Front Cover

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Calderdale Infrastructure Delivery Plan : 2018

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1. Introduction

1.1 The Infrastructure Delivery Plan (IDP) is a compendium of projected infrastructure provision and it helps to ensure that this infrastructure is provided in a timely manner and in a coordinated and sustainable way. It sets out the infrastructure that will support the level of development that is proposed in the Calderdale Local Plan.

1.2 In order for the Local Plan to be found sound at Examination, it must be shown to be effective and deliverable over the Plan period. In order to demonstrate deliverability, the Local Authority is expected to ensure that there is a reasonable prospect that planned infrastructure is capable of being provided when needed.

1.3 The national Planning Practice Guidance (nPPG) requires Local Plans to positively plan for development and the infrastructure required in the area to meet spatial objectives set out in the Council's Local Plan.

1.4 Essentially the Local Plan should make clear, for at least the first 5 years of the plan period, what infrastructure is required, who is going to fund and provide it, and how it relates to the anticipated rate and phasing of development. 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.

1.5 Where the deliverability of critical infrastructure is uncertain 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 the IDP that can be updated regularly.

1.6 Paragraph 162 of the NPPF states "Local Planning Authorities should work with other authorities and providers to:

- *Assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk and coastal change management and its ability to meet forecast demands; and to*

- *Take account of the need for strategic infrastructure including nationally significant infrastructure within their areas".*

1.7 This IDP has identified the key infrastructure that will be required in Calderdale over the first five year period of the Local Plan; however, it is important to stress that investment programmes are constantly evolving and as such the IDP is a living document that will be updated as and when new information becomes available.

1.8 Local Planning Authorities must progress a proportionate evidence base for infrastructure which assesses the quality and capacity of various forms of infrastructure (indeed *tightening the evidence which is expected in respect of both local and strategic policies to support a 'sound' plan, to allow for a more proportionate approach* is an objective set out the draft revised NPPF text published in March 2018).

1.9 Although the IDP seeks to identify the key infrastructure items which are required to meet the growth objectives set out in the Local Plan, it does not capture every project being planned by each Council service or external provider. The IDP recognises there are numerous other plans and strategies which provide more detail on what, how and when those services are to be delivered.

1.10 Early discussions with infrastructure and service providers are considered particularly important to help the Council 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.

1.11 Where the deliverability of critical infrastructure is uncertain, the Plan should address the consequences of this including possible contingency arrangements and alternative strategies. The details concerning planned infrastructure provision should be set out in a supporting document such as an infrastructure delivery programme that can be updated on a regular basis as information becomes clear.

1.12 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 (CIL) is expected to have. Where local planning authorities intend to bring forward a CIL 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 co-ordinated way.

2. DEFINING INFRASTRUCTURE

2.1 Section 216 of the Town and Country Planning Act 2008 defines infrastructure as:

- Flood defence;
- Open space;
- Recreation and sport;
- Roads and transport facilities;
- Education and health facilities;

2.2 More specifically the IDP is concerned with the types and sub-categories of infrastructure set out below:

Table 1 – Types of Infrastructure in the IDP

Type	Sub-category
Physical Infrastructure	
Transport	Strategic Road Network
	Local Road Network
	Public Transport - Rail
	Public Transport - Bus
	Walking/Cycling
Utilities	Sewage/Waste Water/Water
	Gas
	Electricity
	Telecommunications
Waste Management	Municipal Waste/Waste Collection/Recycling
Flooding	Flood Defences
	Water Quality
	Drainage
Social Infrastructure	
Education	Nursery/Pre-School/Surestart
	Primary School
	Secondary School
	Higher Education
	Adult Learning
Health	GP Surgeries/Health Centres
	Hospitals
	Dental Practices
Community & Culture	Community Centres
	Post Offices
	Library/Customer 1st/Information Centres
	Town Halls
	Museum/Galleries/Theatres/Cinemas
	Heritage Assets
Emergency Services	Police
	Fire & Rescue
	Ambulance

Green Infrastructure	
Open Space/ Natural	Parks and Gardens
	Allotments/Community Gardens
	Common Land
	Amenity Land
	Cemeteries/Churchyards/Other Burials
	Civic Spaces
	River/Canal
	Sites of wildlife habitat significance/networks
Sport, Leisure & Recreation	Play areas
	Sports Pitches
	Sports Centres/Swimming Pools
	Outdoor sports facilities (tennis/bowling)

2.3 The term 'infrastructure' has a very wide meaning and relates to all facilities and services which are necessary for successful communities to function. Infrastructure is essential to support social, economic, and environmental objectives. It includes a very wide range of aspects within transport, such as roads, railways, buses and public transport systems, cycle and pedestrian provision, parking, and less visible measures such as travel cards or real-time information. It also includes education and health facilities, greenspaces, leisure and cultural facilities, and utilities for instance, water and electricity.

2.4 This iteration of the IDP has been compiled in consultation with internal and external consultees, and has used the earlier version of the IDP as a baseline to illustrate the changes to date. Contact has been made during 2017/18 with infrastructure providers and/or their respective agencies and the data included in this Plan. A list of all stakeholders who have been consulted on the preparation of the IDP is listed in Appendix 1.

3.0 REGIONAL AND CROSS-BOUNDARY POLICY CONTEXT

Leeds City Region LEP and West Yorkshire Combined Authority

3.1 The 2012 'City Deals' and the subsequent 'Growth Deals' 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.

3.2 Calderdale falls within the Leeds City Region Local Enterprise Partnership (LCR) (LEP) and also falls under the remit of the West Yorkshire Combined Authority (WYCA), the accountable body responsible for administering the closely related £1bn+ West Yorkshire Plus Transport Fund (WY+TF). This fund was created in 2014 as an initial phase for the coalition government's package of devolution to the regions and focuses on funding transport schemes that will facilitate and unlock growth.

3.3 The LCR SEP 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; and
- 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 the period of 2015/16.
- £420m between 2015 – 2035 to deliver the WY+TF

3.4 The closely related West Yorkshire plus Transport Fund (WY+TF) is targeted specifically at increasing employment and economic growth across the LEP area. This ten 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.

3.5 The administrative area of Calderdale has borders with Lancashire to the west, Bradford to the east and Kirklees to the south. Additionally, the authority is part of the Leeds City Region and as such there are a number of notable cross boundary issues shared with other City Region authorities.

3.6 The Localism Act (2011) and National Planning Policy Framework (2012) introduced a duty to co-operate across Local Planning Authority boundaries. Paragraph 181 of the NPPF states that "*Local Planning Authorities will be*

expected to demonstrate evidence of having effectively co-operated to plan for issues with cross- boundary impact, when their Local Plans are submitted for examination".

3.7 The Council has been undertaking Duty to Co-Operate discussions and meetings through the Local Plan process with relevant bodies. These include cross border transport, education and health infrastructure requirements. These discussions will be on-going and relevant schemes identified in the Infrastructure Delivery Programme.

3.8 In March 2018 it was confirmed by the Ministry of Housing Communities and Local Government that a joint bid by Calderdale and Kirklees Councils to the Planning Delivery Fund for increased capacity to support joint planning had been successful. This will provide £170,000 to enable the councils to work together to develop further plans for infrastructure delivery across the South East Calderdale/North Huddersfield area.

4. SCALE AND DISTRIBUTION OF GROWTH

4.1 The Local Plan is planning for the delivery of 12,600 homes and about 60,000sqm of new employment space between 2017 and 2032.

Demographic context

1.13 Whilst the need for housing is largely driven by the formation of households, infrastructure requirements are influenced to a greater degree by changes to the population. Table 1 below shows the Office for National Statistics Projections for changes to Calderdale's population between 2014 and 2032. It can be seen from the table that overall growth masks important differences between the age ranges. In particular the population below the age of 65 grows more slowly and peaks before 2032, compared to the rapid and continual growth of the 65+ range. This information will inform considerations such as the need for school places.

Table 2 – ONS population projections 2014-32

Age category	Net change 2014-32	Peak year
0-3 (pre-school)	-373	2014
4-18 (school age)	+1,744	2028
18-65 (working)	+172	2021
66-89 (retired)	+15,077	2032
90+	+1382	2032
Calderdale all ages	+18,176	2032

Table 3 – SCALE AND DISTRIBUTION OF HOUSING GROWTH

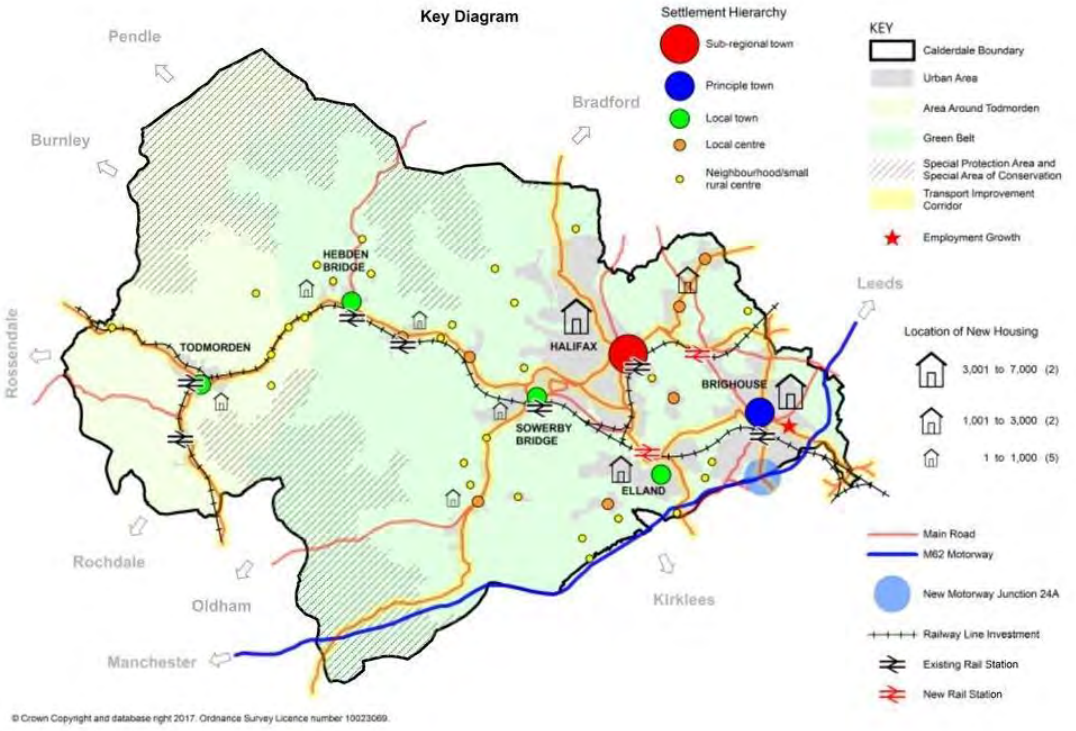
Settlement	EXISTING DWELLINGS (2017/18) Local Land Property Gazetteer layer	Allocations Assumed in OPTION B (12.03.2018)	Existing Permissions	Windfall assumptions	Assumed TOTAL new Housing	Assumed Total Housing at 2032	% Change
Halifax	36,816	2,694	737	631	4,062	40,878	11.03%
Brighouse	16,395	4,580	356	163	5,099	21,494	31.18%
Elland /Greetland / Stainland /Holywell Green	10,003	376	208	179	835	10,766	8.35%
Todmorden	7,277	309	289	156	754	8,031	10.36%
Sowerby Bridge	6,812	234	273	18	525	7,337	9.28%
Hebden Bridge	4,630	68	86	20	174	4,804	3.76%
Mytholmroyd & Luddendenfoot	4,977	142	63	21	230	5,203	4.62%
Ripponden / Rishworth	4,544	69	121	168	358	4,902	7.88%
Northowram & Shelf	4,404	465	78	18	544	4,965	12.35%
Calderdale Total	95,858	8,937	2,211	1,374	12,522	108,830	12.67%

4.2 The opportunities for allocating land are not evenly spread across the Borough. Calderdale is constrained by its topography and environmental capacity, and although the starting point for the distribution of new growth had been the settlement hierarchy identified by the RSS and taken forward in the Core Strategy, the assessment of sites for the land allocations has clearly shown that certain parts of the Borough do not have the supply of suitable sites which would enable this distribution to be achieved.

4.3 Halifax, Brighouse and Elland have the greatest opportunities for new growth. However, there are parts of the Borough which have also been identified as being able to contribute higher levels than previously considered. Sites in the Northowram and Shelf area particularly at Shelf have been identified as being some of the Borough's most suitable sites for development.

4.4 These levels of growth will inevitably have an impact upon the existing infrastructure within Calderdale. To fully understand the infrastructure implications, this IDP considers current shortfalls in infrastructure provision including 'show-stopper' issues for development, and future investment plans of the infrastructure providers. The second stage of development of the IDP will be to discuss the full implications of the growth proposals and identify the infrastructure necessary to ensure development proposals add to the creation of sustainable communities. The Local Plan Initial Draft Key Diagram identifies areas within the above settlements where major growth could occur.

Figure 1 - Local Plan Key Diagram – under revision



INFRASTRUCTURE PROVISION

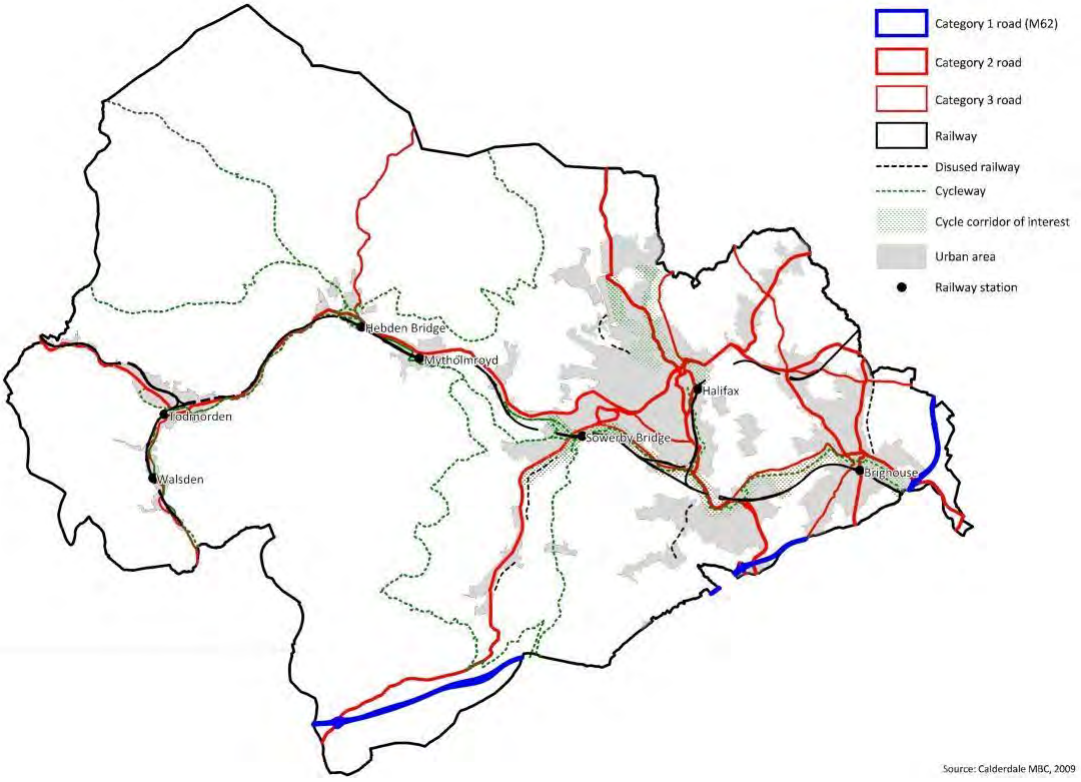
This section of the IDP looks at infrastructure needed and being provided to support the growth that the Local Plan envisages it is set out in sections as follows:

- Transport;
- Utilities;
- Waste Management;
- Flooding, Drainage, Water Management;

5. TRANSPORT INFRASTRUCTURE

5.1 Calderdale is located mid-way between two major cities, Leeds and Manchester and is connected by road and rail to both of these cities and their wider regions. The district is served by the M62 running east to west along its southern boundary, a local road network providing links across Calderdale and to neighbouring towns and cities as well as the Calder Valle line which provides services to Leeds, Manchester and beyond. In addition, Calderdale is served by a bus network linking the main towns with smaller towns and villages as well as a developing network of cycle ways and footpaths.

Figure 2 - Transport within Calderdale



5.2 The topography in Calderdale and its built environment, whilst providing distinct natural beauty, limits and constrains the expansion of the transport network. The main challenge therefore is to get the most out of the existing assets by encouraging and enabling people to switch to alternative travel

modes to the car whilst identifying and seizing any opportunities to address any pinch points.

Modal Share

5.3 With regard to existing travel behavior in Calderdale, based on Census 2011 data, the car or van accounted for the majority of journeys to work in Calderdale: 66% of workers travelled to work in a car or van either as the driver or a passenger. Walking was the second most popular mode for travelling to work in the borough, accounting for 10.1% of journeys, followed by bus services (8.4%), rail services (3.3%), other modes (0.4%) and cycling (0.9%). The remainder of the borough's workforce (9.8%) worked mainly from home.

5.4 Calderdale is slightly below the West Yorkshire average for the share of work journeys made by car (66.7%) and by foot (11%). It is more significantly below the West Yorkshire average for the proportion of journeys to work made by bus (11.3%). The district is very close to the West Yorkshire average for the proportion of journeys to work made by rail (3.5%) and bike (1.25%) the latter despite the challenging topography of the district.

5.5 In terms of the share of journeys to work made by car, Calderdale sits between Leeds, at the lower end (62%) and, at the upper end, Wakefield (73.5%). A higher share of the journeys to work are made by rail in Bradford (5.1%), but the share in Calderdale closely resembles those in the other West Yorkshire districts. A significantly higher proportion of journeys to work in Leeds are made by bus (14.2%) but Calderdale's share is closer to those in the other West Yorkshire districts. A higher proportion of journeys to work are made by bike in Leeds (1.79%) but Calderdale's share is closer to those in the other West Yorkshire districts.

5.6 Traffic congestion regularly occurs within the district with peak period problems encountered on the M62 in the east-bound direction from Junction 24 (A629, Ainley Top) in the AM peak and from Junction 25 (A644, Brighouse) through to Junction 27 (M621/A62, Gildersome) in the PM peak. In the west-bound direction traffic congestion regularly occurs in both peak periods between Junctions 27.

Employment Locations

5.7 In 2011, the overwhelming majority of Calderdale's working residents (91.2%) worked in West Yorkshire and the majority of the borough's working residents commuted to destinations in the Borough itself (64.5%). The Halifax Travel to Work Area coincides with boundaries of the Authority. Compared to other West Yorkshire districts, the Calderdale labour market is less self-contained than Leeds (with 78% of residents working in the district), Bradford (70%) and Wakefield (65%) but marginally more self-contained than Kirklees (63%). Calderdale is more self-contained that the City of Manchester (60%), though Manchester's boundaries are more tightly drawn and do not correspond with the built-up area, which merges with surrounding districts on all sides.

5.8 After Calderdale, Bradford is the most popular destination for the borough's working residents (10% commute to the city) followed by Kirklees (9.2%), Leeds (6.2%) and Rochdale (1.4%). In total, 4.3% of Calderdale's working residents commute to the districts of Greater Manchester. A very small proportion of the borough's working residents commute to destinations in South Yorkshire, North Yorkshire, Lancashire, and further afield.

5.9 Of the Calderdale residents who leave the borough for work (33% of the total working population), the vast majority commute to destinations in West Yorkshire (75.1%) but a significant minority commute to destinations in Greater Manchester (12.2%) and elsewhere in the North West (5%). The vast majority of the Borough's working residents commute less than 30km to work (87.4%). Just under half commute less than 5km (48%) and just over one third commute between 5km and 20km (38.6%).

Commuting Flows

5.10 In 2011, a total of 26,978 workers commuted to Calderdale, while 28,919 of the borough's residents left the borough for work. This represents a small margin with it experiencing a net outflow of workers to other local authority areas (1,941 workers).

5.11 In a West Yorkshire context, Calderdale is positioned between Bradford and Kirklees, which are significant net exporters of labour (by 5,419 and 25,560 workers, respectively) and Leeds, which is a significant net importer of labour (by 54,692 workers). As a small net exporter of labour, Calderdale resembles Wakefield, which is a net importer by 661 workers.

5.12 By a significant margin, Calderdale is a net importer of labour from Kirklees (2,809). To a lesser extent, it is a net importer of labour from Cheshire West and Cheshire (406) and Rossendale (78). However, by a significant margin, Calderdale is a net exporter of labour to Bradford (1,932) and Leeds (2,587). To a lesser extent, it is a net exporter of labour to Rochdale (442), Wakefield (333), Manchester (772), Oldham (133), Burnley (130), Salford (113) and Trafford (114).

5.13 In addition to congestion on the roads, overcrowding issues are also evident on the trains. These issues usually occur during a 90 minute period during both the AM and PM peak. There is evidence of overcrowding on services via Halifax, especially the Blackpool North trains and Leeds services via Brighouse, although most of these issues occur between Mirfield and Morley.

REGIONAL AND LOCAL TRANSPORT STRATEGY

5.14 The West Yorkshire Transport Strategy was adopted by the West Yorkshire Combined Authority (WYCA) in August 2017. The Transport Strategy replaces the West Yorkshire Local Transport Plan adopted in 2011 and sets out WYCA's ambitions for a transport system that serves the needs of businesses and residents as well as enhancing prosperity, health and wellbeing for people and places across West Yorkshire.

5.15 The new strategy sets out a step change in the quality and performance of the transport system within West Yorkshire and our connections with the rest of the UK. By investing in radically improved transport infrastructure and services, we believe that we can deliver the transport connections that businesses and people require and create attractive places in which to invest, work and live. The three objectives of this Plan are:

- **Economy** – Create a reliable, less congested, better connected transport network, increasing business productivity and access to wider labour markets;
- **Environment** – Have a positive impact on our built and natural environment and increase resilience against climate change and;
- **People and Place** – Put people first to create a strong sense of place – increasing access in a safe, inclusive way and encouraging walking and cycling for health and other benefits.

5.16 With regard to Calderdale, the Strategy states that improving transport connectivity within West Yorkshire and to Manchester is key to supporting Calderdale's existing economic activity and facilitating growth. The Strategy notes that some important road corridors are operating at capacity and journeys can be unreliable, with major congestion hotspots including Junction 25 of the M62, A629 Brighouse, Hipperholme Crossroads through to Stump Cross junction, A6026 and Copley Lane and Brighouse, Sowerby Bridge and Hebden Bridge town centres.

5.17 The Strategy also notes that improvements in road capacity and operation will be delivered through the West Yorkshire plus Transport Fund, but road congestion is forecast to worsen significantly and major road building is made difficult by the district's geography, topography and heritage considerations. The Strategy also notes that quality of rail and bus alternatives are perceived as 'lacking'.

5.18 The Strategy notes that the focus is on enhancing the quality of sustainable transport options to reduce car dependency and accommodate new trips, with rail growing in importance for Calderdale residents, particularly for longer, cross-boundary journeys and a priority is to capitalize on planned HS2 and Northern Powerhouse Rail investment as well as upgrades to the strategic road network. Electrification of the Calder Valley line, capitalising on committed road and rail improvements to the Bradford-Halifax-Huddersfield corridor are key strategic transport priorities. The Strategy notes that the buses will be important in serving communities not connected by rail and there is a desire to build on past investment in cycling.

5.19 The **Calderdale Transport Strategy (2016)** sets out an overarching vision for Calderdale's transport system over the duration of the Plan. This vision is supported by a number of objectives, which include the following:

- Enable new jobs to be created at employment sites, particularly in Halifax, Brighouse and the M62 Enterprise Zone;
- Provide residents with access to education opportunities and

employers with access to skilled workers;

- Help to deliver new homes in accessible locations indentified by the Local Plan;
- Improve links between places in Calderdale by addressing gaps and weaknesses in current networks;
- Capitalise upon planned national and regional transport investment, including Leeds City Region Metro, the Northern Hub, Northern Powerhouse Rail and HS2;
- Broaden the range, quality and integration of public transport options available to reduce dependency on the car;
- Cater for movements into and out of Calderdale from neighbouring areas by all forms of transport;
- Increase physical activity and improve air quality to support public health and environmental goals;
- Ensure that transport provision evolves to meet the changing needs of residents, including children and young people, senior citizens and disabled people;
- Enhance the urban and rural environment to improve quality to life for residents and make Calderdale an even more desirable place to live, work and visit.

Role/Potential Impact of the Local Plan

5.20 The Local Plan establishes that housing, employment, retail, leisure and service facilities should, wherever possible, be contained within existing urban areas.

5.21 The Local Plan also notes that transport and its proper planning are fundamental to connecting people with jobs, services and leisure opportunities. It is important that new and existing developments are located so that they remain accessible by public transport, cycling and walking and can access employment, services and other facilities to reduce the need to travel by car. The potential growth areas identified within the Local Plan will need to include improved transport provision, both in terms of public transport and improvements to the local road network to mitigate against increased traffic.

5.22 The Local Plan aims to encourage sustainable modes of transport. It is, however, inevitable that new development will impact upon the road network, which will need mitigation wherever possible. The infrastructure schedule indicates the main schemes that may be required in the future but it is likely that other issues will arise as the Plan progresses beyond its first five years. These new issues will be considered in future iterations of this IDP.

STRATEGIC ROAD NETWORK – The M62 Motorway

Existing Situation

5.23 Highways England (HE) is the government company charged with operating, maintaining and improving the Strategic Road Network (SRN). HE's primary aims are to provide a network that is free flowing, safe and serviceable and

accessible and integrated. It further aims to support economic growth through development of the SRN whilst collaborating with local authorities to identify appropriate interventions both on and off the network.

5.24 The SRN within Calderdale relates to the M62 motorway. Direct access to the M62 is available at junctions 22 to 26, with junctions 22, 24, 25 and Hartshead Moor Services all being located within Calderdale.

5.25 A Smart Motorway scheme was introduced in October 2013 on the M62 between junctions 25 and 30. This makes use of variable mandatory speed limits and dynamic hard shoulder running in order to increase capacity and relieve traffic delays. The scheme has resulted in significant journey time savings during the AM and PM peaks, increased journey time reliability and a significant reduction in collision rates.

5.26 The Government's first Road Investment Strategy 2015-2020 (RIS1) and its associated Route Strategies, including the South Pennines Route Strategy covering the M62 corridor, outlines a long-term investment programme for the strategic road network and sets out specific route-based operational and investment priorities. The priorities relevant to Calderdale district are detailed in Table BB.

Table 4 : Highways England Committed Schemes 2015-20

Location	Detail	Construction start
M62 Jn.20 – Jn.25	Smart motorway. Linking two existing lengths of smart motorway.	By end 2019/20
M62/ M606 Jn.26 Chain Bar	Junction upgrade. Facilitate movements from Leeds to Bradford.	By end 2019/20

5.27 HE are currently developing the second Roads Investment Strategy (RIS2) which will set out proposals to address current and future needs beyond 2020. A comprehensive assessment of the potential impact of Local Plan aspirations on the strategic road network up to 2040, the West Yorkshire Infrastructure Study, was completed in 2016. This takes into account committed network schemes for which funding has been confirmed and develops a list of further mitigation schemes and additional areas for investigation as part of future network enhancement planning.

5.28 The South Pennines Route Strategy was refreshed in 2017 and provides a statement on the current performance of, and perceived pressures on, the route to inform the planning of future investment.

LOCAL ROAD NETWORK

Existing Situation

5.29 Calderdale Council is responsible for the safe operation of the local road network within the district. The main routes include the A646 which connects the towns of the Upper Calder Valley to the rest of the district as well as Greater Manchester and Lancashire; and the A629, A58 and A647 linking the district with Bradford, Leeds, Huddersfield and other parts of west and north Yorkshire.

