engaging such investors is likely to be via the Local Economic Partnerships. Leeds City Region Partnership's City Deal proposal includes the aim of attracting institutional investment from local authority pension funds. For Bradford, this may offer one mechanism of attracting such funding.

However, as with prudential borrowing, this form of funding is equity and must be repaid with interest. Therefore it will not fill funding gaps, but could be a means of assisting with forward funding and cashflow generally.

7.4.5 Joint ventures

The use of a partnership approach to develop a pipeline of sites across an area is a popular potential route that is being pursued by a number of local authorities at present. Such partnerships can include the public sector vesting land and/or equity alongside an equivalent commitment by a commercial partner to deliver a development or regeneration scheme. The site is developed together through the vehicle by leveraging development capital using the public sector assets - the profits are then shared between the two parties or reinvested in further schemes. Bradford Council is currently engaged in such a mechanism in respect of the Bradford/Shipley Canal Road Corridor, partnering with Arnold Laver as a major land owner within this regeneration area.

The development of an infrastructure based JV has potential where the public sector owns development land and is able to use that land to attract private sector investment to deliver infrastructure. In this case, the private sector would put equity into the JV to pay for infrastructure works, then development takes place on the Council's land, the receipts from which are shared between the parties.

The potential for such mechanisms to be applied on an ad hoc or area wide strategic basis should be explored alongside the audit of assets recommended above.

7.4.6 Shadow toll

The Shadow Toll mechanism is one that has been used extensively across Europe and has been the subject of recent debate in connection with the proposals for increasing institutional funding in infrastructure. Historically this has been delivered through a PFI type structure where the system of shadow tolling provides the revenue for privately-funded road schemes for a Design, Build, Finance and Operate (DBFO) contract. The mechanism allows the Government to spread payments for infrastructure over a longer period of use rather than up front for development, with much of the development risk being taken by a private sector partner. The advantages of this scheme are that it enables the private sector to meet the upfront capital funding requirements and share the risks. It may therefore offer an opportunity for funding highway schemes in Bradford.

7.5 Conclusions

It is important that Bradford Council and the Leeds City Region LEP adopt a coherent view on how infrastructure is:

Funded: by users of infrastructure and / or the tax payer; and

Financed: including through creating stable long-term markets to encourage investment, and using new financial models.

The strategy for developing and deploying different funding and financial models needs to be joined up to provide a comprehensive view of how funding and financing will be secured and deployed.

Generally, Bradford District, along with others, is moving away from an approach where it sets out infrastructure asks to Government, towards developing positive propositions for greater freedoms and flexibilities as to how it raises and uses funding.

These new funding models such as CIL, TIF, NHB, Growing Places Fund and so on also provide an opportunity to see investments in infrastructure as not only benefiting the people and businesses of Bradford District, but also as a means for generating a direct financial return to the public sector which can then be reinvested. This means that criteria for prioritising and phasing of infrastructure investments will need to include where, when and how improved infrastructure can genuinely stimulate new housing and business growth to create a return to the public sector through CIL, New Homes Bonus, retention of business rates growth, and direct payback into revolving funds. A hard-headed and realistic approach will be needed to estimating these future revenue streams, particularly when the public sector is borrowing against them (it is called prudential borrowing for a reason).

It will also be important for Bradford Council to continue to seek mainstream funding for infrastructure, and in particular:

- Influencing investment in the national rail network, and through rail franchise specifications to benefit Bradford District; and
- Working with utilities companies to ensure plans for growth in Bradford District are factored into their asset management and investment plans.

8 Infrastructure Schedule

The Infrastructure Schedule details all the required infrastructure provision in the Bradford District, based on available information in September 2012. The schedule details all the infrastructure requirements for the Bradford District up to 2030, with funding costs provided where available. The schedule also details any committed funding sources and potential funding mechanisms, before confirming if there is a gap in infrastructure provision.

‘Essential’ infrastructure is defined as infrastructure that is required to make development acceptable in planning terms.

‘Desirable’ infrastructure is described as infrastructure which would improve the capacity and deliver place making benefits.

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Delivery mechanism		Delivery phasing (When)	Gaps in funding	Baseline source
					Lead delivery agency/ management organisation	Cost			
Transport									
District Wide	Bus Network	Essential	Improve public transport access and encourage modal shift.	Development of bus network in line with Metro specification if Metro opts for quality contracts. Alternative formal partnership approach will also bring benefits	Metro	Could be delivered as part of a West Yorkshire quality contract or formal partnership scheme.	Medium term 5 – 10 years	Medium term cost; however, significant revenue risk.	LTP funding allocated.
District wide	Urban Traffic Management Control (UTMC) Package	Essential	More effective traffic management across the district.	Network of Variable Message Signs (VMS), Automatic Number Plate Recognition (ANPR) to effectively manage traffic	CBMDC	Possible funding through the West Yorkshire Plus Transport Fund or Local Transport Plan. For more details see Appendix A.	Medium term 5 – 10 years	VMS signing being implemented through the LTP and potentially SLGF	Discussions with CBMDC Highway Officers.
District Wide	Walking and Cycling Network	Essential	Improve facilities and enhance take up of sustainable modes.	Provision of enhanced walking and cycling network including the Shipley to Bradford 'living streets' network and Leeds Bradford Cycle Route.	CBMDC / Leeds City Council / Metro	Funding through the Local Transport Plan, LSTF and Cycle City Ambition Grant	£5 million approx	Short to medium term 0 – 10 years	No committed funding confirmed.
District Wide Including cross boundary	Tram-train or fixed rail to Leeds Bradford International Airport	Essential	Would provide improved international connections via LBIA.	Direct link between Bradford & LBIA. Connection of the existing Harrogate Line to a new station close to LBIA. This would allow tram-train vehicles to run from the centre of Bradford to LBIA or via a connection at Leeds.	Metro	Transformational scheme in West Yorkshire Plus Transport Fund. For more details see Appendix A.	£257 million	Long term 10 - 15 years	Discussions with CBMDC Highway Officers.
City of Bradford, including	Bradford City Centre	Essential	Improve the quality of interchange	Bradford Interchange - aims to enhance public transport integration and support the city centre regeneration project. Includes measures to	Metro/ Network Rail	Possible funding through the West Yorkshire Plus Transport Fund. For more details see	£30 million+	Medium term 5 – 10 years	Discussions with CBMDC

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
Shipley and Lower Baildon	Station Improvements		in Bradford city centre and would improve links between the stations and the city centre.	improve linkages between the interchange and the city centre, reduce future maintenance costs and rationalise and improve staff accommodation facilities.	Appendix A.			confirmed.	Highway Officers.	
City of Bradford, including Shipley and Lower Baildon	West Bradford Radial Routes	Essential	Reduce congestion and improve sustainable mode access to the west of Bradford.	Capacity / bus priority / pedestrian & cycling improvements at selected junctions, including Great Horton Road / All Saints Road, Great Horton Road / Cross Lane, Thornton Road / Allerton Road, Legrams Lane / Cemetery Road, Legrams Lane / Ingleby Road, Carlisle Road / Toller Lane and Manningham Lane / Queens Road.	CBMDC/ Metro	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£26 million	Medium term 5 – 10 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
City of Bradford, including Shipley and Lower Baildon	Harrogate Road / New Line, Greengates - Junction Improvement	Essential	Increase capacity at this junction and improve pedestrian safety.	Junction improvement to increase capacity and provide pedestrian and cycling facilities	CBMDC	Funded through the West Yorkshire Plus Transport Fund. And 3 rd party contribution.	£5.5 million	Short term 1 – 5 years	No Gap	Discussions with CBMDC Highway Officers.
City of Bradford, including Shipley and Lower Baildon	Low Moor Station	Essential	Improve access for local residents and provide strategic park and ride opportunities.	New station on the Calder Valley Line between Halifax and Bradford Interchange. The station includes approximately 120 car parking spaces.	Metro	Funding already secured through LTP.	£7 million	Short term 1 – 5 years	No gap	West Yorkshire LTP3
City of Bradford, including Shipley and Lower Baildon	Apperley Bridge Station	Essential	Improve access for local residents and provide strategic park and ride	New station on the Airedale and Wharfedale line between. The station includes approximately 300 car parking spaces.	Metro	£10.3 million secured through Department for Transport Funding £5 million private sector contributions £1.6 million LTP funding	£16.9 million	Short term 1 – 5 years	No gap	Metro Current proposals

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
City of Bradford, including Shipley and Lower Baildon	South East Bradford Access Routes	Essential	opportunities.	Construction of a new access route from the A650 Westgate Hill Street to Holme Wood to serve urban extension	CBMDC	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£40 million	Long Term 10 – 15 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
City of Bradford, Shipley and Lower Baildon	LTP Hubs Programme	Essential	Provide access to housing and employment land in Holme Wood.	First stage is provision of a public transport 'hub' at Shipley to facilitate interchange between local bus services and between bus and rail services. Further hubs planned to improve interchange, provide a safe and secure waiting area, real time information and help point, cycle parking and taxi call point.	Metro	Funding already secured through LTP.	£0.5 million	Medium term 5 – 10 years	No gap	West Yorkshire LTP3
City of Bradford, Shipley and Lower Baildon	Fox Corner, Shipley	Essential	Provide enhanced public transport interchange in a safe and pleasant environment.	Development of a small gyratory system to increase junction capacity	CBMDC	Possible funding through SLGF. For more details see Appendix A.	£2 million	Short to medium term 0 – 10 years	No committed funding confirmed.	Previous Arup Study.
City of Bradford, Shipley and Lower Baildon	Canal Road	Essential	Would address congestion and delays to public transport in central Shipley.	Online highway improvements to encourage strategic traffic to use Canal Road rather than the parallel A650 Quality Bus Corridor and to open up brownfield development land.	CBMDC	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£34 million	Medium term 5 – 10 years	First stage £2.8m funding confirmed. Other funding would be required from WY+TF	Previous Arup Study.
City of Bradford, Shipley and Lower Baildon	Saltaire roundabout	Essential	Address congestion issues around Saltaire	Alteration of the design of Saltaire roundabout to improve capacity and reduce congestion.	CBMDC	Funding already secured through LTP.	£3 million	Scheme completed	No gap	Previous Arup Study.

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
Lower Baildon			Roundabout.							
City of Bradford, Shipley and Lower Baildon	Calder Valley Rail Improvements	Essential	Enhance services on the Calder Valley Line where service quality is currently poor.	Line-speed and capacity improvements, including improved rolling stock and electrification, to enable faster inter-urban long- distance services, and more frequent commuter services.	Network Rail	Possible funding through the Network Rail Northern hub improvements and West Yorkshire Plus Transport Fund. For more details see Appendix A.	Costs to be confirmed. Would be largely funded from rail industry sources but local contributions would be desirable to secure early buy in and shorter term improve- ments. £30 million available from WY Plus Transport Fund.	Short term 1 – 5 years	Funding to be confirmed. £30 million available from WY Plus Transport Fund.	Previous Arup Study.
City of Bradford, Shipley and Lower Baildon	Tong Street Improvements	Essential								
City of Bradford, Shipley and Lower Baildon	Bradford - Huddersfiel d Corridor Improvements	Essential	Provide priority for public transport and encourage take up of these modes.	Highway improvement to increase capacity / provide bus priority.	CBMDC	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£15 million	Medium term 5 – 10 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
City of Bradford, Shipley and Lower Baildon	Bowling Back Lane Improvements	Essential	Reduce congestion and improve sustainable mode access.	Bradford section of scheme limited to bus priority and localised junction improvements	Metro/ Districts	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£5 million	Long Term 10 – 15 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
City of Bradford, Shipley and Lower Baildon				Highway improvement to provide high quality alternative to Leeds Road for strategic traffic.	CBMDC	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£9	Medium term 5 – 10 years	No committed funding confirmed.	Discussions with CBMDC Highway

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
Lower Baildon			the city centre encouraging the re-routing of strategic traffic.							Officers.
City of Bradford, including Shipley and Lower Baildon	Inner Ring Road Stage 4/5	Desirable	Improve traffic flow in Bradford city centre.	New link between Sunbridge Road and Drewton Road.	CBMDC	Possible funding through the Single Local Growth Fund and CBMDC Capital	£7 million	Long Term 10 – 15 years	Some committed funding confirmed.	Discussions with CBMDC Highway Officers.
City of Bradford, Shipley and Lower Baildon / Airedale	Shipley Eastern Link Road	Desirable	Provide a bypass to the congested Shipley town centre and unlock land at Dockfield Lane.	• Bypass to the east of Shipley town centre between the A6037 Canal Road and A6038 Otley Road. • Second strategic crossing of River Aire to the east of Shipley town centre. • Provides access to both the Dockfield Lane regeneration area and development land directly adjacent to the south of Shipley rail station.	CBMDC	Possible funding through the Single Local Growth Fund for initial development of scheme.	£60 million	Long Term 10 – 15 years	No committed funding confirmed.	Previous Arup Study.
City of Bradford, Shipley and Lower Baildon	South Bradford - City CentreTra m Train or NGT	Desirable	Provide high quality public transport and encourage mode shift.	Links M606 - Low Moor - Euroway - West Bowling - City Centre – Shipley with bus lanes and signal priority.	CBMDC / Metro	Possible funding through the Single Local Growth Fund for initial development of scheme	TBC	Long Term 10 – 15 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
City of Bradford, Shipley and Lower Baildon	West Bradford Bus Corridor Improveme nts	Desirable	Provide high quality public transport and encourage mode shift.	Bus priority on radial routes to provide spine of high quality services as part of a Highways Efficiency Bus Package programme.	CBMDC / Metro	Possible funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	TBC	Short to Medium 0 – 10 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers
Airedale	Keighley A650 Hard Ings Road improveme nt	Essential	Reduce congestion in and around Keighley town centre.	Dual A650 Hard Ings Road	CBMDC	Funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	£6 million	Short term 1 – 5 years	No funding gap	Previous Arup Study.
Airedale	Keighley Gyrotary System	Essential	Reduce congestion in and around	Gyrotary in central Keighley to ease traffic flow. The gyrotary would cover Cavendish Street, Hanover Street and East Parade.	CBMDC	Possible funding through the West Yorkshire Plus Transport Fund or remaining LTP Uplift	£1.4 million	Short term 0 - 5 years	LTP & CBMDC Capital	Discussions with CBMDC

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
Airedale	Silsden	Essential	Keighley town centre.	Improving links to Steeton and Silsden station from Silsden town centre as well as highway access works to east of Silsden to serve new development.	CBMDC	Possible funding through Developer Contributions.	£20million	Long Term 10 -15 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
Wharfedale / Airedale	Rail Station Package	Essential	Provide enhanced capacity at certain rail stations in the district.	Car park capacity improvements at stations where this is feasible e.g. Menston, Burley, Steeton	Metro	Funding through the West Yorkshire Plus Transport Fund. For more details see Appendix A.	Short term 1 - 5 years	No funding gap	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
South Pennine Towns and Villages	Cullingworth Area Bus Improvements	Essential	Improve rural public transport accessibility.	A network of bus feeder services to connect Cullingworth and Harden into the rail and bus network at Bingley.	Metro/ CBMDC	To be determined	£0.25 million	Short to Medium 0 - 10 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
Other	Wortley Curve Reopening	Essential	Provide enhanced rail connections to London.	Reopening disused rail curve to allow direct link between Bradford and the East Coast Main Line.	Metro/Network Rail	Could be delivered with HS2	£10 million	Long term 10 -15 years	No committed funding confirmed.	Discussions with CBMDC Highway Officers.
Transport (Strategic Road Network)										
Strategic Road Network	M62 Chain Bar Circulatory Carriageway Widening	Essential	Improve journey time reliability and safety at junction.	The scheme widens the circulatory carriageway to 4 lanes under the southern overbridges with associated lining and signing.	Highways Agency	Highways Agency – Local Network Management Scheme (LNMS)	£2.5m	2015	Fully funded by HA	HA LNMS study
Strategic Road Network	M62 J26 Major Scheme	Essential	The South Pennines Route Strategy identifies the need for a significant capacity enhancement to support	Highways Agency	Highways Agency – potential future major scheme	Currently Unfunded	HA South Pennines Route Strategy Evidence Report			

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
			future traffic growth and demand							
Strategic Road Network	M62 J27 improvement to northern and southern dumbbells	Essential	Improve journey time reliability and safety at junction.	The scheme provides capacity enhancements to the northern and southern dumbbells and improves the M621 off slip.	Highways Agency	Highways Agency – Local Network Management Scheme	£1.5m	2015/16	Currently unfunded	HA LNMS study
Strategic Road Network	M62 J27 Major Scheme	Essential	The South Pennines Route Strategy identifies the need for a significant capacity enhancement to support future traffic growth and demand	Highways Agency	Highways Agency – potential future major scheme	Highways Agency	Currently unfunded	HA South Pennines Route Strategy Evidence Report		
Strategic Road Network	M62 J24a	Essential	The South Pennines Route Strategy identifies the need for a significant capacity enhancement to support future traffic growth and demand	Highways Agency. Also identified as part of WY+TF	Highways Agency – potential future major scheme	Highways Agency	Currently unfunded	HA South Pennines Route Strategy Evidence Report		
Strategic Road Network	M62 J25	Essential	The South Pennines Route Strategy identifies the	Highways Agency	Highways Agency – potential future LNMS	Highways Agency	Currently unfunded	HA South Pennines Route Strategy Evidence		

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
			need for a capacity enhancement to support future traffic growth and demand							Report
Strategic Road Network	M621 J1-7	Essential	The South Pennines Route Strategy identifies the need for a significant capacity enhancement to support future traffic growth and demand	Highways Agency. Also identified as part of WY+TF	Highways Agency – potential future LNMS or Pinch Points	Currently unfunded	HA South Pennines Route Strategy Evidence Report			
Utilities										
Airedale	Aire Valley Trunk Sewer Improvements	Essential	Required to provide sewage capacity for planned housing and employment.	Yorkshire Water	Yorkshire Water has confirmed that they are carrying out an Area Drainage Plan and are considering options for AMP 6, but nothing has been programmed.	Unknown	Short term 1 – 5 years	No Gap	Yorkshire Water	
Airedale	Electricity Sub Station Capacity Silsden	Essential	Upgrades to the sub stations in Silsden will be required to meet the planned housing growth in the area.	Northern Powergrid	The delivery of the required upgrades will be paid for by Northern Powergrid or potentially through contributions from the developer.	Strategic Reinforcements – £2 – 5 million	Medium term 5 – 10 years	Local Reinforcements - £20 – 250k		
Telecommunications										

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
District Wide	Telecomm unication Improvem ents	Desirable	To allow Bradford to compete as a business location and allow home working.	On-going improvements to broadband provision across the District.	Virgin Media, BT, Other providers	This will be market led improvements, paid for by telecommunication providers or developers.	unknown	Medium term 5 – 10 years	No gap	NA
City of Bradfords hipley and Lower Baldon	Urban Broadband Fund	Desirable	To deliver high speed broadband to support economic growth.	A joint bid for ultra-fast broadband funding has been submitted by Bradford and Leeds City councils. Bradford and Leeds have joined forces to bid for a share of £100 million of state aid to support the rollout of ultra-fast broadband in the Yorkshire cities.	CBMDC and LCC	Through a bid to central government. It has been confirmed £14.4 has been secured for the City of Leeds and City of Bradford.	£14.4m	Short term 1 – 5 years	No gap	NA
Flood Risk and Drainage										
No identified schemes										
Waste and Recycling										
District wide	Delivery of the Waste Manage ment DPD	Essential	To meet the waste needs in the District up to 2030.	The delivery of a range of waste facilities to meet household and commercial and industrial waste needs. This includes a new PFI waste facility at Bowling Back Lane, Bradford.	CBMDC Private waste operators	Private waste operators and PFI	Unknown	Medium term 5 – 10 years	No gap	Emerging Waste Management DPD
Green Infrastructure, Open Space and Public Space										
District Wide	Open Space Strategy	Essential	Summary of Infrastructure: The Open Space Strategy is scheduled to be completed in 2013. This will bring together a range of audits, including cemeteries, playing pitches, open spaces and play areas. It will map existing provision, consult with communities on their open space requirements to understand demand, factor in housing growth from the Local Plan and quality standards and produce an action plan of required open space and a plan of how to achieve this. The Open Space Strategy is		Bradford City Council Parks Budgets	Unknown, will be worked up through the Open Space Strategy.	Unknown, to be worked up through the Open Space Strategy.	Throughout the plan period.	Dialogue with CBMDC.	

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
			currently being developed, but is likely to include: A new park in East Bradford, working closely with in-communities; A Leeds – Bradford country park in the Tong area; New outdoor recreational facilities where planned housing growth puts strain on existing resources; Potentially a new park in Silsden linked to planned housing growth; Development of the linear park from Shipley to Bradford, along the Canal Road Corridor; Enhancement of existing open space and play areas; Continued maintenance of Council assets (funded through Council funding and S106 contributions); and Any new pitches required will be confirmed through the Pitches Strategy, which will feed into the Open Space Strategy.	sources. This will be difficult to maintain a large proportion of this funding was heritage lottery funding linked to improvements to Roberts Park in the Saltaire World Heritage Site.	An average of £205,000 of capital funding and £42,000 of revenue funding has been received from S106 contributions from 2008 to July 2012.					
Sport, Leisure and Recreation	Bradford	25 metre pool	A deficit of quality swimming pool provision with links with health and regeneration	CBMDC	Feasibility work currently being undertaken. Delivery of a new 25 metre pool in Bradford City Centre.	Unknown, In the next five years	Unknown, In the next five years	Unknown, In the next five years	Dialogue with CBMDC	

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
District Wide	Open Space Strategy	Essential	benefits.	To deliver the open space needed for a growing population, considering the regeneration benefits of green space.	CBMDC	See Green Infrastructure, Open Space and Public Space section				
Community and Cultural										
District Wide	Library	Essential	To deliver to library services.	To improve existing libraries where necessary. To renovate the central library to allow the reopening of the top two floors (currently closed off for health and safety reasons) and reworking of the first two floors.	CBMDC	Capital funding approved by the CBMDC Executive.	£900,000.	Short term. Planned for early 2013	No gap	NA
District Wide	Cemetery and Crematorium Provision	Desirable	To provide adequate cemetery and crematorium provision.	A new Crematorium in South Bradford to meet modern crematorium requirements. New cemetery provision in Shipley / Bingley following the closure of Nab Wood to new burials.	CBMDC	Capital funding approved by the CBMDC Executive	£4 – 5million crematorium £1.5 million for cemetery	Short – medium term	No gap	NA
Education										
District Wide	Primary School	Essential	Provide primary school places to meet planned housing growth.	To deliver new primary school places in the form of extensions to existing schools, increasing form entry or if required new primary schools (although no need for a new primary school has been identified to date). As set out in the Education Organisation Plan.	CBMDC	Basic Needs Funding – for school places from existing housing development Developer contributions through CIL and S106 – to meet needs of housing growth in the District Revenue funding to be provided by Central Government.	Cost associated with proposed new housing circa £90 million based on assumptions set out in Appendix A and calculations set out in Appendix B	Throughout plan period. circa £90 million	Dialogue with CBMDC Education team	
	Secondary	Essential	Provide	To deliver new secondary school places in the	CBMDC	Cost	Throughout	Circa £116	Dialogue	

Location (Where)	Scheme	Essential / Desirable	Need for scheme (Why)	Requirements of scheme	Lead delivery agency/ management organisation	Delivery mechanism	Cost	Delivery phasing (When)	Gaps in funding	Baseline source
School		secondary	school places to meet planned housing growth.	form of extensions to existing schools and/or increasing form entry (although no need for a new secondary school has been identified to date). As set out in the Education Organisation Plan.	Basic Needs Funding – for school places from existing housing development Developer contributions through CIL and S106 – to meet needs of housing growth in the District Revenue funding to be provided by Central Government.	Basic Needs Funding – for school places from existing housing development Developer contributions through CIL and S106 – to meet needs of housing growth in the District Revenue funding to be provided by Central Government.	plan period.	million	with CBMDC Education team	
Health										
District Wide	Provision of Healthcare	Essential	Provision of GP and hospital care through the three established Clinical Commissioning Groups (CCGs)	To meet healthcare needs in Bradford. Factoring in the increase in population.	NHS Commissioning Group	NHS funding per person registered for healthcare in the Bradford District	Unknown	On-going	No gap	NA
Emergency Services										
District wide	Provision of Emergency services, including Ambulance, Police and Fire Services.	Essential	Provide adequate emergency services to meet the needs of the future population.	Provision of emergency services that meet the required resource time and distribution of services across the District.	WY Police Yorkshire Ambulance Service West Yorkshire Fire Service	Through funding for emergency services.	Unknown	On-going	No gap	NA

9 Conclusion

9.1 Overall Conclusions

This Local Infrastructure Plan and Schedule has drawn upon numerous work streams undertaken by City of Bradford Metropolitan District Council, other neighbouring local authorities as well as partner infrastructure and service providers.

The objectives of the study have been to consolidate and analyse available information; and augment details of infrastructure requirements where appropriate through the application of high level standards. The outputs reflect a point in time and a number of areas for further investigation are identified and priority actions identified.

The conclusion from this study is that there is broadly sufficient infrastructure, either current or planned to support the housing and economic growth aspirations for the Bradford District up to 2030. As such, the current evidence shows that the strategy set out in the emerging Core Strategy is broadly deliverable. However, there are uncertainties associated with the planning and delivery of some infrastructure. There are some gaps in the ability of committed or allocated funding to deliver the necessary levels of infrastructure.

Specific risks include:

- The delivery of an integrated, sustainable transport infrastructure remains critical to the long term future of the district. Its role in helping unlock housing growth to support a growing population; encouraging locational decision making amongst businesses to stimulate jobs growth; and facilitating greater connectivity between people and settlements within the district, across the district, and to neighbouring local areas should not be underestimated. It also represents the greatest challenge in terms of realising the requisite level of funding necessary to deliver schemes identified to support growth. A sophisticated two-fold strategy which plays both a short term and long term game is required. A strategy, which simultaneously releases infrastructure investment so that transport schemes can be delivered, whilst also allowing appropriate growth, in the right locations to take place.
- To understanding the full implications of population growth on the district's education services in the short to medium term. Recent funding problems linked to the loss of Building Schools for the Future, compounded by major population growth (especially in the under 11 profile) means that there are a number of uncertainties surrounding whether or not the district can continue to provide a sustainable, high quality education service, across all parts of the district. Ensuring sufficient capacity, whilst also driving up the quality of education performance will be one of the principal challenges for the district over the next 10 years.
- The majority of other infrastructure types do not present themselves as 'show-stoppers' to the future growth targets in the Local Plan; however as a package they require concerted and regular investment to ensure that negative impacts linked to lack of capacity, or poor quality provision do not emerge. Securing capacity and improving quality of infrastructure is a vital component in the district seeking to position itself as a modern, sustainable, economically

prosperous and equitable location. Although not absolutely fundamental to deliver the Local Plan, CBMDC and partners must work hard to ensure the other infrastructure types are maintained and enhanced to complement other proposals to make a step-change in the future of the district and the quality of life for residents and businesses.

