

City of Bradford Metropolitan
District Council

**Bradford City Centre Area Action
Plan**

Infrastructure Delivery Plan

ISSUE | 25 September 2015

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Appendix A

List of Infrastructure Stakeholders

1 Introduction

1.1 Role of the Infrastructure Study

The National Planning Policy Framework and Planning Practice Guidance require Local Plans to positively plan for development and the infrastructure required in the area to meet spatial objectives. Local Planning Authorities must progress a proportionate evidence base for infrastructure which assesses the quality and capacity of various forms of infrastructure.

Bradford is the fourth largest Local Authority District in England by population and contains England's sixth largest city¹. 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.

CBMDC 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. A growing population within the district, combined with pressure arising from an evolving population structure, and a strengthening and diversification of key employment sectors will all have impacts on the required infrastructure provision across the Local Plan Period.

Sitting beneath the Local Plan, CBMDC are progressing an Area Action Plan (AAP) for Bradford City Centre. The Bradford City Centre AAP (BCCAAP) sets out the long-term spatial vision for the city centre and the strategic policies required make the vision a reality. The analysis and conclusions within this Infrastructure Delivery Plan (IDP) therefore assess the suitability of current city centre infrastructure provision and the extent to which existing infrastructure will be 'fit for purpose' against the land requirements to deliver objectively assessed housing and employment needs.

1.2 Role of this study

To provide a technical evidence base suitable to inform the production of future stages of the Bradford City Centre Area Action Plan (BCCAAP), this study has sought to understand:

- The current level of infrastructure provision within the BCCAAP area and whether this infrastructure is currently fit for purpose to support the existing population.
- The level of planned infrastructure within the BCCAAP boundary as set out in plans and strategies adopted by CBMDC and the forthcoming strategies from organisations responsible for the delivery of planned infrastructure.
- Whether the current and planned infrastructure scheduled to be delivered will meet the requirements of the BCCAAP when set against the objectively

¹ Census 2011

assessed housing and employment needs and strategic aspirations – and subsequently whether a gap exists between supply and demand.

- The costs associated with planned infrastructure provision and whether there is a gap between committed, allocated and required investment.
- The scale of the gap between committed, allocated and required investment in infrastructure and the potential means by which this gap could be bridged where no source has been identified. This is particularly important in light of declining Council funding and infrastructure spend.

In 2012 Arup was commissioned to produce a district wide infrastructure study. A great deal of the work carried out as part of the district-wide infrastructure study is still considered to represent an accurate picture and thus there is a direct 'read-across' between the district-wide study and the BCCAAP infrastructure study. Certain infrastructure needs, for example emergency services, are calculated on a district-wide basis, and so there is little benefit to replicating the study at the micro level represented by the AAP study area. Therefore emergency services provision, waste management and cemetery and crematorium provision are excluded from this study analysis.

2 Policy Context for Infrastructure Delivery

2.1 Overview

This section of the IDP includes a summary of national and sub-regional policy related to infrastructure delivery. The current and emerging Local Planning Policy for the Bradford District is then summarised.

2.2 Understanding of National Policy Context – NPPF and PPG

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.

2.3 Sub Regional Policy

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 will be delivered in partnership with the West Yorkshire Combined Authority and 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.

2.4 Understanding of Local Policy Context

Introduction

The following section outlines the planning policy context for infrastructure planning in the BCCAAP area and the development assumptions agreed in order to appraise future infrastructure requirements.

2.5 Planning Policy Context

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.

2.5.1 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 following Examination in Public in early 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 (SCRC) and the BCCAAP itself.

2.5.2 Emerging City Centre Area Action Plan

The Area Action Plan will guide the transformation of city centre regeneration area up to 2030². 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

² 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>

duration of the plan's lifespan. It will be the role of the BCCAAP to formally allocate development sites within its boundary.

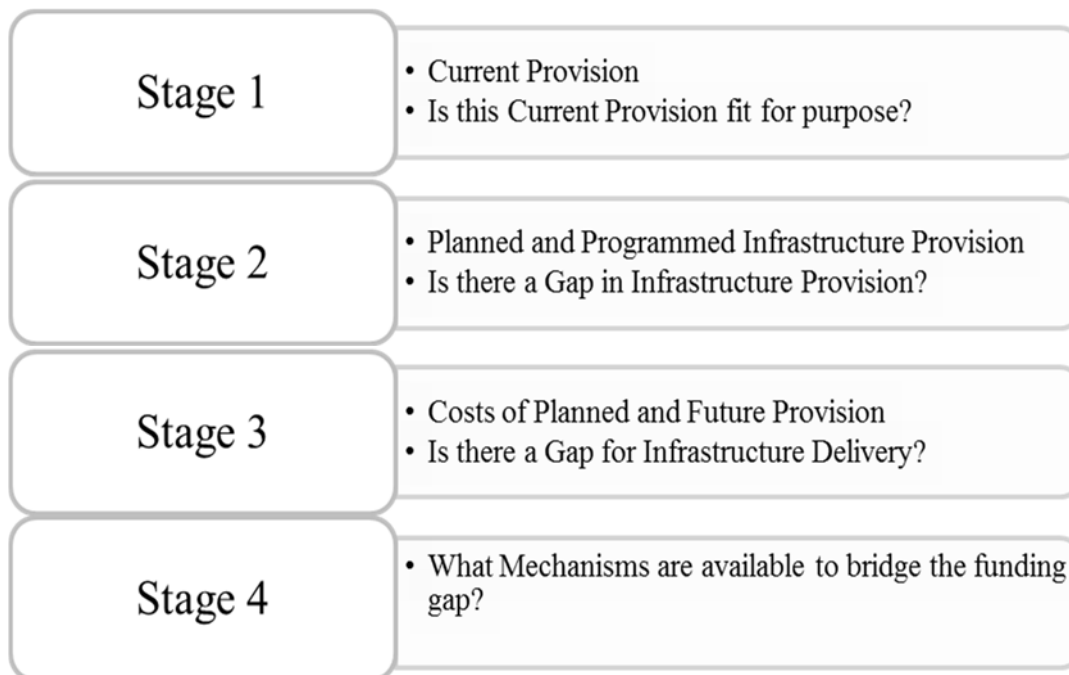
2.5.3 City Centre Masterplan and Neighbourhood Development Frameworks

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.

3 Approach to Producing the Infrastructure Study

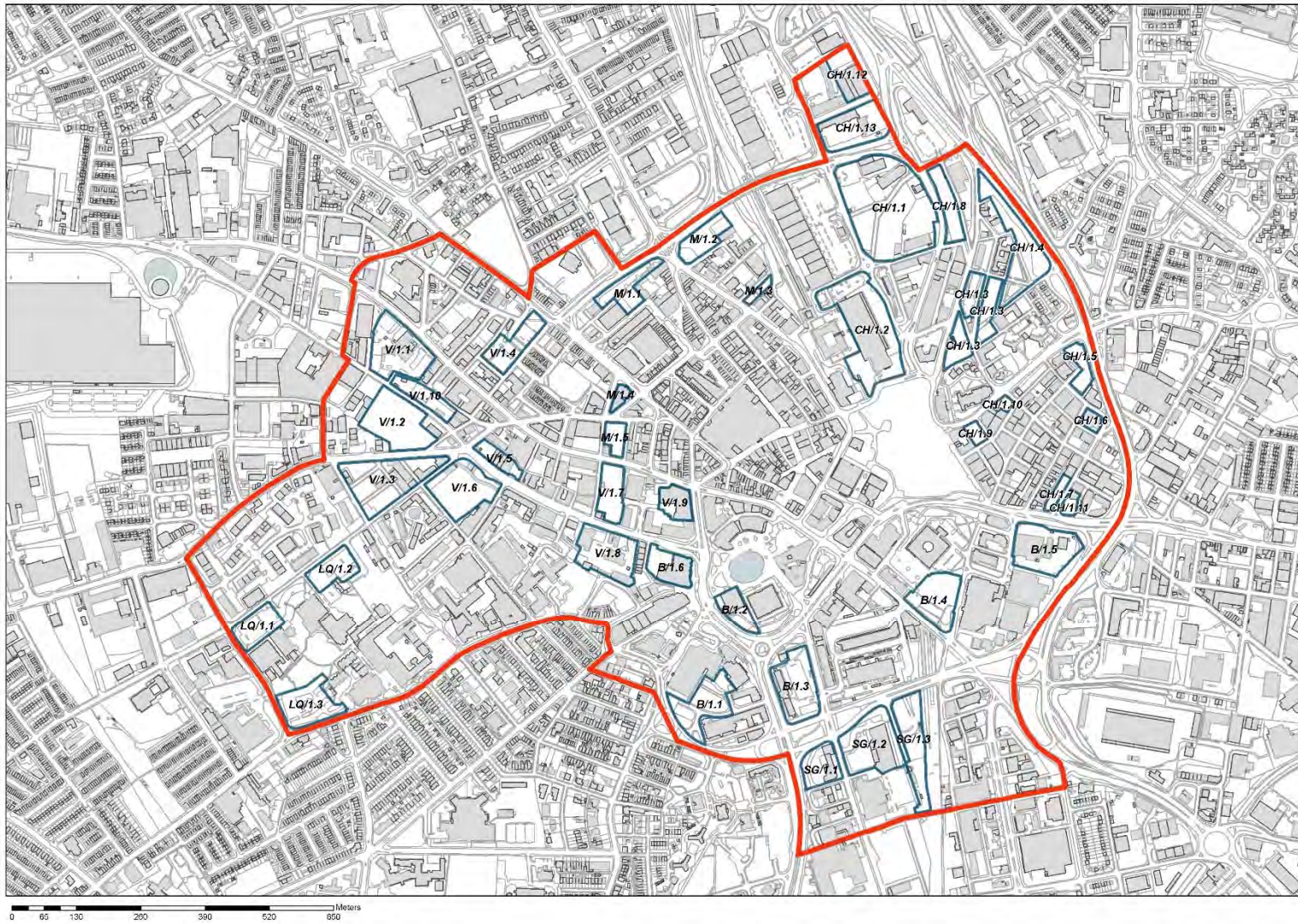
3.1 Introduction

This study is based on a four stage process to understand current and future infrastructure provision, taking into consideration the planned areas of growth and regeneration. This approach has made it possible to identify areas in need of further investment and potential funding mechanisms.



To give context to the assessment of current and planned infrastructure, proposed development quantum must be assumed and agreed. The following section therefore sets out this preparatory step prior to undertaking Stages 1 – 4 above.

Figure 1.1: Location of City Centre AAP sites



3.2 Development Quantum Assumptions

3.2.1 Overview

The study considers the infrastructure needed to support the level of growth proposed in Bradford City Centre between 2014 and 2030. As the emerging Local Plan documents are likely to be subject to some amendment, this section confirms the agreed assumptions for the quantum of development which will underpin the appraisal of infrastructure.

Policy HO1 of the Publication Draft Core Strategy plans for 42,100 new homes between the plan's base year of 2012 to 2030. Policies HO3 and HO4 set the district wide spatial distribution, and specifically set a target of 3,500 homes within the city centre during the plan period. The emerging allocations contained within the BCCAAP demonstrate the potential capacity for approximately 3,790 dwellings.

Although the Core Strategy Policy HO5 mandates a minimum density of 30 dwellings per hectare across the district, it recommends that higher densities are pursued within the BCCAAP. Table 3.1 reproduces the BCCAAP's suggested densities on a site by site basis.

Table 3.1: Development Assumptions

	Site Name	Ref	Size (ha)	Site Capacity	Land Use
Central Business and Leisure District	Sharpe Street Car Park	B/1.1	0.4	Unknown	Cultural Expansion Zone
	Exchange Court	B/1.4	1.1	Unknown	Mixed use
	Former Yorkshire Water Depot	B/1.5	0.68	400	Mixed use
	Former Bradford Odeon	B/1.6	1.2	Unknown	Mixed use
Little Germany and Cathedral Quarter	Area West of Valley Rd.	CH/1.1	3.5	600	Phased residential development
	Former Royal Mail Sorting Office	CH/1.2	1.88	Unknown	Leisure led mixed use
	Cathedral Quarter PH.1	CH/1.3	1.4	100	Residential
	Cathedral Quarter PH.2	CH/1.4	1.52	200	Residential
	Burnett St. car park	CH/1.5	0.33	50	Residential
	Olicana House, Chapel St.	CH/1.6	0.34	20	Residential
	East Parade Car Park	CH/1.7	0.18	50	Residential
The Market	Car Park, Simes Street	M/1.1	1.2	200	Mixed use
	Car Park on site of former Carlton Grammar School	M/1.2	0.85	100	Residential (historical lapsed A1/A3 permission)
	Stone St. Car Park	M/1.3	0.16	20	Residential
	Former Yorks. Building Soc. HQ	M/1.4	0.17	80	Mixed use
	Former Tetley Street Shed	M/1.5	0.32	100	Mixed use
Goit side	Former Provident Financial HQ	V/1.1	1.81	400	Residential

	Former Gas Works & Foundry	V/1.2	2.5	400	Mixed Use (Resi-led)
	Globus Textiles	V/1.3	1.69	200	Mixed Use (Resi-led)
	Wigan St. Car Park	V/1.4	0.8	120	Residential
	Former Yorks. Stone Yard & Mill	V/1.5	0.35	80	Residential
	Former Bee Hive Mills	V/1.6	1.45	220	Residential
	Vacant Site South of Sunbridge Road, bounded by Tetley Street and Fulton Street	V/1.7	0.31	80	Residential
	Car Sales / Filling Station Site, Thornton Road	V/1.8	0.25	230	Residential
	Sunwin House, Godwin Street / Sunbridge Road	V/1.9	1.3	Unknown	Residential led mixed use
	Former Alexandra Hotel & Empire Cinema	V/1.10	0.61	100	Residential
The Learning Quarter	N/A	N/A	N/A	N/A	N/A
Southern Gateway	Clifford Street Car Park	SG/1.1	1.4	200-250	Residential led mixed use
Total no. dwellings:				3,790	

3.2.2 Housing Development Quantum and Sites

At the inception meeting Arup confirmed the sites that should be focus of the study. From the table above it is proposed to focus in more detail upon the infrastructure requirements necessary to unlock the larger sites (extracted and reproduced below). As confirmed by the assumptions note issued immediately following the meeting, the sites which are the focus of study in the city centre are:

Site name	Reference	Capacity
Exchange Court	B/1.4	Unknown
Area West of Valley	CH/1.1	600
Cathedral Quarter PH.1	CH/1.3	100
Cathedral Quarter PH.2	CH/1.4	200
Former Provident Financial HQ	V/1.1	400
Former Gas Works	V1.2	400
Former Bee Hive Mills	V/1.6	220

3.3 Scope of the study

This study builds on the District-wide Infrastructure Study, which was first produced in 2012 and updated regularly by the council, and focuses on the smaller

output area of the city centre. The following types of infrastructure were agreed to be assessed:

Infrastructure Sector	Sub-Sector
Transport	Highways, Bus, Park and Ride, Rail, Walking and Cycling
Utility Networks	Electricity, Gas, Water Supply, Waste Water and Telecommunications
Flood Risk and Drainage	Flood Risk and Drainage
Green Infrastructure, Sport and Recreation	Open Spaces, Play Areas, Allotments, Sports Pitches, Sport Centres and Pools
Health	Primary Care and Hospitals
Education	Nursery, Primary School, Secondary School, College and Sixth Form
Community and Cultural	Local Retail Outlets
Decentralised, Renewable and Low Carbon Energy	Decentralised, Renewable and Low Carbon Energy

3.4 Stages of the Study

3.4.1 Stage 1: Determining Current Infrastructure and if it is Fit for Purpose

At this stage the overall assumptions were set which would guide the Infrastructure Delivery Plan and baseline work. This included confirming:

- 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.
- The approach to reporting the final information.

Stage 1 of this Study focussed on understanding the current infrastructure provision within the city centre and whether it is adequate to meet the needs of the current population.

This was undertaken through a quantitative assessment of current infrastructure and its spatial distribution, and was principally achieved through an extensive review of secondary data sources. This analysis was supplemented by discussions with key stakeholders and local service providers to understand if existing facilities were ‘fit for purpose’.

3.4.2 Stage 2: Identify planned infrastructure provision

Stage 2 of this study involved identifying planned infrastructure provision. Utilising the baseline of current level and condition of infrastructure, it was possible to carry out a broad assessment of planned infrastructure improvements

up to 2030. This was based on an analysis of secondary sources and discussions with stakeholders and council officers. Discussions with stakeholders took place in summer 2014, with a follow up conversation with Education Stakeholders in February 2015 to understand the implications of a new secondary school that opened in the City Centre in September 2014. In June 2015 the flood risk and transport chapters were updated to reflect the draft Strategic Flood Risk Assessment Part 2 and a completed Transport Study. In August 2015 further education comments were provided and the chapter was updated.

3.4.3 Stage 3: Confirm implications and any gaps in infrastructure provision to meet growth aspirations

Stage 3 of this study involved confirming if current, planned and committed infrastructure would be sufficient to meet the needs and demands in line with growth objectives. This assessment therefore highlights where there may be gaps in future infrastructure provision. This stage also confirms the cost of bridging the gap in infrastructure provision required to deliver the Council's planned housing and employment growth.

3.4.4 Stage 4: Identifying Funding Sources to bridge infrastructure gap

Stage 4 required engaging with public sector organisations, traditional funding mechanisms and potential private sector involvement to establish potential funding options which could deliver the infrastructure needed. These options look to understand what funding sources are already committed, what funding sources have been allocated, and whether there is an identified gap between need and committed/allocated funds.

4 Transport

4.1 Information Sources

This section covers the transport network including highways, rail and bus provision and cycling and walking networks.

The following sources of information have been used to populate this chapter:

- A meeting was held with the Council's Transport Planners
- West Yorkshire Local Transport Plan 2011 – 2026 (LTP3).
- Leeds City Region, Strategic Economic Plan, 2014.
- Rail Utilisation Strategy (RUS), Network Rail, 2009.
- Bradford City Plan, 2014.
- Transport Assessment, 2015.

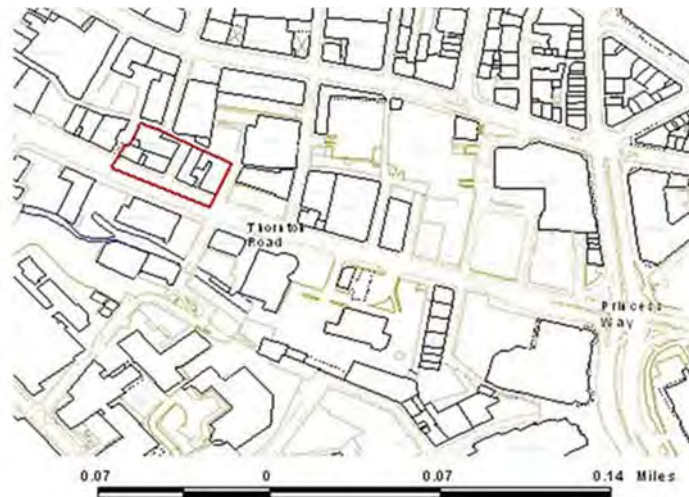
4.2 Current Infrastructure Provision and Fit for Purpose

4.2.1 Highways

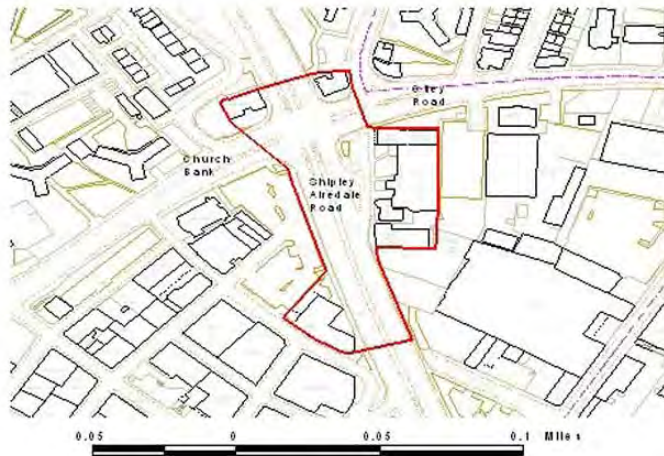
It was noted through dialogue with CBMDC officers that Bradford City Centre currently experiences a high level of vehicle dominance, in particular around Westgate and Godwin Street. The City Centre lacks a complete inner ring road. This can result in rat running through the City Centre and can create an unattractive pedestrian environment.

The current road network causes a large amount of severance at the edge of the city centre. For example there are currently three lanes of traffic around Hall Ings. CBMDC do not want to reduce the highway capacity at Hall Ings as it is likely to be required when the Broadway (Westfield) shopping centre development opens in 2015.

There are two Air Quality Management Areas (AQMAs) in the City Centre. The first is along Thornton Road titled 'An area encompassing a number of properties on Thornton Road, Bradford, in the vicinity of its junction with Princess Way' on the Defra website. This is largely attributable to the high level of residential population that exists in close proximity to the road. The boundary is shown below:



The second is an AQMA at the junction of Shipley Airedale Road and Church Bank on the inner ring road in Bradford. As shown below:



Through discussions with CBMDC Transport Officers it was noted that there is a lot of traffic congestion and rat running along of vehicles passing through the Sunbridge Road. The rat running is now affecting the residential amenity of the residents living in the Goitside area.

CBMDC Transport Officers also noted that CBMDC are coming under pressure to open the bus gate on Barkerend Road to increase highway capacity. CBMDC are continuing to resist this approach.

It was noted by CBMDC Transport Officers that there is a need to revisit the junctions and timings of traffic lights on Princes Way, as the Broadway scheme has changed compared to the original proposals. Following completion of the Broadway scheme Church Bank will be closed to traffic. The impact of this closure has been assessed as part of the Broadway planning application and the impact is acceptable, however the closure is likely to take time to bed in and could result rat running in short term as people get used to the closure. However the rationale for the scheme is to improve the pedestrian environment around Broadway.

4.2.2 Rail Provision

Bradford City Centre is served by two railway stations. Bradford Interchange provides services towards York and Selby (via Leeds) and towards Manchester Victoria, Blackpool North and Huddersfield. Bradford Forster Square station provides services towards Leeds, Skipton and Ilkley.

Given the size of the City of Bradford as the sixth largest city in England³; the two railway stations in Bradford are considered to not provide an attractive entrance to the City. CBMDC has had the aspiration to improve the pedestrian environment and create stronger gateway railway stations since the early 2000s.

4.2.3 Bus Provision

The City Centre is well served by bus services across the City. Bus services generally operate from the Bradford Interchange.

CBMDC officers noted that Market Street experiences a high frequency of bus services and ideally this could be displaced to other streets within the city centre. Currently bus operators have to pay to use Bradford Interchange and this has displaced some services elsewhere within the City Centre (including Hall Ings and Market Street). This causes issues related to the cluttering of the pavement by bus stops and heavy bus traffic down Market Street.

4.2.4 Pedestrian / Cycling

The majority of the core retail area in the City Centre is pedestrianized. CBMDC have prioritised improving the public realm in this area, including new paving and lighting. This has greatly improved the pedestrian environment.

The creation of the City Park has provided a dedicated public square for recreational use in the City Centre.

There are however some pedestrian connectivity issues in non-pedestrianized parts of the City Centre. For example use of barriers on the Ring Road, road dominance and lack of adequate crossing provision in the northern ring road area.

4.3 Planned and Proposed Transport Schemes

This section includes planned and proposed transport schemes for Bradford City Centre. These schemes have been gathered through discussion with CBMDC Transport Officers. The below schemes have been included in the Infrastructure Delivery Programme, which can be found in section 14 of this report.

4.3.1 Highway

Central Urban Traffic Management Control: Improvement to Network Management. This scheme has been funded through LTP3.

Variable Message Signs (VMS): Network of Variable Message Signs (VMS) in the City Centre and provision of signage to improve access to car park and

³ Census 2011

efficient car travel around the City Centre. This scheme has been funded through Local Growth Funding.

New Highway Link between Westgate and Thornton Road: CBMDC are currently undertaking a feasibility study for this link road. This scheme would improve traffic flow and reduce rat running in the Goitside Area. The majority of the funding from this scheme is available through CBMDC capital funds.

4.3.2 Rail Provision

Improvements of Bradford Railway Stations: Station masterplans for both Bradford Forster Square and Bradford Interchange were developed in 2014. The masterplan sets out a design and costs for redevelopment of both railway stations. This masterplan was funded through the West Yorkshire Plus Transport Fund as part of their Gateway Project. The aims of the scheme are set out below:

Bradford Interchange: aims to enhance public transport integration and support the city centre regeneration project. Includes measures to improve linkages between the interchange and the city centre, reduce future maintenance costs and rationalise and improve staff accommodation facilities.

Bradford Forster Square: general improvements to facilities at the station by enhancing the retail offer and enhancing safety and security. The scheme also aims to improve links to the City Centre through enhanced lighting and public realm.

Following the production of the masterplan both schemes are under consideration for funding by the WY+TF through the Rail Stations Gateway programme. CBMDC are working closely with the West Yorkshire Combined Authority to progress both station schemes. The improvements are being progressed in partnership with WYCA, Network Rail and CBMDC. Further work is on-going to produce a business case for first phases of the Bradford Interchange improvements, including delivering an at-grade link and creating public realm improvements.

The exact amount of funding available from the West Yorkshire Plus Transport Fund is currently unclear. However there are a range of other possible funding sources including Local Growth Fund, Network Rail, CBMDC funding and the Train Operating Company (TOC). CBMDC are working with partners to package and promote these schemes,

Tram-train or fixed rail to Leeds Bradford International Airport: This scheme provides a direct link between Bradford & LBIA through 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 and provide onward connection to Leeds. There is potential future funding through the West Yorkshire Plus Transport Fund. CBMDC are currently investigating other funding options for this scheme.

Tram Linked to New Station at Low Moor: Funding has been secured for a new railway station at Low Moor. CBMDC have an aspiration to improve public transport connections between Low Moor and Bradford City Centre to allow a new public transport corridor to be created by a tram connecting West Bowling, Bradford Interchange and Forster Square. This links a number of employment

sites to the city centre. There is currently no committed funding for this scheme, however CBMDC are investigating funding options.

Calder Valley Electrification: This scheme includes line-speed and capacity improvements, including improved rolling stock and electrification, to enable faster inter-urban long-distance services, and more frequent commuter services. An Electrification Task Force is currently confirming prioritisation for the electrification scheme. The Calder Valley Line is included in the 2009 RUS, but is not prioritised. The RUS is currently being refreshed by Network Rail. CMBDC are currently lobbying for this scheme to be implemented. Funding would need to be a mixture Department for Transport and of Train Operating Company (TOC) funding. There is potential for this scheme to be implemented as part of West Yorkshire becoming 'HS2 Ready'.