5.30 2016 base year traffic modelling has been undertaken which represents a baseline situation prior to local plan growth. It has identified issues of capacity constraint at the following locations:

- M62 Junction 25 Brighouse;
- Brighouse Town Centre;
- Stump Cross;
- Elland Town Centre;
- A629 corridor;
- Halifax Town Centre;
- A6026/Copley Lane;
- Sowerby Bridge Centre;
- Hebden Bridge Centre;

5.31 These constraints are mainly related to the topography of Calderdale which gives limited route choice and therefore concentrates traffic on key through routes. This constraining affect of topography upon infrastructure development also necessitates a need to consider alternative modes of transport as priorities for investment in order to alleviate pressure on the highway network.

5.32 In terms of growth related to the Local Plan, modelling indicated issues at the following locations:

Table 5 - Congested Locations and Associated Funding Opportunities

Location	Notes	Funding Opprtunity
A58/Tuel Lane (Sowerby Bridge)	The modelling assessment shows that the Tuel Lane signalised junction is under pressure, supporting previous evidence from the Sowerby Bridge Transport Study which identified existing issues in this location. An intervention at this location would need to be taken forward as part of a package covering the entire town centre. Given the constraints of this location, an improvement would be in the form of upgrades to the various signalised junctions including better co-ordination between signals to optimise highway efficiency. The A58 corridor through Sowerby Bridge is currently planned for a series of corridor improvements as part of the West Yorkshire + Transport Fund (WY+ TF) Corridor	West Yorkshire + Transport Fund (WY+ TF); Corridor Improvement Programme (CIP); developers

Location	Notes	Funding Opprtunity
	Improvement Programme. It is therefore reasonable to expect that the issues identified in this location will be mitigated through that planned investment enable the increased demand from local site allocations to be accommodated without significant detriment to the network.	
A629 at Old Lane (Ovenden)	The issue highlighted by the modelling at this location appears to be as a result of the interactions of local traffic, parking and the geometry of side roads that enter the A629. In order address this problem, the form of intervention would likely be relatively minor in nature such as the rationalisation of parking and the amendment of junction layouts to give increased capacity. The A629 has been put forward to form part of the WY+TF Corridor Improvement Programme such that a number of appropriate small scale interventions can be identified to improve the corridor as a whole. CMBC will continue to prioritise the required investment in this corridor.	Potential WY+TF CIP; other government sources to be confirmed; developers
Wakefield Rd/Copley Lane (Copley)	At this location the junction is particularly constrained by the surrounding housing, public house and school which offer little room for widening of the carriageway. With this in mind it is expected that an improvement would be in the form of upgrades to the signals that could give additional efficiency in terms of capacity. Since the majority of future impact at the junction is attributable to a particular Local Plan site allocation, it is reasonable to expect upgrade to this junction to form part of the planning conditions associated that site's future development. Given the relatively limited scale of investment required, such an approach is deemed viable and is unlikely to prevent development of the site allocation coming forward.	Government source being sought; developers
Dewsbury Road/Elland Riorges Link (Elland)	Traffic from the Dewsbury Road arm of this junction has difficulty exiting as a result of the increased traffic levels. Currently this is an uncontrolled priority junction; therefore a re-balancing of priorities could be achieved through the addition of signals at this location. Given the proximity to the roundabout to the south, it may be necessary to re-configure this junction in unison. Currently there are emerging plans for interventions at various locations within Elland as part of Phase 4 of the A629 corridor improvements, to be funded under the WY+ TF. Whilst currently at an early stage of development, it is likely that the planned investment will alter flows at this junction and mitigate the issues identified, enabling the increased demand from local site allocations to be accommodated without significant detriment to the network.	WY+TF; developers
A6025/Exley Lane (Elland)	This priority junction is modelled with capacity constraints on both Exley Lane and the western A6025 arm. Given the constraints of the rail and road bridges on either side of the junction, there is little scope for a significant intervention at the junction itself. As part of pre-feasibility work on the A541 WY+ TF scheme, options to alleviate pressure on the A6025 between Brighouse and Elland have been explored. Whilst still at an early stage of development, there is the potential for	WY+TF; developers

Location	Notes	Funding Opprtunity
	investment as part of the A641 scheme to reduce demand at the Exley Lane junction, providing greater ability for additional development traffic to be accommodated.	
Huddersfield Road/South Lane (Elland)	The highlighted issue from the model at this location is the right turn into South Lane. This is only marginally above the 85% V/C limit and therefore is likely to be solved with a minor change in traffic volumes. As highlighted above, the planned A629 corridor Phase 4 interventions are expected to benefit Elland by redistributing traffic in the local area. This has the potential to reduce pressure on this junction, increasing the ability for development traffic to be accommodated.	WY+TF; developers
A643/Church Street/Ogden Lane (Rastrick)	The mini-roundabout at this location shows an issue on the A643, however there is little that can be done in terms of widening the approach roads due to the neighbouring housing and school. An improvement could be in the form of signalisation in order to give greater priority to the main movement of the A643. The issue at this location is exacerbated by the large development at “Land between Bradley Wood and Woodhouse Lane” which has been modelled without any associated infrastructure. Separate studies of the large sites within south east Calderdale have stated the need for a link road between the A644 and A641 which would dissipate the traffic from this development and potentially mitigate the potential issue at the A643/Ogden Lane junction.	Government source being sought; developers
A641/Bailiff Bridge	As part of pre-feasibility work on the A641 scheme, the need for improvement of this junction has been identified. Whilst still at an early stage of development, it is likely that issues encountered at Bailiff Bridge will be overcome as part of the A641 investment, thereby enabling development traffic to be accommodated.	WY+TF; developers
A58/A641 (Wyke)	At this junction, there is modelled capacity constraints on all arms given this is the crossroads between two key corridors, therefore there is a need for a significant intervention. As part of pre-feasibility work on the A641 scheme, the need for improvements at this junction has been identified. Whilst still at an early stage of development, it is likely that issues encountered at Wyke will be overcome as part of the A641 investment, thereby enabling development traffic to be accommodated. The final preferred scheme at this location needs to be formed in the context of any wider approach for improvement to the A58 corridor between Chain Bar and Halifax in the longer term.	WY+TF; developers
White Gate/Mill Lane (Mixenden)	This junction is rural in nature and therefore the issue shown by the model here can be mitigated by limited improvements to the alignment of this junction and widening to increase capacity.	Government source being sought; developers
A58/Wakefield Road (Hipperholme)	In the longer term there is a need to address the issues at this junction as part of a comprehensive improvement for the A58 corridor as a whole. This will potentially require a significant highway intervention alongside improvements for	Potential future WY+TF; other government sources TBC;

Location	Notes	Funding Opprtunity
	public transport and other modes. To address the particular issuer seen as a result of the Local Plan sites, smaller scale improvements conditioned as part of the planning process are likely to be necessary in the short to medium term.	developers
A643 Walton Lane/A649 Wakefield Road	At this location there is an issue with the right turning traffic from Walton Lane onto the A649. Given that the proportions of this junction are already generous, the provision of signals at this location to rebalance the traffic priorities in favour of the Walton Lane traffic is considered an appropriate step. Given the relatively limited scale of investment required, such an approach is deemed viable and is unlikely to prevent development of the site allocation coming forward.	Government source being sought; developers
B6112 Stainland Road/Saddleworth Road	There is a need to provide improvements to the West Vale junctions as a while given their proximity and interaction. This will likely be in the form of upgrades to the signal operation and localised traffic management such review of waiting resulting and rationalisation of traffic movements. Phase 4 of the A629 corridor scheme has identified the need to provide investment in West Vale in order to improve journey times and allow for bus priority. The identified Local Plan impacts should be considered as part of further work on that scheme.	WY+TF; developers
A646/A6033 Halifax-Todmorden-Rochdale boundary	Junction improvements and improved network management.	WY+TF; CIP; developers

5.33 The Initial Draft consultation on the Local Plan indicates a preference for the majority of new growth to be located within eastern parts of the district. In recognition of this focus and the current bottle-necks, the Plan identifies a number of key transport routes which are proposed investment priorities. In terms of the local road network these priorities have been chosen to facilitate growth within eastern parts of the district and to overcome existing transport constraints.

5.34 As well as works dealing with the specific congestion issues set out in Table % above, the WY+TF has also funded (at least in part, final programmes to be agreed) the following works :

Halifax Town Centre :

- Bus Box and expanded pedestrian zone;
- Improved public transport facilities;
- Enhanced by-pass routes;
- Enhances pedestrian and cycle routes into Halifax Town Centre;
- Enforcement Package;
- Halifax Railway Station – improvements to the station to create a new “Gateway” into the town with improved waiting facilities; statin building and platform environments.

5.34 Schemes to help facilitate growth with changes t the highway environment must also include measures to improve access via other modes. The WY+TF programme has considered this requirement and this will continue to be expected of transport projects and programmes across the life of the Local Plan.

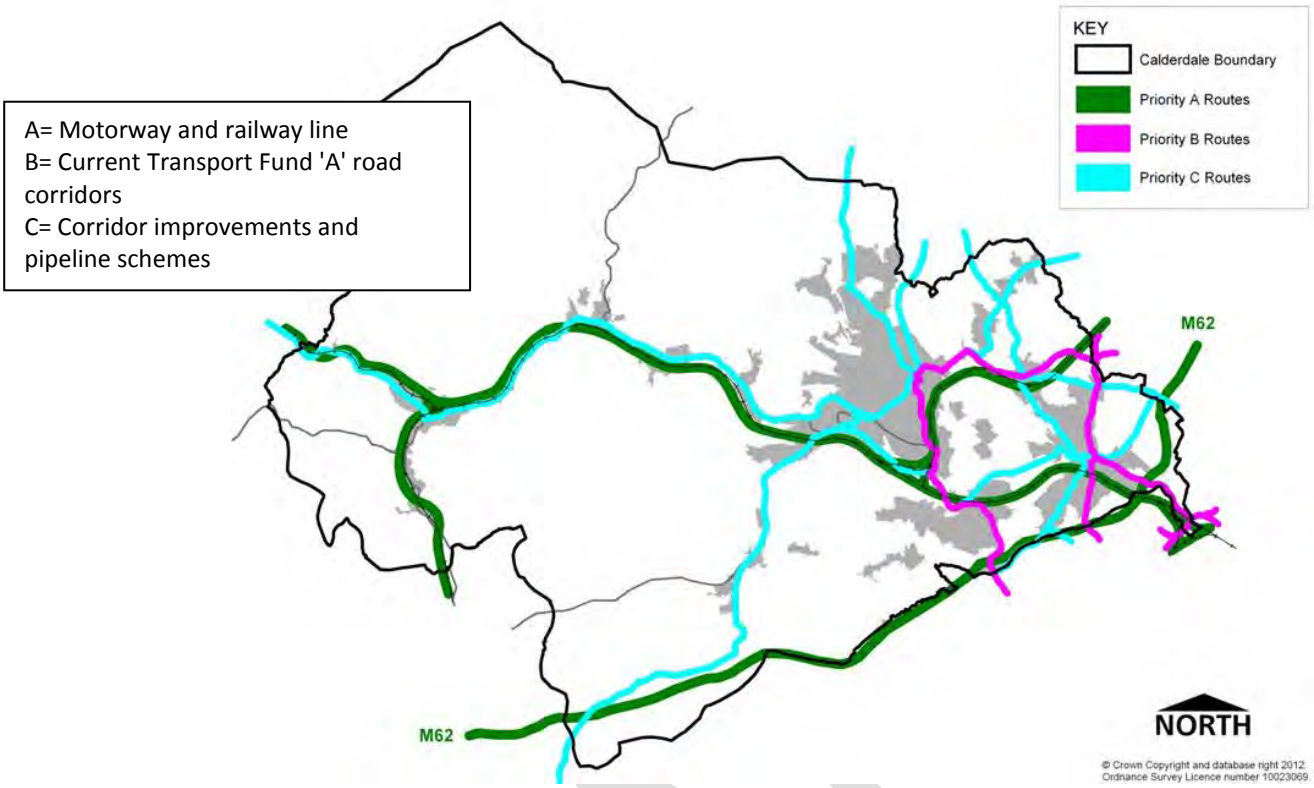
5.31 In 2017 a memorandum of understanding was established between WYCA and the five West Yorkshire Districts for the creation and management of the West Yorkshire Key Route Network (WYKRN). This includes over 660km of predominantly 'A' roads that perform a strategic function across the region as defined within the MOU. The strategic principles of the WYKRN are that it should:

- Facilitate development and economic growth;
- Reduce journey times and congestion across West Yorkshire regardless of district boundaries;
- Assist in the delivery of the WYTF schemes;
- Enable closer working with Highways England and other combined authorities in the north of England.

MAP OF WYKRN to be inserted

5.32 Figure XX shows the extent of the current WYKRN. Initially the MOU will establish a collaborative approach setting standards for the operation and management of the WYKRN but with each District retaining responsibility for day-to-day management and maintenance of the network within its boundaries. It is envisaged that the WYKRN will enable the adoption of a much more focused approach to highways investment and maintenance going forward.

Figure 3 - Priority Transport Investment Routes



RAIL NETWORK

5.34 There are 7 stations within Calderdale at Halifax, Brighouse, Sowerby Bridge, Mytholmroyd, Hebden Bridge, Todmorden and Walsden. The Calder Valley Line connects Calderdale stations Halifax to Leeds, Bradford and Manchester. A recently introduced service connects Halifax and Brighouse directly to London.

5.35 The Leeds City Region Connectivity Study identifies that Calderdale has poor connection by rail to other parts of the city region. The line is constrained by a number of bottle-necks including:

- Limited line and capacity at or approaching Leeds and Manchester Victoria stations:
- A number of single line sections;
- short platform lengths
- low maximum line speeds; and
- long signalling headways (the space required between trains) along particular sections of the line

5.32 In addition, prior to its renewal in 2016, the Northern franchise has operated with no allowance for growth using a mix of older rolling stock which, as well as offering a poor quality passenger environment, has adversely affected dwell times at stations and service reliability. Overcrowding has increased on

certain peak services to and from Leeds with opportunities to address this restricted due to lack of available rolling stock.

5.33 Route Utilisation Studies produced by Network Rail and its predecessor Strategic Rail Authority up to 2011 identified possible interventions that could remove some of the existing constraints and some of these were incorporated into Network Rail's delivery plans for the periods 2009-2014 (Control Period 4) and 2014-2019 (CP5). These include the 'Northern Hub' which is a £560 million scheme to improve and increase train services and reduce journey times across northern England by electrifying lines and increasing rail capacity across Manchester through construction of the Ordsall chord. Approval of this scheme was confirmed by Government in 2012 and the newly constructed line was opened in 2017.

5.34 Additional enhancements on the Calder Valley Line have included line and signalling improvements, improved junction capacity at Bradford Interchange (still current works) and the opening of the Todmorden curve in 2014 allowing trains to run between Burnley and Manchester via Todmorden.

5.35 The new Northern franchise awarded in 2016 promises significant improvements for the Calder Valley line including new and refurbished trains, introduction of staffing and enhanced facilities at some stations, faster journeys, a simplified and improved ticketing offer and new destinations including a direct service to Manchester Airport.

5.36 The Council has secured WYTF funding to develop proposals for a new station at Elland including an enhanced access package linking the station site with the town centre and surrounding residential and industrial areas. The Council is also working with WYCA and rail industry partners on the Halifax Station Gateway project which complements the wider proposals for the town centre and could also potentially unlock industrial sites to the east. The bid submitted for development of transport options in eastern Calderdale to support Local Plan proposals also includes a potential new station site in Hipperholme. Further WYTF funding has been secured by WYCA to expand car parking at Mytholmroyd and Hebden Bridge stations.

5.36 Other current programmes include increasing the availability of car parking and improvements to access Mytholmroyd and Hebden Bridge as well as the provision of ; at Hebden Bridge by 2019 making the station fully accessible. The Council also has a programmed vision for fundamental improvements to the Halifax station environment as part of the WY+TF Station Gateways programme.

5.37 Integrated Ticketing and smartcards are also being developed by Transport for the North to improve customer experience and make it easier to transfer from one mode of transport to another.

5.38 Electrification of the Calder Valley Line is a long standing priority for CMBC. The potential that this offers to the district in terms of improved journey times and future growth is very considerable and must have a direct association with both the emerging HS2 and Northern Powerhouse Rail programmes of

work. The Council has recently begun work on development of a new strategy for the Calder Valley line, building upon the work that has been completed or is currently in progress, which as well as developing a vision for future rail services will also define how the District can take advantage of the wider strategic opportunities offered by High Speed Rail (HS2) and proposals for Northern Powerhouse Rail.

BUS NETWORK

5.41 The West Yorkshire Bus Strategy 2040 developed by WYCA aims to grow bus passenger numbers by 25% over the next ten years and sets out a number of policies to achieve this including presentation of the bus system as a single integrated network, providing a consistent high quality accessible service, simplified fares and cashless payment and investing in a fleet that meets the latest environmental standards. The Bus 18 Partnership with West Yorkshire's commercial bus operators is already delivering benefits regarding the quality of the bus offer and is working with the West Yorkshire Districts on a number of minor capital schemes to address congestion pinch-points on the highway network. The Bus Services Act 2017 provides the City Region with new powers which could be used to deliver the ambitions of the Bus Strategy including enhanced partnership schemes, franchising and advanced multi-operator ticketing.

5.42 The majority of Calderdale's bus services are run on a commercial basis by a small number of operators who decide on the routes and timetables and set the fares levels. First is the major operator across the district. Additional socially necessary services – predominantly rural, evening and Sunday services – are tendered by WYCA.

5.43 TRACC accessibility mapping indicates that the overwhelming majority of the population is within 400 metres of a bus route during weekday periods. Higher frequency bus services operate within the urban areas of Halifax, Sowerby Bridge and Brighouse, along the main Halifax to Bradford, Huddersfield and Upper Calder Valley corridors and between Huddersfield, Brighouse and Bradford.

5.44 The bus network faces considerable challenges. Reduced levels of public funding mean that the tendered network, particularly evening and Sunday services, is under pressure. An assessment of the bus network, Calderdale Council: Integrating Public Transport and Housing Growth Strategies, was carried out in 2013 and identifies rising operating costs and increasing unreliability due to congestion. It also highlights gaps in the network, particularly a lack of cross-Halifax connectivity and links between the Upper Calder Valley, Sowerby Bridge and eastern Calderdale/ Huddersfield avoiding Halifax.

5.45 The various corridor schemes being progressed by Calderdale Council through the WYTF programme include development of measures to address congestion and improve the reliability and attractiveness of bus services. The schemes take into account the aspirations and growth areas as defined within the Local Plan. Proposals include provision and enforcement of a bus

box around Halifax town centre incorporating improved bus/ rail interchange, the enhancement or reconstruction of Halifax Bus Station and bus priority measures along the Huddersfield – Elland - Halifax corridor. The Council is also exploring the establishment of a voluntary bus partnership with the operators and WYCA aimed at developing and managing improved on-street facilities, improving service quality and addressing gaps in the network.

5.46 To improve the experience on buses, WYCA are considering the potential implications of the Buses Services Act and the associated potential to introduce bus quality franchise and/or partnerships to make operators more accountable and provide better value for money. Integrated Ticketing and Smartcards are also being developed to help reduce travel times by minimising on-bus purchases and making it easier to transfer between modes.

5.47 A number of interventions, including junction priorities and public transport hubs, are being considered to improve the speed and reliability of public transport. Transport hubs will provide facilities to support high frequency public transport interchange along core transport routes within the district as well as potentially facilitating interchange with alternative mobility options such as car club vehicles and share bikes.

Figure 4 – Areas within 400m of a bus stop

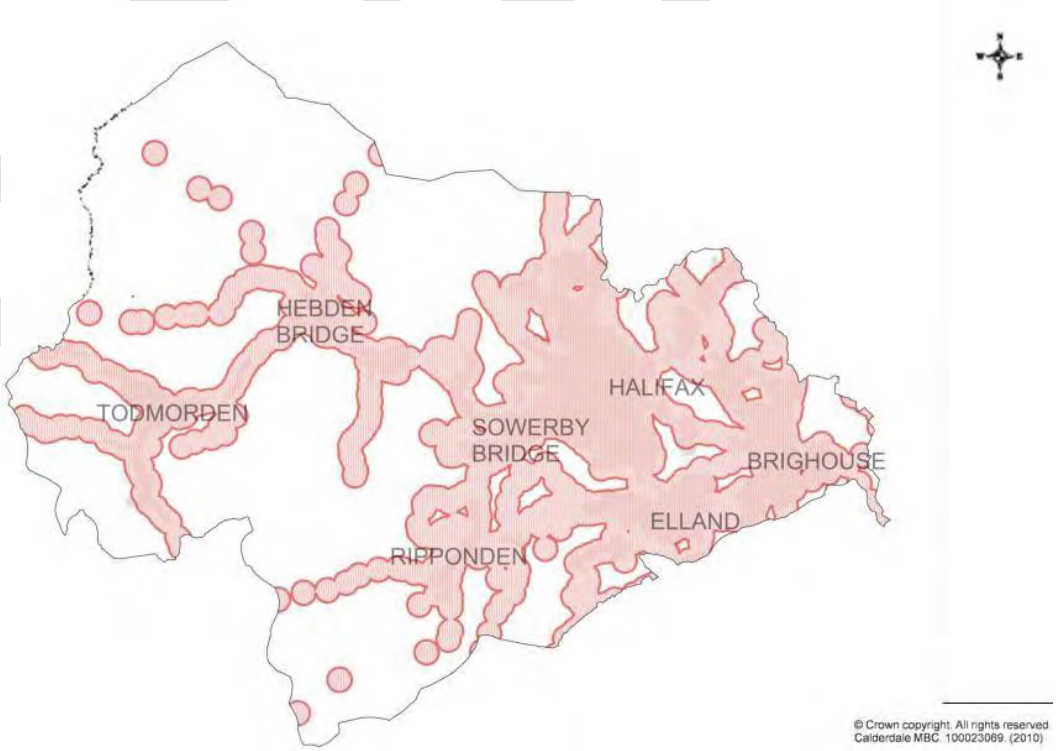
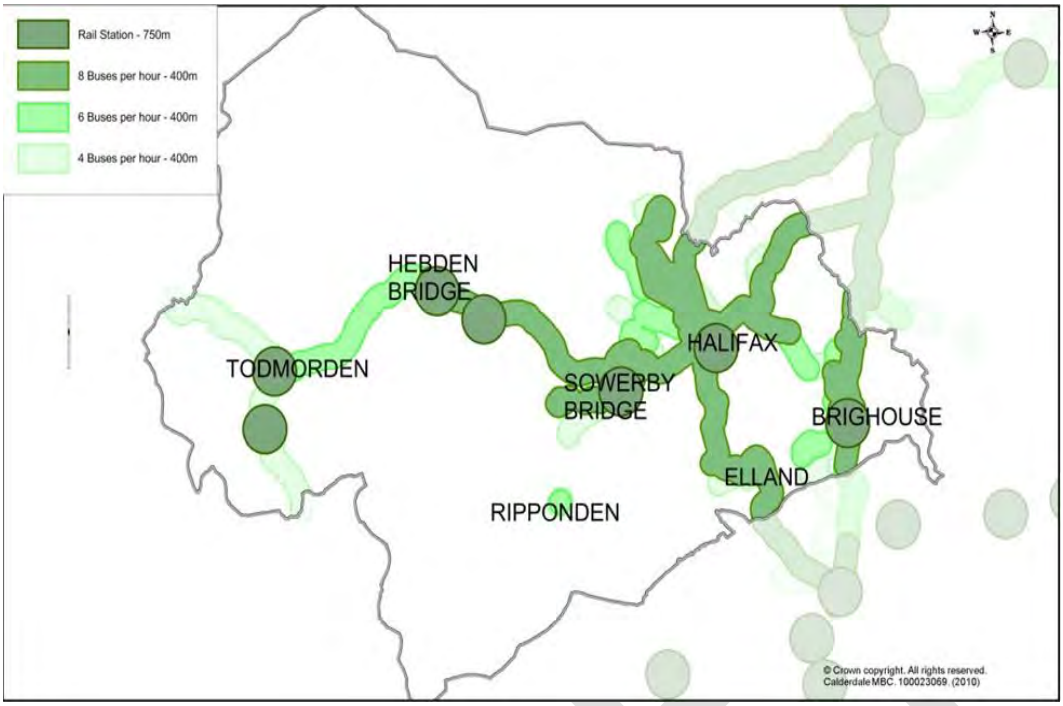


Figure 5 – Proximity to frequent bus service



WALKING AND CYCLING

5.48 The Calderdale Transport Strategy aims to achieve a significant shift towards active travel – walking and cycling – through a combination of the creation of high quality walking and cycling infrastructure, changes to the highway environment to reduce the dominance of motor vehicles and behavioural and attitudinal changes. This supports the vision set out in the Active Calderdale Physical Activity Strategy to 'be the most active borough in the north of England by 2020.

5.49 A comprehensive programme of 20 mph areas is currently being introduced across all of Calderdale's major residential areas, due for completion in summer 2018. All new residential developments within these areas will be required to be covered by a 20 mph order and there will also be an emphasis on provision of safe walking and cycling routes linking new developments with the wider network.

5.50 Calderdale is reputed to have the densest network of Rights of Way in the UK. This network has around 2,000 paths totalling over 700 miles of footpaths and 125 miles of bridleways, along with a very short network of byways open to all traffic. This network includes two national trails – the Pennine Way and the Pennine Bridleway. The Pennine Bridleway through Calderdale connects with a section running through Lancashire to form a 47 mile circular route known as the Mary Townley Loop. Circular routes for walkers can be found on the Calderdale Way, the Todmorden Centenary Way and the Brighouse Boundary Walk, along with numerous shorter walks based around some of Calderdale's villages.

5.51 Sections of the National Cycle Network form arterial routes through Calderdale. Route 66 runs along the valley from Brighouse to Warland in the West. Route 68 runs north to south, over the hills on quiet country roads. Between Todmorden and Brighouse. Furthermore Route 66 forms part of the Calder Valley Greenway and a section of Route 68 via Sowerby Bridge and Hebden Bridge forms part of the long distance Pennine Cycleway.

5.52 Work is presently underway to improve sections of the Calder & Hebble Navigation and Rochdale Canal towpaths. These works will create a continuous high quality walking and cycling route from Todmorden to Brighouse and may lead to the realignment of some of the existing National Cycle Network route between Luddenden Foot and Hebden Bridge.

5.53 The Strategic Cycle Network as shown in Figure XX is a representation of both the current key routes serving the borough as well as sections within those routes and other entire key routes yet to be developed. It should also be noted that whilst not shown on this Map, local links to the Strategic Cycle Network as well as those within key settlements of the borough are also of equal importance to the Strategic Cycle Network itself.

5.54 The National Cycle Network is coordinated by sustainable transport charity Sustrans who are undertaking a review of the National Cycle Network, which may lead to further changes to the local network of cycle routes.