- Finalising, funding and delivering a range of infrastructure schemes in the current fiscal climate will require a mixture of approaches and will need new ways of working to be established. CBMDC has a key role to play in this, by seeking more effective collaboration with the private sector, bringing about more efficient decision-making processes, providing greater certainty to other partners (both public and private) and so giving confidence to investment decisions, and by becoming more enabling and assisting in the brokering of deals and negotiations, rather than attempting to undertake projects single handed or behind closed doors.
- From a funding and financial perspective CBMDC will have to increase the level of understanding on funding instruments outlined in Section 7 and any further emerging options so as to be sophisticated in its role in enabling future development proposals and maximising their benefit for the district, residents and businesses.

9.2 Infrastructure Specific Conclusions

9.2.1 Overview

The following section details the specific conclusions in relation to each infrastructure type. The priority infrastructure topics are Transport and Education provision.

9.2.2 Transport

There are significant costs and an identified gap in funding for the delivery of proposed transport infrastructure. Using current information on the number of proposed schemes, and those that are in receipt of committed funding, the current funding gap is £425.25 million for 'essential' schemes and £60 million for 'desirable' schemes*. This is based on schemes where the cost is known, if there is no cost information it has been included in the infrastructure schedule, but not factored into the above figure.

On a sub-area basis this breaks down on the following basis*:

- **District-wide:** £262m gap for essential; £0m for desirable;
- **City of Bradford, Shipley and Lower Baildon:** £133m gap for essential; £60m for desirable;
- **Airedale:** £20m gap for essential; £0m for desirable;
- **Wharfedale:** £5m gap for essential; £0m for desirable; and
- **South Pennine Towns and Villages:** £0.5m gap for essential; £0m for desirable.
- **Other:** (Wortley Curve) £10m gap for essential; £0m for desirable.

* These funding gap figures may include cost of some schemes that have already been implemented. See Section 8- Infrastructure Schedule for detail.

In all sub-areas it has been shown that the existing transport network is vulnerable, and so an integrated solution is required to overcome constraints whilst simultaneously enabling development. At District wide level the majority of the transport funding gap is required to deliver a tram train to Leeds Bradford Airport. This is a scheme of City Regional significance and will therefore require funding from a range of sources. It is imperative that greater alignment is reached between the delivery and funding of transport infrastructure and strategies for growth and regeneration. A range of potential transport schemes have been developed and are set out in the section 7. There is limited committed funding for the schemes and further development to promote the benefits of the schemes and secure funding is needed in the short to medium term. Whilst the delivery of identified transport infrastructure creates a challenge it should be noted that the requirement for transport investment is phased for delivery in the short, medium and long term. This means that delivery can be spread out over a fifteen year period, providing further opportunities for funding sources to be identified. The West Yorkshire Plus Transport Fund also offers a really opportunity to increase investment in infrastructure, both within the District and across local authority boundaries.

9.2.3 Education

There is an existing capacity issue in the District's primary and secondary schools caused by rapid population growth in recent years. A Education Organisation Plan (EOP) is currently underway to understand requirements for new school places in the District. These places will be funded by funding from central government (Basic Needs Allocations) and Developer Contributions (where appropriate). This needs to be closely monitored, but there will be a requirement for school expansions and potentially new schools. This will be confirmed through the outcome of the EOP. |

9.2.4 Flood Risk and Drainage

There are no worked up flood defence schemes in the Bradford District. There will be a requirement for further work on flood risk management to be developed through the future Allocation DPD and the Area Action Plans for the City Centre and Shipley Bradford Canal Road Corridor.

9.2.5 Utilities

There is potentially a need for a new primary electricity sub-station at Silsden, to unlock planned housing growth in this location. There is also some capacity issues related to water treatment and the capacity of the Aire Valley Trunk Sewer. Yorkshire Water are aware of Bradford's planned housing and employment growth and this will be factored into their investment plans. Local reinforcements of the gas network will also be required in the plan period. On-going improvements to telecommunication networks are required to meet planned housing and employment growth.

9.2.6 Waste

The emerging Waste Management Development Plan Documents, which is being produced by Bradford Council seeks to allocate the sites required to meet the waste requirements for the housing and employment in Bradford District.

9.2.7 Green Infrastructure and Open Space

The delivery of new and enhancements to existing green infrastructure is important to promote a quality of place in Bradford. Continued Developer Contributions are required to enhance existing play areas and deliver new facilities, but further work is needed to understand the funding model to deliver strategic green infrastructure.

9.2.8 Health

The delivery of health services in the Bradford District are the responsibility of three Clinical Commissioning Groups, who will monitor take up and plan accordingly. It is predicted that existing facilities will be adequate to meet planned housing and employment growth, however there will be a requirement for additional staff resources.

9.2.9 Emergency Services

The general trend is for Emergency Services is to move away from larger centralised buildings or facilities and towards smaller, leaner and more responsive service provision. Funding is allocated directly from central government and through local council tax and captured within Capital Plans and Programmes.

9.3 Recommendations

The following recommendations are proposed:

- To work closely to develop the priorities for the West Yorkshire Plus Transport Fund and link up transport requirements with CIL development;
- To work closely with National Government to make a case for increased Basic Needs Allocation, to tackle the existing infrastructure issues faced by the District.
- To embed the LIP within the monitoring and management process of the Local Plan. Annual updates should be instigated, or as a when there is a significant event (change of Government, end of Corporate Plan period etc). This will allow the evidence, analysis and activity to fully reflect what is happening within the district and ensure there is no void or duplication of efforts.
- To establish an Infrastructure Planning Group, whose suggested roles and activities would include being responsible for the updates to and approval any future Local Infrastructure Plan. They would also participate in multi-sectoral workshops and information sharing on project phasing and delivery. In order to reduce resource pressures on organisations, it is suggested that where it may be possible to modify an existing group, or bolster the role of an existing group this should be done.

- In order to lead the Infrastructure Planning Group, it would be beneficial for an existing member of the Local Plans team to develop an Infrastructure Project Tracker to monitor how development and build out of infrastructure, new homes and new employment sites affects infrastructure requirements, the monitoring and identification of new and emerging funding options. This role could include or link up to the preparation of business cases for infrastructure projects which require CBMDC input.
- The viability of delivering CIL in the district should be investigated to determine an appropriate CIL charging level. This work will include consideration of the infrastructure that could be included on a CIL 123 list. A 123 list sets out what infrastructure the CIL contributions will fund.
- The preparation of CIL in 2013 / 2014 could cover as a minimum developer contributions towards local infrastructure. Consideration should be given to expanding the CIL to cover other infrastructure sectors which have more of a district-wide and sub-regional aspect to them - such as transport, education and sports and recreational open space.

Appendix A

Local Infrastructure Baseline Study

A1

The document is attached at the end of the report

Appendix B

Education Calculations

B1

The document is attached at the end of the report

Appendix C

Infrastructure Stakeholders and Comments

C1 Infrastructure Stakeholders

Infrastructure Types	Stakeholders	Details	Summary of Meetings
Transport			
	Joe Grint Principal Engineer	Joe.grint@bradford.gov.uk 01274 434645	Two meetings, firstly on the 3rd May 2012 and secondly on 3rd July 2012
	Richard Gelder	Richard.gelder@bradford.gov.uk	Richard attended the first meeting on the 3rd May 2012.
	Toni Rios Network Planning Manager, Highways Agency	Toni Toni.Rios@highways.gsi.gov.uk	Consultation response on draft LIP received 21st Decemebr 2010.
Utilities			
Electricity		Analysis of forward work plan	
Gas		Analysis of forward work plan	
Water supply and treatment	Stephanie Walden Yorkshire Water	stephanie.walden@yorkshirewater.co.uk	Phone call with Stephanie Walden in May 2012.
	Mathew Naylor Development Planner- Land Property & Planning, Yorkshire Water.	Matthew.Naylor@yorkshirewater.co.uk	Meeting held with CBMDC Planning Service on 13th December 2011
Telecommunications			
		Analysis of forward work plan	
Education			
	Nina Mewse Senior Provision and Places Officer	01274 385537 Nina.mewse@bradford.gov.uk	31st May 2012 Meeting held with CBMDC Planning Service on 3rd August 2011

Infrastructure Types	Stakeholders	Details	Summary of Meetings
			Email correspondences May 2010- August 2011;
	Tony Sinkinson Head of School Organisation and Place Planning	01274 385515 Tony.sinkinson@bradford.gov.uk	31st May 2012 3rd July 2012 3rd August 2012 Meeting held with CBMDC Planning Service on 3rd August 2011
	Steven Jenks Provision and Capital Lead Officer	steven.jenks@bradford.gov.uk	Meeting held with CBMDC Planning Service on 3rd August 2011 Email correspondences May 2010- August 2011;
Health			
	Anita Sims, Director of public health	Contact through Sharon Haigh Personal Assistant 01274 237334 anita.sims@bradford.nhs.uk Sharon.haigh@bradford.nhs.uk	Met with Anita Sims on the 8th June 2012.
	Leaders of the Clinical Commissioning Groups	sue.pitkethley@bradford.nhs.uk nancy.o'neill@bradford.nhs.uk anne.flanagan@bradford.nhs.uk	Email contact, but stated that Anita was the best contact.
	Amanda Fletcher Senior Public Health Manager, Bradford and Airedale NHS	01274 237298 amanda.fletcher@bradford.nhs.uk	Email correspondences March-July 2010; Met with Catherine Thatcher in June/July 2010

Infrastructure Types	Stakeholders	Details	Summary of Meetings
	Catherine Thatcher Deputy Director of Service Development, Bradford and Airedale NHS	Catherine.Thatcher@bradford.nhs.uk	Met with Amanda Fletcher in June/July 2010
Flood Risk and Drainage			
	Tony Poole Principal Drainage Engineer	01274 433904 Tony.poole@bradford.gov.uk	Met with Tony Poole on the 6th June 2012
	Jane Scott Local Plan Team	01274 432251 Jane.scott@bradford.gov.uk	Met with Jane Scott on the 6th June 2012
	Rachel Jones Planning Liaison Technical Specialist	rachele.jones@environment-agency.gov.uk Tel: 0113 2134909 Fax: 0113 2134609	Email contact stating areas of flood risk and schemes with no committed funding.
Green Infrastructure, Open Space and Public Space			
	Jane Scott Senior Planning Officer Local Plan Team	01274 432251 Jane.scott@bradford.gov.uk	Meeting with all Green infrastructure and sports contacts on the 29th May 2012
	Danny Smith, Special Projects Officer- Parks	01274 431988 Danny.smith@bradford.gov.uk	Meeting with all Green infrastructure and sports contacts on the 29th May 2012
	Danny Jackson, Countryside & Rights of Way Service Manager	01274 431230 Danny.jackson@bradford.gov.uk	Meeting with all Green infrastructure and sports contacts on the 29th May 2012
	Duncan Farr, Project Manager	01274 432654 Duncan.farr@bradford.gov.uk	Meeting with all Green infrastructure and sports contacts on the

Infrastructure Types	Stakeholders	Details	Summary of Meetings
			29th May 2012
Sport, Leisure and Recreation			
	Mick Priestly Technical Manager- Environment and Sport	01274 432685 Mick.priestly@bradford.gov.uk	Meeting with all Green infrastructure and sports contacts on the 29th May 2012
	Andy Ross Leisure Programmes Manager	andy.ross@bradford.gov.uk	Email correspondences March-April 2010
Waste and Recycling			
	Ben Marchant Planning Officer	ben.merchant@bradford.gov.uk	Reviewed and updated baseline information.
Community and Cultural			
Libraries	Jackie Kitwood, Libraries Manager	01274 437152 07582 107152 jackie.kitwood@bradford.gov.uk	Met with Jackie on the 31st May 2012.
	Jane Heap Acting Libraries Manager	01274 434681 jane.heap@bradford.gov.uk	Email correspondences March-April 2010
Allotment	Janette Goodinson, Allotments Officer	01274 432247 07582101629 janette.goodinson@bradford.gov.uk	Short conversation with Janette on the 24th June 2012.
Museums and Galleries	Maggie Pedley Museums & Galleries Manager	01274 432626 07582100171 maggie.pedley@bradford.gov.uk	No contact was possible.
Cemeteries	John Scholefield Bereavement and Amenities Manager	01274 437053 john.scholefield@bradford.gov.uk	Met with John and Antonio on the 15th June 2012

Infrastructure Types	Stakeholders	Details	Summary of Meetings
			Email correspondences March-April 2010
	Antonio Smith Bereavement Services Manager	01274 571313 F 01274 521176 E antonio.smith@bradford.gov.uk	Met with John and Antonio on the 15th June 2012
Community Centres		No contact identified.	
Social Housing	Will Ridle-Ellis Housing Research and Policy Support Officer	01274 434454 will.ridley-ellis@bradford.gov.uk	Email correspondences March-April 2010
	Angie Pogson Housing Research and Information Assistant	01274 431703 angie.pogson@bradford.gov.uk	Email correspondences March-April 2010
Heritage	Jon Ackroyd Conservation Officer		Email correspondences May 2010
Emergency Services			
Fire Service	Jim Butler, Bradford District Commander	07765 243305 Jim.butters@westyorkshirefire.gov.uk	Phone call on the 30th May 2012
Ambulance Service	Jonathan Isles, Dacre, Son and Hartley.	01943 885408 jjj@dacres.co.uk	Email and phone call on the 25th May 2012
Police Service	Vince Firth	01274 376250 vincent.firth@westyorkshire.pnn.police.uk	Email in June contact confirming current situation.

Infrastructure Study Meeting Notes	
Transport	
<p>Meeting one: 3rd May 2012</p> <p>Attended by: Tom Bridges (Arup), Emma Roberts (Arup), Joe Grint (CBMDC), Richard Gelder (CBMDC), Bhupinder Dev (CBMDC)</p> <p>Arup was provided with the initial work that was done on transport as part of the LDF process.</p> <p>Bhupinder Dev outlined the background to and purpose of the study.</p> <p>The rest of the meeting involved working around the district and discussing potential schemes that should be included in the long list of options.</p> <p>Joe Grint agreed to provide the list of schemes that were being tested as part of the West Yorkshire Transport Fund.</p>	
<p>Meeting two: 3rd July 2012</p> <p>Attended by: Tom Bridges (Arup) Jonathan Burton, Emma Roberts (Arup), Joe Grint (CBMDC), Bhupinder Dev (CBMDC)</p> <p>Discussed the draft prioritisation list of schemes. The list was worked through each scheme in turn and Joe Grint provided additional details about some schemes.</p> <p>The list of schemes was cross checked against those that CBMDC had included in the West Yorkshire Transport Fund long list that was being examined using the Urban Dynamic Model (UDM). Following this some additional schemes were included in the prioritisation list for this study.</p> <p>Joe Grint also provided feedback on the draft transport chapter.</p>	
Utilities	
<p>Phone call: 12th May 2012</p> <p>Laura Mayo (Arup) and Stephanie Walden (Yorkshire Water)</p> <p>Confirmed that the Yorkshire Water comments on the CBMDC Core Strategy, Further Engagement draft were still valid.</p> <p>Discussed how the Asset Management Period (AMP) operated. Stephanie noted that it is very important to get required capacity improvements into the AMP funding periods, as there is very little flexibility to add a scheme, if it has not been originally included. In addition, she noted that schemes could be phased to the front or end of the AMP, providing some flexibility.</p> <p>She highlighted that the Aire Valley Trunk Sewer is capacity and that work to understand how to deal with this issue is currently underway. There is no timescale set for works to the Aire Valley Trunk Sewer, but Stephanie did note that work did need to be done to improve capacity.</p>	
Education	

Infrastructure Study Meeting Notes

Meeting one: 31st May 2012

Attended by: Tony Sinkinson (CBMDC), Nine Mewse (CBDMC), Tom Bridges (Arup), Laura Mayo (Arup), Ali Abed (CBMDC), Bhupinder Dev (CBMDC)

The following information was gained from this meeting:

Based on birth data provided to the LPA by the Education Authority (based on children registered with health providers) the number of reception places required is forecast to rise further.

There is a £35 million back log in maintenance of primary schools. The Council have extended existing schools wherever possible - around 30 schools have been improved / had their capacity increased through 'Primary Capital Programme' (which now seems to be been cancelled). Some schools have gone to three form entry.

The aim of the Primary Capital Programme was to gradual increase the size of primary schools over a 7 year period - resulting in 5% required capacity. However this funding has stopped.

The only available funding is now:

- Basic Needs (supporting additional capacity); and
- Maintenance Capital Pot (about improving existing schools).

Where works have occurred to increase capacity of the lower primary school years, but not to the higher years there will be a need to increase capacity as these larger intakes reach the higher years.

Basic Allocations needs - 2011/12 - £10.3m. Bradford got an extra £11m in 2010/11 to deal with need to reception places.

Over the next five years in order to meet the shortfall in places the District needs to have increased permanent capacity by 800 places in each year group from year 2 to year 6 - a total of 4000 places are needed.

It will be important for the education team to understand the proposed sites and phasing of housing sites to factor this into their planning.

The Government have stated that they would not expect the LEA to be running any new schools; they should be academies with the LEA potentially funding the building fabric.

There is some income from S106; however this is not making a huge dent in the deficit in funding. There are 29 secondary schools in Bradford District (listed in evidence base).

Two free schools have been approved in the district. The King Science Academy (7 - 11 year olds) opened in September 2011 and Rainbow Free school (4 - 11 year olds).

Three new free schools are due to open in September 2012 Dixon's Trinity, One in a Million and Dixon Academy.

Secondary pupil numbers are also forecast to rise by at least 14% by 2018 and by 2015 an additional 3,500 new student places are needed made up of increased statutory age pupil places (11-16) and post 16.

The increase in demand for places is not evenly distributed across the District, but concentrated in specific areas, particularly the inner city and Wharfedale.

Bradford had 17 schools in phase three of the Building Schools for the Future Programme. The loss of this funding has left a number of schools in need of investment. The growth areas are difficult to predict but over time there has been a pattern of pupil increase in Inner Bradford North

Infrastructure Study Meeting Notes

and West of the inner area (BD2, BD9, BD17, BD18, BD21) and Wharfedale.

Basic Allocations needs - 2011/12 - £10.3m.

Any Priority School Building Programme (PBSP) - five secondary schools are eligible - Aire Valley, Belle Vue Boys, Carlton Bolling College, Oakbank and Queensbury.

The results of the Priority School Building Programme (PBSP) was announced on the 24th May and four schools were successful

Belle Vue Boys' School

Carlton Bolling College

Oakbank School

The Samuel Lister Academy

The CBMDC Department of Children's Services are awaiting more information on the amount of funding and the exact works for each school.

Parental choice and religious beliefs also mean that parents sent their children to schools further away from where they live. There is a need to have a surplus of 5% to accommodate for parental choice according to DfE.

For admissions in 2011 a number of secondary schools have agreed to admit above their published admission numbers to cater for the additional places required.

There is more potential to increase in takes in lower year groups, if there are smaller intakes higher up the secondary school. However as numbers increase through the years the capacity will be reduced. This has already happened in many schools.

There is some income from S106; however this is not making a huge dent in the deficit in funding.

There will potentially be a requirement to find new sites for schools as part of the Bradford Allocations DPD, or identify a potential requirement as part of a large strategic site.

Following the meeting Tony Sinkinson sent through the following information:

The CBMDC Department of Children's Services received a capital basic need allocation of:

2008 /2009: £4,833,341

2009/2010: £4,833,341

2010/2011: £4,833,341 (plus a one off additional payment of £11,009,000)

2011/2012: £10,302,157 (plus a one off additional payment of £7,427,037)

2012 / 2013: £11,517,829 (plus a one off additional payment of £8,093,732)

Meeting two: 3rd July 2012

Attended by: Tony Sinkinson (CBMDC), Nine Mewse (CBMDC), Tom Bridges (Arup), Laura Mayo (Arup), Ali Abed (CBMDC), Bhupinder Dev (CBMDC)

The aim of this meeting was to discuss the gap in education provision, following on from the contextual issues discussed at the last meeting.

Tony confirmed that the Department for Transport figure for a cost of a primary and secondary school place excluded land and professional fees.

Free Schools are funded directly from Department for Education, via the Education Funding

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Agency.

If all the free schools happen then there will be enough secondary school places.

Important to consult David Yates on higher and further education (Arup emailed the draft baseline and comments have been factored in).

The Basic Needs Allocation is based on the number of pupils in education in the Bradford District. Bradford have got one off extra payments in the past few years to deal with the high population growth.

Duty to Cooperate – Tony confirmed that CBDMC work with the education teams in Leeds and Craven to understand cross boundary issues.

Meeting three: 3rd August 2012

Attended by: Tony Sinkinson (CBMDC), Tom Bridges (Arup), Laura Mayo (Arup), Ali Abed (CBMDC), Bhupinder Dev (CBMDC)

The aim of this meeting was to run through the Arup methodology for calculating the gap in education provision.

This involved an assumption that the educational needs of the existing population living in existing housing would be dealt with through the Basic Needs Allocation.

The CBMDC Education Contribution Formula was used to calculate how many new school places the planned new housing would generate, and this was used to identify the gap linked to new housing (the calculations are set out in Appendix B of the Local Infrastructure Plan).

Tony confirmed he was broadly happy with approach and Laura Mayo emailed through a draft of the calculations and baseline for review. The baseline has been amended to reflect Tony's comments.

Tony noted that Children's Services are currently working on a School Organisation Plan, which will provide information on school provision going forward. This should be complete in late 2012.

Health

Meeting one: 8th June 2012

Attended by: Anita Sims (Public Health) and Laura Mayo (Arup).

The following information was gained from this meeting:

Government reforms NHS to move power towards GPs. Therefore from April 2013 the power to commission most NHS services will shift from Primary Care Trusts (PCTs) to Clinical Commissioning Groups (CCGs) supporting to the NHS Commissioning Board. There will also be a West Yorkshire Commissioning Board.

Infrastructure Study Meeting Notes

Two PCT's have become a cluster to support the transition to CCGs – NHS Bradford, Airedale and Leeds.

There are three Clinical Commission Groups covering Bradford District [Info on areas covered in covering note]:

- Airedale, Wharfedale and Craven [Wharfedale and the rest of Airedale]
- Bradford City [broadly covering inside the ring road]
- Bradford District [the rest of Bradford, including Shipley and Bingley]

The Clinical Commissioning Groups are in charge of commissioning services for GP surgery's and hospitals.

From April 2013 the hospital assets will be owned by PropCo, asset holding firm – will take the form of a company wholly owned by the Department of Health. Any assets that are Foundation Trusts of owned by CCGs (GP surgeries) will remain in their ownership.

The responsibilities of Public Health, who will work closely with the CCGs to deliver certain services, such as smoking, sexual health, obesity and emergency planning move to Bradford Council in April 2013. CCGs funding is ring fenced and comes from the NHS budget.

Over the past 10 – 15 years there has been a NHS programme to bring primary care facilities up to standard. This has resulted in new GP surgeries and clustering of GP's in new premise. There are very few facilities that are not fit for purpose.

The hospital facilities are generally deemed to be fit for purpose.

There is move towards more care in the community, support worker and nursing from the home. The aim to reduce the need for hospital stays. There is also cross- boundary capacity in Leeds. £500k has been safeguarded between 2011 / 2015 to deliver improvements to GP surgeries.

The NHS funding is linked to the population registered in the CCGs. Funding is also weighted depending on deprivation.

Ultimately the responsibility for factoring in population growth will lie with the NHS commissioning board and West Yorkshire Commissioning Board.

CCGs are likely to need to highlight where capacity is an issue. In many cases this will mean the need for additional GPs, but not necessarily new premises.

The move towards more community based will result in less need for premises and can be linked to existing GP surgeries.

In addition a new GP emergency number is being set up with nationally, with the aim of diverting some A and E calls to allow GPs to visit people's homes.

Flood Risk and Drainage

Infrastructure Study Meeting Notes

Meeting one: 6th June 2012

Attended by: Tony Poole (CBMDC), Jane Scott (CBMDC)

The following information was gained from this meeting:

Tony Poole stated that CBMDC had produced a Preliminary Flood Risk Assessment in 2011. Tony stated that this was a good source of information and concluded there were no flooding issues in the Bradford District, that were considered to be 'significant' using the definition used by the Environment Agency.

<http://www.environment-agency.gov.uk/research/planning/135526.aspx#3>

The Flood Risk team in Bradford Council have produced a 1D/2D of the Bradford Beck. This allows any new development along the Bradford Beck corridor to be modelled to confirm any flooding issues.

The Flood Risk team are also producing a 1D/2D model for the four Becks that run through Ilkley.

Both these models have been funded through a project called Flood Reliance City, working with Leeds and Sheffield Universities.

From April 2013 CBMDC will be the SUDS approval body. This means that they will comment on all planning applications in relation to provision of SUDS.

On-site SUDS will be an on-site requirement, outside the scope of CIL. The topographic of the Bradford District mean that surface water flooding is an issue when moorland becomes saturated. This is difficult to solve, however the use of SUDS will help.

A Strategic Flood Risk Assessment is currently underway, this has assessed the SHLAA sites and is currently looking at more localised issues. Future flood risk within Bradford District has been assessed as part of the Preliminary Flood Risk Assessment using methodologies derived from the EU Interreg IVB Flood Resilient City (FRC) project.

This involved looking at the District as a whole and assessing potential risk areas based on flooding from a variety of local sources. The key aim of this assessment is to identify areas which are not currently known from past flood incidents.

The DEFRA River Aire IUD pilot study indicated that future climate change scenarios would not produce significant new areas of flooding but due to steep catchments flooding may be exacerbated in existing areas.

Email: 26th June 2012

From Rachel Jones, Planning Liaison Technical Specialist

The email stated the following:

'You asked if there are any particular flooding issues in Bradford that the EA are aware of (so these can be factored into the infrastructure study) and also if there are any planned flood alleviation schemes or any schemes that the EA are looking at in Bradford.'

Infrastructure Study Meeting Notes

Having consulted internally, we have received the following comments which we hope will be useful to you.

1. We understand that the City of Bradford already benefits from a flood alleviation scheme in the form of an overflow tunnel. Flood risk management colleagues in our Partnerships and Strategic Overview team (PaSO) have highlighted an awareness of significant flooding problems on Silsden Beck, Silsden; Bridgehouse Beck, Haworth and on Backstone Beck, Ilkley. You may wish to contact Mark Garford (Flood Risk Management Officer) on 0113 2134763 to discuss these problems in more detail.
2. There are 2 schemes for the Bradford district currently in the Medium Term Plan. These are:
- Cottingley and Branksome Drive FAS, and
- Saltaire to Baildon Homes.