Wortley Curve Reopening: Reopening disused rail curve to allow direct link between Bradford and the East Coast Main Line. Potential funding is likely to be linked to the package of rail improvements to make West Yorkshire 'HS2 Ready'.

4.3.3 Bus Provision

Bus Network Improvements: Development of bus network in line with WYCA and CBMDC specification. This could be delivered through quality contracts or through a partnership agreement. There would be minimal funding required to implement these changes.

Leeds - Bradford New Generation Transport: NGT link between Leeds City Square and Bradford Interchange to provide high quality public transport and encourage modal shift. There is no committed funding for this scheme.

4.3.4 Pedestrian / Cycling

CityConnect Cycle Scheme: A Cycle Superhighway between Leeds and Bradford. The route enters Bradford City Centre along the A647 Leeds Road and Barkerend Road. The aim of this scheme is to provide improved cycle facilities between Leeds and Bradford City Centre. This scheme is fully funded and will be delivered in partnership by WYCA, LCC and CBMDC.

Bradford West Cycle Route: This scheme involves building on the cycle superhighway project and providing a cycle link towards the Thornton viaduct and the Great North Cycle Trail. The aim of this scheme is to improve cycle links between the City Centre and west Bradford. There is currently no committed funding for this scheme. CBMDC are investigating future funding options.

Pedestrian Environment Improvements on northern part of Ring Road: The Bradford City Plan has highlighted the potential to improve pedestrian crossing / remove barriers and generally improve pedestrian links across the Northern part of the Ring Road in the City Centre. There is currently no committed funding for this scheme. CBMDC are investigating future funding options.

Improve the ring road highway public realm: The Bradford City Plan has highlighted the potential to improve the public realm along the Ring Road e.g. wider pavements, tree planting and greening the Ring Road, with a focus on the northern parts of the Ring Road. There is currently no committed funding for this scheme. CBMDC are investigating future funding options.

Public Realm Improvements: Improvement to wayfinding / signage / public realm and shared street schemes (North Parade / Piccadilly). There has been some funding secured through Regional Growth Funds and CBDMC will continue to actively investigating future funding options. The Transport Study (2015) for the recommends pursuing a 'Legible Bradford' wayfinding scheme encourage uptake of walking within the city centre.

4.3.5 Parking Strategy

CBMDC are currently developing a car parking strategy for the city centre. The Westfield shopping centre is set to introduce approximately 1,300 additional parking spaces. The likely effect of this is currently unknown. Generally the quality of car parking in the city centre is poor, with many national car park operators charging less than car parks in CBMDC ownership.

4.4 Impact of Development Proposals

As set out in the Infrastructure Delivery Programme (see section 14), CBMDC are promoting a range of strategic transport schemes to provide the capacity for the planned growth in the City Centre. This is expected to provide the necessary infrastructure to deliver the Area Action Plan aspirations.

In terms of car trips, the Transport Study (2015) notes that the anticipated number of trips arising from the quantum of residential growth within the City Centre AAP boundary is relatively low for residential developments, and as such the number of car trips arising to and from the city centre will be low. This is attributed to the proximity to jobs and services from the proposed residential sites, and a general limited availability of car parking, as typical in a city centre environment. It is however noted that there may be some impact arising from developments beyond the City Centre AAP boundary, within the Shipley and Canal Road AAP boundary. Accordingly these issues are covered separately within the Shipley and Canal Road Infrastructure Delivery Plan.

Alongside these improvements a range of on-site highway improvements are likely to be required to deliver each proposed development site. However these would be site specific transport improvements, which would be funded by the developer of the site. The Transport Study (2015) highlights the potential improvements to the following road junction schemes that should be investigated to accommodate increased traffic:

- Shipley Airedale Road/Bolton Road;
- Shipley Airedale Road/Barkerend Road;
- Queen's Road/Manningham Lane;
- Thornton Road/Godwin Street.

Additionally the study recommends that there is a need for additional peak hour bus capacity to maintain the current level of 20% of all trips into the city centre being made by bus to 2030. Improved cycle connections should also be considered.

CBMDC are currently developing a feasibility study for a New Highway Link between Westgate and Thornton Road. There is potential for the new road to

impact on a number of development sites in the Thornton Road area (site references V1.2, 1.4, 1.12, 1.5 and 1.6). The impact of this scheme will be considered in the next draft of the City Centre Area Action Plan.

The Transport Study (2015) notes that the proposed development quantum will give rise to the requirement for additional peak hour bus capacity to maintain the current level of 20% of all trips into and out of the city centre being made by bus. Additionally there is a need for additional and improved cycle connections into and out of the city centre to encourage cycle use and to maintain growth in the numbers of cyclists. Both of these recommendations are included within the Transport Study (2015).

With regard to the Air Quality Management Areas, the Transport Study (2015) notes that by 2030 these areas will see increased traffic levels over the existing baseline position, potentially worsening the existing situation. Mitigation measures are likely to be required in line with the incremental increases in traffic.

4.5 Delivery and Responsibilities

The responsibility for delivery of the transport improvements necessary to deliver the planned housing and employment growth in the City Centre falls with the West Yorkshire Combined Authority, CBMDC and private developer contributions (S106 or S278).

4.6 Summary of Transport Infrastructure

A meeting has been held with the CBMDC Transport team. Bradford has been successful in securing a range of external funding streams and if these are delivered successfully will allow proposed housing and employment land to be delivered.

A summary of the schemes required to deliver the planned housing and employment growth in Bradford City Centre are provided in the Infrastructure Delivery Programme in Section 14.

There is currently a gap in the delivery of transport funding, however CBMDC are investigating funding options and this is set out in Section 15 and 16 of this report.

5 Utilities

5.1 Information Sources

This section covers the primary utility networks linked with electricity supply, gas supply and water supply treatment.

The following sources of information have been used to populate this chapter:

Electricity

- Northern Powergrid, Long Term Development Statement (LTDS) November 2013.
- Northern Powergrid-Long Term Development Statement (LTDS) May 2014.
- Discussion with Michael Walbank, System Planning Manager, Castleford.
- Bradford City Centre Utilities Study.

Gas

- Northern Gas Networks, Long Term Development Statement (LTDS) 2013.
- Northern Gas Networks, Business Reports 2012.
- Northern Gas Networks, Stakeholder Report 2013.

Telecommunication

- West Yorkshire Local Broadband Plan, 2012.

Water Supply and Treatment

- Discussion with Yorkshire Water.

5.2 Current Issues and Fit for Purpose

5.2.1 Electricity

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.

The electricity network in Bradford City area is well established and robust. There are three Grid Supply Points (GSP) close to the City centre which feed a series of primary substations around the City. These GSPs are at:

- Girlington (west of the City Centre).
- Bradford (in the City Centre).
- Staygate (south of the City Centre).

There are a further two GSPs, at Bingley and at Rodley that are within a proximity to the City Centre to enable them to also provide supplies into the City Centre.

The GSPs serve a large number of primary substations which are strategically well placed around the City and beyond.

The main Bradford GSP which serves the majority of Bradford City Centre is situated at Canal Road, junction of Valley Road and it serves primary substations at:

- Rawson Road,
- Manchester Road,
- Balme Street, Mount,
- Gaisby Lane,
- Idle
- Moorside Road.

All these primary substations are within cabling distance of the proposed City Centre developments.

Girlington GSP is west of the City and the only primary close to the City Centre fed from here is situated at Crown Street.

Staygate is south of the City and the only primary close to the City Centre fed from here is situated at Springmill Street.

The existing electricity distribution systems within and serving Bradford City Centre are fit for purpose at present.

5.2.2 Gas

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. Northern Gas Networks carries out the day to day maintenance of the system and is responsible for the engineering behind any necessary diversions or reinforcements.

Northern Gas Networks carries out extensive refurbishment programmes of the existing gas mains to bring often old assets up to modern serviceability. This often is the replacement of existing cast/ductile iron pipes with modern plastic. An extensive amount of this work has been carried out within Bradford.

The existing gas distribution system within and serving Bradford City Centre is fit for purpose at present.

5.2.3 Broadband and Telecommunications

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.

In December 2010, the UK Government launched a strategy entitled “Britain’s Superfast Broadband Future” that aimed to establish a framework to support the rollout of superfast broadband and improved ‘basic broadband’.

In the local context, work is underway through the Leeds City Region’s West Yorkshire Local Broadband Plan, delivered in partnership with West Yorkshire authorities, including CBMDC, which aims to improve access to better broadband across the region⁴. The Plan has a specific focus upon addressing underserved locations, providing public sector funding to stimulate the considerable private infrastructure investment required. The main aims of the project can be summarised as being:

- to influence and, where permitted, intervene in the market to provide by 2015 access for at least 90% of all premises in West Yorkshire to Superfast Broadband.
- provide better broadband connectivity of at least 2Mbits/s to the remaining premises;
- deliver solutions that are future proofed i.e. have the potential for future speed uplifts; and
- be affordable to customers and continue to offer value for money over time.

Arup IT&C have carried out a high-level assessment of the telecommunications network in the City Centre.

Fixed Broadband

Fixed voice telephony and broadband services are predominantly provided by Openreach 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. Further detailed work will need to be undertaken

⁴ Leeds City Region (2013): <http://www.leedscityregion.gov.uk/LCR-Corporate/media/Media/pdf/WYLBP-Public-Consultation-v2-01.pdf?ext=.pdf>

with Virgin Media to ascertain whether they plan to extend their network within the identified areas.

Business and commercial users in the area will also have direct connections to other network operators with a local point of presence such as KCOM, Level 3 and Vodafone (Cable and Wireless). It should be noted that these tend to be business-grade, bespoke services that cost significantly more than standard residential services – which tend not to have associated Service Level Agreements (SLA).

There is a reasonable prospect that Next Generation Access (NGA) providers, other than Openreach and Virgin Media, may establish a fixed presence in Bradford City Centre in the near future, as the potential demand may be sufficient to induce the significant investment necessary. However, from this study it is clear that both Openreach and Virgin Media already have a significant presence in the City Centre, which may prove to be a barrier to entry for any new entrant.

Openreach currently serves Bradford city centre via their ‘Bradford’ exchange, with the exchange now offering a choice of ISP services who utilise their Fibre to the Cabinet (FTTC) product in the majority of areas; however, their Fibre to the Home (FTTP) offering has not yet been deployed and will not be Openreach’s default service offering for many years to come. The following link provides updates on when exchanges within Bradford city centre will receive FTTC updates and a list of available ISPs. It can be seen that there is a good range of both residential and business ISP services and products available:

<http://www.superfast-openreach.co.uk/where-and-when/>

For a comprehensive list of available services (without undertaking a detailed requirements capture exercise with each of the telecom service providers) the following website provides an overarching view of what is available in specific areas of Bradford city centre:

<http://maps.thinkbroadband.com/>

Virgin Media offers very good coverage in the centre of Bradford with packages that can offer up to 152Mb.

Mobile Broadband

In order to ascertain the level of 2G, 3G and 4G services within Bradford city centre, various sources were reviewed, including the following Ofcom and mobile provider’s websites:

<http://maps.ofcom.org.uk/mobile-services/>

<http://consumers.ofcom.org.uk/phone/mobile-phones/4G/mobile-coverage-checker/>

The following observations were made from the Ofcom source:

- Bradford city centre lies in the 95% or more category for 2G services.
- Bradford city centre lies in the 95% or more category for 3G services.

However, using the four main mobile operator websites (Three, Vodafone, EE and O2) more detailed observations can be made:

Operator	2G Services	3G Services	3G+ services	4G services
Three	Offers a very good service for indoor and outdoor	Offers a very good service for indoor and outdoor	Offers a very good service for indoor and outdoor	Offers a very good service (some indoor services are not good and there is no coverage towards the north east of the city centre towards Five Ends Lane)
Vodafone	Offers a very good service for indoor and outdoor	Offers a very good service for indoor and outdoor	Not applicable	Offers a very good service for indoor and outdoor
EE	Offers a very good service for indoor and outdoor	Offers a very good service for indoor and outdoor	Not applicable	Offers a very good service for indoor and outdoor
O2	Offers a very good service for indoor and outdoor	Offers a very good service for indoor and outdoor	Not applicable	Offers a very good service for indoor and outdoor

5.2.4 Water Supply

The regulated water 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 and billing. 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 has been contacted to discuss the proposed development sites in the City Centre.

Yorkshire Water has confirmed that the Yorkshire Grid system can provide adequate water supply for the proposed site allocations in the City Centre.

Figure 5.1: Yorkshire Water's Supply Grid

Source: Yorkshire Water – www.yorkshirewater.com

5.2.5 Waste Water Treatment

Bradford City Centre is currently served by the Esholt Wastewater Treatment Works (WwTW). Through dialogue with a representative from Yorkshire Water, it has been confirmed that there are no existing capacity issues in relation to waste water treatment in Esholt.

5.3 Planned Schemes

5.3.1 Electricity

The Northern Powergrid (NPg) November 2014 Long Term Development Statement contains details of Northern Powergrids proposed works in the short and medium term. There are no plans for upgrade or improvement works proposed within the LTDS except the connection of renewably generated electricity.

NPg regularly undertake planned works to provide connections to their network, alterations/upgrades to the network and existing connections and maintenance and repairs.

5.3.2 Gas

Discussions with Northern Gas Networks (NGN) staff and examination of the proposed works lists contained within NGN's website do not include any works within Bradford City Centre.

NGN regularly undertake planned works to provide connections to their network, alterations/upgrades to the network and existing connections and maintenance and repairs.

5.3.3 Telecommunication

Fixed Broadband

The Leeds Bradford Super-connected Cities project has delivered Wi-Fi to Bradford City Centre, including City Park, helped businesses in Bradford district upgrade their current broadband service using a voucher scheme and delivered Wi-Fi services on strategic public transport between Leeds and Bradford, including the number 72 bus.

Launched in February this year, the Bradford voucher scheme is funded through the government's £150m 'Super-connected Cities' initiative. It is designed to help small and medium-size enterprises transform the way they do business by improving business efficiency and competitiveness. Funding of up to £9m is available to SMEs across the Leeds and Bradford metropolitan districts and companies can apply for broadband connection vouchers via a dedicated website: www.superconnectedleedsbradford.co.uk.

In collaboration with Openreach, the 'Superfast West Yorkshire' project plans to increase superfast broadband (24+Mbps) to at least 97% of households and businesses across the majority of West Yorkshire. As well as providing high-speed fibre, the partnership aims to upgrade all premises in the area to speeds of more than 2Mbps by autumn 2015.

Overall, it is expected that a large element of the upgraded infrastructure will be fibre optic cable (utilising FTTC technology – which lays new fibre to a street cabinet only, not all the way to the home), partially future-proofing it for years to come and allowing upgrades in bandwidth in the future. Areas that require the most investment will be covered by the scheme's partnership with Openreach. However, it should be noted that the project must also adhere to mandatory State Aid rules, which state that public money cannot be used in areas where private companies like Openreach and Virgin Media are planning to invest in the next 3 years; this includes the city centre. Therefore, this may inhibit any new NGA entrants to the city centre.

In early 2015 Virgin Media have announced that they plan to provide new virgin media networks across the UK. This may provide additional networks in Bradford City Centre. The location of the proposed new networks are still to be confirmed.

Mobile Broadband

The four main mobile operators will continue to deploy and improve on their already very good services within the city centre; this is likely to include more focused micro cells that will improve both bandwidth and contention ratios, e.g. permit more users on the existing infrastructure.

5.3.4 Water Supply

There are no scheduled improvements to water supply infrastructure.

5.3.5 Waste Water Treatment

There are no scheduled improvements to water treatment infrastructure.

5.4 Impact of Development Proposals

5.4.1 Electricity

Methodology

The developments will increase the demand for electricity which will have an impact on the electricity network unless the development is self-sufficient.

To predict future electricity demand, figures have produced for residential development and for other uses such as employment, leisure, retail, storage etc. For the purpose of this report only two categories of demand are considered; residential, and employment which contains all other uses.

Typical demand rates to be applied to residential and employment have been agreed between Arup and Northern Powergrid for the purposes of strategic infrastructure studies. For residential the figure is 2KW/residential unit and for employment it is 120W/m².

Demand figures can be much analysed and manipulated according to use, time, and location, and connection arrangements. For this study the two demand figures are considered to be exclusive and thus the total of the two figures is taken as the maximum demand that the developments require and which the distribution system must have the capacity to provide. The following demands have been calculated:

- **Residential:** 3,790 additional residences planned to be built. These will demand an additional 7.58MW of electricity.
- **Employment and other uses:** The employment demand calculation has more stages. It is first based upon the area of land allocated for employment purposes. This land area has to be factored to determine developed floor areas and in this case 40%⁵ of land is considered to be converted to floor area. The demand rate of 120w/m² is then applied to the floor area and from this a total demand figure is determined.

Where the developed area relates to residential only, the area is not included in the assessment. Where the developed area relates to mixed use the whole area has been assessed as employment in addition to the residential.

On the above basis a total of 36.36 hectares of land has been identified of which 10.2 hectares are considered to be developable employment floor area. Applying a typical demand of 120w/m² results in a total employment demand of 12.24MW.

⁵ Based on Bradford Employment Land Review

Impact of Development

The total combined demand for the proposed development sites based on above methodology is approximately 20MW. 20MW of energy requires approximately 22MVA of electricity.

The City Centre is supplied via Grid Supply Points at Bradford (Canal Road), Girlington and Staygate. Present load at Bradford is circa 92.50MVA against a firm capacity of 117MVA. There is thus 24.5MVA spare at this GSP.

The GSP at Girlington is available to supply substations which serve the area and this GSP has a present load of approximately 61 MVA against a firm capacity of 117 MVA. There is thus 56MVA spare at this GSP

The GSP at Staygate is available to supply substations and hence developments south of the city centre and this GSP has a present load of approximately 97MVA against a firm capacity of 123MVA. There is thus 26MVA spare at this GSP.

On the above basis there is sufficient electricity at the Grid Supply Points to support the overall proposed development quanta within the City Centre. However the Bradford GSP will also support development within the Shipley and Canal Road Action Area. This will predominantly be through the Shipley and Gaisby Lane substations. The total additional demand from Shipley and Canal Road Area Action Plan is circa 11MVA and thus the total demand from both is 33MVA which exceeds the present spare capacity available at Bradford which is 24.5MVA. This is based on all sites in both Area Action Plans being built out in full. A joint approach was pragmatic given the City Centre and Canal Road Corridor share GSPs.

The capacity of Bradford GSP could be increased to provide this additional capacity though this would not necessarily be the lowest cost or the most effective way of solving the shortage at the GSP level. To support all the development proposed from the two AAPs it would be more effective to bring Girlington GSP in to support Bradford GSP. This support could either come from upgrading Crown Street or by cabling additional circuits into the development areas from Girlington.

These options have been discussed with Northern Powergrid, however the exact solution will depend on orders for connections by developers. It was agreed with NPg that the costs of these alternatives would be borne by the developments and that roughly they would be circa £4 million. This £4 million can be broken down as follows; £2 million to increase capacity at Crown Street from circa 8MVA to 16 MVA to service the local developments at The Valley. £2 million to increase capacity of Crown Street from 16MVA to circa 24MVA or £2 million to cable additional circuits into the City Centre from Girlington.

The capacity issues are examined in more detail for the following large scale development proposed developments.

- Exchange Court B/1.4.
- Area West of Valley CH/1.1.
- Cathedral Quarter PH.1 CH/1.3.
- Cathedral Quarter PH.2 CH/1.4.
- Former Provident V/1.1.

- Former Gas Works V1.2.
- Former Bee Hive Mills V/1.6.

The analysis of these sites can be found in Section 13.

The total maximum demand for each specific development site has been determined and this demand has been compared to the spare capacity at adjacent primary substations on the basis of proximity. If the closest primary does not have sufficient spare capacity then the next closest is taken into account.

The capacity issues relate to the whole area at this stage since there is no available information on the likely phasing of build out order for these developments. When a build programme becomes available the take up of electricity will show which individual developments have capacity issues.

Individually no single development has a load which exceeds the capacity of the nearest primary substation to provide it. Collectively the situation changes, resulting in capacity issues.

This analysis finds that locally around The Valley (V/1.1, V1.2, V/1.6).the nearest primary substation is at Crown Street and there is not sufficient capacity here to support all the developments proposed here.

The ability for Northern Powergrid to contribute towards the costs will be dependent on the build out rates proposed development and how quickly Northern Powergrid can 'claw back' the costs of the upgrades from the developments. This will need to be discussed further with Northern Powergrid when there is further detail on the trajectory and build out rates of the development sites. The actual solution will depend upon which developments start first and where they are in relation to other developments and the substations.

The costs of upgrades are summarised in section 5.6.1 and included in the Infrastructure Delivery Programme in Section 14.

5.4.2 Gas

The Northern Gas Networks Business Plan Data Template 2014 to 2021 and informal discussions with Northern Gas Networks support staff indicate that the overall gas network in Bradford City Centre is robust and flexible and that strategic reinforcement of the network would not be necessary to support the proposed housing and employment growth.

The developments are all in locations with relatively close access to Northern Gas Networks' apparatus of sufficient size to provide the capacity of gas to meet the gas demand.

Northern Gas Networks provided plans of the apparatus in the vicinity of the developments to indicate local connection points to the developments. These plans indicated that in public highways on the boundary of all the developments there is apparatus of sufficient size to provide connection capacity to the developments.

Connection costs to Northern Gas Networks will be consistent with the size and length of the new apparatus installed to make the connection. There would be

limited additional costs which again are consistent with typical gas connection costs for all developments.

The impact of the proposed developments on Northern Gas Networks is easily absorbed by the existing the network and is consistent with the extra demand placed on the system which has adequate capacity to meet the extra demand.is section will be populated more detail in early October.

Local reinforcements will be required to service local developments. The costs of local reinforcements are included in the Infrastructure Delivery Programme in Section 14.

5.4.3 Telecommunication

Overview

Research undertaken from various sources confirms that there are no restrictive measures preventing residents in the City Centre from gaining access to superfast broadband services.

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 a street cabinet or chamber connection point; as well as cabling from here to a local exchange/Point of Presence (PoP).

The cost of these improvements would need to be met by a developer as part of their scheme. However, there are other methods for attracting and obtaining capital investments from other third party access network providers. Current broadband provision for residential properties is reliant on an aging copper telephony network that was never designed for transporting high-speed data. Though technological advances have enabled providers to deliver some reasonable throughput, the limits of the medium are rapidly being reached. If Bradford wishes to remain at the forefront of digital technology, this infrastructure will need to be replaced.

Fibre to the Home offers an opportunity to build communication networks from the ground up, especially designed for the delivery of a wide range of high-speed and media rich applications and services. This will provide a future proofed communication infrastructure suitable for the 21st century, and one that will support the next generation of digital and technology solutions.

The local broadband infrastructure will be owned and operated by a number of different companies, depending on where you live, i.e. Openreach 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.

As discussed above, 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:

There are a number of different organisations involved in the construction and delivery of services to properties within a development. These include:

- Infrastructure Provider.
- Access Network Provider.
- Service Provider.
- Developer.

It is essential that the demarcation between the roles and responsibilities of each are clarified, and communicated clearly:

Infrastructure Provider

The role of the infrastructure provider is to construct the onsite ducting network, and other spaces required to operate the FTTH infrastructure. The Infrastructure Provider will be responsible for construction of:

- PoP (Point of Presence).
- MMR (Meet Me Room).
- Ducts, terminated at the exterior of each property.
- Associated chambers.

Access Network Provider

The Access Network Provider will be responsible for the daily management and operation of the onsite FTTH infrastructure. They will therefore install the optical fibre within the site-wide ducting constructed by the Infrastructure Provider, and terminate the cabling within the PoP. The Access Network Provider will also supply the active equipment within each property, and terminate the fibre within the unit.

There are two approaches for site operation available to the Access Network Provider:

Private Network

The Access Network Provider will install the fibre within the ducting and will also act as the service provider onsite. There will be no choice of provider, and any competitor would need to construct their own separate onsite ducting infrastructure; this is the model currently employed by Virgin Media within their network.

The disadvantage with this approach is that residents would have a choice of either using the incumbent provider or nothing, since it is unlikely to be financially feasible for an alternate provider to install a new infrastructure for a limited number of residents.

Open Access Network (OAN)

The Access Network Provider will install the fibre within the ducting, but will not retain exclusive use of it. Access to the fibre to each property will be offered to Service Providers on an equal and equivalent basis. The Access Network Provider

makes their revenue by renting use of the fibre to Service Providers. They do not deal directly with residents.

Service Provider

Service Providers will deliver their services over the Access Network Providers fibre, and will contract directly with residents. A rental fee is paid by Service Providers to Access Network Providers for use of the fibre. The Access Network Operator will interconnect it to the FTTH infrastructure.

It is technically possible for multiple Service Providers to deliver different services to the same property over the same fibre connection.

Engage with BT Openreach

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.

Longer term, Openreach initiatives with FTTC (Fibre to the Cabinet) and FTTP (Fibre to the Premise) technologies are currently improving 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 a wireless operator

In addition to a fixed infrastructure it is possible to explore the benefits of installing a metropolitan wide wireless infrastructure.

Modelling the capabilities and costs of wireless networks is far more complex than for fibre networks, and the results are highly sensitive to a number of technical variables, giving them less confidence in the numerical value of the results than with fibre study. The results are particularly sensitive to the level of traffic to be carried on the network.

Terrestrial wireless technology could cost-effectively deliver the medium demand scenario to a small percentage of homes, although this would require a large increase in the number of base stations deployed. Under a high demand scenario, however, wireless will almost always be more expensive than fibre-based technologies.

While satellite is typically more expensive to deploy than fixed wireless, it can still play an important complementary role by delivering broadband services to homes that are most difficult to reach by other means.

5.4.4 Water Supply

Dialogue with Yorkshire Water has confirmed that there are no strategic water supply issues in Bradford City Centre and there is adequate capacity to provide water to the proposed site allocations.

5.4.5 Waste Water Treatment

Dialogue with Yorkshire Water has confirmed that there are no strategic waste water treatment capacity issues related to the delivery of 3,800 new homes and a range of leisure and employment uses in the City Centre up to 2030. All the waste water generated from the City Centre is treated at the Esholt WwTW.

Yorkshire Water may undertake a Drainage Area Plan (DAP) in AMP6 (2016 – 2020), as there has been some localised flooding incidents in the area.

5.5 Delivery and Responsibilities

The overall final responsibility for delivery of utility infrastructure is as follows:

- Electricity provision is the responsibility of Northern Powergrid.
- Gas provision is the responsibility of Northern Gas Networks.
- Telecommunications provision is the responsibility of BT and a range of other telecommunication providers.
- Water supply and treatment is the responsibility of Yorkshire Water.