5.55 In April 2017, Calderdale Council adopted a Cycling Strategy - *Cycling, a way of life in Calderdale* - to supplement the existing *Calderdale Transportation Strategy 2016-2031*. In relation to physical infrastructure the Cycling Strategy includes a vision that *"Everyone is able to use an intuitive and integrated network of high quality on road, greenway and off road routes, connecting communities activities and destinations, whilst improving their health, wellbeing and contributing to economic growth".*

5.56 It is envisaged in the Cycling Strategy that the focus of network development will be :-

a) Upgrading the National Cycle Network Route 66 from Warland at the western boundary of the Borough through to Anchor Pit Lock at the eastern boundary, and on to Cooper Bridge in Kirklees to further develop the Calder Valley Greenway, and create links with other parts of the West Yorkshire Greenway network in the Bradford and Kirklees areas;

b) Expanding the existing Strategic Cycle Network by:

- extending the Hebble Trail into Halifax town centre;
- the creation of a traffic free link between Halifax town centre and the large housing developments in North Halifax i.e. Ovenden and Mixenden – and potentially linking with the Queensbury Tunnel;
- the realisation of the Ryburn Valley Greenway from Sowerby Bridge (connection with Route 66) south-westwards to

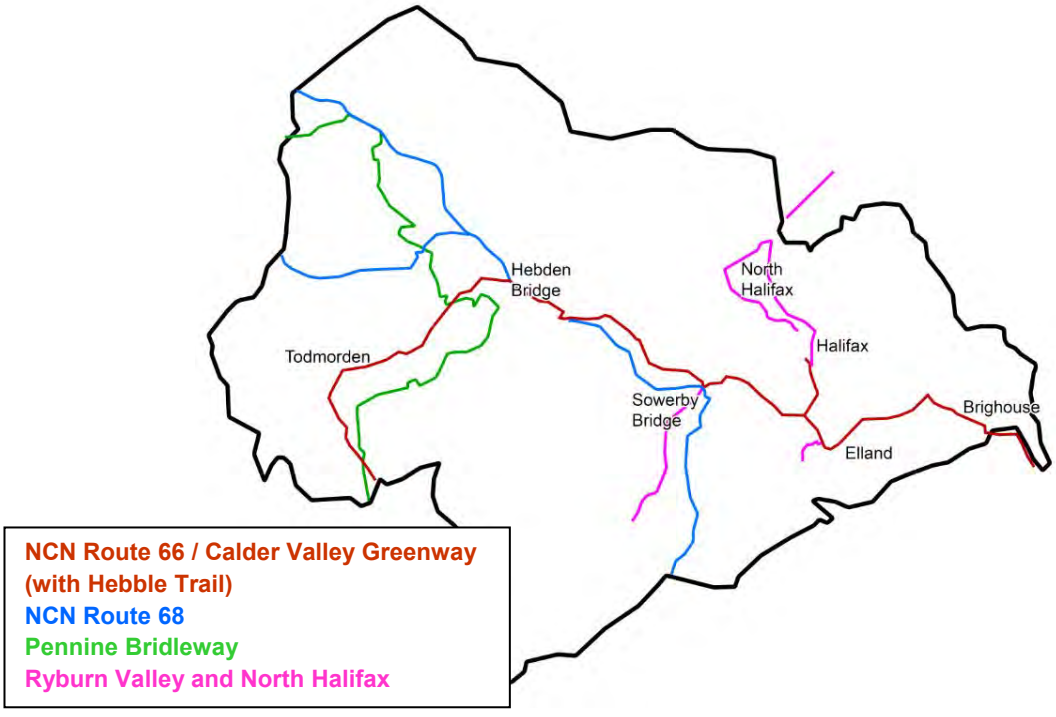
Ripponden and Rishworth (and accommodating a realignment of Route 68);

- linking the West Vale viaduct route with the Calder Valley Greenway route (and Hebble Trail) at Elland, and development of a traffic-free/quiet road route to Broad Carr and beyond towards Huddersfield;
- developing the Pickle Bridge disused railway line between Brighouse and Bailiff Bridge
- developing any other key routes not yet identified but which emerge from Local Cycling and Walking Infrastructure Plan process (2018).

c) Improving the connectivity and visibility of the Strategic Cycle Network routes by filling in gaps and improving signage for the town centres of Todmorden, Hebden Bridge (and link with Hardcastle Crags), Mytholmroyd, Sowerby Bridge, Halifax, Elland and Brighouse, and making these settlements more cyclist and walker friendly, particularly with reference to improved cycle parking, bike/rail integration, lower speeds and other traffic calming measures, and wider place-making initiatives.

5.57 Local Cycling and Walking Investment Plans (LCWIPs), as set out in the Government's Cycling and Walking Investment Strategy (2017), are a new strategic approach to identifying cycling and walking improvements required at a local level. The five West Yorkshire Districts and WYCA have successfully bid to Government for funding support to develop LCWIPs and these will serve to provide a well evidenced, prioritised programme of infrastructure improvements for future investment and ensure that consideration is given to cycling and walking within the local planning process. It is envisaged that the production of an LCWIP for Calderdale would highlight the proposals as set out in a) to c) above.

Figure 6 : Strategic Cycle Network



6. UTILITIES

Water Supply and Waste Water [2018 update requested from Yorkshire Water]

Primary Legislation: Water Resources Act 1991, Water Industry Act 1991, Environment Act 1995, Water Act 2003.

Main providers in Calderdale: Yorkshire Water, Environment Agency.

Regulator: Ofwat

6.1 Yorkshire Water is the sole organisation responsible for water supply and the operation of waste water treatment works in Calderdale. The Local Authority is the lead local flood authority in relation to surface water drainage, whilst the Environment Agency is principally involved with flooding associated with water courses and the protection of water resources including improvements to water quality. These matters are covered later in this document.

6.2 The water industry is regulated by the Water Services Regulation Authority (Ofwat) who every five years carries out a periodic review of Yorkshire Water's future investment needs and determines how much it can charge to finance its activities. This is in the form of a five year business plan with the current one adopted in 2009 covering the period 2010 to 2015. As part of the process of approving the business plan, a Strategic Direction Statement (SDS) is produced, the most recent published in 2010. This sets the direction of travel for the long term, (25 years). The SDS assists the regulator's consideration of Yorkshire Water's draft and final five year business plans in a long term context.

6.3 The current Business Plan is Asset Management Plan 5 (AMP5) and is based on information available in 2008 whilst AMP6 will be published for the next five year period with an information base date of mid-2013. This will be submitted to Ofwat in 2014. It will therefore be able to take account of proposals in the Local Plan and associated sites. Yorkshire Water also produces a Water Resources Management Plan with the latest one covering the period 2015 to 2040. It set out how Yorkshire Water will ensure supply meets demand for the period and incorporates future pressures on water supply and demand for the period due to predicted changes to the climate. It also looks at future changes in population, housing, water use and metering trends in Yorkshire.

6.4 Yorkshire Water is a statutory consultee in relation to the Local Plan and has a duty to provide water supply and waste water treatment to development identified in adopted development plans. The content of adopted development plans is therefore vitally important to investment planning by Yorkshire Water. Clearly the more certainty there is in relation to the location of development the greater the assistance to Yorkshire Water in formulating its own investment plans.

Role/Potential Impact of the Local Plan

Water Supply

6.5 Yorkshire Water has in place as grid system for water distribution running west to east and vice versa, and north to south and vice versa across Yorkshire. Therefore water supply is not a barrier to development as supply can be moved around as required.

Waste Water

6.6 Yorkshire Water operates a number of waste water treatment works (WWTW's) across Calderdale and specific information regarding the capacity of each of these is shown in the table below –

Table 6 - Capacity at waste water treatment sites in Calderdale

Waste water treatment site	Spare Capacity[(1)] Y/N	Comments
Brighouse **Brighouse Upper** **Brighouse Lower**	Y	Form one catchment. Significant spare capacity for roughly 10% population growth/2,000 new dwellings. If needed additional capacity can be undertaken in future AMPs.
Barsey Green	N	Serves a population of approx. 62 people. Could not accommodate any development without more detailed investigation.
Scammonden	N	Serves a population of approx. 24 people. Could not accommodate any development without more detailed investigation.
Ripponden Wood	N	At capacity - could only accommodate existing UDP allocations or committed sites
Halifax North Dean **Salterhebble** **Halifax Copley**	Y	Form one catchment. Significant spare capacity for roughly 10% population growth/4,000 new dwellings. If needed additional capacity can be undertaken in future AMPs.
Pickwood Scar	N	Serves a population of approx. 12 people. Could not accommodate any development without more detailed investigation.
Lee Lane	N	Serves a population of approx. 60 people. Could not accommodate any development without more detailed investigation.
High Royd	N	At capacity - could only accommodate existing UDP allocations or committed sites

Waste water treatment site	Spare Capacity[(1)] Y/N	Comments
Stoodley Glen	N	Serves a population of approx. 27 people. Could not accommodate any development without more detailed investigation.
Gibb Lane	N	Serves a population of approx. 29 people. Could not accommodate any development without more detailed investigation.
Redacre	Y	Spare capacity for roughly 10% population growth/300 new dwellings. If needed additional capacity can be undertaken in future AMPs.
Eastwood	Y	Spare capacity for roughly 10% population growth/500 new dwellings. If needed additional capacity can be undertaken in future AMPs.

6.7 Yorkshire Water requires a 400m cordon sanitaire to be maintained around each of its WWTW's. In calculating the future capacity of these WWTW's Yorkshire Water takes into account a number of factors including extant planning permissions and proposals in development plans (such as the Local Plan) together with those initiatives in the Code for Sustainable Homes aimed at reducing water usage. Where a shortfall in capacity is identified technological advances mean that the most likely solution will be an upgrading of existing WWTW's rather than entirely new facilities being built. Such an approach means that the availability of land for expansion or new facilities is not a constraint on Yorkshire Water's ability to increase capacity. Any requirements for additional capacity will be incorporated by Yorkshire Water into its next business plan (AMP6). Therefore any identified lack of capacity will not prevent development taking place but may influence its timing.

Surface Water Drainage

6.8 This is the shared responsibility of Yorkshire Water, the local authority and the Environment Agency. The amount of surface water is influenced by a number of factors including the use of Sustainable Urban Drainage Systems (SUDS) and these matters are covered in more detail later in this document under Flood Risk and Drainage in Calderdale.

Summary

6.9 Water supply and treatment is not a constraint on growth. Yorkshire Water has a responsibility to supply potable water and take away waste water. Phasing of development may be necessary to enable improvements to the capacity of some WWTW's. In order to formulate a delivery timetable Yorkshire Water require more detailed information on the planned development (particularly numbers of houses and the distribution) for any given waste water treatment catchment.

Figure 7 - Impounding reservoirs and Water Treatment Works

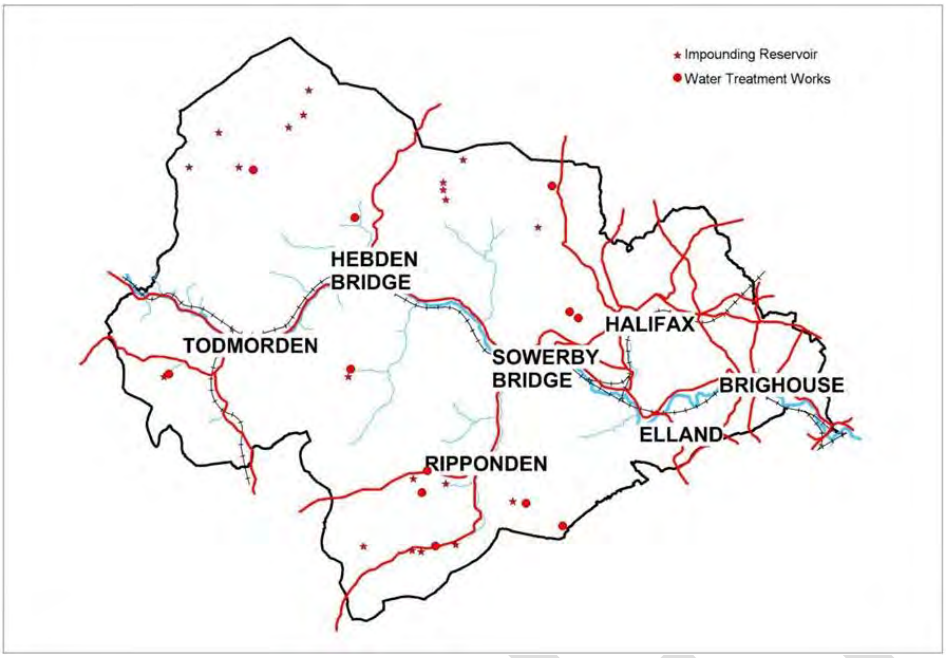
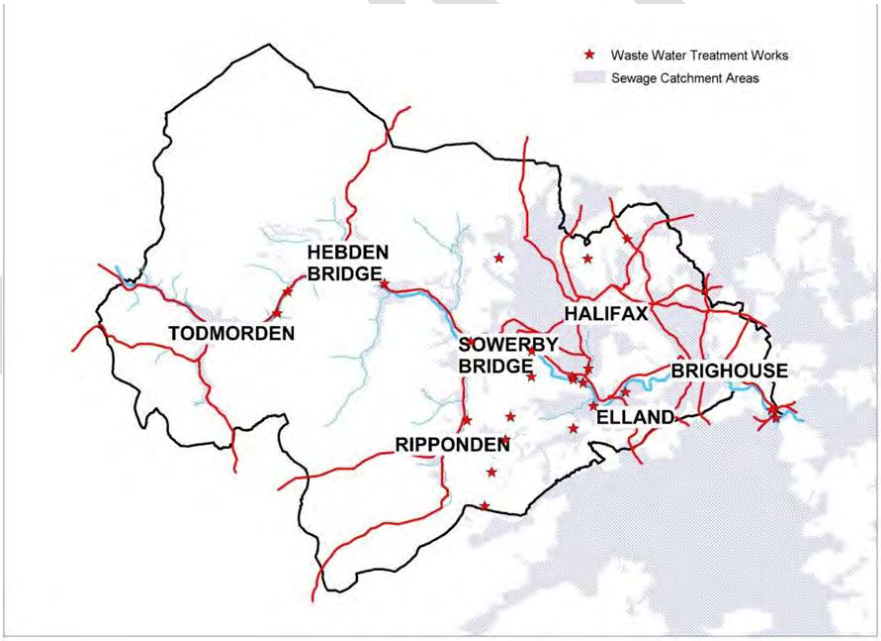


Figure 8 - Waste water treatment works and catchments



6.7 ELECTRICITY

Major legislation: Electricity Act 1989, Electricity at Work Act 1989, Utilities Act 2000, Electricity Safety, Quality and Continuity (ESQC) Regulations 2002 (and as amended in 2006).
Key Industry licence requirements & codes: Distribution Licence, Distribution Code, Grid Code, Connection & Use of System Code (CUSC)
Main Electricity Network Operators in Calderdale:
Transmission – National Grid
Distribution – Northern Powergrid (Yorkshire) plc

Regulator: Office of Gas & Electricity Markets (Ofgem)

Existing Infrastructure
NATIONAL GRID

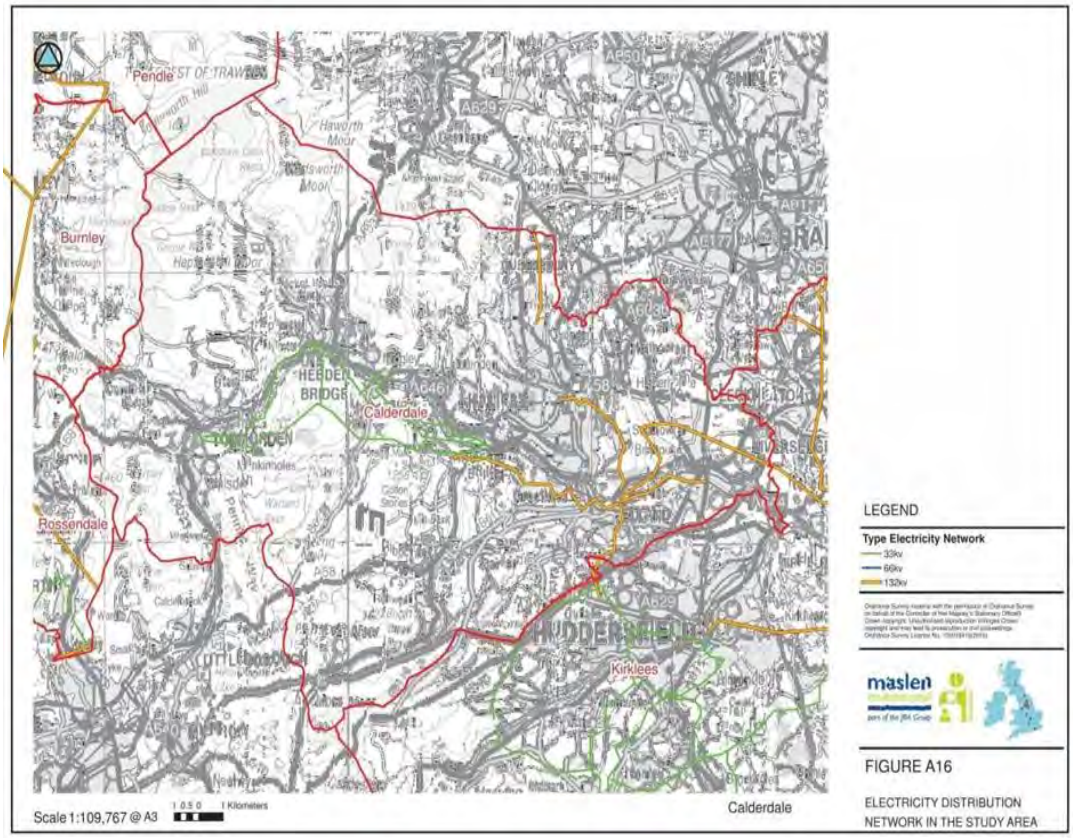
6.8 National Grid, as the holder of a licence to transmit electricity under the Electricity Act 1989, has a statutory duty to develop and maintain an efficient, co-ordinated and economical transmission system of electricity and to facilitate competition in the supply and generation of electricity. National Grid operates the electricity transmission network across Great Britain and owns and maintains the network in England and Wales, providing electricity supplies from generating stations to local distribution companies. To facilitate competition in the supply and generation of electricity, National Grid must offer a connection to any proposed generator, major industry or distribution network operator who wishes to generate electricity or requires a high voltage electricity supply.

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

6.10 National Grid's high voltage electricity overhead transmission lines/underground cables within southern and eastern Calderdale form an essential part of the electricity transmission network in England and Wales. There is a principal electricity substation connected directly to the high voltage network located in Low Fields Business Park, Elland. In the order of a further 500 local substations transfer and distribute power to their respective local areas. The following is a summary of National Grid's major assets in Calderdale.

- YW Line – 275kV route from Bradford West substation to Elland substation in Calderdale
- 4ZP line – 400kV route from the 4ZZ line in Calderdale to Padiham substation in Burnley
- ZP line – 400kV route from the 4ZU line in Wakefield to Rochdale substation in Rochdale
- ZPC line – 400kV route from Elland substation in Calderdale to Elland Tee Junction (ZP line)
- Elland substation – 275kV & 132kV

Figure 9 - Plan showing Electricity Distribution Network



6.11 It should be noted that the Canal & River Trust's towpath network has the potential to accommodate utility cables, which can assist in the delivery of new broadband cables.

LOCAL DISTRIBUTION – NORTHERN POWER GRID

6.12 Northern Power Grid replaced Yorkshire Electric Distribution Limited (YEDL), and owns and operates the electricity distribution network that provides electricity to its customers in the North East, Yorkshire and North Lincolnshire. It operates managerially as one company but has two distribution licence areas, Northern Powergrid (Northeast) and Northern Powergrid (Yorkshire) which comprise more than 63,000 substations and some 60,000 miles of overhead power lines and underground cables spanning 9,650 square miles. Northern Powergrid takes electricity from National Grid's transmission network and also from smaller generators that are directly connected to the distribution network and delivers that electricity to its 3.9 million residential and business customers.

6.13 The standard operating voltages of the Northern Powergrid (Yorkshire) network in Calderdale are 132kV, 33kV, 11kV and low voltage (230/400v). Virtually every urban road has a low voltage electricity underground cable or overhead line with an 11kV available close by.

6.14 The company bring the electricity capacity into the region via its major substations operating at 132kV and 33kV. Information about these substations including information on their current capacity utilisation and

forecast capacity utilisation over the next five years is published annually in Northern Powergrid's Long Term Development Statement (LTDS) which is freely available.

6.15 Northern Powergrid (Yorkshire) plc is the Distribution Network Operator (DNO) that owns and operates the electricity distribution network in Calderdale. The western boundary of Calderdale coincides with the Northern Powergrid (Yorkshire) western boundary. To the west of this, the DNO is Electricity North West Limited (ENWL). Neither party is excluded from crossing the traditional boundary so there is the possibility that a remote dwelling near the boundary may get their electricity connection from either Northern Powergrid or ENWL.

6.16 Northern Powergrid has a responsibility for operating a safe, secure, efficient and co-ordinated distribution network that meets the needs of its customers. It offers connections to new load and generation customers and monitors and forecasts the changing patterns of supply and demand to identify requirements for strengthening the network if required:

- It has a legal obligation to provide customers with a quotation for a connection to the network and then install the connection if the customer wishes to proceed[2].
- It reinforces the network if there is a requirement to do so due to either organic demand growth from existing customers or intensive development of particular towns to avoid overloading the networks or the creation of fault level or voltage issues.
- It is working to support the development of a low carbon economy, which requires the decarbonisation of generation, heat and transport, by connecting renewable generation to its network, and developing new techniques for forecasting and accommodating the projected increase in the use of heat pumps and electric vehicles.
- It is developing smart solutions that will offer customers that have flexibility on how and when they use electricity the opportunity to financially benefit from that flexibility where it results in avoiding the need for network reinforcement.

6.17 The current capacity and future development of the 132kV and 33kV networks in Northern Powergrid (Yorkshire) plc are set out in its Long Term Development Statement (LTDS) which is compiled in accordance with Condition 25 of the Standard Conditions of the Electricity Distribution Licence and revised and published on or before the 30th November each year. The LTDS includes the maximum measured demands in the previous year and forecasts forward over the next five years. It also includes details of any financially authorised projects in place to increase the capacity of the networks. The full LTDS provides the following information:

- A generally summary of the DNOs network design
- Access to geographic map files showing the 132kV and EHV systems;
- Schematic diagrams detailing the connectivity and normal operating configurations of the distribution system;
- Circuit data and transformer data;
- Load information;

- Fault-level information;
- Distributed generation connected at each major substation
- An outline of authorised system development proposals, including details of work proposed, expected timescales and impact on the capacity of the distribution system;
- The number of third party enquiries for a connection at each major substation.

6.18 Appendix 5 of the LTDS shows the firm capacity, the maximum demand for the previous year and the forecast maximum demand on each primary substation for the next five years. The table below is an extract from Appendix 5 of the LTDS showing the current utilisation of the substations supplying the Calderdale area.

Table 7 - Utilisation of the substations supplying the Calderdale area

S/S Group	Secondary Voltage	2016/17 Maximum Demand	Firm Capacity	Utilisation
	kV	MVA	MVA	%
Brighouse 132/33kV	**33**	**73.63**	**117.00**	63%
Bailiff Bridge	11	8.60	24.00	36%
Brighouse 33/11kV	11	8.03	12.00	67%
Deighton	11	19.19	23.00	83%
Lowfields	11	6.10	19.00	32%
Millroyd Street	11	13.04	15.30	85%
Snelsins Lane	11	10.60	23.00	46%
Spenborough	11	13.94	30.00	46%
Halifax 132/33kV	**33**	**31.20**	**72.00**	43%
Halifax 33/11kV	11	24.33	40.00	61%
Swan Bank Lane	11	11.40	24.00	48%
Holmfield	**33**	**61.37**	**117.00**	52%
Denholme	11	3.73	6.50	57%
Furness Avenue	11	12.62	23.00	55%
Gibraltar Road	11	17.49	24.00	73%
Queensbury	11	15.24	24.00	63%
Thornton	11	13.40	23.00	58%
Sowerby Bridge 132/33kV	**33**	**70.57**	**117.00**	60%
Elland 33/11kV	11	13.01	18.21	71%
Hebden Bridge	11	3.25	7.50	43%
Mytholmroyd	11	7.45	15.30	49%
Salterhebble	11	18.76	24.00	78%
Sowerby Bridge 33/11kV	11	16.85	23.00	73%
Todmorden	11	13.57	23.00	59%

6.19 This table indicates that there is currently spare capacity for the connection of demand across Calderdale.

6.20 The LTDS includes schematic diagrams showing the electrical connectivity of these substations. The diagrams relevant to Calderdale are as follows and can be downloaded free of charge.

Table 8 - Schematic diagrams showing the electrical connectivity of substations

132kV / 33kV SUPPLY POINT	EHV PRIMARY	132kV SCHEMATIC	EHV SCHEMATIC
Holmfield	Denholme, Furness Avenue, Gibraltar Road, Queensbury, Thornton	Appendix 2b_04	Appendix 2c_05
Halifax	Halifax , Swan Bank Lane	Appendix 2b_03	
Sowerby Bridge	Elland, Hebden Bridge, Mytholmroyd, Salterhebble, Sowerby Bridge 33/11kV, Todmorden		
Brighouse	Bailiff Bridge, Brighouse, Millroyd Street, Snelsins Lane		Appendix 2c_10

In addition to the LTDS, Northern Powergrid also provides load and generation availability maps, also known as heat maps on its website. These heat maps are updated monthly and provide the latest picture of the capacity for the connection of load and generation at particular points across the whole of the Northern Powergrid network area.

Figure 10 - Example demand heat map

https://www.northernpowergrid.com/demand-availability-map;

Figure 11 - Example generation heat map

https://www.northernpowergrid.com/generation-availability-map

6.21 Green areas indicate where there is spare capacity and generally where connections can be made quickly and cheaply due to there being no requirement for network reinforcement. Red indicates where capacity is approaching being fully utilised and where connections might take more time due to the need for reinforcement of the network and may be more expensive as connections do have to pay a proportion of reinforcement costs depending on their point of connection and the part of the network that requires reinforcement.

6.22 The net load on the Northern Powergrid distribution substations has fallen over the last 15 years due to improvements in energy efficiency, the general economic slow-down in the UK and the connection of embedded generation. It is forecast that this trend will continue in the short term but then will start to reverse when the take up of low carbon technologies such as electric vehicles (EV's) begins to accelerate. The rate of take-up of EVs is uncertain in terms of number, type, battery sizes, charger capacities etc. and the impact of these on the network is also uncertain and depends on where the people who are likely to buy electric vehicles live and work and also on whether customers can be incentivised to the charge their batteries at times of low demand or even support the network at times of high demand. Hence future reinforcement plans will need to be based upon the analysis of a number of take-up scenarios.

Role/Potential Impact of the Local Plan

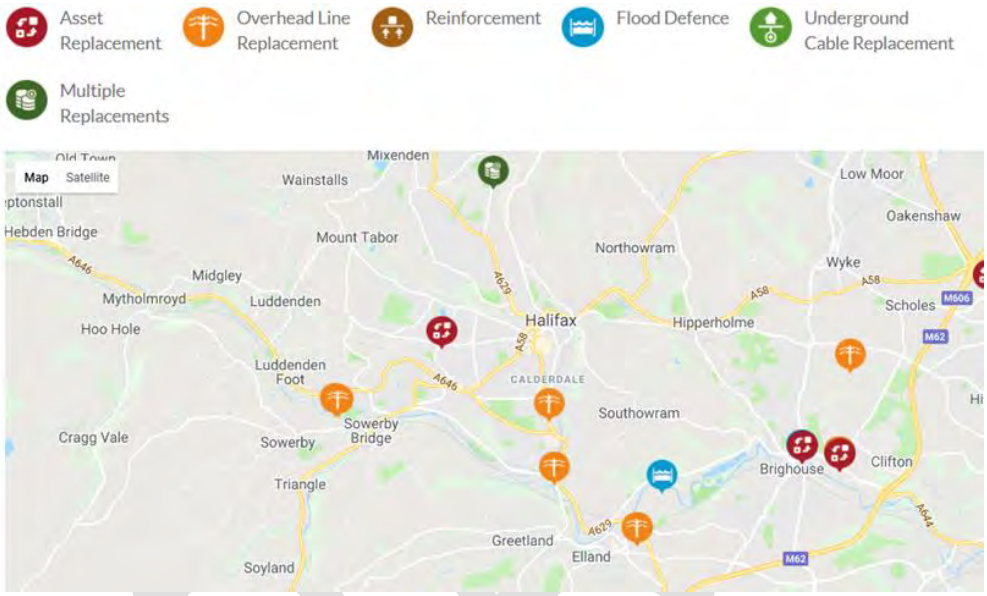
6.23 National Grid – The Energy White Paper makes clear that UK energy systems will undergo a significant change over the next twenty years. To meet the goals of the White Paper, it will be necessary to revise and update much of the UK's energy infrastructure at some point in the future.