Both of these potential schemes were identified in the Upper Aire Strategy and were conceived when the funding situation was very different to now. Neither of the proposals has had a detailed appraisal to determine their feasibility. At this stage, bearing in mind the limited number of residential properties at risk, it may be unlikely that these schemes will progress.

You should contact my colleague Robert Sanderson, Flood Risk Management Officer, to discuss these schemes, and those mentioned in your email below, in more detail. He can be contacted on 0113 2134971'.

Green Infrastructure, Open Space and Public Space

Meeting one: 29th May 2012

Attended by: Jane Scott (CBMDC), Danny Smith (CBMDC), Danny Jackson (CBMDC), Duncan Farr (CBMDC), Ali Abed (CBMDC), Bhupinder Dev (CBMDC), Tom Bridges (Arup), Laura Mayo, Arup.

The meeting included the following discussions / information:

That there has been an ongoing programme of park improvements, particularly at Lister Park and Roberts Park. The funding for this has generally come from Heritage Lottery Fund.

It was noted that the Bradford District Open Space Assessment Strategy shows that the majority of the District is adequately provided for in terms of park and gardens. However there are gaps in Bradford South, Bradford West and Bradford East.

It was also raised that East Bradford is a densely populated area; therefore the ability to find sites for new parks is limited. However it was highlighted by the Parks and gardens team that a new park in East Bradford would be seen to have excellent regeneration benefits.

There is an aspiration to create a green link along Canal Road to aid regeneration.

There are aspirations for a new Country Park, potentially around Tong.

The Bradford District Open Space Strategy has concluded that in area of slight catchment gap the upgrading of certain play equipment from Local Area for Play (LAPs) to Local Equipped Areas of Play (LEAPs) should be considered. However in other areas of significant gaps, such as north and south Shipley and west Keighley the installation of new play equipment is required.

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The Council are currently developing an Open Space Strategy, which seeks to link park provision with wider council priorities, such as health and regeneration benefits.

In the past the general approach has been to gain S106 to improve existing open spaces, rather than asking developers for on-site provision. There have been a number of social issues linked to provision of open space / play space within new developments.

There is likely to be a requirement to deliver new open spaces in the future, especially as part of large urban extensions. There will also be the continued cost of maintaining and improving existing parks.

It is important that funding is a mix of capital and revenue funding to allow sites to be maintained.

The Local Development Framework team are embarking on developing open space standards; this is likely to be completed in the next few years.

Following the meeting Danny Smith sent through the following funding information:

Capital spend using 106 monies on outdoor recreation and play area facilities is as follows:

2008 - 09 - £15,719

2009 -10 - £632,916

2010 - 11 - £293,665

2011 -12 - £71,341

2012 - 13 - £10,332 +

External grants that Sport and leisure have brought in to fund capital improvements to our parks including play areas, pitches, changing rooms etc. [they do not include Section 106].

2007 /2008 - £863K

08/09 - £3.5 million (includes HLF Lottery)

09/10 - £810K

10/11 £1.2 million

11/12 - £460K

12/13 - £15K

Sport, Leisure and Recreation

Meeting one: 29th May 2012 (as part of GI, Open Space and Public Space discussion)

Attended by: Mick Priestly (CBMDC) and those detailed above.

The meeting included the following discussions / information:

Football Pitches

There is a deficiency of designated mini and junior football pitches across the District. Although a

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surplus of senior pitches. Although this would not make up for deficiencies in mini and junior provision even if it was re-designated. Adults football is declining, but junior football is increasing.

There is capacity in Bradford North to meet demand, but not enough pitches in Bradford South. There is capacity in Bradford West now, but no capacity in Ilkley and Keighley. There is a bit of capacity in Shipley.

Cricket

There is a slight deficiency in pitch provision at peak times and demand is increasing for pitches on parks and recreation ground in Bradford North, South and West.

Rugby Union

The quality of the pitches is good and many private clubs own facilities and are able to maintain them to a high standard.

There are catchment gaps in Bradford South and West; however these shortfalls are currently being met by surpluses in other areas on an ad hoc basis if the main sites are unusable.

Rugby League

There is a need for additional Rugby League pitches, especially in South Bradford, where there is a high demand for Rugby League pitches. There is a plan to deliver a new facility in Wyke on a former BSF scheme that is now available.

Hockey

The current pitches are at capacity. We need to understand more about Hockey provision.

Bowls

There is enough capacity to meet current and future demand for outdoor bowls - although there is high maintenance costs associated with bowls. The Council have identified the creation of indoor bowls facilities as a gap in provision.

There is an aspiration to create a new city centre sports facility with a 25 metre pool. The plan to deliver this facility is being presented to the Bradford Council Committee in 2012, along with a wider strategy for sports and pool provision. Sports Pitches Strategy will then begin in July 2012 and feed into the wider Open Space Strategy 2012.

Community and Cultural

Libraries Meeting: 31st March 2012

Attended by: Jackie Kitwood (CBMDC) and Laura Mayo (Arup)

The Central Library in Bradford is currently only able to use two of its five floors, as these floors do not meet the requirements of health and safety and fire regulations. This means a lot of the local history information is not available to the public. The staff at central library can retrieve some information with some notice, but heavier records are not available to the public.

The library service has developed three options to solve the issue of unusable floors in Bradford

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Central Library. These options are going to be presented at the executive committee in June 2012, the options are:

- 1) Remain as it is, with floors 2 upwards closed to the public;
- 2) Do works to make the 2nd floor meet fire regulations, so it can be opened to the public
- 3) Do works to make the 2nd floor meet fire regulations, so it can be opened to the public and refurbish the ground and 1st floor to make it fit for purpose.

Jackie confirmed via email that the third option was confirmed at the Executive meeting, this means that in 2012 / 2013 £900,000 will be spent improving this facility.

In 2009 CBMDC reviewed how they operated their library service, with a particular focus on libraries that open for less than 10 hours a week. The review identified five libraries where saving to staff and building cost could be made by reworking how this provision was delivered. Through consultation with the effected communities four of the five libraries are now community run and Heaton is now served by a mobile library, open the same hours as the former library.

A number of the library premises in the District are old and there is a backlog maintenance cost of approximately £3 million. Great Horton library is a particular issue.

The third option is the one supported by the library service. As they believe they can deliver a good library provision using three floors, with improvements to the usability of those floors. The committee will decide which option is acceptable.

Great Horton Library (which is coming to the end of its usable life) is being moved into village hall to allow the site to be disposed of by CBMDC Asset Management team.

The Silsden Library is also being moved into the village hall to allow the site to be disposed of by CBMDC Asset Management team. The movement of both these libraries has been agreed; however exact timescales are still being worked up.

The library service in Bradford is committed to continuing to deliver the services required. However it may be that this is delivered through continued community managed facilities and potentially not in CBMDC owned buildings.

An increase in housing and employment will not directly affect the infrastructure needed to deliver library services, as this can be delivered in any sort of premise and is likely to only be used by a proportion of any new housing development.

Allotment Phone call: 24th June 2012

Between Laura Mayo (Arup) and Janette Goodinson (CBMDC)

A short conversation where Janette confirmed there were no plans to deliver any new allotments. She noted that there was a plan to bring under used or abandoned back into use by clearing the plot, to allow them to be taken up by new users.

Cemeteries meeting: 15th June 2012

Attended by: John Scholefield (CBMDC), Antonio Smith (CBMDC) and Laura Mayo (Arup)

The meeting confirmed the following information:

There are the following cemeteries in the Bradford District:

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Bingley	Bowling	Charlestown	Clayton
God's Acre (Burley-in-Wharfedale)	Haworth	Ilkley	Menston
Morton	Nab Wood	North Bierley	Oakworth
Oxenhope	Queensbury	Scholemoor	Silsden
Silsden Chuchyard	Stanbury	Steeton	Thornton
Tong	Utley	Wilsden	Windhill

Crematoria facilities are also provided at:-

Scholemoor

Nab Wood

Oakworth

The Bradford Council for Mosques currently manage burial space on behalf of the Muslim community and pay CBMDC a fee for the right to bury on this land.

The Nab Wood cemetery is now full and is closed to new grave burials, unless space is available in existing graves.

The existing crematoria do not have mercury abatement equipment and CBMDC will need to pay for 'abatement credits for 50% of all cremations. The crematorium at Scholemoor functions well, but the chapel facilities are inadequate for current requirements (too small). The setting and location of the Scholemoor Crematorium is also not considered to fit with the standards users expect from the crematorium, given its urban setting. In addition the facility is not located in the area from which the majority of its users originate in South Bradford.

There will also be a need to identify a new burial site in the Bingley / Keighley area within 15 years. This will be required when other cemeteries in the area, in addition to Nab Wood Cemetery become full. This is currently not critical as there are existing facilities at Bingley, Charlestown, Utley and Morton. The costs to provide the required infrastructure to make a field into a cemetery are approximately £600,000 to £800,000 depending on the size of the field.

The Bereavement services are also looking for a potential site for a crematorium in South Bradford. The services are working with the LDF team to try and identify a suitable site in the Oakenshaw / Wyke area. This is likely to cost approximately £4 – 5 million depending on the chosen site and the quality of the landscaping finish.

The Council has investigated the potential to expand existing cemeteries to meet short to medium term capacity issues in certain parts of the district. This would however be subject to the land being either in Council ownership or the Council being able to purchase the land. The expansion land must also be appropriate for burial purposes and planning permission would need to be obtained. In the longer term there is an aspiration for the long term provision of first class burial and cremation facilities within the district.

To deliver new facilities capital funds will need to be sought through agreement of the Bradford Executive Committee.

In terms of burial services, there is an average of 50 year supply available across the district, although this is not evenly distributed. The existing capacity within each of these cemeteries is detailed below. A table with burial space per cemetery was provided by email and is included in

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the baseline.

It is very difficult to predict the rate at which burial spaces will be taken up. It is monitored by the Bereavement service on a one yearly basis. The impact of the recent closure of Nab Wood is still unclear, as it postcode data showed that the population of Bradford were using Nab Wood, as well as more local populations (Bingley and Shipley). The Bereavement service will monitor take up of burial space around the Nab Wood area closely, but there is burial space available in the area and will be almost for the life of the plan.

The Bereavement service is seeking to find a site for a new crematorium and will eventually need to find a new cemetery site in the Bingley / Keighley area. Overall in the District there is enough burial space to meet the projected needs up to 2030.

Emergency Services

Fire Service Phone call: 30th May 2012

Between Laura Mayo (Arup) and Jim Butters (West Yorkshire Fire Service)

Phone call between Jim and Laura. Jim confirmed that the information in the draft LIP was still correct.

Ambulance Service Phone Call: 25th May 2012

Between Laura Mayo (Arup) and Jonathan Isles (Dacre – manage the estates for the Ambulance Services)

Phone call between Jonathan and Laura. Jonathan confirmed that the information in the draft LIP was still correct.

Police Service Email: June 2012

From Vince Firth (West Yorkshire Police Service)

Email from Vince Firth confirmed that the information in the draft LIP was still correct.

Appendix D

Reference Documents

D1 Reference Documents

D1.1 Overarching Documents

Planning Advisory Service, A steps approach to infrastructure planning and delivery, for local strategic partnerships and local authorities, 2008

Department for Communities and Local Government, National Planning Policy Framework, March 2012

HM Treasury, National Infrastructure Plan, 2011

Government Office for Yorkshire and the Humber, Regional Spatial Strategy for Yorkshire and Humber, May 2008

CBMDC, The Community Strategy 2011 – 2014 for Bradford District, 2011

Leeds City Region LEP, Realising the Potential, The Leeds City Region Local Enterprise Partnership Plan, 2011

CBMDC, Core Strategy – Further Engagement Draft, 2011

CBMDC Waste Management DPD, Preferred Approach, 2011

Will Alsop, City Centre Masterplan, 2003

Airedale Partnership Airedale Masterplan, 2005

D1.2 Infrastructure Specific Documents

Bradford Open Space, Sports and Recreation Study, 2006

JBA Consulting on behalf of CBMDC, Bradford Strategic flood Risk Assessment. Report dated March 2003.

CBMDC Preliminary Flood Risk Assessment, Preliminary Flood Risk Assessment, 2011

Northern Powergrid Long Term Development Statement, November 2011

NHS Airedale and Bradford Strategic Plan 2010/14

Bradford and Airedale NHS, Joint Strategic Needs Assessment 2012

NHS Airedale and Bradford Single Integrated Plan 2011 – 2015

Northern Gas Networks Business Plan Data Template 2014 to 2021

CBMDC, Cultural Strategy, 2003

* A full list of all reference documents used for this study is available separately.

Appendix A: Local Infrastructure Baseline Study

This Local Infrastructure Baseline Study is produced to set out the current infrastructure context in Bradford district, by achieving a basic knowledge of the District's existing infrastructure provisions and understanding any gaps or capacity issues to support future growth. The study will inform the preparation of Bradford District Local Infrastructure Plan and identify how the Council and its key partners intend to deliver the associated infrastructure requirements in order to meet the Local Plan growth aspirations.

The purpose of this report is to provide an initial infrastructure assessment for the District. This has included working in partnership with physical, green, social & community infrastructure providers to identify all the infrastructure requirements that are currently accounted for in a range of existing plans and investment strategies developed by the respective responsible agencies. This study also highlights all known future delivery programme and fund/costing arrangements for each of the infrastructure types.

In order to ensure that the study is up-to-date, robust and reliable the approach to this baseline analysis is informed by guidance documents from the Department of Communities and Local Government (DCLG) and the Planning Advisory Service (PAS) and review of other similar infrastructure plans. The combination of research techniques applied included consultation in the form of workshops, individual meetings and telephone interviews, analysis of statistical data, and a review of existing and emerging studies.

A draft Local Infrastructure Baseline Study Report was produced by CBMDC in 2011 which went through public consultations alongside the Local Plan Core Strategy Further Engagement Draft. The Baseline report has been updated since then and summarised below following publication of new information or general change in priorities / circumstances.

The types of infrastructure that have been investigated as a part of this baseline analysis are:

Transport

Definition

The transport infrastructure covered in this study includes highways, buses, park and ride facilities, rail provision and walking and cycling accessibility.

Source materials

The following documents and strategies form the evidence base for this chapter, alongside discussions with relevant stakeholders including Transport and Planning Officers at CBMDC to inform the evidence base:

- Bradford District-Wide Transport Study in Support of the Core Strategy (2010);
- My Journey West Yorkshire Local Transport Plan 3 (2011-2026);
- West Yorkshire Local Transport Plan 2011 – 2026 (LTP3) Bradford Local Implementation Plan (2011);
- Leeds City Region Connectivity Study (2010);
- Leeds City Region Transport Strategy (2009);
- Bradford District Local Infrastructure Baseline Study Working Draft (2011); and
- Core Strategy Further Engagement Draft (2011).
- Highways Agency South Pennines Route Strategy Evidence Report
- Highways Agency Bradford Infrastructure Study

Current position

The south of the District has good access via the M606 to the strategic highway network via the M62 (though access from Airedale and Wharfedale in the north and the rural communities to the west of the District is poor). This and its proximity and direct rail connections to Leeds, makes much of Bradford District highly accessible and able to play a prominent role within the Leeds City Region. Whilst the influence of Leeds as a centre for employment, shopping, leisure and other services is felt throughout the District, it should be noted that in peak periods the inflow of commuters from Leeds to Bradford is still around two thirds the number of movements in the opposite direction. There are also strong and important links with other adjoining districts, notably Calderdale, Craven and Kirklees.

Figure 1: Bradford District Transport Network



Source: Bradford Local Plan Core Strategy Further Engagement Draft (2011)

Bradford's strategic position provides good access to all parts of the UK by road and rail though most long distance rail journeys currently require interchange, usually at Leeds. Levels of car ownership in the district are low both in comparison to the region and nationally and it is to be expected that they will increase as incomes rise. Despite low car ownership a higher number of people use their cars to travel to work in Bradford than in the region as a whole or nationally. This reflects the dispersed nature of settlements and employment in the district and the difficulty in providing viable bus services in some places. The cost of parking in central Bradford is also comparatively low which encourages car based commuting. This relatively high level of car use to access employment opportunities increases levels of congestion within the District with low speeds on several routes during the peak periods. There are particular congestion problems around Keighley, Saltaire, Shipley/Baildon, A658/A657Greengates, the Outer and Inner Ring Roads and A650 Tong Street

There are 14 railway stations within the District which provide good access to both Leeds and Bradford City Centres. The quality of rolling stock on the Airedale and Wharfedale Lines is good; however, there are issues with crowding on some services, especially on services to Leeds. Rolling stock quality and line speeds / journey times for services to / from Bradford Interchange on the Calderdale Line is poorer.

Fit for purpose

The level of transport infrastructure provision required to support growth in housing, economic development and regeneration has not kept pace with the provision of this new development. This has led to congestion issues at certain points of the strategic and local transport network. In certain locations major infrastructure investment is required to support and enable new housing and regeneration, which will open up development sites and improve the sense of place. In certain locations the quality, frequency and accessibility of transport infrastructure poses a barrier to overall objectives for housing, economic growth (including linking people to jobs) and regeneration.

Future programmes and cost

Future programme

The Local Transport Plan 3 (LTP3)

The Local Transport Plan 3 (LTP3) replaced the LTP2 at the beginning of April 2011. LTP3 is a 15 year plan with three year Implementation Plans produced through this period.

Bradford has aspirations for major regeneration over the next 15 years, including its city centre and other key developments such as the Canal Road urban eco-settlement. The transport system will need to be able to help meet these aspirations in the context of significant anticipated growth in population, housing and employment in the city and surrounding areas.

Entitled “My Journey”, the Local Transport Plan for West Yorkshire, sets out a strategy for improving local bus, road, rail, walking and cycling networks for the next 15 years up to 2026. My Journey’s vision is for a people-focused, low-carbon transport system that supports economic activity and growth and enhances people’s quality of life, and has been designed to put the needs of all transport users at its heart.

The Plan sets out to tackle congestion and a lack of transport investment which are key contributory factors to lower than average economic performance in West Yorkshire. It also aims to prepare for the predicted, post-recession growth in employment, population and housing and their impact on the reliability of the transport network.

Four themes run through the Plan to help ensure it achieves its aims.

- Transport Assets: focusing on the existing components of the transport network such as roads, bus stations / stops and traffic lights to ensure the most value is extracted from them;
- Travel Choices: enabling customers to make the most sustainable choices about when and how they travel;
- Connectivity: ensuring people can make integrated and safe journeys using transport networks on which they can rely; and
- Enhancements: improving the overall network to make it more fit for journeys in the future.

The first LTP3 implementation plan includes a number of schemes in Bradford; these are shown in the table below, but only cover the first 3 years of the fund. In addition to these there are a number of West Yorkshire wide measures many of which will include improvements in Bradford District.

Table 1: Bradford Specific Schemes Included in LTP3

Scheme	Cost over Plan Period (£000s)
Repairs to carriageway at Bradford Interchange	380
Walking and cycling route between Bradford City Centre and West Bowling	836
Bradford District wide walking/cycling measures including Rights of Way Improvements	150
Allerton Road, Bradford Inbound Bus Lane	20
Bolton Road, Bradford Outbound Bus Lane	30
Thornbury Gyratory Bradford	60
Thornton Road, Bradford - inbound bus lane	70

Toller Lane, Bradford - both directions bus lanes	25
Woodside Road, Low Moor inbound bus lane	60
New Rail Stations with car parking at Kirkstall Forge (Leeds) and Apperley Bridge (Bradford)	338
Connecting Airedale - improvement works to Saltaire roundabout	2,000
New Rail Station and car park at Low Moor, Bradford	5,397
Connecting Airedale Stage 3 - Canal Road / Valley Road / Otley Road Improvements	800
Car park Enhancements and expansion at Crossflatts, Sowerby Bridge, Pontefract Monkhill, Mirfield and Todmorden Rail Stations*	2,063

*funding is split between different stations depending on the scale of enhancement at each.

Note: The LTP3 implementation plan has been over-programmed by around 20%. This over-programming will be managed as the plan progresses. The funding below is only for the first three years of the LTP 3.

The LTP3 also includes the Bradford Transport Asset Management Programme 2011/12 which includes provision for the resurfacing of around 140 stretches of road, maintenance to 15 bridges and retaining walls and 32 street lighting schemes. The District's Asset Management Programmes are determined annually and are largely determined by the outcome of condition surveys on the various assets though for the less strategic assets there is also an element of local prioritisation by the District's Area Committees.

Local Transport Plan Major Schemes

CBMDC submitted five schemes into the initial RFA round in February 2008. These were Low Moor New Rail station (subsequently funded by other means), Connecting Airedale (Shipley Town Centre), Connecting Airedale (Mannington Station), Connecting Airedale (Canal Road Dualling & A650 QBC) and the Bradford City Centre Integrated Transport Scheme. None of these schemes received regional support.

In the second RFA round in February 2009 the above schemes were all resubmitted along with an additional eight schemes. These were Connecting Airedale (Shipley Eastern Relief Road), A641 Bradford - Brighouse Bus Corridor Improvements, Improvements to transport links on the A658 Harrogate Road Corridor between Bradford and the A65, Additional Relief Road in Keighley, Improved transport network in Bradford city centre, Bradford Outer Ring Road Improvements (North and West) and links to Leeds Outer Ring Road, Relief Road bypassing Silsden and Connecting Airedale (A650 Hard Ings Road, Keighley). None of these schemes received regional support.

LTP uplift funded through the RFA combined with other sources has subsequently been used to progress highways improvements around Saltaire Roundabout, a new station at Low Moor and highways/public realm improvements in the city centre (City Park - now complete). In addition a number of Bradford's infrastructure aspirations have been included in LTP3.

West Yorkshire Plus Transport Fund (WYPTF)

The West Yorkshire Plus Transport Fund (WYPTF) will bring together a range of funding and finance sources to create a capital fund for major transport projects in West Yorkshire and York. Sources of funding are likely to comprise an increased levy on Council Tax, top-slicing of LTP funding and devolved funding for LTP Major Schemes. Fare revenues, localised business rates, site specific business rates (i.e. TIF schemes), CIL, and ERDF are also being explored as potential 'top up' funding sources. There will be powers to enable prudential borrowing against some of these income streams.

The overall value of the fund across West Yorkshire and York is likely to be between £730 million and £1,400 million. If this is split across the five West Yorkshire Districts and York on a per-capita basis * then between £153 million and £294 million would be available theoretically to Bradford District over the 10 year life of the fund. This has been used to consider the potential funding gap but should be treated with extreme caution in view of the actually scheme prioritisation methodology being used as described below.

WYTF schemes will be prioritised according to a range of criteria, particularly their estimated contribution to economic output (as calculated by the Urban Dynamic Model being used to help in the assessment process) and the employment accessibility of deprived areas. It should be noted that because this model does not consider transformational impacts of transport projects, there is a risk to Bradford District that its projects may not perform as well as those in more economically successful locations. Bradford officers are aware of these issues and are monitoring the process closely.

The principles of the Fund, and the establishment of a West Yorkshire Combined Authority to administer it, were set out in the Leeds City Region 'City Deal' agreed with Government in July 2012.

It is expected that the Fund will be launched in early 2013

Road Investment Strategy- (Details to follow post Autumn Statement)

Assessment to meet growth aspiration

Overall Implications of Housing Growth

In terms of delivering housing growth there are a number of sites identified in the District for significant housing growth. The Core Strategy suggests that around 45,500 new homes will be

* the 2011 Census results are that 21% of the population of West Yorkshire and York live in Bradford District

needed in the district in the coming years. These are split with 22% in and around Bradford City Centre and Shipley, 23% in the principal towns of Keighley, Bingley and Ilkley with the remaining houses being in other areas such as the Worth Valley, Wharfedale and upper Airedale. A review of this requirement is currently underway.

Improved transport accessibility and infrastructure, including highways, public transport, and walking and cycling routes, is needed to support delivery of the main housing growth and regeneration sites. Whilst some important transport funding has been secured from the Local Transport Plan Integrated Block, for some of the growth locations there are not yet clear funding commitments for relevant transport schemes. Given future transport funding constraints, work is needed to identify low cost solutions and / or innovative funding mechanisms that can be delivered in the short to medium term to address the main transport problems. These include transport constraints in Bradford city centre ,Airedale and other congested location as identified earlier in this report.

Investment will also be required on the Strategic Road Network to support planned future growth. Significant enhancements to capacity will be required, in particular for Bradford at M62 J26 Chain Bar.

Proposed Schemes

A number of schemes have been proposed. Some of these have had significant levels of development whilst others are at a much earlier stage of development. A summary of these proposed schemes is included in the 'infrastructure schedule' of the Local Infrastructure Plan report.

Responsibility to delivery and potential funding sources

Many of the major infrastructure schemes planned for the district are dependent on CBMDC obtaining Government or third party funds. Where such funds are available schemes should be delivered over the next few years (Low Moor Station, Saltaire Roundabout, Apperley Bridge). Where funds are not available many schemes remain aspirational and the timescales for delivery are unclear.

Leeds Bradford International Airport is owned by Bridgepoint capital. The Airport Masterplan highlights the importance of improving surface access to the LBIA

The airport's Surface Access Strategy (SAS) determines a range of key transport interventions required in the period to 2020 that would support the sustainable growth of the airport and offer increased choices to passengers and staff. This includes improvements to the road access and public transport, including a new rail / tram train link to the Airport.

This would result in improved connectivity to Leeds, Bradford, Harrogate and York.

Cost estimates of proposed schemes and an assessment of whether they are essential or desirable for delivery of the Districts housing and employment growth aspirations are set out in the appended table. The total cost of the “essential schemes” is around £425.25 million.

The Highways Agency is currently developing Route Strategies which outline investment priorities for the strategic road network for the period up to March 2021 and beyond. Proposals emerging from this will be considered by Ministers leading up to the Autumn Statement, with completion of the route strategies programme by the end of 2015.

Utilities

Definition

The utilities infrastructure covered in this study includes the infrastructure associated with the provision of electricity, gas, water supply and waste.

Source materials

A formal request for connection information for all the proposed developments within the development period has been made to Northern Powergrid. This has been followed up with phone calls. The request for connection information included within it not only demand information from the proposed development quanta, but also an estimated of generated electricity that may be associated with the proposed developments.

Northern Powergrid’s connections procedures do not cope well with multi-sites applications and obtaining definitive comments from NP on the proposed development sites and quanta has not been possible.

The full Nov 2011 Long Term Development Statement has been obtained and within it there is information for developers on the design and structure of the network within the Bradford area. This information is in sufficient detail to identify where constraints to development may occur.

The following information has been referred to in the preparation of this report:

- Northern Powergrid Long Term Development Statement November 2011;
- Detailed Information from Northern Powergrid’s LTDS;
- Geographic Maps from Northern Powergrid’s LTDS;
- Schematics from Northern Powergrid’s LTDS;
- Statement of methodology and charges for connection to Northern Powergrid (Yorkshire) plc’s electricity distribution system;
- Load Data for Substations;
- Regional Integrated Infrastructure Scoping Study; and
- ENA Annual Review 2011.