The above parties are the incumbent utility in the area and own and operate the major utility distribution systems. Other parties are able to connect into these networks and own and operate these connections. These other parties then become responsible for the delivery of the utility to the customer over that part of the network they have installed.

5.6 Summary of Utility Infrastructure

5.6.1 Electricity

The state of the overall distribution network in Bradford is robust and flexible at the Grid Supply Points which are at Bradford and Girdlington. This high level capacity is well distributed to the Primary Substations throughout the City Centre all of which, except Crown Street, have at least 35% spare capacity.

The impact of the increased demand in the City Centre is absorbed by spare capacity at the Primary Substations except Crown Street which requires reinforcement to supply those developments within the City Centre closest to it

When Shipley and Canal Road Action Area are included in the analysis then the Bradford GSP requires either upgrading or support from the Girdlington GSP.

Discussions with Northern Powergrid regarding solutions to the provision of additional capacity to the City Centre from Girdlington have considered two options; 1) upgrading Crown Street to An overall capacity of circa 24MW or 2) installing additional circuits into Bradford from Girdlington.

A cost of £2 million has been identified to upgrade Crown Street from 8MW to 16MW to enable the Valley developments to be supplied from it. There would be a further cost of £2 million to take this additional capacity from 16MW to 24 MW. The cost of additional cabling from Girdlington into the City Centre is approximately £2 million and would provide the same additional capacity.

The specific solution would be determined by Northern Powergrid and the further cost would be circa £2 million. Which developments contribute to this sum depends upon the sequencing of their connection, the size of the connection and what other developments have contributed.

Overall an estimated sum of £4 million would be required to be spent on upgrading the Northern Powergrid network to supply the additional developments proposed in Shipley and Canal Street and Bradford City Centre. This has been split across the two areas to result in a resulting infrastructure gap of £2 million for Bradford City Centre and £2m for Shipley Road and Canal Road AAP.

Northern Powergrid have stated that the costs to upgrade the network will need to be paid by the developer of the site that causes electricity capacity issues. A detailed understanding of the likely trajectory of development is required to understand how the electricity capacity can be most efficiently provided.

The ability for Northern Powergrid to contribute towards this costs will be dependent on the build out rates proposed development and how quickly Northern Powergrid can 'claw back' the costs of the upgrades through network charges. This will need to be discussed further with Northern Powergrid when there is further detail on the trajectory and build out rates of the development sites. The actual solution will depend upon which developments start first and where they are in relation to other developments and the substations. The developments will be connected via the primary substations to local substations and hence the developments.

Discussions with Northern Powergrid concluded that if the developers aggregate their development loads and collaborate for their connections then Northern Powergrid would be able to offer a better technical solution at a much lower overall cost.

5.6.2 Gas

The state of the gas distribution network in Bradford is robust and flexible. The network has sufficient spare capacity throughout the network and this capacity is available within public highways close to the developments. The proximity of these connections to the proposed sites means that the costs of the connections are consistent with typical such connections and there should be no major upgrade costs to Northern Gas Networks assets that would be associated with the developments.

The impact of the increased demand due to development is easily absorbed by the existing network.

5.6.3 Telecommunications

There are no infrastructure issues restricting the ability for superfast broadband to be delivered to the whole City Centre, including new sites.

Bradford is well served by 4G mobile internet.

5.6.4 Water Supply and Waste Water Treatment

Through dialogue with Yorkshire Water it has been confirmed that major investment in water supply and waste water treatment infrastructure is not required. Infrastructure provision under a 'business as usual' model would be funded by developers as part of development costs

6 Flood Risk and Drainage

6.1 Information Sources

This section covers provision of flood risk and drainage infrastructure.

The following sources of information have been used to populate this chapter:

- A meeting has been held with CBMDC's Drainage and Flood Risk team.
- A range of outputs from the Bradford Beck Flooding Map has provided information on flooding levels in the City Centre.
- Liaison by email with the Environment Agency.
- Preliminary Flood Risk Assessment.
- Strategic Flood Risk Assessment Part 1.
- Draft Strategic Flood Risk Assessment Part 2.

6.2 Current Issues and Fit for Purpose

CBMDC produced a Preliminary Flood Risk Assessment in 2011⁶, as part of their requirements as a Lead Flood Authority. This concluded that there were no areas in the whole District, including the City Centre 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.

The Council's Strategic Flood Risk Assessment (SFRA)⁷ highlights that the delineation of the high-risk zone within the City Centre is relatively straightforward, and does not warrant significant hydraulic modelling for the purpose of a general risk assessment. The City Centre is only at risk from flooding from the Bradford Beck and from surface water.

Both the Environment Agency and the CBMDC Drainage Team, it has been confirmed that the City of Bradford has an overflow tunnel to deal with flooding from the Bradford Beck.

CBMDC has carried out extensive flood risk modelling of the City Centre. This data is more accurate than the Environment Agency Flood Mapping, as it recognises that there is an overflow tunnel (3.4m) providing flood defence to Bradford Beck.

CBMDC has agreed that the CBMDC flood modelling can be used for major development schemes and to inform the Strategic Flood Risk Assessment. The SFRA part 1 was based on the CBMDC modelling.

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.

⁶ CBMDC Preliminary Flood Risk Assessment, Preliminary Flood Risk Assessment to comply with the Environment Agency Final Guidance 2011

⁷ CBMDC (2014) Draft Bradford Strategic Flood Risk Assessment. Report JBA Consulting

This model has been used to confirm the flood risk of the proposed site allocations in section 7.4.

The flood risk and drainage issues in this sub area will be managed through the sequential and exceptions tests on all future site allocation and through evidence provided through the emerging Strategic Flood Risk Assessment Part 2, which is scheduled for completion in 2015.

New regulations came into force in April 2015 to require SUDS to be agreed through the planning application process. This means developers will need to agree their SUDs with CBMDC and developers will need to meet certain SUD standards, as set out in Planning Practice Guidance. The guidance includes a hierarchy of acceptable discharge solutions with infiltration to the ground the most preferred and connection to sewers the least preferred (but still permissible).

6.3 Planned Schemes

There are no committed flood alleviation schemes in the City Centre. This has been confirmed through dialogue with Flood Risk Officers and the Environment Agency.

The CBMDC drainage team has confirmed that the Council will seek to implement national SUD standards in the City Centre when the above regulations come into force in April 2015. This means that each site has to meet the surface water drainage requirements in the boundary of their development.

Yorkshire Water have noted that they may undertake a Drainage Area Plan (DAP) in AMP6, as they are aware that there has been some localised flooding incidents in the area.

6.4 Impact of Development Proposals

CBMDC provided an output from their flood model showing the depth of flood water in a 1:100 event. This has been compared with the Environment Agency mapping. The CBMDC flood data shows that the majority of the city centre is not at risk of flooding from the Bradford Beck.

In the city centre it is likely that each site will need to deal with their SUDs needs, through a more urban solution. For example consider green and blue roofs, flood bowl car parks, water gardens and permeable pavement or roads. Each site would need to provide adequate drainage or SUDs on site.

Yorkshire Water have also noted that redevelopment of sites in the City Centre could provide an opportunity to divert surface water, currently discharging to sewer, to more sustainable forms of drainage or water course. The CBMDC drainage team would expect brownfield sites to follow the surface water hierarchy and as a last resort a new development could potentially drain into a sewer; however a 30% reduction in flow rate (compared to the existing flow rate) would be required by Yorkshire Water.

The draft Level 2 Strategic Flood Risk Assessment (2015) commissioned by CBMDC notes that the city centre AAP boundary does not include any functional floodplain owing to the density of development and infrastructure.

The following table shows the sites that are either wholly located outside of Flood Zone 3a or where only a nominal area is within Flood Zone 3a/3b:

Site Reference	AAP	Comments
B/1.3	BCC	Proposed employment site with minimal fluvial and surface water risk on part of site. Rest of site is proposed for mixed use and is wholly outside of Flood Zone 3a but at risk from Flood Zone 2. Also at risk from climate change
B/1.6	BCC	Proposed mixed use site with nominal area within Flood Zone 3a. Also at risk from climate change
CH/1.3	BCC	Site area >1 ha with some surface water risk
CH/1.4	BCC	Site area >1 ha with some surface water risk
LQ/1.3	BCC	Proposed employment site with minimal fluvial risk
SG/1.1	BCC	Proposed residential site wholly outside of Flood Zone 3a but at risk from Flood Zone 2
V/1.1	BCC	Proposed residential site wholly outside of Flood Zone 3a but at risk from Flood Zone 2
V/1.2	BCC	Proposed residential site wholly outside of Flood Zone 3a but at risk from Flood Zone 2
V/1.3	BCC	Site area >1 ha with some surface water risk
V/1.5	BCC	Proposed residential site wholly outside of Flood Zone 3a but at risk from Flood Zone 2
V/1.6	BCC	Proposed residential site wholly outside of Flood Zone 3a but at risk from Flood Zone 2
V/1.8	BCC	Proposed mixed use site with nominal area within Flood Zone 3a. Also at risk from climate change
V/1.10	BCC	Proposed mixed use site wholly outside of Flood Zone 3a but at risk from Flood Zone 2

The Draft Level 2 SFRA flood maps showing the draft functional floodplain and flood zones 3a, 3b and 2 in relation to the proposed allocations are in Figure 6.1 and 6.2.

Figure 6.1: Flood Zones (SFRA part 2)

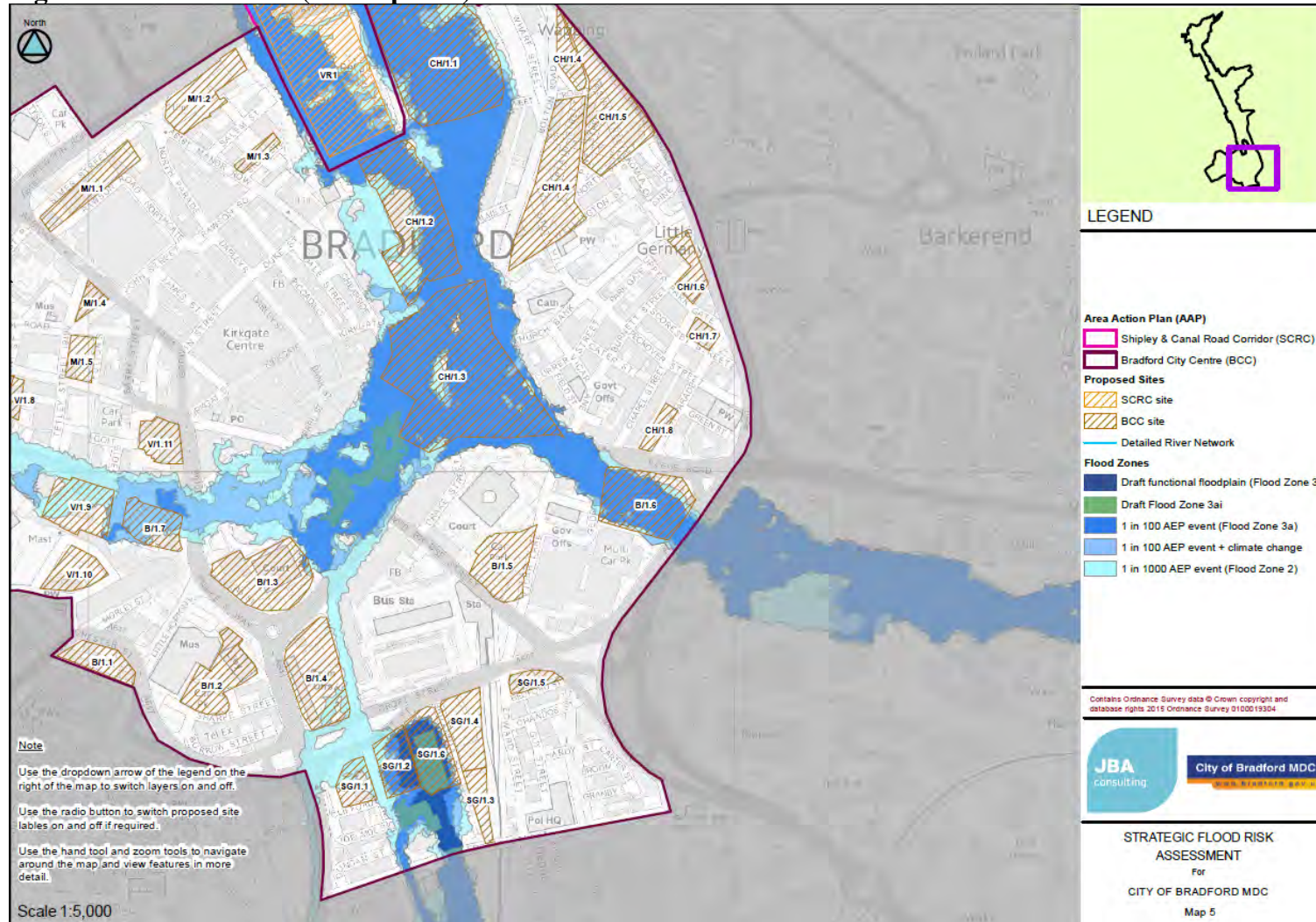
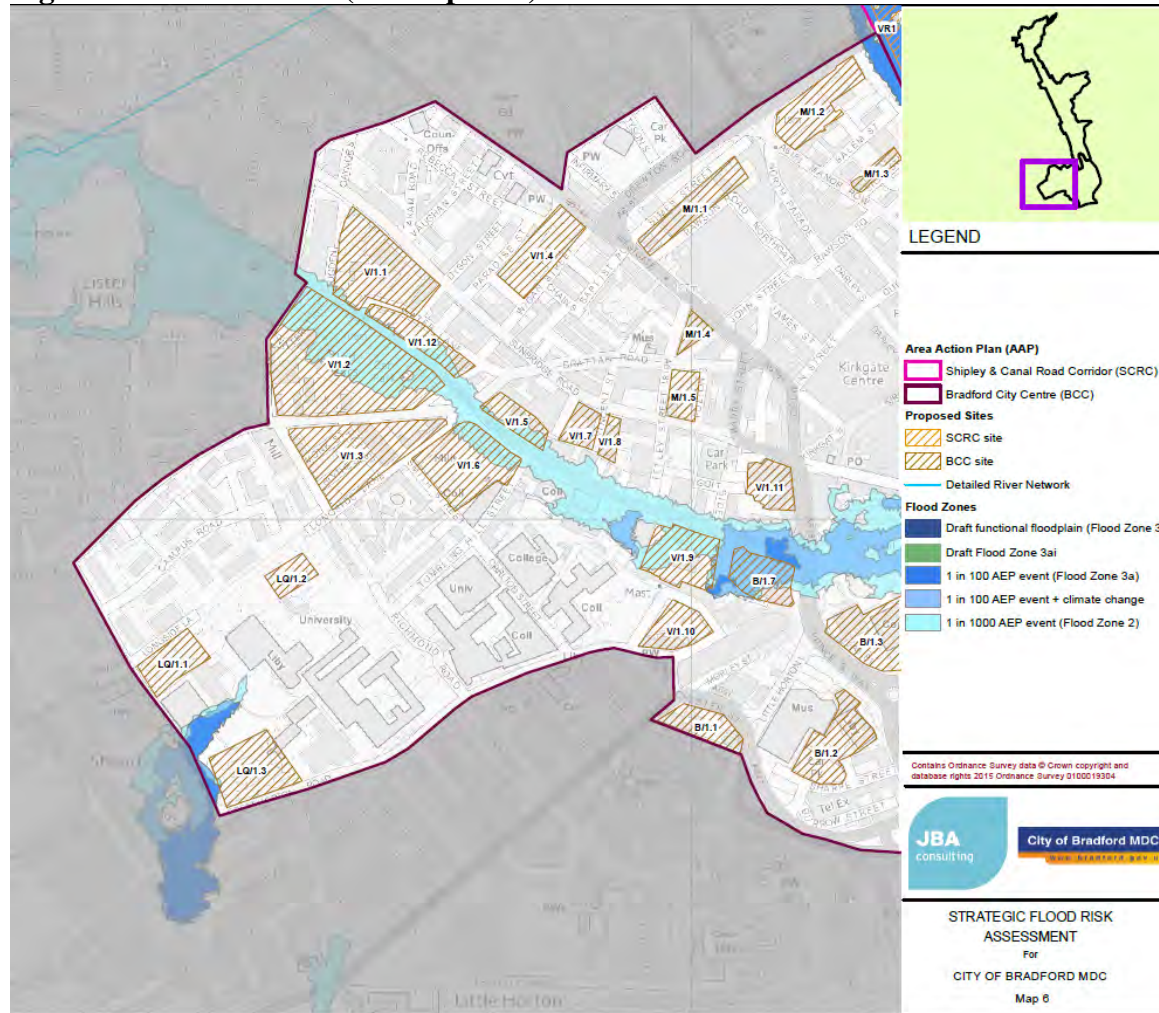


Figure 6.2: Flood Zones (SFRA part 2)



6.5 Delivery and Responsibilities

The responsibility to tackle fluvial flooding lies with the Environment Agency. Whilst the responsibility to tackle surface water flooding lies with CBMDC as the future SUDs Approval Body (SAB). Yorkshire Water also have an interest in surface water if their assets (sewers) are being used as a means to disposing of the surface water.

6.6 Summary of Flood Risk and Drainage Infrastructure

There are no major flood risk issues limiting the delivery of housing and employment sites in the City Centre.

CBMDC are seeking to develop Local SUDS standards, which will be implemented through CBMDC's increased responsibility to sign off SUDs through planning applications from April 2015. The Local Standards will set an area wide approach to managing surface water in the corridor. This is being progressed as part of the SFRA part 2. There are no known gaps in delivery and funding of flood risk infrastructure.

7 Green Infrastructure, Open Space and Public Space

7.1 Information Sources

This section covers provision of open space, play areas and allotments.

The following sources of information have been used to populate this chapter:

- Bradford Open Space, Sport and Recreation Study (2006).
- A green infrastructure study focusing on the City Centre and Shipley and Canal Road corridor
- A green infrastructure study for Bradford City Centre (2014). The studies aim to:
 - Help applicants, developers and planners ensure that proposals for development make the most of potential opportunities to improve existing GI and create new GI for the overall benefit of the City Centre / Shipley Road corridor.
 - Develop a long term vision and strategic framework to support the delivery of GI across the City Centre.
 - Help identify of implementation including issues relating to delivery and funding, enabling the economic value of GI assets to be incorporated into the decision making process.
- A joint green infrastructure and sports meeting was held with the Council's Countryside and Rights of Way Officers.

7.2 Current Issues and Fitness for Purpose

7.2.1 Green Space in the City Centre

The Council's current district-wide Open Space, Sport and Recreation Assessment was completed in 2006. There is therefore a need to update the Assessment in order to reflect changes to the open space stock occurring district-wide in the intervening 8 years. CBMDC is currently considering to update the Open Space Assessment in the next few years.

The 2006 open space study and dialogue with CBMDC officers has confirmed that there is a recognised deficiency in terms of useable open space and play areas in the City Centre. Whilst the delivery of City Park has provided well used and valuable amenity space, there is now an aspiration to provide additional open space and improve levels of connectivity between existing open spaces, alongside enhancements to the quality of the public realm to achieve an attractive pedestrian environment. There are also opportunities for increased use of street trees.

There is recognition that the City Centre does not have the available space to provide large areas of open space and play areas. However there is potential to link the City Centre to other open spaces to allow people to cycle or walk from the city centre to access open space outside the City Centre, as detailed in section 7.2.3.

Figure 7.1 (below) reproduced from the Green Infrastructure study maps the following typologies:

- Public Space (spaces with facilities for public use such as benches and paths) (PS).
- Civic spaces (paved spaces including ‘significant’ pedestrian footways and squares) (CS).
- Street trees (ST).
- Institutional Greenspace (University and religious building grounds) (IG).
- Existing ‘Blue’ infrastructure and SuDS schemes (B) / (SuDS).
- Amenity greenspace (space associated with buildings / car parks etc, but with no facilities for public use) (AG).
- Roadside greenspace (spaces associated with the road network) (RG).
- Greenspace along the rail corridor (TG).
- Private gardens (PG).
- Derelict land (D).

Analysis of Figure 7.2 3 (below) illustrates that 18.82% of Bradford City Centre AAP is comprised of Green Infrastructure assets (31.18 ha out of a total area of 165.68 ha); the Public Space typology covers 2.89 ha of the City Centre AAP area (1.74%); only 7 of a total of 302 identified GI assets are Public Spaces; Civic Spaces are largely confined to ‘The Bowl’ and ‘The Market’; and amenity greenspace in the City Centre is primarily located within the Southern Gateway, Broadway, the Bowl and the University and College Campus areas.

Figure 7.1: Green space typologies within the BCC AAP boundary



7.2.2 Accessibility

Natural England's 'Standards for Accessible Greenspace' (ANGSt) recommends that everyone, wherever they live, should have accessible natural greenspace both close to home and within sustainable transport distances of:

- at least 2 hectares in size, no more than 300 metres (5 minutes' walk) from home.
- at least one accessible 20 hectare site within two kilometres of home.

The City Centre is not well connected to greenspace at the 300m (local) level with only a small area in the north east and the far western edge having coverage, but that the whole of the City Centre AAP area has access to a 20 ha site within 2km.

7.2.3 Green Space Outside the City Centre

The Green Infrastructure Study (2014) notes that the City Centre AAP benefits strongly from its proximity to a number of formal and informal green spaces including:

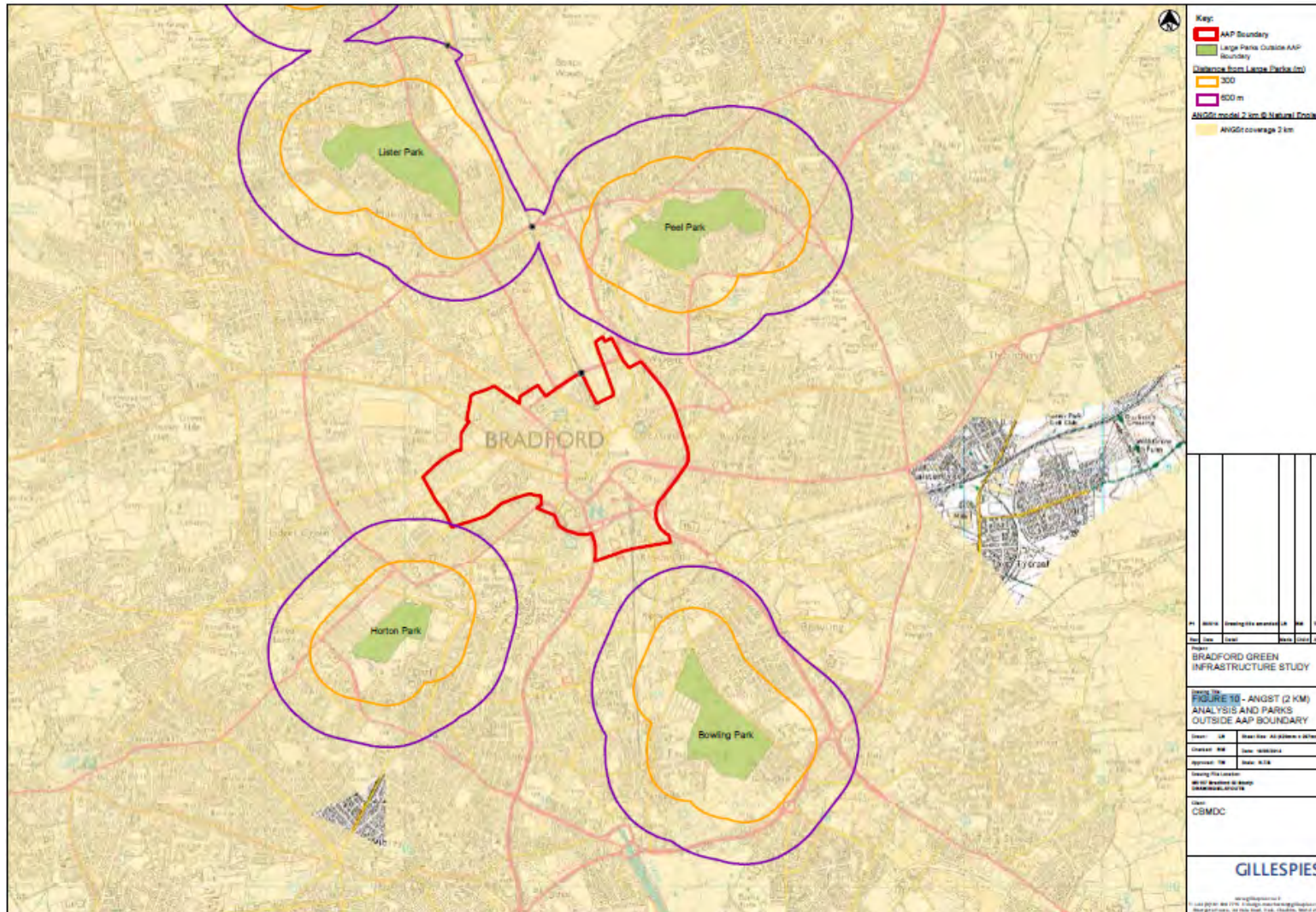
- Lister Park.
- Peel Park.
- Horton Park.
- Bowling Park.

Although these parks lie beyond the City Centre AAP boundary, their close proximity means that they are an asset to the city centre as a whole and can bring benefits to the city centre community as a whole. The above parks are shown on Figure 7.2. In addition Infirmary Fields provides informal open space to the west of Bradford City Centre AAP boundary. The Green Infrastructure study highlights that the identified major parks can be accessed by sustainable transport (walking or cycling) from the City Centre. Figure 7.2, reproduced from the study, shows Natural Greenspace Standard (ANGSt) 2km analysis, showing Parks beyond the AAP boundary. The purple boundary represents a 600 metre radius of the parks, showing that these parks have the potential to offer amenity to current and future residents.

7.2.4 Allotments

There are no allotments in the City Centre. CBMDC does have a waiting list for allotments. However CBMDC are currently working to fully utilise the allotments in Council ownership and bring unused allotments back into use. There is therefore potential for City Centre residents to access allotments outside the City Centre.

Figure 7.1: ANGSt 2km analysis highlighting Parks beyond the AAP boundary but within 2km



7.3 Planned Schemes

CBMDC has no plans to provide any new open space in the City Centre. However there are plans to continue to improve the public realm in the City Centre, which has been referenced as a pedestrian improvement in the transport chapter (see section 4).

The Green Infrastructure Study recommends the following interventions. The opportunities to deliver the interventions will be considered through the next iteration of the Bradford City Centre Area Action Plan.