6.24 Local Distribution Network – The Northern Powergrid (Yorkshire) LTDS includes details of financially authorised projects that increase the capacity of

the 132kV and 33kV networks and there are currently no financially authorised reinforcement projects in Calderdale at these voltage levels.

6.25 Northern Powergrid also provides details of its ten year investment plan on its website in the form of an Investment Map. This allows users to see the wider range of network investments planned in a particular geographic area and includes details of condition based replacement/refurbishment, reinforcement works and flood defence work. This is available on their website and an extract is shown below.

Figure 12 - Extract from Northern Powergrid Investment Map



6.26 The load requirements of a future domestic property could be quite different to those experienced in the past due to the expected uptake of EVs, PV, battery storage technologies and heat pumps which will facilitate the decarbonisation of heat and transport and potentially place more load onto the electricity networks, depending upon how they are managed.

6.27 Northern Powergrid closely monitors the load on its substations and reviews its load forecasts every year, using this information to inform its reinforcement plans for general load growth, but it should be noted that these forecasts relate principally to the underlying load growth and do not, with the exception of recently accepted connection offers, include for anticipated but not confirmed future connection of large new loads such as new factories or large housing estates. These should be dealt with via Northern Powergrid's connections process and the impacts of larger developments will be responded to following a formal application where the developers are able to provide more specific detail of their plans and requirements.

6.28 To summarise, the distribution of electricity to homes and businesses is not a constraint on growth. In future, the peak load per domestic dwelling may increase significantly, whilst the increasing role of battery technologies and renewable (intermittent) generation will also influence the design and operation of local distribution networks.

GAS

Primary legislation: Gas Act 1986, Utilities Act 2000, Energy Act 2004
Main Providers: Northern Gas Networks
Regulator: Ofgem

Gas Industry Structure

6.29 Gas is distributed nationally via the high pressure National Transmission system to a series of Local Distribution Zones (LDZs). There are eight gas distribution networks (GDNs) currently owned by four companies, which each cover a separate geographical region in Britain. In addition there are a number of smaller networks owned and operated by Independent Gas Transporters (IGTs) – most but not all of these networks have been built to serve new housing.

6.30 The LDZs are operated by Gas Distribution Operators (DOs). The gas supply companies pay National Grid Transmission and the DOs a tariff for the use of the gas networks for access to their end-customers.

6.31 The industry has become increasingly fragmented since privatisation. The key groups of organisations as it stands now are:

- Producers – Provide gas at terminals around the country.
- Gas transporters – Own, operate and maintain the physical assets (pipes, plant and equipment) used to transport gas from the terminal to the consumer.
- Shippers – purchase gas from producers, pay transporters to move it to consumers, and sell gas to consumers.
- Metering Organisations – own the meters.

Gas Transmission

6.32 National Grid owns and operates the high pressure gas transmission system in England, Scotland and Wales. National Grid has a duty to develop and maintain an efficient co-ordinated and economical transmission system for the conveyance of gas and respond to requests for new gas supplies in certain circumstances.

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

Gas Distribution

6.34 Northern Gas Networks (NGN) is the gas transporter that owns and operates the Gas Distribution Zone network in Calderdale (although there are also a number of Independent Gas Transporters that operate within the District). NGN does not supply gas, but provides the networks through which it flows. (NGN owns and manages a gas distribution system of 37,000km supplying

gas to 2.6m users). NGN infrastructure in Calderdale is extensive, covering all of the major conurbations and many of the smaller villages. Some rural areas often have no networked gas provision at all.

6.35 NGN publishes a Long Term Development Statement (LTDS) annually. This document provides a ten-year forecast of transportation system usage and likely system developments that can be used by companies contemplating connecting to the gas network, entering into transport arrangements, or wishing to identify and evaluate opportunities. Copies of Long Term Development Statements are available on the company's website.

6.36 Operating under the Gas Act 1986, the Distribution Operators have an obligation to develop and maintain an efficient and economical pipeline system and, subject to that, to comply with any reasonable request to connect premises, provided that it is economic to do so. The Distribution Operators use an Economic Test to calculate the maximum economic investment for Specific Reinforcement, which the Distribution Operators can make for any specific load. A load is deemed to be economic where the incremental transportation income from the additional load exceeds the incremental costs of the load. The test shall be applied over the anticipated life of the load.

6.37 All costs associated with the connection to the existing gas network and works downstream of this are generally fully funded by the customer (the consumer, developer, consortium, etc.). If it is necessary to reinforce the network upstream of the connection point, an Economic Test is applied to these costs (based principally on the size of the load and the nature of the upstream network); the result of which being that none, part, or all of the upstream reinforcement will be funded by NGN. However, connections are a competitive arena and other parties are also able to provide the downstream infrastructure. These can be either Utility Infrastructure Providers (UIPs) who will install the pipes to the appropriate standards and then pass ownership to NGN, or Independent Gas Transporters who will install and subsequently own the infrastructure.

Role/Potential Impact of the Local Plan

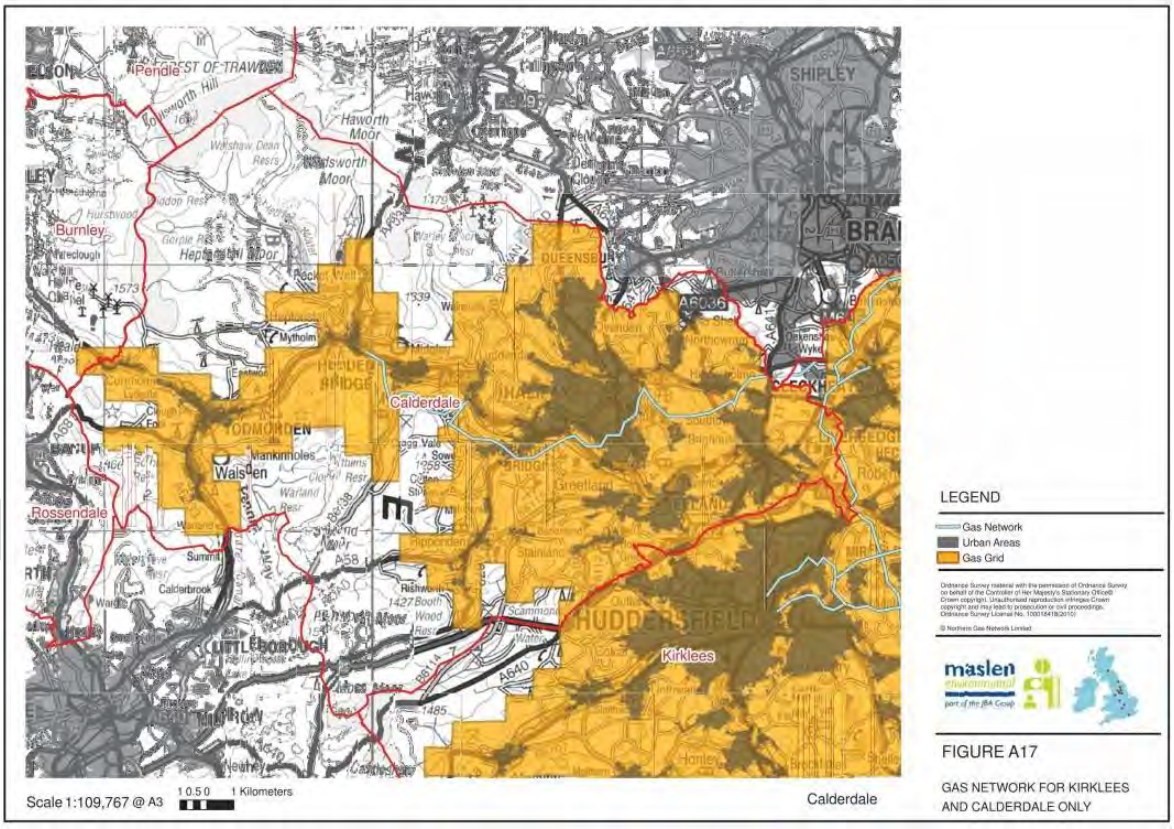
6.38 NGN would generally look at specific development proposals to understand the implications and costs of new connections to their existing network. Any view beyond a 5 year time horizon is based on more uncertainty. In developing new connections, any connections that require crossings of major watercourses or major highway routes are generally more difficult, and therefore more expensive.

6.39 NGN is subject to regulation from OFGEM who approve business plans along with incentives and outputs agreed within eight year price control periods. Rather than speculatively invest to anticipate future demand, development of the network is based on customer requests for new connections and also considers potential growth published in local authority development plans.

6.40 As well as costs of new infrastructure to supply gas to areas of new development another potential area of cost is the diversion of existing gas pipes that run through proposed development sites. These costs are generally fully funded by the customer. The cost of diverting the higher pressure gas mains (The National & Local Transmission) can have a much more significant effect on the economic viability of a development.

6.41 A further factor to consider is that in order to meet the higher levels of the Code for Sustainable Homes which became mandatory from 2016, this may result in a reduction in the demand for gas since using gas as a fuel source is incompatible with achieving the highest level of the code. Therefore gas is likely to diminish in importance for housing growth over the period of the Local Plan.

Figure 13 - Gas network in Calderdale



6.43 The Energy White Paper makes clear that UK energy systems will undergo a significant change over the next 20 years. To meet the goals of the White Paper it will be necessary to revise and update much of the UK's energy infrastructure during this period. There will be a requirement for

- An expansion of national infrastructure e.g. new gas pipelines and associated installations
- New forms of infrastructure e.g. gas storage sites

6.44 Renewable forms of gas production in the form of landfill gas and sewage gas could meet around 1% of the total UK gas demand. Much of this is

currently used to generate electricity but if injected in the gas grid it could be delivered directly into homes at high efficiency rates.

6.45 Whilst this may not make a major contribution in the early part of the period covered by the Local Plan it has the potential to do so later in the plan period, particularly if traditional sources of supply continue to diminish and dependent on any financial incentives which may be introduced by the Government through a renewable heat policy. Northern Gas Networks is committed to looking at new innovations for renewable and low carbon energy sources such as the injection of biomethane gas into the distribution system.

6.46 The supply of gas is not likely to be a constraint on growth. Northern Gas networks have an obligation to develop and maintain an efficient gas distribution system and to comply with any reasonable request to connect.

6.47 In summary, the supply of gas is not likely to be constraint on growth. Northern Gas networks have an obligation to develop and maintain an efficient gas distribution system and to comply with any reasonable request to connect premises. A number of changes affecting the demand for gas are likely to take place over the period of the Local Plan including the effects of the Code for Sustainable Homes.

TELECOMMUNICATIONS AND BROADBAND

6.48 The provision of telecommunications and broadband differs from the services provided by other utilities as they are not controlled in the same way with an open and developing market existing for the provision of telecom networks.

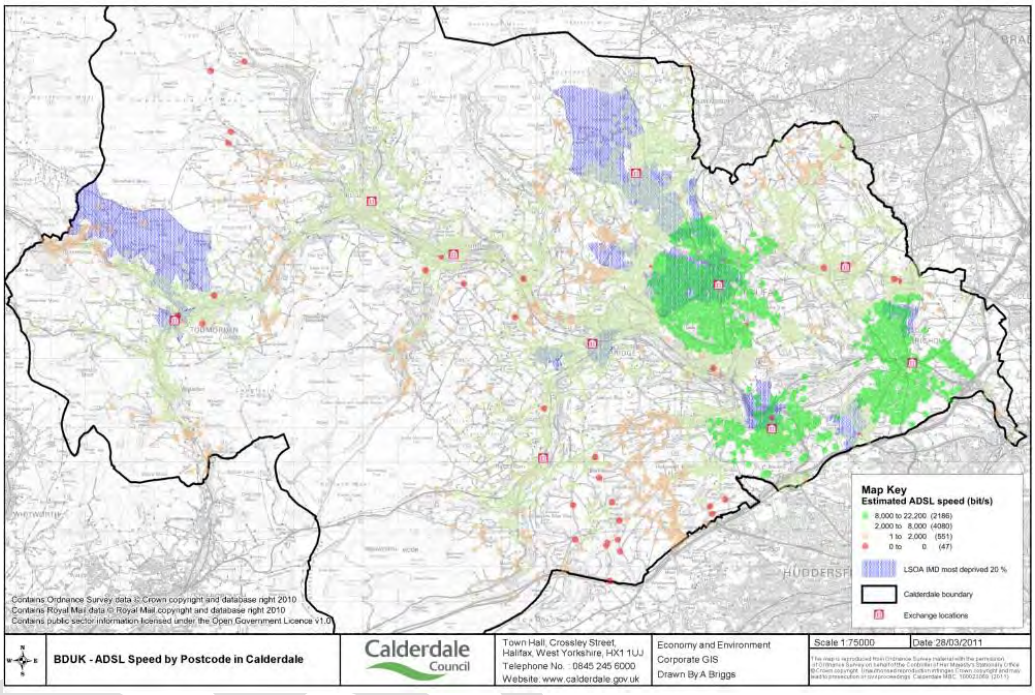
6.49 Most residential customers and small businesses access telephone and broadband services via BT's Openreach Access Network and the Virgin Media network. Broadband coverage and speed is shown in Figure 13 'Broadband Coverage'. Within the main urban areas a significant proportion of existing homes and businesses use the Virgin Media network (cable television networks) for fixed line telephony and broadband services. This differs from BT's Openreach network through its use of high capacity DCOSIS 3.1 fibre optic cabling providing much higher broadband speeds with no degradation in service in relation to proximity to an exchange.

Role/Potential Impact of the Local Plan

6.50 Generally network capacity should not be an issue that shapes or constrains the spatial options for development in Calderdale. Developments in technology together with ongoing investment in the core of the main networks mean that the capacity and capability of the networks continues to improve in response to demand. The exception would be isolated growth and in isolated areas. The rural parts of the district in particular are generally not covered by the Virgin Media network or any other access networks, and residents and small businesses rely exclusively on BT's Openreach network for fixed line telephony services. Broadband speeds (on the copper wire network) are lower in these areas largely due to distance from the exchange. Wireless solutions are currently being used to boost access in rural areas.

6.51 Fibre to the home (FTTH) offers significantly faster and more reliable and consistent broadband connections than is possible using the copper wire access networks. As such it is becoming the technology of choice and adopted as the standard in major new build developments nationally. In partnership with Local Authorities, Openreach has been installing optical fibre in the local network, deploying fibre to the cabinet (FTTC) which leaves a short copper link from the cabinet to the customer. Within Calderdale this includes the Calder Valley and Halifax exchanges.

Figure 14 - Broadband coverage



6.52 Technological advances will continue over the period covered by the Local Plan with potential developments including advances in the provision of 5G, the integration of broadband and mobile technology, and access to dark fibre which offers much higher speeds.

6.53 The Council is engaged with these rapidly developing technologies and current initiatives include:

- Seeking to obtain district wide coverage and faster broadband speeds. To this end the Council has supported the West Yorkshire bid for broadband funding and the development of a local broadband plan. This follows the Government's Broadband UK (BDUK) initiative which aims to raise coverage and line speeds across Britain and from which significant levels of funding has been obtained.

6.54 In summary, the provision of telecommunications and broadband is not likely to be a constraint on growth per se with the market responding to demand. However, in order to provide residential and businesses (both existing and new) with the fastest broadband available the Council must continue to

encourage the development of the latest broadband technologies to achieve this aim.

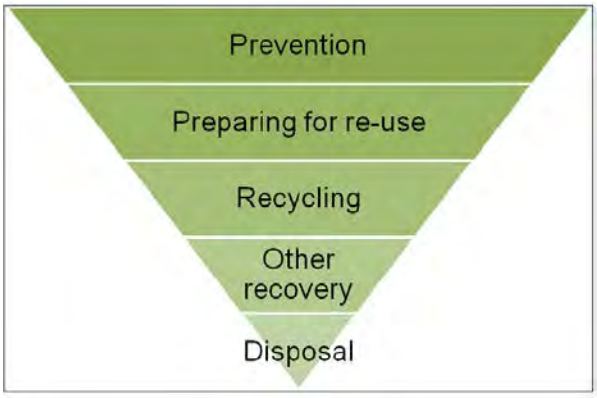
Role/Potential Impact of the Local Plan

6.55 The benefits of having a modern and accessible system of telecommunications will be significant for Calderdale. A digitally accessible borough will allow people an enhanced freedom of choice about where and how they work, how they interact with services and facilities and how they promote and operate their businesses. A connected community is a more sustainable one, as it represents the opportunity for a reduction in car based commuting and a commensurate reduction in carbon outputs and traffic congestion. It also promotes Calderdale as a suitable location for high technology activities and employment to take place. In view of this all new housing and employment development should consider how the benefits of high speed broadband can be provided for future occupiers. Larger sites should facilitate provision of broadband, and plan for this as part of the strategic master plan for the site.

7. WASTE MANAGEMENT

7.1 The main EU legislation is the EU Waste Framework Directive (2006/12/EC), which introduced the 'Waste Hierarchy'. The Directive is transposed into UK legislation through the Waste (England and Wales) Regulations 2011. Through the Waste Hierarchy, landfill disposal is seen as a last resort, and waste should be considered as a resource rather than materials that should be disposed of.

FIGURE 15 – THE WASTE HIERARCHY



7.2 National Planning Policy for Waste (October 2014) sets out national waste planning policy, which was originally found in Planning Policy Statement 10: Planning for Sustainable Waste Management. This document repeats overall government policy on waste, in protecting human health, and reducing the amount of waste produced, and viewing waste as a resource. With regards to waste infrastructure, NPPW requires Waste Planning Authorities to identify suitable sites and areas in Local Plans.

7.3 The National Waste Strategy (2007) sets out targets for the recycling and composting of household waste, which are for at least 50% by 2020.

Current Position

7.4 The Local Plan is required to consider a number of different types of waste. Local Authority Collected Waste (LACW), Commercial and Industrial (C&I), Construction, Demolition (CD) and Excavation (E), Agricultural and Hazardous (Haz).

7.5 The West Yorkshire Authorities have recently commissioned a Waste Assessment Model, which provides data at a Waste Planning Authority level on current arising's, future waste projections, and allows an estimated capacity gap to be prepared. In addition, information provided by the Environment Agency's Waste Data Interrogator also provides a valuable resource.

7.6 The following table presents the estimated arising's for the different waste streams in Calderdale for 2017:

Table 8 - Estimated arising's for the different waste streams in Calderdale for 2017

Waste Stream	2017 (tonnes)
LACW House Holder (LACWHH)	85,203
LACW Secondary	51,837
C&I	162,953
CD	52,543
E	136,104
Haz	6,015

Current Waste Infrastructure

7.7 The Waste Data Update Report (2016) provided an analysis on waste infrastructure in Calderdale. The report estimated that in total, permitted sites had a combined maximum permitted capacity of 1,892,250 tonnes per annum. However, when reviewing the total inputs, it became clear that the vast majority of this spare capacity was not suitable or operational.

7.8 Further information available in the WYCA Waste Assessment Model indicates there are 38 permitted sites in the Borough that regularly accept waste. Combined, these have an overall minimum capacity of 887,000 tonnes per annum.

7.9 However, as with the 2016 report, the Waste Assessment Model considers the different types of waste these facilities can accept and the realistic capacities of the Borough is built into the models scenarios. For example, of the above capacity, 433,000 tonnes is associated with waste water treatment works and inert landfill. Other significant levels of capacity can be associated with metal recycling sites.

FUTURE NEEDS : Future Waste Arisings

7.10 The Local Plan is programmed to plan up to 2032. The following table presents the projected future waste arisings by waste stream, based on a median growth scenario. This shows there is growth in all of the different waste streams, with significant growth in C&I and Excavation wastes.

Table 9 - Projected future waste arisings by waste stream 2032

Waste Stream	Per annum Waste Arisings by 2032 (tonnes)
LACWHH	88,386
LACW Secondary	53,770
C&I	171,618
CD	55,337
E	143,341
Haz	6,335

Future Capacity Requirements

7.11 The WYCA Waste Assessment Model allows an estimate of future capacity requirements to be presented, and in doing so, identify any potential capacity gaps or surpluses in the borough's waste infrastructure.

7.12 Taking a median growth, median recycling scenario, the following table presents the estimated capacity gaps that the Local Plan will need to address. The analysis below presents the estimated capacity gaps relating to both the type of waste and the waste management facility.

7.13 The analysis shows that in terms of waste streams, there are gaps for all types apart from CD&E.

Table 10 – Waste capacity gap by 2032

Waste Stream	Capacity gap by 2032 (tonnes)
LACWHH	37,115
LACW Secondary	51,522
C&I	45,704
CD	0
E	0
Haz	5,721

For the different waste management routes, the Waste Assessment Model indicates that there are shortfalls across the majority of facility types, apart from composting, inert landfill and facilities that recycle CD&E.

Table 11 – Waste management route capacity shortfall by 2032

Waste management Route	2032 Capacity Shortfall (tonnes)
Composting	0
EfW	35,494
Haz Landfill	2,284
Haz treatment	640
Incineration no energy recovery	125
Inert Landfill	0
Non-Haz Landfill	18,857
Recycling	12,865
Recycling CD&E	0
Recycling Metals	24,524
Residual Material Recycling Facility (MRF)	37,115
Treatment	11,244
Total capacity Gap	143,148

7.14 While the Local Plan does not specify the number of additional waste facilities required, the estimated capacity gap by 2032 will be 143,148 tonnes per annum. Whilst the analysis above shows that some waste facilities appear to have excess capacity, the C&I LACWHH and LACW Secondary streams all suffer from a capacity gap.

Role/Potential Impact of the Local Plan

7.15 The Local Plan will be required to put in place both strategic and site specific waste policies. The Plan will identify suitable waste sites, along with a criteria based policy for waste facility planning applications, along with including a safeguarding policy that prevents any further reductions in existing waste management facilities.

8. FLOODING, DRAINAGE AND WATER QUALITY

Responsible Bodies

8.1 The Environment Agency (EA) has permissive powers to maintain watercourses, (main rivers) and its own flood defences. Calderdale Council is the Lead Local Flood Authority (LLFA) and is responsible for managing flood risk from ordinary watercourses, ground water and surface water.

Strategies, Plans and Programmes

8.2 The EA takes a strategic approach to flood risk management assessing and managing it on a catchment basis. **The Calder Catchment Flood Management Plan (CFMP)** was produced by the EA and seeks a sustainable planning-led solution to flood risk management within the Calder catchment.

8.3 The CFMP encompasses all of the Calder Catchment which covers area of 945.5km$_2$ and includes the Rivers Calder, Colne, Hebble, Ryburn and Holme. Following severe flooding that took place on Boxing Day 2015, the Government requested the production of a Catchment Plan for the Calder Valley. In addition, a Flood Commission was established to review the response to the flooding incidents. The Commission made the following recommendations:

- Build a better understanding of flood risk issues
- Take steps to reduce flood risk in Calderdale
- Develop schemes that will manage residual flood risk
- Being better prepared for flood events

8.3 The CFMP not only assesses how flood risk affects development issues but also social, economic and environmental aspects of the Calder Catchment. The CFMP provides a detailed study of the Calder Catchment and makes recommendations for future flood risk management which are taken into account in the future Calderdale Local Flood Risk Management Strategy which was completed in 2016.

8.4 The NPPF emphasises the active role that LPAs should have in ensuring that flood risk is considered in strategic land use planning. It encourages LPAs to undertake SFRAs to be used as part of the documented evidence base required for the production of their Local Plan.

8.5 Calderdale Council, in conjunction with Kirklees and Wakefield Council carried out a Strategic Flood Risk Assessment (SFRA) in 2015 to determine the variation in flood risk throughout the Calder Catchment. The SFRA is primarily a reference document for planners and developers and will inform flooding policies in the Local Plan and other related documents.

8.6 Calderdale Council has produced Preliminary Flood Risk Assessment (PFRA) in accordance with the Flood Risk Regulations 2009, and this was published in December 2017. The PFRA provides general background knowledge of flooding issues in Calderdale.

8.7 The Calderdale Catchment Flood Management Plan was published in October 2016 in response to the Boxing Day 2015 floods. It was given the title **Calderdale Flood Action Plan** (CFAP) and it aims to put in place a number of actions to manage and reduce the risk of flooding in Calderdale over the next 25 years. It is a non-statutory document, the delivery of which is overseen by the Calderdale Flood Programme Board comprising all flood risk management authorities. The CFAP was reviewed in 2017. The CFAP is broken down into the following themes to manage flood risk:

- Strengthening Defences;
- Natural Flood Management;
- Maintenance
- Community Resilience.

8.8 The Local Flood Risk Management Strategy (LFRMS) was updated and published in June 2016. The Strategy sets out the objectives for Calderdale Council as Lead Local Flood Authority to work in partnership with all stakeholders to understand more comprehensively, reduce, manage and to prepare for flood events.

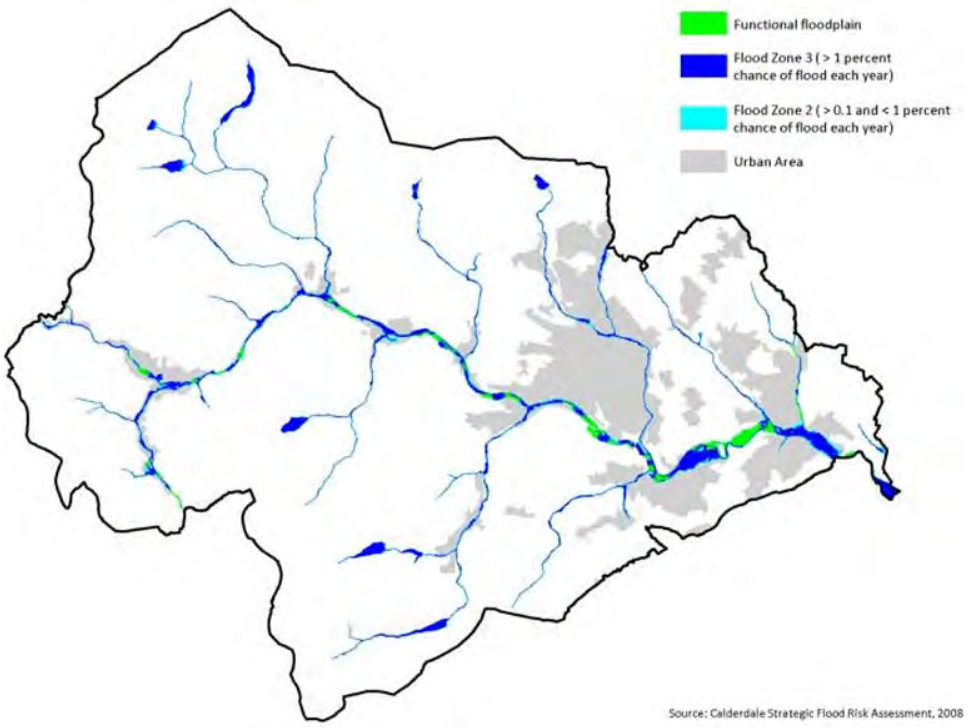
8.9 A key measure within the LFRMS is to ensure robust application of flood risk policy for new development to avoid increased flood risk. In accordance with National Planning Policy Framework, Calderdale Council will seek to ensure planning applications demonstrate:

- All flooding issues have been taken into account;
- Most vulnerable development is located in areas of lowest flood risk;
- Development is appropriately flood resilient and resistant;
- Any residual flood risk can be safely managed;
- Priority is given to Sustainable Drainage Systems.