A formal request for connection information for all the proposed developments within the development period has been made to Northern Gas Networks. This has been followed up with phone calls. NGN's connections procedures do not cope well with multi-sites applications and the request has been passed on to their department dealing with Utility Infrastructure Providers and Gas Transporters.

Northern Gas Networks published an extensive amount of information on their website. The following have been referred to during the preparation of this report:

- Press release: Warm Glow as £91 million of Gas Improvements Announced. July 2nd 2012
- Press release: £400k boost for gas network in Bradford. May 9th 2012
- Delivering Gas to Northern England. General information
- Regional Integrated Infrastructure Scoping Study
- R110-GD1 Business Plan 2014-2021
- NGN-Summary Business Plan Data
- Business Plan Data Template 2014 to 2021.

Current position

Water Supply and Treatment

Yorkshire Water is appointed as the water and sewerage undertaker for the Bradford District through the Water Industry Act (WIA) 1991. Yorkshire Water is the only water and waste water treatment provider for Bradford District. Yorkshire Water has its headquarters located within Bradford.

The principal duties of a water and sewerage undertaker are set out in that legislation. Section 37 of the Act places a duty upon a water undertaker to develop and maintain an efficient and economical system of water supply within its area. Similarly Section 94 places a duty upon a sewerage undertaker to provide, improve and extend a system of public sewers to ensure that its area is effectively drained.

The Water Services Regulation Authority (Ofwat) is the economic regulator of water and sewerage companies in England and Wales. For every five year asset management planning (AMP) cycle companies submit a business plan to OfWat. The plans set out each company's view of water it needs to maintain its assets, improve services to customers and deal with its impact on the environment. The funding is linked to setting of customer bills (the so-called price review or PR). Any infrastructure requirements which arise after agreement of the five year AMP will normally be considered for the following AMP period. AMP5 covers 2010 to 2015.

Under section 106 of the Water Industry Act developers have the right to connect to the existing sewerage system, subject to Planning Permission and relevant conditions. The developer is required to fund the connection to the sewer and the cost of any on-site sewerage facilities. Should the developer need to cross third-party land in order to connect to the existing sewerage system then they can requisition the sewerage undertaker to provide a new sewer under section 98 of the WIA. Requisitions are funded by the developer but the cost is discounted to take account of income received from new sewerage charges over a 12 year period.

Under the WIA water companies have a duty to provide public water supplies for domestic purposes, and to provide public sewer systems. However they also have an obligation to manage customer bills by delivering a service that is cost-effective and good value for money. Ofwat is the economic regulator for the water and sewerage industry in England and Wales and the water companies are subject to asset planning controls. Water companies are willing to invest in infrastructure improvements once it is certain that investment is required. The timing of that investment is subject to the AMP cycles.

When a developer in the Bradford District wishes to proceed with a particular site, they can requisition Yorkshire Water to provide local network infrastructure in accordance with the relevant provision of the Act (Section 98 for sewerage and Section 41 for water). The cost of this is shared between the developer and undertaker in accordance with the provisions of legislation.

Figure 2: Yorkshire Water's Grid Supply



Source: Yorkshire Water

Following significant investment in a new 'water grid' in recent years, the region's water resources can be redistributed according to need. The City of Bradford Metropolitan District Council is within the Grid Surface Water Zone of Yorkshire Water's Water Resources Zones.

The Grid Surface Water Zone is a highly integrated surface and ground zone that is dominated by the operation of rivers and reservoirs. The Grid enables transfer of large volumes of treated and untreated water across the zone to ensure supply meets demand throughout the zone.

Electricity Supply

The local electricity distribution network in the City of Bradford Metropolitan District Council area is operated by Northern Powergrid (Yorkshire) plc which is owned by Northern Powergrid Holdings Company. The network connects to the National Grid network which is owned and operated by National Grid Company. Electricity is regulated by Ofgem.

Electricity is regulated by Ofgem

The electrical network structure with the Bradford area is based upon the standard hierarchy of 132kv Grid Supply Points feeding a number of 33kv substations in turn feeding a number of 11kv substations from which the low voltage network distributes the supply to premises.

Northern Powergrid carries out a regular programme of authorised system development. These projects are contained within the current Northern Powergrid 10-year investment plan that had been financially sanctioned before the end of September 2011. Those projects within the Bradford area are:

- Four Lanes Ends 33/11kv substation, 33kV switchgear replacement.
- Kirk Drive 33/11kV substation transformer 2 replacement.
- Menston – Kirk Drive - Graincliffe Reservoir Teed 33kV overhead line replacement.

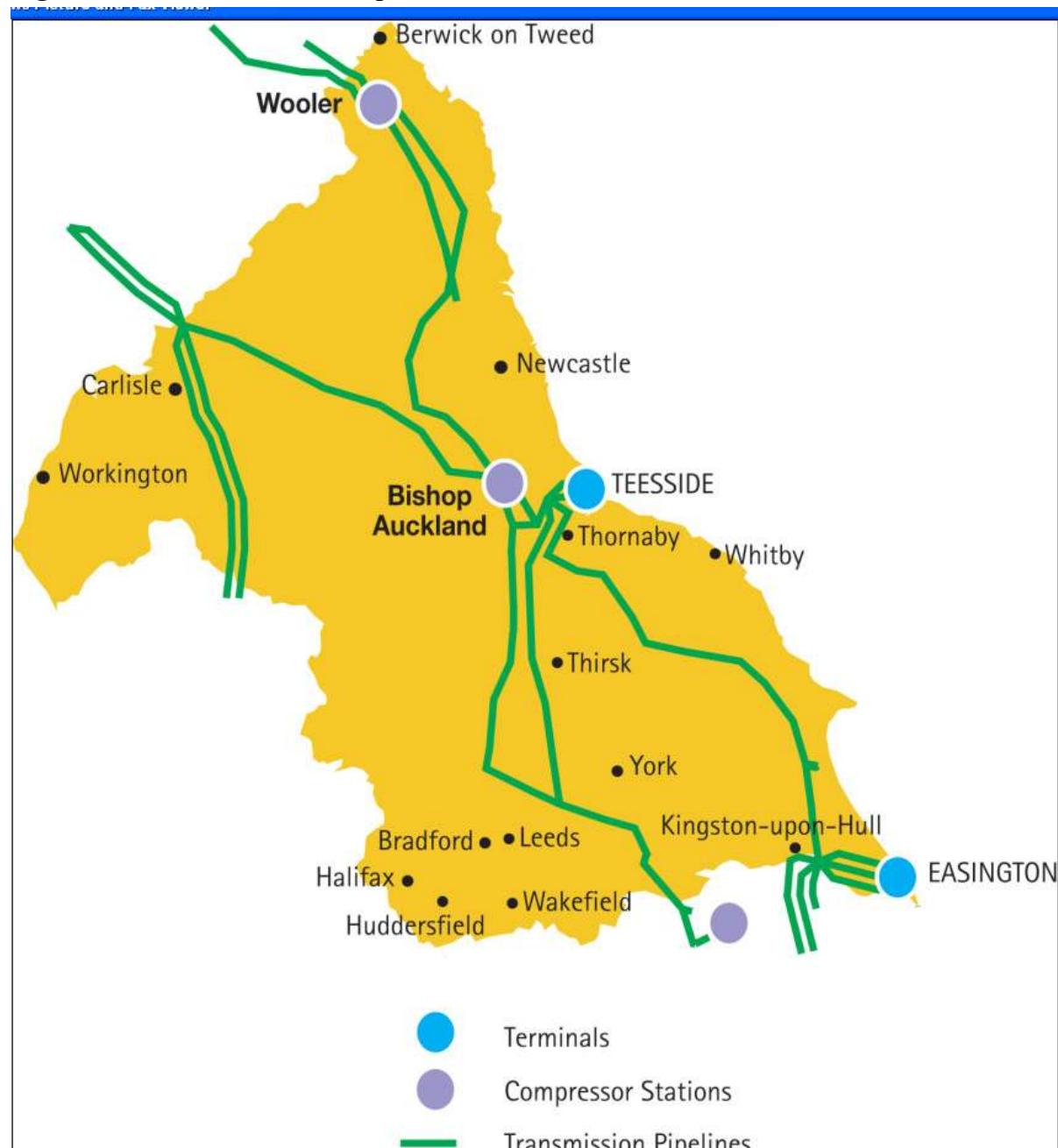
The Four Lanes and Kirk Drive works will improve security of supplies. The Graincliffe overhead replacement will have negligible impact on the capacity and capability of the system.

Under current regulations LDNO's investment plans are constrained with respect to preparing the network system for developments which are still in the strategic stage with actual site works possibly years away. Such developments would be considered speculative and Northern Powergrid would not include them in their development proposals since they would expect all the costs associated with speculative development to be paid by the developers.

Gas Supply

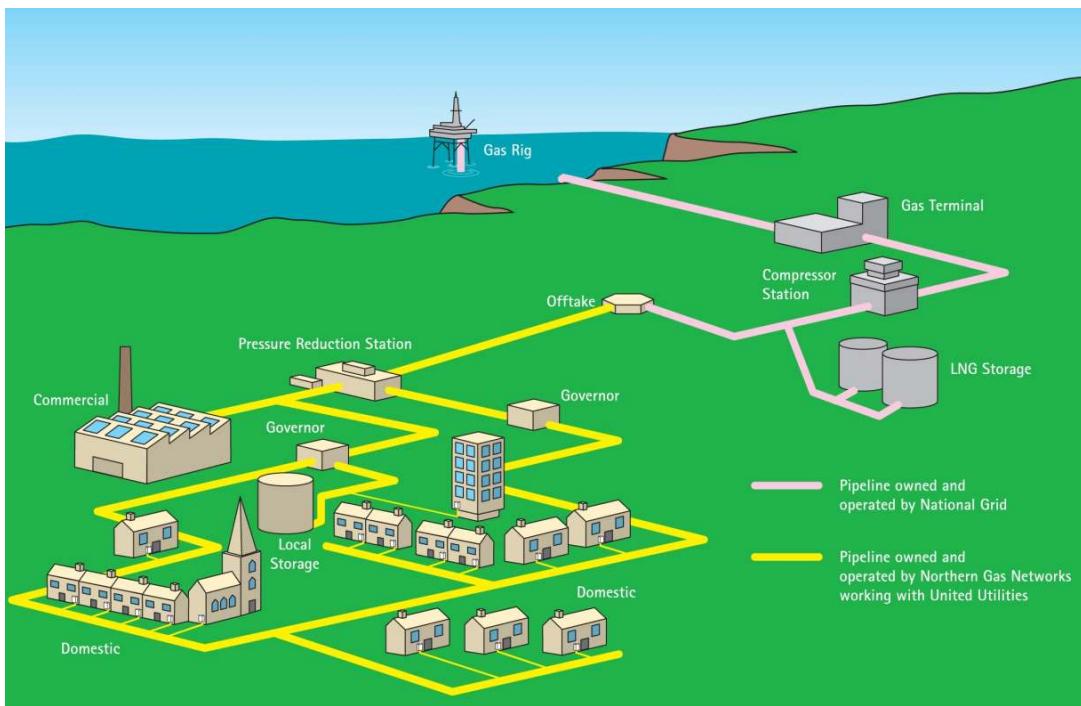
The local gas distribution network in the City of Bradford Metropolitan District Council (CBMDC) area is owned by Northern Gas Networks (NGN) and supplied by National Grid. Bradford is well positioned in West Yorkshire being close to the major gas import installations on the East Coast.

Figure 3: Gas Distribution Map



NGN receives gas at high pressure from National Grid's main transmission lines. The gas enters the local network at high pressure and through a series of pressure reducers, governors and gasometers and increased main sizes, the pressure is adjusted for distribution to premises.

Figure 4: Beach to Meter schematic



The gas industry is regulated by Ofgem. Northern Gas Networks is carrying out a major refurbishment programme of its gas mains throughout West Yorkshire. This is evidenced by recent investment in Bradford of £400k in the Bradford Moor area to replace old cast iron mains with plastic.

Northern Gas Networks recently announced Warm Glow. This is £91 million of gas infrastructure improvements across the North of England, which will improve the region's distribution network by replacing ageing underground pipes.

The multi-million pound package has been announced by Northern Gas Networks, the region's gas distribution company, to ensure the safe and reliable supply of gas to local homes and businesses for decades to come.

The funding has been allocated to West Yorkshire, North Yorkshire, East Riding, Hull, Cumbria and the North East for the 2012/13 financial year (ending March 2013), to replace almost 620km of old metal gas mains with modern plastic pipes. This investment for pre-planned work will be supplemented with further money for contingency work, such as emergency repairs.

United Utilities Operations Ltd (UUOL) carry out the day to day maintenance of the system and are responsible for the engineering behind any necessary diversions or reinforcements. Other companies in the gas industry are responsible for production, metering and billing. The gas connections market is very competitive, and whilst Northern Gas Networks does have a connections business and they are the incumbent in the area, other operators can and will provide the service in Bradford District.

Fit for Purpose

Water Supply and Treatment

The water supply is fit for purpose and the whole of the Bradford District is served by the Yorkshire Grid.

Through discussions with Yorkshire Water it is understood that major urban areas tend to have spare waste treatment capacity, however the growth of smaller outlying towns and villages is where capacity issues are most likely to arise.

Yorkshire Water have confirmed that the Aire Valley Trunk Sewer is at capacity and that they can no longer accept any new foul or surface water flows to this sewer. This sewer collects the foul drainage from the areas of Kildwick, Glusburn, Cross Hills Sutton-on-Craven, Steeton and Silsden. Yorkshire Water has commented that any increase in flows would create an unacceptable risk in pollution to the local aquatic environment. The Environment Agency has also raised this issue.

Based on the current population the existing treatment facilities are adequate.

Electricity Supply

The electrical network is fit for purpose in so far as it is managed and operated to maximise service to existing customers. Some constraints to development have been identified but none that would seem to be “show stoppers”. There will always be issues with the mismatch of developer’s costs and programmes with that of costs and programme to provide the electrical network to developments.

The electrical network was designed on the basis of centralised generation connecting into the network at specific locations and hence distributing a series of stepped down voltages until low voltage to dwellings.

The electrical network now has to respond to de-centralised generation and accept generated electricity at virtually any geographical and system location within the network. This places a major burden on those developments which wish to achieve the highest code levels of the Code for Sustainable Homes through renewable energy generation.

De-centralised electricity generation can result in serious voltage management issues for the network and hence require additional investment to the system to compensate for these.

Northern Powergrid can obtain funds from developers when developer’s proposals for on-site generation exceed a certain level. These funds are used to reinforce the network to better cope with voltage management issues.

The 33kV substation at Silsden feeds a large relatively rural area spreading from Cracoe in the North, Barnoldswick in the West, Haworth in the South and Ilkley in the East. The Primary 33kV substation at Silsden is presently overloaded at 33kV with the following 11kV connected secondary substations being close to their limit, at Crosshills and Ings Lane (in the Craven District). The consequences of the 11kV substations being close to their limits are that any development triggering reinforcement works at the substations will have to pay for it all. The sizes of development triggering such reinforcements are estimated as follows on the basis of demand only.

At some point the additional dwellings will overload Silsden and a major expenditure to this 33kV system would be required. The distribution of costs would depend upon which voltage level the triggering load was proposed to operate on. If the load required is low voltage (I.e. a small housing scheme of under 100 dwellings) then a significant proportion of the cost would be paid for by Northern Powergrid since the works would be two levels removed from the demand load. If the load required is high voltage then a significant proportion would be paid by the developer. The cost is estimated to be in the order of £2m to £5m.

The 33kV at Heckmondwike substation is just outside the Bradford area and is highlighted here as a potential constraint since development within the Bradford Metropolitan close to Heckmondwike may be affected by it and its demand constraints.

Gas Supply

The existing gas infrastructure in the Bradford area is fit for purpose and maintained in a robust and active manner. There is a major refurbishment programme being undertaken throughout the area to replace metal pipes within 30meters of properties with plastic. There is a constant programme of replacing mains that have been identified as requiring strategic replacement that runs alongside the major refurbishment programmes.

Future Programme and Cost

Water Supply and Treatment

Yorkshire Water use local development plans, economic information, population forecasts and other data to plan for growth and new provision. The Water Resources Management Plan (2010 – 2035) is based on local population forecasts from ONS 2005 mid year estimates and 2004 based projections, as well as house building forecasts and econometric data.

Yorkshire Water has therefore provided a commentary of where upgrades will be required in AMP 6 to meet the proposed trajectory of development. They will monitor take up of treatment capacity and determine whether investment is needed, weighing up the likelihood of

development occurring based on the current trajectory. There may be requirement for Yorkshire Water to upgrade the capacity of WwTW in AMP 6 at Burley/ Menston , Denholme, Keighley / Marley and Dowley Gap.

Yorkshire Water is currently producing a Drainage Area Plan for the Aire Valley Trunk Sewer Catchment, to fully understand the flows draining to the sewer, including historic land drainage connections and cross connections, plus the implication of future development. The Drainage Area Plan is due to be completed by the end of the AMP 5 (2015) and the findings will be fed into the plans for AMP 6. However there is currently no timescale for any future investment in the Aire Valley Trunk Sewer.

The forecast in the Water Resources Management Plan (2010 – 2035) is for considerably reduced housing growth, mainly as a result of the current economic crisis. The table below shows Yorkshire Water has adopted a mid range forecast to plan for properties across the region demanding new water and waste water connections within the grid surface water zone (GSWZ).

Table 2: New Property Forecast Range

GSWZ	2009/10	2014/15	2019/20	2024/25	2029/30	2034/35
Mid range forecast	8,585	17,330	23,171	23,840	20,699	20,699

Source: Water Resources Management Plan (2010, Yorkshire Water p75)

From 2010 demand figures for new domestic properties assume a per capita consumption of 120 litres per head per day, based on new properties being built in line with code for sustainable homes standards. It is assumed non-households will use 118.3 litres per property per day.

The principal duties of a water and sewerage undertaker are set out in that legislation. Section 37 of the Act places a duty upon a water undertaker to develop and maintain an efficient and economical system of water supply within its area. Similarly Section 94 places a duty upon a sewerage undertaker to provide, improve and extend a system of public sewers to ensure that its area is effectually drained.

It is likely that local reinforcements will be required to service local developments as and when these are allocated. These are considered as extensions to existing local distribution networks and would be consistent with costs that would normally be associated with providing services to developments.

Whilst the current situation shows a healthy resource in Yorkshire, climate change and new legislation on abstractions means there is potential need to adapt the water grid. Yorkshire Water estimates a possible 10% reduction in water yields due to climate change over the

period to 2035 (Strategic Direction Statement, 2010 pg 29). Any shortfalls in supply can be addressed by implementing demand reduction options (such as leakage control) as well as development of existing assets.

Electricity Supply

Northern Powergrid will continue to invest in the electrical network where service levels are below acceptable or on their way to be so.

It is understood that Northern Powergrid consider that developments should pay for the electrical infrastructure that is required to meet the demands of the development. Similarly developers should pay for the infrastructure to enable the development to generate electricity for the development's consumption and also export to the Grid.

These costs may be significant but are considered to be within the market levels that developers expect for such services and are part of the overall investment calculations that developers carry out to determine development viability.

Gas Supply

The demand forecasting for gas is a complex exercise with many uncertainties. Northern Gas Networks have published their business plan to 2021 which includes their investment proposals which in turn are based upon gas consumption within the period. The additional 45000 properties in Bradford represent significant increase in consumption and in turn revenue.

NGN recognises that the Renewable Heat Incentive will have an effect on the demand and consumption of gas. NGN has used various growth scenarios to model the future economy and hence demand and consumption of gas. NGN growth scenarios do not require significant investment to support the growth scenarios.

Assessment of Infrastructure to meet growth aspirations

Water Supply and Treatment

There is no infrastructure capacity issues associated with the supply of water in Yorkshire. Yorkshire Water is aware of capacity issues linked to Aire Valley Trunk Sewer.

An Area Drainage Plan is currently being produced. This means that until 2016 at the earliest only allocated sites (from the UDP) can discharge in this sewer. This will affect development sites on Kildwick, Glusburn, Cross Hills Sutton-on-Craven, Steeton and Silsden. If non-allocated sites come forward they may need to treat their waste water on site or link into a

different sewer (if possible). Yorkshire Water has confirmed that they are carrying out an Area Drainage Plan and are considering options for AMP 6, but nothing has been programmed. The table below provides a commentary on the major WwTW and where investment may be needed to facilitate housing growth. This has been provided by Yorkshire Water and is linked to the proposed housing levels set out in the emerging Core Strategy.

Table 3: Waste Water Treatment Works Capacity

Settlements	WwTW	Capacity	Comments
Guiseley, Yeadon, Bradford and adjacent urban areas	Esholt WwTW	There is capacity for the LDF numbers in this catchment.	
Thornton, Shipley and Baildon			
East Ilkley and Ben Rhydding	Ben Rhydding WwTW	There is capacity during AMP 5 and should be ok for AMP 6.	Information on the distribution of housing is needed.
West Ilkley, Addingham	Ilkley WwTW		
Burley and Menston	Burley/Menston WwTW	There is only capacity for 2005 UDP and committed sites	If development progresses as per the trajectory throughout AMP 5 then it is likely that YW will have to undertake investment in schemes in AMP 6. Phasing of development is required
Denholme	Denholme WwTW		
Keighley, Oakworth, Haworth, Riddlesden, East Morton	Keighley/Marley WwTW		
Bingley, Eldwick, Cottingley, Wilsden, Harden and Cullingworth	Dowley Gap WwTW		
Oxenhope	Oxenhope WwTW	There is capacity for development in this catchment in AMP 5 and potentially AMP 6.	

Electricity Supply

Electricity provision is generally adequate to meet the growth aspirations. However minor local reinforcements would be needed at primary substations, as well as cabling and the

installation of a new secondary substation. Size and timescales of these elements would depend upon the size of the development and its delivery timescale.

Developments in areas supplied via Silsden are likely to need additional reinforcement, some at the local 11kV level and eventually at the 33kV level at Silsden. This could be a significant programme of works with a high cost which should be raised with Northern Powergrid so that it can be considered as early as possible before it is required.

An appraisal of substation capacity has indicated that it is likely that development quanta and demand will exceed local supplies and that local reinforcements will be required. The more significant developments are likely to require reinforcements that extend further up the system and in some circumstances could be considered to be strategic reinforcements. Local reinforcements would normally include some moderate works at a primary substation or other substations, cabling and the installation of a new substation. The size of these elements would depend upon the size of the development. The cost of this work could typically be between £20k and £250k and would be expected by developers.

Strategic reinforcements would normally involve a new primary substation with substantial works at other substations, cabling and new secondary substations. The costs of strategic reinforcements would normally be in the order of £2 to £5m. These high costs may delay individual developments until such time as more are planned and the cost/dwelling is more acceptable to business plans.

The electricity supply nationally is moving towards more low carbon sources. The aim is to increase the amount of electricity that is generated in this manner. Electricity generated by low carbon sources can be fed into the National Grid or a local network. There is a range of private proposals to increase low carbon energy in Bradford. Low carbon proposals are generally developed by private sector companies, and it is for CBMDC to develop policies to encourage focus renewable energy schemes in the Bradford District.

Gas Supply

The information within the Development Plans for Northern Gas Networks (NGN) have suggested that the overall gas network within CBMDC is robust and flexible and that strategic reinforcement of the network would not be necessary to support the intended development plans.

Local reinforcements will be required to service local developments as and when these are allocated and designed. These should be considered as extensions to the existing local distribution networks and in proportion to the size of the proposed development and consistent with costs that would normally be associated with providing services to developments.

Responsibility for Delivery and Potential Funding Sources

Water Supply and Treatment

The regulated water and sewerage company in the area is Yorkshire Water (YW). Their regulator is Ofwat. YW is responsible for the full range of the water business from production, treatment, distribution, metering, billing, sewerage and effluent treatment.

Electricity Supply

The local electricity distribution network is operated by Northern Powergrid (Yorkshire) plc which is owned by Northern Powergrid Holdings Company. The network connects to the National Grid network which is owned and operated by National Grid Company. Electricity is regulated by Ofgem.

It has been not been possible to go down to the level of detail that would normally be applied for a normal electrical connections application for a typical development site. Development proposals for 45,000 new properties over the whole of Bradford could represent something in the order of 1000 new electrical connections applications. This extent and number of developments would put a burden on the administration of applications.

Northern Powergrid is undertaking a programme of refurbishment to its electrical infrastructure throughout West Yorkshire. This programme of refurbishment is targeted at replacing old assets, improving security of supply and reducing fault levels. This programme of work is not directed at increasing capacity for new supplies but directed at improving service to existing customers.

Northern Powergrid's ability to invest money to support potential development is restricted by the regulator which allows Northern Powergrid to invest only in improved services to existing customers rather than potential customers.

There is no evidence to suggest that the proposed developments would be constrained by the current extent of the electrical infrastructure in Bradford except those developments in the areas connected to Silsden. In this area there will likely be additional costs and programme issues that may alter the budget plans of developers and/or hold up development.

There may be occasions in other areas where development programmes are adjusted to take into account the extent of work required to connect the development to the existing infrastructure but overall financial programmes and budget forecasts should not be adversely affected by the cost of connecting to the existing electrical infrastructure.

Gas Supply

The local gas distribution network is owned by Northern Gas Networks (NGN) and supplied by National Grid. The gas industry is regulated by Ofgem. United Utilities Operations Ltd (UUOL) carry out the day to day maintenance of the system and are responsible for the engineering behind any necessary diversions or reinforcements.

It has been not been possible to go down to the level of detail that would normally be applied for a normal gas connections application for a typical development site. Development proposals for 45,000 new properties over the whole of Bradford could represent something in the order of 1000 new gas connections applications. This extent and number of developments would put a burden on the administration of applications.

Northern Gas Networks is undertaking a major programme of refurbishment to its gas infrastructure throughout West Yorkshire and whilst this may cause some network issues in the short term, in the long term the refurbishment will improve the capacity of the gas infrastructure.

There is no evidence to suggest that the proposed developments would be constrained by the current extent of the gas infrastructure in Bradford. There may be occasions where development programmes are adjusted to take into account the extent of work required to connect the development to the existing infrastructure but financial programmes and budget forecasts should not be adversely affected by the cost of connecting to the existing gas infrastructure.