Greening the Grey: Green streets and Green gateways: The provision of green streets and gateways are suggested as an opportunity to address multiple issues (such as air quality, walkability and health, storm water management and the creation of positive identity) in a creative and sustainable way through the delivery of street trees, SuDS systems and planters and to introduce sustainable urbanism into the existing highway infrastructure network

Greening the Grey: Green Roofs / Walls: The provision of green roofs/ walls provide multifunctional GI. Large flat roofs / walls are suggested as most suitable, although other options could include smaller green roofs on bus shelters or market stalls.

Greening the Grey: Habitat Highways: Habitat highways are comprised of GI assets which are either linear in nature or whose proximity to other GI assets create the potential to create a wider linked network, aiding the mobility of species. Such assets could involve wildflower and informal planting along the road or rail network and 'green' SUDs measures along the road network. These can be managed to facilitate habitat creation and the mobility of species into the wider GI network.

Greening the Brownfield: Boundary Treatments: Derelict and neglected development sites have a 'blight' effect on their surroundings. The GI study suggests that improving the boundaries of the sites can improve the image of the site and the surrounding area in a cost effective way. Living barriers can also offer pollution filtering benefits. Such treatments could be applied to sites which become available as a result of a 'stalled' project.

Greening the Brownfield: Greenspace treatment: Building on the success of Bradford Urban Gardens, these sites that are awaiting development could temporarily be used for other uses such as community food growing or recreation. Through temporary proposals and land uses, 'stalled spaces' can deliver community and environmental benefits if appropriately designed and managed.

Network of Sites – key green spaces: Existing and proposed spaces could become a network of public open space/green space across the city centre. Potential to enhance existing green spaces and create a series of play areas. Also potential to re-establish the presence of the Bradford Beck through the city centre as a series of SUDs features and rain gardens along public road network.

Green / blue links through development sites: New Green Infrastructure Assets which form part of a network should be created within development sites. SuDS should be embraced as a feature or series of features within the development and

the identity of the local area and its heritage should be reflected in design solutions.

Legibility and links: Links to the large GI assets located both within and outside the AAP boundary should be created or enhanced. Pedestrian and cycle facilities such as good crossings and cycle lanes should be prioritised along these routes. Where GI assets exist along the route, these are used to enhance it. Where they do not, street trees, planters, signage and promotional information can be used. Where these routes enter conservation areas, these measures should reflect the special qualities of their location.

7.4 Impact of Development Proposals

7.4.1 Accessibility Standards

Figure 7.3 (below) compares green space provision within the City Centre AAP boundary against National Greenspace Standards. This highlights that the 300m and 2 km categories are more likely to be accessed by sustainable transport (walking or cycling) than greenspaces in the 5km and 10km categories which would more commonly be accessed by private transport.

Current ANGSt provision at the 300m level is poor across the City Centre with coverage limited to the extreme west and north east of the AAP area. Therefore the majority of the residents in the City Centre have limited access to greenspaces 'on their doorstep'. The Green Infrastructure Study reference that the four 'significant' public greenspace outside the City Centre AAP boundary provide access to 'large scale' public greenspace. These are Peel Park, Lister Park, Horton Park and Bowling Park. Figure 7.3 (below) shows the proposed allocations within the BCC AAP boundary against the 300m ANGSt coverage. Despite this, all residential development sites within the City Centre AAP have full coverage at the 2 km ANGSt level.

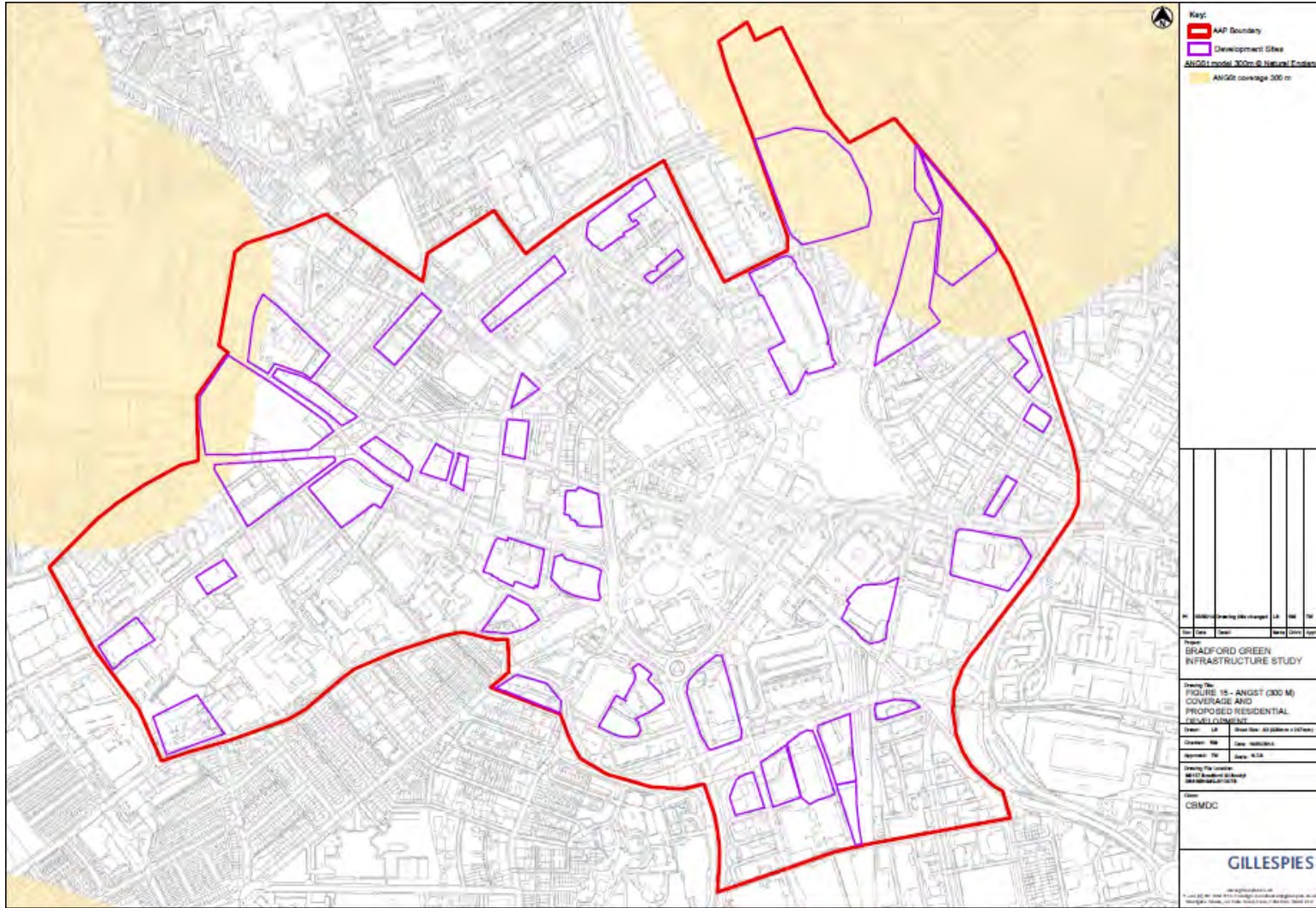
At a district wide level CBMDC normally request that if a site is located in close proximity to an existing play area or green space that would benefit from enhancements then S106 contributions from development are used to carry out site improvements. However there is less scope for this in the City Centre, due to its limited supply of existing open space and play areas. Therefore CBMDC would seek to accommodate an element of open space provision and play provision within proposed development.

It was recognised by CBMDC that it is generally harder to accommodate play space and green space on development sites in the City Centre and that there will be a need for developers to think more creatively about the forms that play space could take (e.g. roof gardens).

The CBMDC officers confirmed that the revenue / maintenance cost of delivering new open space or play areas must be considered alongside the capital costs for new provision. CBMDC would require revenue funding through the S106 or a management company to be put in place to manage the open space or play areas.

Section 13 includes a proforma setting out infrastructure requirements per strategic site allocation. The main findings are set out below. The remaining strategic sites have not been assessed as open space requirements only directly relate to proposed residential allocations.

Figure 7.3: Proposed allocations against ANGSt provision



A summary of the impact of the larger sites in the City Centre are set out below:

Former Provident Financial HQ (V1.1), Former Gas Works and Foundry (V1.2) and Former Bee Hive Mills (V1.6): The nearest area of open space to these sites is Infirmary Fields. This site however must remain in its current form and cannot be further developed as it is needed by CBMDC's Emergency Planning team as holding space for demonstrations. This precludes the site from being considered for off-site contributions for play space from developments in the city centre. Through discussion with CBMDC Officers it was confirmed that they are likely to require on-site provision of play space on these sites.

Cathedral Quarter CH1 and 2/Area West of Valley Road (CH1.2): This site has good links towards the Dales Way Footway. Through discussion with CBMDC Officers it was confirmed that they are likely to require on-site provision of play space and potentially improvements to Peel Park to provide the necessary open space and play areas for these sites.

Exchange Court (B/1.4): The nearest open space to this site is City Park. This site is likely to be too small to deliver on site open space or play space. CBMDC would therefore seek to secure a contribution to improving the public realm or public space (e.g. City Park).

7.5 Delivery and Responsibilities

The delivery of open space and play areas is generally the responsibility of CBMDC, potentially using a range of funding streams including developer contributions (S106) and other funding streams (e.g. Heritage Lottery Funding).

The delivery of the City Centre Green Infrastructure Study will be considered through the emerging Bradford City Centre Area Action Plan.

7.6 Summary of Green Infrastructure, Open Space and Public Space

In summary, the Bradford City Centre Green Infrastructure study finds that:

- Less than 20% of the AAP is comprised of GI assets (31.18 ha out of a total area of 165.68 ha).
- The Public Space typology covers 2.89 ha of the City Centre AAP area, out of a total area of 31.18 ha (1.74%).
- the City Centre and proposed residential development sites within the City Centre AAP do have full coverage at the 2 km level.
- a large number of both formal and informal green spaces are located outside the AAP boundary.
- There are limited green / public spaces within the City Centre.
- The whole AAP area lacks easy access (10 minutes walking distance) to good quality formal public open space.
- The AAP area has strong existing north-south links (Route 66 and the Dales Way link).

The public open space in the City Centre has been greatly improved in recent years through the delivery of City Park. This offers a great resource for all ages. The City Centre offers excellent accessibility across the Bradford District and beyond by a range of transport modes. This means that whilst there is limited open space in the City Centre a wide range of spaces can be accessed. New development sites will be expected to provide open space and will need to be innovative, including roof gardens etc.

CBMDC will monitor the use of parks and play areas and maintain / alter provision depending on the age of the population e.g. an increase in teenagers may mean that traditional play areas should be converted in MUGAs or other appropriate provision. Based on this monitoring, CBMDC will continue to improve and manage their play areas and parks through CBMDC capital and revenue funding and any available external funding.

Whilst there is limited open space and play area provision in the City Centre, this can be served by open space and play provision within other parts of the City and therefore is not an identified gap. CBMDC will work with developers to deliver new provision as part of developments or seek contributions to improve existing open space.

8 Playing Pitch and Sports Provision

8.1 Information Sources

This section covers provision of playing pitches and sports provision.

The following sources of information have been used to populate this chapter:

- Playing Pitch Strategy and Assessment Report (produced by Knight, Kavanagh and Page, December 2014).
- A joint green infrastructure and sports meeting was held with the Council's Countryside and Rights of Way team.

It has not been possible to meet with the Council's allotments Officer), however an understanding of allotment provision has been gained through discussions with other council officers.

8.1.1 Current Issues and Fit for Purpose

Overview

Paragraph 73 of the NPPF requires planning policies to be based on 'robust and up-to-date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision'. These assessments should 'identify specific needs and quantitative or qualitative deficits or surpluses of open space, sports and recreational facilities in the local area'.

Knight, Kavanagh and Page published a summary of their Playing Pitch Strategy (PPS) Assessment Report in December 2013 and the full version of the Playing Pitch Strategy in December 2014. The report seeks to provide a clear, strategic framework for the maintenance and improvement of existing outdoor sports facilities and ancillary facilities between 2014 and 2021.

This document builds upon the September 2011 'Strategy for Sport and Physical Activity in the Bradford district 2011-2015' by providing a detailed audit of playing pitch provision within the Bradford District, including assessment of need, demand and fitness for purpose.

The PPS has been agreed by Sports England and the sport National Governing Bodies (NGBs). The strategy utilises Sport England's Facilities Planning Model (FPM) to analyse gaps in sports provision by individual sport. FPM data is sufficiently detailed to allow the assessment of sports halls, swimming pools, and artificial grass pitch provision. Data can be viewed at levels up to and including census Output Areas.

Using the detailed audit within the Playing Pitch Strategy (PPS), it is possible to assess the levels of deficit for each type of provision. As the Knight Kavanagh and Page Playing Pitch Assessment is completed on a 'Strategic Area' basis, which does not align with the extent of the AAP, a balanced judgement of provision within the boundary has been considered. For this reason also, it is useful to reflect capacity and quality issues within the context of provision across the wider District.

Football

Although the Council owns the majority of sites within the District, there are a number of pitch providers, including academies, colleges, private sport clubs and Bradford University. Many of the pitches within Bradford are prone to waterlogging and therefore only a third of pitches are 'good' quality. The Bradford District FA have identified that the quality of ground maintenance has significantly reduced across the District.

Poor quality is considered to be a significant factor in the levels of overplay within Bradford; of a total of 29 pitches being overplayed, 52% are rated as poor quality.

City Centre Summary: Using the detail within the PPS Assessment Report, the following pitches are considered to be within the City Centre AAP boundary.

- **Bradford College**, contains one adult pitch which is currently considered to be overcapacity.
- **Hudson Avenue Road Recreation Ground**, contains one adult pitch which is considered to be of a poor quality as a result of holes on the pitch. Despite issues regarding quality, play at this site is considered to match the level the site can sustain.
- **Woodhead Recreation**, one youth pitch which can accommodate additional levels of play.
- **St Williams Catholic Primary**, contains one adult pitch which is currently overcapacity.

Based on the analysis of the above football pitches within the City Centre Area, there is considered to be levels of overplay. However, Bradford Girls Grammar, West Park Girlington and Whetley Academy all exist beyond the boundary of the City Centre Area Action Plan. There is considered to be capacity available at these sites.

Bradford District Overview: Overall there is considered to be a deficit of football pitches across most analysis areas, and there is no surplus across Bradford for adult match equivalent sessions at peak time.

Cricket

Clubs playing on local authority pitches highlights that the standard of cricket pitches is generally adequate for the standard played. Demand for Cricket across the wider district is very strong, with 198 senior teams and 147 junior teams. The audit of Cricket Pitches in Bradford found that 40% received a 'good' quality rating.

For the wider Bradford District, the Playing Pitch Strategy objective requires the 'meeting of unmet demand for access to additional pitches and work to increase the quality of existing provision.

City Centre Summary: There are two adult cricket pitches located on the edge of the City Centre boundary at Girlington CC Little Horton and Park Avenue CC. Girlington CC –Little Horton is considered to be of a standard quality, however there is significant levels of overplay at this site. Park Avenue CC is considered to be of a good quality and there are relatively high levels of occupancy at this site.

Bradford District Overview: There are 83 senior pitches and one junior pitch (Bradford Grammar School); of which 5 are unavailable for community use. Overall there is a deficit of cricket pitches across all analysis areas, with the greatest levels of overplay in Bradford West, Keighley and Shipley. Future demand for six grounds as well as latent demand leads to a shortfall citywide of 25.2 grounds, of which the greatest shortfall is 6.7 grounds in the Shipley Analysis Area (north of the AAP area).

Rugby

In total, there are 31 rugby union pitches located across 12 sites in Bradford. Of these, 20 pitches are available for community use. The Playing Pitch Strategy identifies that the objective for rugby union comprises ‘working towards meeting identified current and future deficiencies and increase quality as required’.

With regard to Rugby League, there are 37 dedicated rugby league pitches in Bradford across 27 sites. Of these, 33 pitches are available for community use and four senior pitches are not available for community use. The Objective for Rugby League within the Playing Pitch Strategy is to ‘work towards improving the quality of provision and reduce levels of overplay’.

Bradford City Centre Summary: There is no Rugby Union or Rugby League provision within the AAP area.

Bradford District Overview: Eight rugby union clubs operate in Bradford which amounts to a total of 58 teams across the District. There are no actual reports of unmet demand or displaced demand within Bradford, however the Playing Pitch Strategy Assessment indicates that there is an additional need to accommodate 15 match equivalents from latent and arising future demand. Identified levels of overplay can be attributed to training sessions taking place on match pitches.

The Playing Pitch Strategy Assessment Report identifies that the majority of rugby league pitches and their ancillary facilities in Bradford are rated as ‘poor’ quality and 30% are rated as standard. Based on latent and future League demand within Bradford, there is a large deficit of 18 match equivalent sessions.

Hockey

There is a total of six clubs within Bradford with 45 respective teams. Supply constitutes nine full-sized sand-based AGPs, of which almost all are located on education sites. The objective for hockey provision within the Playing Pitch Strategy is to ‘maximise access to existing provision and work towards improving the quality of existing provision’.

City Centre Summary: The City Centre AAP contains one full-sized sand-based AGP at Laisteridge Lane (University of Bradford):

- **Use:** The University takes priority on availability and any remaining slots are then available for community use. The pitch is used extensively by the University for both hockey and football training.
- **Quality:** The pitch was refurbished in 2010, for which the pitch quality is now standard. Maintenance is carried out by the University.

Bradford District Overview: All demand is currently accommodated inside the Bradford District. However through consultation a lack of capacity on current provision in Keighley to accommodate existing demand (both unmet and

displaced) expressed by Ben Rhydding Hockley Club. Airedale Hockley Club reports that if it had access to additional pitches, that it could field an additional two senior and three junior teams.

Bowls

There are 62 Bowling greens within Bradford which cater for a total of 46 clubs. Bowling Green distribution is evenly spread throughout Bradford. The Playing Pitch Strategy Objective for Bowls in Bradford is to ‘maximise access to existing provision and work towards improving quality’.

Bradford City Centre Summary: There are two Bowling Green pitches in or within close proximity to the AAP area:

- **Horton Park:** There are three Bowling Greens at Horton Park (which is neighbouring the AAP area). There is significant spare capacity at this site.
- **West Park Girlington:** There are two Bowling Greens at West Park, and it is likely that current levels of play could be accommodated on the one green.

Bradford District Summary: All Greens, excluding the Lido Bowling Green, are considered to be of good or excellent quality. The Playing Pitch Strategy assessment identifies that through consultation it is considered that there is some capacity on the majority of Bowling Greens in Bradford. A green may have no spare capacity on an afternoon/ evening when a popular league is operating but may be empty for the rest of the week.

Swimming Pools

There are currently no Council owned swimming pools in Bradford City Centre. Bradford. Bradford University operate a swimming pool, which is available to the public. Through discussions with CBMDC officers it was noted that the emerging Sports Facilities Investment Strategy highlights that there is an under provision of fit for purpose swimming pool facilities, particularly 25 metre pools. There are Council pools outside the City Centre however even these facilities are ageing and new facilities are recommended to provide better quality provision, with improved operational efficiency. CBMDC have a wider strategy to improve swimming pools facilities across the District. The proposals that impact on the City Centre are set out in Section 8.2.

8.2 Planned Schemes

CMBDC has confirmed that they have an aspiration to deliver a new 25 metre swimming pool in Bradford City Centre. A potential site has been identified at Britannia Street Mill and Car Park in the south of the City Centre. CBMDC are currently investigating funding options for the swimming pool and potential for other leisure uses to complement the swimming pool (e.g. a gym).

Discussions with CBMDC officers confirmed that high proportion of available sports pitches are over played. CBMDC are progressing a District wide Sports Facilities Strategy to reconsider swimming pool, sports centre and playing pitch provision. This may include closing services and opening new services.

To date, separate reviews of the below provision have been carried out:

- swimming provision and the supply of swimming facilities.

- sports halls.
- sports pitches.

The District wide Sports Facilities Strategy will be informed by the Facilities Planning Model, which seeks to assess whether the capacity of existing facilities for a particular sport is capable of meeting local demand for that sport, taking into account how far people are prepared to travel to such a facility.

The findings from these reviews and a strategy for future sports provision will be reported in the single Sports Facilities Strategy.

8.3 Impact of Development Proposals

Given the limited availability of land for playing pitch provision in the City Centre the CBMDC Sports team noted that a S106 contribution towards improving existing provision would be appropriate. The emerging Sports Facilities Strategy will provide an indication of the future strategy for sports facilities in the District.

Section 13 includes a proforma setting out infrastructure requirements per strategic site allocation. The main findings are set out below. The remaining strategic sites have not been assessed as open space requirements only directly relate to proposed residential allocations.

Former Provident Financial HQ (V1.1), Former Gas Works and Foundry (V1.2) and Former Bee Hive Mills (V1.6): Residents of this site could access sports facilities in the University of Bradford. The nearest Council operated sports provision is at Shearbridge. CBMDC would seek a developer contribution towards improving this provision.

Cathedral Quarter CH1 and 2/Area West of Valley Road (CH1.2): Residents of this site could access sports facilities in the University of Bradford. The nearest Council operated sports facilities at Peel Park (2 football pitches). CBMDC would seek contributions towards improving or providing additional sports provision in Peel Park through a developer contribution.

Exchange Court (B/1.4): Residents of this site could access sports facilities in the University of Bradford. CBMDC would seek contributions towards improving or providing additional sports provision in Peel Park.

8.4 Delivery and Responsibilities

Overall delivery responsibility for playing pitches, like open space, will ultimately rest with CBMDC, however there will be an on-going role through negotiation for developers to contribute towards providing playing pitches either on site, as could be appropriate at large scale strategic sites, or off site within the immediate locale.

The Playing Pitch Strategy should be utilised as a tool to guide the appropriate siting of new playing pitch provision to meet the needs of the overall district. CBMDC can potentially access a range of funding streams including developer contributions (S106) and other funding streams (e.g. Sports England or Football Foundation funding). Private sector sports provision also has a role to play in providing sports facilities; however private facilities are generally more extensive than Council run facilities.

8.5 Summary of Playing Pitch and Sports Provision

Based on the findings of the Playing Pitch Strategy, the City Centre does lack playing pitch and sports provision. However good public transport connections from the City Centre offers residents the opportunity to access playing pitches across the City. At a District level there is a deficit in football, cricket, rugby union and rugby league pitches. CBMDC are reviewing the findings from the PPS and developing a strategy for investment.

CBMDC are currently developing a District wide Sports Facilities Strategy, which will consider the full Council provision of facilities across the District. There is a Council aspiration to deliver a new 25 metre swimming pool in the City Centre, which would provide an excellent amenity for existing and new residents and workers in the City Centre.

Whilst there are deficits in playing pitch provision this is not considered to be a strategic infrastructure gap that would restrict development in the City Centre. New developments would be expected to contribute towards improving existing sports provision or providing new provision through developer contributions.

9 Community and Cultural

9.1 Information Sources

This section considers the following community and cultural facilities

- Museums and Galleries.
- Libraries.

The following sources of information have been used to populate this chapter:

- A brief discussion with the CBMDC Museums and Galleries Manager and a meeting with the Assistant Director of Culture, Tourism and Commercial Services (CBMDC).
- The emerging CBMDC Cultural Strategy.
- It has not been possible to arrange a meeting with Jackie Kitwood (Libraries), however libraries were briefly discussed with Tony Stevens.

9.2 Current Issues and Fit for Purpose

9.2.1 Museums and Galleries

The focus for community and cultural activities is Bradford City Centre. The following cultural facilities are available in the City Centre:

- The National Media Museum.
- Alhambra.
- St Georges Hall.
- Peace Museum (10 Piece Hall Yard, Bradford BD1 1PJ).
- City Library in City Park.
- Impressions Gallery in City Park.
- Kala Sangam Arts Centre St Peter's House.
- Cineworld.
- Bradford Playhouse.
- Police Museum in the City Hall.
- Design Exchange (City of Film) and Digital Exchange.
- A range of annual festivals, including Mala and Christmas markets.

CBMDC are working within an environment of public sector funding constraint. This limits what they are able to fund. This means CBMDC are seeking to focus their efforts and attempting to influence private or community spending to achieve the required outcomes.

A recent initiative for the Design Exchange in Little Germany has been the development of a digital exchange including a BT/Cisco tele-health platform to provide the system infrastructure around which practical software application and

remote sensor devices can be developed by start-up companies based in the new centre. This is being promoted by the University of Bradford.

The centre would house new digital start-up companies, some of whom will develop high value software and hardware products based around BT's leading edge technology platforms. BT will commit to locating a technology development team within the R+D centre in Little Germany.

St Georges Hall is a theatre venue, which is in need of investment to renovate the internal décor.

The Bradford Playhouse also is in need of internal renovations and there is also a need to bring the playhouse up to disabled access standards.

9.2.2 Library

The Central Library is located in the City Centre, in the City Park. There are no quality issues with the Central Library.

9.3 Planned Schemes

9.3.1 Museums and Galleries

The planned schemes include:

Former Odeon Building

The former Odeon Building is located to the west of the City Park. The Odeon closed in 2000 and has been vacant since this date. The site is owned by CBMDC, who have been working to consider options for the buildings future.

In August 2014 CBMDC announced that they had identified a preferred bidder to redevelop the former Odeon building. The preferred bidder is called 'Bradford Live'. Their proposals seek to recreate the original auditorium with a capacity of 3,500 seated and 4,000 with stalls standing. The venue of this size would attract national and international performers, and its flexibility would also allow sporting events, corporate product launches and conferences. The exact funding proposals for the scheme are currently being confirmed.

St Georges Hall

There is a requirement to renovate and redecorate St Georges Hall, with consideration of the heritage elements of the Hall. CBMDC have applied to the Heritage Lottery Fund for between £1m and £2m to carry out this work. CBMDC are still waiting for confirmation regarding this funding bid.

Delivery of a Cultural Quarter

A key aspiration for CBMDC, working with partners is to focus the creation of a cultural quarter around the Alhambra, National Media Museum and the vacant Odeon Building. This links well with City Park and provides a strong visitor area.

Promoting the Evening Economy

CBMDC are keen to promote the evening economy and increase spending in the City Centre from linked trips. For example through Albambra / St Georges Hall Theatre linking theatre and dinner trips.

Bradford Matters is an indicative being promoted by CBMDC, Little Germany Action Ltd and restaurateurs, who are working on trying to improve the restaurant offer in the City Centre.

There is a recognition that the completion of the Broadway Retail scheme is likely to extend the City Centre economy by offering extended retail opening hours into the early evening.

Other Cultural Provision

Through dialogue with CBMDC officers it was noted that the Impression Gallery had secured funding for the next 3 years, whilst Kala Sangam have lost their funding from the Arts Council.

9.3.2 Libraries

There are no planned improvements to library provision in Bradford City Centre.