8.10 Within the LFRMS Calderdale Council is producing a Flood Risk Asset Register, a statutory requirement. The register identifies infrastructure that affects flood risk in Calderdale and includes a management strategy for those assets identifying inspection and maintenance requirements. This will be published in 2018.

8.11 The actions contained in the LFRMS have been included in the Calderdale Flood Action Plan to form one over-arching action plan.

Figure 16 - Flood Risk and Drainage in Calderdale



8.12 In the upper reaches of the Calder catchment and its many tributaries, valleys are generally narrow and steep sided and consequently flood zones are narrow. Typical flooding occurs in the valley bottoms when rivers come out of channel or when high river levels prevent discharge of surface water. Existing development is mostly housing, commercial or small areas of light industry.

8.13 Flooding caused by groundwater has not been identified as a significant problem due to the geology in the locality. The geology of Calderdale includes Lower Carboniferous rocks outcropping at the surface, these being overlaid in areas by more recent drift material, peat on the uplands and sands and gravels in the valley bottoms, particularly in the east of the District. The Carboniferous strata are typified by an ever-changing succession of sandstones, gritstones, shales and mudstones.

8.14 A feature of the Calderdale area is steep topography which is an underlying reason for the dispersed nature of flooding areas, except in the valley bottoms. Therefore surface water flood events across Calderdale tend to be numerous but generally tend not to have a serious or lasting impact on people or infrastructure. This however is not always the case, and in several instances, there have been serious impacts to both people and infrastructure. Allowing for climate change, the frequency of these events is likely to increase.

8.15 Effective flood risk management is achieved partly by avoidance of inappropriate development in high risk zones. This should take priority over substitution of lower vulnerability infrastructure where avoidance is not

possible. Where avoidance or substitution is not possible, the mitigation of the risks through a variety of techniques should be undertaken.

Planned Provision

8.16 The Strengthening Defences theme in the Calderdale Flood Action Plan includes the delivery of major Flood Alleviation Schemes at Hebden Bridge, Mytholmroyd and Brighouse. Further Flood Risk Reduction Schemes (FRRS) are being investigated at:

- Walsden;
- Cross Stone Road, Todmorden;
- Oak Hill Clough, Todmorden;
- Commercial Street, Todmorden;
- Shaw Wood Road, Todmorden;
- Calderside, Hebden Bridge;
- Macphelah Screen, Hebden Bridge;
- Calder/Ryburn confluence, Sowerby Bridge;
- King Street, Mytholmroyd;
- Lower Bank House, Barkisland;
- Railes Close, Midgley;
- Dean Clough, Halifax;
- A646 The Square, Mytholmroyd;
- Copley Village;
- Luddenden Brook;
- Cottonstones;
- Ripponden;
- Rossendale View.

Schemes that come forward from the Initial Assessments will form a programme of schemes FRRS 2.

8.17 The FRRS 1 programme is nearing completion with schemes constructed at:

- Shop Lock, Todmorden;
- Nutclough, Hebden Bridge;
- Bacup Road, Walsden;
- Burnt Acres, Eastwood;
- Woodland View, Hebden Bridge;
- Pin Hill, Midgley;
- Kershaw Road.

A scheme at Park Road, Elland is to be constructed in 2018 and a scheme at Erringden Hillside is to be incorporated into the Hebden Bridge Flood Alleviation Scheme.

8.18 The CFAP also includes the implementation of various natural flood management features to slow and contain flood water in the Calder catchment. This will include tree planting, attenuation ponds, leaky dams,

gully stuffing and moorland restoration. Many of these features will form new flood risk infrastructure.

Role/Potential Impact of the Local Plan

8.19 The Local Plan will ensure that flood risk associated with new development is considered both when land is allocated for new development and in development management decisions, in accordance with the NPPF and Policy CC2 of the Local Plan.

WATER QUALITY

8.20 Directive 2000/60/EC the "Water Framework Directive" (WFD) is European water legislation that applies to surface water and groundwater. The Environment Agency is responsible for delivering WFD requirements in England and Wales in partnership with communities and co-deliverers, including local government. WFD requirements are delivered through River Basin Management Plans (RBMP).

8.21 WFD objectives are to prevent deterioration of waterbodies, and to improve them such that they meet the required status for the given waterbody. The term waterbody applies to rivers, lakes, estuaries, coastal and ground waters. Under WFD waterbodies are required to achieve "good" status. However, where waterbodies have been altered by human activity they may be classified as Heavily Modified (HMWB) or Artificial (AWB) and therefore have an objective to achieve "good" potential.

9. SOCIAL INFRASTRUCTURE

9.1 Social infrastructure is about the services and facilities required to make a place function.

EDUCATION

9.2 Schools form a vital part of the local infrastructure of an area. The provision of sufficient school places for the local population, and the maintenance of school facilities to a suitable condition are both crucial factors to consider in the long term planning of infrastructure.

Current position – Governance/Responsible bodies

9.3 Calderdale Council is currently responsible for the majority of schools within the district; however the Government's policy of encouraging more Academies and Free Schools means that an increasing number are being transferred away from local authority control. However, regardless of how many schools eventually move out of local authority control, Calderdale Council will retain a statutory duty to commission school places and ensure that there are sufficient school places in the right areas to meet the needs of the local population.

Current position – Provision

9.4 As of January 2018, there were a total of 100 schools in the district - a mix of community, foundation, voluntary aided and voluntary controlled Academies and special schools. There are 84 junior, infant and primary schools, 12 secondary and 2 all-through schools. As at September 2017 there are 33 fully converted academies with a further 6 applications to the Department for Education (DfE) for Academy status pending.

A project is currently underway to provide a new facility for Copley Primary School. The current accommodation is for 224 pupils and is not fit for purpose. The new building will accommodate 315 pupils and is due for completion by September 2018.

The Local Authority is currently conducting a feasibility study on creating a new sixth form centre in Halifax town centre. This will be formed from consolidating three existing sixth forms at Trinity Academy, Halifax, Rastrick High School and Trinity Academy, Sowerby Bridge. Should the scheme proceed, the pupils currently attending these sixth forms will be decanted into the new building and this will free up places within the current buildings. In addition to the extra places created the Authority is also investing in expansion of provision at Calder High School by an additional form of entry.

9.5 Special school provision is being expanded. There is a new sixth form provision for Ravenscliffe High School at Springhall, Halifax. This will reduce the number of pupils attending at the current site and free up places within the main school.

9.6 The current list of ongoing school construction projects is set out below:

- **Todmorden High – New Teaching Block (£4.594 million)**
To provide a new teaching block and replace 16 classrooms, including ICT and food technology areas. Work started on site in summer 2017. The expected opening date is February half term 2018.

- **Ferney Lee Primary – New School (£4.035 million)**
To build a new 1 form of entry school (210 places) on school land and the demolition of the old building. The expected opening date is September 2018.

- **Ravenscliffe Special – Spring Hall Development (£2.807 million)**
To build a new sixth form special school facility. Work started in July 2017, with an expected opening date in the spring of 2018.

- **Copley Primary – New School (£4.304 million)**
To build a new 1.5 form entry school (315 places) on neighbouring Council land and to demolish the old school. The expected opening date is September 2018.

- **Moorside Primary – New School (£3.888 million)**
To build a new 1 form of entry school (210 places) on adjacent school land and to demolish the old building. The expected opening date is September 2018.

Future Needs/Strategies of Relevance

9.7 Calderdale Council produces a 'Planning for School Places' document annually, highlighting projections for pupil place need in each area of Calderdale showing existing school places alongside the anticipated new demand for places. It incorporates data from the patients register which is supplied annually by the Clinical Commissioning Group (CCG) and also projected additional demand for places from new housing development. Migration cannot be accurately predicted and is not factored into the projections although anecdotal evidence identifies which schools are affected and how significant an impact this is for individual schools.

9.8 The use of data from the patients register gives a lead in time of 4 years for planning primary school places. Naturally a much longer lead in time exists for planning secondary school places. The 'Planning for School Places' report is the main tool used for identifying and planning the requirement for new facilities.

9.9 In 2016 the Local Authority set out its 5 year plan for additional places across Calderdale (predominately in secondary) in its planning of school places document. That work identified the need for 675 additional mainstream secondary school places by September 2018 in the following geographical areas of Calderdale:

- Brighouse / Rastrick / Lightcliffe – 150 places;

- Elland – 75 places;
- Mytholmroyd / Ryburn / Sowerby Bridge – 300 places;
- North Halifax – 150 places.

9.10 In October 2017 members of Cabinet considered two equally weighted options, each comprising of a number of individual school submissions that would provide the additional places, in the right areas and in the right timeframe. At their meeting on 2 October 2017 Cabinet agreed the following option of the two;

(a) to close three sixth form sites and use the space released to provide secondary school places at; Trinity Academy 150 places, Sowerby Bridge High School 150 places, and Rastrick Academy 225 places (and to create a consolidated sixth form of 600 places on the current Central Library / Northgate House site). The funding provided for the release of those 525 secondary school places will be £7 million and;

(b) to provide the remaining 150 places at Calder High School meeting the need in the Ryburn / Sowerby Bridge / Mytholmroyd area at a cost of £1.5 million. The total cost of all places would be £8.5 million.

Role/Potential Impact of the Local Plan

9.11 Any future housing development will clearly have an impact on the demand for school places in Calderdale. Projections indicate that the new pupils starting reception class is set to plateau, however the bulge that we have seen in primary schools in recent years is now feeding into secondary schools. Within the context of these pressures the Council has a statutory duty to ensure that pupils have access to a school place within a reasonable distance; 2 miles (under 8's) or 3 miles (over 8's) walking distance of their home.

9.12 Indicative building costs for a small 2-classroom primary school expansion would be approximately £¼m to accommodate 60 pupils. In practice however project costs are generally much higher as it is seldom the case that a two classroom extension can be added without the need for associated work. The practicalities of class organisation within schools mean that an expansion would generally consist of a minimum additional four classrooms (half a form entry). Standard class sizes consist of 30 pupils and although it is possible to mix age groups to make up a class of 30 from two different year groups, it is impractical to teach more than two year groups in the same classroom at the same time. Hence to expand a school by half a form entry (half a class for each of 7 year groups) four classrooms are required. For full form of entry, 7 classrooms are required.

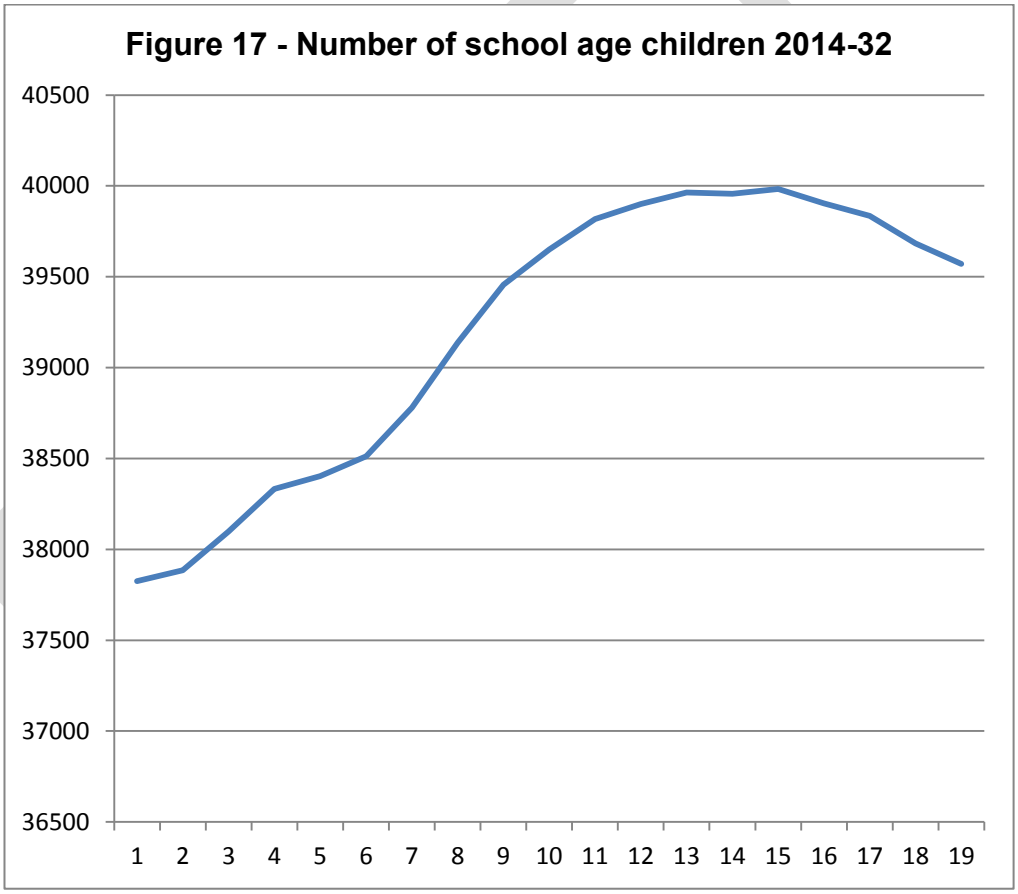
9.13 Examples of associated works consist of the addition of circulation space (link corridors to any additional classrooms), additional toilet facilities, and dining and sports facilities. The infrastructure of the existing provision may need to be upgraded to accommodate the additional demand. Gas and electricity supplies, and water and drainage provision very often require significant investment to facilitate the expansion of schools. The impact of additional pupil numbers cannot therefore be understated.

9.14 In terms of the pupil yield arising from new housing, a figure of 0.36 pupils per new dwelling has historically been used by Calderdale Council. However, there is no prescribed formula for calculating pupil yields, and every Local Authority uses their own methodology.

9.15 Central Government 'basic need' funding is provided to help assist local authorities in creating additional school places. This is based upon an assumed need for places due to increases in birth rates resulting in additional pupil demand above the borough wide capacity for accommodating pupils.

9.16 As stated previously the net increase in school children between 2014 and 32 is projected to be 1,744. The graph below shows that the number peaks in 2028 before tailing off towards the end of the Plan period. Given that there is projected to be a small net reduction in the number of pre-school children over the life of the Plan, one would expect the downward school age trend to continue after 2032.

Figure 17 - Number of school age children 2014-32



9.18 Particular consideration needs to be given to the provision of school places in South East Calderdale. In relation to the proposed Thornhills Garden Suburb It has been assumed that there will not be capacity within the existing schools in the area to accommodate the pupils associated with the new housing. The number of houses indicated in the Strategic Vision for South East Calderdale will create 504 primary and 357 secondary places. This will require a new primary school within the site (2.25ha site for 2.5 form entry school) and a new secondary school (5ha site), which will also create the

necessary places to accommodate pupils generated from the Woodhouse site.

9.19 In relation to the Woodhouse Garden Suburb, as with the Thornhills Lane site, it has been assumed that there will not be capacity within the existing schools in the area to accommodate the pupils associated with the new housing. The number of houses indicated in the Strategic Vision for South East Calderdale will create 294 primary and 208 secondary places. This will require a new primary school within the site (1.5ha site for 1.5 form entry school) It is proposed that secondary education is accommodated on the Thornhills Lane site.

9.20 Appendix 3 to the IDP provides a schedule of school place provision projects

HEALTH

National Guidance

9.21 There is no specific national planning policy guidance or statement that deals specifically with health. However, this is likely due to the fact that health issues cut across many other planning policy topics, including transport, housing, waste, open space, sport and recreation, flooding and climate change.

9.22 Although this section on health focuses on infrastructure that is necessary to treat health problems infrastructure relating to maintaining an improving health is addressed in a number of other sections in the document.

Current Position – Governance

9.23 There are different types of health facilities referred to in this section. Primary care and community services, secondary care and mental health care, all of which are managed by different organisations within the NHS. Primary care generally refers to services provided in the first stage of treating an illness, such as general practice, dentists, community pharmacists; community services include – school nurses, health visitors, district nurses, community mental health teams, substance misuse and sexual health services. Secondary care refers to the second stage of treatment illness and is generally delivered by hospitals.

Changes to Governance and the NHS Structure

9.24 Since the introduction of the Health and Social Care Act 2012, most of the public health responsibilities are carried out by Calderdale Council, most local health commissioning responsibilities are carried out by NHS Calderdale Clinical Commissioning Group. The remainder of health services responsibilities are carried out by the two national bodies; NHS England and Public Health England. The diagrams below illustrate the different responsibilities.

Figure 18 – CCG responsibilities

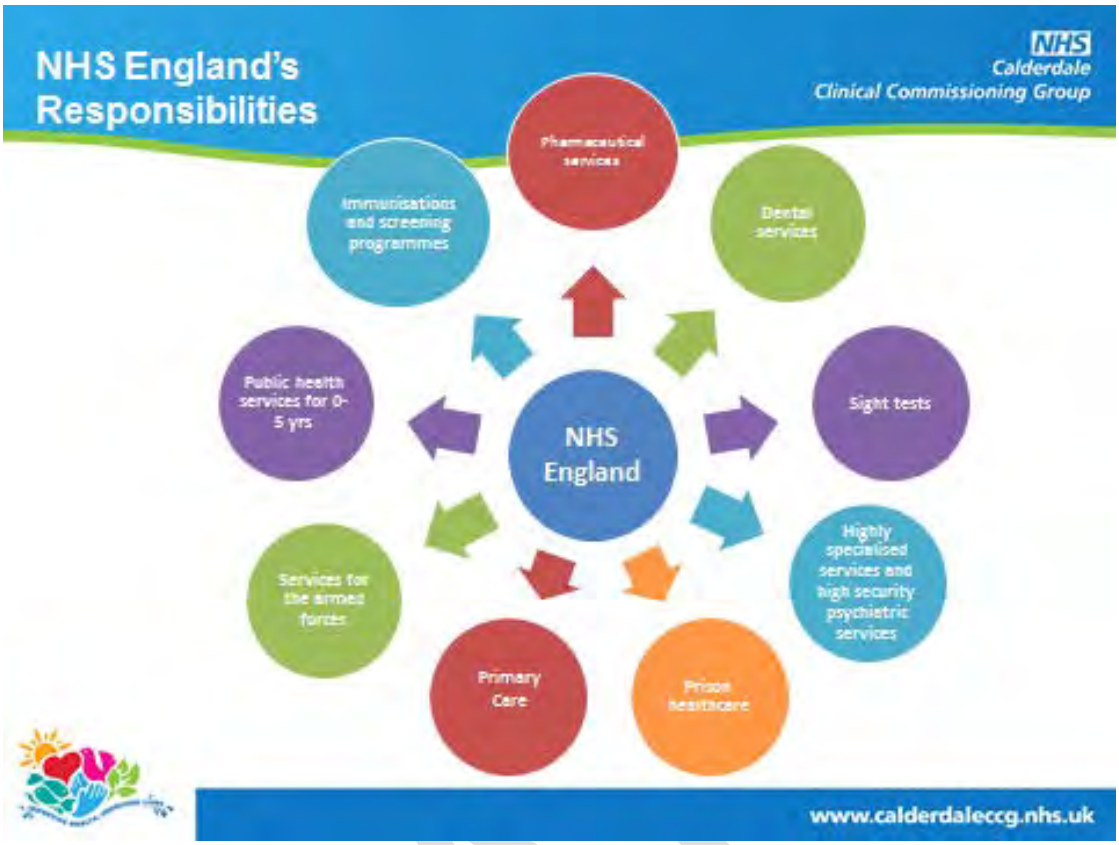


Figure 19 – NHS England responsibilities

Figure 20 – Local Authority responsibilities

Calderdale Clinical Commissioning Group (CCG)

9.25 NHS Calderdale Clinical Commissioning Group is a membership organisation consisting of 26 general practices that look after the health needs of people who live in Calderdale and/or are registered with a Calderdale GP. This means that local clinicians have a lead role in commissioning the health services used by local people.

9.26 The purpose of the CCG is to improve the health and lives of Calderdale people. This is achieved by working with partners to:

- Ensure that healthcare is available for anyone who needs it.
- Ensure that good quality care and keep people safe.
- Support people to maintain a healthy lifestyle and,
- Work with Calderdale Council to address health inequalities locally.

The CCG's annual budget allocation is approximately £312m.

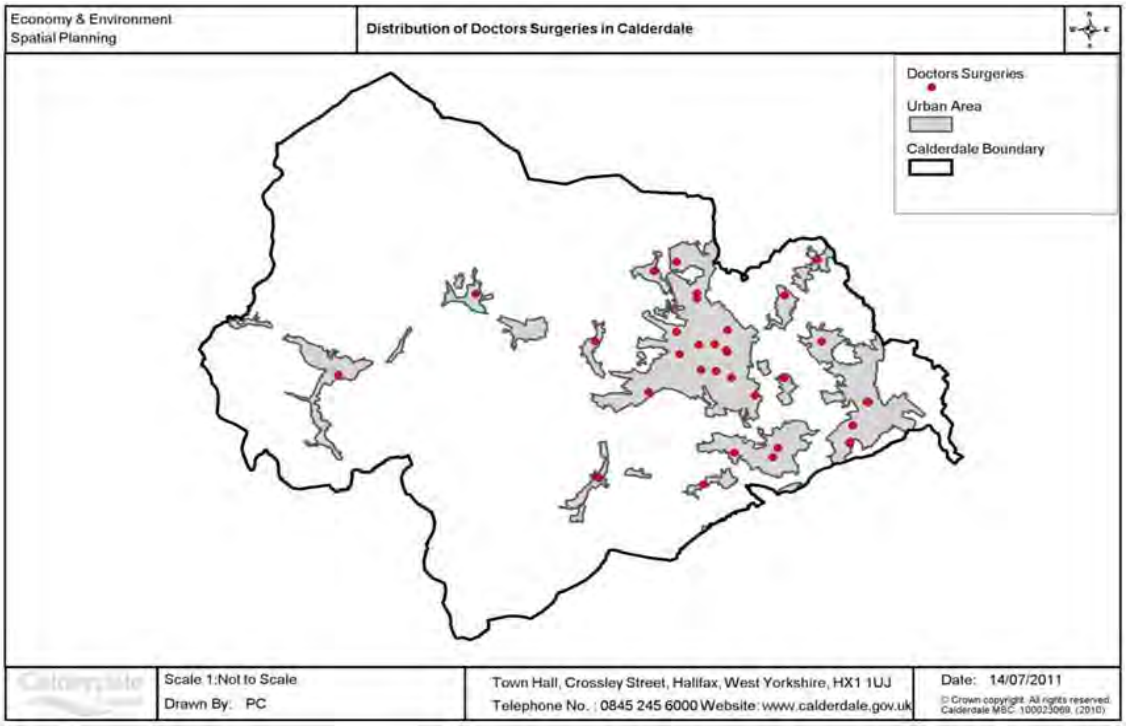
9.27 Calderdale and Huddersfield NHS Foundation Trust is in charge of the two main hospitals in Halifax and Huddersfield, Calderdale Royal Hospital and Huddersfield Royal Infirmary, as well as providing outreach services to local communities. The Trust provides healthcare for more than 435,000 people across Calderdale and Kirklees.

9.28 The South West Yorkshire Partnership – NHS Foundation Trust provides a range of community, mental health and learning disability services to Calderdale, Barnsley, Kirklees and Wakefield. Services are provided in a variety of locations, including hospitals, GP surgeries, health centres and community buildings, as well as with people in the own homes.

Current Position – Provision

9.29 Within Calderdale there are 26 General Practices with approximately 121 doctors, 33 dental practices, 40 pharmacies, 34 optometrists and one hospital trust. According to the Department of Health's information centre for health and social care statistics, in January 2017, there were 220,263 people registered with a Calderdale GP.

Figure 21 - Distribution of GP surgeries in Calderdale



9.30 The following maps show the distribution of dental practices and key health facilities respectively.

Figure 22 - Distribution of dentists in Calderdale

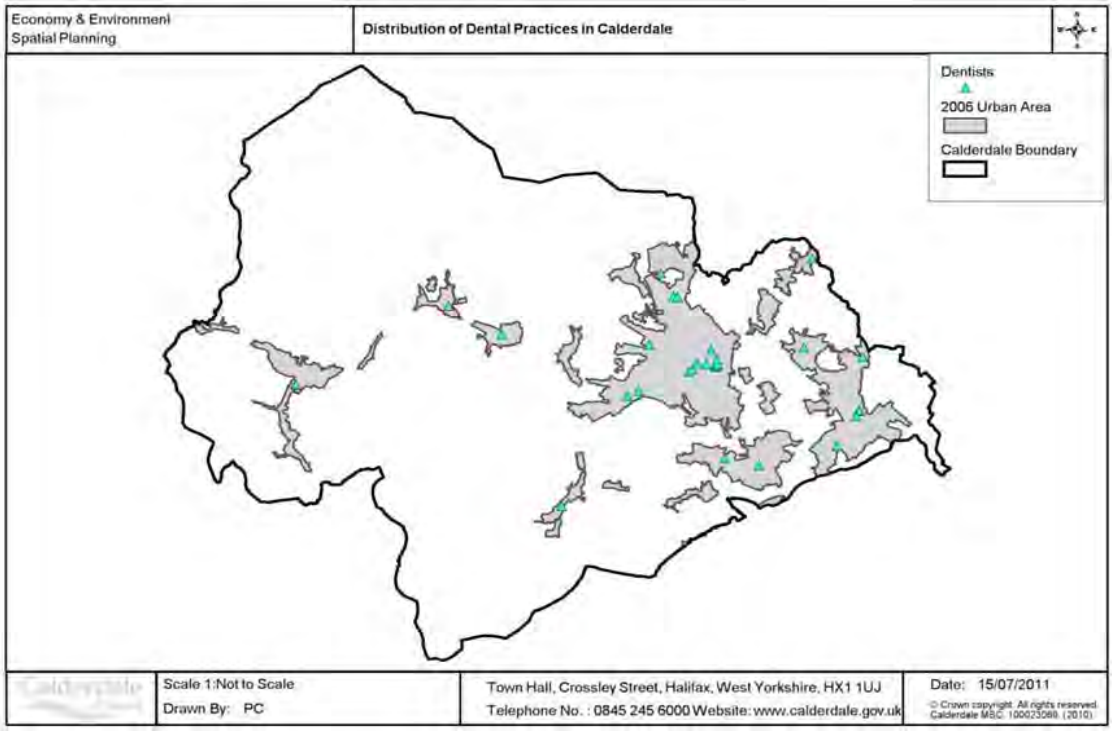
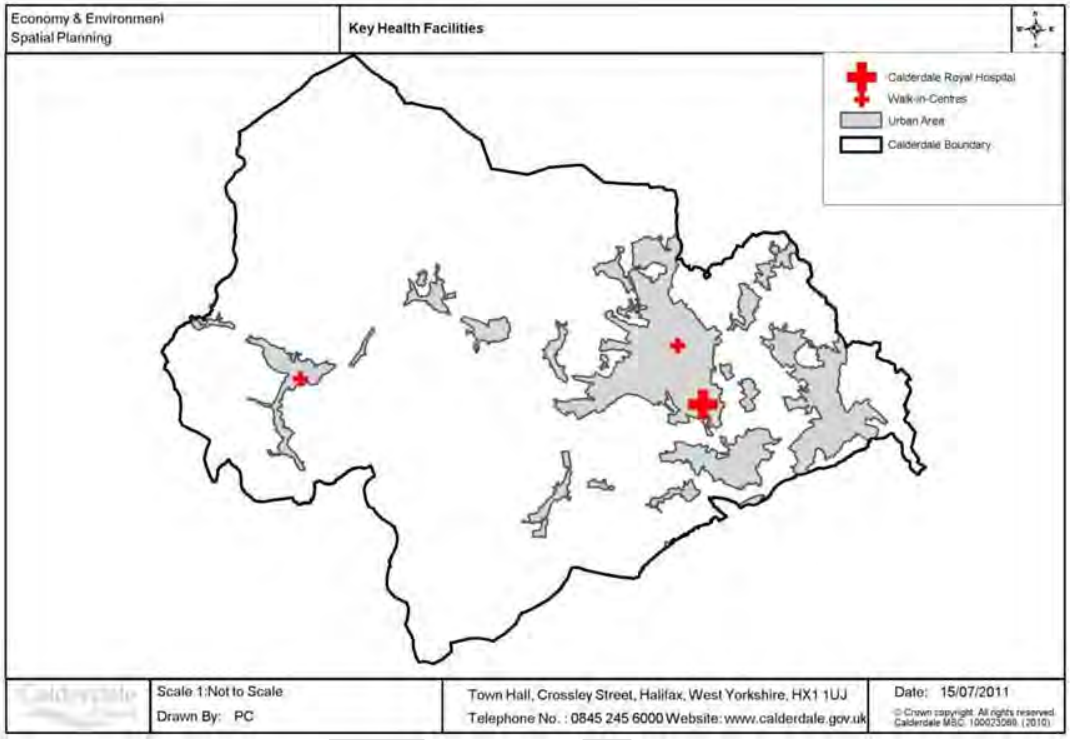


Figure 23 - Distribution of hospitals and walk in centres in Calderdale



Future Needs/ Strategies of Relevance

9.31 Growth Projections are for population to increase by 16% between 2009 and 2033, with significant increase in ages 65-74 (37%) and 75+ (46%). The effect of these changes could lead to additional pressure on the NHS. In terms of future needs, there is no definite indication of additional infrastructure the NHS is seeking. The most relevant strategy in terms of the Local Plan is the local NHS Estates Strategy. The most recent Estates Strategy was published in 2005, and is in the process of being reviewed. However, given the uncertainty surrounding the exact nature of NHS governance, it is not clear when this will be published or who will be doing so. As the Local Plan preparation progresses, regular updates will be sought from the NHS in terms of any further details concerning this.