In previous and similar utility capacity studies the following statement has been released by National Grid... “*the only constraint on growth to our infrastructure is the timescales to reinforce and on a local level this should not be a problem.*”

Summary

Current	Fit for Purpose	Planned	Cost	Gap
Water				
Yorkshire Water is the only water and waste water treatment provider for Bradford District.	Yorkshire Water have confirmed that the Aire Valley Trunk Sewer is at capacity and that they can no longer accept any new foul or surface water flows to this sewer.	Yorkshire Water is a statutory consultees on emerging Local Plans and will factor proposed growth into their investment plans. A Drainage Area Plan is being	Unknown.	No gap identified.
Bradford District is				

Current	Fit for Purpose	Planned	Cost	Gap
served by the Grid Surface Water Zone. Yorkshire Water is appointed as the water and sewerage undertaker for the Bradford District through the Water Industry Act (WIA) 1991.	Based on the current population the existing treatment facilities are adequate.	carried out to understand the flows on the Aire Valley Sewer. This will be completed by 2015. Yorkshire Water have are considering including the improvements in Amp 6 There are a number of WwTW that may need to be upgraded in AMP6.	Unknown.	No gap identified.
Electricity				
Local electricity distribution network in Bradford District is operated by Northern Powergrid (Yorkshire) plc. The network connects to the National Grid.	Development quanta and demand likely to exceed local supplies and reinforcements will be required.	Northern Powergrid will continue to invest in the electrical network where service levels are below acceptable or on their way to be so. Developers should pay for the infrastructure to enable the development to generate electricity for the development's consumption and also export to the Grid.	The costs of strategic reinforcements (of a primary substation) would normally be in the order of £2 to £5m. Local reinforcement costs of secondary substations is typically between £20k and £250k and would be expected by developers. Depending on the proposals at Silsden, local	Infrastructure gaps can be overcome through appropriate phasing, timing and dialogue with Northern Powergrid. No gap identified.

Current	Fit for Purpose	Planned	Cost	Gap
			or strategic reinforcements would be required. Further discussion with Northern Powergrid would be needed when developing proposals in Silsden.	
Gas				
West Yorkshire is close to the major gas import installations on the East Coast.	There are no existing issues.	Northern Gas Networks have published their business plan to 2021 which includes their investment proposals which in turn are based upon gas consumption of existing areas.	Strategic Reinforcements of the network are not necessary. Local reinforcement costs only.	No funding gap identified.

Telecommunications

Definition

The Information and Communications Technology (ICT) infrastructure covered by this chapter include broadband and wireless provision for residential, community and commercial properties.

Source materials

The following documents and sources were used as the initial evidence base for this chapter.

- SamKnows website

- Broadband Delivery UK website
- Super-connected cities press release
- West Yorkshire Local Broadband Plan, 2012
- Ofcom Communication Market Review 2012

Current position

Overview

Digital services have long been recognised as important for citizens' participation in society, the economy and the democratic process. Ofcom, the independent regulator and competition authority for the UK communications industries, has undergone some work to encourage competition which has helped to deliver the three central goals of availability, take-up and effective use of key services.

The digital world is changing. The growth of broadband and mobile services, digital broadcasting and technologies and services, could all provide greater benefits for many customers throughout the Bradford district, including residents, educational establishments and business users.

With the proposed growth and regeneration of commercial, retail and residential developments within the Bradford district, there comes an aspiration to promote choice and competition, not only in the provision of broadband services to users, but telephony and television services too. The push towards a more digital Britain will offer an opportunity to develop and increase access to council services and offer integrated services to residents and businesses.

The gap between digitally included and excluded people is getting bigger, with a large percentage of people still not using or seeing the benefits of the Internet. People who are not digitally connected and gaining access to Internet services such as tele-conferencing, tele-care, tele-medicine, home working and, online banking and shopping will increasingly be excluded.

Fixed voice telephony and broadband services are predominantly provided by BT throughout the Bradford district. Other telecom operators, such as Virgin Media also provide fixed telephony services with the additional benefit of television services; however, it is not clear at this stage whether they have installed the infrastructure necessary to serve all users and businesses within the identified development areas.

Other commercial customers in the area will also have direct connections to other network operators with a local point of presence such as KCOM and Cable and Wireless.

There is a reasonable prospect that Next Generation Access (NGA) operators other than BT Openreach and Virgin Media may establish a presence in the Bradford district in the near

future, as the potential demand may be sufficient to induce the significant investment necessary.

With the recent announcement that Bradford, via the Urban Broadband Fund, will become one the UK's first 'super-connected' cities with quoted internet broadband speeds set to become up to ten times faster than current average UK speeds.

Accompanying this there will also be full wireless coverage within the city centre with many homes and businesses benefitting from the increased connectivity.

It should be noted that it will be a joint investment with Leeds to form a neighbouring 'Economic Core' of the wider city region as it was considered that a joint integrated bid would provide the most economic and social impacts, and benefits.

The Leeds City Region (LCR), which includes Bradford authority, is the largest city region economy outside of London and was one of the very first to structure a private sector – led local enterprise partnership (LEP) which committed to working closely with both private and public sectors to assist businesses and the growth of the local economy.

Change in focus

Only in recent months is the focus in the UK slowly shifting from superfast broadband infrastructure build to creating demand for the superfast services it will enable. Without take-up and the exploitation of such services, the economic benefits that superfast can bring to the country, and more importantly the Bradford district, will simply not materialise.

Demand stimulation will undoubtedly be required to raise awareness among consumers in the Bradford district of the offer of superfast broadband in order to increase take-up.

Local authorities are under increasing pressure to develop demand stimulation and community engagement strategies as part of their Local Broadband Plans.

Community-based projects have to get their constituents on board if such schemes are to prove successful, with commercial players already deploying superfast services necessitating an increase in take-up numbers to gain a return on investment as quickly as possible.

Infrastructure

Research from the website SamKnows confirms that there are no restrictive measures preventing residents in the Bradford district gaining access to the internet. In total there are 21 exchanges that directly serve the main settlement areas within the study.

The table below illustrates broadband availability, choice of operator and available speeds in the district[†].

[†] Ofcom has defined four classifications to be applied to exchange areas. These are:

Table 4: Broadband availability, choice of operator and available speeds

Exchange	Serves Approx (Residential)	Serves Approx (Non-residential)	ADSL (2Mbps) enabled	ADSL Max (8Mbps) enabled	Virgin Media enabled	BT FTTC Status	Operators (other than BT)	Ofcom Market Classification1
Manningham	20,796	721	✓	✓	✓	✓ (2013)	6	3
Dudley Hill	8,641	366	✓	✓	✓	✓ (now)	5	3
Laisterdyke	9,543	400	✓	✓	✓	✗	4	3
Bradford	18,362	2,539	✓	✓	✓	✗	4	3
Horton Bank	13,558	457	✓	✓	✓	✗	5	3
Idle	9,840	349	✓	✓	✓	✗	6	3
Shipley	20,290	1,006	✓	✓	✓	✓ (now)	6	3
Guiseley	7,951	311	✓	✓	✓	✓ (now)	6	3
Burley in Wharfedale	2,848	60	✓	✓	✗	✓ (now)	2	2
Keighley	19,807	952	✓	✓	✓	✓ (2012)	6	3
Bingley	10,639	473	✓	✓	✓	✓ (now)	6	3
Ilkley	6,362	478	✓	✓	✓	✓ (2012)	3	3
Addingham	1,721	74	✓	✓	✓	✗	0	1
Otley	6,483	610	✓	✓	✗	✓ (2012)	4	3
Queensbury	11,331	261	✓	✓	✓	✗	4	3
Steeton	5,433	172	✓	✓	✓	✗	3	3

Market 1 - Exchanges where the incumbent operator (BT Wholesale) is the only provider of broadband services

Market 2 - Exchanges where two or three operators provided broadband services (including BT);

Source: SamKnows, an Ofcom partnered website

Market 3 - Exchanges where four or more operators provided broadband services

Hull area - Exchanges in Hull are served only by Kingston Communications

Cross Hills	5,890	220	✓	✓	✗	✗	4	3
Thornton	3,941	120	✓	✓	✓	✗	2	2
Bolton Abbey	289	25	✓	✓	✗	✗	0	1
Haworth	6,242	168	✓	✓	✓	✓ (now)	4	3
Cullingworth	3,868	114	✓	✓	✗	✓ (now)	2	2

Source: SamKnows, an Ofcom partnered website

It can be seen that market competition – with the exception of Addingham and Bolton Abbey exchanges – is good, with broadband availability and speed within the settlement areas offering residents and non-residents both choice and range of broadband speeds. It is apparent that community access to the internet is not entirely that of physical constraint, i.e. copper/fibre in the ground, but that of perceived cost and/or need or benefit. Evidentially, this should lead Bradford council to proactively bring about service provision to residents, as opposed to allowing it to be purely market driven, which historically has failed.

There is however areas where there is no coverage at all and these areas have been termed broadband ‘notspots’.

BT’s recent decision to open its fibre ducts to competitors may bring ‘next generation’ broadband access to the Bradford district sooner rather than later, nonetheless, it is unlikely that these details will be finalised and announced until later this year. In the meantime, BT is continuing to roll out their fibre-to-the-cabinet (FTTC) scheme, with enabled exchanges conveyed in the table above; however there are exchanges that are not ear-marked for upgrade anytime soon.

Telecommunications differs from other utility sectors in that any person may install and operate telecoms infrastructure and provide services to the public without prior approval or being expressly licensed, provided that certain general regulations are complied with.

Accordingly, the market for telecommunication infrastructure and services in the Bradford district, as elsewhere in the UK, is open to competitive provision. With the release of the government’s ‘Digital Britain’ report and emerging NGA technologies now evident within the market, this provision creates opportunities for new players to offer new development sites with innovative products and services. It is these products and services that can act as a key differentiator for developers and councils alike.

The digital economy is extremely important for government and local councils; hence the introduction of e-Hubs – a dedicated incubator for creative and digital industries – can attract and retain SMEs in the area who may have otherwise chosen to set up their businesses elsewhere.

When assessing the requirements for a wide area communication infrastructure, three separate categories can be considered.

Private sector businesses

Private sector companies have a wide range of individual requirements dependent on their precise business needs. Generally, they will require high quality voice and data services, delivered over high levels of bandwidth. Most critically, connectivity must be delivered in a reliable and resilient manner to avoid possible downtime, and therefore negative impact on their operation.

Public sector

Public sector organisations have similar requirements to the private sector for their normal operation. However, additional benefit can be derived from a communication infrastructure to promote closer relationships between organisations, sharing data in a secure manner, or operating additional community based services.

Residential

As a minimum, residential users require access to telephony, broadband and entertainment services, from a choice of providers. These are currently delivered over copper and/or fibre circuits, but will increasingly be delivered over optical fibre circuits only instead, offering a wider range of higher quality services.

Technology

Many organisations, both private and public sector, will increasingly progress beyond the physical boundaries of the office space, incorporating both 'owned' and 'shared' spaces that may span buildings, as well as cities; no longer being confined to the conventional form of the office environment.

Technology, specifically ICT and converged services, are facilitating this shift in working procedures with employers now distributed by time and location, accessing their buildings periodically; the function of the conventional building is radically changing. Instead of a 'one desk per person' scenario, employers are implementing 'non-territorial' working; breakout spaces, pod areas, quiet rooms and well-equipped meeting spaces.

Technology used to connect only places: now it connects people. With more people now working on the move, be it at home, in the office breakout space or even at the airport, there is a growing trend towards mobility, with ubiquitous access to work resources.

The below services are those which are perceived to herald the trend for the future of working practices:

Ubiquitous connectivity

A primary requirement for all users of technology is access to information. Therefore, it is essential that they are able to connect to the network wherever they are, fixed or wireless, from any computing device (e.g. laptop, PC, smart phones).

For instance a user could view relevant and personalised learning resources from a virtual environment, and gain access to the same information whether at home, at work or on a train.

Unified Communications (UC)

Refers to the trend in business to simplify and integrate all forms of communications. It would allow a user to send or receive a message on one medium and receive it on another; this can include phone, e-mail, chat, voicemail, presence services, and fax.

Gains in efficiency can result through an optimisation of business processes and enhancing human communications, reducing latency, managing flows, and eliminating device and media dependencies.

Smart building

The term ‘Smart Building’ can be defined as the integration of building controls, security and IT systems to provide synergistic functionality that could not be achieved by any one system alone, e.g.:

- Enabling the heating, ventilation and air-conditioning systems to intelligently react to the usage of the room and the requirements of the occupants
- Enabling operations personnel to control, manage and maintain all building, security and IT systems through a single common software application.
- Automatically turning on the lights and streaming the appropriate CCTV video to a manned security room when a building occupant attempts to access an unauthorised area.

Smart building technologies are not only saving building owners and their tenants’ money; they are also offering significant help in saving the planet. Thanks in part to Internet Protocol-based networks, new digital technologies are ready to make dramatic contributions in how buildings function, particularly in reducing their energy consumption.

For the council the bottom-line result of this intelligence and coordination is much lower operational expenses for commercial buildings.

Social networking

Modern governmental and educational institutions are represented in the physical and virtual worlds. The innovative use of Web 2.0/3.0 technologies and 3D virtual world applications

extend the surface area beyond traditional physical boundaries to provide stimulating learning environments for staff and members.

The control has shifted from the owner to the user. The participating audience is finding new ways to contribute, communicate and collaborate. Council employers will need to develop an established response to social networking sites since at home and at work they will play a fundamental role in how people will interact in the future and interface with digital media.

A metropolitan wide communications infrastructure could have many benefits for public services and community based initiatives. Examples of these could be:

Digital inclusion initiatives

One of the goals of the Digital Britain report, published by the government in June 2009, is to promote the use of broadband across the country and encourage the use of web-based public services, such as access to local authority services.

A comprehensive communications infrastructure can be used to support this and other initiatives, by removing or reducing barriers for many inhabitants of the region. Increasing the level of broadband uptake would also improve the ICT skills of users, and improve communication between local authorities and citizens.

Public Information Displays (PID)

Public Information displays are a good source of real-time information for members of the public. They can be used as an interactive tool, relaying directions, viewing the council website and up-to-date information regarding rates, bus timetables, planning guidelines and 'What's on' guides.

Displays can be installed either within public buildings or at strategic locations across the local area.

Web-enabled booking systems

Users can utilise web-based systems to see or make bookings of public services, regardless of their location. These systems would provide a quick and convenient view of the availability of resources, such as doctor's appointments or sports facilities, and would produce the following benefits:

- Availability details are easily obtainable and up to date
- Simple form based input ensures appointments are easy to arrange, reschedule or cancel
- Eliminates double-booking
- Quickly review appointment availability and view attendees
- Attendees can quickly be informed via email of changes in status to a appointment

- Easy to generate audit trail of a booking history and attendees
- Monitoring and control of resource pools (e.g. traffic/fleet management)

Fit for purpose

Overview

The nature of the de-regulated telecoms market in the UK means that planners must consider telecoms ducting infrastructure provision for multiple operators.

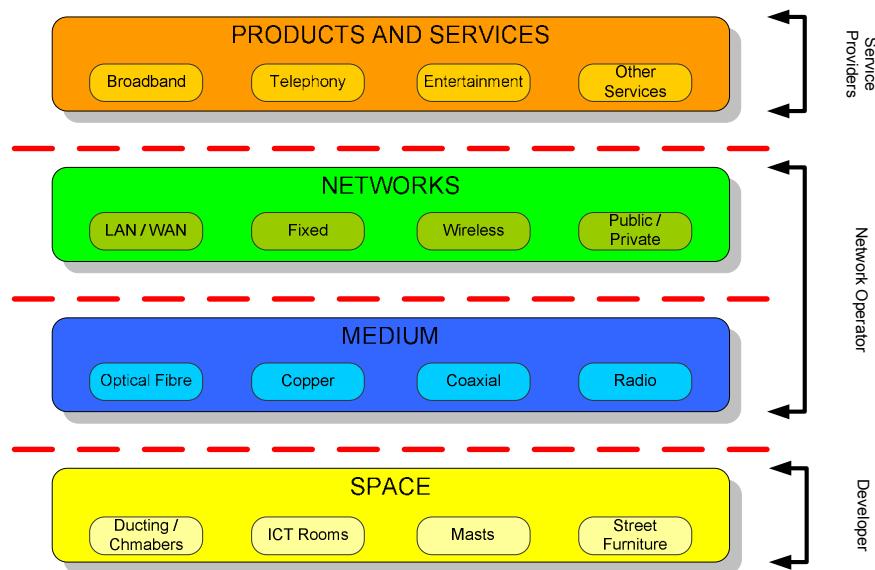
As part of utilities infrastructure development it is common to make provision for a shared telecoms ducting infrastructure to support the operators' requirements. This ensures that the requirements of multiple operators can be accommodated in an efficient manner in terms of space required within utilities corridors.

It is, however, becoming increasingly common to consider the procurement of telecoms networks as part of the development process, even though this is normally provided through a partnering type agreement with a telecoms operator.

This section describes ICT infrastructure provision using the four layer model and explains their role in more detail in relation to the development areas.

Four layer model

The methodology for provision of ICT services can be illustrated using a four layer model as shown in the Figure below.



Space

The Space layer refers to the dedicated areas utilised by the ICT infrastructure which are essential to deliver ICT services. These include underground duct work, chambers, mast locations and street furniture.

Medium

The Medium layer refers to the passive networking medium such as wired and wireless technologies that permit the distribution of ICT signals across site. Wired media normally consists of optical fibre, copper, or coaxial cabling, and is installed within the ICT ducting infrastructure from the Space layer. Wireless technologies include Wi-Fi, WiMAX, and cellular networks and will require antennas to be located across site to operate.

Networks

The Networks layer consists of the active networking equipment that operates over the Medium layer. For a city wide implementation networks are normally operated by a number of different Communication Providers, and may include data, voice, video, and closed circuit television (CCTV) networks.

Products and services

The Products and Services layer consists of the ICT systems and services delivered to end users, including public and private sector, and residential. Typical examples of services may include broadband, telephony services, and television services.

In the traditional telecoms business model, a single operator will construct and own a network infrastructure, and retain exclusive use to deliver service over it.

This is the model currently adopted by Virgin Media for the residential sector, where it has constructed a hybrid fibre/coaxial nationwide network infrastructure and delivers broadband, telephony and television services to users.

However, the rest of the UK-wide copper telephony network operates in a different manner. BT Openreach, a division of BT, was established under regulatory pressure by Ofcom, and has the primary responsibility of maintaining the local copper telephony circuits from telephone exchanges into business and residential premises. It does not provide services over the circuits, but rather it offers access to the circuits on an open and equivalent basis to service providers. End users have a choice of which service provider to receive service from, even though the same access circuit is used to deliver it.

For businesses there is also the option of using private circuits directly from Communications Providers (CPs) which do not utilise the telephony network. These connections are predominantly optical fibre, and allow businesses to receive a guaranteed level of throughput and quality.

Open Access Network (OAN)

An Open Access Network (OAN) is a layered business model for the provision of communications services which extends the principles currently utilised within the copper telephony network.

Open Access takes the idea of separating network operation from service provision to a logical conclusion, with a single operator who makes the network available to service providers but is not directly involved in the service provision.

An OAN can be used by any number of different service providers to supply consumers with a range of telecommunications services, not limited to just broadband, and is a potential way of implementing a Fibre-to-the-Premise (FTTP) network.

There are several options for the implementation of an OAN. For example:

Infrastructure only

Where the network operator provides space within ducting infrastructure, and the service provider is responsible for the installation and operation of the fibre and operating the service.

Dark fibre

Where the network operator installs and maintains the optical fibre to a premise within their ducting, and the service provider supplies the active equipment to 'light' the fibre.

Lit fibre

Where the network operator installs the fibre, and supplies and maintains the active equipment at either end of the connection to pass data.

Open access maximises the scope for the competitive provision of telecoms services at a development: only the basic infrastructure of ducts and wires is controlled by a single entity.

Multiple service providers competing for consumers:

- Benefits the community as a whole, both in terms of freedom of choice of service provider for subscribers and the opportunities it brings for local economic development; and
- As a result of the ease of adding multiple services, local businesses as well as public services find the network attractive.

Single network operator connecting users:

- Unified design and deployment of network; and
- No discrimination by network operator.

Comparison with the vertically integrated business model

- Services that are in-demand are brought to market faster and at little or no up-front risk to the network operator;

Complex upfront commercial contracting to ensure adequate service provision in early stages;

- No obligation on the part of the service providers to adapt service delivery to the specific technical requirements of the network (e.g. sky).

Fixed infrastructure requirements

It is possible to quantify the telecoms demand for a development site in terms of networks and connectivity. In order to support these, telecoms spaces will be needed within the developments and externally in terms of:

- Space / land for dedicated buildings / structures / masts etc.
- Space within buildings for active equipment
- Ducts / paths / routes between locations
- Space for pits / access to locations

Wherever possible, infrastructure can be shared between systems, except where inappropriate for technical, commercial or regulatory reasons.

The developer would provide the ducts and other space required, and would select the network operator. The operator would install the optical fibre network and connect users to it.

Users then contract directly with service providers for the services they want. The network operator is then paid by the service providers according to standard terms.

This business model has been developed for residential, SME and public sector users. Large commercial users will generally have their own networks and only wish to lease transmission capacity from the network operator.

Wireless infrastructure requirements

The large growth in the demand for wireless products and services has driven planners to consider available wireless opportunities, and their associated benefits. The provision of technologies such as WiFi, WiMax and cellular 3G+ can differentiate locations by offering, amongst others, remote working, location-based facilities, cashless vending and advertising services.

The wireless technologies identified above are those that are currently licensed, known and understood. The challenge for planners during a long term development project is to forecast which new technologies are likely to emerge.

For example, one technology which is likely to emerge in the short term is LTE (Long Term Evolution), a new high performance cellular mobile communication system.

Every wireless technology has a physical impact on the built environment, as they require mounting points for antennas with connections to power and fixed telecoms services. Mounting points can include dedicated towers and masts, external mountings on building facades and roofs and street furniture such as lighting posts and information points.

It is therefore becoming more common to appoint an infrastructure provider to manage the delivery of numerous wireless technologies and services within the built environment on a coordinated basis.

The current Telecoms infrastructure is not fit for purpose to serve the Bradford district up to 2026 because the existing infrastructure is not suitable to enable next generation service delivery.

Although there are current schemes in place that will benefit areas of the district for the next 5 years or so, for the most part, the infrastructure will need to be upgraded, in particular within the more rural areas.

Future programme and cost

Costs associated with the future provision of telecommunications infrastructure and next generation services are market-led, and are delivered on a case by case, site by site basis.

It should also be noted that delivery of fast broadband to each business park/industrial estate means delivery to the green box on the edge of the estate in some cases this can still mean a

long run to individual premises. Some new parks might be ducted beyond this, others, particularly the older ones may not be.

CBMDC and Leeds City Council have jointly bid for funds from the Urban Broadband Fund for Super Connected Cities funding. This would delivery high speed broadband to the two Cities. It has been confirmed that the Cities have been successful and will receive between £10 – 14.6 million from this fund. The exact amount will be confirmed in Autumn 2012. The outcomes of this funding would deliver the objectives of the West Yorkshire Local Transport Fund[‡].

Assessment of infrastructure to meet growth aspirations

Existing telecoms infrastructure within the Bradford district is not adequate to meet growth aspirations up to 2028 and possibly even up to 2015. Size and timescales of these elements would depend upon the size of the development and its delivery timescale.

Telecoms provision overall is not adequate to meet growth aspirations up to 2028 and possibly even up to 2015. Local strategic infrastructure would be needed at the access layer – the cabling from the home to street cabinet – in certain areas, as well as cabling from the street cabinet to the exchange.

Responsibility for delivery and potential funding resources

Overview

The local broadband infrastructures will be owned and operated by a number of different companies, depending on where you live, i.e. BT and Virgin Media to name the main two. These networks ultimately connect to backhaul, nationwide networks which again, are owned by various telecommunications companies. Therefore the responsibility will not solely rely on a single company and will depend on the chosen method of service delivery.

Telecommunications is regulated by Ofcom.

There are a number of strategies and procurement options for the delivery of digital services to users. These will impact the capital and operational expenditure (private sector, public sector, residential), and any potential revenue streams available. These strategies are outlined in the following sections.

Engage with BT Openreach

BT Openreach is currently in a strong position to provide the Bradford district, holistically and in each individual area, with copper based telephony access circuits. These would provide residents and businesses with basic telephony and broadband services, though would not offer users enhanced or next generation services.

[‡] Leeds City Region, West Yorkshire Local Broadband Fund, February 2012

Longer term, BT initiatives with FTTC (Fibre to the Cabinet) and FTTP (Fibre to the Premise) technologies would improve the bandwidth available, though it is likely that these would proceed in line with the rest of a UK-wide roll-out programme. Therefore, any upgrades would not offer any differentiation for Bradford over other areas.

Engage with an Open Access Network (OAN)

Alternatively, it may be possible to engage with an alternative open access network (OAN) provider for a next generation infrastructure. These may offer greater bandwidths and a wider range of services to current offerings.

The OAN could be responsible for building the infrastructure and attracting service providers to deliver service over them. There are varying degrees of involvement and contributions available to the council, ranging from installing the ducts and chambers only, to a fully functional fibre network infrastructure which can be leased to service providers.

Engage with a wireless operator

In addition to a fixed infrastructure it is possible to explore the benefits of installing a metropolitan wide wireless infrastructure.

Next steps

There are key issues that need to be resolved regarding the procurement and provision of a NGA infrastructure.

- Opportunities for alternative approaches to providing developments with next generation access developments.
- Potential for Openreach to be incentivised to install fibre to the premises (FTTP).
- Potential for attracting an alternative provider.
- Scale required for attracting an alternative service provider to BT Openreach and Virgin Media.
- Consideration of alternative approaches to developing a seamless, integrated wireless infrastructure.

Summary

Current	Fit for Purpose	Planned	Cost	Gap
Telecommunications services entirely open to competitive	The telecommunication	Engagement with BT, an Open Access Network, and a Wireless	Costs associated with future provision are	There is a gap in funding, which will

<p>provision.</p> <p>BT provides fixed voice telephony and broadband services. Virgin Media also provide fixed telephony services.</p> <p>Commercial customers in the area have direct connections to network operators such as Thus, KCOM, and Cable and Wireless.</p>	<p>infrastructure varies across the District, but is broadly fit for purpose.</p>	<p>Operator is vital for the future of the district.</p> <p>The Urban Broadband Fund will deliver High Speed Broadband to the City of Bradford and City of Leeds.</p> <p>At least £10.3 million has been secured for this work.</p>	<p>market-led, and are delivered on a case by case, site by site basis.</p>	<p>need to be met by private companies as detailed above.</p>
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Flood Risk and Drainage

Definition

The Flood and Drainage infrastructure covered in this study includes the infrastructure associated with the management of flooding, including any works to protect the district from the risk of flooding.