9.4 Impact of Development Proposals

Bradford City Centre 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.

The existing cultural facilities have capacity for increased usage and private sector provision is an option depending on the cultural services required.

There is no identified gap in community and cultural provision linked to the planned new housing and employment in the City Centre. The planned growth would support the existing offer and attract existing provision.

There is scope for CBMDC to request support for public art through S106 contributions on a case by case basis, if this is deemed appropriate.

9.5 Delivery and Responsibilities

The delivery and operation of community and cultural facilities is the responsibility of CBMDC, charity organisations and the private sector.

9.6 Summary of Community and Cultural Infrastructure

Within the district, the current main provision of museums and galleries is in Bradford City Centre. CBMDC are working within an environment of public sector funding constraint. This limits what they are able to fund and means CBMDC are seeking to focus their efforts and are trying to influence private or community spending to achieve the required outcomes.

The priority schemes for CBMDC are:

- Redevelopment of the former Odeon Building.
- Refurbishment of St Georges Hall.
- Delivery of a cultural quarter.
- Promoting the evening economy.

These priority schemes have identified funding sources. There is therefore no gap in the provision of community and cultural facilities.

The City Centre library has recently been relocated and there is no gap in library provision in the City Centre.

10 Education

10.1 Information Sources

This section covers the provision of primary and secondary schools.

The following sources of information have been used to populate this chapter:

- A meeting has been held with the CBMDC Education Department in June 2014 and a follow up discussion took place in June 2015.
- Data on school places provided by the CBMDC Education Department.

10.2 Current Issues and Fit for Purpose

There are currently no primary or mainstream secondary schools within the Bradford City Centre Area Action Plan (AAP) boundary. Figure 10.1 shows existing school provision near the City Centre.

The nearest primary is the Rainbow Primary School, completed in 2011, is immediately outside the City Centre AAP boundary on Nelson Street. In recent years the Diocese of Leeds has disposed of St. Mary's Primary School and merged it with St. Peter's on Leeds Road, reducing City Centre primary school provision.

There is a specialist secondary school in the City Centre called the Bradford Studio School (14 year olds plus), which specialises in international food and travel.

A new secondary school opened in September 2014 on Trinity Road to the north of AAP boundary called Dixons McMillian Academy. This school could serve city centre residents, and took its first intake of year 7 students in 2014⁸. However it is considered that this school is already at capacity and will not be able to accommodate future potential growth. Other secondary schools that could be accessible from the City Centre include Thornton Grammar, Belle Vue, Oasis Academy Lister Park (Challenge College).

Primary school provision in the City Centre is nearly at full capacity. The Council normally uses a 5% working surplus; however currently in the District as a whole the surplus is approximately 2%. There are however some places available at the Rainbow Primary School, though this school does not exclusively serve the city centre and children travel here from Manningham.

10.3 Predicting School Places

The Local Authority (LA) uses data on GP registered children and demographic trends to predict future school provision.. There are some caveats to using this data, for example there are uncertainties around high migration groups as some

⁸ It should be noted however that the school's admissions policy states that following assessments from children District wide, there is an independent random selection to allocate children to the school.

may not be registered with GPs. The registered GP data is considered to be the most accurate way of confirming children in the Bradford District.

The Bradford District experiences a high level of churn amongst its cohort of school children each year, with large numbers both leaving and joining its schools (i.e. moving in or out of the District). Over the last 10 years the number of reception children in Bradford Primary schools has increased from approximately 6,500 to over 8,000. Secondary numbers have increased by only approximately 600. The demand for places will change as primary numbers work through to secondary ages. It is predicted that there will be a need to expand secondary provision significantly which will be exacerbated by new housing developments.

Each year the LA is required to use the GP registered children data to confirm future requirements to the Department for Education (DfE). This can take into account developments with planning consent, but does not consider sites allocated through local plans or the phasing of the sites in local plans. In the last return the LA were asked to confirm the S106 contributions that they had secured and this was then deducted from the total funding received. This funding stream for new school places is called Basic Needs Funding.

The majority of new school places are generated from the existing population living in existing houses. However the LA factors in school places that are predicted to be generated from new housing development sites using an in-house formula for primary and secondary school provision.

The formula can be used to create a cost per required school place, which is requested by CBMDC through a S106 if there is inadequate primary or secondary provision in the vicinity of the proposed development site.

Primary School Provision

The in-house formula for predicting primary school places uses the Department for Education's costs for a school place and assumes 1 to 2.5 children per school year (7 years for primary school places) for every 100 new homes.

Number of school places x number of years at primary school (7) x number of dwellings / 100 (per 100 homes) x cost of a primary school place defined by DfE (£13,345)

Therefore for a 200 unit scheme of 2 and 3 bedroom houses (2 school places per school year for every 100 new homes) the calculation would be as follows:

$$2 \times 7 \times 200 / 100 \times £13,345$$

This results in 28 additional primary school places and a **total contribution of £373,660 or £1,868 per dwelling** for primary school provision.

The number of school places expected to be generated from different sizes of dwelling is shown in table 10.1 below.

Table 10.1: Predicted Primary School Places

Primary School places	Primary School Places per dwelling
2 bedroom Apartment	1 school place primary school years (7 years) per 100 units
Houses	2 school place primary school years (7 years) per 100 units

Houses with four bedrooms or more	2.5 school place primary school years (7 years) per 100 units
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Secondary School Provision

The in-house formula for predicting secondary school places uses the Department for Education's costs for a school place and assumes 1 to 2.5 children per school year (6 years for primary school places) for every 100 new homes.

Number of school places x number of years at primary school (6) x number of dwellings / 100 (per 100 homes) x cost of a secondary school place defined by DfE (£20,110)

Therefore for a 200 unit scheme of 2 and 3 bedroom houses (2 school places per school year for every 100 new homes) the calculation would be as follows:

$$2 \times 6 \times 200 / 100 \times £20,110$$

This results in 24 additional secondary school places and a **total contribution of £486,240** or **£2,413 per dwelling** for secondary school provision.

The number of school places expected to be generated from different sizes of dwelling is shown in table 10.2 below.

Table 10.2: Predicted Primary School Places

Secondary School places	Secondary School Places per dwelling
2 bedroom Apartment	1 school place secondary school years (6 years) per 100 units.
Houses	2 school place secondary school years (6 years) per 100 units.
Houses with four bedrooms or more	2.5 school place secondary school years (6 years) per 100 units.

10.4 Planned Schemes

There are no new primary or secondary schools planned in the City Centre AAP boundary. However a new secondary school is planned to the south east of the City Centre on Fenby Avenue called Bradford Forster Academy. The Academy opens in September 2015 and will provide high quality school places for 210 year 7 pupils at the point of opening. The school will build upwards from year 7 from September 2015 and will reach full capacity by September 2019. This school has the potential to serve the City Centre.

10.5 Impact of Development Proposals

10.5.1 Overview

There is currently some primary school capacity at the Rainbow Primary School on Nelson Street. However if the proposed new housing sites attract families to the City Centre there will be a requirement to provide additional primary school provision.

Discussions with the Local Authority Education Department has confirmed that there is an need for additional secondary school places to serve both planned new

housing in the City Centre and surrounding areas including the Bradford Shipley Canal Road Corridor. The Dixons McMillan Academy has partly fill this requirement. However, the school will satisfy current demand and not future demand. A deficit therefore remains.

CBMDC are currently exploring options for a new secondary school location in the City Centre or in the Bradford Shipley Canal Road Corridor. A new secondary school in this location would absorb the need arising from the planned development forecast in the City Centre AAP and it would also be capable of satisfying some of the demand arising across the rest of the district owing to the city centre's good transport linkages. There is also potential for a 'through school' to be provided in the City Centre to serve ages 5 to 18 year olds.

Section 13 includes a proforma setting out infrastructure requirements per strategic site allocation. The main findings are set out below. The remaining strategic sites have not been assessed as open space requirements only directly relate to proposed residential allocations.

Former Provident Financial HQ (V1.1), Former Gas Works and Foundry (V1.2) and Former Bee Hive Mills (V1.6): The nearest primary and secondary schools are a substantial distance from this site. The LA noted that a new primary school would be supported on site to provide capacity for these sites and the other residential allocation sites on the west of the City Centre. The LA also noted that a new secondary school was required to support the City Centre and Shipley and Canal Road proposed site allocations. The LA noted that the City Centre offered an excellent location for a new secondary school as it is easily accessible by public transport from across the City.

Cathedral Quarter CH 1 and CH2: The nearest primary school is Westminster CE and the nearest secondary school is one in a million. There is limited capacity in these schools. S106 / on site provision would be required. A new secondary school provision could provide capacity for this site.

Exchange Court (B/1.4): The nearest primary school to this site is the Rainbow Primary School. There is currently some capacity in this school, but this may be taken up before the site is developed. The nearest secondary school is a substantial distance for this site. CBMDC would seek to provide necessary capacity in a new secondary school.

10.5.2 Likely New School Places

Approximately 3,790 new dwellings are planned for the City Centre through the Bradford City Centre Area Action Plan.

Using the CBMDC formula set out in section 10.3 an indication of the likely number of new school places generated by the proposed new housing can be made.

Based on an assumption that half the dwellings are 2 bedroom flats and half are 2 / 3 bedroom houses (which is a worse case assumption) the new residential development would generate a requirement for 398 additional primary school places and 341 additional secondary school places.

This is based on the assumption that there is no capacity in the existing schools.

10.6 Funding

The funding to create additional school places (through either expansion of existing schools or creation of new schools) is mainly funded through the Basic Need Funding. This is funding received from central government.

In the past there have been additional pots of funding that are provided by central government and the LA. This has included Targeted Basic Need (which was extra funding for the LA based on a predicted increase in school places). This was provided once in 2011 / 2012, but did not create any provision in Bradford City Centre.

In 2011 / 2012 Bradford bid for two new secondary schools through the Priority Schools Building Programme (PSBP) for funding. The bids were unsuccessful although a bid to significantly re-model or re-build four existing secondary schools in the wider District was successful. A second round of PSBP has been announced and the LA plan to submit a bid for this funding. This is more about improving the existing fabric of schools, rather than providing new schools.

Free schools apply for capital funding directly from central government and use this to build their premises. Free schools can request to use Council owned land or buildings, but the funding should still come straight from central government.

S106 provides some income to the LA, however they do not rely heavily on this funding. This is because there is no guarantee of receiving S106 contributions and they are sometimes paid after the provision needs to be provided.

10.7 Delivery and Responsibilities

The responsibility for delivery of additional school provision falls with the CBMDC as the Local Authority.

10.8 Summary of Education Infrastructure

Through discussions with the LA it has been confirmed that additional primary and school places will be required to support the residential development proposed through the Bradford City Centre Area Action Plan (BCCAAP). The LA have confirmed that a new secondary school or 'through school' is required to provide the necessary school places. The Dixons McMillan Academy will partly fill this requirement. However, the school will satisfy current demand and not future demand. A deficit therefore remains.

CBMDC are currently exploring options for a new secondary school location in the City Centre or in the Shipley and Canal Road Corridor. A new secondary school in this location would absorb the need arising from the planned development forecast in the City Centre AAP and it would also be capable of satisfying some of the demand arising across the rest of the district owing to the City Centre's good transport linkages.

Approximately 3,790 new dwellings are planned for the City Centre through the Bradford City Centre Area Action Plan. Using the CBMDC formula set out in section 10.3 an indication of the likely number of new school places generated by the proposed new housing can be made.

Based on an assumption that half the dwellings are 2 bedroom flats and half are 2 / 3 bedroom houses (which is a worse case assumption) the new residential development would generate a requirement for 398 additional primary school places and 341 additional secondary school places.

The provision of new schools will be delivered through the following funding mechanisms:

- Priority Schools Building Programme (No funding currently available).
- Basic Needs Allowance (only if allocated by DfE).
- Future central government capital funding.
- Developer contributions (S106 or CIL).

11 Health

11.1 Information Sources

This section covers the health provision, including GP surgeries and hospitals.

The following sources of information have been used to populate this chapter:

- A meeting with the CBMDC Director of Public Health

11.2 Current Infrastructure

The City Centre is served by the Bradford City Clinical Commissioning Group (CCG). Health care is funded by GP surgeries receiving a funding allocation for each registered patient. The fund is higher for the under-fives and over 75s and higher still for the over 85s. The funding of additional GP and hospital provision and its procurement is controlled by the NHS West Yorkshire Local Area Team, whilst the quality of the services provided is the responsibility of the CCG.

There is currently no main stream GP provision within the City Centre Area Action Plan boundary.

The only GP surgery in the City Centre boundary is Bevan Healthcare (152 Sunbridge Road). This GP surgery has a particular focus of providing medical services for homeless and rootless patients.

The Fountains Hall Medical Centre is located on Fountain Street, Bradford, BD1 3RA. This is within walking distance of the City Centre, but outside the City Centre AAP boundary.

The reason that there is no GP surgery in the City Centre is because there is a limited residential population in the City Centre.

There are no hospitals in the City Centre, but the closest hospital is the Bradford Royal Infirmary.

11.3 Fit for Purpose

The Bradford City CCG has a very high demand for primary care. The CCG struggles to attract and retain quality staff. There are issues with the overall quality of the service provided by the CCG and it serves the most deprived population of any CCGs in the country. The CCG have struggled to proactively work on the prevention of disease. This means that they are very reactive to health issues.

The lack of spending on prevention of disease has resulted in the CCG not spending their full budget in the past few years. This has meant that whilst the CCG's budget has increased in the last few years in an attempt to tackle deprivation in the CCG area, the CCG has not received all the funding because of historical underspend.

The Bradford City CCG potentially has a high proportion of unregistered users. These users tend to access emergency care through hospitals rather than GP

services. This means the CCG does not receive funding for these people as they are not registered in the area.

Residents living in a certain area do not need to access their closest GPs surgery. They are able to register with any GP or access hospital facilities in any part of the country.

It is now accepted that a single GP doctor will have between 1,500 –and 5,000 patients on their books. The number of patients will depend on the needs of the community e.g. how often each patient comes to the GP.

There is a shortfall in NHS dentists in the whole of Bradford, including the City Centre. This shortfall is a concern for the NHS and CCGs because there is a known issue with poor dental health in Bradford. For example NHS statistics show that Bradford children have very poor dental health.

11.4 Planned Schemes

There are no planned improvements to GP, dentistry or hospital provision in Bradford City Centre.

11.5 Impact of Development Proposals

The CBMDC Public Health team noted that if the new sites in the City Centre were likely to be populated by young single people or professionals this would have a reduced impact on GP health provision compared to families. This would be monitored as development occurred in the City Centre.

There may also be interest from the existing GPs and social enterprise to provide further services. Alternatively, depending on the total level of new people that move to the City Centre, there may be an opportunity to provide a City Centre GP surgery. The mechanism used to decide whether a new facility is required would be the GP surgeries in the surrounding area highlighting capacity issues and potentially offering to operate a facility or highlighting that one is needed. Alternatively existing GPs might raise the issue through the Local Medical Committee.

The NHS West Yorkshire Local Area Team would decide whether funding is provided for a new facility, existing facilities expanded or extra GPs provided.

All the proposed development sites would have adequate access to existing Hospital and Accident and Emergency services and the Bradford Royal Infirmary.

Section 13 includes a proforma setting out infrastructure requirements per strategic site allocation. The main findings are set out below. The remaining strategic sites have not been assessed as open space requirements only directly relate to proposed residential allocations.

Former Provident Financial HQ (V1.1), Former Gas Works and Foundry (V1.2) and Former Bee Hive Mills (V1.6): The nearest GP health provision to these sites is provided by a social enterprise focusing on the health needs of the homeless, and rootless people called Bevan Healthcare on Sunbridge Road.

Cathedral Quarter CH1 and 2/Area West of Valley Road (CH1.2): The Fountains Hall Medical Centre on Fountain Street is the closest existing GP surgery to these sites. In addition, GP provision in Shipley could be accessed.

Exchange Court (B/1.4): The nearest GP surgeries to this site are the Bevan Healthcare and the Foundations Hall Medical Centre. Both of these surgeries are a 15 minute walk from this site.

11.6 Delivery and Responsibilities

The funding of additional GP and hospital provision and its procurement is controlled by the NHS West Yorkshire Local Area Team, whilst the quality of the services provided is the responsibility of the Bradford City Clinical Commissioning Group (CCG).

11.7 Summary of Health Infrastructure

Based on discussions with the CBMDC Public Health team it is considered that there is existing GP provision which could provide sufficient initial GP capacity for a growing residential population in the City Centre. If there was a large rise in population a City Centre GP provision would be considered.

The CBMDC Public Health team noted that if the new sites in the City Centre were likely to be populated by young single people or professionals this would have a reduced impact on GP health provision compared to families. This would be monitored as development occurred in the City Centre.

There may also be interest from the existing GPs and social enterprise to provide further services. Alternatively depending on the total level of new people that move to the City Centre there may be an opportunity to provide a City Centre GP surgery. The mechanism used to decide whether a new facility is required would be the GP surgeries in the surrounding area highlighting capacity issues and potentially offering to operate a facility or highlighting that one is needed. Alternatively the GPs might raise the issue through the Local Medical Committee.

The NHS West Yorkshire Local Area Team would decide whether funding is provided for a new facility, whether existing facilities should be expanded or whether extra GPs should be provided.

All the proposed development sites would have adequate access to existing Hospital and Accident and Emergency services and the Bradford Royal Infirmary.

There is therefore no funding gap for the provision of health services in Bradford City Centre.

12 Renewables and Climate Change

12.1 Information Sources

This section covers renewable energy and climate change infrastructure.

The following sources of information have been used to populate this chapter:

- A report of Strategic Director of Regeneration & Culture to the meeting of the Environment and Waste Management Overview and Scrutiny Committee to be held on 3rd December 2013.

12.2 Existing Infrastructure and Future Objectives

12.2.1 Overview

CBMDC are seeking to promote a lower carbon economy through the Bradford City Centre Area Action Plan and emerging Core Strategy. CBMDC are investigating the potential for additional or new provision of:

- District heating.
- Provision of an Energy Services Company (ESCO) tender.
- Biomass.

A summary of installed renewable energy and planned renewable energy schemes are set out in section 12.2.7.

12.2.2 District Heat Networks (DHN)

Leeds City Region (LCR) Heat Project

Leeds City Region have obtained funding from the Department of Energy and Climate Change (DECC) to undertake heat mapping work across participating authorities. Bradford is likely to begin this commission in late 2014.

This information will provide heat density and load data to inform the development of District Heat network business case. CBMDC Officers have made a bid to DECC for Heat Network Development Unit feasibility funding for Civic Quarter DHN and have successfully gained funding. This work is being delivered by external consultants and should be completed in late 2014 / early 2015.

Bradford District Heating Opportunities

District Heat Networks (DHN) or district heating schemes supply heat from a central source or multiple networked sources directly to buildings through a network of pipes carrying hot water. This means that individual buildings do not need to generate their own heat on site.

In March 2013 DECC published The Future of Heating: Meeting the Challenge. DECC has established a Heat Network Development Unit (HNDU) and launched a programme of funding rounds to support the development of District Heating Network investment propositions.

As Bradford Council continues to relocate employees to City Centre premises the size of and the energy demand from the corporate estate is growing. By 2014/15 it is anticipated that circa 2,000 employees will be operating from five sites in close proximity within the City Centre. This concentrated cluster provides an opportunity to establish a District Heating Network to service these buildings.

Development plans for a new city leisure centre and options to include the Media Museum would add to the potential heat demand.

The Civic Quarter District Heating Network Feasibility Study will develop the business case and options for connecting the below sites in a District Heat network:

- Jacobs Well.
- Former Central Library building.
- Mercury House.
- City Hall.
- Britannia House.
- Alhambra.
- St Georges Hall.
- City Hall.
- Options for Media Museum and city centre sports facility and potential to include the Odeon and Tyrls development sites.

A District Heating Network Embryo project is currently being developed around the refurbishment of former Central Library building and Mercury House.

Although the heat sources are still to be finalised, City Hall has an existing biomass facility and a proposed commercial energy from waste project (EfW) will have heat output capability in close proximity to the proposed network. Process heat is also produced from commercial sites adjacent to city centre.

A report taken to the Council's Executive in July 2015 provides the following business case:

Capital Costs	£7,535,920
IRR	10.12%
NPV	£3,765,198
Payback	9 Years
20 Year Income	£18,456,519

The business case has suggested that Britannia House and Argus Chambers, City Park One, Alhambra Theatre, Margaret McMillan Tower, Mercury House, St George's Hall, City Hall, Public Service Hub, Leisure Centre and eleven Incommunities social housing blocks would provide the optimum returns.

The Council has ambitious carbon reduction and renewable energy generation targets. An Energy Reform Plan is in place to deliver 15% energy consumption reduction by 2015/16.

The development of a City DHN provides an opportunity to drive energy cost reduction and energy resilience through energy source substitution i.e. switching to alternative energy sources, or more cost effective generation and management systems.

12.2.3 Energy Services Company (ESCO) tender

CBMDC Officers are working with legal and procurement colleagues on the development of outline formal structures for a Bradford Energy Company which will:

- Create an umbrella vehicle within which to site a Solar Photovoltaic system to generate and distribute energy locally generated, and that;
- The energy supply is regulatory compliant.

It is anticipated that elements of the ESCO will be in use in 2014 and linked to renewables project delivery. The technical elements of this work may be externally procured.

12.2.4 Biomass Biomass supply chain

The use of biomass fuels is regarded as a low carbon, renewable energy source. Currently the forest arisings from the corporate woodland estate are traded via a contractor and used as biomass fuel in Ilkley Town Hall and City Hall. However, it is unlikely that the corporate woodland estate will be able to supply large quantities additional biomass capacity into a District Heating Network.

Options to develop a sustainable biomass supply chain are currently being investigated in collaboration with a number of other organisations including local authorities and Pennine Prospects, the South Pennine rural regeneration company.

12.2.5 Installed and Pipeline Renewable Energy in the Bradford District

Table 12.1 below sets out the installed and pipeline renewable energy in the Bradford District in late 2013. The highlighted rows relate to provision in the City Centre.

Table 12.1: Summary of Renewable Energy Generation Capacity Installed and Current Pipeline

Site	Technology	Capacity (Kwh)	Annual generation Kwh	CO2 Saving (Tonnes)
Current Installed Provision				
St James Hospital	Photovoltaic	49.5	39,600	21.42
Jacobs Well	Photovoltaic and Solar Thermal	21	16,800	9.09
Britannia House	Photovoltaic and Solar Thermal	25	20,000	10.82

Industrial Museum	Photovoltaic and Biomass	25	20,000	10.82
Harris Street	Photovoltaic	25	20,000	10.82
Birklands	Photovoltaic	15	12,000	6.49
Oastler Centre	Photovoltaic	25	20,000	10.82
Mitre Court	Photovoltaic	25	20,000	10.82
Saltaire Primary	Photovoltaic	15.75	12,600	6.82
Total Capacity Installed		226.251	181,000	97.92
Future Provision				
Paddock	Photovoltaic	25	20,000	10.82
Shipleigh Pool	Photovoltaic and Solar Thermal	30	24,000	12.984
Eccleshill Pool	Photovoltaic and Solar Thermal	30	24,000	12.984
Keighley Leisure Centre	Photovoltaic and Solar Thermal	25	20,000	10.82
Keighley Market	Photovoltaic	75	60,000	32.46
Total Planned Capacity:		185	148,000	80.068

12.3 Impact of Proposed Development

The planned new housing and employment development in Bradford City Centre will be required to meet building regulation standards in relation to fabric efficiency.

In addition CBMDC will seek to request built in car charging points in residential development.

The Civic Quarter District Heating Feasibility Study will investigate the opportunity to create a district heating network in Bradford. Whilst the focus of this network is on Council owned buildings, if a network is viable there is an opportunity for new development to tap into the district heating opportunities.

CBMDC will also investigate on-going opportunities to support the low carbon economy and favourably consider the delivery of renewable energy, with consideration of technical and environmental constraints.

13 Larger Sites Information and Analysis

13.1 Summary of Sites

This section provides a detailed appraisal of the infrastructure issues on the larger / strategic proposed site allocations in the City Centre. The identified sites were agreed with CBMDC at the inception meeting for this commission.

Table 13.1. provides a summary of the strategic / larger proposed site allocations in the City Centre. The infrastructure issues are then set out by site from section 13.2 onwards.

Table 13.1: Summary of Strategic / Larger Proposed Site Allocations in the City Centre

Site name	Reference	Capacity
Exchange Court	B/1.4	Unknown
Area East of Valley Road	CH/1.1	600
Cathedral Quarter PH.1	CH/1.3	100
Cathedral Quarter PH.2	CH/1.4	200
Former Provident	V/1.1	400
Former Gas Works and Foundry	V1.2	400
Former Bee Hive Mills	V/1.6	220

13.2 Exchange Court

Site Name and Reference	Site Capacity and Proposed Use
Exchange Court (B/1.4)	Focus as a mixed use development
Current land use	This site is currently a surface car park and taxi rank. There are no buildings on the site.
Known abnormal of development issues	There are no known abnormalities on this site.
Transport Issues and Requirements	The site is located immediately off Bridge Street and Vicar Lane. There are two potential access points from Vicar Lane. This site is located approximately 50 metres from Bradford Interchange Railway Station, providing services to Leeds and towards Manchester and Blackpool.
Utility Provision	Electricity: This development is at the junction of Bridge Street and Vicar Lane and the closest primary substation is at Manchester Road and the second at Balme Street. Both these substations are presently only loaded to half their capacity and thus there is plenty of spare capacity to meet this site's demand which at 326KW is not a large demand. Gas: Northern Gas have confirmed there are no gas supply capacity issues affecting this site.