9.32 Based on the figures above, each GP surgery serves an average population of approximately 8.5k people. Assuming population growth of about 18k over the life of the Plan, approximately 2 further GP practices would be required by 2032. In reality though given the aging nature of the population, this figure could be higher.

9.33 One facility that has already been redeveloped is the Laura Mitchell Health Centre. The NHS redeveloped the existing site at Great Albion Street in Halifax providing a brand new walk in facility.

9.34 The Joint Strategic Needs Assessment (JSNA) which is prepared jointly by NHS Calderdale and the local authority identifies the current and future health and wellbeing issues of the local population. The JSNA has been

revamped from 1 April 2016 to take a broader view of the health and wellbeing needs of the Calderdale population. The JSNA is a 'live' site that is constantly being updated, improved and expanded.

Role/Potential Impact of the Local Plan

9.35 The Local Plan will have a significant role and impact on the future infrastructure needs of the NHS. It will be necessary to co-ordinate future development as closely as possible in order to match services with need. The NHS will be kept informed of any future consultations in order that they can continue to contribute to the Local Plan process, and as the future governance arrangements become clear discussions will continue in terms of the future Estate Strategy. Future housing growth across Calderdale may provide opportunity to secure additional health facilities and services in the district.

COMMUNITY INFRASTRUCTURE

9.36 Community infrastructure in the context of the Calderdale Local Plan includes libraries, community centres and halls, post offices, cemeteries and heritage assets.

LIBRARY INFRASTRUCTURE

9.37 Libraries are a key part of community infrastructure, providing a wealth of services to local residents including books, sound and vision loans, meeting rooms, reference resources, internet and wi-fi access, newspapers, schools resource services.

Current Position – Governance/responsible bodies

9.38 Calderdale Council is responsible for providing and maintaining all library provision around the district.

Current Position – Provision

9.39 The Library and Information Services Strategy 2017 - 2020 set out a vision for a modern, financially sustainable and relevant service in Calderdale, placing libraries at the heart of local communities and providing a range of opportunities to connect residents to the knowledge, information and skills that would enrich their lives. Within the Strategy, the organisation of the library network (22 sites) was on a Central, Hub and Community model. The new Central Library & Archives opened in September 2017 as the flagship Library for the Borough and provided the fullest range of both printed and digital resources for public use.

9.40 The six 'Hub' Libraries are situated in the main towns: Brighouse, Elland, Hebden Bridge, King Cross (Halifax), Sowerby Bridge and Todmorden. The fifteen community libraries are situated in neighbourhoods: Bankfield, Bailiff Bridge, Beechwood Road, Greetland, Hipperholme, Mixenden, Mytholmroyd,

Northowram, Rastrick, Ripponden, Shelf, Skircoat, Southowram, Stainland and Walsden.

Futures Needs/Strategies of Relevance

9.41 The most recent full review of Calderdale's Library and Information Service took place in 2012. With the opening of the new Central Library & Archives and a number of physical improvements to some Hub and community libraries since then, it was suggested that now was an appropriate time to take a fresh look at the network. The review will take into account the savings set by Budget Council for the Library & Information Service over the next two financial years.

Role/Potential Impact of the Local Plan

9.42 Any future development will clearly have an impact on the demand for library services. Standards for library provision have been produced with varying levels proposed of between 25 and 35sqm per 1000 population. The Museums and Libraries Archive Council (MLA) recommend 30sqm in the Living Places toolkit – www.living-places.org.uk produced with the Local Plan and Community Infrastructure in mind. Benchmark construction and fit out costs are also provided for assisting with a CIL charging schedule. A separate figure of 6sqm per 1000 population is recommend for new or refurbished archive space.

Community Centres and Halls Infrastructure

Current position – Governance/Responsible bodies

9.43 The various community centres and public halls that are currently located around the district area a combination of local authority run premises and privately or community owned facilities.

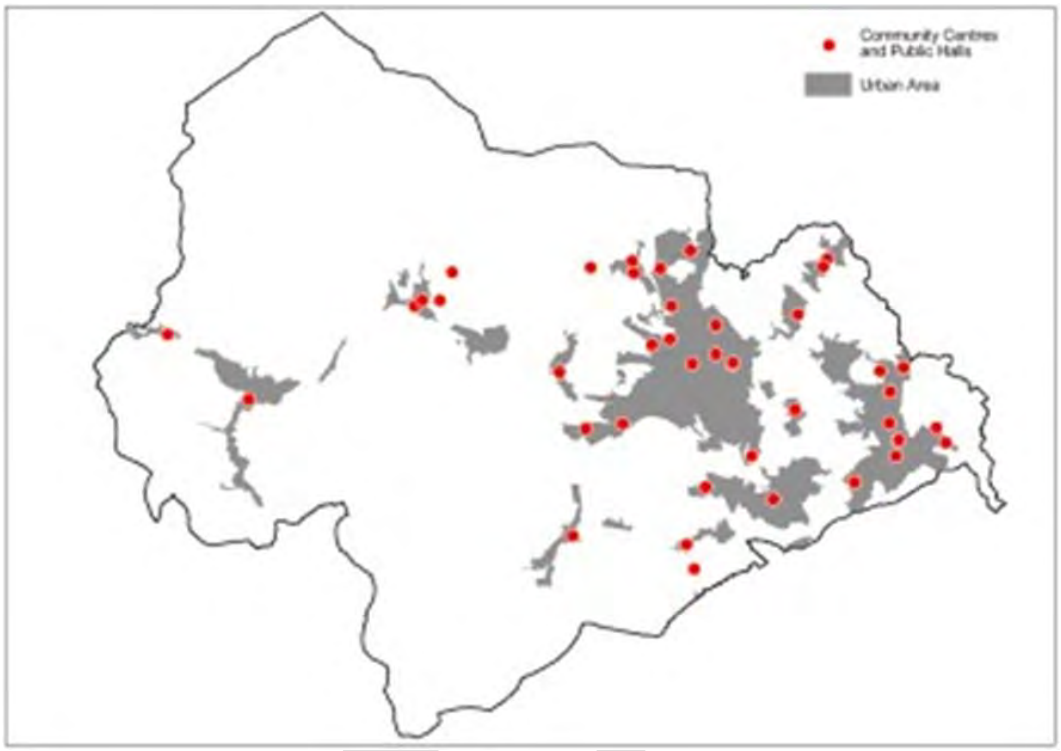
Current position – Provision

9.44 Calderdale Council run a total of 6 facilities available for hire by the public for private functions or community events:

- Brighouse Civic Hall
- Clay House, West Vale
- Luddenden Civic Institute
- Shelf Village Hall
- Todmorden Town Hall

9.45 There are approximately a further 40 facilities located around the borough, their locations are highlighted below:

Figure 24 - Community Centres/Public Hall facilities



Future Needs/Strategies of Relevance

9.46 There are no known strategies of relevance relating to community centre or public hall provision at a strategic level in Calderdale.

Role/potential impact of the Local Plan

9.47 Where the Local Plan proposes significant new development over the plan period there may be a need for further facilities however there are no known standards for community centre or public hall provision to help gauge this need. Government proposals through the Localism Bill support communities in taking over building exactly for this kind of use. Policies within the Local Plan will help to support provision and ensure that new facilities are multi-functional and could act as cultural hubs for the local community (enabling theatre production, exhibitions etc.).

POST OFFICE INFRASTRUCTURE

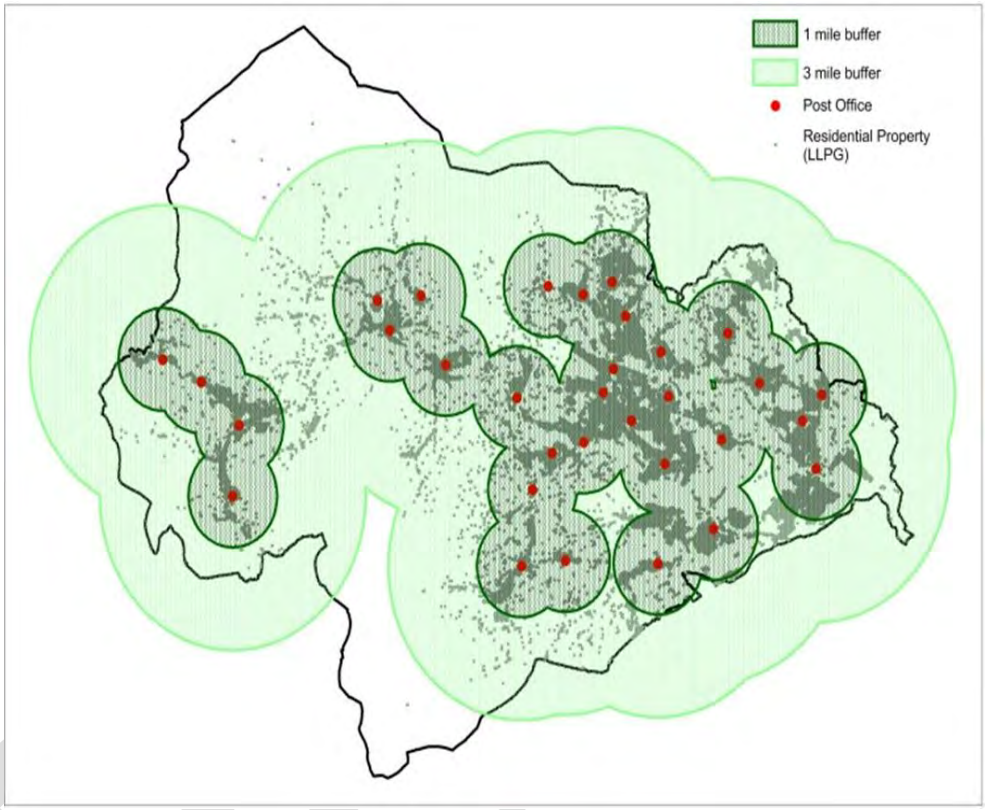
Current position – Governance/ Responsible bodies

9.48 Post Office Ltd is a wholly owned subsidiary of Royal Mail Group Ltd. There are currently over 11,500 Post Office branches nationwide, offering more than 170 products and services to over 19 million customer visits each week. Only around 3% of post office branches are now directly managed by sub-postmasters /mistresses or partners. More recently franchise partners have included companies such as Tesco and WHSmith and proposals to privatise the Post Office (see below) could see many more branches following this model.

Current position - Provision

9.49 In Calderdale there are currently 25 post office branches in operation across the district. Out of a total of 93,145 dwellings in Calderdale (LLPG record at 18 October 2011), 85,925 (92.2%) were located within 1 mile of their nearest branch; 93,135 (99.9%) were located within 3 miles of their nearest branch.

Figure 26 - showing Post Office locations and 1 mile and 3 mile catchment areas



Future Needs/Strategies of Relevance

9.50 The Post Office has very recently undergone significant structural change. The Network Change Programme was a Government led initiative, undertaken between October 2007 and March 2009, to modernise and reshape the network for a more secure and stable future. In total 2,500 branches were closed across the country, including 11 closures in Calderdale.

9.51 Despite these closures, the Post Office applies the following minimum access criteria, nationally:

- 99% of UK population to be within 3 miles and 90% to be within 1 mile of their nearest branch:
- 99% of the total population in deprived urban areas across the UK to be within 1 mile of their nearest branch.

- 95% of the total urban population to be within 1 mile of their nearest branch: and
- 95% of the total rural population to be within 3 miles of their nearest branch.
- In addition, for each individual postcode district to be within 6 miles of their nearest branch.

9.52 As demonstrated by the map in the Current Provision section above, in Calderdale these minimum access criteria are met across the district with only 10 properties (out of 93,145) being located further than 3 miles from a Post Office branch.

9.53 Further significant structural changes are likely as a result of the privatisation of Royal Mail and there have been warnings that up to a third of remaining branches may close.

Role/Potential Impact of the Local Plan

9.54 The location of new development in the future will have an influence on the Post Office Group maintaining their minimum access criteria in the future. The anticipated number of new dwellings in Calderdale were (to some degree) taken into account during the Network Change Programme even though locations were unknown. Post Offices play a vital role in serving their local communities and this was clearly demonstrated by the strength of objection during recent closures. Therefore close monitoring of the Post Office network will be necessary in the light of future development and any potential further future branch closures as a result of privatisation.

CEMETERIES INFRASTRUCTURE

Current position – Governance/Responsible bodies

9.55 Calderdale Council is responsible for the majority of cemeteries across Calderdale. Churches across the district are responsible for their own churchyards however their maintenance is the responsibility of the Council once the churchyard has been closed by the Privy Council in London.

Current position – Provision

9.53 There are currently 9 municipal cemeteries across the district, all of which have ample space for the foreseeable future i.e. (over a 35-40 year planning period). Municipal cemeteries are located at:

- Brighouse, Lightcliffe Road;
- Clifton, Towngate;
- Elland, Exley Lane;
- Luddenden, Stocks Lane;
- Rastrick, Carr Green Lane;
- Sowerby Bridge, Sowerby Bridge New Rd;
- Stoney Royd, Water Lane, Halifax;
- Booth Cemetery, Booth;
- Soyland Cemetery, Ripponden.

9.54 There is currently no municipal provision in the upper valley, despite efforts for some years to acquire land for a facility. All cemeteries in the upper valley currently belong to churches, and the majority of these are coming to the end of their lives and reaching capacity. Current statistics indicate that Calderdale already has responsibility for maintaining 30 closed churchyards across the district, an increase of 4 from the previous Infrastructure Delivery Plan.

9.55 In addition to cemeteries, Calderdale has a modernised crematorium facility at Park Wood, Park Road, Elland.

Future Needs/Strategies of Relevance

9.56 A solution to the lack of facilities in the upper valley will still need to be resolved and the matter is still being investigated.

9.57 In terms of planning for future needs, the cemeteries service track mortality rates as opposed to looking at development and population increases. Over the period of the Local Plan, the death rate is predicted to increase slightly up to the period 2032.

Role/Potential Impact of the Local Plan

9.58 Should the need for a facility in the upper valley be identified and required through Council then the Local Plan has a role to play in ensuring that a suitable site is protected for this use.

CULTURAL INFRASTRUCTURE

9.59 The cultural sector as a whole covers a wide variety of activities including: the performing and visual arts; creative industries; museums and galleries; built heritage; libraries; parks and playgrounds; sports; and cultural tourism. Cultural infrastructure in this context however (in terms of the Local Plan) is limited to theatres/cinemas, museums and galleries, libraries built heritage and parks and outdoor recreation are covered under separate section of the Infrastructure Delivery Plan.

Current position – Governance/Responsible bodies

9.60 Cultural and arts provision within Calderdale is a mixture of both public and privately run facilities and enterprise. The Council is responsible for a number of museums and galleries around the district and the Calderdale Cultural Partnership (established in 2008 as a sub-group of the Local Strategic Partnership) advised on issues relating to culture in the borough and co-ordinates activity at a strategic level to maximise the contribution of culture to the economic and social wellbeing of Calderdale.

Current position – Provision

9.61 Current publicly run provision in Calderdale includes:

- The Victoria Theatre, Halifax;

- The Hebden Bridge Picture House;
- Shibden Hall Museum, Halifax;
- Bankfield Museum, Halifax;
- Heptonstall Museum;
- Smith Art Gallery, Brighouse;
- Piece Hall, Halifax;

9.62 Various privately run facilities such as the Ted Hughes Museum, the Toy Museum, Hardastle Craggs, Eureka and other commercial galleries are also located throughout the district.

Future Needs/Strategies of Relevance

9.63 Both the Theatres and Museum service advocate a degree of flexibility in planning for the cultural sector. Where new community facilities are proposed then the use of any space for both performing arts and exhibition space should be considered. A very small investment could enable a more sustainable, multi-use facility.

THEATRES

9.64 Ownership and day to day running of the Hebden Bridge Picture House has transferred back to the Town Council via an asset of community value application. The Victoria Theatre in Halifax is still under the Council's ownership and control.

MUSEUMS

9.65 Bankfield Museum has benefitted from some restoration work as it was previously in a poor state of repair. The Museum Forward Plan of 2013-2015 set out the intention to have outline costs and delivery proposals for works to be prepared during this period, but the Plan has since been abandoned and will not be updated. The retention of Bankfield museum in situ is particularly significant due to its location in a deprived area where there are generally few facilities for the local community.

9.66 The Piece Hall transferred from the Council's ownership to the Piece Hall Trust in 2017.

Role/Potential Impact of the Local Plan

9.67 Cultural facilities are an essential component of sustainable communities. High quality, sustainable and well located arts and museum facilities can help with delivery wider social aims such as improving well-being and enlivening the population. In addition, they can act as important tourist attraction to communities and all around, and outside of, Calderdale.

9.68 The Living Places Project (www.living-places.org.uk) was set up by five of the leading cultural agencies; Arts Council, England, the Commission for British Architecture and the Built Environment (CABE), Natural England, the Museums, Libraries and Archives Council (MLA) and Sport England. The

sponsoring departments in government include the Department for Culture Media and Sport (DCMS) and the Department for Communities and Local Government (DCLG).

9.69 The primary aim of the Living Places Project is to ensure that all communities (particularly those experiencing housing-led growth and regeneration) can benefit from cultural opportunities by embedding cultural developments in villages, towns and cities alongside other key areas of infrastructure provision such as healthcare and transport.

9.70 A toolkit has been produced detailing benchmark standards of provision for cultural services. Although the toolkit acknowledges that any local benchmarks should be supported by local evidence of need, and the derivation of local costs, these provide a potential starting point for negotiation with developers if considered as part of a CIL charging schedule.

- Galleries/Theatres/Performing spaces – 45sqm per 1000 population of publicly owned and managed or regularly funded, arts provision;
- Museums – 28sqm per 1000 population

9.71 The toolkit also proposed construction and fit out costs for each typology for use in composing a CIL charging schedule when appropriate.

Indoor sport facilities

9.72 The Council's Built Facility Strategy (May 2017) found that:

- Halifax Swimming Pool is considered the only 'poor quality' swimming pool in the Borough. The facility is beyond its life expectancy and the condition of plant and machinery is poor and could fail at any time.

- North Bridge Leisure Centre provides the only 8 court sports hall in Calderdale and this is considered a key asset and essential facility.

- There is an overall deficit of water space for the residential population of Calderdale; this will further increase by another 4 swimming lanes by 2039.

- It is important to continue to maintain key facilities throughout Calderdale to their current quality and standards by ensuring sufficient funds are available to do so.

- A large amount of facilities are not owned by the council (e.g. Schools), there is a need to protect community access to these facilities by implementing community use agreements, and there is the potential risk that these facilities can fall out of community use if this strategy is not implemented.

9.72 In the context of the above findings, the future of Halifax town centre sports provision has been the subject of discussion and Cabinet papers for a number of years. Halifax Swimming Pool and North Bridge Leisure Centre (NBLC) currently operate from two separate buildings and attract over

600,000 visits per year, however both facilities have significant maintenance liabilities totalling £12.2m.

9.74 There is a need to deliver a sustainable solution that aligns the vision for the Sports and Leisure Service with an asset review that considered current provision and future property needs, shaped around the needs of the people of Calderdale. In 2010, Calderdale Council successfully delivered new combined swimming pool and fitness centres at both Brighouse and Sowerby Bridge using prudential borrowing. Both are well used and are returning positive income year on year.

9.75 In May 2013 a strategic decision was taken to keep the Sports Service in-house, as opposed to delivering services through a trust model. This resolved a significant issue in the consideration of new capital investment as the approaches to delivering new facilities would vary greatly depending on the operating model.

9.76 In October 2014 the Council allocated £2.0m from the capital investment fund as a contribution towards a new swimming pool and leisure provision in Halifax. The conclusion from the feasibility study was that the construction of a new combined swimming pool and leisure facility on the existing North Bridge site would provide the most cost effective solution, incorporating the retention and refurbishment of the existing main sports hall and viewing balcony.

9.77 A subsequent feasibility review produced a worked up design option at an indicative cost of £17.5 million. The new design has flexible spaces which allow in the next stage of the project income generation models to be thoroughly investigated and public consultation to be taken into consideration. Work is currently progressing to refine the design, value manage the scheme and maximise income generation, to ensure a viable and sustainable scheme.

EMERGENCY SERVICES

9.78 The three main emergency services in Calderdale comprise the West Yorkshire Police Authority, the West Yorkshire Fire and Rescue Authority and the Yorkshire Ambulance Service.

Current position – Governance/Responsible bodies

9.79 The West Yorkshire Police Authority (WYPA) has a key statutory duty to ensure the maintenance of an efficient and effective police force in its area. This includes the publication of an annually rolling three year Policing Plan (consistent with the Secretary of State's Strategic Policing priorities).

9.80 The West Yorkshire Fire and Rescue Authority (WYFRA) are responsible for the county's fire and rescue service, which serves a population of more than two million people.

9.81 The Yorkshire Ambulance Service (YAS) is commissioned by the West Yorkshire and Harrogate CCG's to provide emergency transport and care of patients in Calderdale, to meet patients' acute healthcare needs.

NON-EMERGENCY PATIENT TRANSPORT SERVICE

9.82 YAS is commissioned to provide routine patient transport services operating in the district for non-emergency transfers (for example for transport of patients to and from routine appointments).

Current position – Provision

West Yorkshire Police Authority

9.83 The West Yorkshire Police Authority currently has a total of 3 police stations around the district. These are located in Halifax, Todmorden and Brighouse. There are a network of neighbourhood policing teams that operate throughout the Borough.

WEST YORKSHIRE FIRE AND RESCUE AUTHORITY

9.84 The WYFRA currently has 5 fire stations located across Calderdale. In the upper valley there are stations in Todmorden and Mytholmroyd; Halifax has two stations at King Cross and Illingworth and Rastrick (which replaced the Elland and Brighouse stations).

9.85 YAS currently has 3 main ambulance stations in Calderdale; Halifax (4 ambulances and 3 cars), Brighouse Station (3 ambulances and 2 cars) and Todmorden station (1 ambulance and 1 car). A further smaller facility is in use at King Cross Fire Station in Halifax. This location provides an additional base with appropriate facilities for running local services. A similar small facility at Illingworth fire station is currently being looked at to serve the North Halifax area.

9.86 In terms of service provision, the culture is currently to use A&E departments as a last resort. Other pathways to relevant care are given priority and indeed wherever possible efforts are made to keep patients in their own homes following call-outs. This is further supported through the use of the NHS 111 number where urgent (but not life threatening) calls are assessed and directed to the most appropriate service.

Future Needs/Strategies of Relevance

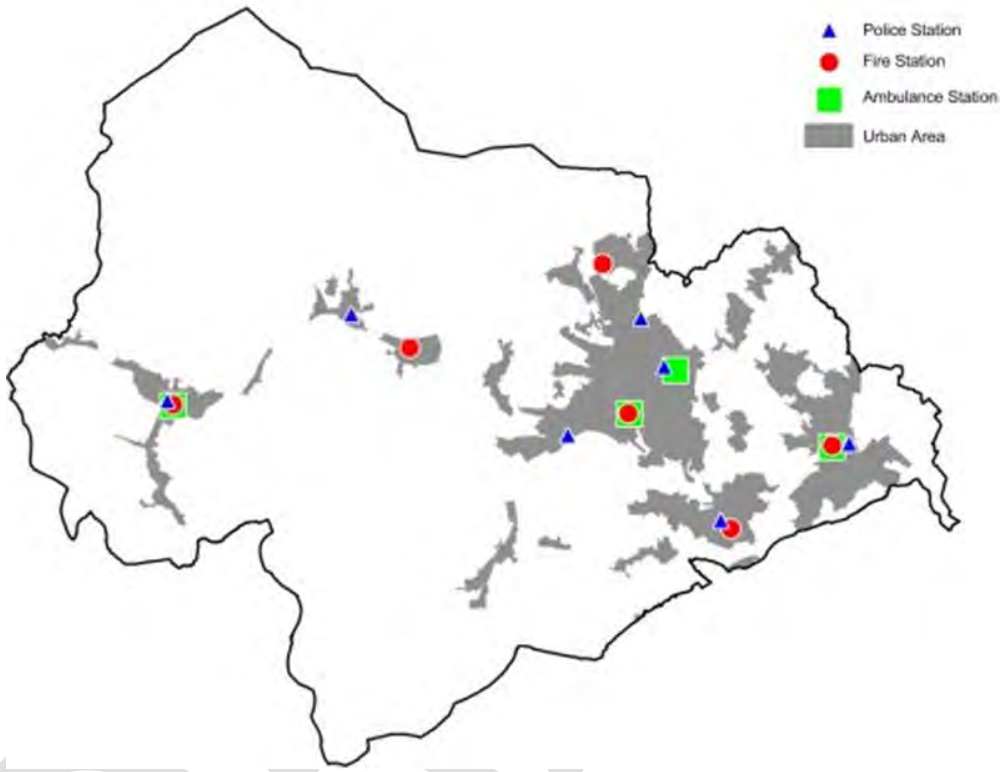
WEST YORKSHIRE POLICE AUTHORITY

9.87 The WYPA is going through significant restructuring in line with other public sector bodies in light of government austerity measures. The West Yorkshire Policing Plan (2011-15) sets out the strategic priorities for the police authority, one strand of which (Strand 4) is "Transforming the Organisation".

During the 2011/12 period a process of planning estates asset rationalisation is planned. The policing plan also refers to a specific Force Estate Strategy.