Source materials

- Bradford District Preliminary Flood Risk Assessment (2011)
- Yorkshire & Humber Regional Flood Risk Appraisal- Initial Draft (2010)
- Bradford Strategic Flood Risk Assessment- Level 1 (2003)
- Review to Consider the Future of Water Management and the Associated Problems of Flooding in the Bradford District (2005)
- River Aire Catchment Flood Management Plan (2010)
- Environment and Waste Management Improvement Committee Minutes

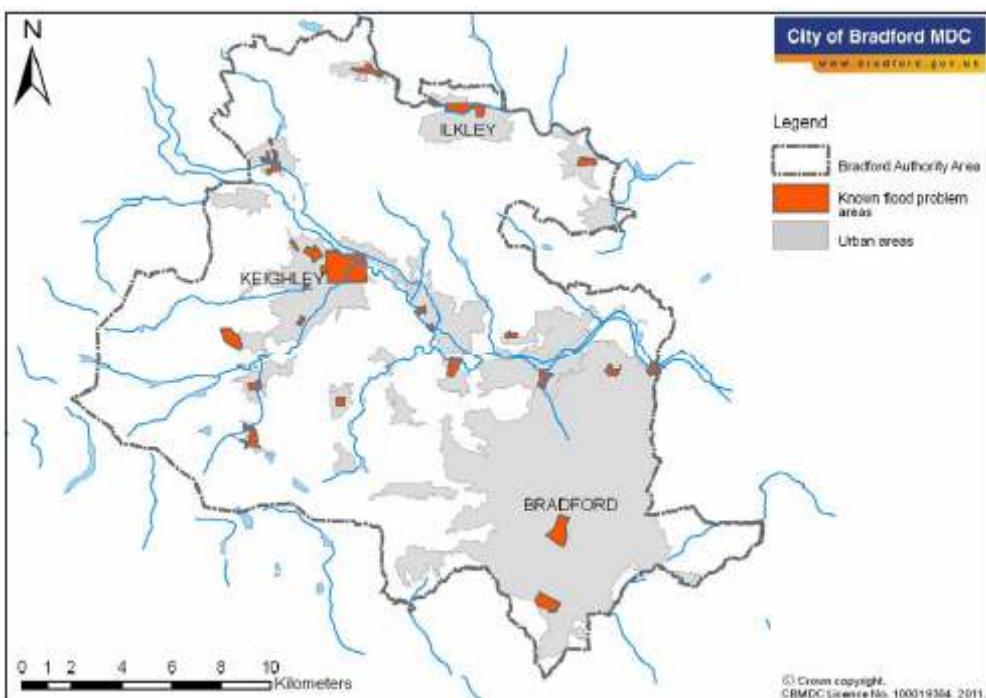
Current position

Bradford District includes the catchment areas of the River Aire and the River Wharfe, the latter forming a main river within the River Ouse catchment. There a number of other water courses in the District.

Some locations in the Bradford District are historically more prone to flooding. The delineation of Bradford's natural floodplains is well understood as experienced from the recent flood events. The main flood risk areas lies along the course of river Wharfe, River Aire and Silsden beck covering their catchment areas mainly in Ilkley, Burley, Stockbridge, Shipley, Bingley, Apperley Bridge and Silsden. Developments in those floodplains are strictly controlled by dedicated planning policies and through extensive consultation process with related partners including the Environment Agency.

A summary map highlighting the locations of past flood events is illustrated in Figure below.

Figure 5: Known Flood Problem Areas



Source: Bradford District Preliminary Flood Risk Assessment (2011)

These flood events came from a range of flood sources (e.g. surface water flooding, groundwater flooding, sewer flooding and ordinary watercourse flooding), and in many cases the source of flooding was unknown or not recorded. However, due to the lack of readily derivable information available, it is not possible to determine at this point if any historic flood events have been considered to have had 'significant harmful consequences'. Also, the complex nature of flooding that occurs in the District has also made it impossible to solely attribute flooding on these scales to single sources.

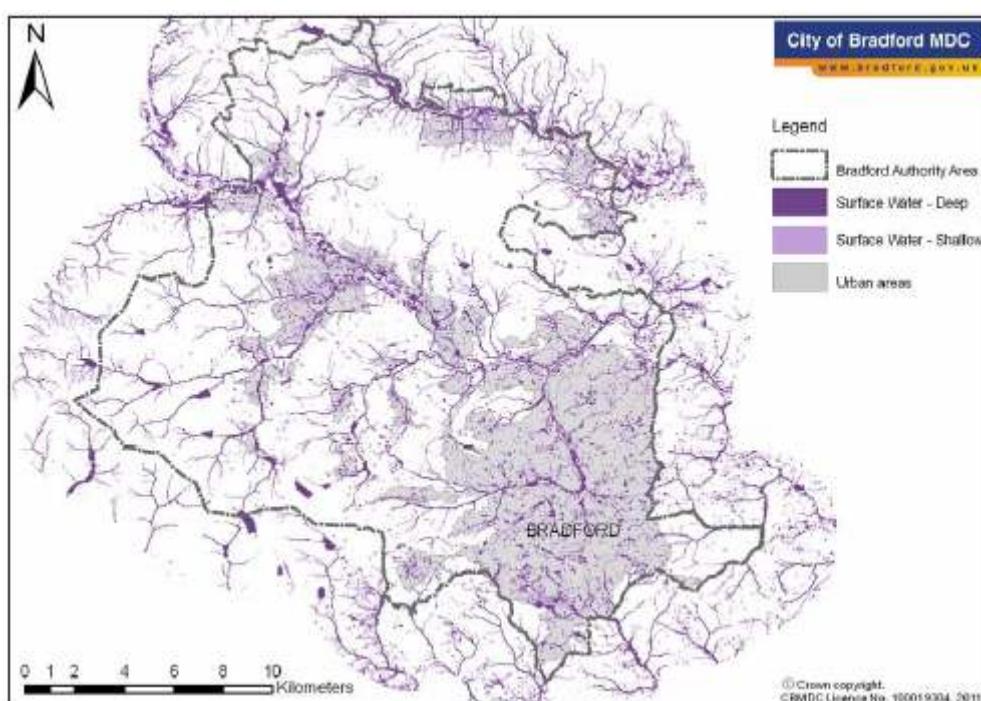
A District-wide Strategic Flood Risk Assessment is currently underway. The study has assessed the SHLAA sites and is currently looking at more localised issues. There are a range of data sets and models that have been collected / produced by CBMDC to complete the assessment.

Fit for purpose

Future flood risk within Bradford District has been assessed as part of the Preliminary Flood Risk Assessment[§] using methodologies derived from the EU Interreg IVB Flood Resilient City (FRC) project. This involved looking at the District as a whole and assessing potential risk areas based on flooding from a variety of local sources. The key aim of this assessment is to identify areas which are not currently known from past flood incidents.

The Environment Agency (EA) Surface Water Flood Map for Bradford District is illustrated in the Figure below, highlighting areas at risk of surface water flooding in the future. The majority of the areas under some form of flood risk are around rivers and in valleys.

Figure 6: Areas at Risk from Surface Water Flooding



Source: Bradford District Preliminary Flood Risk Assessment (2011)

In relation to flooding from Canals and Ordinary Watercourses there is only limited information available to inform the baseline study. Currently there is no available information on future flood risk from Bradford's canals. However, British Waterways are currently working on a study to better understand the future flood risk from canals, which will be made available once it is completed.

Based on the EA fluvial flood map, no areas were identified within the District that seemed to be at significant risk from ordinary watercourses. However further evaluation of areas within catchments such as the Bradford Beck will be undertaken as part of the Council's subsequent Local Strategies.

[§] Bradford District Preliminary Flood Risk Assessment (2011)

Future programme and cost

Bradford Metropolitan District Council is in the process of developing the Level 2 SFRA as part of its Local Development Framework evidence base, and as part of progressing the City Centre Area Action Plan and Allocation DPD.

There are 2 schemes for the Bradford district currently in the Environment Agency's Medium Term Plan^{**}. These are:

- Cottingley and Branksome Drive Flood Alleviation Scheme, and
- Saltaire to Baildon Homes.

Both of these potential schemes were identified in the Upper Aire Strategy and were conceived when the funding situation was very different to now. Neither of the proposals has had a detailed appraisal to determine their feasibility. At this stage, bearing in mind the limited number of residential properties at risk, it may be unlikely that these schemes will progress.

In terms of drainage, sewerage and waste water treatment, Yorkshire Water aims to stop sewers flooding homes and businesses as a result of asset failure. To do this, the Yorkshire Water Business Plan states that by 2035 will aim to stop all flooding in homes as a result of failure of their assets. The Business plan goes on to state that Yorkshire Water aims to provide protection against flooding for 1 in 30 year events and reduce the number of 1 in 10 and 2 in 10 'at risk' internal flooding properties by 31%.

The Drainage Team in Bradford Council have produced a 1D/2D of the Bradford Beck. This allows any new development along the Bradford Beck corridor to be modelled to confirm any flooding issues. The team is also producing a 1D/2D model for the four Becks that run through Ilkley. Both these models have been funded through a project called Flood Reliance City, working with Leeds and Sheffield Universities.

From April 2013 CBMDC will be the SUDS approval body. This means that they will comment on all planning applications in relation to provision of SUDS.

Timescale for Delivery

The Environment Agency's current programme for flood alleviation and flood defence schemes is scheduled for 2009 to 2011. Local flood alleviation and flood defence schemes are programmed during 2009 to 2015. Yorkshire Water's target to stop sewers flooding homes and businesses as a result of asset failure is to be achieved by 2035.

^{**} Yorkshire Regional Flood and Coastal Risk Management Programme 2012/13 (Regional Flood & Coastal Committee Approved-February 2012)

Assessment to meet growth aspiration

The topographic of the Bradford District mean that surface water flooding is an issue when moorland becomes saturated. This is difficult to solve, however the use of SUDS will help. The Core Strategy seeks to focus housing and employment growth away from flood risk areas, in line with National Planning Policy. A District-wide Strategic Flood Risk Assessment is also underway; this has assessed the SHLAA sites and is currently looking at more localised issues.

The main implications of flood risk for development in and around the main settlements in the Leeds City Region functional sub-region (FSR) is identified in the Yorkshire & Humber Regional Flood Risk Appraisal- Initial Draft (2010) report. This study provides an overview of the broad implications of related flood risk for strategic-scale development in and around the (RSS) settlements in the FSR. Within Bradford those settlements are: The City of Bradford (including Shipley), Ilkley and Keighley.

Future flood risk within Bradford District has been further assessed as part of the Preliminary Flood Risk Assessment using methodologies derived from the EU Interreg IVB Flood Resilient City (FRC) project. This involved looking at the District as a whole and assessing potential risk areas based on flooding from a variety of local sources. The key aim of this assessment is to identify areas which are not currently known from past flood incidents.

The DEFRA River Aire IUD pilot study indicated that future climate change scenarios would not produce significant new areas of flooding but due to steep catchments flooding may be exacerbated in existing areas.

Responsibility for Delivery

Environment Agency has invested in both flood defence and flood warning systems through the Aire and Bradford Beck Catchment.

Yorkshire and Humber RSS sets out the lead roles in delivering on Policy ENV1, which includes; local authorities, Yorkshire Forward, Environment Agency, Highways Agency, Network Rail, Forestry Commission and Internal Drainage Boards.

Bradford Council will proactively engage with key partners to implement Core Strategy policy, seeking the advice of the Environment Agency where appropriate. Other policy and legislation will play an important role in minimising impact of flood risk, and maximising the use of sustainable construction and drainage.

The Council will also promote sustainable drainage systems with support from the Environment Agency. Developers will normally be expected to fund sustainable drainage systems and their future management, which will be secured by planning condition or obligation.

Waste Management

Definition

The waste infrastructure covered in this study includes the infrastructure associated with the management of waste, with an emphasis on municipal and commercial and industrial waste.

Source materials

- Local Plan Waste Management DPD-Preferred Approach (2011)
- Bradford Council Executive Committee and Scrutiny Committee Reports

Current position

The majority of current waste arisings within Bradford District come from Commercial and Industrial Waste (C&I), Construction, Demolition and Excavation Waste (CDEW) and Local Authority Collected Waste (LACW) which combined equate to just under three quarters of the total arisings. In 2012 (the latest date available) the amount of waste arisings in the District were estimated to have been 1,399,042 tonnes excluding construction demolition and excavation waste. This rises to a best estimate of 1,783,868 tonnes when all waste types are included*. This data also incorporates Calderdale's Local Authority Collected Waste.

Existing waste facilities in Bradford District include: 12 End of Life Vehicle Recycling Sites, 8 Metal Recycling Sites, 1 Recycling Reprocessor of C&I and CDEW Site, 1 Residual Mechanical Treatment Site, 6 Hazardous Waste Transfer Stations, 18 Non-Hazardous Waste Transfer Stations, 2 C&I Treatment Facilities, 1 C&I and LACW Treatment Facility (Windrow Composting), 2 Waste Electronic and Electrical Equipment Facilities, and 3 Waste Water Treatment Sites.

Waste arisings within Bradford are currently managed in a number of ways that depends on the type of waste and the availability of suitable waste management facilities. This existing management of waste currently relies on two methods:

1. exporting waste to landfill outside of the District remains the primary waste management method utilised for most of the waste originating in Bradford. The main destinations of waste currently exported from Bradford are Wakefield and then Leeds.

* Local Authority Collected Waste, Commercial and Industrial Waste, Construction, Demolition and Excavation Waste, Hazardous Waste, Agricultural Waste, and Low Level Radioactive Waste.

2. Pre-treatment of waste, with residual waste being exported to continental Europe as Waste Derived Fuel.

There are also eight Household Waste Recycling Centres (HWRC) in the District and an additional 60 recycling points which handle just under a quarter of municipal waste arising.

Fit for purpose

The latest forecast suggests an overall reduction in waste arisings of 81,590 Tonnes across the district between 2008 and 2026. However, not all waste streams are likely to reduce with CDEW and MSW in Calderdale likely to increase within this timeframe.

As stated before, most of the waste originating in Bradford is currently being exported to landfill sites outside the District. However, the EU Landfill Directive has set demanding targets for all member states to reduce the amount of biodegradable municipal waste being sent to landfill. The requirement is that all member states must reduce the amount waste sent to landfill by 25% of the 1995 levels by 2010, 50% by 2014 and 65% by 2020. Local Waste Authorities will face both increased charges per tonne of waste sent to landfill and fines for not meeting the EU landfill targets. It is therefore recognised that current waste management practices in Bradford District need to be altered to avoid the Council having to pay heavy fines for municipal waste being sent to landfill.

Bradford Council has five separate five-year contracts with companies to deal with the district's household waste arisings. The deals would run till October 2015 with the option to extend them up to 2017 if necessary and would deal with the treatment of up to 150,000 tonnes of rubbish a year. The agreements are essential to prevent the Council having to pay increasing landfill tax costs – which are to rise from £48 per tonne to £80 per tonne by April 2014.

The council also has awarded a 25-year, £400 million waste treatment PFI contract which will see more materials being recovered/recycled and then using energy from waste treatment in a proposed waste treatment plant to be built on Bowling Back Lane site.

The overall value of the PFI contract is of £400 million. Of this total £62.1m of PFI credit support has been secured from central government.

There are also existing planning permissions for 3 new waste management facilities within Bradford.

Future programme and cost

Bradford's ability to handle its own waste will improve through the creation of new and expanded waste management facilities. Existing planning permissions for new waste

facilities; future development applications (as windfall opportunities to meet need); the Council's Waste PFI programme; and the increasing rates of re-use and recycling in the District will all contribute significantly.

Recycling and composting rates in Bradford represent around 25% of total household waste generated. Significant improvements are needed in this area including the provision of additional infrastructure to meet the minimum target of 220,331 tonnes of MSW to be recycled. This is in addition to efforts to reduce and re-use waste to be delivered through and alongside the PFI programme.

By 2026, it is forecast that 531,135 tonnes of CDEW arisings will need to be managed within Bradford District. A large proportion of this waste will be dealt with in-situ at sites not requiring a waste Permit.

While all these are planned for in terms of the provision of expanded and new facilities, the Council's Waste Management DPD will also ensure that opportunities to reduce, reuse and recycle waste will be maximised and that some flexibility and contingency in the levels of future waste management facilities provision will be made on a monitor and manage basis.

Assessment to meet growth aspiration

The Waste DPD has factored in population and housing growth in the district, and therefore there should not be a deficit in waste management provision within the lifetime of the LDF.

Responsibility to delivery and potential funding source

The new waste facilities required to meet waste management targets will be delivered through joint working between Bradford Council, Calderdale Council, land owners and the Municipal Waste Contractor. The waste facilities will be funded by the Council from central government funding and finance from the private sector.

Summary

Current	Fit for Purpose	Planned	Cost	Gap
Bradford Council has five separate five-year contracts with companies to deal with the district's household waste arisings. The	The Waste DPD has factored in population and housing growth in the district, and therefore there should not be a deficit in waste management	A 25-year waste treatment PFI contract has been awarded to deal with District's waste. The proposed waste treatment plant will be built on	PFI contract costs £400 million. Costs associated with future provision are market-led, and are delivered on a case by case, site by site	£62.1m of PFI Credits (now known as Waste Infrastructure Credits) is secured from the central government. Further funding would be sourced through the Council's capital programme.

deals would run till October 2015 with the option to extend them up to 2017, if necessary.	provision within the lifetime of the Local Plan.	Bowling Back Lane site.	basis.	
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Green Infrastructure and Openspace

Definition

The Green Infrastructure, open space and public space infrastructure covered in this study includes open spaces, parks and gardens, forests and woodlands, village greens, registered common lands, river and canal corridors and allotments,

Source materials

- Bradford District Open Space, Sport and Recreation Study (2006)
- Bradford District Right of Way Improvement Plan (2007)
- ‘Nature and people’: Bradford District Nature Conservation Strategy (1998)
- Bradford Council Executive Committee and Scrutiny Committee Reports

Current position

The Bradford District has 38 public parks and 147 recreational grounds. 10 of the parks are on the English Heritage Register of Parks and Gardens of Special Historic Interest in England. Five of the Parks are Green Flag parks (Lister, Roberts, Harold, St Ives and Haworth).

Fit for purpose

The Bradford District Open Space Assessment catchment mapping exercise shows that the majority of the District is adequately provided for in terms of park and gardens. However there are gaps in Bradford South, Bradford West and Bradford East. These are densely populated area; therefore the ability to find sites for new parks is limited. However it has been highlighted by the Parks and Gardens team that a new park in East Bradford would be seen to have excellent regeneration benefits.

The Bradford District Open Space Assessment has also concluded that in area of slight catchment gap the upgrading of certain play equipment from Local Area for Plan (LAPs) to Local Equipped Areas of Play (LEAPs) should be considered.

However in other areas of significant gaps, such as north and south Shipley and west Keighley the installation of new play equipment is required.

There is also an aspiration for a new country park in Bradford. To date S106 contributions have been focused on off-site improvements, however there was some discussion that some on-site provision may be required for some of the larger housing allocations.

Future programme and cost

The Open Space Assessments summarises that there is sufficient quantity of green space and open space in the district to meet the demands of future housing and economic growth. The issue for the district in future would be to upgrade the quality of existing spaces and improvements to their accessibility. The level of investment required to upgrade these spaces, and the mechanism to deliver these improvements will be explored later in this report and by the subsequent review of the above studies.

The Council are currently developing a Parks Strategy, which seeks to link park provision with wider council priorities, such as health and regeneration benefits.

In the past the general approach has been to gain S106 to improve existing open spaces, rather than asking developers for on-site provision. There have been a number of social issues linked to provision of open space / play space within new developments.

There is an aspiration to create a green link along Canal Road to aid regeneration. A potential location for a new Country Park is also being looked at.

Funding has been secured through Heritage Lottery Fund for Cliffe Castle Park to improve the park and its facilities.

The Council is also embarking on developing open space standards, which is likely to be completed in the next few years.

Assessment to meet growth aspiration

There is likely to be a requirement to deliver new open spaces in the future, especially as part of large urban extensions. There will also be the continued cost of maintaining and improving existing parks.

It is important that funding is a mix of capital and revenue funding to allow sites to be maintained.

Responsibility to delivery and potential funding sources

The agencies/organisations involved in delivery alongside the Council include:

- The Countryside Agency;
- Natural England;
- Environment Agency;
- Yorkshire and Humber Biodiversity Forum;
- The Forestry Commission England;
- European Forum for Urban Forestry.

Sports, Leisure and Recreation

Definition

The sport, leisure and recreation infrastructure section covers both indoor and outdoor sports provision including sports pitches, courts, sports halls, swimming pools, health and fitness facilities and indoor bowls facilities. The section will look at sports, leisure and recreation infrastructure operated by CBMDC, private operators and voluntary organisations.

Source materials

- Bradford District Sports Facilities Investment Plan (2012)
- The Strategy for Sport and Physical Activity in Bradford District: 2011 – 2015 (2011)
- Bradford District Sports Facilities 10 Year Strategy 2009-2019 (2009)
- Bradford District Open Space, Sport and Recreation Study (2006)
- Sport and Recreation Facilities Assessment (2008)
- Bradford Council Executive Committee and Scrutiny Committee Reports

Current position

The District is served by a range of public, private and voluntary run sports and recreation facilities. In summary these are-

- 43 sports halls;
- 25 - 30 Sports centres / facilities.
- 9 pools (5 council pools and 4 in schools). There are also a number of private pools and sports facilities.
- 19 mini or junior football pitches;
- 30 senior rugby league pitches
- 19 senior rugby union pitches;
- 68 cricket squares;
- 7 full size hockey pitches;
- 2 athletic tracks;
- 25 golf courses;

- 52 bowling greens and
- 36 tennis courts in parks and recreation grounds;
- 7 full sized sand based artificial turf pitches and 5 smaller artificial pitches. All these pitches are in private and education sector.

Fit for purpose

A number of the sports facilities and swimming pools in the District are no longer fit for purpose. They are outdated and fall short of current benchmarks for accessibility, energy consumption / greenhouse gas production and running costs. Fundamentally it is not practical to make significant improvements without replacement.

These facilities also fall below modern standards for either community use, swimming lessons or competition and athlete development. Again it is not practical to make improvements without re-building and there are risks of increased customer dissatisfaction and loss of business.

Buildings are also known to be in a poor condition. Five year backlog maintenance costs across the sports portfolio were estimated in 2011/12 at £12m with over £7m needed for the District's swimming pools with shutdowns required to undertake works.

In terms of sports pitches, there is a deficiency of designated mini and junior football pitches across the district but a surplus of senior pitches. Bradford North and West have capacity to meet the current demand but there is a deficiency in Bradford South, Ilkley and Keighley.

Demand for cricket pitches is increasing at peak times and there is a deficiency of provisions particularly in Bradford North, South and West.

The quality of the pitches is good and many private clubs own facilities and are able to maintain them to a high standard. There are catchment gaps in Bradford South and West; however these shortfalls are currently being met by surpluses in other areas on an ad hoc basis if the main sites are unusable.

There is also a need for additional Rugby League pitches, especially in South Bradford, where there is a high demand.

Future programme and cost

The current approach adopted by the Council seeks to improve the quality of existing facilities as well as deliver new facilities in order to increase both access and distribution of sporting facilities across the district.

A Sports Facilities Investment Plan is currently being developed, which will undertake a comprehensive option appraisal and develop a business case outlining a programme of capital investment in the District's sports facilities. It is intended that initially there will be a facilities modelling work to demonstrate strategic need for replacement sports facilities taking account of current and future demand, need for increased accessibility and opportunities to reduce net operating costs of the facilities. The second stage of the process will see a development appraisal of potential sites including policy implications, commercial viability and site specific constraints.

The effective delivery of future sports provision in Bradford district is also largely dependent on using existing sports facilities within education sites more effectively. The use of BSF schools is an advantage, but they are not available all the time. Where BSF schools have been cancelled - there is increasing pressure on Council and private facilities to take the slack.

There is also significant potential to consider developing specialist sports hubs/hubs of sporting excellence, providing for both training and competition and also opportunities for individuals to develop along the pathway of their chosen sport/activity.

Assessment to meet growth aspiration

Factoring in housing growth there would be capacity issue for football pitches in Bradford West, Bradford South, Ilkley and Keighley.

Bradford North and Shipley (if improvements are made to existing sites) have enough football pitches to meet the projected needs of the District.

Responsibility to delivery and potential funding sources

The strategy to deliver the required sports provision in Bradford is an integrated partnership approach based on improving existing facilities, linking with existing school facilities to make efficient use of current resource and taking advantage of the emerging regeneration opportunities across the district.

The main organisations involved in delivery of sports facilities include:

- Bradford Council;
- Sport England;
- The Lottery Fund;
- Football Foundation;
- Private leisure providers;
- Playbuilder; and
- Developer contributions.

Community and Cultural

Definition

The community and cultural infrastructure covered in this study includes libraries, museums, galleries, theatres and cemeteries.

Source materials

- Bradford District Open Space, Sport and Recreation Study (2006)
- Bradford District Settlement Study (2010)
- Bradford District Library Service Review (2010)
- Bradford Destination Strategy (2010)
- Bradford Council Executive Committee and Scrutiny Committee Reports

Current position

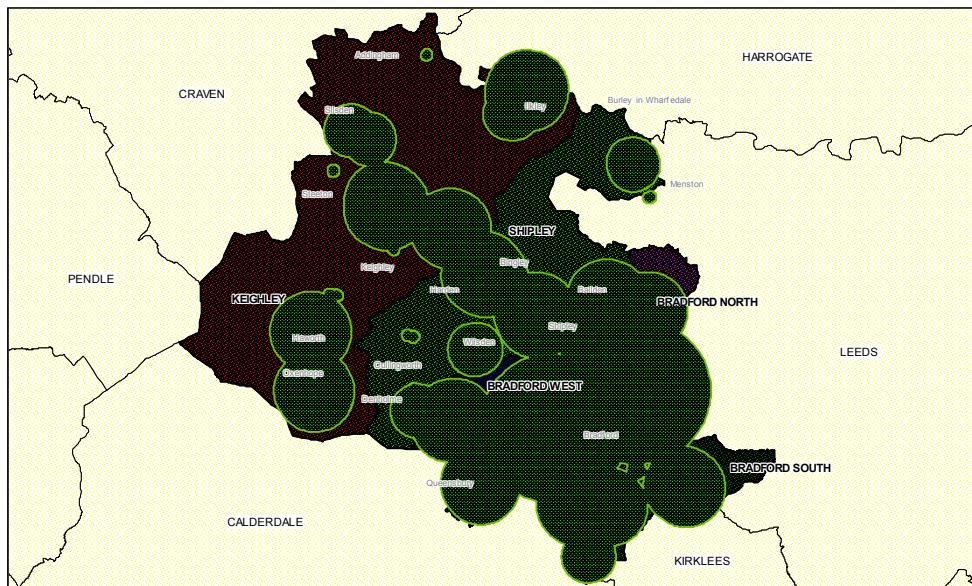
Currently there are 96 community centres in Bradford District. There are also 26 libraries run by CBMDC, four community-managed libraries (Addingham, Rose, Denholme and Wilsden) and 3 mobile libraries that travel to different locations around the District. There is also a home delivery service for users that struggle to access libraries.