	<p>Water Supply: Yorkshire Water has confirmed that there are no water supply capacity issues affecting this site.</p> <p>Water Treatment: Yorkshire Water has confirmed that the waste water from this site would drain to Esholt. There is adequate capacity in the sewer network and at Esholt Wastewater Treatment Works to provide the necessary capacity for the site.</p> <p>Yorkshire Water would promote surface water drainage solutions on site or into the Bradford Beck, rather than the sewer network.</p>
Telecommunications	<p>Fixed Broadband</p> <p>Four or more 'principal' operators provide broadband services at this exchange. Service in this area has been deregulated.</p> <ul style="list-style-type: none"> - BT Wholesale - O2 - Sky - TalkTalk - Virgin Media (in some areas) <p>4G Mobile broadband</p> <p>Three – 4G outdoor only</p> <p>EE - 4G indoor and outdoor</p> <p>O2 - 4G indoor and outdoor</p> <p>Vodafone - indoor and outdoor</p>
Flood Risk and Drainage issues	<p>This site is located in Flood Risk Zone 1 and is not at risk of flooding from fluvial sources. Through dialogue with the CBMDC drainage team it was confirmed that this site would be expected to meet its SUD requirements on site.</p> <p>Yorkshire Water would encourage surface water to be dealt with on site, and it should only enter the sewer as a last resort. This is in line with the SUD hierarchy.</p> <p>The 2015 Draft Level 2 SFRA notes that the site records nominal surface water risk.</p>
Open Space and Sports requirements	<p>The nearest open space to this site is City Park. CBMDC would either seek delivery of play space or open space on-site or consider a contribution to public realm improvements or City Park improvements.</p> <p>It was recognised by CBMDC that it is generally harder to accommodate play space and green space on development sites in the City Centre and that there will be a need for developers to think more creatively about the forms that play space could take (e.g. roof gardens).</p>
Community and cultural provision	<p>This site is well served by community and cultural provision. There is a mechanism in place for CBMDC to request a S106 related to provision of art. However a decision regarding whether to request this contribution would depend on the nature of the proposal on the site.</p>
Education requirement	<p>If a residential use was developed on this site then education requirements would apply.</p> <p>Primary Provision: The closest primary school to this site is the Rainbow Primary School. There are currently limited places available at this primary school. However if these places are taken before the site is built out then a contribution towards primary school places would be</p>

	<p>required depending on the capacity at the point of planning application and the type of the residential development.</p> <p>Secondary provision: The nearest secondary school is at One in a Million Secondary School in Manningham. At this point any children in this development would need to travel to this school bus. The school is however very small and is not yet operating across all year groups. It is therefore likely that if the site is built out, a contribution towards secondary school places would be required depending upon capacity at the point of the planning application and the type of residential development.</p>
Health provision	<p>The nearest hospital is the Bradford Royal Infirmary.</p> <p>The nearest GP style health provision to this site is provided by a social enterprise focusing on the health needs of the homeless, rootless and people called Bevan Healthcare on Sunbridge Road. The Foundations Hall Medical Practice on Foundation Road is walking distance from this site. In addition higher quality provision in Shipley could be accessed.</p> <p>As discussed in the health provision chapter if additional GP provision is required the existing facilities will be extended or a new GP surgery will be delivered in the City Centre. The most appropriate solution will depend on the size of the population housed in the City Centre and their health needs.</p>

13.3 Area East of Valley Road

Site Name and Reference	Site Capacity and Proposed Use
Area West of Valley (CH/1.1)	600 residential units
Current land use	The site is a mixture of cleared sites, which are either cleared ground or surface car parks and some existing uses. There is an office block, car sales facility and a Halfords.
Known abnormal of development issues	There are no known abnormalities on this site.
Transport Issues and Requirements	This site is located approximately 100 metres from Bradford Forster Square Railway Station, which provides services towards Leeds, Skipton and Ilkely.
Utility Provision	<p>Electricity: This large site is within the area bounded by Valley Road, Hamm Strasse and Canal Road. The substation at Balme Street is closest to this development and has sufficient capacity to meet this site's demand which at approximately 1200KW is a relatively reasonably high load.</p> <p>Gas: Northern Gas have confirmed there are no gas supply capacity issues affecting this site.</p> <p>Water Supply: Yorkshire Water has confirmed that there are no water supply capacity issues affecting this site.</p> <p>Water Treatment: Yorkshire Water has confirmed that the waste water from this site would drain to Esholt. There is adequate capacity in the sewer network and at Esholt Wastewater Treatment Works to provide the necessary capacity for the site.</p> <p>Yorkshire Water would promote surface water drainage solutions on site or into the Bradford Beck, rather than the sewer network.</p>

Telecommunications	<p>Fixed Broadband</p> <p><u>Market 3</u></p> <p>Four or more 'principal' operators provide broadband services at this exchange. Service in this area has been deregulated.</p> <ul style="list-style-type: none"> - BT Wholesale - O2 - Sky - TalkTalk <p>4G Mobile broadband</p> <p>Three – 4G outdoor only</p> <p>EE - 4G indoor and outdoor</p> <p>O2 - 4G indoor and outdoor</p> <p>Vodafone - indoor and outdoor</p>
Flood Risk and Drainage issues	<p>Parts of this site fall within Flood Risk Zone 2 and 3 according to the Environment Agency Flood Mapping, In addition part of the site are at high risk of surface water flooding according to the EA mapping.</p> <p>The CBMDC Bradford Beck Mapping demonstrates that</p> <p>Through dialogue with the CBMDC drainage team it was confirmed that this site would be expected to meet its national SUD requirements on site.</p> <p>Yorkshire Water would encourage surface water to be dealt with on site, and it should only enter the sewer as a last resort. This is in line with the SUD hierarchy.</p> <p>The 2015 Draft Level 2 SFRA notes that several existing large industrial / retail units also still exist and are mostly located within Flood Zone 3a, equating to 83% of the full site footprint. Flood Zone 3a flood depths however could reach up to 1.5 m in the central southern part of the site which may rule out utilising this part of the site for car parking though scope for flood storage here should be investigated. In order to avoid increasing risk downstream, the existing building footprints should be used so as to avoid additional removal of floodplain.</p>
Open Space and Sports requirements	<p>This site has good links towards the Dales Way Footway. Through discussion with CBMDC Officers it was confirmed that they are likely to require on-site provision of play space and potentially improvements to Peel Park to provide the necessary open space and play areas for these sites.</p> <p>The nearest sports facilities at Peel Park (2 football pitches). Therefore contributions towards improving or providing additional sports provision in Peel park would be sought through S106..</p>
Community and cultural provision	<p>This site is well served by community and cultural provision. It is in close proximity to Bradford Forster Square Retail Park and the Broadway Scheme. There is a mechanism in place for CBMDC to request a S106 related to provision of art. However a decision regarding whether to request this contribution would depend on the nature of the proposal on the site.</p>
Education requirement	<p>If a residential use was developed on this site then education requirements would apply.</p> <p>Primary Provision: The closest primary school to this site is Westminster CE and there is limited capacity in this schools. If these places are taken before the site is built out then a contribution towards primary school places would be required depending on the capacity at the point of planning application and the type of the residential development. S106 / on site provision would be required. A new 'through school' could provide capacity for this site.</p>

	<p>Secondary provision: The nearest secondary school is at One in a Million Secondary School in Manningham. At this point any children in this development would need to travel to this school bus. There is some capacity in this secondary school. However if these places are taken before the site is built out then a contribution towards secondary school places would be required depending on the capacity at the point of planning application and the type of the residential development.</p>
Health provision	<p>If a residential use was developed on this site then health requirements would apply.</p> <p>The nearest hospital is the Bradford Royal Infirmary.</p> <p>The nearest GP style health provision to this site is the Foundations Hall Medical Centre on Foundation Street. In addition higher quality provision in Shipley could be accessed.</p> <p>As discussed in the health provision chapter if additional GP provision is required the existing facilities will be extended or a new GP surgery will be delivered in the City Centre. The most appropriate solution will depend on the size of the population housed in the City Centre and their health needs.</p>

13.4 Cathedral Quarter

Site Name and Reference	Site Capacity and Proposed Use
Cathedral Quarter (CH.3 and CH.4)	Focus for residential development Approximately 300 new dwellings
Current land use	These two sites are currently a mix of existing community buildings and cleared plots.
Known abnormal of development issues	There are no known abnormalities on this site.
Transport Issues and Requirements	The Air Quality Management Areas on Shipley Airedale Road and Church Bank on the inner ring road in Bradford has the potential to affect sites CH1.4 and 1.5. It is expected the development of both sites could place pressure on existing highway network capacity. The Thornton Road Air Quality Management Area is close to V1.5 and 1.6.
Utility Provision	<p>Electricity: These sites are approximately the same overall size with similar development and are contiguous. They are bounded by Bolton Road and Shipley Airedale Road. Their juxtaposition warrants the sites being considered as one. They are both close to Balme Street which has sufficient capacity to meet both sites' demands which collectively is 600KW which is not a large load.</p> <p>Gas: Northern Gas have confirmed there are no gas supply capacity issues affecting this site.</p> <p>Water Supply: Yorkshire Water has confirmed that there are no water supply capacity issues affecting this site.</p> <p>Water Treatment: Yorkshire Water has confirmed that the waste water from this site would drain to Esholt. There is adequate capacity in the sewer network and at Esholt Wastewater Treatment Works to provide the necessary capacity for the site.</p> <p>Yorkshire Water would promote surface water drainage solutions on site or into the Bradford Beck, rather than the sewer network.</p>
Telecommunications	Fixed Broadband

	<p>Four or more 'principal' operators provide broadband services at this exchange. Service in this area has been deregulated.</p> <ul style="list-style-type: none"> - BT Wholesale - O2 - Sky - TalkTalk - Virgin Media (in some areas) <p>4G Mobile broadband</p> <p>Three – 4G outdoor only EE - 4G indoor and outdoor O2 - 4G indoor and outdoor Vodafone - indoor and outdoor</p>
Flood Risk and Drainage issues	<p>Both these sites are within Flood Risk Zone 1 and not identified as being at particular risk of flooding from surface water.</p> <p>Through dialogue with the CBMDC drainage team it was confirmed that this site would be expected to meet its SUD requirements on site.</p> <p>Yorkshire Water would encourage surface water to be dealt with on site, and it should only enter the sewer as a last resort. This is in line with the SUD hierarchy.</p>
Open Space and Sports requirements	<p>This site has good links towards the Dales Way Footway. The nearest sports facilities at Peel Park (two football pitches). On site provision would be requested (particularly on CH1.2) or potentially S106 to improve Peel Park.</p>
Community and cultural provision	<p>This site is well served by community and cultural provision. It is in close proximity to Bradford Forster Square Retail Park and the Broadway Scheme. There is a mechanism in place for CBMDC to request a S106 related to provision of art. However a decision regarding whether to request this contribution would depend on the nature of the proposal on the site.</p>
Education requirement	<p>If a residential use was developed on this site then education requirements would apply.</p> <p>Primary Provision: The closest primary school to this site is Westminster CE and there is limited capacity in this schools. If these places are taken before the site is built out then a contribution towards primary school places would be required depending on the capacity at the point of planning application and the type of the residential development. S106 / on site provision would be required. A new through school could provide capacity for this site.</p> <p>Secondary provision: The nearest secondary school is at One in a Million Secondary School in Manningham. At this point any children in this development would need to travel to this school bus. There is some capacity in this secondary school. However if these places are taken before the site is built out then a contribution towards secondary school places would be required depending on the capacity at the point of planning application and the type of the residential development.</p>
Health provision	<p>If a residential use was developed on this site then health requirements would apply.</p> <p>The nearest hospital is the Bradford Royal Infirmary.</p>

	<p>The nearest GP style health provision to this site is the Foundations Hall Medical Practice on Foundation Road. In addition higher quality provision in Shipley could be accessed.</p> <p>As discussed in the health provision chapter if additional GP provision is required the existing facilities will be extended or a new GP surgery will be delivered in the City Centre. The most appropriate solution will depend on the size of the population housed in the City Centre and their health needs.</p>
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13.5 Former Provident Financial Headquarters

Site Name and Reference	Site Capacity and Proposed Use
Former Provident (V/1.1)	Focus for residential development Approximately 400 new dwellings
Current land use	This site contains the former Provident building, which has been converted into temporary student accommodation. The rest of the site is former car parking for the office building.
Known abnormal of development issues	The site slopes downwards from north to south.
Transport Issues and Requirements	There are potential for development of this site to impact on the junction between Thornton Road and Princes Way. However it is likely that assumptions could be made that a development on this site would have low levels of car ownership due to the proximity to the City Centre.
Utility Provision	<p>Electricity: This site is bounded by Thornton Road, Listerhills Road and Norcroft Street. This site is on the other side of Thornton Road from <u>Former Gas Works and Foundry, Site ref V/1.2</u>. Both these sites are close to <u>Former Bee Hive Mills, Site ref V/1.6</u>.</p> <p>The juxtaposition and proximity to each other of the development sites allows them to be considered as a single demand of approximately 4,804KW which is a large load.</p> <p>The primary substation at Crown Street is the closest to these developments. This substation is fed from the GSP at Girlington. At present this substation has only a firm capacity of about 8MW of which 5.3MW is already committed. Thus there is only about 2.7 MW available to meet the 4.8MW demand. The next closest substation is at Rawson Road and this has over 10MW of spare capacity.</p> <p>On the basis of the lack of sizeable spare capacity at Crown Street it is considered that if the sites are developed separately then the first site is likely to take all the spare capacity from Crown Street and thus leaving the remaining developments to cable back to Rawson Street or have Crown Street upgraded to meet their demands.</p> <p>There are other developments in the proximity of Crown Street and thus the upgrading of Crown Street would seem to be a requirement. However there is spare capacity at Rawson Road and also spare capacity at Toller Lane which are both within reasonable cabling distance from this group of developments.</p> <p>The final arrangement between cable lengths and substation upgrade will be determined by Northern Powergrid</p>

	<p>according to network integrity and operational efficiencies and it is considered that Northern Powergrid would upgrade Crown Street. The estimated ceiling cost of this is £2m and this does not include any additional land purchase costs.</p> <p>The normal connection procedures are that the spare capacity is taken according to first come first served. When the spare capacity is reached and an upgrade is required then the developer requesting the connection which requires the upgrade pays for the upgrade. If later new</p> <p>Gas: Northern Gas have confirmed there are no gas supply capacity issues affecting this site.</p> <p>Water Supply: Yorkshire Water has confirmed that there are no water supply capacity issues affecting this site.</p> <p>Water Treatment: Yorkshire Water has confirmed that the waste water from this site would drain to Esholt. There is adequate capacity in the sewer network and at Esholt Wastewater Treatment Works to provide the necessary capacity for the site.</p> <p>Yorkshire Water would promote surface water drainage solutions on site or into the Bradford Beck, rather than the sewer network.</p>
Telecommunications	<p>Fixed Broadband</p> <p>Four or more 'principal' operators provide broadband services at this exchange. Service in this area has been deregulated.</p> <ul style="list-style-type: none"> - BT Wholesale - O2 - Sky - TalkTalk - Virgin Media (in some areas) <p>4G Mobile broadband</p> <p>Three – 4G indoor and outdoor</p> <p>EE - 4G indoor and outdoor</p> <p>O2 - 4G indoor and outdoor</p> <p>Vodafone - indoor and outdoor</p>
Flood Risk and Drainage issues	<p>This site is within Flood Risk Zone 1 and not identified as being at particular risk of flooding from surface water. This is confirmed through the 2015 Draft Level 2 Flood Risk study.</p> <p>Through dialogue with the CBMDC drainage team it was confirmed that this site would be expected to meet its SUD requirements on site.</p>
Open Space and Sports requirements	<p>The nearest area of open space to these sites is Infirmary Fields. This site however must remain in its current form and cannot be further developed as it is needed by CBMDC’s Emergency Planning team as holding space for evacuations. This precludes the site from being considered for off-site contributions for play space from developments in the City Centre. The open space team is likely to ask for on-site provision of play space.</p> <p>The nearest sports provision is at Shearbridge. Therefore contributions towards improving or providing additional sports provision in Peel park would be sought through S106.</p>

Community and cultural provision	This site is well served by community and cultural provision in the City Centre. There is a mechanism in place for CBMDC to request a S106 related to provision of art. However a decision regarding whether to request this contribution would depend on the nature of the proposal on the site.
Education requirement	If a residential use was developed on this site then education requirements would apply. Primary Provision: The nearest primary and secondary schools are a substantial distance from this site. The LA noted that a new primary school would be supported on this site or the Former Gas Works Site to provide capacity for these sites and the other residential allocation sites on the west of the City Centre. This would need to be an independent school however, and not a local authority school. Secondary provision: The LA also noted that a new secondary school was required to support the City Centre and Shipley and Canal Road proposed site allocations. The LA noted that the City Centre offered an excellent location for a new secondary school as it is easily accessible by public transport from across the City.
Health provision	If a residential use was developed on this site then health requirements would apply. The nearest hospital is the Bradford Royal Infirmary. The nearest GP style health provision to this site is the Foundations Hall Medical Practice on Foundation Road. In addition higher quality provision in Shipley could be accessed. As discussed in the health provision chapter if additional GP provision is required the existing facilities will be extended or a new GP surgery will be delivered in the City Centre. The most appropriate solution will depend on the size of the population housed in the City Centre and their health needs.

13.6 Former Gas Works and Foundry

Site Name and Reference	Site Capacity and Proposed Use
Former Gas Works (V/1.2)	Focus for residential development Approximately 400 new dwellings
Current land use	A car garage and large surface car park.
Known abnormal of development issues	Potential contamination from former uses.
Transport Issues and Requirements	There are potential for development of this site to impact on the junction between Thornton Road and Princes Way. However it is likely that assumptions could be made that a development on this site would have low levels of car ownership due to the proximity to the City Centre.
Utility Provision	Electricity: This site is located off Thornton Road. This site is in close proximity to <u>Former Provident (V/1.1)</u> . Both these sites are close to <u>Former Bee Hive Mills, Site ref V/1.6</u> .

	<p>The juxtaposition and proximity to each other of the development sites allows them to be considered as a single demand of approximately 4,804KW which is a large load.</p> <p>The primary substation at Crown Street is the closest to these developments. This substation is fed from the GSP at Girlington. At present this substation has only a firm capacity of about 8MW of which 5.3MW is already committed. Thus there is only about 2.7 MW available to meet the 4.8MW demand. The next closest substation is at Rawson Road and this has over 10MW of spare capacity.</p> <p>On the basis of the lack of sizeable spare capacity at Crown Street it is considered that if the sites are developed separately then the first site is likely to take all the spare capacity from Crown Street and thus leaving the remaining developments to cable back to Rawson Street or have Crown Street upgraded to meet their demands.</p> <p>There are other developments in the proximity of Crown Street and thus the upgrading of Crown Street would seem to be a requirement. However there is spare capacity at Rawson Road and also spare capacity at Toller Lane which are both within reasonable cabling distance from this group of developments.</p> <p>The final arrangement between cable lengths and substation upgrade will be determined by Northern Powergrid according to network integrity and operational efficiencies and it is considered that Northern Powergrid would upgrade Crown Street. The estimated ceiling cost of this is £2m and this does not include any additional land purchase costs.</p> <p>The normal connection procedures are that the spare capacity is taken according to first come first served. When the spare capacity is reached and an upgrade is required then the developer requesting the connection which requires the upgrade pays for the upgrade. If later new</p> <p>Gas: Northern Gas have confirmed there are no gas supply capacity issues affecting this site.</p> <p>Water Supply: Yorkshire Water has confirmed that there are no water supply capacity issues affecting this site.</p> <p>Water Treatment: Yorkshire Water has confirmed that the waste water from this site would drain to Esholt. There is adequate capacity in the sewer network and at Esholt Wastewater Treatment Works to provide the necessary capacity for the site.</p> <p>Yorkshire Water would promote surface water drainage solutions on site or into the Bradford Beck, rather than the sewer network.</p>
<p>Telecommunications</p>	<p>Fixed Broadband</p> <p>Four or more 'principal' operators provide broadband services at this exchange. Service in this area has been deregulated.</p> <ul style="list-style-type: none"> - BT Wholesale - O2 - Sky - TalkTalk - Virgin Media (in some areas) <p>4G Mobile broadband</p> <p>Three – 4G indoor and outdoor</p>

	<p>EE - 4G indoor and outdoor</p> <p>O2 - 4G indoor and outdoor</p> <p>Vodafone - indoor and outdoor</p>
Flood Risk and Drainage issues	<p>Parts of this site fall within Flood Risk Zone 2 and 3 according to the Environment Agency Flood Mapping, and this is confirmed in the 2015 Draft Level 2 Flood Risk Study.</p> <p>Through dialogue with the CBMDC drainage team it was confirmed that this site would be expected to meet its SUD requirements on site.</p> <p>Yorkshire Water would encourage surface water to be dealt with on site, and it should only enter the sewer as a last resort. This is in line with the SUD hierarchy.</p> <p>The Draft Level 2 SFRA recommends that runoff should be controlled to existing rates, and encourages the creation of the linear park to cover as large an area of Flood Zone 2 as possible, thus minimising the amount of floodplain taken up by development.</p>
Open Space and Sports requirements	<p>The nearest area of open space to these sites is Infirmary Fields. This site however must remain in its current form and cannot be further developed as it is needed by CBMDC's Emergency Planning team as holding space for evacuations. This precludes the site from being considered for off-site contributions for play space from developments in the city centre. The open space team is likely to ask for on-site provision of play space.</p> <p>The nearest sports provision is at Shearbridge. Therefore contributions towards improving or providing additional sports provision in Peel park would be sought through S106.</p>
Community and cultural provision	<p>This site is well served by community and cultural provision in the City Centre. There is a mechanism in place for CBMDC to request a S106 related to provision of art. However a decision regarding whether to request this contribution would depend on the nature of the proposal on the site.</p>
Education requirement	<p>If a residential use was developed on this site then education requirements would apply.</p> <p>Primary Provision: The nearest primary and secondary schools are a substantial distance from this site. The LA noted that a new primary school would be supported on this site or the Former Gas Works Site to provide capacity for these sites and the other residential allocation sites on the west of the City Centre. This would need to be an independent school however, and not a local authority school.</p> <p>Secondary provision: The LA also noted that a new secondary school was required to support the City Centre and Shipley and Canal Road proposed site allocations. The LA noted that the City Centre offered an excellent location for a new secondary school as it is easily accessible by public transport from across the City.</p>
Health provision	<p>If a residential use was developed on this site then health requirements would apply.</p> <p>The nearest hospital is the Bradford Royal Infirmary.</p>

	<p>The nearest GP style health provision to this site is the Foundations Hall Medical Practice on Foundation Road. In addition higher quality provision in Shipley could be accessed.</p> <p>As discussed in the health provision chapter if additional GP provision is required the existing facilities will be extended or a new GP surgery will be delivered in the City Centre. The most appropriate solution will depend on the size of the population housed in the City Centre and their health needs.</p>
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13.7 Former Bee Hive Mills

Site Name and Reference	Site Capacity and Proposed Use
Former Bee Hive Mills (V/1.6)	Focus for residential development Approximately 220 new dwellings
Current land use	A cleared former Mill site.
Known abnormal of development issues	Potential contamination from former uses.
Transport Issues and Requirements	There is potential for development of this site to impact on the junction between Thornton Road and Princes Way. However it is likely that assumptions could be made that a development on this site would have low levels of car ownership due to the proximity to the City Centre.
Utility Provision	<p>Electricity: This site is located off Thornton Road. This site is in close proximity to <u>Former Provident (V/1.1)</u>. Both these sites are close to <u>Former Bee Hive Mills (V/1.6)</u>.</p> <p>The juxtaposition and proximity to each other of the development sites allows them to be considered as a single demand of approximately 4,804KW which is a large load.</p> <p>The primary substation at Crown Street is the closest to these developments. This substation is fed from the GSP at Girlington. At present this substation has only a firm capacity of about 8MW of which 5.3MW is already committed. Thus there is only about 2.7 MW available to meet the 4.8MW demand. The next closest substation is at Rawson Road and this has over 10MW of spare capacity.</p> <p>On the basis of the lack of sizeable spare capacity at Crown Street it is considered that if the sites are developed separately then the first site is likely to take all the spare capacity from Crown Street and thus leaving the remaining developments to cable back to Rawson Street or have Crown Street upgraded to meet their demands.</p> <p>There are other developments in the proximity of Crown Street and thus the upgrading of Crown Street would seem to be a requirement. However there is spare capacity at Rawson Road and also spare capacity at Toller Lane which are both within reasonable cabling distance from this group of developments.</p> <p>The final arrangement between cable lengths and substation upgrade will be determined by Northern Powergrid according to network integrity and operational efficiencies and it is considered that Northern Powergrid would upgrade Crown Street. The estimated ceiling cost of this is £2m and this does not include any additional land purchase costs.</p>

	<p>The normal connection procedures are that the spare capacity is taken according to first come first served. When the spare capacity is reached and an upgrade is required then the developer requesting the connection which requires the upgrade pays for the upgrade. If later new</p> <p>Gas: Northern Gas have confirmed there are no gas supply capacity issues affecting this site.</p> <p>Water Supply: Yorkshire Water has confirmed that there are now water supply capacity issues affecting this site.</p> <p>Water Treatment: Yorkshire Water has confirmed that the waste water from this site would drain to Esholt. There is adequate capacity in the sewer network and at Esholt Wastewater Treatment Works to provide the necessary capacity for the site.</p> <p>Yorkshire Water would promote surface water drainage solutions on site or into the Bradford Beck, rather than the sewer network.</p>
Telecommunications	<p>Fixed Broadband</p> <p>Four or more 'principal' operators provide broadband services at this exchange. Service in this area has been deregulated.</p> <ul style="list-style-type: none"> - BT Wholesale - O2 - Sky - TalkTalk - Virgin Media (in some areas) <p>4G Mobile broadband</p> <p>Three – 4G indoor and outdoor</p> <p>EE - 4G indoor and outdoor</p> <p>O2 - 4G indoor and outdoor</p> <p>Vodafone - indoor and outdoor</p>
Flood Risk and Drainage issues	<p>Parts of this site falls within Flood Risk Zone 2 and 3 according to the Environment Agency Flood Mapping, The CBMDC Bradford Beck Mapping demonstrates that Through dialogue with the CBMDC drainage team it was confirmed that this site would be expected to meet its SUD requirements on site.</p> <p>Yorkshire Water would encourage surface water to be dealt with on site, and it should only enter the sewer as a last resort. This is in line with the SUD hierarchy.</p> <p>The 2015 draft Level 2 SFRA recommends that a site-specific FRA would be required. Surface water risk is said to be minimal.</p>
Open Space and Sports requirements	<p>The nearest area of open space to these sites is Infirmary Fields. This site however must remain in its current form and cannot be further developed as it is needed by CBMDC's Emergency Planning team as holding space for evacuations. This precludes the site from being considered for off-site contributions for play space from developments in the city centre. The open space team is likely to ask for on-site provision of play space.</p> <p>The nearest sports provision is at Shearbridge. Therefore contributions towards improving or providing additional sports provision in Peel park would be sought through S106.</p>

<p>Community and cultural provision</p>	<p>This site is well served by community and cultural provision in the City Centre. There is a mechanism in place for CBMDC to request a S106 related to provision of art. However a decision regarding whether to request this contribution would depend on the nature of the proposal on the site.</p>
<p>Education requirement</p>	<p>If a residential use was developed on this site then education requirements would apply.</p> <p>Primary Provision: The nearest primary and secondary schools are a substantial distance from this site. The LA noted that a new primary school would be supported on this site or the Former Gas Works Site to provide capacity for these sites and the other residential allocation sites on the west of the City Centre. This would need to be an independent school however, and not a local authority school.</p> <p>Secondary provision The LA also noted that a new secondary school was required to support the City Centre and Shipley and Canal Road proposed site allocations. The LA noted that the City Centre offered an excellent location for a new secondary school as it is easily accessible by public transport from across the City.</p>
<p>Health provision</p>	<p>The nearest GP style health provision to this site is provided by a social enterprise focusing on the health needs of the homeless, rootless people called Bevan Healthcare on Sunbridge Road.</p> <p>As discussed in the health provision chapter if additional GP provision is required the existing facility could be extended or a new GP surgery will be delivered in the City Centre. The most appropriate solution will depend on the size of the population housed in the City Centre and their health needs.</p>

14 Infrastructure Delivery Programme

14.1 Overview

This section takes the evidence and analysis from Sections 4 through to 13 and sets out how the level of current, planned and future infrastructure will / could be delivered. This section:

- presents the indicative costs associated with delivering the planned and future infrastructure required to support the long term growth objectives in CMBDC.
- outlines how CBMDC could look to prioritise and facilitate the delivery of infrastructure.
- summarises potential funding sources that CBMDC could explore to deliver its infrastructure requirements.