9.88 On an ad-hoc basis, asset management teams and blue light services from across West Yorkshire meet for partnership working and information sharing. Information received at these meetings will be fed into this Infrastructure Delivery Plan where appropriate.

Figure 26 – Emergency Services Infrastructure (under revision)



WEST YORKSHIRE FIRE AND RESCUE AUTHORITY

9.89 The Government introduced Integrated Risk Management Planning (IRMP) in 2004 to replace National Standards of Fire Cover. This change moved the focus of emergency cover from buildings to people. The aim of IRMP is to improve community safety, reduce emergencies and provide value for money, with the continuous process of aligning the available resources to risk and demand.

9.90 West Yorkshire Fire Authority has already begun to implement changes to emergency cover in Calderdale, with the merger of Elland and Brighouse fire stations as part of IRMP Action 2012/13. As part of the consultation document on “Proposals for Changes to Emergency Cover in West Yorkshire” the Fire Service states that Halifax fire station still has two fire engines, one of which is a Combined Aerial Rescue Pump (CARP). Risk and demand has fallen considerably and no longer justify two fire engines and it is now proposed that one of these fire engines is removed leaving the CARP and keeping the fire engine at Illingworth fire station.

9.91 As of October 2012 the proposal to reduce the Halifax fire station by 1 engine is open for consultation, however should the proposal be approved then it is likely that the Fire Service will look to construct a smaller fire station nearby to the present site as it is already well under used. An alternative option may be to rent or sell off spare capacity in the existing site.

9.92 Below the strategic level of estates planning, individual developments can require the installation of small scale infrastructure such as new hydrants or water tanks which equally should be classed as essential community infrastructure. The West Yorkshire Fire Service is keen to see responsibility for this handed over to the developer as an integral part of new development. Section 106 Agreements should remain a viable means of achieving this aim and West Sussex and Wiltshire Fire Authorities have established legal agreements with local authorities to this effect which could act as guidance for a similar process in Calderdale.

YORKSHIRE AMBULANCE SERVICE

9.93 The standards that the YAS are required to meet in providing their services are based on demand. Category 1 response calls should be responded to within 7 minutes on average and the service should respond to 90% of calls within 15 minutes. YAS are also measured on quality of service and patient outcomes. Therefore an increase in population that may result from significant new development is likely to directly impact on the service.

9.94 Changes in demand for ambulances are monitored every quarter and rota changes are planned around this data to ensure that services meet demand – many different factors contribute to demand, not just overall population. Factors affecting demand are; NHS 111, access to GP surgeries and how arrangements for out of hours cover are arranged.

9.95 Specifically in terms of the Local Plan, however the YAS has expressed an interest in being kept up to date with plans.

10. GREEN INFRASTRUCTURE

10.1 Green infrastructure is about natural or semi natural open spaces which provide habitats for wildlife as well as health and social benefits for those using or living near them. It forms an essential part of Calderdale's environment and plays an important role in maintaining the health and wellbeing of its residents. It contributes to quality of life by improving the amenity of the environment and enabling exercise and other pastimes to take place. It also contributes biodiversity and other sustainability objectives. Open spaces often come under pressure for development and this pressure is set to increase in the future. There are limited opportunities to increase the amount of open space, particularly in urban areas, and therefore it is imperative that existing open space is preserved and that it is protected from loss and inappropriate development that would harm its character appearance or function.

Responsible Bodies

10.2 The Council is responsible for the network of parks, countryside sites, designated wildlife sites and other green-spaces, allotments and outdoor sports facilities across the borough, although a significant number of sports facilities are owned by sports clubs. On a national level, Natural England has responsibility for ensuring that England's natural environment is protected and improved. Whilst Natural England is independent of the government, the Secretary of State has the legal power to issue guidance to Natural England on various matters. Sport England is a statutory consultee on planning applications affecting playing field land. The Council under the Natural Environment and Rural Communities Act 2006 has a Biodiversity Duty and the Wild Bird Duty.

Strategies, Plans and Programmes

10.3 The Leeds City Region Infrastructure Strategy was published in 2010 and was refreshed in 2016. The strategy is not a statutory planning document rather it identifies where value can be added to existing and future green infrastructure investment and interventions at the city region scale. Investment programmes and strategic projects contained in the strategy of particular relevance to Calderdale include Urban Green Adaptation, Greening our Economic Potential, Carbon Capture, Woodfuel, Rivers for Life and Live Moor/Learn Moor. Further details of each initiative are provided in the Infrastructure Schedule.

10.4 The NPPF recognises that green infrastructure can contribute to conserving and enhancing biodiversity and reducing flood risk and states that plan policies should aim to maintain, and enhance, restore or add to biodiversity conservation interests. The NPPF also states that access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and well-being of communities. Planning policies should be based on robust and up to date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision. Information gained from the assessments should be used to determine what open space, sports and recreational provision are required.

10.5 The latest version of Calderdale's Natural Heritage: A Biodiversity Action Plan for Calderdale was published in 2007 and is regarded as the beginning of a long process to protect and enhance Calderdale's biological diversity. Calderdale's Biodiversity Action Plan is an evolving programme of protection and enhancement of priority habitats. The priority habitats listed in the BAP include ancient trees, blanket bog, canals, hedgerows, unimproved grasslands, ponds and lakes.

10.6 The Calderdale Open Space, Sport and Recreation Study – 2015 Update sets out local accessibility standards for all open space typologies. The aspiration for natural and semi natural green space is that all settlement areas should be located within 400m of a site size 0.04ha-1ha or 600m within a site between 1-3ha or 1200m within a site of 3ha or greater. The same aspiration applies for amenity green space. The maps below set out the current provision of natural and semi natural green space and amenity green space in the borough.

Figure 27 - Natural and Semi Natural Green Space

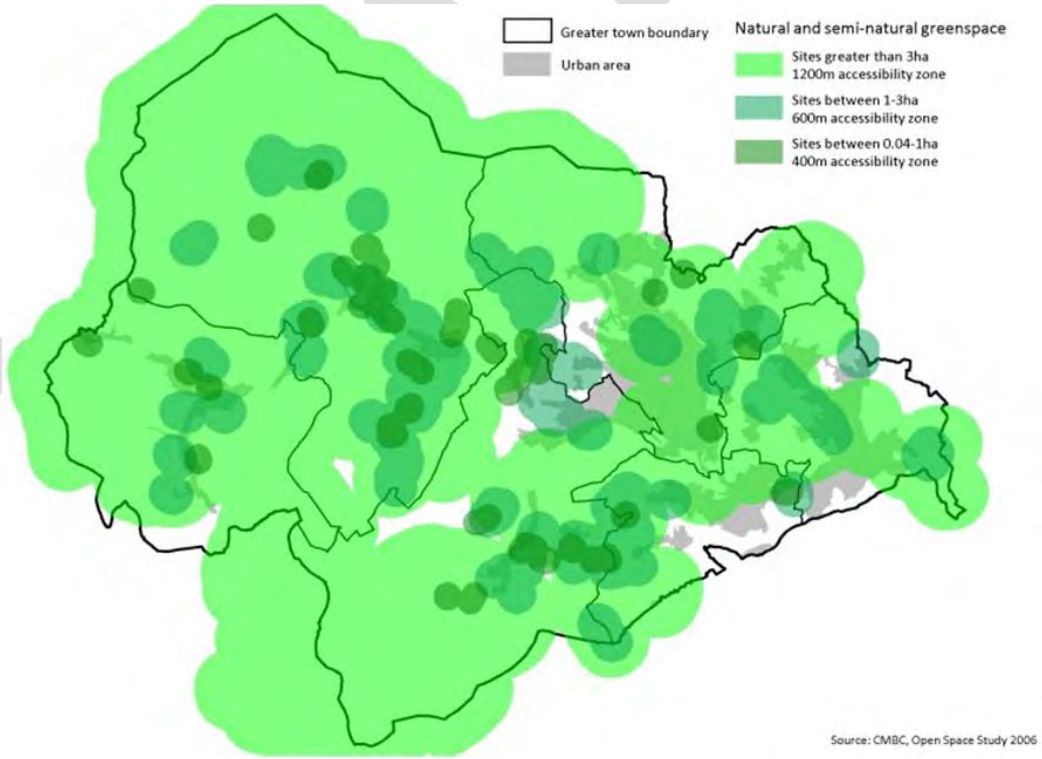
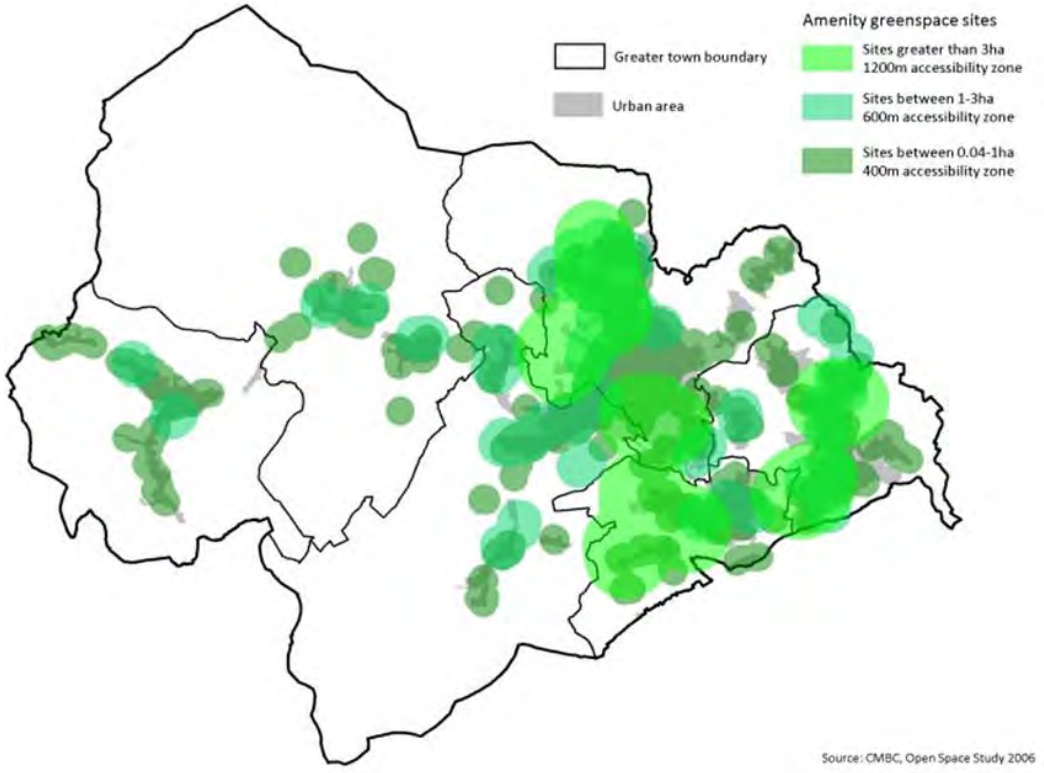


Figure 28 – Amenity Greenspace Accessibility



Planned Provision

10.7 Calderdale Council do not have sufficient funding to provide new areas of open space and so developers will need to pay planning contributions to fund additional open space needed because of new development. The Council has a limited budget to fund maintenance and upkeep of current open spaces across the district. Concerns have been expressed by the Council's Safer Greener Cleaner Service that such budgetary constraints could lead to lower maintenance standards being applied to existing assets.

10.8 Thorough the Open Space and Recreation Study the Council has developed locally devised standards and will require developers to provide open space, indoor and outdoor recreation facilities in accordance with those standards. Recognised areas of deficit include a shortage in the provision of allotments and areas that can be used for community growing areas, woodlands, areas of the Public Right of Way network that have suffered neglect due to a low maintenance budget and provision of facilities for children and young people to include informal play provision.

10.9 The Playing Pitch Strategy identifies actions required to improve sports facilities on a site by site basis and any shortfalls in provision. In particular there is a requirement for six additional full sized 3G artificial pitches in the borough. The headline findings of the Playing Pitch Strategy are included as Appendix 4.

10.10 Further deficits are identified in the Calderdale Biodiversity Action Plan to include a number of natural habitats and species. Many of the threats to species and habitats come from development, intensive or inappropriate use of open and green spaces and human impact including disturbance, litter, dumping, vandalism and erosion of moorland. Listed habitats in need of most conservation include ancient trees, blanket bog, canals, hedgerows, rivers and streams, unimproved grasslands, ponds and lakes. Priority species associated with each habitat have been identified and include bats, birds, amphibians, fish and plants. Habitat networks need to be included as a strategic approach to developing green infrastructure in a way that is most beneficial to biodiversity. These are mapped for Calderdale through West Yorkshire Ecology.

10.11 The Canal and River Trust are working towards providing waterways that are an attractive setting for development, and they suggest that property developments at waterside locations command a premium value of between 15-25% compared to other schemes. Significant new developments in the vicinity of the canal network can place extra liabilities and burdens on waterway infrastructure, particularly as a result of its use as a form of open space and as a sustainable transport route. Increased liabilities may include the removal of litter, and maintenance of towpaths. The Trust currently maintains its towpaths in a 'steady state' and it is therefore suggested that appropriate contributions should be sought from developers in order to mitigate the impact of new development on the Trust's assets.

10.12 The Trust has been working towards improving and promoting use of towpaths where possible. It wishes to encourage new development next to the network to include connections to the towpath where appropriate. The Trust recognises that the Rochdale Canal along the Calder Valley is an asset that promotes tourism. In addition, the towpath provides a potential sustainable transport corridor for walking and cycling; which would encourage healthy living. The present towpath on the Rochdale Canal is in a poor condition, and discourages its use by walkers and cyclists. To address this, it is delivering a towpath re-surfacing project between Sowerby Bridge and Stubbings Wharf (to the west of Hebden Bridge) which will be completed by Summer 2018. This is funded through the DfT Cycle City Ambition Grant. The route is being promoted as walking and cycling infrastructure and will include waymarking along the canal. There is a desire to extend this scheme through to Todmorden and Walsden, and it is working with the West Yorkshire Combined Authority and Calderdale Borough Council to identify funding for this route. The timeframe for these works would be uncertain. The bid deadline is May 2018. If this scheme is successful it will leave a gap on the network on the Rochdale in Calderdale between Todmorden and Walsden, which is currently in a poor quality condition, and discourages use of the network for walking and cycling.

10.13 In addition to the above, the Trust does believe that pedestrian connectivity around the wharf in Sowerby Bridge could be improved, and could be considered as a future aspiration. The Trust is seeking to improve the Calder & Hebble navigation as a visitor attraction in Salterhebble, Elland and

Brighouse via promoting improvements to our towpaths in these areas. Improvements could be funded through taking advantage of funding opportunities such as CCAG2 (Cycle City Ambition Grant 2); or developer contributions where development would result in additional use of our towpaths.

SUSTAINABLE ENERGY SOURCES

10.14 The canal network provides readily available opportunities for developments to incorporate innovative technologies to make use of water such as the abstraction of canal water for heating or cooling purposes, where there is a sufficient flow of water to sustain this use. Climate change is an important consideration in the modern world, and thermal energy for heating and cooling from water is a low carbon solution which contributes to UK Government targets to reduce the UKs greenhouse gas emissions by at least 80% (from the 1990 baseline) by 2015. The water flowing though the Trust's waterways contains enough thermal energy to provide approximately 640 MW of energy. This has attracted a number of businesses which now utilise this low carbon source to heat and cool their buildings. The Department for Energy and Climate Change have acknowledged this potential in their Heat Map, which includes a specific canal layer. The energy is extracted using water sourced heat pumps which are very efficient compared to conventional forms of heating and cooling. These efficiency improvements will help reduce energy demands from other sources and assist in balancing electricity supplies.

Sustainable Water Sources

10.15 The Trust is working alongside water companies regarding infrastructure improvement schemes. Examples include use of the canal network to transport water over long distances. The Trust's water infrastructure could also provide water supply and wastewater services to new developments providing local solutions and reducing the demand on the water companies for water supply.

Role/Potential Impact of the Local Plan

10.16 The Local Plan will require developers to provide or contribute towards open space provision and maintenance. It will also seek to safeguard and enhance biodiversity across the district. Developers should contribute to biodiversity and green infrastructure. Mitigation and enhancement provision is considered critical and where possible these elements should also be protected within development.

10.17 Habitat networks should be enhanced by development. Large schemes such as roads have the potential to contribute towards the provision of further appropriate tree planting and canopy cover.

10.18 The Local Plan will give site specific protection to existing Green Infrastructure (GI). GI work feeding into the Plan will be incorporated into future iterations of the Infrastructure Delivery Plan.

11. DELIVERING INFRASTRUCTURE

11.1 The future of sustainable growth and development within Calderdale depends on the timely funding and delivery of infrastructure that reflects the scale and type of development and the needs in the locality; without it, new development may be delayed and/or there could be unacceptable adverse social, economic or environmental impacts on existing infrastructure.

11.2 Improved alignment of investment is critical to delivery of timely infrastructure. Whilst significant public sector funding will underpin much of the infrastructure delivery to provide the growth set out in the Local Plan, short public sector funding cycles, can make it difficult to plan for long term growth. Infrastructure providers have complex financial planning approaches to funding and in the majority of cases bids need to be made many years in advance.

11.3 Commercial and private providers operate to different investment plan cycles, and utilities providers operate to their own five year Asset Management Plans, adding to the difficulty of co-ordinating future investment and infrastructure delivery. Ongoing work will to be undertaken with the responsible infrastructure providers to ensure that the necessary infrastructure is provided in a timely fashion. Where appropriate this information will be used to inform and update this IDP.

11.4 Much of the funding for infrastructure comes from the budgets of public and private organisations responsible for the different infrastructure categories. The planning system, however, has the power to set charges associated with development for shortfalls in infrastructure funding, or different categories of infrastructure not already funded. In recognition of this, the Council are proposing to introduce a Community Infrastructure Levy (CIL). CIL will sit alongside site specific development agreements (often known as Section 106 agreements) to assist in securing necessary infrastructure and reducing any funding gap.

11.5 It is recognised that in the current economic climate and times of austerity, there are particular challenges around the funding of infrastructure. This emphasises the importance of a fully co-ordinated approach to planning and delivering infrastructure through the IDP process. The IDP will ensure that charges imposed through an evidenced charging schedule will supplement the cost of certain infrastructure types. It is, however, recognised that developers can only bear a certain amount of contribution from planning obligations. Therefore, the emerging CIL charging schedule has been subject to a thorough viability assessment to ensure that development is not overly inhibited in the future.

Other sources of revenue

11.6 A number of alternative funding and delivery options which the Council can consider for infrastructure projects are briefly described below:

- **Prudential Borrowing** –

This is financed by Government and has to be sustainable and affordable. The Council can undertake unsupported borrowing to fund 'invest and save' schemes as long as it is affordable and within its prudential borrowing limit. Prudential borrowing can have an important role to play in meeting capital investment needs. It allows the Council to borrow against their asset base and manage investment to fund shortfalls in infrastructure and services. It requires all local authorities to draw up rolling three-year plans for capital expenditure and covers all capital spending apart from that on housing.

- **New Homes Bonus** –

This was introduced by Government in April 2011 to support housing development. It involves government match funding the amount of Council tax raised from new homes and vacant properties brought back into use. The New Homes Bonus is an on-going scheme with match funds paid over 6 years for each new dwelling or vacant property brought back into use. The Council is paid the new Homes Bonus if there is an increase in effective stock.

- **Business Rate Retention** –

The Local Government Finance Bill proposes the introduction of business rate retention. Business rate retention is another incentive local authorities can use to promote economic growth. Rather than increasing the amount businesses pay, it allows local authorities to keep part of their locally collected rates instead of passing revenues back to central government.

- **City Deal** –

In July 2012, Government provided devolved budget and decision making powers to 8 city regions. Leeds City Region, of which Calderdale is part, was one city region provided with these new powers. The Leeds City Deal focuses on skills, transport, investment funds, trade and inward investment, supported by a combined authority to achieve efficient and effective decision making.

- **European Funding** –

The European Regional Development Fund (ERDF) provides match funding for economic development. JESSICA and JEREMIE schemes involve venture capital and loan schemes. Joint European Support for Sustainable Investment in City Areas, is an initiative of the European Commission developed in co-operation with the European Investment Bank (EIB) and the Council of Europe Development Bank (CEB). It supports sustainable urban development and regeneration through financial engineering mechanisms. EU countries can choose to invest some of their EU structural fund allocations in revolving funds to help recycle financial resources to accelerate investment in Europe's urban areas. With the prospect of the UK withdrawing from Europe in 2019, the future for this type of funding is uncertain.

- **Regional Growth Fund** –

Regional Growth Fund (RGF) money is available through RGF programmes. These programmes are schemes run by national or local

organisations that have been awarded RGF cash to offer grants and/or loans to eligible businesses.
To be eligible businesses must:

- be based in England
- want to strengthen or grow their business
- create or protect jobs
- be investing private capital
- be unable to find funding elsewhere for the application
- be state aid compliant

The Regional Growth Fund (RGF) has no internal ring fences and the minimum threshold for bids is £1 million. It can be used to invest in infrastructure to enable economic growth, tackle barriers such as congestion and improve connections to job opportunities.

- **Council owned assets** –

Capital receipts can be raised through the sale of Council assets such as buildings and land. Central Government recently announced a development rights auction model which is a pilot scheme enabling the public sector to auction off publicly owned parcels of land with planning permission. The Localism Act sets out opportunities for communities to manage services and assets previously delivered through the Council.

One Public Estate (OPE)

11.7 OPE is an established national programme delivered in partnership by the Cabinet Office Government Property Unit (GPU) and the Local Government Association (LGA). It provides practical and technical support and funding to councils to deliver ambitious property-focused programmes in collaboration with central government and other public sector partners.

11.8 OPE partnerships across the country have shown the value of working together across the public sector and taking a strategic approach to asset management. At its heart, the programme is about getting more from our collective assets - whether that is catalysing major service transformation such as health and social care integration and benefits reform; unlocking land for new homes and commercial space; or creating new opportunities to save on running costs or generate income. This is encompassed in three core objectives:

- creating economic growth (new homes and jobs);
- delivering more integrated, customer-focused services;
- Generating efficiencies, through capital receipts and reduced running costs.

11.9 As the Plan progresses further consideration will need to be given to the OPE route as a mechanism to deliver facilities such surgeries, libraries, and community centres.

SOUTH EAST CALDERDALE

11.10 In recognition of the potential issues arising from the ambition for growth in SE Calderdale a supplementary statement has been as Appendix 5 that draws together the evidence that is of particular relevance to this area.

12 CONCLUSIONS

12.1 The IDP provides a robust evidence base which identifies what infrastructure is required to support the delivery of the Local Plan, specifically over its first five years. It identifies some of the key infrastructure requirements for the district and key issues relating to its provision, the funding available and the partners that will deliver the infrastructure.

12.2 There are no “show stoppers” relating to the delivery of infrastructure required to support this level of growth over the first five years of the Plan Period. There are, however, a number of significant challenges which will require further consideration within the plan period to ensure that the district can prosper.

12.3 Some of the potential solutions already benefit from committed funding but some remain unfunded or will require developer contributions sought either through the Community Infrastructure Levy or s106 Planning Obligations. Further detailed work is required to identify the full extent of this funding gap The IDP can inform, but not dictate, the list of infrastructure projects that the Council would seek to fund using the CIL following its introduction.

12.4 The IDP will continue to be refined over time, and will as a matter of course by refreshed on an annual basis to allow the full range of infrastructure needs to be kept up to date, and demonstrate the delivery projects.

APPENDIX 1 – LIST OF STAKEHOLDERS AND INFRASTRUCTURE PROVIDERS

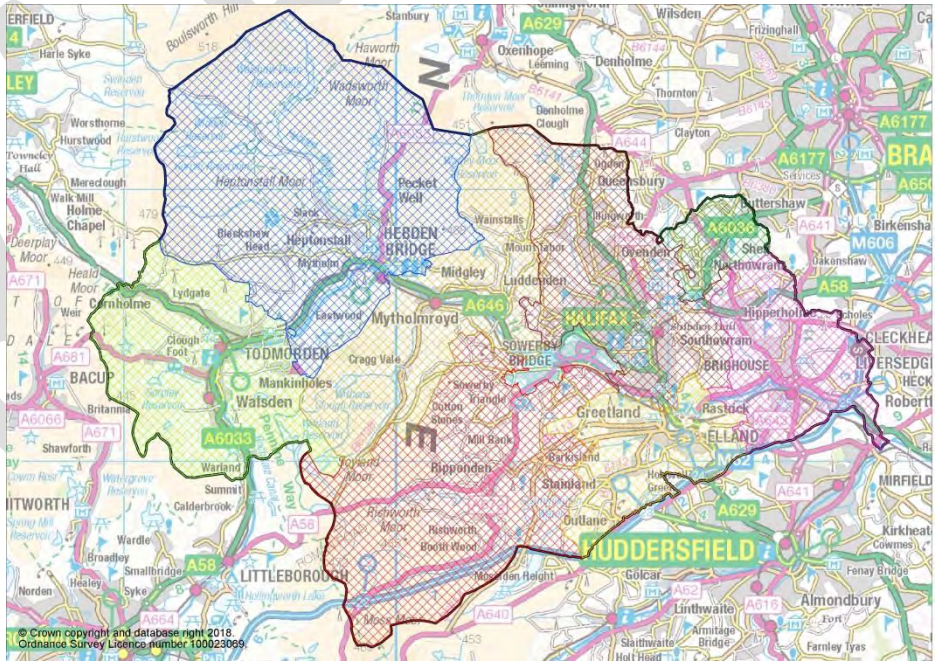
- Calderdale Council Directorates:
    - Regeneration and Strategy;
    - Public Health;
    - Public Services;
    - Adult and Children's Services;
- Calderdale Clinical Commissioning Group
- West Yorkshire Combined Authority;
- Highways England;
- Environment Agency;
- Canal and Rivers Trust;
- Yorkshire Water;
- National Grid;
- Northern Powergrid (Yorkshire) plc;
- Northern Gas Networks;
- Yorkshire Ambulance Service;
- West Yorkshire Fire and Rescue Service;
- West Yorkshire Police.

APPENDIX 2 - SCHEDULE OF TRANSPORT INFRASTRUCTURE

PRIORITY :		FUNDING:
1 Key Priority / Necessary to Support Growth		1 Definite / Very Likely
2 Desirable		2 Uncertain / Part Funded
3 Subject to Funding		3 None Currently Identified

INFRASTRUCUTURE DELIVERY PLAN AREAS (as per Local Plan Areas)

Hx – Halifax
B – Brighouse
E – Elland
SB – Sowerby Bridge
HB – Hebden Bridge
T – Todmorden
M – Mytholmroyd
NS – Northowram and Shelf
R – Ripponden



LOCAL PLAN AREAS

CALDERDALE INFRASTRUCTURE SCHEDULE – TRANSPORT INFRASTRUCTURE SCHEDULE

Schemes ordered by 'Priority: Key Priority' and 'Funding: Definite / Very Likely'. Schemes are then sorted by total cost.