There are 22 museums and galleries in the district and the majority of them are private run facilities.

There are 67 sites classified under the typology of cemeteries, churchyards and burial grounds, made up of 44 closed church yards and 24 municipal cemeteries

Bradford District Open Space Assessment Catchment mapping (2006), based on all current provision, shows that there are only a small number of gaps across the settlements of Bradford in terms of cemeteries, churchyards and disused burial grounds. These are in the Shipley and Keighley analysis areas, especially in Keighley. However, it is not considered appropriate, within a 10-15 year window, to consider covering these catchment gaps through extra provision of this typology because of its nature.

Figure 7: Cemeteries and crematoria facilities in Bradford



Source: Bradford District Open Space, Sport and Recreation Study (2006)

Bradford Council operates **cemeteries** at:-

Bingley	Bowling	Charlestow	Clayton
God's Acre (Burley-in-Wharfedale)	Haworth	Ilkley	Menston
Morton	Nab Wood	North Bierley	Oakworth
Oxenhope	Queensbury	Scholmoor	Silsden
Silsden Chuchyard	Stanbury	Steeton	Thornton
Tong	Utley	Wilsden	Windhill

Crematoria facilities are also provided at:-

- Scholmoor
- Nab Wood
- Oakworth

The Bradford Council for Mosques currently manage burial space on behalf of the Muslim community and pay CBMDC a fee for the right to bury on this land.

Fit for purpose

A number of community centres and libraries in the district are no longer fit for purpose. In 2009 a review has been carried out on library service, with a particular focus on libraries that open for less than 10 hours a week. The review identified five libraries where saving to staff and building cost could be made by reworking how this provision was delivered. Through consultation with the effected communities four of the five libraries are now community run and Heaton is now served by a mobile library, open the same hours as the former library. The top two floors of the Central Library in Bradford City Centre are currently closed to the public due to health and safety / fire issues.

A number of the library premises in the District are old and there is a backlog maintenance cost of approximately £3 million. Great Horton library is a particular issue. A number of floors in the central library are currently not open to public, as they do not meet the required fire safety standards.

Other facilities such as theatres, galleries and museums also require investment to ensure they are sustainable in the long-term. There are also needs for appropriate resources to make them more accessible to wider communities and attractive as family-friendly sites.

The Nab Wood cemetery is now full and is closed to new grave burials, unless space is available in existing graves.

The existing crematoria have not installed mercury abatement equipment. and CBMDC will need to pay for 'abatement credits' for 50% of all cremations. The crematorium at Scholemoor functions well, but the chapel facilities are inadequate for current requirements (too small). The setting and location of the Scholemoor Crematorium is also not considered to fit with the standards users expect from the crematorium, given its urban setting. In addition the facility is not located in the area from which the majority of its users originate in South Bradford.

Future programme and cost

An increasing population within Bradford, along with the future development guided by the LDF process will place further demands upon community and cultural facilities. The Infrastructure Plan process will ensure that development is in areas with adequate community infrastructure provision, and future provision meets further growth.

The Council is also currently undertaking a preliminary review of its assets, which will assess how effectively they are being utilised. The infrastructure plan process will feed into this asset management review to ensure that future growth and demand for services is considered when rationalising provision of community and cultural infrastructure.

The emerging strategy for provision of community and cultural infrastructure is about increasing co-location opportunities to meet localised needs and through coordinating existing facilities and clustering cultural resources as appropriate to deliver an increased quality offer. For example the ability to co-locate libraries with existing facilities or vice-versa is currently being looked at in various locations across the district.

- Great Horton Library (which is coming to the end of its usable life) is being moved into village hall to allow the site to be disposed of by CBMDC Asset Management team.
- The Silsden Library is also being moved into the village hall to allow the site to be disposed of by CBMDC Asset Management team. The movement of both these libraries has been agreed; however exact timescales are still being worked up.
- Idle Library is going to be transferred to Idle Enterprise Centre using funding from the centre and the Library Capital pot.
- Wyke Library is being moved into Appleton Academy using funding from the Academy and the library capital pot.

Any improvements to the fabric of existing facilities and staffing / material costs are paid for through the Library Revenue pot, which is £3,617,900 in 2012 / 13. The only two capital projects that are scheduled in this period are Idle and Wyke. It has also been approved by the council executive committee that the central library will be reopened to public through remodelling of ground and first floor and extending services to second floor. This is estimated to cost £900,000 and will allow the service to function at the capacity that it operated at prior to closure.

Small amounts of funding are sometimes available through Heritage Lottery Funding (e.g. this was used to improve Manningham Library), or funding linked to online learning. But these are only small pots of funding.

The District's tourism opportunities lies with the increasing day visits to museums and galleries, annual visit to music festivals and trips to the rural areas which links historic sites, conservation areas, active recreation and beautiful environmental locations. The City's designation as the first UNESCO City of Film status has also increased potentials for developing further tourism offers based on media and film heritage.

There will also be a need to identify a new burial site in the Bingley / Keighley area within 15 years. This will be required when other cemeteries in the area, in addition to Nab Wood Cemetery become full. This is currently not critical as there are existing facilities at Bingley, Charlestown, Utley and Morton. The costs to provide the required infrastructure to make a field into a cemetery is approximately £600,000 to £800,000 depending on the size of the field.

The Bereavement services are also looking for a potential site for a crematorium in South Bradford. The services are working with the LDF team to try and identify a suitable site in the Oakenshaw / Wyke area. This is likely to cost approximately £4 – 5 million depending on the chosen site and the quality of the landscaping finish.

The Council has investigated the potential to expand existing cemeteries to meet short to medium term capacity issues in certain parts of the district. This would however be subject to the land being either in Council ownership or the Council being able to purchase the land. The expansion land must also be appropriate for burial purposes and planning permission would need to be obtained. In the longer term there is an aspiration for the long term provision of first class burial and cremation facilities within the district.

To deliver new facilities capital funds will need to be sought through agreement of the Bradford Executive Committee.

Assessment to meet growth aspiration

The size, scale and type of various community and cultural facilities will be influenced by the site allocations for housing growth during the Allocation DPD process. Continuous negotiation through the infrastructure plan process with relevant infrastructure providers can identify and create opportunities for new community infrastructure facilities and funding.

The library service in Bradford is committed to continuing to deliver the services required. However it may be that this is delivered through continued community managed facilities and potentially not in CBMDC owned buildings. An increase in housing and employment will not directly affect the infrastructure needed to deliver library services, as this can be delivered in any sort of premise and is likely to only be used by a proportion of any new housing development.

In terms of burial services, there is an average of 50 year supply available across the district, although this is not evenly distributed. The existing capacity within each of these cemeteries is detailed below.

It is very difficult to predict the rate at which burial spaces will be taken up. It is monitored by the Bereavement service on a one yearly basis. The impact of the recent closure of Nab Wood is still unclear, as it postcode data showed that the population of Bradford were using Nab Wood, as well as more local populations (Bingley and Shipley). The Bereavement service will monitor take up of burial space around the Nab Wood area closely, but there is burial space available in the area and will be almost for the life of the plan.

The Bereavement service is seeking to find a site for a new crematorium and will eventually need to find a new cemetery site in the Bingley / Keighley area. Overall in the District there is enough burial space to meet the projected needs up to 2028.

Table 5: Existing Capacity of District's Cemeteries

Location	Capacity 2011	Approx No of burials in new graves per year	Current estimate when full	Potential for expansion
Bradford Area				
Scholemoor	802	83	2019	YES
Council for Mosques	1399	266	2013	YES
Queensbury	858	9	2061 +	NO
Clayton	208	1	2061 +	YES
North Bierley	10965	50	2061 +	NO
Bowling	3216	80	2048	YES
Thornton	5747	9	2061 +	Possible
TOTAL	23,195	498		
Shipley Area				
Nab Wood	FULL			
Bingley	481	12	2050	YES
Charlestown	1156	12	2061 +	NO
Wilsden	584	3	2061 +	Possible
Menston	308	3	2061 +	YES
TOTAL	2529	82		
Keighley Area				
Utley	824	35	2033	Possible
Oakworth	314	12	2034	Yes
Ilkley	3399	20	2061 +	No
Morton	230	16	2024	No
Haworth	320	5	2061 +	No
Stanbury	480	3	2061 +	Possible
Steeton	672	3	2061 +	No
Silsden	FULL			
Silsden (New)	34	5	2011	Yes
Oxenhope	1484	5	2061 +	Possible
TOTAL	7757	104		

Responsibility to delivery and potential funding sources

The Bereavement Service is responsible for operating and maintaining burial and crematoria facilities. The department raises a revenue stream by charging for burial / cremation, however,

this is not sufficiently profit making to allow any major infrastructure improvements to be funded.

To deliver new facilities capital funds will need to be sought through agreement of the CBDMC Executive .

Agencies involved in the delivery of these improvements include:

- Bradford Council
- HCA
- Heritage Lottery Fund
- English Heritage, etc.

Summary

Current	Fit for Purpose	Planned	Cost	Gap?
24 cemeteries, 44 church yards 3 crematoria.	<p>The Nab Wood cemetery is now full and is closed to new burials, unless a plot has been reserved.</p> <p>The existing crematoria do not provide adequate level of mercury filtering.</p> <p>CBMDC will need to pay for the pollution of mercury in the short term.</p> <p>The crematorium at Scholemoor functions well, but the chapel facilities are a</p>	<p>A new crematorium in South Bradford. Working with LDF team to locate a potential site.</p> <p>A new cemetery will be required in the Shipley / Keighley area. This is not required straight away. But may be in the lifetime of the plan.</p>	<p>Approximately £4 – 5 million for new crematorium.</p> <p>Ongoing maintenance of cemeteries</p> <p>Potential new plot in the Bingley / Shipley area £1,500,000</p>	<p>Funding would need be sourced through the Council's capital programme.</p> <p>Covered through the bereavement service Council revenue budget.</p> <p>Funding would need be sourced through the Council's capital programme</p>

	bit small for current needs and the cemetery is not located where there is a high demand for crematoria facilities.			
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Education

Definition

The education infrastructure covered in this study includes nurseries, primary schools, secondary schools, further and higher education.

Source materials

- Bradford District Education Organisation Plan
- Bradford Council Executive Committee and Scrutiny Committee Reports
- Discussion with Tony Sinkinson (Head of School Organisation and Place Planning) and Nina Mewse (Senior Provision and Places Officer)

Current Position

Overview

The City of Bradford Metropolitan District Council as the Local Education Authority has a statutory obligation to provide education according to the Department for Education (DfE) guidance.

Nursery and pre-school

There are 7 state nursery schools in Bradford district, as well as a range of early years facilities operated by private, voluntary and independent providers..

<https://bso.bradford.gov.uk/council/schools/schoolfinder.aspx>

Primary Schools

There are 157 primary schools in Bradford district. 26 are voluntary aided primary school, 16 of which are Catholic and 10 Church of England. 12 primary schools are voluntary controlled all of which are Church of England schools. There are 9 primary Foundation schools, a Primary Trust, 18 Academies and 2 primary Free schools.

Weblink: <https://bso.bradford.gov.uk/council/schools/schoolfinder.aspx>

Secondary Schools

There are 28 secondary schools in Bradford district.

- Beckfoot School
- Belle Vue Boys
- Belle Vue Girls Academy
- Bingley Grammar School (Voluntary aided)
- Buttershaw Business and Enterprise College (Trust)
- Carlton Bolling
- Dixon City Academy
- Dixons Kings Academy (Free)
- Dixons McMillan Academy (Free)
- Dixons Trinity Academy (Free)
- Feversham College (Muslim Girls Secondary School) Academy
- Grange Technology School
- Hanson School (Foundation School)
- Ilkley Grammar School 11 – 18 year olds (Academy)
- Immanuel College (Church of England Secondary School, Voluntary aided)
- Laisterdyke Business & Enterprise College (Foundation School)
- Oakbank School (Foundation School)
- Oasis Academy Lister Park
- One In A Million (Free)
- Parkside (Trust)
- Queensbury School (Foundation School)
- St Bede's & St Joseph's Catholic College (Catholic voluntary aided school)
- The Holy Family Catholic School (Catholic voluntary aided school)
- The Samuel Lister Academy
- Thornton Grammar (Trust)
- Titus Salt School
- Tong High School (Trust)
- University Academy Keighley

All Through Schools

There are 4 all-through schools in the Bradford District (Ages 3 to 19)

- Appleton Academy

- Bradford Academy
- Bradford Girls Grammar
- Dixons Allerton Academy

There is also one Studio School – Bradford Studio school that admits pupils aged 14 to 19.

Provision for children with Special Educational Needs

Special schools

There are eight special schools in the Bradford District.

- Beechcliffe Special School (Secondary)
- Chellow Heights Special School (Primary)
- Delius Special School (Primary)
- Hazelbeck Special School (Secondary Academy shared with Beckfoot)
- High Park School (All through)
- Oastlers (Secondary)
- Phoenix Special School (Primary)
- Southfield School (Secondary Academy shared with Grange)

Weblink: <https://bso.bradford.gov.uk/council/schools/schoolfinder.aspx>

There are also 7 pupil referral units.

These mainstream schools receive additional resources to provide for small numbers of pupils with a specific special educational need.

Additional specialist provision for pupils with Autistic Spectrum Disorders

- Carrwood Primary School, Eversley Drive, Holmewood, Bradford BD4 0EQ (September 2012)
- Bradford Academy, Teasdale Street, Bradford BD4 7QJ (September 2012)
- Denholme Primary School, Minorca Mount, Denholme, Bradford, BD13 4AY
- Parkside School, Parkside Terrace, Cullingworth BD13 5AD (September 2012)
- The Grange Technology College, Haycliffe Lane, Bradford, BD5 9ET
- The Holy Family Catholic Secondary School, Spring Gardens Lane, Keighley, BD20 6LH

Additional specialist provision for pupils with hearing impairment

- Girlington Primary School, Girlington Road, Bradford, BD8 9NR
- Swain House Primary School, Radcliffe Avenue, Bradford BD2 1JL
- Hanson School, Sutton Avenue, Bradford BD2 1JP

Additional specialist provision for pupils with speech and language difficulties

- Green Lane Primary School, Green Lane, Bradford, BD8 8HT

- High Crags Primary School, Crag Road, Shipley, BD18 2ES
- The Challenge College, North Avenue, Bradford, BD8 7ND
- Thornton Grammar School, Leaventhorpe Lane, Thornton, Bradford, BD13 3BH
- Titus Salt School, Higher Coach Road, Baildon, Shipley, BD17 5RH

Additional specialist provision for pupils with physical difficulties

- Beckfoot Secondary School, Wagon Lane, Bingley, BD16 1EE
- Bradford Academy, Teasdale Street, Bradford, BD4 7QJ

Additional specialist provision for pupils with visual impairments

- Grove House Primary School, Myers Lane, Bradford BD2 4ED
- Hanson School, Sutton Avenue, Bradford BD2 1JP

Supplementary Schools

The LEA has been providing support to Supplementary Schools for mother tongue teaching since 1983. There are over 80 Supplementary Schools registered with Education Bradford providing a range of mother tongue teaching classes in Arabic, Bengali, Gujarati, Punjabi, Hindi, Polish, Italian and Urdu as the main languages. These schools cater for approximately 8,000 minority ethnic pupils involving 300 community tutors.

Further education

There are four further education sixth form colleges in Bradford district, they are:-

- **Bradford College:** Bradford College offers more university level qualifications than any other college in England with approximately 170 full and part time HE courses to choose from. Most of the college's degrees are validated by Leeds Metropolitan University; previously they were validated by the University of Bradford with the final cohort graduating in December 2007. Bradford College plans to apply for university status and award their own degrees, the application process due to formally start in May 2008.
- **Leeds City College at Keighley:** this is the former Keighley College which merged with the Park Lane College Leeds which in turn became the new Leeds City College.
- **Shipley College:** The college is mainly based in the village of Saltaire but there is a Bingley Connection building, which is a building based in the centre of Bingley. There are a wide range of courses offered at Shipley College, but they mainly offer BTEC's as full time courses. The BTECs on offer include BTEC National Diploma, First Diploma and Introductory Diplomas and Certificates.

Higher education

Higher education is provided in:

- The University of Bradford
- Bradford College
- Leeds City College at Keighley
- Shipley College

Fit for Purpose

Primary School

The number of children in primary schools has been growing steadily over the last 5 years due to an increase in the birth rate, newcomers to the District and consequent increase in the number of 4 year olds being admitted into reception year.

Based on data provided to the Local Authority by the Health Authority the number of reception places required is forecast to rise further. From 2004 to 2010 there was an average of 8,279 live births in Bradford each year^{##}. As set out below a programme to increase the capacity of primary schools is currently underway to try and meet capacity issues linked to children already in the system.

In addition parental expectations together with their cultural and religious beliefs often steers parents towards making choices about specific schools. However, school performance and hence popularity of schools changes over time which makes it increasingly difficult to identify where changes in demand will occur. There is, therefore, a need to have the surplus suggested by the DfE (5%) to be able to accommodate parental choice.

Moreover, the number of appeals against allocated school places in Bradford is already the highest in the country. Anticipated increases in the school-age population will have a negative impact on the schools' ability to meet parental preferences and potentially further increase the number of appeals lodged unless additional places are created.

Secondary School

The total number of pupils in secondary schools has remained relatively stable over the same period, although the smaller number of students in the upper age range masks the rise in the number of students being admitted to Year 7. However clearly as the primary school pupils reach secondary school there will be a need to increase capacity.

^{##} Nomis, Live Births 2010

School Capital Funding

Schools Capital Maintenance Grant Allocations:

Since 2008 the Schools Capital Maintenance Grant made to the Authority has been as follows:

Table 2: Schools Capital Maintenance Grant

Year	DfE CMG Allocation	Annual % Change
2008-09	£5,392,740	
2009-10	£5,818,955	7.9%
2010-11	£5,818,955	0.0%
2011-12	£7,884,044	35.5%
2012-13	£6,351,482	-19.4%
2013-14	£6,137,430	-3.4%
2014-15	£5,614,808	-8.5%
2015-16	£5,877,114	4.7%
Total		

Funding allocated for 2015-16 by the EFA was £5,877,114 and has increased by 4.7% on the previous year.

Authority Schools Backlog Maintenance

The total estimated repair cost for those Schools that the Authority is responsible for is close to £39 million.

In 2010, and in response to the Sebastian James review, the Government set up its Property Data Survey (PDS). The DfE stated that *“The programme consists of a series of high-level surveys of educational establishments in England, including all maintained schools. These surveys provide detailed information on the condition of the entire schools estate, which will allow the DfE to allocate funding where it is most needed”*.

The DfE’s high level surveys do not go into the same detail that the Authority’s own surveys do and there is a risk that the new surveys have under estimated the need for repairs to school buildings, which will then be reflected in funding allocations. The Authority has written to the EFA in relation to its concerns about the PDS and in particular the significant variance between the high level overview provided and the detailed surveys the Authority carries out.

School Devolved Formula Capital (DFC)

In addition to the Schools Capital Maintenance Grant, Schools also receive a DFC allocation. Previously this money has been allocated to the Authority who passed the amounts on to individual Schools once they had put forward an appropriate maintenance/improvement project. The Authority understands that Schools will now receive DFC directly from the EFA rather than via the Authority. This is not a major issue for the Authority, although it is important to know what capital works are planned by Community Schools so that the

Authority can ensure that there is a linkage with any works the Authority is planning to carry out.

Table 3: Annual School Devolved Formula Grant

Year	School DFC Allocation	Annual % Change
2008-09	£8,282,303	
2009-10	£8,116,273	-2.0%
2010-11	£7,531,530	-7.2%
2011-12	£1,567,639	-79.2%
2012-13	£1,488,626	-5.0%
2013-14	£1,453,034	-2.4%
2014-15	£1,317,713	-9.3%
2015-16	£1,310,363	-0.6%

Funding allocated for 2015-16 has reduced by 0.6% on the previous year.

Basic Need Funding

The Authority receives Basic Need funding from the EFA each year to expand Schools and provide extra pupil places. Previously the Authority was awarded £9,223,125 for 2015-16 and £9,684,281 for 2016-17.

The funding announcement in February 2015 awarded the Authority Basic Need capital for Schools Expansion of £727,005 for 2017-18. This equates to a reduction of 92.5% on the previous year. The table below shows Bradford's Basic Need allocations since 2010.

Table 4: Annual Basic Need Grant Since 2010

Year	Basic Need	Annual % Change
2010-11	£11,009,000	
2011-12	£17,729,194	61.0%
2012-13	£19,611,561	10.6%
2013-14	£7,644,753	-61.0%
2014-15	£7,644,753	0.0%
2015-16	£9,223,125	20.6%
2016-17	£9,684,281	5.0%
2017-18	£727,005	-92.5%

In addition to Basic Need funding, in 2013 the Authority applied for an extra one off funding stream known as "Targeted Basic Need" funding to help meet the forecasted increase in pupil numbers. The Authority was successful in securing £16.6million to create 1,400 new school places (1,050 Secondary, 315 Primary and 35 Special).

A comparison with other West Yorkshire Authorities with regards to the 2017/18 allocation is shown below.

Table 5: Comparison with other West Yorkshire Authorities

LA Name	Basic Need allocations
Bradford	£727,005
Calderdale	£4,908,329
Kirklees	£8,609,673
Leeds	£33,141,952
Wakefield	£5,663,376

In view of the pressures the Authority is facing with pupil numbers, particularly at Secondary level, the Authority has asked the EFA to urgently review its allocation and a response to this request is awaited.

Future Programme and Cost

Overview

To accommodate this anticipated growth the Local Authority has embarked on a programme of creating additional school places within a number of existing primary schools across the District. However, without a further allocation of Basic Need funding the Authority cannot undertake any further School expansions at Primary (or Secondary School) level. Projects which have already been approved by the Authority's Executive are being undertaken using previous Basic Need allocations, and these allocations are nearly all now committed.

Primary Schools

The primary school expansion programme is being delivered through a gradual increase in the size of a number of schools and quality improvements over a period, as the increased cohorts move through the school. The aim is to fully implement this programme in a seven year period. When fully implemented these changes will result in an overall surplus capacity, (based on current figures) of approximately 5% across the primary sector.

To ensure that the Local Authority meets the demand for school places the following additional places have been created across the District since 2010. (Published Admission Number (PAN) and Total additional capacity.

Year	School	PAN increase	Total reception – Y6 places	Comments
2010	Appleton Academy	30	210	1 FE to 2FE, all through
2011	All Saint's Bradford	30	210	PAN 60 to 90
2011	Brackenhill	30	210	PAN 30 to 60
2011	Bradford Academy	60	420	Newly all through
2011	Carrwood	30	210	PAN 30 to 60
2011	Cavendish	15	105	PAN 45 to 60
2011	Crossflatts	15	105	PAN 45 to 60
2011	Crossley Hall	30	210	PAN 60 to 90
2011	Fagley	10	70	PAN 20 to 30
2011	High Crags	15	105	PAN 45 to 60

2011	Hoyle Court	15	105	PAN 45 to 60
2011	Iqra	30	210	PAN 60 to 90
2011	Killinghall	30	210	PAN 60 to 90
2011	Knowleswood	15	105	PAN 45 to 60
2011	Ley Top	15	105	PAN 45 to 60
2011	Long Lee	30	210	PAN 30 to 60
2011	Margaret McMillan	30	210	PAN 60 to 90
2011	Newhall Park	15	105	PAN 45 to 60
2011	Peel Park	30	210	PAN 60 to 90
2011	Princeville	30	210	PAN 60 to 90
2011	Riddlesden St Mary's	15	105	PAN 45 to 60
2011	Ryecroft	30	210	PAN 30 to 60
2011	Southmere	30	210	PAN 30 to 60
2011	St James	30	210	PAN 30 to 60
2011	St Joseph's Bingley	10	70	PAN 20 to 30
2011	Thackley	15	105	PAN 45 to 60
2011	Thornton	30	210	PAN 60 to 90
2011	Trinity All Saints'	30	210	PAN 30 to 60
2011	Westminster CE	30	210	PAN 60 to 90
2011	Woodside	30	210	PAN 30 to 60
2012	Burley Oaks	15	105	PAN 45 to 60
2012	Rainbow Academy	75	525	Opened September 2012
2012	St Anne's Catholic	-20	-140	Reduced PAN to 30
2012	St Joseph's Keighley	-30	-210	Reduced PAN to 30
2012	St Stephen's CE	30	210	PAN 30 to 60
2013	Aire View Infants	15	45	PAN 75 to 90
2013	Ashlands	15	105	PAN 45 to 60
2013	Dixons Allerton Academy	60	420	All through from 2013
2013	Dixons Music Academy	60	420	New free school
2013	Ingrow	30	210	PAN 30 to 60
2013	St Columba's Catholic	5	35	PAN 45 to 50
2013	Wycliffe CE	15	105	PAN 30 to 45
2014	Bradford Girls Grammar	48	336	Converted from private
2014	Cullingworth	15	105	PAN 30 to 45
2014	Eldwick	15	105	PAN 60 to 75
2014	Haworth	15	105	PAN 30 to 45
2014	St Clare's	10	70	PAN 20 to 30
2014	Victoria	15	105	PAN 30 to 45
	Total	1143	7941	Additional places

Secondary Schools

Bradford had 17 schools in phase three of the Building Schools for the Future Programme. The loss of this funding has left a number of schools in need of investment. However it has been confirmed that Bradford will receive funding from the Priority School Building Programme (PBSP) for four schools. The four schools are

- Belle Vue Boys' School
- Carlton Bolling College

- Oakbank School
- The Samuel Lister Academy

The education department in Bradford are awaiting more information on the amount of funding and the exact works for each school. But is likely to involve improvements to the school buildings to bring them to a reasonable standard.

The increase in demand for places is not evenly distributed across the District, but concentrated in specific areas, particularly the inner city and Wharfedale. Bradford had 17 schools in phase three of the Building Schools for the Future Programme. The loss of this funding has left a number of schools in need of investment.

Special Schools

The new special schools will mainly provide for pupils with severe learning difficulties, profound and multiple learning difficulties and, severe and complex autistic spectrum disorders. These schools are to be located as follows:

- Delius Special School - 130 places, 2-11 years, on the Bradford Moor Primary / Lapage Primary site, postcode BD3,
- Chellow Heights Special School - 130 places, 2-11 years, on the Heaton Primary site, postcode BD9,
- Phoenix Special School - 110 places, 2-11 years, on the Guard House Primary site, postcode BD22,
- Southfield Special School - 120 places, 11-19 years, on the Grange Technology College site, postcode BD5,
- Hazelbeck Special School - 120 places, 11-19 years, on the Beckfoot Secondary School site, postcode BD16, and
- Beechcliffe Special School - 100 places, 11-19 years, on the University Acaedmy Keighley site, postcode BD20.