In simple terms, this part of the report takes the overall cost of each infrastructure type and sets that within the context of any existing funding, so as to determine any funding gaps. From here it will be possible to identify potential options for bridging the funding gaps and ensure Bradford can be proactive in looking to deliver the infrastructure required to deliver the Bradford City Centre Area Action Plan (BCCAAP).

The costs and information shown in Table 14.1 have been determined through an analysis of the evidence base and discussions with relevant contacts in CBMDC, other public and private sector organisations and wider stakeholders.

14.2 Bradford City Centre infrastructure Requirements and Investment

14.2.1 Overview

Table 14.1 below represents a summary of the infrastructure required in Bradford City Centre up to 2030. This includes an indicative assessment of costs, committed funding sources and the subsequent funding gaps that exist.

There are certain infrastructure types where funding gaps do exist. This relates to infrastructure which will play an important role in delivering the future housing and economic growth in Bradford City Centre.

The infrastructure has been split into essential and desirable infrastructure.

‘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.

14.2.2 Essential Infrastructure

The infrastructure falling into this category, which currently does not have committed funding comprises:

Transport

Transport, Highways:

A new highway link between Westgate and Thornton Road is partly funded. £7 million has been secured from CBMDC capital funds and CBMDC are seeking to secure the remaining £1m of funding from future funding bids.

Transport, Rail:

There are a number of uncommitted railway schemes, including:

- **Bradford City Centre Station Improvements scheme** (£30 – 45 million) does not have committed funding. However CBMDC are working closely with the West Yorkshire Combined Authority (WYCA) to access the West Yorkshire Plus Transport Fund and working with Network Rail and the Train Operating Company to access potential funding. WYCA have confirmed that funding has been ringfenced for the Forster Square scheme. CBMDC and WYCA are working closely to look at delivery options for a first phase of the Bradford Interchange scheme.
- **The electrification of the Calder Valley line** (£unknown) does not have committed funding. However CBMDC are lobbying Government and working closely with WYCA to make the case for investment as part of wider electrification proposals in the north of England.
- **The reopening of the Worley Curve** (£10 million) does not have committed funding. CBMDC are working closely with WYCA to promote this scheme as part of a package of rail improvements to allow Bradford to be 'HS2 ready'.

There are no essential bus or pedestrian / cycle schemes without committed funding.

The gap in infrastructure funding for essential transport infrastructure equates to between **£40 and £55 million**, as set out in Table 14.1.

Utilities

There is an identified funding gap in relation to electricity provision.

Discussions with Northern Powergrid regarding solutions to the provision of additional capacity to the City Centre from Girdlington have considered two options; 1) upgrading Crown Street to a capacity of circa 24MW or 2) installing additional circuits into Bradford from Girdlington.

A cost of £2 million has been identified to upgrade Crown Street from 8MW to 16MW to enable the Valley developments to be supplied from it. There would be a further cost of £2 million to take this additional capacity from 16MW to 24 MW.

The cost of additional cabling from Girdlington into the City Centre is therefore approximately £2 million.

The solution would be determined by Northern Powergrid and the cost would be circa £2 million. Which developments contribute to this sum depends upon the sequencing of their connection, the size of the connection and what other developments have contributed.

Overall an estimated sum of £4 million would be required to be spent on upgrading the Northern Powergrid network to supply the additional developments proposed in Shipley and Canal Street and Bradford City Centre.

This has been split across the two areas to result in a resulting infrastructure gap of **£2 million** for Bradford City Centre, as set out in Table 14.1.

The capacity issues relate to the whole area at this stage since there is no available information on the likely phasing of build out order for these developments. When a build programme becomes available the take up of electricity will show which individual developments have capacity issues.

Individually no single development has a load which exceeds the capacity of the nearest primary substation to provide it. Collectively the situation changes, resulting in capacity issues.

This analysis finds that locally around The Valley (V/1.1, V1.2, V/1.6).the nearest primary substation is at Crown Street and there is not sufficient capacity here to support all the developments proposed here.

The ability for Northern Powergrid to contribute towards the costs will be dependent on the build out rates proposed development and how quickly Northern Powergrid can 'claw back' the costs of the upgrades from the developments. This will need to be discussed further with Northern Powergrid when there is further detail on the trajectory and build out rates of the development sites. The actual solution will depend upon which developments start first and where they are in relation to other developments and the substations.

There is no funding gap for essential gas infrastructure.

There is no funding gap for essential water supply and treatment infrastructure.

Telecommunications

There is no funding gap for essential telecommunications infrastructure.

Flood Risk and Drainage

There is no funding gap for essential flood risk and drainage infrastructure.

Green Infrastructure, Open Space and Public Space

CBMBC have produced a Green Infrastructure Study for the City Centre. This includes a number of potential interventions to improve access to green space in the City Centre. These will be progressed through the emerging City Centre Area Action Plan. CBMDC are also progressing an Open Space Strategy, which will consider options for increasing usable open space in the City Centre or links from the City Centre to other open spaces. There is no committed funding to increase open space in the City Centre, however CBMDC will access a range of funding sources including external funding available on a bid by bid basis, developer contributions and CBMDC capital funding.

There is therefore a gap in essential open space funding, however the exact gap in funding will be confirmed by the future Open Space Strategy.

Sports, Leisure and Recreation

CBMDC are progressing a Sports Facilities Strategy (including finding of the Playing Pitches Strategy), which will be informed by a Facilities Planning Model (FPM). This will confirm future requirements and a strategy to deliver sports provision including sports hall, swimming pools and sports pitches.

CBMDC have identified a potential site for a new 25 metre swimming pool in Bradford City Centre. There is currently no committed funding for this new facility, however CBMDC are looking at funding options as part of the Sports Facilities Strategy.

There is therefore a gap in sports, leisure and recreation funding, however the exact gap in funding will be confirmed by the Sports Facilities Strategy as this will confirm the future plans for sports provision.

Community and Cultural

The funding to renovate St Georges Hall is not yet committed. A bid for between £1 million and £2 million has been submitted to the Heritage Lottery Fund but it has not been confirmed.

A preferred bidder has been identified for the redevelopment of the former Odeon. However the exact gap in funding is still being worked through with the preferred bidders and CBMDC.

Education

The delivery of 3,790 new residential units in the City Centre will create a need for new primary and secondary school places. The LA have identified a need for a new secondary school or 'through school' in the City Centre to serve new residential development and the demand for school places generated by the existing growing population. However since this was need was identified a new secondary school has opened called Dixons McMillan Academy. However, the school will satisfy current demand and not future demand. Dialogue with the Education team has been confirmed that a deficit in secondary school places still remains at a district wide level.

CBMDC are working closely to identify a potential site for a new school and funding from Basic Needs Allowance (if allocated by DfE), developer contributions and potential additional funding from central government linked to the acute need for a new school.

Using the CBMDC in-house formula for calculating the cost of additional primary or secondary school places the worst case gap (based on their being no available school places) equates to a total funding requirement of £13.9 million. This requirement could be met through a new school, however some additional capacity could be created by extending existing primary schools.

Health

The Bradford City Clinical Commissioning Group (CCG) and NHS West Yorkshire Local Area Team will provide any necessary additional GP provision in the City Centre. Therefore any future gap in provision will be delivered through NHS funding and there is gap in the funding of health infrastructure.

Climate Change and Renewables

There is no funding gap for climate change and renewable infrastructure.

14.2.3 Desirable Infrastructure

The infrastructure falling into this category, which currently does not have committed fund comprises:

Transport

Transport, Rail provision:

- **The tram link from the new railway station at Low Moor to Bradford City Centre** (approximately £150 million) does not have committed funding. This scheme was identified in the One North as a potential project. CBMDC are currently investigating funding options for this scheme.
- The development of a **tram train or fixed rail link to Leeds Bradford International Airport** (£238 million) does not have committed funding. There is potential for this scheme to be funded through the West Yorkshire Plus Transport Fund.

Transport, Bus Provision:

- **The Leeds to Bradford New Generation Transport scheme** (£209 million) does not have committed funding. This is a longer term scheme and CBMDC are investigating potential funding mechanisms.

Transport, Pedestrian and Cycle Provision:

The following cycling and pedestrian improvement schemes do not have committed funding:

- **The Bradford West Cycle Route** (approximately £8 million). CBMDC are investigating funding options including the Local Transport Fund.
- **A range of improvements to the pedestrian environment in Bradford City Centre** (£unknown), including improving pedestrian environment around the northern parts about the ring road, greening the ring road and general improvement to wayfinding and the pedestrian environment.

There are no desirable funding gaps in relation to highway schemes. The gap in infrastructure funding for desirable transport infrastructure equates to £605 million, as set out in Table 14.1.

Utilities

This study has not identified any desirable utility infrastructure. All requirements are essential.

Telecommunications

There is no funding gap for desirable telecommunications infrastructure.

Flood Risk and Drainage

There is no funding gap for desirable flood risk and drainage infrastructure.

Green Infrastructure, Open Space and Public Space

This study has not identified any desirable green infrastructure, open space and public space infrastructure. All requirements are essential.

Sports, Leisure and Recreation

This study has not identified any desirable sports, leisure or recreation infrastructure. All requirements are essential.

Community and Cultural

There is no funding gap for desirable community and cultural infrastructure.

Education

This study has not identified any desirable education infrastructure. All requirements are essential.

Health

This study has not identified any desirable health infrastructure. All requirements are essential.

Climate Change and Renewables

This study has not identified any desirable climate change and renewables infrastructure. All requirements are essential.

Figure 14.1: Essential Infrastructure Requirements in the City Centre

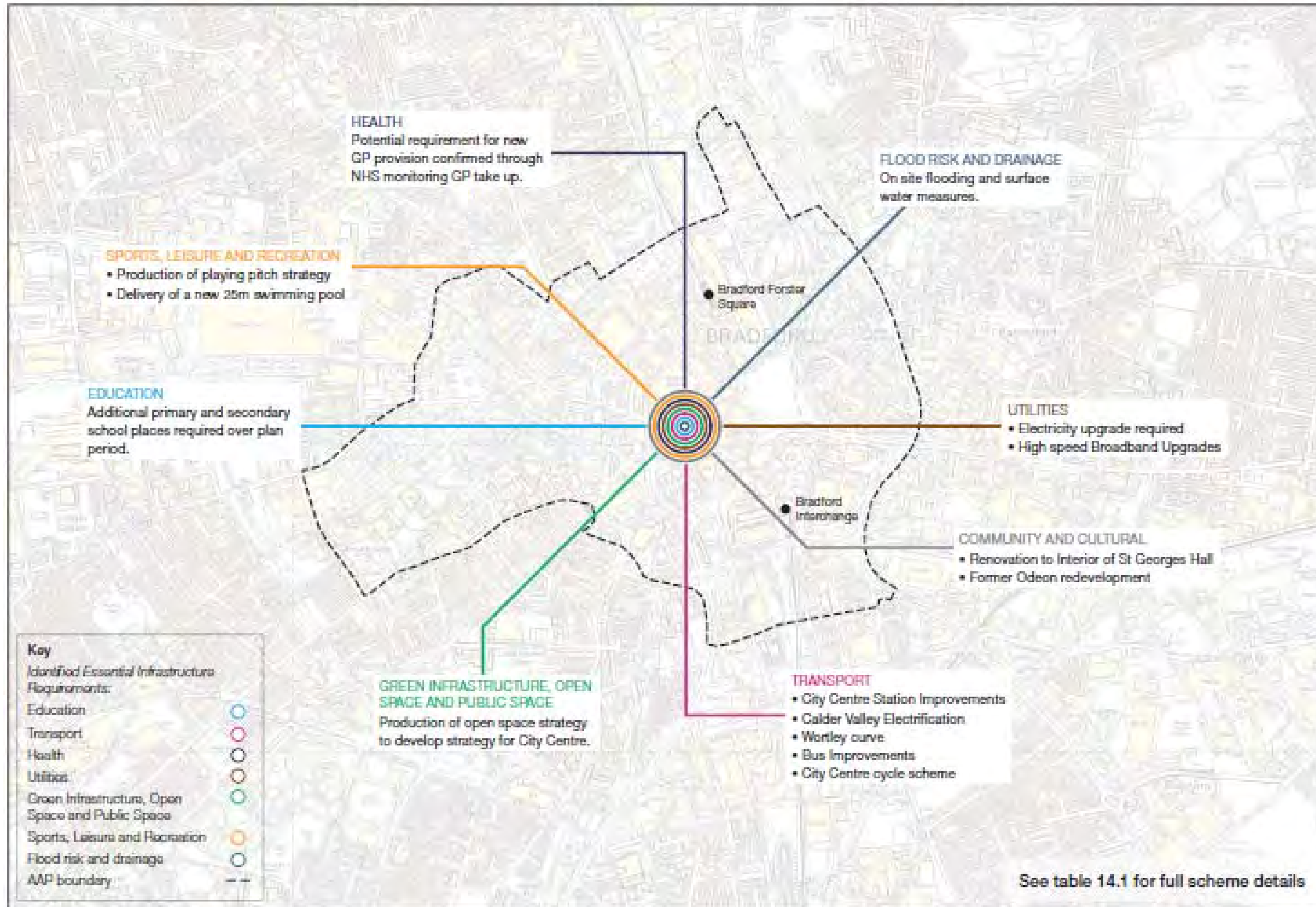


Table 14.1: Infrastructure Delivery Programme

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
Transport										
Highways										
City Centre	Variable Message Signs (VMS)	Essential	More effective traffic management across the district.	Network of Variable Message Signs (VMS) in the City Centre and provision of signage.	CBMDC	LTP	£600,000	Short term 1 year	No gap	Discussions with CBMDC Transport Officers.
District Wide	Central Urban Traffic Management Control	Desirable	Create capacity through improved network management.	Improvement to Network Management including the City Centre and Canal Road. Currently being reviewed by CBMDC.	CBMDC WYCA	Currently being reviewed by CBMDC.	£400,000	Short term 0 – 5 years	No gap	LTP3
City Centre	New Highway Link between Westgate and Thornton Road	Desirable	Facilitate regeneration of western side of City Centre	CBMDC are currently undertaking a feasibility study for this link road. This scheme removes through traffic except buses from Westgate and Godwin Street thus allowing regeneration of this area	CBMDC	CBMDC Capital Funding (£7m) and future funding bids.	Approx. £8m	Medium term 5 – 10 years	Partly funded	Discussions with CBMDC Transport Officers.
Rail Provision										
City Centre	Bradford City Centre Station Improvements	Essential	Improve the quality of interchange in Bradford city centre and improve links between the stations and the city centre.	Station masterplans have recently been completed to provide a design and cost for redevelopment of both railway stations. This has been funded through the West Yorkshire Plus Transport Fund as part of their Gateway Project. Bradford Interchange - aims to enhance public transport integration and support the City Centre regeneration project. Includes measures to improve linkages between the interchange and the city centre, reduce future maintenance costs and rationalise and improve staff accommodation facilities. Bradford Forster Square - general improvements to facilities at the station by enhancing the retail offer and enhancing safety and security. The scheme also aims to improve links to the City Centre through enhanced lighting and public realm.	WYCA/ Network Rail / CBMDC	Masterplan funding was secured through WY+TF. The masterplan has provide high level costings for station improvements. The schemes are under consideration for funding by the WY+TF through the Rail Stations Gateway programme. Possible funding through: - West Yorkshire Plus Transport Fund (a £50m pot for station improvements across major rail stations in West Yorkshire). - Local Growth Fund. - Network Rail. - CBMDC funding. - Train Operating Company (TOC)	Approx. £30 to £45 million	Phased approach short, Medium term / Long Term 0 – 15 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers.

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 Centre	Calder Valley Electrification	Essential	Enhance services on the Caldervale 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.	WYCA / CBMDC / Network Rail	An Electrification Task Force is currently confirming prioritisation for electrification scheme. The Calder Valley Line is included in the 2009 RUS, but is not prioritised. The RUS is currently being refreshed by Network Rail. Funding would need to be a mixture Department for Transport and of Train Operating Company (TOC) funding.	Unknown	Medium term 5 – 10 years	No committed funding confirmed.	Network Electrification Rail Utilisation Strategy (RUS), 2009
City Centre / North Bradford	Tram-train or fixed rail to Leeds Bradford International Airport	Desirable	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 and provide onward connection to Leeds.	CBMDC / WYCA	Possible funding through the West Yorkshire Plus Transport Fund.	£238 million	Medium term 5 – 10 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers.
City Centre	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.	WYCA/ Network Rail	Potential funding is likely to be linked to the package of rail improvements to make West Yorkshire 'HS2 Ready'.	£10 million	Medium term 5 – 10 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers.
City Centre / South Bradford	Tram Linked to New Station at Low Moor	Desirable		Funding has been secured for a new railway station at Low Moor. CBMDC have an aspiration to improve public transport connections between Low Moor and Bradford City Centre to allow a new public transport corridor to be created by a tram connecting Euroway, Prologis, West Bowling, Bradford Interchange and Forster Square. This links a number of employment sites to the city centre.	CBMDC	Identified in One North as an aspiration. CBMDC are currently investigating funding options.	Approx. £150 million	Medium term 5 – 10 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers.
Bus Provision										
District Wide	Bus Network	Essential	Improve public transport	Development of bus network in line with WYCA and CBMDC specification if WYCA opts for quality contracts or, if not, through a partnership agreement.	CBMDC / WYCA	Could be delivered as part of any West Yorkshire quality	Minimal capital cost, however	Medium term 5 – 10 years	No committed	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
			access and encourage modal shift.			contract scheme or through a partnership agreement.	significant revenue risk.		funding confirmed.	Transport Officers.
City Centre	Leeds - Bradford New Generation Transport	Desirable	Provide high quality public transport and encourage mode shift.	NGT link between Leeds City Square and Bradford Interchange	CBMDC / WYCA	Not yet determined	£209 million	Long Term 10 – 15 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers.
Pedestrian and Cycling										
City Centre	City Connect Cycle scheme	Essential	To provide improved cycle facilities between Leeds and Bradford City Centre.	A Cycle Superhighway between Leeds and Bradford. The route enters Bradford City Centre along the A647 Leeds Road and Barkerend Road.	CBMDC/ LCC and WYCA	Delivered by WYCA, LCC and CBMDC. £18.05 million from Department for Transport. £10.89 million in Local Authority Contributions and the rest from third party contributions.	£29.5m	Short term 0 – 5 years (complete by September 2015)	No gap	Discussions with CBMDC Transport Officers.
City Centre	Bradford West Cycle Route	Desirable	To improve cycle links between the City Centre and west Bradford.	This scheme builds on the cycle superhighway project by providing a cycle link towards the Thornton viaduct and the Great North Cycle Trail.	CBMDC / WYCA	Funding bid for LGF funding was unsuccessful. Potential delivery through future years of the Local Transport Fund.	Approx. £8 million	Short term 0 – 5 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers.
City Centre	Pedestrian Environment Improvements on northern part of City Ring Road.	Desirable	Improve pedestrian environment	Improve pedestrian crossing / remove barriers and generally improve pedestrian links across the northern parts of the City Ring Road in the City Centre.	CBMDC	CBMDC	Unknown	Short term 0 – 5 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers and City Plan.
City Centre	Improve the City Ring Road highway public realm	Desirable	Improve pedestrian environment	Improve the public realm along the City Ring Road e.g. wider pavements, tree planting and greening, with a focus on the northern parts of the City Ring Road.	CBMDC	CBMDC	Unknown	Short term 0 – 5 years	No committed funding confirmed.	Discussions with CBMDC Transport Officers and City Plan.
City Centre	Public Realm Improvements	Desirable	Improve City Centre environment.	Improvement to wayfinding / signage / public realm and shared street schemes (North Parade / Piccadilly).	CBMDC	CBMDC RGF	Unknown	Short / medium term 0 – 10 years	No committed funding confirmed although signing / wayfinding possibly funded through RGF .	Discussions with CBMDC Transport Officers and City Plan.

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
Utilities										
City Centre	Electricity Provision	Essential	To provide adequate electricity provision.	<p>Discussions with Northern Powergrid regarding solutions to the provision of additional capacity to the City Centre from Girdlington have considered two options; 1) upgrading Crown Street to a capacity of circa 24MW or 2) installing additional circuits into Bradford from Girdlington.</p> <p>A cost of £2M has been identified to upgrade Crown Street from 8MW to 16MW to enable the V/1.1, V/1.6 and V1.2 developments to be supplied from it.</p> <p>The cost of additional cabling from Girdlington into the City Centre is therefore approximately £2 million. The solution would be determined by Northern Powergrid and the cost would be circa £2 million. Which developments contribute to this sum depends upon the sequencing of their connection, the size of the connection and what other developments have contributed.</p> <p>The capacity issues relate to the whole area at this stage since there is no available information on the likely phasing of build out order for these developments.</p> <p>When a build programme becomes available the take up of electricity will show which individual developments have capacity issues.</p> <p>Individually no single development has a load which exceeds the capacity of the nearest primary substation to provide it. Collectively the situation changes, resulting in capacity issues.</p> <p>This analysis finds that locally around The Valley (V/1.1, V1.2, V/1.6).the nearest primary substation is at Crown Street and there is not sufficient capacity here to support all the developments proposed here. The ability for Northern Powergrid to contribute towards the costs will be dependent on the build out rates proposed development and how quickly Northern Powergrid can 'claw back' the costs of the upgrades from the developments. This will need to be discussed further with Northern Powergrid when there is further detail on the trajectory and build out rates of the development sites. The actual solution will depend upon which developments start first and</p>	Northern Powergrid Developers	Northern Powergrid Developers Contribution The ability for Northern Powergrid to contribute towards this costs will be dependent on the build out rates proposed development and how quickly Northern Powergrid can 'claw back' the costs of the upgrades through network charges. This will need to be discussed further with Northern Powergrid when there is further detail on the trajectory and build out rates of the development sites.	£2 million	Short / medium term 0 – 10 years (depending on the delivery of sites)	£2 million	Arup analysis and discussion with Northern Powergrid

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
				where they are in relation to other developments and the substations.						
City Centre	Drainage Area Plan	Desirable	To understand drainage.	Yorkshire Water may undertake a Drainage Area Plan (DAP) in AMP6 (2016 – 2020), as there has been some localised flooding incidents in the area.	YW	YW AMP6 Funding	Unknown	Short to medium term 0 – 10 years	No gap.	Discussions with Yorkshire Water
Telecommunications										
District wide	Leeds Bradford Super-connected Cities	Essential	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. A £9 million broadband voucher scheme to help businesses in Bradford and Leeds districts upgrade their current broadband service. An £800,000 scheme to put wifi services on strategic public transport between the cities. A £1.6 million investment in wifi located within public buildings.	CBMDC and LCC	Funding secured by CBMDC and LCC.	£11.4 million	Short term 1 – 5 years	No gap	NA
District wide	Superfast Broadband	Essential	To deliver high speed broadband to support economic growth.	The new project, ‘Superfast West Yorkshire’, plans to extend high-speed fibre broadband to 97 per cent of households and businesses across the majority of West Yorkshire. As well as providing high-speed fibre, the partnership aims to upgrade all premises in the area to speeds of more than 2Mbps.	CBMDC, BT	A £21.96 million contract between BT, Bradford Council and three other local authorities has been agreed to transform broadband speeds across most of West Yorkshire by the end of autumn 2015.	£21.96 million	Short term 1 – 5 years	No gap	NA
District Wide	Telecommunication Improvements	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
Flood Risk and Drainage										
City Centre	Drainage Area Plan	Desirable	Confirm drainage issues.	Yorkshire Water may undertake a Drainage Area Plan (DAP) in AMP6 (2016 – 2020), as there has been some localised flooding incidents in the area.	YW	YW AMP6 Funding	Unknown	Short to medium term 0 – 10 years	No gap.	Discussions with Yorkshire Water
City Centre	Strategic Flood Risk Assessment	Essential	Delivery of SFRA part 2 to support AAP	To produce a SFRA part 2 and consider SUD standards linked to CBMDC having an increased role in SUD approval from April 2015. Each site will be required to meet national SUD requirements on an individual site basis.	CBMDC	CBMDC	Unknown	Short to medium term 0 – 10 years (draft produced in June 2015)	No gap.	Discussions with CBMDC officers
Green Infrastructure, Open Space and Public Space										
District Wide	Open Space Strategy	Essential	To confirm current and required open space and play areas.	An Open Space Strategy is required to provide up to evidence to support the emerging Core Strategy and City Centre Area Action Plan.	CBMDC Developer Contributions	CBMDC Parks Budgets	Unknown, will be worked up through the Open Space Strategy	Throughout the plan period.	Unknown, to be worked up through the	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
				<p>The Open Space Strategy is likely to include measures to:</p> <ul style="list-style-type: none"> • Build on the success of City Park. • Increase the use of street trees. • Improve the City Centre public realm • Improve the linkages between existing open spaces. • Requirement for development sites to provide open space and play space on site or contribution towards improvements elsewhere. <p>There is recognition that the City Centre does not have the available space to provide vast areas of open space and play areas. However there is potential to link the City Centre to other open spaces to allow people to cycle or walk from the city centre to access open space outside the City Centre.</p>		Heritage Lottery, Local Landfill Tax, Sports England and other funding sources: S106			Open Space Strategy.	
City Centre	Green Infrastructure Study	Desirable	To improve GI provision.	<p>The City Centre Green Infrastructure Study identifies a number of interventions to improve access to open space in the City Centre. The interventions will be investigated further through the emerging City Centre Area Action Plan. The interventions are set out in section 7.3 and include:</p> <ul style="list-style-type: none"> • Greening the Grey: Green streets and Green gateways. • Greening the Grey: Green Roofs / Walls. • Greening the Grey: Habitat Highways. • Greening the Brownfield: Boundary Treatments. • Greening the Brownfield: Greenspace treatment. • Network of Sites: key green spaces: Green / blue links through development sites. • Legibility and links. 	CBMDC Developer Contributions	CBMDC Parks Budgets Heritage Lottery, Local Landfill Tax, Sports England and other funding sources: S106	Unknown	Throughout the plan period.	Unknown.	Dialogue with CBMDC.
Sport, Leisure and Recreation										
City Centre	25 metre pool	Essential	A deficit of quality swimming pool provision with links with health and regeneration	Delivery of a new 25 metre pool in Bradford City Centre.	CBMDC	CBMDC Capital funding.	Unknown	Short term 1 – 5 years	Unknown, cost work currently on-going.	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
			benefits.							
District Wide	Playing Pitch Strategy	Essential	To confirm current and required playing pitch provision.	The Playing Pitch Strategy identifies a number of deficits in playing pitch provision in the City Centre and across the District. CBMDC are now working on a delivery strategy to provide new playing pitches across the District.	CBMDC	CBMDC Sports Budgets Sports England and Football Foundation. S106	Unknown	Throughout the plan period.	Unknown, to be worked up through the Playing Pitch Implementation Plan	Dialogue with CBMDC.
District Wide	Sports Facilities Strategy	Essential		The Sports Facilities Strategy will be informed by a Facilities Planning Model (FPM), which is a computer-based supply/demand model. The model is a tool to help assess the strategic provision of sports facilities in an area. FPM is currently applicable for assessing the provision of sports halls, swimming pools, and artificial grass pitches. To date separate reviews of the below provision has been carried out: <ul style="list-style-type: none"> swimming provision and the supply of swimming facilities. sports halls. sports pitches. The findings from these reviews and a strategy for future sports provision will be reported in the single Sports Facilities Strategy.	CBMDC Developer Contributions	CBMDC Sports Budgets Sports England and Football Foundation. S106	Unknown	Throughout the plan period.	Unknown, to be worked up through the Sports Facilities Strategy.	Dialogue with CBMDC.
Community and Cultural										
City Centre	St Georges Hall Renovations	Essential	Renovations to the interior of St Georges Hall.	There is a requirement to renovate St Georges Hall to bring the interior of the building up to standard for a 21 st century theatre.	CBMDC Heritage Lottery	A Heritage Lottery Funding bid has been submitted by CBMDC.	£1 million – £2 million	Short to medium term 0 – 10 years	No gap in funding (if bid is successful)	Dialogue with CBMDC Officers.
City Centre	Former Odeon Redevelopment	Essential	Reuse of the former Odeon Building	The former Odeon Building is located to the west of the City Park. The Odeon closed in 2000 and has been empty since this date. The site is owned by CBMDC, who have been working to consider options for the buildings future. In August 2014 CBMDC announced that they had identified a preferred bidder to redevelop the former Odeon. The preferred bidder is called 'Bradford Live'. There proposals seek to recreate the original auditorium with a capacity of 3,500 seated and 4,000 with stalls standing.	Private Developer CBMDC	Private Developer CBMDC	Unknown	Short to medium term 0 – 10 years	Unknown, to be worked up through the bidding process.	Dialogue with CBMDC Officers.
City Centre	Delivery of a Cultural Quarter	Desirable	To improve the cultural	A key aspiration for CBMDC, working with partners is to focus the creation of a cultural quarter around the Alhambra, National Media Museum and the	CBMDC	CBMDC	Unknown	Short to medium term 0 – 10 years	No gap	Dialogue with CBMDC Officers.