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Term 15 yr+
R, E, B	**Strategic Road Network**	M62 Jn. 20-25 Smart Motorway	£283m to £392m	1	1 Highways England	Highways England	Delivery of managed motorway system to improve flow and journey times on a highly congested section of the M62 https://highwaysengland.co.uk/projects/m62-junction-20-to-junction-25-smart-motorway/	Start March 2020.		✓	
All	**Public Transport – Rail**	Calder Valley Line – Rolling Stock Replacement	£261m approx.	1	1 DfT	Network Rail, Northern	Contracted for 98 new trains is across the Northern network at £498M. Of these 50% are electric and not to be seen on the Calder Valley. Cost of diesels is more than electric traction. An estimate of 5% would value the diesel fleet at £261M or about £5.5M per train. Of the 48 diesel trains five to seven will be seen on any given day on the Calder Valley line.	2019 complete	✓		
All	**Public Transport – Rail**	Calder Valley Line – Pre-electrification improvements	£100m approx.	1	1 DfT	Network Rail, Northern	Investment in new signalling, and line speed improvements – Bradford – Halifax – Manchester Victoria. This comprises of: line speed improvements (mostly between Rochdale and Manchester); signalling improvements to reduce gap between trains down to 4 minutes thereby increasing capacity; junction changes at Bradford Interchange so more services can run in/out at the same time; works to ensure line is more resilient and copes better with bad weather events and in particular flooding	2016-18	✓		
Hx	**Local Road Network**	A629 Programme - Phase 1a	£8.5m	1	1 WY+TF	CMBC, WYCA	Junction Remodelling. Additional Lanes. Improved public transport priorities/facilities. UTMC control package.	2017-18	✓		

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
E	Public Transport - Rail	Elland Rail Station	£14m	1	1 WY+TF	WYCA, CMBC, Network Rail, Northern	Provision of new rail station	2022 complete	✓		
E	Walking and Cycling	Elland Access Package	£7m	1	1 WY+TF	CMBC, WYCA	Improved pedestrian and cycle access from and between Elland and the new Elland station as well as better access to employment areas	2022 complete	✓		
SB, M, HB	Walking and Cycling	CityConnect Rochdale Canal Towpath – Phase 1	£1.6M	1	1 Cycle City Ambition Grant2 (CCAG2)	WYCA, CMBC, Canal and Rivers Trust	Provision of high quality cycle route along canal towpath for commuting, utility and leisure trips. Section from Sowerby Bridge to Hebden Bridge.	2018 complete	✓		
All	Public Transport – Rail	Northern franchise service enhancements	£600k	1	1 Northern Franchise	Northern	Increased frequencies, improved ticketing, additional rolling stock and provision of staff at additional stations	2018 complete	✓		
B	Local Road Network	Cooper Bridge	£70m	1	2 WY+TF	KMBC, CMBC, WYCA, Highways England, Canal and Rivers Trust	Kirklees led scheme. Improved connection between the A62 / A644 and in turn M62 jn.25. Potentially inclusive of Kirklees elements in a potential Cooper Bridge cycle scheme on the Calder and Hebble navigation. Programme costs and timeframes may be subject to change	2018 - 2023		✓	

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
Hx	**Local Road Network**	A629 Phase 2 - Halifax Town Centre	£41m	1	1 WY+TF	CMBC, WYCA	Bus Box excluding Buses from certain streets in the centre of Halifax, expanded pedestrian zone, improved public transport facilities. Enhanced by-pass routes. Enhanced pedestrian and cycle routes into town centre. Enforcement package. Programme costs and timeframes may be subject to change	2018-22	✓		
E	**Local Road Network**	A629 Programme – Phase 4	£25m	1	2 WY+TF	CMBC, WYCA	Improvements to local highway network serving Ainley Top, Elland and West Vale. Programme costs and timeframes may be subject to change	2024 complete	✓	✓	
Hx, E	**Local Road Network**	A629 Programme - Phase 1b	£18.9m	1	2 WY+TF	CMBC, WYCA	Junction Remodelling. Additional Lanes. Improved pedestrian and cycle facilities. Improved public transport priorities/facilities. UTMC control package. Programme costs and timeframes may be subject to change	2021 complete	✓		
B	**Local Road Network**	A641 Programme – Improved Connectivity A644 to A641	£14.5m	1	2 WY+TF Developers	CMBC, WYCA	Demand for movement between the A644 and A641 at Brighouse is known to be high and contributes to congestion. The Brighouse Local Plan Area is also critical to the housing allocations of the draft local plan. Part of WY+TF Programme. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
B	**Local Road Network**	A641 Programme – Improved Connectivity A641 to A643	£13m	1	2 WY+TF Developers	CMBC, WYCA	Demand for movement between the A641 and A643 at Brighouse is known to be high and contributes to congestion. The Brighouse Local Plan Area is also critical to the housing allocations of the draft local plan. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
E	Local Road Network	A629 Programme – Phase 5	£12m	1	2 WY+TF	KMBC, CMBC, WYCA	Kirklees led scheme. Programme costs and timeframes may be subject to change	2018-21	✓		
Hx	Public Transport – Rail	Halifax Station Gateway	£10.6m	1	2 WY+TF Developers	CMBC, WYCA, Network Rail, Northern	Comprehensive station improvement gateway scheme including public realm, bus/rail interchange and potential reopening of third platform. Programme costs and timeframes may be subject to change	2023	✓		
B, E	Local Road Network	A641 Programme – Improved connectivity A6025 to Elland	£10.5m	1	2 WY+TF Developers	CMBC, WYCA	Better connectivity between Elland and the A6025 would enhance access to employment. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
Hx, SB, M, HB, T	Local Road Network	Corridor Improvement Programme - A646 / A6033	£4m to £10m	1	2 WY+TF	CMBC, WYCA	Delivery of a package of works to improve transport access along the Calder Valley. Range in potential cost due to scheme being at pre-feasibility stage. As such preferred scheme is yet to be determined. Programme costs and timeframes may be subject to change	2021	✓		
B	Local Road Network	A641 Programme – Bradford Local Highway Package	£8m	1	2 WY+TF Developers	CBMDC, CMBC, WYCA	Junction Remodelling. Additional Lanes. Improved public transport priorities/facilities. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
B	Local Road Network	A641 Programme – Bailiff Bridge Improvements	£7m	1	2 WY+TF Developers	CMBC, WYCA	All mode Bailiff Bridge improvements. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
B	Local Road Network	A641 Programme – Kirklees Local Highway Package	£6m	1	2 WY+TF Developers	KMBC, CMBC, WYCA	Junction Remodelling. Additional Lanes. Improved public transport priorities/facilities. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
Hx, SB, R	Local Road Network	Corridor Improvement Programme - A58 / A644	£5.3m	1	2 WY+TF	CMBC, WYCA	Delivery of a package of works to improve transport access along the Ryburn Valley from Halifax to Ripponden. Programme costs and timeframes may be subject to change	2021	✓		
B	Local Road Network	A641 Programme – Brighouse Town Centre Improvements	£5m	1	2 WY+TF Developers	CMBC, WYCA	All mode town centre improvements. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
B	Local Road Network	A641 Programme – NPIF Scheme	£4.5m	1	2 NPIF Developers	CMBC, WYCA	As in the National Productivity Investment Fund bid for the Clifton Business Park Transport Network - http://www.calderdalenextchapter.co.uk/sites/default/files/Redacted%20Annexes%20inc%20Cushman%20Wakefield%20on%20Next%20Chapter_0.pdf . Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
B	Local Road Network	A641 Programme – Huntington Road Bridge Replacement (WY+TF)	£4.2m	1	2 WY+TF Developers	CMBC, WYCA	Programme costs and timeframes may be subject to change	2025 complete	✓	✓	

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
B	Walking and Cycling	A641 Programme – Cycle Route Improvements (WY+TF)	£4m	1	2 WY+TF Developers	CMBC, WYCA	Package to deliver local cycle access improvements both in on highway and greenway contexts. Inclusive of parts of a potential Cooper Bridge cycle scheme on the Calder and Hebble navigation. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
B	Public Transport - Buses	A641 Programme – Bus Journey Time Improvements (WY+TF)	£2.5m	1	2 WY+TF Developers	CMBC, WYCA	Package to deliver improved bus priorities/facilities. Programme costs and timeframes may be subject to change	2025 complete	✓	✓	
HB, T	Walking and Cycling	CityConnect Rochdale Canal Towpath – Phase 2	£1.5m to £2m	1	2 Safe Cycling Fund (Bid) Developers	WYCA, CMBC, Canal and Rivers Trust	Provision of high quality cycle route along canal towpath for commuting, utility and leisure trips. Section from Hebden Bridge to Todmorden. Further funding required for crossing five heritage feature weirs.	2019 towpath. Weirs unknown	✓		
All	Public Transport - Rail	Calder Valley Line Electrification	£500m to £1bn	1	3 DfT	DfT, Network Rail, Route LAs, Northern	A 2012 assessment of the cost put the value of these works to be at around £475m. There have however been similar works undertaken in the south west more recently where costs have escalated very substantially as compared to original predictions	Unknown			✓
All	Public Transport - Rail	Northern Powerhouse Rail	Unknown	1	3 DfT	DfT, Network Rail, Route LAs, Northern	Whilst it is unlikely that any Calderdale level planning relevant infrastructure decisions will specify land requirements in the next 5 years, the scale and importance of this national project merits mention here for contingency purposes.	Unknown			✓

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
Hx	Walking and Cycling	North Halifax – Halifax to Mixenden and Illingworth Cycle Corridors	£10m to £12m	1	3 Unknown. Potentially CCAG3, LTP, Developers	CMBC	Mixed on highway and greenway cycling infrastructure. Inclusive of potential Hebble Trail.	Unknown	✓		
Hx	Local Road Network	A629 North Halifax to Bradford Boundary	£5 to £10m	1	3 Govt source unknown, Developers	CMBC	Delivery of a package of works to improve transport access along the A629 from Halifax to the Bradford district border. No funding as yet secured but on a reserve list for addition to the Corridor Improvement Programme	Unknown	✓	✓	
E	Strategic Road Network	M62 Jn. 24 Ainley Top Junction Capacity	£5 to £10m	1	3 Highways England, Developers	Highways England, CMBC, KMBC	Three lanes approach from M62 westbound off-slip on A629 to provide more stacking capacity and weave section.	Unknown	✓	✓	✓
E	Strategic Road Network	M62 Jn. 25 Junction upgrade	£5 to £10m	1	3 Highways England	Highways England, CMBC, KMBC	Signalisation of all arms (in potential conjunction with the Cooper Bridge scheme)	Unknown	✓	✓	✓
All	Local Road Network	LED Street Lighting	£22m	2	1 CMBC	CMBC	Comprehensive replacement of lamps and columns	2018-20	✓		

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
HB	**Public Transport – Rail**	Hebden Bridge Station Lift	£2.2m	2	1 DfT Access for All	Network Rail, CMBC, Northern	Delivery of lifts to provide level access for all station users	2019	✓		
M	**Public Transport – Buses**	Enhanced Bus Stop Facilities	£200k	2	1 Bus 18	CMBC, WYCA	Provision of enhanced bus stop facilities in Mytholmroyd as part of the Bus Hotspots Fund of the Bus 18 initiative	2018-19	✓		
All	**Local Road Network**	20mph speed restriction schemes	Range of schemes	2	1 LTP, developers	CMBC	Schemes to introduce sign only 20mph areas to reduce casualties and improve local environments	2018 complete	✓		
All	**Local Road Network**	Casualty reduction schemes	Range of schemes	2	1 LTP, developers	CMBC	Changes to speed limits, crossing facilities, signage and layout to reduce speeds and improve local environments. Informed by reports on network lengths and sites of concern.	Ongoing	✓		
All	**Local Road Network**	Signalised junction upgrades	Range of schemes	2	1 LTP, developers	CMBC	Improvements to junctions to resolve local traffic issues	Ongoing	✓		
All	**Local Road Network**	Variable Message Signing	Range of schemes	2	1, LTP, developers	CMBC	Signs have been installed in some areas as funded by the LTP (e.g. Calder Valley). Roll out can and should continue with potential developer contribution support	Ongoing	✓	✓	

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
All	**Local Road Network**	Urban Traffic Management Control Project	£7.5m – county wide	2	2 WYCA	KMBC, CMBC, WYCA	Ongoing countywide project to link traffic signals in order to improve traffic flow and reduce congestion.	2021	✓		
All	**Public Transport – Buses**	Commercial Quality Enhancements (Bus 18)	Comm er-cial Data	2	2 Bus 18	Bus Operators, WYCA, CMBC	Under the Bus 18 Initiative bus operators are making a series of upgrades to their fleet in terms of ticketing technology, interiors and livery.	ongoing	✓		
B	**Strategic Road Network**	M62 Jn. 24a. New Junction	£50m to £70m	2	3 Highways England	Highways England, CMBC, KMBC	Provision of a new junction that may serve the critical housing allocations of the Brighouse Local Plan Area within the draft local plan. Case, demand, risks and costs yet to be established.	Unknown		✓	✓
B, NS	**Local Road Network**	A58 / A6036 North East Calderdale 'Wedge' Halifax – Shelf / Wyke	£10m to £50m	2	3 Unknown. Potentially developers	CMBC, WYCA	Housing viability negatively impacted by highly constrained and congested local highway network. Future transport interventions may consider sustainable transport options (e.g. Hipperholme train station)	Unknown		✓	✓
T	**Public Transport – Rail**	Todmorden Station Lift	£500k to £2m	2	3 DfT Access for All	Network Rail, CMBC, Northern	Delivery of lifts to provide level access for all station users. Whilst funding is not secured CMBC plan to bid in 2018	Unknown	✓	✓	

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
All	**Public Transport – Buses**	Bus service expansion	Scheme / route depend-ent	2	3 Developers	WYCA, CMBC	Some larger housing and employment land development schemes would merit developer contributions to support new or improved bus service timetabling	Unknown	✓	✓	✓
R	**Walking and Cycling**	Ryburn Valley Greenway	£2m to £5m	3	2 Unknown. Potentially LTP, Developers	CMBC	Funding to explore feasibility sourced from the LTP. Implementation funding yet to be sourced – Corridor Improvement Programme possibility to be explored.	Unknown	✓	✓	✓
T	**Walking and Cycling**	Rochdale Canal Towpath – Phase 3	£2m to £5m	3	3 Unknown. Potentially LTP, Developers	CMBC, Rochdale BC	Section from Todmorden to Warland (and potentially beyond). Currently at pre-feasibility stage. Implementation funding yet to be sourced – challenging in rural settings.	Unknown	✓	✓	✓
Hx, B	**Walking and Cycling**	Southowram to Cromwell Bottom	£2m	3	3 Unknown. Potentially LTP, Developers	CMBC	Currently at pre-feasibility stage. Implementation funding yet to be sourced – challenging in rural settings.	Unknown	✓	✓	✓
T	**Public Transport - Rail**	Todmorden Station Gateway	£750k	3	3 Unknown	CMBC, Northern, Network Rail	Following station gateway feasibility exercises undertaken in 2017 these works would provide station improvements to enhance the passenger experience at the station	Unknown	✓	✓	✓

AREA	TRANSPORT SUB-CATEGORY	SCHEME	TOTAL COST	PRIORITY	FUNDING AND SOURCE	PARTNERS (lead listed first)	DELIVERY NOTES	DATES	Short Term 5 yr	Medium Term 10 yr	Long Tern 15 yr+
SB	Public Transport – Rail	Sowerby Bridge Station Gateway	£700k	3	3 Unknown	CMBC, Northern, Network Rail	Following station gateway feasibility exercises undertaken in 2017 these works would provide station improvements to enhance the passenger experience at the station	Unknown	✓	✓	✓
B	Strategic Road Network	M62 / M606 Jn. 26 Chain Bar Junction Upgrade	£11m	2	1 Highways England	Highways England, CBMDC	Improving traffic flow on the M62 Chain Bar roundabout by adding an extra lane and reconfiguring the traffic signals. http://roads.highways.gov.uk/projects/m62-junction-26-chain-bar-improvement-scheme/	DONE			

APPENDIX 3 – CALDERDALE INFRASTRUCTURE SCHEDULE – COMPLETED TRANSPORT SHCEMES March 2018

Area	Transport Sub-Category	Scheme	Total Cost	Partners (Lead listed first)	Delivery Notes	Dates
B	Strategic Road Network	M62 Jn. 25-30 Smart Motorway	£95m	Highways England	Delivery of managed motorway system to improve flow and journey times on a highly congested section of the M62	2013
SB, Hx	Local Road Network	Sowerby Bridge Copley Valley Development Scheme	Various schemes	CMBC, Genr8, Buckinghams, Taylor Wimpey, CDP Marshall	Creation of new homes, employment space, highway and flood infrastructure	2015
B	Strategic Road Network	M62 / M606 Jn. 26 Chain Bar Junction Upgrade	£11m	Highways England, CBMDC	Improving traffic flow on the M62 Chain Bar roundabout by adding an extra lane and reconfiguring the traffic signals. http://roads.highways.gov.uk/projects/m62-junction-26-chain-bar-improvement-scheme/	2017
E	Local Road Network	M62 jn. 24 Ainley Top Roundabout South	£2m	KMBC, Highways England	Signalisation, pedestrian crossing facilities, additional lane	2014
SB	Public Transport - Rail	Sowerby Bridge Station Car Park Improvement and Extension	£490k	WYCA, CMBC, Network Rail, Northern Rail	Existing upgraded and extension by 44 spaces	2013
Hx	Local Road Network	King Cross District Centre	£415k	CMBC	Safer roads and public realm improvements	2016
T	Public Transport - Rail	Todmorden Station Car Park Improvement and Extension	£376k	WYCA, CMBC, Network Rail, Northern	Existing upgraded and extension by 26 spaces	2013
M	Local Road Network	Mytholmroyd District Centre	£215k	CMBC	Safer roads and public realm improvements	2013
E	Local Road Network	Elland District Centre	£180k	CMBC	Safer roads and public realm improvements	2017
T	Public Transport	Todmorden Hub	£100k	CMBC, WYCA	Improved rail and bus station access	2014
All	Local Road Network	Freight Signage Improvements	£80k	CMBC	Package of works to improve signage and safety in relation to freight movements	2017

APPENDIX 4 – SCHEDULE OF SCHOOL PLACE PROVISION

AREA	Scheme status	Scheme identity	Finance	Notes	Completion dates
Hx	**On-site**	Todmorden High School	£4.594 million	To provide a new teaching block and replace 16 classrooms, including ICT and food technology areas. Work started on site in summer 2017.	Expected opening spring 2018
T	**On-site**	Ferney Lee Primary	£4.035 million	New School To build a new 1 form of entry school (210 places) on school land and the demolition of the old building.	Expected opening date is September 2018.
Hx	**On-site**	Ravenscliffe Special School	£2.807 million	Spring Hall Development. New sixth form special school facility. Work started in July 2017	Expected opening date in the spring of 2018.
Hx	**On-site**	Copley Primary	£4.304 million	New School To build a new 1.5 form entry school (315 places) on neighbouring Council land and to demolish the old school	Expected opening date is September 2018
Hx	**On-site**	Moorside Primary – New School	£3.888 million	New 1 form of entry school (210 places) on adjacent school land and to demolish the old building	Expected opening date is September 2018
Hx; B; SB	**Feasibility/design**	Re-organisation of 6th form provision	Total cost of all places would be £8.5 million	Close three sixth form sites and use the space released to provide secondary school places at; Trinity Academy 150 places, Sowerby Bridge High School 150 places, and Rastrick Academy 225 places (and to create a consolidated sixth form of 600 places on the current Central Library / Northgate House site); Provide a further 150 places at Calder High School meeting	From September 2019
B	**Future options**	Thornhills Garden Suburb	Unknown – notional £30 million (incl. land)	Requirement for 504 primary and 357 secondary places resulting a need for a new primary school (2.25ha site for 2.5 form entry school) and a new secondary school (5ha site)	After 2023
B	**Future options**	Woodhouse Garden Suburb	Unknown – notional £8 million (incl. land)	Requirement for 294 primary and 208 secondary places resulting in a need for a new primary school (1.5ha site for 1.5 form entry school); secondary education would be accommodated on the Thornhills Lane site.	After 2023

APPENDIX 5 - THE HEADLINE FINDINGS OF THE PLAYING PITCH STRATEGY

Sport	Analysis Area	Current Picture	Future Demand (2039)[1]
Football	Calderdale	Current demand is being met	Shortfall of 3 youth 11v11 match equivalent sessions
3G AGPs	Calderdale	Shortfall of six full size 3G pitches based on FA training model (Please note that this figure differs from the figures for moving mini/youth match play to 3G).	Shortfall of six full size 3G pitches; pitch/s will require resurface and FA testing
Cricket	Calderdale	Current demand is being met although overplay is evident, particularly in Lower Valley analysis area.	Future demand can be met although overplay is evident
Rugby league	Calderdale	Current demand is being met although overplay amounts to 19 match equivalent sessions.	There is a future requirement for an increase in floodlit pitches
Rugby union	Calderdale	Current demand is being met although overplay amounts to 19 match equivalent sessions.	Requirement for an additional minimum of 4 match equivalent sessions
Hockey	Calderdale	Current demand is being met	Future demand can be met although pitches will require resurfacing
Tennis	Calderdale	Current demand is being met	Future demand can be met
Bowls	Calderdale	Current demand is being met	Future demand can be met

[1] Future demand based on ONS calculations and club consultation which also includes latent and displaced demand identified.

APPENDIX 6 - SOUTH EAST CALDERDALE : SUPPLEMENTARY INFRASTRUCTURE STATEMENT

Background

A5.1.1 This statement draws on and should be read in conjunction with the following documents: *Strategic Vision for South East Calderdale* (November 2016) (SVSEC) and *Strategic Vision for South East Calderdale Traffic Statement* (October 2016) (SVSECTS).

A5.1.2 The SVSEC and SVSECTS indicate that the Thornhills and Woodhouse Garden Suburbs have potential capacities of 1936 and 1223 dwellings respectively. These studies also established that the Thornhills GS could accommodate approximately 1100 dwellings before the delivery of major transport infrastructure; and the Woodhouse GS just 303 dwellings.

A5.1.3 Volume housebuilders typically construct about 50 dwellings per year per site. On a strategic allocation it is expected that several different housebuilders would be on site at the same time, and some housebuilders dual brand their products, which would further increase the rate of delivery. Nevertheless if one allows for lead-in time (planning applications, land assembly etc.), it is clear that the Garden Suburbs are likely to require the entire 15 years of the Local Plan to be delivered in their entirety.

A5.1.4 Having regard to these factors it is considered unlikely that either of the Garden Suburbs would have delivered sufficient development to necessitate major transport infrastructure by year 5 of the Plan. The National Planning Policy Framework establishes that the Plan should show *for at least the first 5 years of the plan period, what infrastructure is required, who is going to fund and provide it, and how it relates to the anticipated rate and phasing of development. 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.*

Transport Infrastructure

A5.2.1 Modelling work has demonstrated that the existing highway network in SE Calderdale is presently operating satisfactorily but with some key junctions having insufficient capacity which result in queuing and delays on critical parts of the network particularly during peak hours. It has been demonstrated that without intervention the impact of the proposed quantum of developments across SE Calderdale would result in serious impacts by the end of the plan period. However, the interventions already identified, and contained within the IDP reduce the impact of development to manageable and acceptable levels. Further and ongoing master-planning work and detailed consideration of impacts on the local road network together with the hoped for modal changes encouraged by the Transport Strategy 2017, will also address the implications.

The Operation of the Local Highway Network

A5.2.2 In central Brighouse, the junctions that make up the through-route on the east side of the town are close to capacity. These include the junctions where the A641, A644 and A643 meet, with the inbound A644, inbound A643 and the junction of the A641 having the worst delays.

A5.2.3 The capacity of the A644 to the south east of the town centre is restricted as a result of right turning traffic causing delays to other vehicles.

A5.2.4 On the west side of the town the A644 / A6025 / A643 roundabout shows congestion on all arms and is operating beyond its capacity on the northern arm. Also, the junction of the A6025 and Brookfoot Lane shows capacity issues.

Strategic Highway Network

A5.2.5 The M62 motorway passes near to both Garden Suburb sites and the Enterprise Zone employment allocation, with junction 25 of the M62 being the nearest exit. The M62 extends from Liverpool in the west to Hull in the east and connects the nearby employment centres of Bradford, Leeds and Manchester with Brighouse.

A5.2.6 M62 Junction 25 shows modelled link capacity issues on the circulating carriageway of the roundabout and congestion at the junction onto the roundabout from the A644 from Cooper Bridge.

A5.2.7 The westbound and eastbound exits from the M62 also experience congestion. In the AM peak the westbound off slip is affected by queuing back onto the roundabout from the A644. In comparison the eastbound exit of the M62 is less affected as is the A644 approach from Brighouse.

A5.2.8 Junction 25 forms a key access point for both Kirklees and Calderdale and hence it is showing issues of congestion. The known problems at Cooper Bridge also exacerbate the issues seen here.

Transport Conclusions

A5.2.9 The prospect of significant strategic highway improvements in the vicinity of the two sites has been considered as part of the master planning process. These include for the A641 Bradford-Brighouse-Huddersfield corridor improvements, the A644 improvement scheme and the introduction of a new motorway junction onto M62. Whilst these improvements are at the early stages of the design development, there is a reasonable prospect that they will be forthcoming during the Local Plan period. It is noticeable that the A641 corridor improvements would resolve the vast majority of capacity issues in the west of the town centre and close to the southern end of the Thornhills Lane site.

A5.2.10 The table below is extracted from the main transport infrastructure schedule that is also appended to this IDP. The table identifies the schemes that are

particularly relevant to facilitating development in SE Calderdale. It can be seen from the table that the infrastructure is expected to be delivered by 2025, which given the trajectory of housing delivery, will ensure that the development can be accommodated acceptably.

TABLE APP5.1 : Summary of Planned Transport Interventions in SE Calderdale

Scheme	Cost	Notes	Completion date
A641 Programme – Improved Connectivity A644 to A641	£14.5m	Demand for movement between the A644 and A641 at Brighouse is known to be high and contributes to congestion. The Brighouse Local Plan Area is also critical to the housing allocations of the draft local plan. Part of WY+TF Programme. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Improved Connectivity A641 to A643	£13m	Demand for movement between the A641 and A643 at Brighouse is known to be high and contributes to congestion. The Brighouse Local Plan Area is also critical to the housing allocations of the draft local plan. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Improved connectivity A6025 to Elland	£10.5m	Better connectivity between Elland and the A6025 would enhance access to employment. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Bradford Local Highway Package	£8m	Junction Remodelling. Additional Lanes. Improved public transport priorities/facilities. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Bailiff Bridge Improvements	£7m	All mode Bailiff Bridge improvements. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Kirklees Local Highway Package	£6m	Junction Remodelling. Additional Lanes. Improved public transport priorities/facilities. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Brighouse Town Centre Improvements	£5m	All mode town centre improvements. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – NPIF Scheme	£4.5m	As in the National Productivity Investment Fund bid for the Clifton Business Park Transport Network. Programme costs and timeframes may be subject to change	2025 Completion

Scheme	Cost	Notes	Completion date
A641 Programme – Huntington Road Bridge Replacement (WY+TF)	£4.2m	Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Cycle Route Improvements (WY+TF)	£4m	Package to deliver local cycle access improvements both in on highway and greenway contexts. Inclusive of parts of a potential Cooper Bridge cycle scheme on the Calder and Hebble navigation. Programme costs and timeframes may be subject to change	2025 Completion
A641 Programme – Bus Journey Time Improvements (WY+TF)	£2.5m	Package to deliver improved bus priorities/facilities. Programme costs and timeframes may be subject to change	2025 Completion

COMMUNITY INFRASTRUCTURE

A5.3.1 The Garden Suburbs and other developments in SE Calderdale are likely to generate a requirement for one secondary and two primary schools, and also a GP surgery. The SVSEC makes explicit provision for these schools, which will be further reflected in the policies within the Local Plan. GP surgeries require less space compared to schools; however, the emerging Local Plan policy on master planning will ensure that this and any other infrastructure will be delivered in a timely manner.

OVERALL CONCLUSION for SE CALDERDALE

A5.4.1 The infrastructure required to facilitate the development proposed in SE Calderdale has been identified. Whilst further work is required to understand the exact requirements and delivery mechanisms, there is no reason to believe that the development proposed in SE Calderdale cannot be brought forward in a satisfactory manner.