Assessment of Infrastructure to meet growth aspirations

Overview

The growth areas are difficult to predict but are likely to be the areas where there is currently pressures and where additional housing is planned. This is likely to be mainly in Bradford but particularly in BD2, BD9, BD10, BD17, BD18, BD21) and Wharfedale. Children Services currently uses child registrations (ages 0 to 18) provided to the Local Authority by the Health Authority. This gives the Education Department a three / four year period to provide the school places that are required. There is currently not a mechanism for planning over the longer period for primary school provision, and funding has been secured through S106 and

basic need allocations. Revenue funding is provided directly to each school based on number of pupils.

Primary Schools

Children Already in the System and School Places Generated by the Existing Population

Over the past two years and the next five year period in order to remedy the shortfall in places the District needs to have increased permanent capacity by over 1,000 in each year group from Year 2 to Year 6 to accommodate the children as they progress through the primary sector, a total of a further 7,500 places across the Primary School estate, as a minimum.

This increase in capacity is needed to meet the requirements of children already in the educational system and therefore will need to be met by the basic need allocation. The Education Department have confirmed that Basic Needs allocation would be used to deliver these capacity improvements, which will cost approximately £70 million.

Parental choice and religious beliefs also mean that parents send their children to schools further away from where they live. There is a need to have a surplus of 5% to accommodate for parental choice according to DfE.

These required capacity improvements are being delivered through a seven year programme of primary school improvements.

Projecting Primary School Places from New Housing Development up to 2030

It is very difficult to predict the demand for school places in the future, as this depends on the birth rate of the existing population and inward migration. The requirement for school places is generated from existing housing / population in Bradford District and also from planned housing growth. This Local Infrastructure Study seeks to confirm the infrastructure issues related to proposed housing and employment. An assumption therefore needs to be made that the cost of providing education for the existing population living in existing housing will be met by the Basic Needs Allocation. As discussed above there is already a capacity issue in Bradford.

The birth rate from 2004 to 2010^{§§} has been averaged at 8279 per year and factored forward to 2028. An in-house CBMDC formula has then been used to calculate how many school places are likely to be required from this new housing growth. This formula uses the Department for Education's costs for a school place and assumes two additional children per school year (7 years for primary school places) for every 100 new homes. A range of assumptions on the type of housing have been made and this is detailed in Appendix B. Children Services in CMMDC will continue to monitor children in the system and plan accordingly. The below

^{§§} Average of Live Births 2004 – 2010 (ONS)

calculations provide an indication of additional places and is designed as a guide to aid planning for infrastructure.

Using the above requirement for additional school places for new housing development there is a requirement to deliver 3,171 additional primary school places based on housing built between 2013 / 2014 to 2029/ 2030. This results in a total cost of **£89,667,190.20^{***}**. This is a worst case scenario. However given the high population growth in Bradford, it is important that new development contributes to the cost of infrastructure. To provide an indication, if each planned new house contributes towards this cost this would result in an average of £2,055.13 per residential unit. Full details are set out in Appendix B.

Secondary Schools

Children Already in the System and School Places Generated by the Existing Population

Secondary pupil numbers are also forecast to rise by at least 14% by 2018 and by 2016 an additional 3,500 new student places are needed made up of increased statutory age pupil places (11-16) and post 16.

For admissions over recent years a number of secondary schools agreed to admit above their published admission numbers to cater for the additional places required. However as numbers increase through the years the capacity will be reduced. This has already happened in many schools. The Government have stated that they would not expect the LA to be running any new schools, they should be academy's funded through the Education Funding Agency (EFA) with the LA potentially funding the building fabric.

The total number of secondary school places created by existing schools and recently opened free schools has meant that Bradford District has enough secondary school and post 16 provision places to date. However the location of the school places does not meet the distribution of demand across the District. There will therefore need to be some improvements to capacity in the District. The cost of the capacity improvements are currently not known.

The exact growth areas are unpredictable, but over time there is a pattern of pupil increases concentrated in the inner Bradford area, East and West of the inner area in the Wharfedale. There will potentially be a requirement to find new sites for schools as part of the Bradford Allocations DPD, or identify a potential requirement as part of a large strategic site.

Projecting Secondary School Places from New Housing Development up to 2030

There will be a requirement to increase secondary school places as the larger school years move through the system. This required capacity improvements will be partly delivered through the capital basic needs allocation. However there is a requirement for this funding to be subsidized by increased population from residential development.

^{***} Based on a cost per place of £ 13,345– set by Department for Education and used in the CBMDC contribution formula.

The requirement for school places come from existing housing / population in Bradford and also from new housing proposed. This infrastructure study seeks to confirm the infrastructure issues related to proposed housing and employment. An assumption therefore needs to be made that the cost of providing education for the existing population living in existing housing will be met by the Basic Needs Allocation. As discussed above there is already a capacity issue in Bradford, but although free schools have created some additional capacity it is still predicted that there will be a shortfall in secondary schools places on current total capacity.

The birth rate from 2004 to 2010^{†††} has been averaged and factored forward to 2028. This provides an indication of total school places throughout the plan period. An in-house CBMDC formula has then been used to calculate how many of these places are likely to come from new housing growth. This formula uses the Department for Education's costs for a school place and assumes two additional children per school year (6 years for secondary school places) for every 100 new homes. A range of assumptions on the type of housing have been made and this is detailed in Appendix B. The education department in Bradford will continue to monitor children in the system and plan accordingly. The below calculations provide an indication of additional places and is designed as a guide to aid planning for infrastructure.

Using the above requirement for additional school places for new housing development there is a requirement to deliver 2,718 additional secondary school places from 2013/14. This results in a total cost of **£115,819,120.80^{†††}**.

However given the high population growth in Bradford, it is important that new development contributes to the cost of infrastructure. As detailed above there are already secondary school capacity issues in Wharfedale, given the popularity of this area for family by housing and the fact that there are no known free school proposals in the area to date , it is likely that there will be an increase in the demand for additional school places from housing developments in Wharfedale.

To provide an indication, if each planned new house contributes towards this cost this would result in an average of £2,654.52 per residential unit. Full details are set out in Appendix B.

Responsibility for Delivery and Potential Funding Sources

CBMDC has a responsibility to provide school places in the Bradford District. The revenue costs should be covered by the funding provided directly to each school, which is linked to number of pupils. The basic needs allocation covers capital funding for additional school places.

There are now a number of free schools and academy's that receive funding directly from National Government and will operate using this funding.

^{†††} Live Births 2004 – 2010 ONS

^{†††} Based on a cost per place of £20,110 – set by Department for Education and used in the CBMDC contribution formula.

CBMDC are working closely with neighbouring authority on cross boundary education issues, which relate to Menston, Otley, Guiseley, Steeton and Silsden and Crosshills.

CBMDC also receive some funding through S106 funds. S106 contributions have been monitored between 2009 and 2012. The education department do not feel that these have been high enough to meet the needs. The cost of a school place is set at a national level by the Department of Education. This is £13,345 for a primary school place and £20,110 for a secondary school place. The Council presume that on average 2 additional school places will be created in each year group for every 100 houses built, and 1 place for apartments. If a house has four or more bedrooms it is projected that 2.5 school places per year will be created for every 100 dwellings. The calculation set out Appendix B and assumptions set out below demonstrate the likely gap in funding.

Summary

Current	Fit for Purpose	Planned	Cost	Gap?
Nursery				
Seven Nursery Schools/Children's Centres with private nurseries across the District.	Private sector nurseries must meet stringent standards to be able to operate.			No funding gap identified.
Primary				
There are 157 primary schools in Bradford district. 18 are academies and 2 free schools	There has been a programme of improvements to the primary school stock – including providing additional capacity. However there are currently	Seven year programme of primary school improvements.	Total outstanding cost of remaining five years of the programme - £50 million.	Depending on the confirmed capital basic need allocation for 2013/2014 onwards there is likely to be a requirement for S106 or CIL contributions to meet this infrastructure gap.

Current	Fit for Purpose	Planned	Cost	Gap?
	pressure points to serve the current need, particularly in Inner Bradford North, West of the inner area (BD2, BD10, BD9, BD17, BD18, BD21) and Wharfedale.			<p>The funding gap is likely to be approximately £89,667,190.20 based on calculations set out in Appendix B and summarised in this chapter.</p> <p>Further work on the level of CIL funding will be carried out and feed into the infrastructure schedule.</p>
Secondary				
There are 28 secondary schools in Bradford District of which 9 are Academies and 4 free schools	Bradford had 17 schools in phase three of the Building Schools for the Future Programme. The loss of this funding has left a number of schools in need of investment.	<p>A programme of secondary school improvements are planned.</p> <p>Bradford will receive funding from the Priority School Building Programme (PBSP) for four schools. The four schools are Belle Vue Boys' School</p>	<p>It is projected that there is enough school places across the District in the short term, but the distribution of places is unlikely to meet the future demand for places.</p> <p>The exact cost of the programme of improvements</p>	<p>The funding for raised this will partly be covered by capital basic need allocation.</p> <p>Depending on the confirmed capital basic need allocation in the next few years there is likely to be a requirement for S106 or CIL contributions to meet this infrastructure gap.</p>

Current	Fit for Purpose	Planned	Cost	Gap?
		Carlton Bolling College Oakbank School The Samuel Lister Academy	has not been finalised. Capacity improvements are likely to be needed in parts of the District under particular pressure. Awaiting confirmation of the exact funding from the PBSP.	The funding gap is likely to be approximately £115,819,120.80 based on calculations set out in Appendix B and summarised in this chapter. Further work on the level of CIL funding will be carried out and feed into the infrastructure schedule.
There are 4 All Through Schools that cater for children aged 3 to 19 and are all academies.				No funding gap identified.
Further				
Bradford College Park Lane College, Keighley Shipley College: Bowling Community College				No funding gap identified.

Current	Fit for Purpose	Planned	Cost	Gap?
Higher				
Bradford University Bradford College Park Lane College, Keighley Shipley College: Bowling Community College				No funding gap identified.

Health

Definition

The health infrastructure covered in this study includes community and primary care and hospitals and acute care.

Source materials

- Discussion with Anita Sims (Public Health) – June 2012
- Airedale and Bradford NHS Strategic Plan 2010/14
- Bradford and Airedale Joint Strategic Needs Assessment 2009-2012
- Bradford Council Executive Committee and Scrutiny Committee Reports

Current position

The Government has reformed the NHS to move power towards GPs through the Health and Social Care Act 2012. Therefore from April 2013 the power to commission most NHS services will shift from Primary Care Trusts (PCTs) to Clinical Commissioning Groups (CCGs) supporting to the NHS Commissioning Board, which will be based in Leeds as part of the Department of Health. There will also be a West Yorkshire Commissioning Board.

To support the transition of the CCGs, two PCT's have become a cluster to called NHS Bradford, Airedale and Leeds.

There are three Clinical Commission Groups covering Bradford District as set out below. The Clinical Commissioning Groups are in charge of commissioning services for GP surgery's and hospitals.

1. Airedale, Wharfdale and Craven [Wharfdale and the rest of Airedale]

GP Surgeries

Addingham Medical Centre, Cross Hills Group Practice, Dyneley House Surgery, Farfield Group Practice, Fisher Medical Centre, Grange Park Surgery, Grassington Medical Centre, Haworth Medical Practice, Holycroft Surgery, Ilkley & Wharfedale Medical Practice, Ilkley Moor Medical Practice, Kilmeny Surgery, Ling House Medical Centre, Oakworth Health Centre, One Medicare @ North Street, Silsden Health Centre, Town Head Medical Practice.

Hospitals

Airedale General Hospital

2. Bradford City [broadly covering inside the ring road]

GP Surgeries

Avicenna Medical Practice, Bevan Healthcare, Bilton Medical Centre, Bluebell building – Barkerend Health Centre, Bradford Student Health Service, Clarendon Medical Centre, Farrow Medical Centre, Fountain Hall Medical Centre, Frizinghall Medical Centre, Grange Medical Centre, Kensington Street Health Centre, Little Horton Lane Medical Centre, Hillside Bridge Healthcare Centre, Manningham Medical Centre, Mughal Medical Centre, Park Grange Medical Centre, Parkside Medical Practice, Peel Park Surgery, Picton Medical Centre, Primrose Surgery, The Lister Surgery, Valley View Surgery, Whetley Medical Centre.

Hospitals

Leeds Road Hospital, St Lukes

3. Bradford District [the rest of Bradford, including Shipley and Bingley]

GP Surgeries

Ashcroft Surgery, Ashwell Medical Centre, Bingley Medical Practice, Bowling Hall Medical Practice, Carlton Medical Practice, Cowgill Surgery, Dr Hamdani, Dr P M Gomersall & Partners – Newton Way Medical Practice, Dr R D Falls & Dr T M Hussain – The Bradford Moor Practice, Dr Roberts & Partners, Haigh Hall Medical Centre, Heaton Medical Practice, Highfield Health Centre, Horton Bank Practice, Horton Park Surgery, Leylands Lane Medical Practice, Low Moor Medical Centre, Mayfield Medical Centre, Moorside Surgery, Oak Glen Surgery, One Medicare @ Woodhead Road, Parklands Medical Practice, Phoenix Medical Practice, Rooley Lane Medical Centre, Saltaire Medical Practice, Shipley Medical Practice, Springfield Surgery, Sunny Bank Medical Centre, The Grange Practice, The Ridge Medical Practice, The Rockwell and Wrose Practice, The Willows Medical Centre, The Wilsden Medical Practice, Thornbury Medical Centre, Thornton Medical Centre, Tong Medical

Practice, Westcliffe Medical Centre, Wibsey & Queensbury Medical Practice, Windhill Green Medical Centre, Woodroyd Centre.

Hospitals

Shipley Hospital, Bradford Royal Infirmary, Westbourne Green Community Hospital, Eccleshill Community Hospital, Leeds Road Community Hospital, Westwood Park Diagnostic Treatment Centre

The CCGs own the GP's surgery's in their area. They do not own the hospital's.

From April 2013, all hospital assets that are not owned by Foundation Trusts will be transferred to PropCo. This is an asset holding firm, which is a company wholly owned by the Department of Health. This means the following for the hospitals in the Bradford District.

Hospital	Ownership Arrangements
Bradford Royal Infirmary	Continue to be owned by the Bradford Teaching Hospital NHS Foundation Trust.
St Lukes	Continue to be owned by the Bradford Teaching Hospital NHS Foundation Trust.
Airedale Hospital	Continue to be owned by the Airedale NHS Foundation Trust.
The Yorkshire Clinic	Operated by Ramsay Healthcare (a private operator). This will continue.
Shipley Hospital	Currently owned by Bradford and Airedale Teaching PCT. If they do not become a foundation trust by April 2013 they will be transferred to PropCo.
Lynfield Mount Hospital	Currently owned by Bradford District Care Trust. If they do not become a foundation trust by April 2013 they will be transferred to PropCo.
Westbourne Community Hospital	Currently owned by Bradford and Airedale Teaching PCT. If they do not become a foundation trust by April 2013 they will be transferred to PropCo.
Eccleshill Community Hospital	Continue to be owned by the Bradford Teaching Hospital NHS Foundation Trust.
Eccleshill NHS Treatment Centre	Operated by Care UK. This will continue. However the building is owned by Bradford and Airedale Teaching PCT and will therefore transfer to PropCo.
Leeds Road Community Hospital	Currently owned by Bradford and Airedale Teaching PCT. If they do not become a foundation trust by April 2013 they

	will be transferred to PropCo.
Westwood Park Diagnostic Treatment Centre	Currently owned by Bradford and Airedale Teaching PCT. If they do not become a foundation trust by April 2013 they will be transferred to PropCo.

This will not fundamentally alter the provision of the service, as it will be commissioned by the CCGs, but it does affect who own the health care infrastructure.

The responsibilities of NHS Public Health are transferred to Bradford Council in April 2013. Public Health work closely with the CCGs to deliver certain services; such as smoking, sexual health, obesity and emergency planning. There funding is ring fenced and comes from the NHS budget.

Fit for purpose

Over the past 10 – 15 years there has been a NHS programme to bring primary care facilities up to standard. This has resulted in new GP surgeries and clustering of GP's in new premises. There are very few facilities that are not fit for purpose.

The hospital facilities are generally deemed to be fit for purpose.

Future Programmes and Costs

There is move towards more care in the community, support worker and nursing from the home. The aim to reduce the need for hospital stays. There is also cross- boundary capacity in Leeds.

£500k has been safeguarded between 2011 / 2015 to deliver improvements to GP surgery's. The NHS funding is linked to the population registered in the CCGs. Funding is also weighted depending on deprivation. The committed funding for CCGs and Public Health linked to the Bradford District (NHS Airedale and Bradford) is set out below:

	2011/12	2012/13	2013/14	2014/15
Revenue	£98.7 billion	£101.5 billion	£104 billion	£109.8billion

Assessment to meet growth aspirations

Ultimately the responsibility for factoring in population growth will lie with the NHS commissioning board and West Yorkshire Commissioning Board.

CCGs are likely to need to highlight where capacity is an issue. In many cases this will mean the need for additional GPs, but not necessarily new premises.

The move towards more community based will result in less need for premises and can be linked to existing GP surgeries. In addition, a new GP emergency number is being set up with nationally, with the aim of diverting away from Accident and Emergency, to allow GPs to visit people's homes.

Emergency Services

Definition

The emergency service infrastructure covered in this study includes the provision of the ambulance, fire and rescue and the police services.

Source materials

- Bradford and Airedale Community Infrastructure Plan (2010)
- WYFRS Bradford Risk Reduction Plan 2012-13
- WYFRS District Action Plan for Bradford 2012-13
- WYFRS Integrated Risk Management Plan 2012-13- consultation paper
- WYFRS Service Plan 2011-15
- WYPA Policing Plan 2011-15
- YAS Annual Business Plan 2012-13
- YAS Five Year Business Plan 2010-15

Current position

Fire and rescue service:

There are 49 fire stations in West Yorkshire. 10 of them are in Bradford District:

Whole time stations (crewed day and night) -

- Bradford
- Keighley
- Bingley
- Shipley
- Idle
- Fairweather Green
- Odsal

Manned by retained firefighters -

- Haworth
- Ilkley
- Silsden

The 999 HQ is located in Buttershaw.

Ambulance service:

There are three ambulance stations in the Bradford district in:

- Bradford
- Keighley
- Menston

There are also three YAS standby points in the district. These are used to ensure an 8 minute response time and are usually linked to shared facilities. There are also YAS deployment points, which are simply lay-bys.

Police service:

Bradford District is covered by two of the West Yorkshire Police Divisions.

- Airedale and North Bradford Division

(HQ based in Keighley and sub-stations in Shipley, Bingley, Eccleshull and Ilkley).

- Bradford South Division

(HQ in Bradford (Nelson Street)) and sub-stations in Lilycroft Road, Manningham.

Fit for purpose

Fire and rescue service:

There is a review of facilities planned in the next two years. Some of the facilities will need to be replaced or improved in the future, but are operating well in current conditions.

Ambulance service:

The Bradford ambulance station is larger than required and is now incurring high maintenance costs.

The Keighley facility is well placed and the right size for the demand in the area.

The Menston facility is no longer the ideal location to best respond to emergency calls.

Police service:

The current police provision is monitored on a daily basis across the District and the police stations operate on a fluid basis. Officers from different stations and divisions can support each other if there is particular demand for police services.

Future programme and cost

Fire and rescue service:

West Yorkshire Fire and Rescue have no major plans for the estate in the District. From April 2012 the second fire engine at Silsden became a back up appliance based at Keighley Fire Station.

Co-locating fire stations and other services is challenging due to access requirements and the scale of space required for fire engine. If it is possible Fire service is willing to co-locate.

From April 2013 an existing fire engine and cherry picker will be replaced with a new fire engine that can also provide lifting facilities. The aim of this is to reduce the staffing costs. This new vehicle will be based at the Bradford, Leeds Road Fire Station.

Ambulance service:

The Ambulance Service are currently reviewing how they deliver there services across the whole of Yorkshire. The review is considering a Hub and Spoke way of delivering services. This is likely to mean that Bradford and Keighley remain hubs and additional spoke facilities (standby areas) are created. The full details of this are planned to be published in Summer 2012.

Police service:

At a district level the overall approach is to rationalise and create efficiencies across the police force by delivering at a neighbourhood level.

Assessment to meet growth aspiration

Fire and rescue service:

The fire station states that the current operational capacity of the service is sufficient to cater for the current population and future planned growth.

There may be a requirement to co-locate or create new stations as facilities reach the end of the operational life. This is being looked at as part of the review.

The fire service continually monitor incident data, including monitoring socio-economic data that is linked to increased risk of fire incident, such as poverty and single parent families.

Yorkshire Water responds to planning application design (to make sure that there is enough water supply to fight a fire - providing hydrants).

Since 1987 building regulations has required new builds to have hardware smoke protection built in. The likelihood of fire's occurring in new buildings is therefore less than older

properties. However if monitoring shows an increased incident rate in a particular part of Bradford then the fire service will look at moving provision to meet this need.

Ambulance service:

The current stations and network of standby points provide a sufficient level of resource for the District. If an incident required additional assistance the resources in Leeds, Craven, Calderdale and Kirklees can support this requirement.

If demand increased permanently then YAS would commission resources based on the forthcoming review.

Police service:

Large scale housing schemes (e.g. Shipley-Canal Road and Holmewood) will require engagement with the police to ensure additional policing is delivered.

APPENDIX B

THE COST OF PLACES ASSOCIATED WITH HOUSING GROWTH

The cost of places associated with housing growth		Places per unit	Primary	Calculation based on CMBDC formula					Total Contribution	10% land and 10% professional fees	Per unit (if all pay)	Per unit if half pay
Apartments	8,420 (20% of all proposed dwellings)	1 school place per unit	1x7x8420/100 x 13,345	1	7	8420	100	13345	£ 7,865,543.00	£ 9,438,651.60	£ 1,120.98	£ 2,040.79
Houses	25,260 (60% of all proposed dwellings)	2 school place per unit	2x7x25260/100 x 13,345	2	7	25260	100	13345	£ 47,193,258.00	£ 56,631,909.60	£ 2,241.96	£ 3,965.82
Houses with four bedrooms or more	8,420 (20% of all proposed dwellings)	2.5 school place per unit	2.5x7x8420/100 x 13,345	2.5	7	8420	100	13345	£ 19,663,857.50	£ 23,596,629.00	£ 2,802.45	£ 5,101.97
									£ 89,667,190.20	£ 115,819,120.80	£ 2,055.13	
		Secondary		Calculation based on CMBDC formula								
Apartments	8,420 (20% of all proposed dwellings)	1 school place per unit	1x6x8420/100 x 20,110	1	6	8420	100	20,110	£ 10,159,572.00	£ 12,191,486.40	£ 1,447.92	£ 2,636.00
Houses	25,260 (60% of all proposed dwellings)	2 school place per unit	2x6x25260/100 x 20,110	2	6	25260	100	20,110	£ 60,957,432.00	£ 73,148,918.40	£ 2,895.84	£ 5,122.47
Houses with four bedrooms or more	8,420 (20% of all proposed dwellings)	2.5 school place per unit	2.5x6x8420/100 x 20,110	2.5	6	8420	100	20,110	£ 25,398,930.00	£ 30,478,716.00	£ 3,619.80	£ 6,589.99
									£ 115,819,120.80	£ 2,654.52		

ADDITIONAL PLACES LINKED TO HOUSING GROWTH

Housing Trajectory		Factoring the mix of housing			Calculated using the Council Formula								
Phase	Years	Projected Completion	Apartments (20%)	Houses (60% houses)	Apartments	Houses	Four bed houses	TOTAL ADDITIONAL PLACES					
Phase 1	2013/2014	900	180	540	180	12.6	10.8	37.8	32.4	12.6	10.8	63	54
	2014/2015	1100	220	660	220	15.4	13.2	46.2	39.6	15.4	13.2	77	66
	2015/2016	1300	260	780	260	18.2	15.6	54.6	46.8	18.2	15.6	91	78
	2016/2017	1600	320	960	320	22.4	19.2	67.2	57.6	22.4	19.2	112	96
	2017/2018	1900	380	1140	380	26.6	22.8	79.8	68.4	26.6	22.8	133	114
	2018/2019	2400	480	1440	480	33.6	28.8	100.8	86.4	33.6	28.8	168	144
Phase 2	2019/2020	2400	480	1440	480	33.6	28.8	100.8	86.4	33.6	28.8	168	144
	2020/2021	2600	520	1560	520	36.4	31.2	109.2	93.6	36.4	31.2	182	156
	2021/2022	2900	580	1740	580	40.6	34.8	121.8	104.4	40.6	34.8	203	174
	2022/2023	3200	640	1920	640	44.8	38.4	134.4	115.2	44.8	38.4	224	192
	2023/2024	3400	680	2040	680	47.6	40.8	142.8	122.4	47.6	40.8	238	204
	2024/2025	3600	720	2160	720	50.4	43.2	151.2	129.6	50.4	43.2	252	216
Phase 3	2025/2026	3600	720	2160	720	50.4	43.2	151.2	129.6	50.4	43.2	252	216
	2026/2027	3600	720	2160	720	50.4	43.2	151.2	129.6	50.4	43.2	252	216
	2027/2028	3600	720	2160	720	50.4	43.2	151.2	129.6	50.4	43.2	252	216
	2028/2029	3600	720	2160	720	50.4	43.2	151.2	129.6	50.4	43.2	252	216
	2029/2030	3600	720	2160	720	50.4	43.2	151.2	129.6	50.4	43.2	252	216
		45,300										3171	2718

Taken from page 359 of Core Strategy Development Plan Publication Draft

ADDITIONAL PLACES LINKED TO HOUSING GROWTH PER SUB AREA

	Factoring the mix of housing			Apartments	Houses	Four bed houses	TOTAL ADDITIONAL PLACES					
	Total Housing for sub area	Apartments (20%)	Houses (60% houses)	Houses over 4 beds (20%)	Additional Primary School Places	Additional Secondary School Places	Additional Primary School Places	Additional Secondary School Places	Additional Primary School places	Additional Secondary school places		
City of Bradford, Shipley and Lower Baildon	28,650	5730	17190	5730	401.1	343.8	1203.3	1031.4	401.1	343.8	2005.5	1719
Airedale	8,350	1670	5010	1670	116.9	100.2	350.7	300.6	116.9	100.2	584.5	501
Wharfedale	1,600	320	960	320	22.4	19.2	67.2	57.6	22.4	19.2	112	96
Pennine	3500	700	2100	700	49	42	147	126	49	42	245	210
	42,100				0	0	0	0	0	0		

0 Note: predicted school places per sub area, do not produce the total additional places based on the proposed phasing schedule - this is because the phasing schedule (Core Strategy) includes a slightly higher housing figure than the sub area breakdown (Core Strategy).

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www.bradford.gov.uk

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