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
			offer in the City Centre.	vacant Odeon Building. This links well with City Park and provides a strong visitor area.						
City Centre	Promoting the Evening Economy	Desirable	To improve evening economy	<p>CBMDC are keen to promote the evening economy and increase spending in the City Centre from linked trips. For example through Alhambra / St Georges Hall Theatre trips linked with dinner trips.</p> <p>Bradford Matters is an indicative being promoted by CBMDC, Little Germany Action Ltd and restaurateurs, who are working on trying to improve the restaurant offer in the City Centre to provide restaurant choices.</p>	Bradford Matters Community Groups CBMDC	Bradford Matters Community Groups CBMDC	Unknown	Short to medium term 0 – 10 years	No gap	Dialogue with CBMDC Officers.
Education										
City Centre	Primary School Provision	Essential		<p>Approximately 3,790 new dwellings are planned for the City Centre through the Bradford City Centre Area Action Plan.</p> <p>Using the CBMDC formula set out in section 10.3 an indication of the likely number of new school places generated by the proposed new housing can be made.</p> <p>Based on an assumption that half the dwellings are 2 bedroom flats and half are 2 / 3 bedroom houses (which is a worse case assumption) the new residential development would generate a requirement for 398 additional primary school places.</p> <p>This would need to be provided by expansion of existing primary schools or provision of a new ‘thorough school’ serving 5 to 18 year olds.</p> <p>This is based on the assumption that there is no capacity in the existing schools.</p>	CBMDC	CBMDC Basic Needs Allowance (if allocated by DfE) S106	Using the CBMDC formula £6.4 million of funding is required to provide 398 primary school places. This includes 10% professional fees and 10% land costs. The cost of a through school is set out in the Secondary school section.	Short to medium term 0 – 10 years	Gap in Funding	Dialogue with CBMDC Officers.
City Centre	Secondary School Provision	Essential	To provide secondary school places	<p>CBMDC are currently exploring options for a new secondary school location in the City Centre or in the Bradford Shipley Canal Road Corridor. A new secondary school in this location would absorb the need arising from the planned development forecast in the City Centre AAP and it would also be capable of satisfying some of the demand arising across the rest of the district owing to the city centre’s superior transport linkages. There is also potential for a ‘through school’ to be provided in the City Centre to serve ages 5 to 18 year olds.</p> <p>Approximately 3,790 new dwellings are planned for the City Centre through the Bradford City Centre Area Action Plan.</p>	CBMDC	CBMDC Basic Needs Allowance (if allocated by DfE) S106	Using the CBMDC formula £8.2 million of funding is required to provide 341 secondary school places. This includes 10% professional fees and 10% land costs.	Short to medium term 0 – 10 years	Gap in funding	Dialogue with CBMDC Officers.

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
				<p>Using the CBMDC formula set out in section 10.3 an indication of the likely number of new school places generated by the proposed new housing can be made. Based on an assumption that half the dwellings are 2 bedroom flats and half are 2 / 3 bedroom houses (which is a worse case assumption) the new residential development would generate 341 additional secondary school places.</p> <p>This is based on the assumption that there is no capacity in the existing schools and these needs would be met by a new secondary school or through school.</p> <p>A new secondary school called Dixons McMillan Academy opened September 2014 and will fill gradually up the year groups up to 2020. The school has a total capacity of 720 pupils. However, the school will satisfy current demand and not future demand. Dialogue with CBMDC have confirmed a district wide secondary school deficit remains.</p>						
Health										
District Wide	Provision of Healthcare	Essential	Provision of additional GP and Dentistry provision in the City Centre	<p>There may be interest from the existing GP's and social enterprise to provide further services. Alternatively depending on the total number of new people that move to the City Centre there may be an opportunity to provide a City Centre GP surgery.</p> <p>The mechanism used to decide whether a new facility is required would be the GP surgeries in the surrounding area highlighting capacity issues and potentially offering to operate a facility or highlighting one is needed. Alternatively the GPs might raise the issue through the Local Medical Committee.</p> <p>The NHS West Yorkshire Local Area Team would decide whether funding was provided for a new GP surgery.</p>	NHS West Yorkshire Local Area Team Bradford City Clinical Commissioning Group	NHS funding per person registered for healthcare in the City Centre	Unknown	On-going	No gap	CBMDC Public Health Team
Climate Change and Renewable										
City Centre	District Heating	Essential	Feasibility for District Heating in the City Centre	Feasibility for creation of a District Heating in the Civic Quarter, focused on CBMDC owned buildings.	CBMDC DECC	CBMDC DECC Consultants	Unknown	Short term 0 – 5 years	No gap	Dialogue with CBMDC Officers.

15 Facilitating Infrastructure Delivery

15.1 Overview

This section examines the potential funding mechanisms for financing strategic infrastructure investment in Bradford.

There is a broad range of potential approaches to funding strategic infrastructure. Individual project characteristics, including type of economic and financial outputs generated, play a key role in determining the most appropriate approach for any particular project. The purpose of this analysis is to outline the key potential mechanisms and key players, both in the public and private sectors. Consideration is also given to how policy changes may affect the funding environment in the future.

15.2 Changes in infrastructure funding

There have been significant changes to the public funding environment in recent years, largely in response to the depth of the previous recession and on-going constraints in public sector expenditure. The way in which future infrastructure projects are likely to be funded has also changed as a consequence.

The government has made boosting private sector investment in infrastructure a priority, alongside achieving long-term reductions in public expenditure. There are a number of challenges in achieving this objective. In particular, the ability of the government to ensure the right environment such that there is a sufficient appetite for investing in long-term assets by prospective investors, both at home and abroad, will be critical. To support this objective, the government recently published a guide to investing in UK infrastructure⁹, targeted at encouraging private sector investment from an international investor base.

Changes have also occurred in relation to the bodies responsible for local growth, most significantly through the introduction and continuing development of Local Economic Partnerships (LEPs). LEPs have an influential role in future local infrastructure investment.

Further to this backdrop, the funding environment is subject to further potential changes arising from the Chancellor of the Exchequer's 2014 Autumn Statement due on 3rd December 2014 and the next general election due in May 2015. Accordingly, there are considerable policy uncertainties in the short-term.

15.3 Leeds City Region LEP: Role and funding mechanisms

LEPs have assumed many of the responsibilities of Regional Development Agencies (RDAs) and are gaining an increasing range of powers in respect of funding and income generation.

⁹ 'Investing in UK Infrastructure' HM Treasury/UKTI (July 2014).

In the context of their role in delivering strategic infrastructure projects, the LEPs have the following powers and responsibilities:

- **Growing Places Fund** – Allocations from the Growing Places Fund have been made to the LEPs to be spent on infrastructure;
- **Local Growth Fund** – Ability to apply for funds from the Single Local Growth Fund from 2015-16;
- **European Structural and Investment Funds** - Responsibility for delivering part of the EU Structural and Investment Funds for 2014-2020 as of June 2014; and
- **Access to cheaper borrowing through the government** – Access to cheaper borrowing through government loans.

These powers and responsibilities will be important in enabling the LEPs to deliver their ‘Growth Deals’ and ‘Strategic Economic Plans (SEPs)’ outlining their plans for economic growth. The Leeds City Region’s Strategic Economic Plan¹⁰ sets out the LEP’s ambition for economic growth of the City Region. The plan was agreed with central government in July 2014 in a ‘Growth Deal’ that approved the following allocations:

- **Local Growth Fund** - £572.9 million, of which £62.2 million is confirmed for 2015/16 and £233.3 million for 2016/17 to 2021; and
- **West Yorkshire plus Transport Fund** - £180 million over 6 years (2015-16 to 2020-21); and a further £420 million over the period 2021/22 to 2034/35 subject to an independent review.

The status of these two funds is outlined below.

15.3.1 Local Growth Fund (LGF)

Local Growth Fund (LGF) is bringing together resources to support housing, transport and skills. These are some of the key drivers of local growth and central government expects Local Enterprise Partnerships to reflect these themes strongly in their investments.

The first round of Local Growth Fund resources can be used by Local Enterprise Partnerships to support those local economic growth priorities agreed in their Strategic Economic Plan.

The Leeds LEP has agreed an initial list of priority projects with central government. These projects are currently undergoing the due diligence process. Bradford One, which relates to an investment in an office development in City Park, is included in this first round of projects and has secured £5.2 million of LGF investment (£0.4 million in 2015/16).

Future rounds of Local Growth Fund will be an important potential source of funding for infrastructure projects in Bradford. Competition for funds will be intense however and it will be important for a robust case to be put forward for projects. Projects that can demonstrate strong economic outputs and deliverability, as well as being of strategic importance to Leeds City Region as a whole will have a greater chance of securing funding.

¹⁰ ‘Strategic Economic Plan 2014, Part A: Growth Plan’ (March 2014).

What is clear from experiences across the country is that LGF should not be approached as the sole source of funding for a project however (unless there are exceptional circumstances). There is a need to match LGF with other sources including private sector funds, local council and European funds as far as possible. It is also anticipated that LEPs will increasingly seek a financial return (where viable) on projects going forward in order to maximise their resources.

15.3.2 West Yorkshire Plus Transport Fund (WY+TF)

The Leeds City Region Local Enterprise Partnership and West Yorkshire Combined Authority alongside Local Authority Partners have secured a local transport fund of £1 billion for implementation of major public transport and highways schemes for the next 20 years. The fund is 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 Department for Transport Major Scheme Funding.

As part of the Leeds City Region ‘Growth Deal’, central government has agreed to co-invest in the WY+TF to provide a multi-year flexible fund that will allow the West Yorkshire Combined Authority to oversee significant investments in inter-city and intra-city connectivity schemes. The deal with government will provide £180 million over 6 years (2015-16 to 2020-21); provided as £30 million per annum. A further £420 million will be provided over the period 2021/22 to 2034/35, subject to an independent review.

This commitment could be worth up to £600 million over 20 years depending on the economic impact of local investments. When combined with local commitments, it could deliver a £1 billion Transport Fund in the Leeds City Region.

Bradford has been successful at accessing this fund for short term and longer-term schemes, as set out in Section 14. The ability of projects to deliver housing will also be important since the fund aims to deliver 11,350 homes.

15.4 Other mechanisms

15.4.1 Collaboration with the Homes and Communities Agency (HCA)

The HCA will continue to collaborate with the Leeds City Region LEP and Local Authorities on the development of pipeline projects and alignment of investment. Accordingly, there will continue to be opportunities to work together with these organisations in order to develop and deliver projects.

15.4.2 New Homes Bonus (NHB)

The New Homes Bonus is a grant paid by central government to local councils for increasing the number of homes and their use.

The bonus is paid each year for 6 years. It is based on the amount of extra Council Tax revenue raised for new-build homes, conversions and long-term empty homes brought back into use. There is also an extra payment for providing affordable

homes. The £917 million of New Homes Bonus allocations announced for 2014 to 2015 brings the total to £2.2 billion over the 4 years between 2011 and 2015.

Local councils can decide how to spend the New Homes Bonus. In principle, it can be used to pay for infrastructure requirements. However, government requires councils to consult communities about how they will spend the money, especially communities where housing stock has increased.

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.

Between July and September 2013 the government consulted on a proposal to pool the New Homes Bonus as a part of the Local Growth Fund. Following an announcement at Autumn Statement 2013 that pooling would proceed only in London. Further consultation has been undertaken and there could be further refinements to how the scheme operates.

15.4.3 Business rate retention

On 1 April 2013 a new system of business rates retention began in England. Before April 2013 all business rate income collected by councils formed a single, national pot, which was then distributed by government in the form of formula grant.

Through the Local Government Finance Act 2012, and regulations that followed, the Government gave local authorities the power to keep up to half of business rate growth in their area by splitting business rate revenue into the 'local share' and the 'central share'. The central share is redistributed to councils in the form of revenue support grant in the same way as formula grant. Local share tax base growth is retained within local government.

Whilst this change gives financial incentives to councils to grow their local economies, at the same time it has resulted in more risk and uncertainty. The scheme is structured in a way that is consistent with the Government's deficit reduction plans. The total external income to local government is planned to fall by 40 per cent in real terms over the life of this Parliament.

The experience of councils to date has been varied and no two stories have been the same. In particular, there is a huge diversity between the amounts collected by authorities. Emergent issues that are common among local authorities include the level of financial risk that councils face due to appeals and business rate avoidance, with little scope for those risks to be managed under the current arrangements.

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.

In summary, business rate retention does offer potential for raising funds for infrastructure projects. It is a complex area however and has significant risks. Further changes to the scheme may be announced in coming months responding to some of the issues to date.

15.4.4 Asset disposal receipts

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. 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.

15.4.5 Increases in council tax

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.

15.4.6 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 government.

The cost of prudential borrowing is particularly low, 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 cash flow, but as it is debt it will not plug any funding gaps.

15.4.7 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.

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 already operating using this model through the URBO joint venture for New Bolton Woods that includes up to 1,200 homes

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.

15.5 Conclusions

This section has examined the potential funding mechanisms for financing strategic infrastructure in Bradford. The key conclusions are:

- The funding environment for infrastructure has changed significantly in recent years and will continue to evolve with the central government policy shift toward greater involvement of the private sector and devolution of powers to local government bodies;
- The Leeds City Region LEP has an increasingly important role in planning and funding strategic infrastructure investment. The LEP is charged with the investment of Local Growth Fund and European funds and has powers to raise funds through a number of additional mechanisms;
- Local Growth Fund (LGF) provides an important source of potential funding for projects that can demonstrate support of housing, transport and skills objectives. The recent 'Growth Deal' has confirmed an investment of £572.9 million, of which £62.2 million is confirmed for 2015/16 and £233.3 million for 2016/17 to 2021;
- The West Yorkshire Plus Transport Fund is a potential source of funds for transport projects that can demonstrate benefits in inter-city and intra-city connectivity. The 'Growth Deal' with government will provide £180 million over 6 years (2015-16 to 2020-21); provided as £30 million per annum. A further £420 million will be provided over the period 2021/22 to 2034/35, subject to an independent review. Bradford has been successful at accessing this fund for short term and longer-term schemes, as set out in Section 14. The ability of projects to deliver housing will also be important since the fund aims to deliver 11,350 homes; and
- Other mechanisms for funding infrastructure include project collaboration with the HCA, New Homes Bonus (NHB), business rate retention, asset disposal

receipts, council tax, prudential borrowing and joint ventures. These all require careful consideration with reference to the characteristics of the specific infrastructure project; and

- There could be further refinements to some of these mechanisms (such as New Homes Bonus and business rates retention) that will provide further clarity on aspects including risk.

On a broad level, many infrastructure projects will need to be funded by drawing on a range of sources including some form of private sector contribution. It is important that Bradford Council and the Leeds City Region LEP adopt a coherent view on how different types of infrastructure are funded and how new approaches can provide the right environment to encourage investment. Continued working with other strategic partners such as the HCA will also be valuable.

16 Conclusion and Recommendations

16.1 Overall Conclusion

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 Bradford City Centre. As such, the current evidence shows that the strategy set out in the emerging Area Action Plan is broadly deliverable.

However, there are uncertainties associated with the planning and delivery of some infrastructure. There are also some gaps in the ability for committed or allocated funding to deliver the necessary level of infrastructure.

Specific risks include:

- The requirement for electricity upgrades to support development in the City Centre focused around Thornton Road.
- Provision of adequate access to green space through new open space in developments or access to existing parks to support Bradford's regeneration agenda.
- The need for additional high quality school places to allow the City Centre to become attractive to families.

Across this areas of risk decisions will need to be made on priorities for infrastructure delivery. These decisions must factor in the timing and phasing of housing and economic development and also infrastructure investment cycles.

16.2 Infrastructure-Specific Conclusions

The following section details the specific conclusions in relation to each infrastructure type:

Transport: CMBDC are working closely with national and sub-regional agencies to deliver necessary transport improvements in the City Centre. CBMDC are working hard to secure funding for uncommitted schemes referenced in section 14 and 15. The proposed schemes seek to improve public transport and highway access to the City Centre.

In terms of car trips, the Transport Study (2015) notes that the anticipated number of trips arising from the quantum of residential growth within the City Centre AAP boundary is relatively low for residential developments, and as such the number of car trips arising to and from the city centre will be low. This is attributed to the proximity to jobs and services from the proposed residential sites, and a general limited availability of car parking, as typical in a city centre environment. It is however noted that there may be some impact arising from developments beyond the City Centre AAP boundary, within the Shipley and Canal Road AAP boundary. Accordingly these issues are covered separately within the Shipley and Canal Road Infrastructure Delivery Plan.

Alongside these improvements a range of on-site highway improvements are likely to be required to deliver each proposed development site. However these would be site specific transport improvements, which would be funded by the developer of the site. The Transport Study (2015) highlights the potential

improvements to the following road junction schemes that should be investigated to accommodate increased traffic:

- Shipley Airedale Road/Bolton Road;
- Shipley Airedale Road/Barkerend Road;
- Queen's Road/Manningham Lane;
- Thornton Road/Godwin Street.

Utility Networks: This study has highlighted that there is a potential capacity issue in relation to electricity provision. This results in a requirement to upgrade Crown Street Primary Sub Station, at a cost of £2 million to enable the full quantum of development to be delivered in the City Centre. The available electricity capacity would be used by the first tranche of development in the City Centre, it would then fall to the developer that creates the capacity issue to pay the £2 million upgrade. The ability for Northern Powergrid to contribute towards this costs will be dependent on the build out rates proposed development and how quickly Northern Powergrid can 'claw back' the costs of the upgrades. This will need to be discussed further with Northern Powergrid when there is further detail on the trajectory and build out rates of the development sites. The actual solution will depend upon which developments start first and where they are in relation to other developments and the substations. The developments will be connected via the primary substations to local substations and hence the developments.

Telecommunications: The City Centre is well served by broadband and mobile internet. There are also a number of wifi hotspots in the City Centre and public transport providing access to free access to the internet. There is no funding gap for essential telecommunications infrastructure.

Flood Risk and Drainage: CBMDC have a detailed model showing the flood risk posed by the Bradford Beck. There are no major flood risk issues in the City Centre. There is no funding gap for essential flood risk and drainage infrastructure.

Green Infrastructure, Open Space and Public Space: There is a deficit of open space in the City Centre, as demonstrated through the City Centre Infrastructure Study. The City Centre does offer public transport access to parks surrounding the City Centre. There is no committed funding to increase open space in the City Centre, however CBMDC will access a range of funding sources including external funding available on a bid by bid basis, developer contributions and CBMDC capital funding. There is therefore a gap in essential open space funding, however the exact gap in funding will be confirmed by the future Open Space Strategy.

Sports, Leisure and Recreation: The CBMDC Playing Pitch Strategy has identified a deficit in playing pitches in the City Centre and the wider District. CBDMC are progressing a Sports Facilities Strategy, which will confirm future requirements and a strategy to deliver sports provision including sports hall, swimming pools and sports pitches. CBMDC have identified a potential site for a new 25 metre swimming pool in Bradford City Centre and are investigating funding options.

There is therefore a gap in sports, leisure and recreation funding, however the exact gap in funding will be confirmed by the Sports Facilities Strategy as this will confirm the future plans for sports provision.

Community and Cultural: The City Centre has a wide range of community and cultural facilities. CBMDC will continue to consider external funding options e.g. Heritage Lottery Funding and opportunities to improve facilities.

There is therefore not technically a gap in funding provision for community and cultural facilities.

Education: The delivery of 3,790 new residential units in the City Centre will create a need for new primary and secondary school places. A new secondary school called Dixons McMillan Academy has recently opened immediately outside the City Centre AAP boundary. However, the school will satisfy current demand and not future demand. A deficit therefore remains. However a deficit in secondary school remains at a district wide level. A new primary school called Rainbow Primary was opened in 2011, close to Bradford Interchange.

Health: The City Centre is covered by the Bradford City Clinical Commissioning Group (CCG). The CCG and NHS West Yorkshire Local Area Team will provide any necessary additional GP provision in the City Centre. Therefore any future gap in provision will be delivered through NHS funding and there is gap in the funding of health infrastructure.

Climate Change and Renewables: CBMDC are investigating the options for providing a heat network across the City Centre. This is being progressed through a separate study. There is no funding gap for climate change and renewable infrastructure.

16.3 Recommendations

The findings of this study have raised a number of issues to consider as CBMDC progresses in the short, medium and long term. Based upon knowledge gathered, it is recommended that CBMDC proceeds with the following next steps:

- Ensure that existing allocations are converted into funding commitments. CBMDC needs to take all necessary steps to ensure that existing allocations become committed funding. This will involve continuous dialogue with local and city-region partners to maintain Bradford's position as a vital component of the future of the West Yorkshire and Leeds City Region.
- CBMDC to engage with Northern Powergrid and known affected developers to understand options for securing electricity upgrades in the most efficient manner.
- To work closely with Metro and the other local authorities within the Leeds City Region Local Enterprise Partnership to develop the priorities for the West Yorkshire Plus Transport Fund and link up transport requirements with CIL development.
- To work closely with Government to make a case for increased Basic Needs Allocation, to tackle existing infrastructure issues in frontline services such as Education.

- To produce an Open Space Strategy to fully understand the options for improving provision to and access to open space, building on the recommendations of the Green Infrastructure Study.
- To develop a Sports Facilities Strategy to improve access to create a deliverable plan for improving existing provision and across the Bradford District.

Appendix A

List of Infrastructure Stakeholders

A1 List of Infrastructure Stakeholders

Infrastructure Type	Stakeholder Name	Date of Meeting
Transport		
	Joe Grint, Principal Engineer	June 2014 July 2014
	Richard Gelder Transportation Development Manager	June 2014
	Michelle Greenwood	July 2014
	Toni Rios Network Planning Manager, Highways Agency	Consulted on draft IDP
Utilities		
Electricity	Michael Walbank, System Planning Manager, Castleford	July 2014
Water Supply and Treatment	Stephanie Walden, Yorkshire Water	July 2014
Education		
	Nina Mewse Principal Research & School Planning	July 2014 and comments on draft IDP September 2015.
	Steven Jenks Provision and Capital Lead Officer	July 2014
Health		
	Anita Parkin, Public Health, CBMDC.	July 2014
Flood Risk and Drainage		
CBMBC Drainage Team	Tony Poole Principal Drainage Engineer	June 2014
CBMBC Drainage Team	Mohammad Amjid, Flood Risk Team, CBMDC	June 2014
Environment Agency	Rachel Jones Planning Liaison Technical Specialist	Phone call to confirm that EA have no schemes in this area in July 2014
Green Infrastructure, Open Space and Public Space		
	Danny Smith, Special Projects Officer- Parks	July 2014
	Mick Priestley, CBMDC	July 2014
	Michelle Catlow, CBMDC	July 2014

Sport, Leisure and Recreation		
	Mick Priestly Technical Manager-Environment and Sport	July 2014
Community and Cultural		
Museums and Galleries	Tony Stevens, CBMDC	July 2014
Emergency Services		
Fire Service	Jim Butler, Bradford District Commander	July 2014
Ambulance Service	Jonathan Isles, Dacre, Son and Hartley.	July 2014
Police Service	Vince Firth West Yorkshire Police	July 2014
Community Groups		
Dave West	Little Germany Action Ltd	July 2014
Goitside Partnership	Jonathan Wright	July 2014